HISTORY OF NON-DAIRY WHIP TOPPING,
COFFEE CREAMER, COTTAGE CHEESE, AND
ICING/FROSTING (WITH AND WITHOUT SOY)
(1900-2013):

EXTENSIVELY ANNOTATED
BIBLIOGRAPHY AND SOURCEBOOK

Compiled
by
William Shurtleff & Akiko Aoyagi

SOYINFO CENTER
2013

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For a detailed history of Rich Products Corp., see www.soyinfocenter.com
DEDICATION AND ACKNOWLEDGMENTS

This book is dedicated to Henry Ford and Robert E. Rich, Sr..

Part of the enjoyment of writing a book lies in meeting people from around the world who share a common interest, and in learning from them what is often the knowledge or skills acquired during a lifetime of devoted research or practice. We wish to give deepest thanks...

Of the many libraries and librarians who have been of great help to our research over the years, several stand out:

University of California at Berkeley: John Creaser, Lois Farrell, Norma Kobzina, Ingrid Radkey.

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Special thanks to Tom and Linda Wolfe of Berwyn Park, Maryland. And to Lorenz K. Schaller of Ojai, California.


Finally our deepest thanks to Tony Cooper of San Ramon, California, who has kept our computers up and running since Sept. 1983. Without Tony, this series of books on the Web would not have been possible.

This book, no doubt and alas, has its share of errors. These, of course, are solely the responsibility of William Shurtleff.

This bibliography and sourcebook was written with the hope that someone will write a detailed and well-documented history of this subject.

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INTRODUCTION

Brief chronology of non-dairy whip topping, coffee creamer, cottage cheese, and icing/frosting (with or without soy):

Overview: This may seem like a very narrow and perhaps uninteresting subject – but it definitely is not. For with the advent of the first commercially successful whip topping, created near the end of World War II by Bob Rich in Buffalo, New York, the entire category of non-dairy products was born. But it was not an easy birth.

The basic lineage of the U.S. non-dairy industry is: Henry Ford > George Washington Carver Laboratory (established by Henry Ford in Ford’s Greenfield Village in Dearborn, Michigan; soymilk research was conducted by Robert A. “Bob” Smith and Holton W. “Rex” Diamond) > Bob Rich and Rich Products, Inc. > Holton W. “Rex” Diamond and Frank S. Mitchell (both employees of Rich Products, Inc.) > 40 lawsuits against Rich’s non-dairy products by individual states trying to keep these products off the market; Rich Products won all of the suits but one, and paid more than $600,000 in legal fees in the process > The U.S. non-dairy industry is born.

The first wave: The early interest in these non-dairy products took place starting in the late 1800s as urbanization was increasing, ice was still used for refrigeration, and milk – unless consumed fresh on the farm – was a source of pathogens and infectious diseases. Seventh-day Adventists, many of whom consumed no dairy products, were among the pioneers in developing non-dairy products.

Henry Ford disliked cows – and horses: As early as 1921, in an interview published in the New York Tribune (Feb. 9, p. 1, 4), Ford predicted that horses would be replaced by automobiles and tractors. The horse is a “twelve-hundred-pound ‘hay motor’ of one horse power,” he quipped. The milk and meat from cows will be replaced by man-made products. Ford notes: “It is a simple matter to take the same cereals that the cows eat and make them into a milk which is superior to the natural article and much cleaner. The cow is the crudest machine in the world. Our laboratories have already demonstrated that cow’s milk can be done away with and the concentration of the elements of milk can be manufactured into scientific food by machines far cleaner than cows and not subject to tuberculosis.” [Note: This article was written 10 years before Ford discovered soybeans and soymilk!]

In the mid-1930s Henry Ford built a soymilk plant in Greenfield Village (Dearborn, Michigan). It was just a demonstration plant that made several hundred gallons of soymilk a day. The plant was part of the larger research effort; none of the milk was sold commercially. With the arrival of World War II, the process was taken by Bob Smith, one of the men who developed it, and used as the basis for a private plant [Delsoy Products] in Dearborn where he sold a lot of soymilk for use in whipped toppings, baked goods and frostings. It was quite successful (Source: Robert Boyer).

In about July 1942, during World War II, Henry Ford created the George Washington Carver Laboratory in Greenfield Village (Dearborn, Michigan), in honor of George Washington Carver (who shared many of Ford’s beliefs, including those about cows; Carver made milk from peanuts). There Ford assembled a team of scientists to intensify his research on alternatives to dairy products – including soymilk and “soy whip topping.” He served this soymilk to patients in the nearby Ford Hospital, and he offered to give the soymilk recipe to anyone who was interested. Bob Rich was one of the first to accept this offer.

Whipping cream and World War II: Non-dairy whip toppings in the USA were a child of World War II. During the war, whipping cream had not been available to typical American consumers. It was reserved for use by our troops and allies. The dairy industry fought in state after state to prevent “imitations” from gaining a commercial toehold. And Bob Rich fought back, refusing to give up and mounting an aggressive defense, all the while maintaining that his new products were a superior replacement!

Because cream was such a hugely important product for the dairy industry, the test product soon became Coffee Rich, a non-dairy coffee creamer – which Bob Rich sensitively referred to as a “coffee whitener” in an attempt not to step on the toes of dairy interests. But the dairy industry went to court to enforce the laws in state after state where it was illegal to sell imitation dairy products.

As recently as the 1970s it was illegal to sell imitation dairy products (such as soymilk, whip topping, or coffee creamer/whitener) in some U.S. states, especially those having a large dairy industry. But today, non-dairy products can be sold freely throughout the United States, so long as the label states clearly that it is not a dairy product.

Moreover, the market for non-dairy products is growing much faster than the market for dairy products.

1900 – In Every-day Dishes and Every-Day Work, Ella Kellogg, a Seventh-day Adventist and wife of the famous Dr. John Harvey Kellogg, discusses her system of meatless cookery. She notes (p. 166-70) that either peanut butter or almond butter work well as an ingredient in the icing for peanut cake or in almond pound cake.

1904 – In Healthful Cookery: A Collection of Choice Recipes
1934 April 8 – Mrs. Escoe Ervin (appears in an article titled “Peanut butter in the diet,” by the British word for “icing”), Peanut Butter Frosting, appears in an article titled “Peanut butter in the diet,” by Mrs. Escoe Ervin (Ohio Farmer, p. 490).

1939 – In his classic book Back to Eden, Jethro Kloss has recipes for “Soybean cottage cheese” (made from fermented soybean milk, p. 608) and Soybean cottage cheese loaf.

1941 Dec. 7 – World War II begins for the United States. A War Food Administration (WFA) is created at the federal level and rationing of certain foods (especially meats, dairy products, and oils and fats) begins in late 1942. For example, in Nov. 1942 the WFA issued an order prohibiting the sale of whipping cream in America. This leads to a nationwide push to find nutritious and tasty alternatives.

1943 – One day the chief purchasing agent of Detroit’s Ford Hospital came into Bob Rich’s office at the War Food Administration in Detroit in search of additional butter ration points. Rich explained that his job was concerned solely with the diversion of non-essential civilian milk supplies into the production of dry and condensed milk for the U.S. armed forces and for Lend Lease. The purchasing agent replied that the Ford Hospital was not in need of milk. The entire supply of milk and cream was produced in Dearborn, Michigan, by Henry Ford’s Carver Laboratory (named after Dr. George Washington Carver) – from soybeans! Those last words sparked what was to become a lifelong interest for Bob Rich. He had never heard of soymilk before – and like Henry Ford, he disliked cows. Rich soon visited the Carver Lab, where he met Rex Diamond.

1943 Dec. 4 – An article titled “Soybean curd makes good cottage cheese substitute” appears in Science News Letter (p. 360).

1944 Aug. – Delsoy, a soymilk-based non-dairy whipped topping is launched by Russell-Taylor Inc. of Dearborn, Michigan. The world’s earliest known whipped topping, it had been developed at the Henry Ford’s Carver Laboratory, largely by Bob Smith and “Rex” Diamond. The key man behind the new business is Herbert Marshall Taylor. The company, which was renamed Delsoy Products, Inc. by July 1945, did not last long (Detroit News. 1945. April 16).

1945 Jan. – Whip Topping starts to be sold commercially by Rich Products. It was developed by Frank Mitchell of Spencer Kellogg & Sons, with financial backing from Bob Rich. In the early years, when Rich Products Corp. used soy protein as the protein source in its non-dairy products, it obtained the protein from defatted soybean flakes purchased from the Archer-Daniels-Midland Co. (ADM). In 1945, Rich Products did $28,000 worth of business, selling only non-dairy products.


1945 Sept. – The term “soy whip topping” is first used in a “Cumulative Work Report” of research conducted at the George Washington Carver Laboratory (in Henry Ford’s Greenfield Village) by Holton W. “Rex” Diamond. The Report concerned research from June 1943 to Sept. 1945 in an attempt to find alternatives to dairy products.

In this same report Diamond first mentions a coffee creamer, which he describes as “a ‘soy cream’ which will not curd in coffee.”

1945 Sept. – Rich Products starts to sell Whip Topping as a frozen product. In the summer of 1945 Bob Rich had accidentally discovered that his liquid Whip Topping could be whipped after being frozen – which dairy cream could not. He had invented the world’s first frozen non-dairy whipped cream. This meant that his market was no longer confined to Buffalo, New York. Now he could sell Whip Topping nationwide. Quite by accident Rich Products Corp. had entered the frozen food business.


1946 March – The terms “whipped topping” and “coffee whiteners” are first used in a far-sighted article titled “Imitation or Improvement,” by Lawrence E. Doherty (Food Business magazine, p. 22-23, 56).
1949 – The dairy industry starts to try to prevent Whip Topping from being sold. The first lawsuit is in California. The charge is that Whip Topping is an imitation dairy product, and hence illegal. Rich Products’ defense is that their frozen product is not an imitation (which implies inferiority to the real product) but a replacement. Likewise the Model T Ford was clearly a replacement for the horse and buggy, not an imitation. Whip Topping has many definite advantages over its dairy counterpart. Rich Products won the case. Then in 1951 the product was seized again. In the interim, the dairy industry had gotten the state food laws changed and, as Bob Rich recalled, “had done everything but mention Rich Products’ name.” Rich Products won the 1952 trial, and Judge Bernard Shawman notified the state’s attorney general that if he should attack Rich Products at any time in the future, Mr. Rich would have an excellent chance for indemnity against the state. That was the last lawsuit ever brought against Whip Topping.

1950 – Mocha Mix Coffee Creamer, the world’s first non-dairy coffee creamer, is launched by Presto Food Products of Industry, California. It was later renamed Mocha Mix Non-Dairy Creamer.

1956 May – Rich Products adds a completely new formulation of Whip Topping to its line. Developed by Holton W. “Rex” Diamond, it is named Rich’s Whip Topping – The Diamond Process.” It contains no protein. Soy oil is replaced by coconut oil, which had a better flavor.

1957 – Mocha Mate, the world’s second non-dairy coffee creamer, is launched by Mitchell Food, Incorporated of Fredonia, New York.

1957 – The terms “Soy whipped cream,” “Tofu cottage cheese,” and “Homemade tofu cottage cheese,” are first used in print in Sally’s Recipes, by Sally Zerfing.


1964 – Perx, a non-dairy coffee lightener, is launched by Mitchell Food, Inc. of Fredonia, New York.

1972 June – At the wedding of Kazuko Aoyagi and Travis Venters at International Christian University (ICU) in Tokyo, Gretchen Broadbent makes the wedding cake with whole wheat flour and tofu icing.

1974 – Rich Products, Inc. has won 40 court cases, which cost the company more than $600,000. That year the Kansas Supreme Court declared Coffee Rich “a new and distinct food” and the dairy lobby gave up. Were it not for Bob Rich and his lead attorney, Ellis Arnall (former attorney general and governor of Georgia, 1943-47), non-dairy products might still be illegal in the USA!

1975 Dec. – The terms “Tofu whipped cream” and “Tofu icing” are first used in print in The Book of Tofu by Shurtleff & Aoyagi. A recipe for “Tofu cottage cheese” is also given.

1990 Oct. – Bob Rich’s contributions to the food industry are recognized when he becomes one of the first four inductees into the National Frozen Food Hall of Fame. He receives “a standing ovation which salutes his work as the father of the non-dairy frozen foods segment.”

1999 May – White Wave, Inc. of Boulder, Colorado, launches Silk Soymilk Creamer – a non-dairy, liquid coffee creamer whose main ingredient was soymilk. The product sold so well that French Vanilla flavor was added in March 2000 and Hazelnut in 2002.

1999 – Hip Whip, a tofu-based product is launched by Now & Zen, Inc. of San Francisco, California, which describes it as “The first real food dairy free whipped topping.”

2006 Feb. – Soyatoo Soy Whip: Whipped Soy Topping is developed by Bernd Drosihn and launched by Viana in a pressurized can. By Oct. 2007 it is renamed SoyaToo! Soy Whip.


2013 Nov. – Rich Products Corp. now has 7,000 employees and annual sales exceeding $3 billion. While selling 2,000

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products across 112 countries, the company is still firmly headquartered in Buffalo, New York, and a major benefactor of the city and region.

The many names of non-dairy whip topping, coffee creamer, cottage cheese, and icing/frosting (useful for digital searching):

Coffee creamer
Coffee lightener
Coffee whitener
Soybean cottage cheese
Soy cream
Soymilk creamer
Soy whipped cream
Soy "whipped cream"
Soy whipping cream
Tofu cottage cheese
Tofu frosting
Tofu icing
Tofu whipped cream
Tofu whipped topping
Whipped tofu topping
Whipped topping
Whip topping

ABOUT THIS BOOK

This is the most comprehensive book ever published about the history of non-dairy whip topping, coffee creamer, etc. It has been compiled, one record at a time over a period of 35 years, in an attempt to document the history of these interesting food products. It is also the single most current and useful source of information on this subject.

This is one of more than 100 books compiled by William Shurtleff and Akiko Aoyagi, and published by the Soyinfo Center. It is based on historical principles, listing all known documents and commercial products in chronological order. It features detailed information on:

- 48 different document types, both published and unpublished.
- 354 published documents - extensively annotated bibliography. Every known publication on the subject in every language.
- 112 original Soyinfo Center interviews and overviews never before published, except perhaps in our books.
- 92 unpublished archival documents.
- 84 commercial products.

Thus, it is a powerful tool for understanding the development of this subject from its earliest beginnings to the present.

Each bibliographic record in this book contains (in addition to the typical author, date, title, volume and pages information) the author’s address, number of references cited, original title of all non-English language publications together with an English translation of the title, month and issue of publication, and the first author’s first name (if given). For most books, we state if it is illustrated, whether or not it has an index, and the height in centimeters.

All of the graphics (labels, ads, leaflets, etc) displayed in this book are on file, organized by subject, chronologically, in the Soyinfo Center’s Graphics Collection.

For commercial soy products (CSP), each record includes (if possible) the product name, date of introduction, manufacturer’s name, address and phone number, and (in many cases) ingredients, weight, packaging and price, storage requirements, nutritional composition, and a description of the label. Sources of additional information on each product (such as advertisements, articles, patents, etc.) are also given.

A complete subject/geographical index is also included.
ABBREVIATIONS USED IN THIS BOOK

A&M = Agricultural and Mechanical
Agric. = Agricultural or Agriculture
Agric. Exp. Station = Agricultural Experiment Station
ARS = Agricultural Research Service
ASA = American Soybean Association
Assoc. = Association, Associate
Asst. = Assistant
Aug. = August
Ave. = Avenue
Blvd. = Boulevard
bu = bushel(s)
ca. = about (circa)
cc = cubic centimeter(s)
Chap. = Chapter
cm = centimeter(s)
Co. = company
Corp. = Corporation
Dec. = December
Dep. or Dept. = Department
Depts. = Departments
Div. = Division
Dr. = Drive
E. = East
ed. = edition or editor
e.g. = for example
Exp. = Experiment
Feb. = February
fl oz = fluid ounce(s)
ft = foot or feet
gm = gram(s)
ha = hectare(s)
i.e. = in other words
Inc. = Incorporated
incl. = including
Illustr. = Illustrated or Illustration(s)
Inst. = Institute
J. = Journal
J. of the American Oil Chemists’ Soc. = Journal of the American Oil Chemists’ Society
Jan. = January
kg = kilogram(s)
km = kilometer(s)
Lab. = Laboratory
 Labs. = Laboratories
lb = pound(s)
Ltd. = Limited
mcg = microgram(s)
mg = milligram(s)
ml = milliliter(s)

mm = millimeter(s)
N. = North
No. = number or North
Nov. = November
Oct. = October
oz = ounce(s)
p. = page(s)
photo(s) = photograph(s)
P.O. Box = Post Office Box
Prof. = Professor
psi = pounds per square inch
R&D = Research and Development
Rd. = Road
Rev. = Revised
RPM = revolutions per minute
S. = South
SANA = Soyfoods Association of North America
Sept. = September
St. = Street
to = metric tons
trans. = translator(s)
Univ. = University
USB = United Soybean Board
USDA = United States Department of Agriculture
Vol. = volume
V.P. = Vice President
vs. = versus
W. = West
°C = degrees Celsius (Centigrade)
°F = degrees Fahrenheit
> = greater than, more than
< = less than
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Type [Ctrl+F] to “Find.” A white search box will appear near the top right of your screen.
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You will be told how many times this term appears, then the first one will be highlighted.
To go to the next occurrence, click the down arrow, etc.

For those using a Mac without Acrobat Reader: Safari is often the default browser. Click “Edit” in the toolbar at top. In the dropdown click “Find,” then click “Find...” again. A search bar will open across top of screen with a search box at right. In this box type a word or phrase you would like to search, such as Creamer or Rich Products. Click “Done” then scroll through the various matches in the book.

Chronological Order: The publications and products in this book are listed with the earliest first and the most recent last. Within each year, references are sorted alphabetically by author. If you are interested in only current information, start reading at the back, just before the indexes.

A Reference Book: Like an encyclopedia or any other reference book, this work is meant to be searched first - to find exactly the information you are looking for - and then to be read.

How to Use the Index: A subject and country index is located at the back of this book. It will help you to go directly to the specific information that interests you. Browse through it briefly to familiarize yourself with its contents and format.

Each record in the book has been assigned a sequential number, starting with 1 for the first/earliest reference. It is this number, not the page number, to which the indexes refer. A publication will typically be listed in each index in more than one place, and major documents may have 30-40 subject index entries. Thus a publication about the nutritional value of tofu and soymilk in India would be indexed under at least four headings in the subject and country index: Nutrition, Tofu, Soymilk, and Asia, South: India.

Note the extensive use of cross references to help you: e.g. “Bean curd. See Tofu.”

Countries and States/Provinces: Every record contains a country keyword. Most USA and Canadian records also contain a state or province keyword, indexed at “U.S. States” or “Canadian Provinces and Territories” respectively. All countries are indexed under their region or continent. Thus for Egypt, look under Africa: Egypt, and not under Egypt. For Brazil, see the entry at Latin America, South America: Brazil. For India, see Asia, South: India. For Australia see Oceania: Australia.

Most Important Documents: Look in the Index under “Important Documents -.”

Organizations: Many of the larger, more innovative, or pioneering soy-related companies appear in the subject index – companies like ADM / Archer Daniels Midland Co., AGP, Cargill, DuPont, Kikkoman, Monsanto, Tofutti, etc. Worldwide, we index many major soybean crushers, tofu makers, soymilk and soymilk equipment manufacturers, soyfoods companies with various products, Seventh-day Adventist food companies, soy protein makers (including pioneers), soy sauce manufacturers, soy ice cream, tempeh, soynut, soy flour companies, etc.


Soyfoods: Look under the most common name: Tofu, Miso, Soymilk, Soy Ice Cream, Soy Cheese, Soy Yogurt, Soy Flour, Green Vegetable Soybeans, or Whole Dry Soybeans. But note: Soy Proteins: Isolates, Soy Proteins: Textured Products, etc.

Industrial (Non-Food) Uses of Soybeans: Look under “Industrial Uses ...” for more than 17 subject headings.
Pioneers - Individuals: Laszlo Berczeller, Henry Ford, Friedrich Haberlandt, Artemy A. Horvath, Englebert Kaempfer, Mildred Lager, William J. Morse, etc. Soy-Related Movements: Soyfoods Movement, Vegetarianism, Health and Dietary Reform Movements (esp. 1830-1930s), Health Foods Movement (1920s-1960s), Animal Welfare/Rights. These are indexed under the person’s last name or movement name.

Nutrition: All subjects related to soybean nutrition (protein quality, minerals, antinutritional factors, etc.) are indexed under Nutrition, in one of more than 70 subcategories.

Soybean Production: All subjects related to growing, marketing, and trading soybeans are indexed under Soybean Production, e.g., Soybean Production: Nitrogen Fixation, or Soybean Production: Plant Protection, or Soybean Production: Variety Development.

Other Special Index Headings: Browsing through the subject index will show you many more interesting subject headings, such as Industry and Market Statistics, Information (incl. computers, databases, libraries), Standards, Bibliographies (works containing more than 50 references), and History (soy-related).

Commercial Soy Products (CSP): See “About This Book.”

SoyaScan Notes: This is a term we have created exclusively for use with this database. A SoyaScan Notes Interview contains all the important material in short interviews conducted and transcribed by William Shurtleff. This material has not been published in any other source. Longer interviews are designated as such, and listed as unpublished manuscripts. A transcript of each can be ordered from Soyinfo Center Library. A SoyaScan Notes Summary is a summary by William Shurtleff of existing information on one subject.

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3. An asterisk in a listing of the number of references [23* ref] means that most of these references are not about soybeans or soyfoods.

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History of Soybeans and Soyfoods: Many of our digital books have a corresponding chapter in our forthcoming scholarly work titled History of Soybeans and Soyfoods (4 volumes). Manuscript chapters from that book are now available, free of charge, on our website, www.soyinfocenter.com and many finished chapters are available free of charge in PDF format on our website and on Google Books.

About the Soyinfo Center: An overview of our publications, computerized databases, services, and history is given on our website.

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HISTORY OF NON-DAIRY WHIP TOPPING, COFFEE CREAMER, COTTAGE CHEESE, AND ICING/FROSTING (WITH OR WITHOUT SOY) (1900-2013)

1. Kellogg, Ella Ervilla (Eaton) (Mrs.). 1900. Every-day dishes and every-day work. Battle Creek, Michigan: Modern Medicine Publishing Co. 206 p. Index. 21 cm. [1 ref]

**Summary:** The wife of the famous Dr. John Harvey Kellogg discusses her system of meatless cookery. She lived 1852-1920. This book was copyrighted 1896.


Sanitas Nut Food Company’s Products (recipes using them; including Nut Butter, Nuttolene, Nut Meal (“Many persons suffer from biliousness, nervousness, sick-headache, and various forms of indigestion, from the use of butter, milk, and cream, without being aware that these substances are harmful to them. Persons suffering from dilatation of the stomach, a condition which is exceedingly common, must avoid milk and butter in all forms. Nut butter, nut meal, and nuttolene have been prepared as substitutes for butter and cream. In nut butter, the fat is in a state of perfect emulsion, so that it mixes well with water. Thus it does not interfere with digestion,” Protose, Granose, Almond Meal). Hints about every-day work (Economizing time, system in work, daily program of kitchen work, economizing money, economy of material, uses of stale bread, left-overs, waste of fuel, general suggestions for economical housework, order of clearing the table, washing the dishes, dish-cloth and towels, cleaning silver, care of table linen, disposal of garbage).

Peanut butter is called for as an ingredient in recipes on pages 166 and 170 (“An icing for the peanut cake may be made in the same way using the peanut butter”).

Note: This is the earliest English-language document seen (Nov. 2013) that mentions a non-dairy icing.

Almond butter is called for as an ingredient in recipes on pages 140 (one well-rounded tablespoonful in an icing for Almond pound cake), 155 (twice), 156 (twice), 166 (twice), 170, and 172 (twice).

The term “nut butter” appears on 32 pages; see p. 201 in Index.

The word “Vegetarian” appears in this book only once, in the titled of a recipe, “Vegetarian Boiled Dinner” (p. 164). Bran (including wheat bran) is mentioned on pages 98 and 99 (3 times each in the section on soups), 100, 144, 169, and 197.

Near the end of this book are full-page ads for: Bromose (p. 207), Malted Nuts (“presented in the form of a fine granular powder,” p. 208), Protose–vegetable meat (“This truly wonderful food product is, without question, the most remarkable discovery in dietetics which has been made within the last half century… Protose is a Perfect Substitute for flesh food… Send 10 cents for a sample can,” p. 209), Battle Creek Sanitarium Health Foods (Granose, Granola, Caramel-Cereal, Battle Creek Sanitarium Breakfast Food, Germless Oats, Germless Corn Grits, Crystal Wheat {sterilized, ready cooked}, Gluten Preparations, Diabetic Foods, A large variety of crackers and biscuit and other wholesome preparations. Superior canned goods. Warranted pure. Send for catalog and price list, p. 210).

Antiseptic charcoal tablets–antiseptic, absorbent.

“Charcoal Tablets are not a panacea, but they have proved to be the most valuable remedy we possess for morbid conditions arising from fermentation or decomposition of food in the stomach and intestines. They consist of a special form of vegetable charcoal, much superior to willow, freshly prepared, to which is added sulphur, one of our most valuable intestinal antiseptics, and diastase, a starch-digesting ferment. This will at once be recognized as a happy combination for combating the action of microbes in the alimentary canal,” (p. 211). The Stomach: Its Disorders and How to Cure Them, by J.H. Kellogg, M.D. (p. 212). The Home Hand-Book, by J.H. Kellogg (p. 213). Science in the Kitchen, by Mrs. E.E. Kellogg, A.M. (p. 214). Address: A.M., Battle Creek, Michigan; Author of Science in the Kitchen, etc.


“Peanut butter” is called for in various recipes: Nut cheese (p. 163), Nut cream (p. 164), Nut salad dressing (p. 171), and Vegetable soup (p. 181-82).

“Almond butter” is called for in: Fruit pin wheels (p. 49), Almond cream (p. 164), Nut cream (p. 164), Peach salad (p. 169), Sweet salad dressing (p. 172), Sour salad dressing
Bread, gluten

Gluten is mentioned throughout the book, as are gluten 60, 164, 176, 192, 205, 217, 245, 253, and 283.

Steak, no. 2 (p. 75), and other recipes on pages 86, 99, 104-

Nut gluten rolls (p. 47), Pease gravy toast (p. 65), Nut Lisbon
at once with dairy or Nut Cream, dairy or Nut Butter,...

“Nut cream is called for in: Granuto cakes (p. 44; “Serve
spread smoothly on the bread...”).

Some one of the various nut butters, should be creamed and
136, 157, 159-62, 169, 173, 177-79, 233, 245, 301. For “Nut
butter puffs (p. 45), Nut gluten rolls (p. 47), and other recipes
“Nut butter” is called for in: Granuto cakes (p. 44), Nut
Almond pound cake (p. 231, incl. almond butter in the icing),
Almond filling (for desserts, p. 233), Chocolate mold no. 1
(p. 239), Cocalo nut cream sauce (p. 245), Almond
whipped cream ([non-dairy], p. 246. “Reduce Almond Butter
to the consistency of cream, and pour slowly over the well-
beaten white of an egg. Sweeten and flavor to suit the taste.
For persons who can not use cow’s cream, this makes an
excellent substitute for whipped cream”).

Note 1. This is the earliest document seen (Oct. 2013)
that discusses a non-soy, non-dairy whipped cream.

“Nut butter” is called for in: Granuto cakes (p. 44), Nut
butter puffs (p. 45), Nut gluten rolls (p. 47), and other recipes
on pages 55, 57, 58, 71, 78, 82, 86, 87, 88, 104-06, 126,
136, 157, 159-62, 169, 173, 177-79, 233, 245, 301. For “Nut
butters” see Sandwiches (p. 53; “The butter, whether dairy or
some of the various nut butters, should be creamed and
spread smoothly on the bread...”).

“Nut cream is called for in: Granuto cakes (p. 44; “Serve
at once with dairy or Nut Cream, dairy or Nut Butter,...”),
Nut gluten rolls (p. 47), Pease gravy toast (p. 65), Nut Lisbon
steak, no. 2 (p. 75), and other recipes on pages 86, 99, 104-
05, 121-23, 129, 132, 136-37, 141, 146, 151, 153, 155, 159-
60, 164, 176, 192, 205, 217, 245, 253, and 283.

Gluten is mentioned throughout the book, as are gluten
bread, gluten flour, 40% gluten flour, ½ cup gluten (p. 84),
20% gluten (p. 99, in Protose and gluten patties), gluten
meat, and gluten gruel.

This is a vegetarian cookbook. In the chapter on flesh-
food substitutes (p. 67+), “vegetarian” is mentioned in
several recipe names: Vegetarian roast (p. 106). Vegetarian
roast No. 2 (p. 107). Also: Vegetarian boiled dinner (p.
134). Major branded ingredients in this chapter are: Protose
(“vegetable meat”), Nuttollen, Granola, and Nut Butter. On
page 84 is a recipe for “Vegetable turkey.”

On the last 2 pages of the book is an ad: “This volume
contains some six hundred recipes.” “For the preparation
of Sanitarium foods. These foods are manufactured by the
Battle Creek Sanitarium Co., Ltd., and the Sanitas Nut Food
Co., Ltd., the two original health food manufacturers of
Battle Creek. Our products are of world-wide reputation,
some of them having been in use more than a quarter of
a century [i.e., since about 1879]. The company makes
more than 49 food products. “Many good grocers carry
only a few of them; some, a large line; more, none at all...
Thousands upon thousands of grocers have never heard of
our products.”

“To all express offices in the following States we prepay
the express on orders of $5.00 or more.” On orders of $15.00
or more they also offer a 10% discount. The names of 23
states near Michigan are listed. Then the name, weight,
packaging type, and price of every product is given.

The author is the wife of the famous Dr. John Harvey
Kellogg. She lived 1852-1920. A slightly enlarged edition
(313 p.) was published in 1908. Address: A.M., Battle Creek,
Michigan.

Ohio Farmer 143(12):490. March 22.

• Summary: A reader requests a recipe for making peanut
butter. Begins with a discussion of the nutritional value and
versatility of peanut butter. “Peanut butter is very nutritious
and it ought to be used in the diet more extensively.
Generally speaking, it is three times as nourishing as beef,
veal or mutton, and costs usually only one-half as much.”
“In fancy jars at $0.50 per pound it is not economical, but
purchased in bulk, at $0.15 to $0.20 per pound, it makes
a choice and economical food. It is not commonly adulterated.
However, the oil is sometimes extracted and the cheaper
cottonseed oil is substituted, but this does not change the
food value in the least, tho the taste is slightly different.”

Recipes include: Peanut butter filling for peppers or
onions. Peanut butter salad dressing. Peanut butter and
banana salad. Peanut butter cookies. Peanut butter frosting.
Peanut butter candy.

Note. This is the earliest English-language document
seen (Oct. 2013) that mentions a non-dairy frosting (the
British word for “icing”)—Peanut butter frosting. Address:
Highland County, Ohio.

4. Holton Whittier “Rex” Diamond graduates from Valley
High School in Lucasville, Ohio (Early event). 1932.

• Summary: Born on 15 June 1915 in Lucasville, Scioto
county, Ohio, Rex was the son of Walter V. Diamond and
Ethel Pigg. He was a very bright boy, chosen valedictorian
of his Valley High School class and, as valedictorian, he
presented “The Seniors’ Farewell Message” at the graduation
ceremony on 10 May 1932. After entering Wilmington
College in Wilmington, Ohio, on a scholarship, the school
newspaper noted that he added “to a brilliant scholastic
record” by “being the first freshman to score 100%
first entering
of the college to score 100%
the state-wide English examination. Diamond also holds
national, state, and county scholarship awards in Latin,
French, chemistry and English.”

Another article reported that he was the first entering
freshman in the 60 year history of the college to score 100%
on the timed entrance exam.

Photos from two local Ohio newspapers at the time he
graduated from high school show “Holton W. Diamond.”
A portrait photo shows him on graduation day from
Wilmington College, Wilmington, Ohio.

Photos courtesy of Florence Barbier Diamond, Rex’s
wife. See 1992 interview with Florence Diamond about
Rex’s life story.

for daily table use: Milk, cheese, roasts, bread and other

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preparations made from herb claimed to have high nutritive values. April 8. Sport section. p. 5. Sunday. Facsimile printed in Back to Eden by Jethro Kloss, 1982 ed.

• Summary: Two photos by Rinc above the article show:
  (1) A small insert portrait of Dr. Jethro Kloss. (2) His daughter, Mrs. Harry C. Engelhardt, standing next to her daughter, Joyce, age 5. The caption states that “Dr. Jethro Kloss is devoting his life to the dissemination of knowledge pertaining to soy bean milk.” Both his daughter and granddaughter were raised on this milk.”

  “Dr. Kloss prides himself on having once been a ‘farmer.’ He is credited with having spent a fortune in philanthropic work, the greater part having gone toward introducing a bean which he feels is destined to eventually revolutionize the economic structure of this country and become of incalculable value in time of war.

  “Approximately 6,000 persons recently heard Dr. Kloss in Bayfront park explain how he apparently performs miracles when he transmutes beans into 24 or more different foods which in addition to being delectable also retain various life-giving elements usually attributed to cow’s milk...

  “He exhibited 21 articles made from soy beans and invited the public to taste them. These were soy bean milk, bread, pie, cakes, buns, cookies, roast, buttermilk, coffee, cottage cheese, cream cheese, yellow cheese, soy bean sauce, pancakes, broth, butter, ‘mashed potatoes,’ mayonnaise, soy bean roast not like that from meat, ice cream, sprouted beans. None of these contained white flour nor cane sugar, making such foods especially valuable for diabetics. Soy bean foods are also recommended for arthritis.

  “He advocates the teaching of edible food preparation from soy beans as part of school curriculum and drew a parallel tending to show how the government spends millions to spread hog and other stock-feeding knowledge while almost ignoring the phases which would create well-fed humans.

  “Dr. Kloss pointed out that he was merely in this country revealing something which for centuries had been common knowledge throughout the Orient... He quoted Dr. S. [sic, A.] Horvath of the Rockefeller institute as one of the world’s leading authorities who said: ‘The Chinese nation exists today because of the use of the soy bean as a food.’”

  A sidebar at the lower left of the article shows another portrait photo of Dr. Kloss and announces: “By the request of thousands who heard Dr. Kloss speak in Bayfront Park, he has consented to give further instructions in the preparation of the wonderful Soy Bean Products.

  “He will give two food demonstrations in the Miami School of Applied Arts, 406 N.E. 2nd Ave., Monday afternoon at 2:30 and Monday evening at 8, April 9.

  “Dr. Kloss makes more delicious table foods from soy bean than any one else known. The soy bean is a complete food, and is highly alkaline. Following is a partial list of the foods he makes:

    “Soy bean milk, soy bean buttermilk, cottage cheese, ice cream, bread, buns, pies, cake, cookies, roast, coffee, pancakes, butter [probably soynut butter], mayonnaise, broth. These foods do not contain any cane sugar or other harmful ingredients. They are most economical, simple to prepare, and very healthful and inexpensive. The use of the articles would mean a great saving of money, and preserving of health. They must be seen and tasted to be appreciated.”

  Note 1. This is the earliest document seen (March 2000) that mentions soy mayonnaise.

  Note 2. This is the earliest document seen (Oct. 2013) that mentions a “cream cheese” or “yellow cheese” made from soy beans (one of two documents).

  Note 3. This is the earliest document seen (March 2007) that mentions Jethro Kloss’ work with soy bean ice cream.

  Note 4. As of Nov. 1990 the Miami Daily News no longer exists. Its name was changed to the Miami News, it was owned by Cox, and it went out of business in about 1988. Back issues would probably be available at the Univ. of Miami.

  Note 5. This is the second earliest document seen (March 2007) that uses the word “miracles” (or “miracle” or “miraculous”) in connection with soy beans.

  Note 6. This is the earliest document seen (Oct. 2013) that mentions a non-dairy cottage cheese–made from soy beans. Address: Florida.


• Summary: By special request Dr. [Jethro] Kloss is giving two more free lectures and food demonstrations at the Miami School of Applied Arts, 406 N.E. 2d Avenue, Monday, April 9, in the afternoon and evening. Following is a list of food Dr. Kloss prepares from the soybean. They do not contain any cane sugar, white flour, or other harmful ingredients: Soy bean milk, bread, buns, pies, cakes, roast, buttermilk, ice cream, jelly, sauce, cream cheese, cottage cheese, yellow cheese, coffee, pancakes, broth, mashed potatoes, mayonnaise, butter.

  “Learn to make this alkaline milk from soybeans, it taste’s [sic] better than other milks, and has a better analysis than cow’s milk, or goat’s milk. Dr. Kloss will show a table of comparative analysis prepared for him by Dr. LeClerc, Senior Chemist of the Government. This milk can be made in any home, and costs less than 2 cents per quart... Dr. Kloss’ ice cream made from the soybean milk is as delicious as any on the market, and very inexpensive and healthy. Learn to make these products in your own kitchens.”

  Note: This is the earliest document seen (Oct. 2013) that mentions a “cream cheese” made from soybeans (one of two documents). This cream cheese was developed by Jethro Kloss. Address: 500 44th St., N.W., Miami, Florida. Phone:

**Summary:** On the front panel: “‘Soyan’ contains no starch. ‘Soyan’ is a pure product of nature with none of the valuable fats or other food elements removed from the Soy Bean itself.”

Contents: Introduction (the ash “is alkaline, unlike that of cereal flours.”) We repeat: “never use a Soy Bean Flour that has had any of the very valuable oils extracted, or has been chemically processed”). General directions: Bread, breakfast cereals, pancakes, puddings, rice, tapioca, etc., baking powder products, icings, white sauce, soups, gravies, etc., malted milk. Special ‘Soyan’ recipes: Pancakes, frying batter, nut bread, ginger bread, plain cake, Washington apple sauce cake, icing, bourbons, pumpkin pie, chocolate cream pie [like a cheesecake] (with “1 heaped tablespoon ‘Soyan’” plus butter, eggs, milk, etc.), Hamburg steak with Spanish onions, Yorkshire pudding, special Soyan pudding, steamed sponge pudding, omelette, fluffy tapioca omelette, mashed potatoes, cheese fudge.

Note. This is the earliest English-language document seen (Oct. 2013) which states that soy (Soyan soy note. This is the earliest English-language document)


**Summary:** Contents: Introduction (sprouted soybeans, substitutes for peanuts or peanut butter). Order surprisingly large. Romance in industry. Approves 75 recipes. List of firms (which now prepare soy bean food products in their own plant or by contract with others; 32 companies are listed with the company name, city, state, and list of soy products).

“Soy bean and several other species of beans are sprouted and used extensively as a green vegetable by the orientals. Soy bean sprouts may be used in various dishes as a home-grown vegetable. Largely because southern-grown vegetables have been made available to the dinner tables of the north in the winter-time, at reasonable prices, the sprouting of plants, excepting in the case of brussel [sic, Brussels] sprouts, to provide a winter vegetable has hardly been practiced.

“Recently an American firm has placed on the market processed soy beans for use as a substitute for peanuts eaten as beans or in the butter.


**Summary:** Dr. Chataway, Dr. Hopkins, and Dr. Malloch met with Mr. Malkin in Mr. Green’s office. Mr. Calkin’s plant in Montreal had not resumed operation, but the company’s “sales of soya flour were increasing to a very gratifying extent. One firm alone in Montreal is taking one ton weekly and may double this amount while a sale of about one hundred tons had been arranged in Great Britain. They had just taken on a master baker—a Mr. Doig—who had previously worked on the introduction of Best Yeast. With a thorough understanding of the baking trade and problems, Mr. Doig had, in the week or so he had been with them, been able to secure trial orders from many firms. At first a general discussion of milling equipment took place.”

Although soya flour costs more than wheat flour, Mr. Calkin feels that it more than “this was almost entirely made up for by the extra amount of water which the soya...
flour carries through the oven. The slower staling attained was a decided advantage and would, he believed, result in increased bread consumption. While there was very little positive proof of this to date, he referred to one baker in Vankleek Hill whose bread sales had increased by 20%. In loaves of the French type, soya flour gave a crust that was of better flavor and less rubbery. “Some whole meal [soya] flour was being sold at 9 cents, but not by his firm. The chief selling point of this latter flour was that less shortening was required.” Another use for flour was in cake icing.

“Oil so far produced in Canada has not been refined prior to sale. It is easy to decolourize the oil but more difficult to deodorize it. For paint use it is decoloured. Sherwin-Williams do this at their own plant using Frankonite sold by Chapman of Toronto [Ontario province]. Crude oil can be sold for paint or shortening for 6½–7½ cents per lb.

Canada Linseed had investigated the possibility of putting in a soya bean extraction plant but decided against it because, while their interest lay primarily in oil production, it would be necessary for them to market the 75% residue besides making allowance for the 10% processing loss. Dominion Linseed is putting whole meal [soya] flour on the market.”

“Mr. Calkin did not think that the recovery of lecithin was of immediate importance to the industry although it might well become so later.”

Some soya flour had been sent to Erinoid Limited of England. Standards and solvents were also discussed. The aviation spirits in solvents were unsatisfactory and could be detected by consumers in cooked products. Mr. Calkin “mentioned that they were required to charge sales tax on the flour sold to bakers whereas no sales tax is charged on wheat flour sold to them.” Address: Dominion Soya Industries Ltd., 2049 Harvard Ave., Montreal, Quebec, Canada.


• Summary: Dr. Kellogg is sending Dr. Dafoe a box of oranges and other fruits, plus a new table showing the vitamin content of different foods. “I am also sending you a package of soy acidophilus cheese which resembles cottage cheese in appearance. It is made from soy acidophilus milk in essentially the same manner in which cottage cheese is prepared. With the addition of thick cream, sweet or sour, and if desired, a little salt, it becomes as palatable as ordinary cottage cheese and has the advantage that it contains a high percentage of Lactobacillus acidophilus. A count made today (February 11) shows 250 billion to the gram. I thought the quintuplets might like this for a change.

“If you will consult the table you will see that the soy bean is a good source for vitamin B and also one of the best of all known vegetable sources for vitamin G. This gives an additional value to soy acidophilus milk and other soy bean preparations.” Address: M.D., Battle Creek, Michigan.


The Foreword states: “This book contains tried, safe, and inexpensive remedies for the prevention of disease and sickness, remedies which are the result of my own practical experience of nearly forty years.” “No matter how many germs get into the body, if the blood stream is clean and the blood corpuscles are in a healthy condition, you will be safe. Everyone comes in contact with many kinds of germ, but these organisms will not harm you or cause you sickness and death unless they have a place in which to propagate themselves.” Sickness and illness are “caused by violating the laws of nature and health. “If then they would resort to simple means and follow the basic laws of health that they have been neglecting–proper diet, use of pure water, fresh air, sunshine, rest, and nature’s remedies, herbs, etc., nature would restore the body to its original health.” “God has provided a remedy for every disease that might afflict us.” “The fundamental principle of true healing consists of a return to natural habits of living.”

 Virtually all of the information on soybeans and soyfoods is in chapter 34, “Food Preparations of Various Kinds” (p. 582-633). First come two sections of text: “The nutritional value of the soybean” (p. 582-84; “Taken from an address delivered by Dr. J.A. LeClerc, before the annual meeting of the American Soybean Association. Sept. 15, 1936”). “Uses of the soybean for industrial purposes” (p. 585).

Then comes an introduction soy-related recipes (p. 585-
The knowledge of the value of the soybean here in America is one of the greatest things that was ever launched in the food line in the history of the nation, and at this time of great poverty [the Great Depression], want, and disease, it is the most important thing that could be given the people.”

“Soybean milk can be made from soybeans at home for less than two cents a quart.” Soybean milk “is not only a good food, but a real medicine.” It is easily digested and highly alkaline. “I have experimented with soybeans for good food, but a real medicine.”

Then come recipes (p. 587+): Soybean cheese (fermented soybean milk, peanut butter, and tomato puree, p. 587). Soybean cream cheese (from fermented soybean milk, p. 588). Nut cheese no. 1 (fermented soybean milk, peanut butter, and soybean butter [see p. 613], p. 588). Nut cheese no. 2 (raw peanut butter, ground oatmeal flour, water and salt [no soy], p. 589). Nut milk (made with raw peanut butter and cow’s milk [no soy], p. 590). Canned soybeans (p. 592). Soybeans and rice (with sprouted soybeans). Baked beans with tomato sauce (incl. soybeans, p. 593; “Soybeans are, no doubt, the best of all beans, but the flavor is not as pleasant. This can be overcome by using various seasonings, such as tomato sauce, a little onion, and celery). Vegetable protein (wheat gluten seasoned with soy sauce, p. 597). Nut loaf (seasoned with soy sauce). Kloss’ granola (with soybean milk and soybean mash [okara], p. 599). Baked rice (natural brown rice baked in soybean milk, p. 600). Soybean coffee plus 2 recipes for Cereal coffee based on rye or wheat bran [real coffee with caffeine is not included]. Soybean broth (with soybean milk and oatmeal, p. 604-05). Oatmeal broth (with soybean milk). Soybean buttermilk (fermented, p. 605-06; “Buttermilk is an excellent article of diet for everyday use, but is especially beneficial in malnutrition, tuberculosis, toxic conditions, and intestinal infections. Soybean buttermilk has the advantage of producing an alkaline effect and is more nourishing than ordinary buttermilk. It is rich in minerals and very palatable. More nourishing than yogurt buttermilk used under various names.”). Soybean cheese (fermented soymilk, raw peanut butter, and tomato puree). Soybean cottage cheese (fermented soybean milk, p. 608). Soybeans and rice (with sprouted soybeans, p. 608-09). To sprout soybeans, lentils, or grains (p. 609). Soy patties (with soybean pulp [probably ground soybeans, not okara] and soy sauce). Gluten patties (seasoned with soy sauce, p. 610). Soybean loaf. Soybean cottage cheese loaf. Soybean milk. Soybean milk no. 2 (made from “soy meal, p. 611). How to curd [soybean] milk (p. 612). Soybean jelly (soybean milk jelled with agar-agar flakes and sweetened with malt sugar). Soybean butter (made with 1 cup water, 2 tablespoons soybean flour, and 2 cups soybean oil, p. 613). Soybean cream (blend rich soybean milk and soybean oil). Soybean ice cream (made with 2 quarts rich soybean milk, 2 lbs. malt sugar, ½ pint soybean butter or soybean mayonnaise, and 1 tbsp. agar-agar). The yolk of an egg (made with soybean flour, p. 614). Pancakes (with cornmeal and soybean mash [okara]).

This book does not call for the use of dairy milk or eggs. Concerning cow’s milk, Kloss states (p. 75): “Cow’s milk is not suited for human consumption. Half the invalids in the world suffer from dyspepsia, and milk should not be taken. Milk causes constipation, biliousness, coated tongue, headache, and these are the symptoms of intestinal auto-intoxication. Soybean milk and nut milks are excellent substitutes, and have practically the same analysis, and the danger of disease is removed.” A recipe on page 614 uses a mixture of soybean flour and soya bean oil as a substitute for the yolk of an egg.

This book contains the same detailed information on the possible dangers of aluminum cooking utensils found in the 1935 edition.

Note 1. This latter company was almost certainly founded and is owned by Jethro Kloss.

According to Doris Gardiner (Oct. 1990), the original book (of which she and her aunt each have copies) has a green hard cover. The first printing was probably done by a Mr. Brunck, who worked for the College Print Shop in Takoma Park, Maryland. She thinks Jethro self-published the book. He paid for the printing and sold the books himself. Jethro and his wife moved to Coalmont, Tennessee. There they lived with the Hiatt family, and Mr. Hyatt, owner of Longview Press (renamed The Message Press by 1964) became the book’s first legitimate publisher. His wife died in 1944. Jethro died in 1946 at age 83. The page numbers from the 1939 edition are unchanged in later editions.

Note 2. This is the earliest English-language document seen (Oct. 2013) that uses the term “Soybean cream cheese” to refer to soy cream cheese.

Note 3. This is the earliest English-language document seen (June 2013) that uses the term “soybean mash” to refer to okara.

Note 4. This is the earliest English-language document seen (Oct. 2013) that contains the term “Soybean cottage cheese” or that has a recipe for it. Address: Washington, DC.


• Summary: What is the soybean? It is a legume which was cultivated for more than 5,000 years in the Celestial Empire, which has the important characteristic of being a food of major value as a source of protein, and which can provide a large quantity of derivative foods, forage, and industrial products.

In the Soviet Union there is a Soy Institute (el Instituto de la Soya), which is continually experimenting with new soybean varieties.

A table gives the chemical composition of whole soy flour—which contains 38% protein and 22.5% vegetable oil. The soybean is also a source of many other nutrients, including vitamins and minerals. It is also a source of milk, called soymilk (leche de soya), which can be made at home from soybeans. There is no danger of tuberculosis in soymilk as there is in cow’s milk. Discusses various published experiments feeding soymilk to infants, and gives the chemical composition of Soybee and Sobee, two soy-based infant formulas. There follows one paragraph on each of the following foods: Soy cheese or tofu (el queso de soya or teo-fu). Soy sauce or shoyu (la salsa de soya o shoyu). Soybean puree (el puré de soya; made from dehulled, ground soybeans, boiled for a long time). Soy cottage cheese and butter. Soy oil and lecithin. Soy coffee and chocolate. Soy bread (bread enriched with 10-20% soy flour; good in diabetic diets). Soymilk: A table compares the chemical composition of mother’s milk, cow’s milk, and soymilk.

Address: Dr.


• Summary: Dr. Carver has made and sent to Henry Ford a preparation known as bisque powder. It is prepared by the careful blending and intermittent roasting of sweet potatoes, peanuts, and pecans. Carver used it like chocolate to make the cream filling and icing for a double-layer cake, decorated “with half pecan nuts and half blanched peanuts. It was said to be perfectly beautiful and absolutely delicious in taste... Made a little bit different from this, it makes an excellent breakfast food, and as soon as I get the soybeans you are sending me I want to try them out with this as a breakfast food made in much the same way.”


• Summary: In an accompanying letter to Mr. Grady Porter of the Tom Huston Peanut Company in Columbus, Georgia, Dr. Carver thanks Mr. Porter for the refuse scraped up off the floor of the peanut shelling plant. “I have just completed now the making of a soap from this and from the fatty acids collected from the purification of crude peanut oil. It excels, to my mind, any cleaning soap that I have ever gotten hold of. Its lathering properties are perfectly marvelous.”

Dr. Carver then writes to Henry Ford in Dearborn: “I am more pleased with this soap as it dries out, and I am very confident that soybean waste of that type could be converted into a very useful cleansing soap.

“I want to say also that the preparation, the bisque powder that I sent you yesterday for making filling and icing, should be ground very very fine like chocolate but my mill is not sufficient for grinding it that fine.”

Dr. Carver just received the box that Henry Ford (via Frank Campsall) sent him on Jan. 27. “I am delighted with every article that you have sent me. It shows conclusively how far ahead in thought and execution that you and your workers are to those who move along the lines of the least resistance... I am beginning on the soybean today and you will hear from me later. I imagine that the soybean meal would work nicely in this bisque preparation...

“With the hope that nothing will prevent you from coming down this Spring...”

Note: The letterhead states that The George Washington
Carver Foundation (Incorporated) was founded Feb. 10, 1940. The 8-member board of trustees includes F.D. Patterson (chairman), A.W. Curtis, Jr. (secretary), and G.W. Carver.


• **Summary:** In 1935 the author was appointed technical director for Soy Bean Products Co. in Chicago, where he developed the product described in this article. The brand name of the product is not given [but it was probably Soyco].

“The results of large-scale purchases by our government for lease-lend [sic, Lend-Lease] purposes have been a curtailment of production of egg whites for the domestic market, and an almost three-fold rise in the price of egg albumen.”

“This condition has brought into sharp focus a rather new product–soybean protein derivative–which can be used to replace egg albumen completely in some products, and to complement egg whites in other goods... [It] is of great interest to candy manufacturers, as well as bakers.”

“Soybean supply sources today are selling their product, not as a complete replacement material for egg whites, but rather as a complementary material whose use together with egg whites will materially reduce the cost of ingredients, in candy... Most of the research work, covering a period of 3½ years, has been carried on by Dr. M.T. Hanke of Chicago and the author of this article.” Address: Soy Bean Products Co., Chicago, Illinois.

16. Photograph of ten members of the laboratory staff (including Bob Smith and Austin Curtis) standing in warm coats in front of the food laboratory, 1942.  
• **Summary:** Over the laboratory door is written in large letters “George Washington Carver.” Negative number: unknown.

Note: This photo negative may be filed in the Ford Archives at: “Ind–Autos–FMC–Eng & Des” which means “Industry–Autos–Ford Motor Co.–Engineering and Design.”

17. Butler Food Co. 1942. ViM-ilk (Soymilk). P.O. Box 4, Cedar Lake, Michigan.  
• **New Product–Documentation:** Manufacturer’s catalog. 1942. 8 oz. can for $0.06 or 16 oz. can for $0.10. “Resembles cow’s milk. May be used in same manner, and is preferred by many to an animal milk. ViM-ilk, as it comes from the can, is of the consistency of cream, therefore should be diluted about half with sold water for drinking. ViM-ilk is purely vegetable, therefore it is pure and wholesome. This product should be kept in a cool place, if possible, in a refrigerator, as the lecithin, which is in abundance in the soybean, may cause ViM-ilk to solidify if stored in normal temperature. After ViM-ilk has become solid or sour, a fine cheese can be made from it, the same as cottage cheese is made from cow’s milk.” Wt/Vol., Packaging, Price: 8 oz or 16 oz can.

• **Summary:** This book, dedicated “To Humanity,” is basically a vegan cookbook–except for the use of a little honey. It uses no dairy products or eggs, and views a raw food diet as the ideal—although many recipes call for cooking. Following the dedication is this quote: “The human body is the temple of God and as real as God himself, because He dwells in it...”  

Under “Substitutions” (p. 21) the author notes that “Soy milk may be substituted for cow’s milk...” Under “For the infant” we read: “Advice to the mother–Almond milk is the most perfect and ideal food for the infant both in nutritional value and digestibility.” Soy sauce (p. 70-71, etc.), Savita, and Vegex are widely called for as seasonings. The soy-related recipes in this book seem extremely original and innovative; they include: Baked lima beans (with soy bean milk, p. 58). French-fried onions (with soy bean milk, p. 61). Peas cooked with potatoes and soy bean milk (p. 67). Whole wheat or barley chowder (with soy bean milk, p. 68). Tofu omelet (baked, p. 74). Tofu loaf (baked, p. 74). Tofu omelet (p. 74).

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On pages 141-43 are two charts: (1) Alkaline, acid and neutral foods (soy beans [dried or fresh], soy bean bread, and soy bean milk are listed as having an alkaline ash, whereas flesh foods, eggs, cheese, and most nuts are listed as having an alkaline ash). (2) Vegetable protein vs. animal protein. Divides various foods that are high in protein content into vegetable and animal, then ranks them in descending order of protein content. Included in the vegetable protein are: 1. (highest) Soy bean flour 39.5%, 4. soy beans 34.0%. The highest ranked animal product is dried beef 39.2%. The average protein content of 26 vegetable foods is 25.89%, compared with 21.79% for 26 animal foods.

The author, a chiropractor, died in about 1986 in a fire at about age 92. A videotape of him has been produced by the Rotondi foundation in Los Angeles.

Note: This is the earliest English-language document seen (Jan. 2007) that contains the term “Vegetable hamburgers” (or “Vegetable hamburger”). Address: Los Angeles, California.


• Summary: “Now that cottage cheese production has been curtailed, soybean curd can be used as a good substitute.”

This curd, made from soybean milk, can be “added like cheese to omelets, Welsh rabbit and creamed hard-boiled eggs, or served with other vegetables in hot dishes. Its mild, somewhat cheese-like flavor and soft texture” makes it a good as a stuffing for celery, pepper rings, or tomatoes, a garnish on salads, or mixed with salad dressing. It can also be rolled into balls and served on crisp lettuce.

There follows a description of how to make soybean milk and soybean curd on a home kitchen scale.


• New Product–Documentation: This is the world’s earliest known commercial non-dairy whip topping. Letter from Herb Kusche to Bob Rich, both of Rich Products Corp. in Buffalo, New York. 1945. March 22. “Glad to hear you are progressing favorably with your topping with the exception of the Washington delay. It sounds as if you might be on the market very soon. Let’s hope so anyway. The government restricted Taylor [Herbert Marshall Taylor] for selling ‘topping’ for about a month due to the fact that he was overselling his quota. Now I understand he has come out with a complete soy product containing no butterfat. I am going to get a carton of it and send it to you.”


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[About Herbert Marshall Taylor and Delsoy]. A photo shows Taylor. In Nov. 1942 the War Food Administration issued an order prohibiting the sale of whipping cream in America. After dairy interests forced Taylor to leave Chicago, he picked up a partner, Eric R. Swanson, who is still with him, and in Dec. 1943 started a business in Detroit. Though dairy people continued to oppose him, his “business soared. In 1944 it jumped from 1,400 to 20,000 gallons a month. He sold at wholesale, then added half pints for the home trade. Now he claims 1,500 independent distributors here [in Detroit]. But along came a War Food Administration order placing a 19 per cent limit on all fats–animal or vegetable–used in his product [which combined a milk base with vegetable fat]. WFA also cut his milk quota. So he started using soy milk as a base, producing an all-vegetable product.

An ad (below this article in Rex Diamond’s binder; original source and date unknown) is titled “What is Delsoy? It’s the dessert topping that’s winning the enthusiastic approval of housewives by the hundreds of thousands. Delsoy is the original topping made of natural vegetable products.” The ad shows illustrations of two non-dairy whip toppings: (1) In the foreground, “Delsoy Super Whip: Instant Dessert Topping” which is sold in a pressurized can. The ad states: “Introduced in August 1944, the first product of its kind, Delsoy dessert topping has gained tremendous popularity. Continuing to grow by leaps and bounds...” (2) In the background, “Delsoy: A delicious whip,” a refrigerated perishable product which is sold in a half-pint paper container shaped like a truncated cone.

Letter from H. Marshall Taylor to Mr. Holton W. Diamond, c/o Russell-Taylor Inc., 2001 S. Telegraph Rd., Dearborn, Michigan. 1945. July 6. “Dear Diamond: At the suggestion of Mr. [Bob] Smith, and with my consent, we take pleasure in handing you... ten shares of the common stock of Delsoy Products, Inc. We feel that since you have taken such a great interest in our operations, and that you would like to continue working with us, that we can possibly cement our relations by inviting you to join the small family.” At the top of the letter is “Devonshire Topping, Inc.” Just above Marshall’s signature is typed “Delsoy Products, Inc.”


Note 2. This is the earliest known commercial soy product made by Delsoy Products, Inc.

A W-2 form shows that during 1945 Holton W. Diamond (who lived at 1648 May Ave., Dearborn, Michigan) was employed by “Russell-Taylor Inc., 1951 E. Ferry Ave., Detroit 11, Michigan.” [Note the spelling of the company’s name; Diamond was working on their whip topping]. His wages totaled $552.13 in 1945. A 1946 form shows he was paid wages $68.25 by Russell-Taylor in the first quarter of 1946.

Shurtleff & Aoyagi. 1979. Feb. Tofutti & Other Soy Ice Creams. p. 22-23. Shurtleff & Aoyagi. 1985. History of Rich Products’ work with soy proteins. “In 1944 or 1945 Bob Smith (a former Ford researcher) and Herbert Marshall Taylor introduced Delsoy, a soymilk-based non-dairy whip topping. Launched in the Detroit area, it was sold mostly to the restaurant trade. In the spring of 1945 it was introduced through retail stores in New York. Delsoy was America’s earliest known commercial non-dairy whip topping. But it never became a very successful product. In part because it was not a frozen food, its distribution was limited to the Detroit area.”

Robert A. Smith. 1979. “The Ford Experimental Laboratory and the ‘Square House.”’ Interview conducted by Donald V. Baut of Dearborn Historical Museum, May 31. Pages 44-48. This is one of the best sources seen on the origin and history of this product and of Presto Whip, its counterpart in a pressurized can. Starting in the spring of 1943, Smith worked in his spare time, designed the equipment (based on the design of the equipment in the Carver Laboratory but on a larger scale), and built a plant in the old Livonia Dairy on Telegraph Road at Harvard in Dearborn; its initial capacity was about 1,000 gallons per day (one shift). The equipment in Ford’s Carver Lab was designed to produce 150 gallons of soymilk per day in a small non-stop stream. The funds needed to equip and establish the plant in Dearborn came from profits made by selling Devonshire Topping in Detroit. They began production [of Delsoy] in the Livonia Dairy “[in the latter part of 1943” (p. 45). [Note 3. This introduction date of late 1943, recalled by Smith in 1979, does not fit with the date given in several earlier documents. 1. Olmsted (April 1945) says that H.M. Taylor started making a filled dairy milk in Detroit in Dec. 1943. He did not start using soy milk until WFA cut his milk quota, apparently in 1944. 2. An undated Delsoy ad from about 1945 states that the Delsoy was “introduced in August 1944, the first product of its kind”). For the first year or so the company’s name in Dearborn was the Russell Taylor Co. Harvey Whitehouse, a Detroit dairymen who was qualified to operate both refrigeration and steam equipment, was hired to operate the plant. Smith left the Ford Motor Co. in Aug. 1945 to work full time with Delsoy Products.


• Summary: The recipes are given in two new booklets published by A.E. Staley Mfg. Co., Decatur, Illinois. “One deals with bakery formulas, the other with recipes for use in restaurants, hotels, and institutions. The baking formulary.
contains 27 tested formulas for yeast breads, quick breads, sweet doughs, pies, cakes, icings, cookies and doughnuts.” The second booklet contains “a special section devoted to foods for hospitals and institutions. In this section each recipe is accompanied by a food analysis, giving the value per serving in proteins, calories, and principal vitamins. This book will be furnished free on written request.”


**Summary:** During January and February 1945, Diamond was doing research on a “soy cheese” made by culturing soymilk curds at the Ford Motor Company’s Carver Laboratory. On Jan. 8 he wrote the words “Soy cheese” at the top of his notebook page.

Note 1. This is the earliest English-language document seen (Oct. 2013) that uses the term “Soy cheese” to refer to a Western-style soy cheese.

During March and April he worked on whip toppings. On 24 March 1945 Diamond noted in his notebook that the previous day he had made two batches of “Exptl. topping” (experimental whip topping). Concerning the first batch, he wrote: “Flavor excellent; definite improvement [perhaps compared with a sample Florence Diamond says was brought to the lab by Herbert Marshall Taylor]. Did not whip.” The ingredients were: 125 gm hydrogenated soy oil (“accident-intended to be 62.5 gm), 62.5 gm liquid soy oil, 125 gm skim soy milk, 250 gm water, 4 gm Span 20 emulsifier. 1 gm NaCl (table salt), 12 drops butter color, 2 gm B.V. meat flavor, 2 gm butter flavor, SM.”

During April, Diamond’s toppings vary from “thin” to “thick,” with some “dark” and others “soapy.” None of the 4 experimental toppings he made on 10 April 1945 whipped, but two of the three batches he made the next day did whip but were very thin. On April 13 the first batch finally whipped although it was somewhat thin. It contained 170 gm soy milk, 170 gm water, and 170 gm fat (composed of 92% hydrogenated soy oil, 5% glycerin, 2% glycercyl monostearate, and 1% Soyemuls); increasing the glycerin was the key to success. On April 19, the first topping whipped satisfactorily—in 4½ minutes; the basic ingredients were the same but the pH was adjusted after preparation (probably by adding citric acid) to 6.60 or 6.68. By April 30 the first sample was “usable.”

In May and June Diamond concentrated his research on soymilk, then started to work on ice cream in early June 1945. On June 28 (p. 80) he gave the formula for his soy ice cream then noted: “This batch was exceptionally good. The flavor was mild, not at all ‘beany,’ and the texture smooth. The fat used was hydrogenated soy oil. The mix was frozen in a hand freezer and packed in freezing compartment of refrigerator in tray. Some crystallization, or ‘iciness’ was observed after a couple of weeks.”

This Carver Laboratory film only covers the first half of 1945. Numerous other log books in this accession in the Ford Archives cover work elsewhere during the 1950s.

Note 2. This is the earliest document seen (Oct. 2013) concerning Holton W. (“Rex”) Diamond in connection with soy.

Note 3. This is the earliest document seen (Oct. 2013) concerning soy-based whip topping Address: Dearborn, Michigan.


**Summary:** Two level tablespoons of soya flour are used in the icing. Address: London, W.1.


**Summary:** “Dear Bob—Received your letter of March 14th... Bill and I are quite interested in the possible termination of ‘79’ in the near future. Do you think the butter industry might postpone the termination of restrictions on fluid cream?

“Glad to hear you are progressing favorably with your topping with the exception of the Washington delay. It sounds as if you might be on the market very soon. Let’s hope so anyway.

“The government restricted Taylor [Herbert Marshall Taylor] for selling ‘topping’ for about a month due to the fact that he was overselling his quota. Now I understand he has come out with a complete soy product containing no butterfat. I am going to get a carton of it and send it to you.

“Everything is fine in the office... We are looking forward to seeing you in Detroit very soon. Give our regards to Janet. Cordially, Herb.”

Note 1. This is the earliest document seen (Nov. 2004) that mentions Herbert Marshall Taylor or, by association, Delsoy Products, Inc.

Note 2. This is the earliest document seen (Oct. 2013) that mentions the work of Rich Products Corp. with soy.

Talk with Robert Rich, Sr., founder and chairman of the board of Rich Products Corp. 1993. July 13. Herb Kusche (pronounced “ku-SHAY”’) still works for Rich Products; he is executive vice-president, age 71. The “Washington delay” refers to the fact that Rich Products had to get the approval of 32 different governmental agencies in Washington, DC, before the company could introduce its new non-dairy Whip Topping. Finally, they got tired of waiting so they launched the product anyway without all the approvals—which came through later. “Bill” refers to Bill Meyers who was a milk inspector in the Buffalo, New York, area. Bob hired him as an auditor when he (Bob) went to Detroit as a milk market

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administrator during World War II. ‘79’ refers to War Food Order #79, which said that milk processors could process only 90% of what they had processed in the same month of the previous year (1943). This was designed to reduce civilian consumption of milk so they could use that milk to make butter, cheese, and milk powder for Lend Lease and the armed forces. Address: Detroit 4, Michigan.


Soybean Blue Book. 1947. p. 73. Category is “Toppings.” Product name is “Whip Topping.” This product is listed every year from 1947 to 1958, and is the only product in the category. In 1959 the category was discontinued.

Robert Rich. 1951. March. “Rich’s testimony.” Describes the early history of the development of this product and states that the company “put a soy cream on the market” on the last day of March [1945].


Letter from H.R. [Herbert] Kusche to H.A. Chapin. 1964. Sept. 2. Sales of Whip Topping in ½ pints decreased from $422,848 in 1946, to $111,366 in 1949, to $195 in 1953, the last year it was sold.

Shurtleff & Aoyagi. 1985. History of Rich Products’ work with soy proteins. The original “soy cream” formulation called for (in order of predominance): water, 27% soy oil shortening, corn syrup, 1.5% isolated soy protein (slurried with water), flavoring, coloring, salt, and the stabilizer they had developed (propylene glycol monostearate). The product was launched in April 1945 as a refrigerated product. It was introduced as a frozen product after about Oct. 1945. In Jan. 1946, the first ad for the product, aimed to get national distribution, was run in Quick Frozen Foods. In late 1948 Whip Topping was introduced in a pressurized all-metal container.

Note 1. This is the earliest known commercial soy product made by Rich Products of New York.

Note 2. This is the earliest know commercial product named a “Whip Topping.”

Note 3. This may well be the world’s earliest known commercial food product that uses a modern soy protein product (soy protein isolates) as an ingredient.


• Summary: Herbert Marshall Taylor is a native of Canada. When “hail, frost, and influenza” put an end to his farming in Alberta, he returned to Toronto, where he had received a university degree 6 years earlier. “He acquired American rights to a gadget which British housewives had bought in quantity to make cream from butter and milk through homogenization. He sold 30,000 in the United States, but it wasn’t a big-time success. “By 1937 Taylor had perfected a product using a milk base and vegetable fat. And he had motorized the gadget. He started selling the product to bakers in New York. It saved them $1 a gallon on whipping cream. The idea spread to other cities.”

In Nov. 1942 the War Food Administration issued an order prohibiting the sale of whipping cream in America. After dairy interests forced Taylor to leave Chicago, he picked up a partner, Eric R. Swanson, who is still with him, and in Dec. 1943 started a business in Detroit. [Note: Swanson lived most of his life in Dearborn.] Though dairy people continued to oppose him, his “business soared. In 1944 it jumped from 1,400 to 20,000 gallons a month. He sold at wholesale, then added half pints for the home trade. Now he claims 1,500 independent distributors here [in Detroit]. But along came a War Food Administration order
placing a 19 per cent limit on all fats—animal or vegetable—used in his product [which combined a milk base with vegetable fat]. WFA also cut his milk quota. So he started using soy milk as a base, producing an all-vegetable product.

“Taylor drew the fire of OPA [Office of Price Administration], too. He says it is demanding damages for overcharges which would put him out of business. But Taylor isn’t through. He grossed $267,000 last year. He added a plant in Dearborn to his start in Detroit. He’s planning to market soy milk, butter, cheese [tofu?], and frozen dessert [soy ice cream]. There is an indication that Henry Ford is interested.”

Note 1. This is the earliest English-language document seen (Sept. 2013) that uses the term “frozen dessert” to refer to soy ice cream.

Note 2. This is the earliest document seen (Oct. 2013) concerning soy-based whip topping


“The dairy lobby in Washington [DC] is powerful,” says Taylor. ‘But I’ve been fighting the dairy interests for 12 years. They’ll never stop me.”’ A photo shows Mr. Taylor.

An ad below this article (not in The Detroit News, but in Rex Diamond’s scrapbook; original source and date unknown) is titled “What is Delsoy? It’s the dessert topping that’s winning the enthusiastic approval of housewives by the hundreds of thousands. Delsoy is the original topping made of natural vegetable products.” The ad shows illustrations of two non-dairy whip toppings: (1) In the foreground, “Delsoy Super Whip: Instant Dessert Topping” which is sold in a pressurized can. The ad states: “Introduced in August 1944, the first product of its kind, Delsoy dessert topping has gained tremendous popularity. Continuing to grow by leaps and bounds...” (2) In the background, “Delsoy: A delicious whip,” a refrigerated perishable product which is sold in a half-pint paper container shaped like a truncated cone.


• Summary: This is a contract between Frank Mitchell and Rich Products Corporation. “Whereas Mitchell has invented and owns a certain secret formula for the preparation of a substance for human food called ‘Whip Topping,’ and Whereas Rich desires to manufacture the said food product and sell and merchandise the same...” Each pays the other one dollar. Mitchell sells to Rich the formula and the right to use it, and improvements on it, in the manufacture of a Whip Topping and to sell the product. Rich agrees to manufacture the Whip Topping and to pay Mitchell a specified variable royalty on every half pint produced—the royalty depending on the sales price. The term of the contract is one year, after which it may be renegotiated. The agreement contains a “non-compete” clause which affects Mitchell.

Note 1. This is the earliest English-language document seen (Oct. 2013) that contains the term “Whip Topping” or that concerns the etymology of whip topping.


• Summary: It looks like cream, tastes like cream, and whips like cream—but it is not heavy cream and has nothing whatsoever to do with a cow. “It is a combination of vegetable protein, vegetable fat, vegetable carbohydrates, cottonseed and soybeans with corn syrup for sweetening.” It whips at room temperature and holds its shape for 2 hours. Grocery stores in Detroit (Michigan), Toledo (Ohio), and New York “now handle vegetable ‘cream’ in half-pint cartons for around 20 cents and do voluminous business.”


• Summary: “Dear Diamond: At the suggestion of Mr. [Bob] Smith, and with my consent, we take pleasure in handing you herewith Certificate No. 12 for ten shares of the common stock of Delsoy Products, Inc. We feel that since you have taken such a great interest in our operations, and that you would like to continue working with us, that we can possibly cement our relations by inviting you to join the small family.”

At the top of the letter is “Devonshire Topping, Inc.” Just above Marshall’s signature is typed “Delsoy Products, Inc.” Address: President, Delsoy Products, Inc., Graybar Building, 420 Lexington Ave., New York 17, NY. Phone: Murray Hill 3-3079.


• Summary: “Delsoy is the new brand name for Devonshire Topping, all-vegetable whipping product. And the name of the manufacturing firm has been changed from Devonshire Topping, Inc., to Delsoy Products, Inc., Herbert Marshall Taylor, the manufacturer, has announced. Headquarters are in the Graybar Building, New York City.

“Delsoy Topping has had an interesting history, having encountered the usual pitfalls of a new food product that is bedeviled with bureaucratic interference and the opposition of powerful economic interests.
“Topping is the name bakers have for the fluffy white dressing they use on the top of pies. Whipped cream is the traditional topping.

“Taylor began over a decade ago by manufacturing and selling a machine with which bakers could whip up their own cream from mixtures of powdered milk and butter, an operation saving them a dollar a gallon.

“When, as he says, the Chicago creameries put him out of business, he moved to Detroit and began to manufacture the topping to sell through retail stores. The product was made from a milk base and a vegetable oil until WFA [War Food Administration] cut the firm’s milk allotment. Then Taylor switched to a soy milk base and the topping became an all-vegetable product. According to the New York Herald Tribune it whips to two and one-half times its original volume and looks, tastes and acts like whipped cream.

“Taylor claims 1,500 independent dealers for Delsoy Topping in Detroit. He has added a plant in Dearborn to the one in Detroit, and announces that he plans to manufacture and sell soy milk, soy chocolate milk, soy butter, soy cream cheese and ice cream. This spring the topping was introduced through retail stores in New York City.”

A large photo shows Herbert Marshall Taylor using a spatula to scoop his whipped Delsoy Topping from a metal bowl onto the top of a pie. Nearby is an eggbeater and a truncated conical carton, in which Delsoy is sold.

Note 1. Rich Products Corp.’s Whip Topping was introduced shortly after Delsoy, and sold in the same shaped container.

Note 2. No mention is made in this article of Delsoy sold in a pressurized can.

Note 3. This is the earliest English-language document seen (Oct. 2013) that uses the term “soy cream cheese.”

Note 4. This is the earliest English-language document seen (Sept. 2013) that uses the term “soy ice cream,” but in the form “soy cream cheese and ice cream.”


• Summary: At some unknown date (after Sept. 1945 and probably before Aug. 1947) “Rex” Diamond wrote a summary of the work he had done at Henry Ford’s George Washington Carver Laboratory in Dearborn: 1. Chlorophyll and its derivatives: Edible and inedible chlorophyll compounds. 2. Soybean oil. Two types of investigations were made: (A) Deodorizing and deflavoring. “Experiments were made to determine the optimum conditions for removing the unpleasant odor and flavor from the oil produced at the Rouge Plant. There were found to be: Temperature of the oil, 140°C; temperature of the steam, 70-80°C; pressure, less than 4 inches of mercury; time, 40-60 minutes. (B) Extraction of oil from wet soybean flakes following alkaline extraction of protein.” Only 50% of the oil was recovered in this process compared with 97% in the extraction of the whole dry flakes with hexane. However the flavor of the oil was better.

3. Gelatinous form of soybean protein. “During experiments which were directed toward obtaining a ‘soy cream’ which would not curd in coffee, a ‘protein’ with phenomenal gelatinous properties was prepared... It was thought such a ‘vegetable gelatin’ might find use in the food...
and pharmaceutical industries... Note 1. This is the earliest English-language document seen (Oct. 2013) concerning a non-dairy coffee creamer, which it calls “soy cream”; in this case it was made with soy protein.

“4. Wheat Milk. Several attempts were made to make milk by process similar to that used in making soy milk, but were largely unsuccessful... 5. Peanut Milk. A few experiments were conducted with peanut protein. One batch of milk was made, of unpleasant color and flavor, due to the inclusion of the red ‘skins’ and the staleness of the nuts themselves.

“6. Soybean ‘dairy’ products. (A) Soy Milk. Since the manufacture and development of soy milk is one of the major projects of the Carver Laboratory, much of my work has had to do with this product. Investigations were largely in six general fields. (B) Soy Cream. (1) Non-curding cream for coffee. Quite a large number of experiments have been made to prepare a ‘soy cream’ which will not ‘curd’ when used in coffee. These experiments are still proceeding. As yet, no palatable non-curding cream has been prepared. (2) Soy whipping cream. Various types of vegetable fats, emulsifiers, and proportions of these with ‘skim soy milk’ were tried in seeking a cream that would ‘whip’. ‘Sweetex’ fat, manufactured by Procter and Gamble, homogenized at pressures under 500 pounds per square inch with soy skim milk makes an acceptable ‘topping’ which ‘whips’ and resembles whipped cream in appearance. The flavor of this product is generally considered to be an improvement over the flavor of regular soy milk, probably due to the dilution of the soy protein with fat and air. [Note 2. No mention is made of mono- or diglycerides. See Florence Diamond interview of Dec. 1992.]

“(C) Soy ‘cream cheese’ spreads. Different methods of chemically ‘souring’ straight 16% soy cream were tried, using citric acid and calcium chloride as precipitating reagents, and different combinations of the drained and pressed precipitate with pimentos, pickles, and other flavoring materials were made. A number of different varieties of ‘cheese spread’ of this sort were made. The texture and flavor of these spreads are comparable with the flavor and texture of the common spreads made from cow’s milk.

“(D) Soy ‘Cheddar’ cheese. A number of attempts were made to prepare an acceptable ‘hard’ or ‘Cheddar’ cheese from soy milk by chemical souring and mechanical pressing. In all cases, however, the pressed cake was brittle, with a tendency to crumble, quite different in texture from ordinary Cheddar cheese. The flavor in each case was considerably inferior to ordinary American cheese.

Note 3. This is the earliest English-language document seen (Oct. 2013) that uses the term “Soy ‘Cheddar’ cheese” to refer to a Western-style soy cheese.

“(E) Soy ice cream. (1) Refrigerator tray type. It was found that by substituting soy topping for whipping cream and 16% soy cream for coffee cream specified in ordinary cow’s-milk recipes for refrigerator ice cream, an acceptable product could be obtained.”

Note 4. This is the earliest English-language document seen (Oct. 2013) that contains the term “Soy whipping cream” (regardless of capitalization).

Note 5. This is the earliest English-language document seen (although unpublished) (Sept. 2013) that uses the term “Soy ice cream” (p. 250).

See also Diamond’s “Laboratory Notebook,” starting Feb. 1945. Address: Dearborn, Michigan.


*Summary:* “This paper was prepared by members of the staff of Spencer Kellogg and Sons, Inc., who are among the largest producers of soybean products and leading exponents of industrial research. Their research laboratory is one of the oldest and most distinguished in American industry. Its head, Dr. Alexander Schwarcman, was recently awarded the Schoellkopf Memorial Medal for achievement in chemical research. In this paper the discussion of edible soybean oil is by Frank Mitchell; soy flour by H.A. Olendorf; industrial soybean oil by Edward H. Valance, and soybean oil meal by J.E. Johnson.”

Note: Frank S. Mitchell later developed a non-dairy whip topping for Rich Products Corp. of Buffalo, New York. After leaving Rich Products, he started his own company, Mitchell Foods, Inc. in Fredonia, New York and manufactured the whip topping he had invented. That product was fairly successful, but his coffee creamer, Perx, was very successful. Address: Spencer Kellogg & Sons, Inc.


*Summary:* See next page. This quarter-page black-and-white ad is the first ad run by Rich Products Corp. “Whip Topping is a frozen pure-soy cream for whipping and baking. Will last indefinitely if kept properly frozen. Whips up in 45 seconds. Triples its bulk. Is twice as nourishing as heavy cream. Is nonfattening. An Attractive margin of profit. Samples of Whip Topping and additional information sent on request.”

A photo shows the carton, shaped like a truncated cone. Below the product name is written: “Ideal for desserts, salads, pastries, jello.”

Note 1. This ad brought responses from 134 distributors. From among them, Rich Products Corp. appointed its first 100 distributors. Note 2. This is the earliest published document seen (Dec. 2003) concerning Rich Products Corp. and soy.

Note 3. This is the earliest published document seen
A New Frozen Food!

WHIP TOPPING

is a frozen pure-soy cream for whipping and baking. Will last indefinitely if kept properly frozen. Whips up in 45 seconds. Triples its bulk. Is twice as nourishing as heavy cream. Is NON-FATTENING.

An Attractive margin of profit.

Samples of Whip Topping and additional information sent on request.

RICH PRODUCTS CORP.
1149 Niagara St., Buffalo 13, N.Y.

(Oct. 2013) that contains the term “Whip Topping.” Address:


• Summary: Mr. Diamond wants to manufacture a soy-based whip topping. In response to Mr. Diamond’s letter of Jan. 31, Ken Gunther writes: “I do not know of such a source at the present time, however, it is quite probable that you would not have very much difficulty in having such a source develop, if a sizable market should appear for such a material. We have not produced pure protein on a commercial scale ourselves, but we have given considerable thought to the matter and would be interested in going into the matter with you if your plans are sufficiently well advanced.

“I have had a desire for some time to visit the Carver Laboratories at Dearborn and it may be possible for me to get to Dearborn within the next month. If this can be arranged I am wondering if you will be available for a discussion of the isolated protein matter.” Address: Research Director, Central Soya Company, Inc., Decatur, Indiana. Phone: 336.


• Summary: “In the family of vegetable-fat dairy replacements, the Big Brother Who Made Good is oleomargarine. The other family members—including whipped topping, coffee whiteners, and mellorene—work to be equally successful... Today vegetable whipping preparations, both powdered and aerosol, reportedly outsell dairy whipping cream.” Two companies long associated with the dairy industry now make powdered coffee whiteners or creamers: Carnation makes Coffee-mate (launched in 1961, and now the market leader), and Borden’s makes Cremora (launched in the autumn of 1963). Photos show a jar of each product. “The non-dairy coffee whitener market” is now experiencing fast growth. These products have two advantages over cream: they are less expensive and they keep longer. It was during World War II “that ‘ersatz’ dairy products got their big boost, due to some shortages of dairy products on the home front, and the need to develop non-spoiling dairylike foods for military men on the move.

“Since that time whipped topping and coffee whiteners have made important strides, especially in the institutional field where lower cost and increased shelf life are telling advantages. On almost all coffee vending machines, the ‘cream’ button releases what is actually a vegetable-base cream replacement, either powdered or liquid.”

“Robert E. Rich, whose Rich Products Corp. sells frozen liquid Coffee-Rich, predicts that within five years vegetable fat coffee whiteners will be outselling dairy cream for coffee. Rich Products, of Buffalo, New York, is a pioneer in the non-dairy field. In 1945 Bob Rich, who then (as now) operated a large dairy company, learned of work done by the George Washington Carver Laboratories [of the Ford Motor Co., Dearborn, Michigan] on making milk and cream from soy beans, and used this work plus other research to produce a soy cream that would whip. Rich’s Whip Topping produces more volume when whipped, remains firmer longer, combines with any acid fruit or juice, and costs less. This was followed in 1961 by Coffee-Rich, and this is where the company ran into a barrage of legal battles...

“Rich’s Coffee-Rich is probably the largest seller of liquid non-dairy coffee whiteners. Carnation’s Coffee-Mate is said to be the leader among the powdered cream... In the whipped topping field, Rich is said to be the largest seller of liquid topping. General Foods’ Dream Whip, introduced in 1957 in powdered form, is the leader among the dry packaged whips. Lever Bros.’ Lucky Whip mix, introduced in 1961, is considered in second place. Lucky Whip is also sold in aerosol containers, as is Whip Topping.”

“H.W. Diamond, research vice-president of Rich Products, who holds the ‘Diamond process’ patents for vegetable fat whippable emulsions, foresees a fine future for non-dairy products. ‘Generally speaking, vegetable fat replacements for dairy products can be created,
manufactured, distributed, and sold at a lower cost in man hours of effort than can comparable dairy products. The vegetable fat products represent a more efficient utilization of the food producing capacity of the soil and the labors of man,” he said.”

One ad for Rich’s Coffee Rich shows it being poured into a cup of coffee. “New non dairy coffee compliment. Shipped frozen. Keeps 3 weeks after thawing in your refrigerator.” It is sold in a Pure Pak carton. A second ad states “Rich’s Coffee Rich wins again!” A Wisconsin cow, so labelled, is being carried away in a cage. The sign across the top which read “Legally Dangerous” has been changed to “Legally Meek,” since Coffee Rich won a big legal victory in the dairy state of Wisconsin. Coffee Rich can be sold there and it need not be labeled “imitation cream.” Rich has now won this legal battle in 7 states.

Note 1. This is the earliest document seen (Jan. 1999) that uses the term “coffee whiteners” (or “coffee whitener”). It is also the earliest document seen (Jan. 1999) that uses any term to refer to this new product category, and the earliest document seen (March 2001) concerning the etymology of such products.

Note 2. This is the earliest English-language document seen (Sept. 2013) that uses the term “mellorene” to refer to a frozen dessert made with vegetable oils instead of butterfat.

Note 3. This is the earliest English-language document seen (Sept. 2013) that uses the word “dairylike” to refer to products resembling dairy products.

Note 4. This is the earliest document seen (Oct. 2013) that contains the term “whipped topping.” Address: Assoc. editor.

• Summary: “To anyone interested in unusual foods soy cheese is indeed fascinating. While it will never become popular in this country it is worth knowing about and trying at least once.

“Soy cheese or curd is known to the Chinese as tofu and it has been aptly described by them as ‘the meat without a bone.’... The bean curd or soy cheese is the coagulated casein of the soybean and is made from soy milk very much as we make cottage cheese. The result is a white, very soft, watery substance, that can be pressed into a cake or soft cube. It is an easily digested food, fairly high in protein, and can be used as a meat, egg, or fish substitute, as a cheese, or as a topping or dessert.

“Every Oriental settlement has its tofu factory or factories which supply the restaurants and markets with fresh cheese. The methods used in some of them are very crude and primitive but the result is an excellent cake of cheese. There is an interesting little place in the heart of new Chinatown in Los Angeles run by two old Chinese who claim no knowledge of English, and can’t be bothered with curious visitors. They did, however, allow me to watch from a distance. A large size coffee mill run by a little motor ground the beans. The curds were cooked in a clean wash tub and the cakes were pressed between two boards held down by a wooden bar which was attached to the wall at one end and weighted at the other end with a pail of sand. Naturally their output was limited but their product was excellent. Here was the old world working in the midst of the new making an ancient food that was yet new and novel.”

Describes how to make tofu at home (vaguely), how to store it, basic preparatory techniques, and serving suggestions. It is delicious as a dessert “Some ingenious cooks even use it for cheese cake.” Canned tofu is more in demand than fresh because it is more widely available. “Canned it is known as soy cheese, soy food or soy curd and the taste, texture and moisture varies with the different brands.”

“Soy cheese will never become popular in this country. A certain amount will always be used, however, by the vegetarian, especially by those who do not use any animal products whatsoever [i.e., vegans], and by those who have developed a taste for it. It is an unusual food that does not appeal to everyone. It is becoming more and more popular in corrective nutrition because it often fills a need in the special diet.

“The meat without a bone’ is one of the interesting variations of the versatile bean. This ancient food is gaining a toe hold in our American diet and is filling a dietary need for many persons.”

A photo shows a woman in a Korean market selling cakes of tofu on a round woven bamboo tray. Address: Author of “The Useful Soybean” [California].

• Summary: See next pages. These six glossy black-and white prints of old photographs were sent to Soyfoods Center by Judith A. Maurer (Asst. Secretary, Rich Products Corp., P.O. Box 245, Buffalo, New York 14240). Most are undated, but they are probably from the mid-1940s. They include: (1) An attractive lady in a black dress and high heels standing behind a table in a Rich’s Whip Topping booth at a trade show. An oval sign reads: “Costs less. Tastes better.” (2) Another booth for Rich’s Whip Topping. (3) A man’s hand holding an aerosol can of Rich’s Whip Topping. Written across the bottom: “Always Fresh!” (4) The same can standing upright. (5) A lady in a white dress standing behind a table in a Rich’s Whip Topping booth in Los Angeles, Oct. 1946. (6) Three containers in one photo: (1) A small aerosol can of Rich’s Whip Topping–Contains no milk or Milk Fat! (2) A tall Pure-Pack carton of Rich’s Whip Topping. A small aerosol can of Sundi-whip–Fountain Topping.


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• **Summary:** “... manufactured by Rich Products Corp., Buffalo. Distributor is Famous Frosted Foods, New York.”

• **Summary:** “The soybean ‘cow’ is giving a new kind of vegetable cream which is selling frozen in half-pint cartons, to whip up for toppings.

“It’s a laboratory product in which soy protein joins with a vegetable fat, carbohydrates, salt and flavoring.”

Defrost it until it is just soft, then add a dash of vanilla and sugar to taste. The stuff quickly whips up just like whipping cream—to three times its original volume. And it tastes good!

Note: This product was known (by March 1945) as “whip topping” and made and sold frozen by Jan. 1946 by Rich Products Co. of Buffalo, New York.

• **Summary:** Diamond gives material costs per day and per gallon for each of the 4 soy-based products listed above based on a production rate of 2,000 gallons per day. “I have come to the conclusion that the cheapest, most practical way to obtain the protein component of the soy bean foods is to purchase it from a large-scale processor. A spray-dried commercial product has advantages other than low cost. It can be stored without refrigeration, requires little storage space, and is light and much easier to handle than a ‘curd’ which contains 95% water, has to be pumped from place to place, and must be used immediately.”

“The Carver Lab protein cost us more than 5 dollars per pound to make, whereas chemically isolated industrial soy protein sells at 15 to 18 cents per pound... his use of skim milk powder [dairy, not soy] was a principal reason why [Herbert Marshall] Taylor, during October, November, and December of 1944, at a production rate of about 1,200 gallons per day, was able to make more than $25,000 profit each month.

Diamond estimates that to process 2,000 gallons of liquid per day, the basic manufacturing equipment (but not all equipment) would cost roughly $17,675. He would like to make 1,000 gallons of topping, 1,800 gallons of ice cream, 425 pounds of cheese, and 50 gallons of chocolate malted per day. “If we had an operating fund of $10,000 this would bring the capital investment required to start a ‘soy bean dairy’ to about $55,000. Of course, if we could buy some of this equipment used, we could whittle this down a little.

“I believe you are right in thinking Rich [Bob Rich of Rich Products Corp.] has something in freezing his product
[soy-based Whip Topping].” The late fall months, which include Thanksgiving and Christmas, are the months of peak demand for whip topping. But Diamond does not think he can get his proposed new company started by that time. He has “a feeling that research work along the line of soy foods is going on all over the country, and it just might be possible that someone else is as smart as we are.” He discusses The Borden Company, The Glidden Company (“the largest producers of industrial soy protein in the world”), the A.E. Staley Mfg. Co., and Central Soya.

“Will you give me a ring when you have looked over these data and let me know what our next step should be?”

Note: Arthur Smith was an attorney who Rex met through Florence Diamond (Smith lived 2 doors down the street from the Diamond family on Elmwood in Dearborn) and who helped Rex start Vegetable Products Corp. and find investors. Later, president Eisenhower appointed Smith a judge to the U.S. Court of Customs and Patent Appeals in Washington, DC. Address: 1648 May St., Dearborn, Michigan.


• Summary: “For the past three years I have been employed as an organic chemist at the George Washington Carver Laboratory of the Ford Motor Company, acting as chief chemist for a portion of that time. During the course of experimentation on soy bean foods, chlorophyll pharmaceuticals, and other biochemical problems, I originated some developments in soy foods which I believe are valuable...

“The patents now pending relate to a synthetic whipping cream, and similar soy bean products. I believe these products are unique. Especially popular among our visitors at the Carver Laboratory is a vegetable ‘cream cheese’ flavored with pimentos, chives, and the like.”

Diamond would like to meet with Joyce, show him samples, and discuss granting him a license to manufacture these foods.

Note: This letter was “ghost written” for Diamond by Judge Arthur M. Smith. Address: 1648 May St., Dearborn, Michigan.


• Summary: “The Rich Products Corporation, 1149 Niagara St., formed only a year ago, has hit the post-war consumer market with a new whipping cream derived from soybeans. Demand is exceeding production. The product already is being marketed in 30 states, Alaska, Hawaii and Bermuda, and will be distributed in other areas.

“Headed by the youthful Robert E. Rich, the company markets the soybean cream under the trade name of ‘Whip Topping.’ The product consists of soy protein, vegetable fat, carbohydrates, salt, flavoring and coloring. The soybean cream, packed in half-pint cartons, whips exactly as regular cream. It puffs up quickly to triple its bulk and may be used for dressing up pies and cakes and other delicacies.

“The company has spent nearly $60,000 for new plant facilities and machinery to increase production. Mr. Rich said it is the nation’s only producer of soybean cream.

‘We are producing approximately 1,000,000 half-pints a month but we expect we will have to step up production further in the near future,’ Mr. Rich said. ‘Our plant is working 24 hours a day, seven days a week and employs 47 workers.’

“Mr. Rich also is owner of the Wilber Farms Dairy, which is housed in the building in front of the structure occupied by Rich Products.

“Mr. Rich said the volume of sales of the soybean product already exceeds milk sales by the dairy.”

A photo shows Robert Rich and employee Marshall Golding standing next to a mixing vat. Rich is examining a temperature gauge as Golding “dumps a 50-pound cake of soy fat into a pasteurizer containing soy milk.” The caption reads: “Soybeans offer competition for ‘Bossie.’”

Note: In the early years, when Rich Products Corp. used soy protein as the protein source in its non-dairy products, it
obtained the protein from defatted soybean flakes purchased from the Archer-Daniels-Midland Co. (ADM). Rich then used hot water to extract the soy protein from the flakes. In effect, he was using isolated soy protein as the protein source for his whip topping.

• Summary: A photo shows Rich’s Whip Topping in a half-pint sanitary Pure Pak carton, designed for more convenient storage and easy pouring. “Whip Topping, said to be non-fattening and highly nutritious, is made from pure soy cream…”


• Summary: The story of Rich Products Corp. “Long before present shortages developed, the Wilber Farms Dairy of Buffalo foresaw an extended scarcity of whipping cream. Wilber’s president, Robert E. Rich, then formed the Rich Products Corp. and began experimenting with a substitute made from soybeans. Now the new product is hitting the market under the brand name ‘Whip Topping,’ with initial distribution in 30 states, Alaska, Hawaii, and Bermuda. Other areas will be added as more product becomes available.

“Frozen package–Whip Topping consists of soy protein, vegetable fat, carbohydrates, salt, flavoring, and coloring. The mixture is sold in a frozen state and is said to fluff up like regular cream.”

Note: This is the earliest major article seen on Rich Products Corp. It is not clear exactly what is meant by the term “soy protein.”

• Summary: Contains two recipes for “Mock almond paste.” The second calls for “4 ounces soy bean flour.” This paste, an alternative to icing, is English in its origin.

The sides of a fruit cake or Christmas cake are seldom iced–a tradition whose origins are obscure.

A portrait photo shows Marjorie Elwood.

• Summary: A photo shows an air stewardess “cutting a cake frosted with Whip Topping, a soy product. The cake is pictured atop other items taken on the first weekly air-freight shipment of fresh and frozen foods from Los Angeles to Alaska recently initiated by American Air Lines. The Whip Topping used on the cake is a frozen soy cream for whipping and an ingredient in desserts and salads. It was introduced by Rich Products Corp., Buffalo, New York.

“Over $60,000 has been spent by the firm in erecting a modern plant and purchasing new equipment to handle the consumer demand for Whip Topping, distribution of which is nationwide.

“Whip Topping is a pure frozen soy cream containing soy protein, vegetable fats, carbohydrates, salt, flavoring and
The cream whips to three times its bulk in less than a minute. It is a perfect topping for desserts, cakes, gelatine and salads.

"’We are producing approximately 1 million half-pints a month,’ said Robert E. Rich, president of Rich Products Corp., and also president of Wilber Farms Dairy of Buffalo, ’but we expect we will have to step up production further immediately. Our plant is working 24 hours a day, 7 days a week.’"

48. Photograph of George Washington Carver Laboratory employees. 1946.

• Summary: Front row (left to right): Unknown (4th from left), Clem Glotzhober, Alberta Hardy, Florence Barbier, Mary Wallace.


  This research laboratory, established by Henry Ford in honor of George Washington Carver, was located in Greenfield Village, Dearborn, Michigan. Address: Dearborn, Michigan.


• Summary: “Finish for desserts: A word here about Rich’s Whip Topping, which we don’t report as being new (it was introduced more than a year ago), but as economical and practical. It’s a frozen product consisting of soya protein, vegetable fat and flavorings, and when beaten up, supplies a snowy white, whipped cream-like finish to any number of desserts.

  “A half pint costs about twenty-eight cents, whereas the same quantity of heavy cream is several cents more. Not only that but heavy cream must be beaten within a short time of serving, while the topping maintains its body and consistency for hours, if not for an actual day or more.”

  Comparison tests of the two products at The Times are described. It takes 4 times as long to beat up the whip topping with a hand-beater.


• Summary: A directory and information book for the soybean production and processing industries—but with much greater emphasis on processing and utilization. One of the most valuable sources of worldwide information on soybeans. During the period from 1947 to the 1960s, the Blue Book was usually published in March or April of each year.

  In the 1966 Blue Book (p. 28-29) are two full-page
tables titled “World Soybean Production.” The first gives acreage in 1,000 acres, yield in bushels per acre, and production in 1,000 bushels. The second gives hectarage, yield in kilograms per hectare, and production in 1,000 metric tons. Figures are given for: 1950-54 (average), 1955-59 (average), 1963, 1964, and 1965. Statistics are given for the following countries: North America: Canada, United States. South America: Argentina, Brazil, Colombia, Paraguay. Europe: Italy, Rumania, Yugoslavia, Other Europe (excluding USSR). USSR (in Europe and Asia). Africa: Nigeria, Rhodesia, Tanzania. Asia: Turkey, China (Mainland), Cambodia, China (Taiwan), Indonesia, Japan, Korea (South), Thailand. Estimated world total. Address: Hudson, Iowa.

   • Summary: Arranged alphabetically by product category: Beverages; Breakfast Foods; Soy Butter (probably like margarine; the only source is Daglish Health Foods in Santa Cruz, California); Canned Green Soybeans (Note: These are probably canned mature green vegetable type soybeans. In the 1948 Bluebook this section is titled “Canners of Green Vegetable Soybeans.” List compiled from 1947 edition of Canners’ Directory, published by the National Canners Association); Coffee Substitutes; Cookies, Crackers, Toasts and Wafers; Soybeans for Cooking and Sprouting; Soy Flour, Flakes and Grits; Soy Flour Mixes; Soy Food Consultant (Donald S. Payne); Health Food Stores, Supply Houses; Lecithin; Macaroni, Spaghetti, Noodles; Meat Substitutes; Soy Milk; Sprouts; Roasted Soybeans or Nuts; Sausage Binders; Salad and Cooking Oils, Shortening; Soy Sauce; Toppings [Whip]; Whipping Agents.

   • Summary: “... has been awarded seals of Good Housekeeping and Parents’ Magazine.”

   • Summary: See above. A small (1.75 by 2.5 inch) black and white ad. “Delicious and nutritious for desserts, salads, etc. At all fine food stores and grocers.” There are two seals: “Guaranteed by Good Housekeeping,” and recommended by “Parents Magazine.” Illustrations show: (1) A small gable-top carton of the Whip Topping. (2) A parfait topped with a cherry and plenty of Whip Topping.

   • Summary: This is a contract between Rex Diamond and Vegetable Products Corporation (VPC). “Diamond has knowledge of processes by means of which it is possible to manufacture a whipped topping and certain other food products, chiefly from materials of vegetable origin.” He has applied for at least one patent. He “agrees to grant to the corporation the sole and exclusive right and license to make, have made, and sell products made under each and every one of Diamond’s inventions...” Hamel signs this agreement as President of VPC, and Diamond as its treasurer.

Talk with Florence Diamond. 1993. Jan. 27. Rex had plenty of good ideas but no money. He found investors and set up this corporation to raise money in order to get his non-dairy whipped topping on the market. Florence recalls that there were about 5 investors, who probably contributed equal amounts of capital, totaling about $10,000 to $20,000—a relatively small amount. The investors were John J. Hamel Jr., A. Roy Barbier (Florence’s father), Robert Walker, Elmer Hitt, and probably one other man. Rex did not invest any capital. The corporation was headquartered in Birmingham, Michigan, which was where John Hamel, the president, had his office and lived. However Hamel didn’t participate much in VPC. It was about 2 months after this agreement was signed that VPC began to manufacture Wonder Whip at Bodker’s Dairy in Detroit. Address: 1. Chemist, 1648 May St., Dearborn, Michigan; 2. John J. Hamel, President, Vegetable Products Corp., 1161 South Adams St., Birmingham, Michigan.

**THE TOPS IN TOPPING.**

- Tops on Strawberries
- Tops on Cakes
- Tops on Pies
- Tops on Gelatins

**TOPS WITH ALL THE FAMILY**

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**Wonder Whip**

**RECIPES**

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**Vegetable Products**

**Corporation**

Saline, Michigan

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**SHERRY CREAM:** 1 envelope gelatin, ½ c. cold water, ½ c. boiling water, 2 T. lemon juice. ½ c. sherry wine, ½ pt. Wonder Whip.

Soften gelatin in cold water. Add boiling water and stir until completely dissolved. Add sherry and set aside to cool. Fold lemon juice into stiffly beaten Wonder Whip then the jelly when it has begun to thicken. Pour into a mold to set or pile in serving dishes and chill. Serve with crushed fresh raspberries or other fruit.

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[neutral spray-dried soybean protein isolate]. About 30-40 parts fat having a suitable melting point, such as a margarine or butter fat, and containing a monoglyceride emulsifier are homogenized at 105°F with 60-70 parts of a 3% solution of the neutral soybean protein. According to Diamond the composition of the resulting emulsion is approximately equivalent to "heavy cream" but somewhat lower in fat and protein. The soybean protein is used in proportions of about 1-2% by weight of the total ingredients.”

Talk with David and Harvey Whitehouse, formerly of Delsoy Products. 1992. Feb. 4. Originally Rex Diamond worked for Henry Ford (with Bob Smith) at Carter Laboratories. There he learned about use of soybeans in foods. Rex Diamond was never employed full time for Delsoy Products. In the early days he worked at the company for a day or two now and then in the plant doing soybean extraction—not as a consultant, but as a friend of Bob Smith’s. Then Rex pulled a fast one. He left, set up his own company named Vegetable Products Corp. in Saline, Michigan (located inside Henry Fords’ old soybean extraction plant there), and began to make a soy-based whipped topping named Wonder Whip (non-pressurized in a cone-shaped container), which was designed to be whipped with an egg beater. But he did not know how to run a food plant. One day Bob Smith was visiting one of his chain store accounts when the buyer told Bob that Rex Diamond was telling all the distributors that Delsoy Products had quit making their topping—so that Rex could take over the accounts. Diamond had so many problems with the quality of his product that his company never got off the ground, and in less than a year went out of business. He tried to sell his used equipment to Delsoy.


The Label (blue on white), when folded, becomes a truncated cone, and contained ½ pint of Wonder Whip. Note that the ingredients (shown above) are apparently not in descending order of predominance. “Not so fattening. Hospitals use it. Delicious on jello, cakes, pies, puddings. Keep cool. Easy to use. Nothing to add. Shake contents well and whip.” On the 1.75-inch diameter top is written “The Tops in Topping. Sales Office—L.C. Tabor.”

Ad #1. Wonder Whip recipes. 1947-49. 2.25 by 3 inches, 4 panels. Describes the product (It contains “easily digested hydrogenated vegetable oil, energy-producing dextrose from corn and nutritious soya protein”’) and gives recipes for Frozen Pudding and Sherry Cream. Ad #2, 1948. “The tops in topping. Wonder Whip.” Tops on strawberries, cakes, pies, or gelatins. Tops with all the family. Ad #3, 6-14 Nov. 1948. “Wonderful desserts made from sensational, new Wonder Whip. $0.25 per half pint.” Demonstrations Nov. 5 and 6 at 8 packers outlets. Ad #4, 1948. “55,000 customers asked where to buy Wonder Whip.” They asked this after tasting the product in the Wonder Whip booth (a photo of which is shown) at the Michigan State Fair. The ad gives the names and addresses of 95 grocery stores in Detroit that sell Wonder Whip for $0.25 per half pint. Mass demonstrations of Wonder Whip will be conducted in 20 of Candlers Quality dairy Shops. Ingredients: 28% vegetable [soy] proteins, water, salt, vitamins A, D, thiamine, B-1, riboflavin B-2, niacin, hydrogenated vegetable oil, calcium, sodium, phosphorus and chlorine, also rich in dextrose, artificial flavor and color added. Wt/Vol., Packaging, Price: ½ pint wax paper carton in the shape of a truncated cone. Refrigerated.


• Summary: The soybean drying oils vary in character according to the nature of the treatment by which they are modified. The attack has been generally two-fold: first, by segregation of the drying and non-drying constituents; second, by various chemical modifications of the oil, all of which impart characteristics not possessed by the original oil.

The improved soybean drying oils are usually made from alkali-refined soybean oil. Sometimes, however, they are based on the fatty acids derived from the oil.

Note: Frank Mitchell was presently employed by Spencer Kellogg & Sons. On 21 Feb. 1949 he incorporated as Mitchell Food Inc. and soon started to make a non-dairy whip topping he had invented. Address: Members, Soybean Research Council.


• New Product—Documentation: Detroit News. 1945. April 16. “Who’s who and why.” [About Herbert Marshall Taylor and Delsoy]. A photo shows Taylor. An ad (below this article in Rex Diamond’s binder; original source and date unknown) is titled “What is Delsoy? It’s the dessert topping that’s winning the enthusiastic approval of housewives by the hundreds of thousands. Delsoy is the original topping made of natural vegetable products.” The ad shows illustrations of two non-dairy whip toppings: (1) In the foreground, “Delsoy Super Whip: Instant Dessert Topping” which is sold
in a pressurized can. The ad states: “Introduced in August 1944, the first product of its kind, Delsoy dessert topping has gained tremendous popularity. Continuing to grow by leaps and bounds...”

Interview with Robert A. Smith by Donald V. Baut. 1979. June 21. “Delsoy Products.” p. 44-72. This is the single best source seen on the origin and history of this product. However Bob Smith calls the product Presto Whip (which is also sold in a pressurized can) and gives the date of introduction as 1946 or 1947, which is 2-3 years after Delsoy Super Whip was introduced.

Talk with Robert Rich, Sr., founder and chairman of the board of Rich Products Corp. 1993. July 13. He strongly disagrees with Bob Smith’s statement that Delsoy was the first non-dairy whip topping to be sold in a pressurized can. Mr. Rich believes that Rich Products’ non-dairy Whip Topping was the first such product to be sold commercially in a pressurized can. It was on the market in Oct. 1948. Bob never heard of Delsoy Super Whip; he thinks Delsoy’s product in a pressurized can was named Presto Whip.

Ingredients: Incl. soymilk, vegetable oil, sugar. Wt/Vol., Packaging, Price: Pressurized metal can.


* New Product–Documentation: Interview with Robert A. Smith by Donald V. Baut. 1979. June 21. “Delsoy Products.” p. 44-72. This is the single best source seen on the origin and history of this product. Originally Delsoy Topping was sold in paper containers purchased from the Sutherland Paper Co. in Kalamazoo, Michigan. Delsoy bought the containers by the carload, 300,000 at a time. When Sutherland went out of business, Delsoy switched to buying containers from the Crown Cork and Seal Co. in Philadelphia. During World War II Crown Cork and Seal had developed a pressurized can to use for insecticide sprays by the military. Delsoy was the first to realize that the can’s unique valve (produced by the Super Whip Co. in Chicago and used with nitrous oxide gas) made it suitable for whipping cream. So the company modified its formula for Delsoy Topping, put it in this pressurized can, and in 1946 or 1947 named it Presto Whip. Delsoy Products was the first company to ever put a topping in a pressure can and sell it. It immediately became a huge success, was widely advertised, and was soon sold by every chain store in the area. Soon Delsoy Products was working 3 shifts, making 25,000 cans a day–sold mostly in the Detroit area. Soon they were selling the products over a range of 350 miles in lower Michigan, Ohio, and parts of Indiana, Pennsylvania, and New York. By 1963 they had 23 distributors.

Letter from Robert A. Smith (of Delsoy Distributors, 1847 South Telegraph Rd., Dearborn 8, Michigan) to Mr. Holton W. Diamond (in Whiting, Indiana). Smith expresses interest in obtaining Rex Diamond’s services and patents. Printed in the lower left corner of the letter is a picture of a pressurized can of Delsoy Presto Whip. In the lower right corner is a picture of a container of Delsoy Topping in the shape of a truncated cone.

Talk with Robert Rich, Sr., founder and chairman of the board of Rich Products Corp. 1993. July 13. He strongly disagrees with Bob Smith’s statement that Delsoy was the first non-dairy whip topping to be sold in a pressurized can. Mr. Rich believes that Rich Products’ non-dairy Whip Topping was the first such product to be sold commercially in a pressurized can. It was on the market in Oct. 1948. Delsoy Products had problems with the name of its product “Presto Whip.” Delsoy Products and the Presto Whip Co. in California both had a lawsuit against each other since they were both using the same name. The California company probably won, since they used the name for many years afterwards.

Note 1. The relationship between this product and Delsoy Super Whip, both soy-based whip toppings sold in a pressurized can and made by Delsoy Products, is not clear. Note 2. This early non-dairy whipped topping was NOT made with enzyme-modified soy protein. Ingredients: Incl. soymilk, vegetable oil, sugar. Wt/Vol., Packaging, Price: 10 oz pressurized can with valve. Refrigerated.


• Summary: “Soybean oil is classified as a semi-drying oil, being intermediate in character between olive oil (a non-drying oil) on the one hand and linseed oil (a drying oil) on the other.”

Photos show: A boat “painted with soybean oil base paint.” An attractive Iowa farm home, belonging to Harry L. Langlas of Marengo, Iowa, painted with “soybean oil base paint.” Address: Members, Soybean Research Council.


• Summary: 2 level tablespoons of soya flour are used in the chocolate cream icing. Also: Please remember to return your empty jam jars and milk bottles. Address: London, S.W.1.


• Summary: “We have discovered that, contrary to the teaching of prior art, soybean meal from which the oil has been removed by ethyl alcohol produces the most acceptable light, foamy material. That this light, foamy material does not contain the objectionable flavors characteristic of other
One example of the process: Combine 1 part of icings, meringues, cookies and/or the like with solvents. The soy whip can be used to make candies, plant materials as glucosides which are soluble in alcoholic solvents. The reason that these undesirable flavors are absent is due to the fact that bitter substances such as saponins... are present in plant materials as glucosides which are soluble in alcoholic solvents. The soy whip can be used to make "candies, icings, meringues, cookies and/or the like."

One example of the process: Combine 1 part of flaked soybeans with 6 parts of hot ethyl alcohol (95% pure by volume) until 95% of the oil and about 12% of the original soybean have been removed by [dissolved in] the alcohol. This takes about 1 hour at the boiling point of the alcohol. Use evaporation to remove all of the alcohol. The remaining solid residue is about 69% of the original bean. To 100 parts of this residue add 500 parts of water and allow to soak for 30 minutes. Then strain the liquid extract from the solid residue. (Note: The entire mixture may also be used without straining off the liquid extract. The extract may also be evaporated to dryness after straining). This resulting liquid contains such a "concentration of the foaming principle that it may be whipped to a foam by mechanical means and may then be used for culinary purposes."

Note 1. The product resulting from this process was called "Gelsoy." Note 2. No hydrolysis is involved in making "Soy whip." Thus Gelsoy is a type of soy protein isolate. Address: NRRL, Peoria, Illinois.

62. Savage, Kay. 1948. Sub found for whipped toppings. Detroit Free Press. Aug. 24. p. 9. • Summary: "Pennies are pocketed when favorite desserts go to the table topped with the newest alternate for whipped cream. Developed from a formula by Rex Diamond, a young chemist, following research work in the George Washington Carver Laboratory, the new whip is composed of vegetable oils. "Attractively priced at 25 cents for a half-pint, the vegetable whip is sweetened and flavored with vanilla. It may be used as a topping or filling. It may also be combined with other ingredients in practically all recipes calling for whipping cream. "When using it in such combinations, it should be remembered the whip is already sweetened and sugar must be decreased. The sugar in these recipes has been adjusted."

Recipes are given for cherry banana mold, sherry cream, and banana whip. Address: Free Press Food Writer, Michigan.

63. Vegetable Products Corporation. 1948. Wonder Whip: Mass-produced valve costing only a few pennies. A third ad ranging from 40º below zero to 40º above using a simple, pressurized can for retail stores. On the front panel is written: "Contains No Milk or Milk Fat!" One full-page ad by Crown Cork & Seal Company, Inc., Can Division ("One of America’s largest can manufacturers"), shows a large photo of the can, which is called "Crown Spra-Tainer, the world’s original and leading propulsion can." A second ad by Super Whip Co. (715 South Damen Ave., Chicago 12, Illinois) describes how the company’s "Super Whip Pressure Valve" (an exploded view of which is shown) has allowed Rich’s Whip Topping to be packed under 90 pounds per square inch of gas pressure for months at a time at temperatures ranging from 40º below zero to 40º above using a simple, mass-produced valve costing only a few pennies. A third ad by Spencer Kellogg and Sons, Inc. (Buffalo 5, New York), reads: "Congratulations! Rich’s Whip Topping." Spencer Kellogg has worked for 10 years with Rich Products and helped with the development of this product. A photo shows the product, named "Rich’s Whip Topping." A fourth full-page ad shows that the top of the pressurized can was made of plastic by Sterling Molders, Inc., 277 Military Rd.,

preparations has been determined by organoleptic tests. The reason that these undesirable flavors are absent is due to the fact that bitter substances such as saponins... are present in plant materials as glucosides which are soluble in alcoholic solvents. The soy whip can be used to make "candies, icings, meringues, cookies and/or the like."

"Wonder Whip is a sensational new vegetable food for use as topping and in making delicate new desserts. It is packaged attractively in half pints, already sweetened and flavored, ready to whip and serve. It costs only a quarter. Wonder Whip is backed by consumer advertising and store demonstrations that show results. You can order Wonder Whip for your store today. Call WO. 1-1468—Ask for Tabor." The ad gives the names and addresses of 95 grocery stores in Detroit that sell Wonder Whip for $0.25 per half pint. Mass demonstrations of Wonder Whip will be conducted in 20 of Candlers Quality Dairy Shops.

Talk with Florence Diamond. 1993. Jan. 27. This leaflet, which may have also been run as an ad, was probably developed and paid for by Mr. Tabor (nick-named Tabe), a friend of Florence’s father who owned a meat distributing company in Detroit that also distributed Wonder Whip. Address: Saline, Michigan.

64. Rich Products Corporation. 1948. October. Whip Topping (In a Pressurized Aerosol Metal Can: Non-Dairy, Based on Isolated Soy Protein). Renamed Rich’s Whip Topping in 1950. 1149 Niagara St., Buffalo 13, New York. • New Product–Documentation: Buffalo Evening News (New York). 1949. “Output tripled by Rich Products.” June 28. “The company, which makes a whipping cream derived from soybeans, has adopted a new pressurized metal container to package its product. Forty three employees have been added, $28,000 has been spent in new automatic equipment in the last month and output has been stepped up to 47,000 container units a day.”

Quick Frozen Foods. 1955. “The Rich story: 10th anniversary. 1945-1955.” Feb. p. 91-114. A photo shows the product, named “Rich’s Whip Topping,” in a 7-oz. pressurized can for retail stores. On the front panel is written: "Contains No Milk or Milk Fat!" One full-page ad by Crown Cork & Seal Company, Inc., Can Division ("One of America’s largest can manufacturers"), shows a large photo of the can, which is called “Crown Spra-Tainer, the world’s original and leading propulsion can.” A second ad by Super Whip Co. (715 South Damen Ave., Chicago 12, Illinois) describes how the company’s "Super Whip Pressure Valve" (an exploded view of which is shown) has allowed Rich’s Whip Topping to be packed under 90 pounds per square inch of gas pressure for months at a time at temperatures ranging from 40º below zero to 40º above using a simple, mass-produced valve costing only a few pennies. A third ad by Spencer Kellogg and Sons, Inc. (Buffalo 5, New York), reads: "Congratulations! Rich’s Whip Topping." Spencer Kellogg has worked for 10 years with Rich Products and helped with the development of this product. A photo shows the product, named “Rich’s Whip Topping.” A fourth full-page ad shows that the top of the pressurized can was made of plastic by Sterling Molders, Inc., 277 Military Rd.,

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Buffalo 7, New York. A fifth full-page ad by Rich Products Corp. states that in 1954 housewives bought enough Rich’s Whip Topping to top more than 300 million desserts.

Shurtleff & Aoyagi. 1985. History of Rich Products’ work with soy proteins. The product was launched in April 1945 as a refrigerated product. It was introduced as a frozen product after about Oct. 1945. In Jan. 1946, the first ad for the product, aimed to get national distribution, was run in Quick Frozen Foods. In late 1948 Whip Topping was introduced in a pressurized all-metal container; the size was half-pint for the retail trade and quarts for institutions and bakeries. A large photo of the can shows that the ingredients were: “A pasteurized blend of water, hydrogenated soya oil, soya protein, corn syrup, sugar, salt, propylene glycol monostearate (vegetable source), artificial flavor, artificial color. Charged with nitrous oxide and...” In 1949 the first lawsuit was filed against the product in California. Rich Product won this and all subsequent lawsuits. In the latter half of 1956 the Whip Topping sold to institutions started to be made without soy protein, which was replaced by methyl ethyl cellulose. In about 1965 Rich Products stopped using soy protein in its retail whip topping and switched to the formulation sold to institutions. A large black-and-white photo sent by Rich Products Corp. to Soyfoods Center shows the white pressurized can. Below the product name is a bowl of strawberries topped with the topping. Below that is written “Always Fresh!” Around the base of the lid is written “Low in calories.” Six ads from 1953 show Rich’s Whip Topping in a gable-top quart Pure-Pak carton; the slogan for each is “One always stands up!”


Talk with Robert Rich, Sr., founder and chairman of the board of Rich Products Corp. 1993. July 13. This product came on the market in Oct. 1948. In 1949 the cans started coming back to Rich Products because the pressurized gas was escaping. After numerous attempts to solve the problem, they finally found the solution through Ed Germain, a friend of Bob’s at the Dunlop Company (experts in rubber products). Bob Rich strongly disagrees with Bob Smith’s statement that Delsoy was the first non-dairy whip topping to be sold in a pressurized can. The first dairy whipping cream to be sold in a pressurized can was Reddi-Wip, made by the Reddi-Whip Company, located in Chicago and owned by Bunny Lapin and Mark Lipsey. The second commercial dairy whipping cream to be sold in a pressurized can was Super Whip, made by the Illinois Creamery Supply Co., which also made Super Whip Pressure Valves. When Bob got interested in the idea, only these two dairy toppings were on the market; he could see that the new package would sell much better than his Pure-Pak container. Bob Rich went to Crown Cork and Seal Co. in Philadelphia, Pennsylvania. Dr. Graham, who worked there, said he might get into trouble with the Reddi-Wip Corporation (Crown’s big customer) if he okayed selling pressurized cans to Rich Products for use with a non-dairy topping. Nevertheless Bob Rich got the okay and he is almost certain that his product (Rich’s Whip Topping) was on the market in a pressurized can before Delsoy was, and that his product was the world’s first non-dairy whip topping sold in a pressurized can. The product in a pressurized can was sold frozen. By that time regular Rich’s Whip Topping was sold frozen in a Pure-Pak carton.
Talk with Herb Kusche, executive vice president of Rich Products Corp. 1993. July 14. Herb thinks that Rich’s Whip Topping was on the market in a pressurized can before Delsoy’s product in a pressurized can. The valves that were used in this product’s pressurized can were purchased from Super Whip (in Chicago), a different company from Crown Cork and Seal Co.—but maybe there was some connection between the two. Rich Products initially had trouble with the valves, because when they froze the topping, the rubber in the valve would contact and allow the pressurized gas to escape. Then they discovered they could pack the cans upside to freeze the rubber, which prevented leakage. Herb recalls that the first two dairy whipping creams on the market in a pressurized can were made by Reddi-Wip Corp., then by Super Whip Sales in Chicago (owned by Joe Rosen).

Letter from Robert E. Rich, CEO of Rich Products Corp. 1993. July 26. This product was first marketed in a pressurized container in Oct. 1948. At that time the company’s address was still 1149 Niagara Street. The product was renamed Rich’s Whip Topping sometime in 1950. There was no connection between the valve company (Super Whip) and the can company (Crown Cork and Seal). Bunny Lapin was a partner with Mark Lipsey in forming the Reddi-Wip Company. Ingredients: Water, hydrogenated soya oil, soya protein, corn syrup, sugar, salt, propylene glycol monostearate (vegetable source), artificial flavor, artificial color. Wt/Vol., Packaging, Price: Pressurized can. Frozen.


• Summary: “Vegetable Products Corporation was organized a year and a half ago to exploit some chemical processes I had developed. Since we have been in operation, we have operated consistently at a loss.

“I am a chemist, the only full-time employee of the company, and the other stockholders agreed originally on a ‘subsistence’ salary for me of $250 per month until such time as the company operations showed a profit. However, because there usually has not been enough money in the corporation treasury to pay me even a week’s salary at a time, I have taken ten to twenty dollars at a time for living expenses, and a total of $2,783.86 in this way in the past year.

“There have been so many problems incident to running a tricky chemical process with used equipment, and trying to conduct a business with too little capital, I have neglected to do a thorough job of bookkeeping, a kind of work which is unfamiliar to me. In this way I have neglected to ‘withhold’ my income tax, and am not now able to pay it at once.

“I am enclosing $117.00. It appears likely that Vegetable Products Corporation will be forced to suspend operations this week or next for lack of funds. I have already applied for a job with a large company in Ann Arbor, and expect to have it or another source of steady income soon. Thereafter, I expect to be able to pay the remaining $100 of 1948 tax within the following three months.

“I understand that there is a penalty, in the nature of interest, for delinquency, and I trust that this plan will be satisfactory to you.” Address: [208 South Ann Arbor St., Saline, Michigan].


• Summary: Mr. Diamond gives a brief history of his work “while employed as chief chemist at the George Washington Carver Laboratory of the Ford Motor Co. There he developed a popular vegetable “cream cheese,” a vegetable “ice cream” and related products.


He offers to bring samples to show the company (if the company will defray his expenses for so doing), and to grant a license to American Maize Products Co. if they wish to manufacture these products.

Note: A similar letter was sent to Mr. Austin S. Ingleheart of General Foods Corp. (250 Park Ave., New York 17, New York). Both letters were “ghost written” for Diamond by Judge Arthur M. Smith. The American Maize response by Mr. B.R. Taylor, who was then manager of Planning and Development, and later Vice President in Charge of Research and Finance of the company, led to Diamond’s subsequent years of association with American Maize Co. Address: 208 South Ann Arbor St., Saline, Michigan.

**Summary:** John Hamel is an investor in Vegetable Products Corp. (VPC) and a part owner of the building in which the VPC plant is located. Diamond is sending Hamel by air express, frozen, several samples of a newly developed ice cream, which contains the same ingredients as Wonder Whip, a soy-based whip topping. Diamond has talked with a man who sells 10,000 gallons/week of custard mix during the summer, and who believes he could sell as much of this ice cream mix in liquid form. It might also be able to be spray dried and sold in powdered form.

“I have not sold Tabe [Taber meat distributing company, the main distributor of Wonder Whip] any topping during the past week. Tabe has notified the trade that, ‘Due to a serious breakdown at the plant, Vegetable Products Corporation has advised us that Wonder Whip will not be available for two weeks or more. We will notify you immediately upon advice from Vegetable Products Corporation that Wonder Whip is again available."

“Bob Smith of Delsoy called me a few evenings ago and asked me to drop in for a visit, which I did yesterday. He has some interest in my pending patent applications and the name of our company which he thinks is a better name than my own ‘Delsoy Products Incorporated’, however he made no definite offer to me other than to suggest that I could have a job with them any time I wanted it. I believe that they have been making expenses and a little more for some time, but with a little outside financial aid, they have recently been doing very well. Bob told me that last week they sold 42,000 units, which compares with our 4000 to 4500.

“The financial condition of Vegetable Products Corporation is such that when Tabe and the University of Michigan pay what they owe us, and we pay our bills, we will be about three to four hundred dollars behind.”

Talk with Florence Diamond. 1993. Jan. 27. By the time Rex wrote this letter, Bob Rich’s frozen soy-based whipped topping [which he began freezing in late 1945] was being widely distributed. That severely hurt Vegetable Products Corp. Rex tried to expand into new products but VPC didn’t have the funds to develop and launch a new product such as a soy ice cream, so the latter was never sold commercially. The University of Michigan may have been buying Wonder Whip (even though whipping cream had been back on the market since late 1947) to serve in their cafeterias and/or university hospital, both because of its lower cost and/or superior properties. Address: 208 South Ann Arbor St., Saline, Michigan.


**Summary:**”A sharp increase in operations of the Rich Products Corporation was reported today by president Robert E. Rich, who said production has more than tripled since the installation last week of new automatic equipment at the plant at 1149 Niagara St.

“The company, which makes a whipping cream derived from soybeans, has adopted a new pressurized metal container to package its product. Forty three employees have been added, $28,000 has been spent in new automatic equipment in the last month and output has been stepped up to 47,000 container units a day.

“We are working three shifts a day,’ said Mr. Rich. ‘Based on our present volume, sales of our product in the pressurized containers alone will exceed $1,000,000 during the next six months.”

“The company’s sales in all of 1948 totaled $507,000.”

A photo shows Mr. R.E. Rich.


**Summary:** Diamond has decided to terminate his agreement with Vegetable Products Corporation because the corporation has failed, since 26 March 1949, to (1) furnish the capital and manufacturing facilities necessary for the manufacture of Diamond’s food products (Wonder Whip), (2) employ Diamond at a salary of $250 per month, and (3) make any effort toward the commercial exploitation of his inventions. All three of these activities are required by the Agreement of 26 Aug. 1947.

Talk with Florence Diamond. 1993. Jan. 27. This letter was written somewhat as a formality, to get the fact down on paper that Rex was ending his involvement with Vegetable Products Corporation. Address: 208 South Ann Arbor St., Saline, Michigan.


**New Product–Documentation:** Robert Rich. 1951. March. “Rich’s testimony.” This unpublished manuscript states on page 7: “On February 21, 1949, Mr. [Frank S.] Mitchell incorporated as Mitchell Food, Incorporated and began the manufacture of a soybean cream similar to ours. He attempted without much success, to obtain our customers for his product. He was of considerable nuisance but not much competition.”

Talk with Robert Rich, Sr., founder and chairman of the board of Rich Products Corp. 1993. July 13. Frank Mitchell left Rich Products because “he thought he was smarter than me.” He thought he could make more money by leaving Rich

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Topping, launched in 1949, was a frozen, non-dairy whip topping base sold mainly to bakeries. Wt/Vol., Packaging, Price: 10 lb or 30 lb tins. Frozen.

• Summary: “... which spouts whipped dessert and salad topping at the touch of a finger. Whip topping is a vegetable product, manufactured from soy oil and protein by Rich Products Corp., Buffalo, New York.”

• Summary: Concerns a vegetable topping of predictable whipping qualities (it will incorporate and hold a predetermined quantity of air) made from 0.8%–1.5% vegetable protein (e.g. soy bean protein), 4–8% vegetable carbohydrate (e.g. dextrose or glucose), 25–35% plain refined vegetable oil (e.g. hydrogenated soybean oil), 0.8%–3.0% monoglyceride prepared from glycerin and an edible fat of vegetable origin (e.g. hydrogenated soy bean oil), 52.5%–69.4% water, etc. Address: Dearborn, Michigan.

• Summary: “A Buffalo product [Whip Topping made by Rich Products Corp.] was drawn into Senate debate on colored oleo by Senator Bourke B. Hickenlooper, Republican of Iowa, to illustrate his contention butter is only one of the dairy products which is susceptible to substitution in modern competition.” The product’s label called it “the pure, frozen soy cream for whipping.” The senator felt this language was deceptive. Mr. Rich noted that “we have never advertised whip topping as a substitute for dairy whipping cream, but merely as a dessert topping... the Supreme Court of the State of California has ruled in our favor that whip topping is not a substitute cream.”

• Summary: This is a contract between Rex Diamond and American Maize-Products Co. (“Maize”). Diamond has now been employed by Maize and has executed a standard form of employment contract with Maize. He owns a patent and applications for a patent concerning foods (particularly a dessert mix [soy ice cream] and a whipppable topping) in which a principal constituent is vegetable proteins derived from soy beans. Diamond agrees to transfer his rights to his patents and inventions to Maize, and Maize agrees to pay him “an indeterminate sum which shall be equivalent to 5% of the actual sales value... of all products made under the inventions of said Patent Rights and sold by Maize...” but
not more than 20% of profits from these products. Address: 1. 1831 Davis, Whiting, Indiana; 2. Whiting, Indiana (a corporation of Maine).


Talk with Jeremiah Ridenour. 1998. Oct. 20. Mocha Mix is now owned by Suiza Foods Corp. (pronounced SUI-zuh), a Texas-based company that is one of the very big, modern consolidators of the dairy industry. The acquisition took place quite a few years ago. Ingredients: In 1992: Water, partially hydrogenated soybean oil, corn syrup, mono & diglycerides, soy protein, dipotassium phosphate (buffering salt–controls acidity), polysorbate 60 (emulsifier or stabilizer from soybean or cottonseed–Keep oil and water form separating), sodium stearoyl lactylate, salt, vegetable color (beta carotene), artificial flavor (vegetable origin). Wt/Vol., Packaging, Price: 1 pint, 1 quart, or ½ gallon Pure-Pak carton. Quart is $1.35, ½ gallon is $2.45 (1/92, California). Refrigerated.


• Summary: “This is quite possible. It is actually being done by both the vegetable topping manufacturers now operating, Delsoy Products, Inc. of Dearborn, Michigan and Rich Products Corporation of Buffalo, New York. So far as I know there are only two companies manufacturing a vegetable whip of this type in the United States. My company, Vegetable Products Corporation, was the third.

“This container is closely related to my being employed by Maize. Delsoy and Vegetable Products had just about split the local Detroit market with the liquid whip distributed in cardboard bottles when Delsoy introduced their product in the new pressurized carton and launched an advertising campaign to accompany it. To pay for the advertising and rather expensive new packaging equipment, Delsoy had negotiated a loan of $100,000. With the new package and a $10,000 per month merchandising program they were able to persuade the large chain stores to handle their product exclusively. We were unable to match their program, and we could not get along without a few large ‘stops’ on our truck routes, so after about six weeks of futile effort, we bowed out of the picture.

“In this type container, the whip is handled as a refrigerated or frozen product. As yet, no practical method has been developed for handling the whip at room temperature. Rich Products handles their topping as a frozen item, and distributes it nationally through frozen food outlets. Delsoy handles it as a ‘fresh’ refrigerated item, which means servicing the retail grocery outlets at least once every two weeks and preferably once a week. This makes the distribution of the product in the ‘Reddi-Whip’ container pretty much a local proposition, although Delsoy was operating refrigerated trucks to southern Ohio from Detroit about a year ago, and were planning to extend their routes as far south as Louisville, Kentucky.

“I do not have any recent information on the Rich operations, and the last report I have on the Delsoy operations is more than a year old. At that time, their daily sales were about $3000.00 averaged over the preceding three month period, and they were growing rapidly.” Address: Roby, Indiana.

• Summary: Frank S. Mitchell, a former early key employee of Rich Products Corp., sued Rich Products Corp. and Robert E. Rich. On 7 Feb. 1951 a summons was served on the defendants. This draft was presumably prepared in anticipation of a hearing which was scheduled from 19 March 1951. The testimony contains a detailed early history of Rich Products Corp. and its relationship with Frank Mitchell seen from Robert Rich’s point of view.

“When in Detroit, serving as Milk Administrator for the War Food Administration, I became interested in a filled cream called Devonshire Topping. This product had a milk
base and any product combining milk and vegetable fat is not allowed to be sold in New York State.

“However, the purchasing agent of the Ford Hospital [in Dearborn, Michigan] came to my office one day on another matter, and during our conversation he told me that the Ford Motor Company was making soybean milk and soybean cream at their laboratory, the George Washington Carver Laboratory, and that this soy milk and cream was being used exclusively in the Ford Hospital. He advised me further that one of the employees at the George Washington Carver Laboratory had been attempting to interest the Devonshire Topping people in placing a whole soy cream on the market instead of the milk base soy cream that they were making at that time. He mentioned that the Ford Company was going to sell the rights to the continuous flow soybean milk extraction to the Devonshire Topping people for $1.00 a year. He mentioned further, he was sure the Ford Company would make the same offer to any other company deciding to manufacture a soybean milk or cream.

“Several weeks later, Mr. Sam Lustig, Manager of Dealer Dairy Products, Detroit, came to see me and advised me that Devonshire Topping was making plans to put a whole soy cream on the market. He stated, that he had been granted the franchise for this product for New York and Pennsylvania and wondered if I would be interested in distributing this product in the Buffalo area. I advised him I was interested and we arranged tentatively for the rights to distribute in Syracuse, Rochester, Buffalo and Erie.

“About a week later, Lustig called and advised me that it would not be possible for him to grant us the distribution in the area mentioned, as Mr. Taylor, the head of the company placing Devonshire Topping on the market, did not want to deal with dairies, but rather with jobbers, who were handling noncompetitive products that were held at dairy case temperature.

“Shortly after obtaining this information from Mr. Lustig, I requested our dairy sales manager to go to Toledo and purchase some of the whole soy cream that Devonshire Topping had just placed on the Toledo market. Mr. Hannon purchased eight or ten samples in Toledo and flew them back to Buffalo. I immediately took several of these samples downtown to Dr. Alexander Schwarcman, who is Research Director and Vice President of the Spencer Kellogg Company. I whipped up one of the samples to show Dr. Schwarcman the whipping ability of this product and told him I wished to breakdown the product and manufacture a similar product in Buffalo, in as much as, the Devonshire Topping people did not wish to do business with us. Dr. Schwarcman, after studying the ingredients, advised me that such a product could be placed on the market at a price much lower than dairy cream.”

Mr. Chase, in charge of sales of edible fats for the Spencer Kellogg Co. advised Mr. Rich “that there were several chemists working for the Spencer Kellogg Company, who would be interested in earning some extra money working on the breakdown of this product after hours. At that time he mentioned the name of Frank Mitchell, a friend of his.” The following Saturday Mitchell expressed interest in doing the work. Mr. Rich “gave him several samples of a new batch of the soy cream which I had purchased in Detroit the previous week, as Devonshire Topping had turned over part of their production to a whole soy cream topping, which they sold in addition to their topping with a milk base.” Mitchell worked on developing the product, aided by information from the Buffalo Testing Laboratory. “However, it took slightly longer than we had anticipated and we [Rich Products Corp.] did not put a soy cream on the market until the last day of March [1945] instead of early March as we had hoped.

“During this time I was working with Mr. Howard Fanet, president of the R.G. Wright Company, on picking up used pieces of equipment that could be used in the manufacture of the soy cream itself. This equipment included two Cherry Burrill pasteurizers, a Manton Gaulin homogenizer, a surface cooler, a Cherry Burrill filler and the necessary amount of tin copper piping lines. This was the equipment we needed with the exception of the equipment necessary to make the soy milk which we were going to use as the base and which Mitchell was working on at that time. In the meantime, we were attempting to obtain the authorization from the Ford Motor Company for the use of their patent, which we had been given to believe would be granted us for $1.00 per year. We were not successful in our attempt, so I asked Mr. Faust if he would go to Detroit with Mr. Mitchell and look at the equipment being used at the George Washington Carver Laboratory for the manufacture of the soybean milk base. This he did and when he returned he advised me that the same work could be done by a batch system with the addition to our equipment of a 300 gallon extraction tank, two 300 gallon settling tanks and a clarifier. This equipment was purchased and once it was set-up, we obtained a 43% extraction, which was considerably higher than the extraction obtained by the Ford Company on the continuous flow system.”

“On February 21, 1949, Mr. Mitchell incorporated as Mitchell Food, Incorporated and began the manufacture of a soybean cream similar to ours. He attempted without much success, to obtain our customers for his product. He was of considerable nuisance but not much competition.”


• **Summary:** Continued. This is one document is divided into 2 parts because of limitations in computer records space: “In the meantime, I had resigned my position with

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the Department of Agriculture and proceeded to obtain a fat quotient in conformity with the regulations of the War Food Administration and established a price with the Office of Price Administration [OPA]. In our application to the OPA, we listed as a cost of manufacture the payment of $.03 a half pint for technical service to Mr. Mitchell. Our mark-up, of course, was based upon the cost of the product plus the cost of its manufacture including the $.03 per half pint technical service mentioned. I told Mr. Mitchell that for the work he did in 1945 I wanted to pay him one third of the profits derived from this product, and that it appeared as if the profits without any payments being made to Mr. Mitchell for the work he did would be $.09 a half pint. This was very encouraging to Mr. Mitchell, as he advised me being a newer employee of the Spencer Kellogg Company, his wage was frozen at, I believe, $3,300.00 a year. With this in mind, I had my attorney, Mr. Pottle, draw up such a contract and it was signed on April 9, 1945 with the duration of one year.

“At this time we had been on the market for about ten days and it looked as if everything would go as expected. I had invested about $5,000.00 in equipment and change over in a small plant adjacent to our dairy operation.

“The following payments were made to Mr. Mitchell at $.03 per half pint: April $428.76; May $1,009.59. In May it became apparent that the cost of producing Whip Topping was much higher than was anticipated prior to the actual operation and due to the loss we had suffered to this date, it was necessary to either discontinue the operation or cut our overhead expenses. When informed of this fact, Mr. Mitchell, requested that his contract be canceled and that we go on a month to month basis. We agreed that for the present $.01 a half pint could be paid to Mitchell. In addition, in canceling the contract Mr. Mitchell re-paid Rich a check for $500.00 from the first two payments made Mr. Mitchell. This $500.00 check was deposited in Rich’s account on July 11, 1945.

“The operation did not prove too successful and for the month of December a loss was incurred of $1,032.90 and in accordance with an agreement with Mr. Mitchell no payment was made to him for that month. In that year, 1945, I drew out as a salary which included rent for the building—$5,200.00. Mitchell was paid $1,574.24. We had found it necessary earlier in the year to establish a separate company to distribute this product, as the State Department of Agriculture had forbidden us to place the product on our milk routes. This distributorship was a partnership between my wife and myself and was called Wilber Farms Soy Products Company. No salary was withdrawn by my wife or my self and the Company lost $32.28 during the year 1945, at which time this operation was discontinued.

“In January 1946, we entered into a new oral agreement at which time I agreed to pay Mitchell $200.00 monthly for supervising our plant during time when I was not employed by the Spencer Kellogg Company. These $200.00 payments were paid until September 30, 1946, at which time I entered into another oral agreement with Mr. Mitchell to pay him one-tenth of $.01 per half pint for technical supervision. He spent at least three or four hours at the plant each night during October and November. In October he received $812.79 and in November $457.53. It was on November 20, 1946 that the sale of dairy cream was no longer restricted and our sales dropped sharply, so that his payment for December 1946 was $109.99. His total earnings for his after hours work for 1946 amounted to $3,180.31. In 1946, the corporation made a profit of $7,284.54. I withdrew $15,389.99 as salary and the rent paid to Wilber Farms Dairy amounted to $26,106.31. In 1947 with dairy cream no longer restricted we lost $14,084.90 (corrected Internal Revenue figure $1,970.43). I withdrew no salary this year and the rent paid to Wilber Farms was $13,990.08.

“We were losing money each month during 1947 although continuing to pay Mr. Mitchell for the work he did. Mr. Mitchell, had mentioned earlier that he could obtain some money from a brother who evidently was a doctor, in a small town in Illinois. He advised me that his brother had offered him $15,000.00 to invest in a business. I offered Mr. Mitchell a third interest in the enterprise for the above mentioned $15,000.00 and he called his brother in Illinois from my office one night, I believe in April 1946. The brother refused to loan Mr. Mitchell the money he requested and shortly after that I attempted to negotiate a contract with Mitchell other than the oral contract we had had, but on the same basis. However, the new contract was to be on a yearly basis instead of the month to month basis we had been working on. I attempted to negotiate this contract as Mitchell had mentioned to me on several occasions that he would like to go into business for himself.

“I advised Mr. Mitchell that in order to continue at the payments we were making to him that he would have to put in more time with us and that I wanted him to sign a contract to prevent him from going into business in competition to us for a period of one year should he leave our employ. In addition, there was considerable friction between Mitchell and our plant manager and I advised him in June 1947 that his services were being terminated at the end of that month.

“On February 21, 1949, Mr. Mitchell incorporated as Mitchell Food, Incorporated and began the manufacture of a soybean cream similar to ours. He attempted without much success, to obtain our customers for his product. He was of considerable nuisance but not much competition.” Address: Rich Products Corp., 1145 Niagara St., Buffalo 13, New York. Phone: GArfield 3211.


• Summary: All of the following information was obtained from documents.
1944–Frank Mitchell is employed by Spencer Kellogg & Sons, Inc. of Buffalo, New York, engaged in chemical research, especially in the development of edible vegetable oils derived from soybeans.

1944 Aug.–Robert E. Rich, who is interested in manufacturing a non-dairy soy-based whip topping contacts Mitchell and in August they enter into an agreement wherein Mitchell is to use his technical skill to develop the whip topping and Rich is to supply the necessary financial backing.


1945 April 9–Frank Mitchell signs a written agreement, with a duration of one year, stating that he will receive one-third of the calculated profits earned by the whip topping he has developed. Mitchell receives monthly payments, but he claims these payments were reduced in amounts and finally discontinued in about the summer of 1947. Rich states that Mitchell was paid $1,574.24 in 1945 (April–Dec.) and $3,180.31 in 1946–based on an oral agreement.

1946–In about April, Robert Rich offers Frank Mitchell a one-third interest in Rich Products in exchange for $15,000 which Mitchell hoped to borrow from his brother who was a physician in Illinois. Frank Mitchell calls his brother from Mr. Rich’s office, but the brother refuses to loan Frank the money. Shortly thereafter, Rich attempts to negotiate a 1-year contract with Mitchell, since Mitchell had mentioned on several occasions that he would like to go into business for himself.

1946 Nov. 20–The U.S. government stops restricting the sale of dairy cream, and Rich’s sales of Whip Topping drop sharply.

1947–According to Rich Products, the company loses money each month this year yet Mitchell continues to be paid for the work he does. Rich advises Mitchell that “in order to continue at the payments we were making to him, that he would have to put in more time with me and that I wanted him to sign a contract to prevent him from going into business in competition to us for a period of one year should he leave our employee. In addition there is considerable friction between Mitchell and our plant manager and I advised him in June 1947 that his services were being terminated at the end of that month.”

1949 Feb. 21–Frank Mitchell incorporates as Mitchell Foods, Inc. in Fredonia, New York. There he buys a 6,000 square foot former ice cream and dairy plant at 152 West Main St. and soon begins to manufacture Scotch Topping, a non-dairy soy-based whipped topping similar to that made by Rich Products.

1951 Feb. 7–Frank Mitchell (of 152 West Main St., Fredonia, New York) sues Rich Products Corp. by serving a summons. Mitchell claims that Rich products has not paid him according to the terms of their written agreement. An article of 19 June 1951 states that Mitchell is seeking more than $1,000,000 in damages from Rich Products, and is also seeking an injunction to restrain the corporation for further production of the product. This lawsuit never went to trial.


1958–The big pie makers such as ITT Continental Baking Co. start mass production of frozen cream pies. Mitchell Foods is able to acquire a majority of the business in whipped toppings for the pies, which suddenly increases the company’s sales several hundred percent. In 1959 Mitchell Foods’ sales first top $1 million for the year.


1961 Oct. 5–Frank S. Mitchell, president of Mitchell Foods Inc. announces the purchase of the Good Seed Co. in Fredonia; he will use its 40,000 square feet for storage space.

1962–Mitchell Foods employs about 50 people and is supplying Continental Baking Co.’s big pie plants in Iowa and Virginia among others. But in 1963 Continental and most of the other major pie makers start to produce their own non-dairy whip toppings. So Mitchell Foods develops a concentrated topping and a non-dairy creamer named White Nectar, which is sold to institutions.

1964–In response to the 1963 setback in toppings and the popularity of White Nectar creamer, Mitchell Foods introduces Perx, a frozen non-dairy coffee whitener and cereal creamer, into the retail grocery market. It becomes an instant success, especially in the New York City market.

1964 Sept.–Rich Products sues Mitchell Foods and Frank S. Mitchell, apparently for infringing on Rich’s patent for whip topping. The trial is held on Sept. 14-18 in the U.S. district court for the western district of New York. Plaintiff’s exhibit #28 shows that sales of whipped topping in millions of dollars were approximately steady at $1.5 million from 1952 to 1955, then began to rise exponentially, reaching about 6.8 million in 1963. Mitchell lost and appealed the case. There was apparently no relationship between the launch of Perx and Rich Product’s lawsuit against Mitchell Foods.

1965 July 1–The appeals court judge (U.S. District Judge Harold P. Burke) rules that Mitchell Foods did infringe upon the patent owned by Rich Products. “Rich Products is entitled to an injunction restraining Mitchell Foods from further infringing the patent and also for damages to compensate for the infringement, Judge Burke ruled.” An article on Aug. 6 states that Rich Products is seeking damages totaling at least $1 million. Mitchell Foods appealed to the Second U.S. Court of Appeals in New York but that court upheld the decision of Federal Judge Harold Burke. “Rich claimed that Mitchell’s Scotch Topping and Mitchell’s Whip Filling Base used a patented formula which Rich had purchased from the inventors and used for Rich’s Whip Topping.”
In about 1944 Mr. Mitchell “was employed by the Spencer Kellogg & Sons, Inc. of Buffalo, New York, and was engaged in chemical research for that corporation, especially in the development of edible vegetable oils derived from soy beans.” Robert E. Rich contacted Mr. Mitchell and expressed his interest in manufacturing “a simulated whipped cream made entirely from soy and other vegetable products. In or about August 1944 they entered into a partnership, wherein the plaintiff [Mitchell] was to use his technical skill for the purpose of inventing and developing a soy topping of the type desired, and the defendant, Robert E. Rich, was to supply the necessary financial backing for such invention and development and that aside from certain fees received by the plaintiff during the primary stages of developing such a product, the plaintiff’s share of the total assets of the enterprise would amount to one third of such assets and that he likewise would be entitled to one third of all the profits arising from the sale of the product to be developed by him.

“That thereupon plaintiff entered into the work of inventing and developing a soy topping and did in fact invent and develop such a topping by the early part of 1945; that plaintiff also at that time lent his technical skill to the setting up of machinery for the production of said topping; that in January 1945 there was commenced the manufacture and sale of a product called “Whip Topping” which was in fact that topping developed by plaintiff.”

“In April 1945 the plaintiff was asked to sign a contract under which, as an interim arrangement he would receive one third of the calculated profits of the enterprise, and that pursuant to the request, he did sign said contract, a copy of which is hereto annexed.

“That the plaintiff now believed that the defendant Robert E. Rich took advantage of the confidential relationship existing between them and used the contract of April, 1945 as a device to defraud plaintiff of his one third interest in the enterprise.”

“Rich Products Corporation still manufactures and sells in large quantities the same soy topping invented and developed by your deponent [Mitchell], which product is still called ‘Whip Topping... the plaintiff did receive monthly payments for some time subsequent to the signing of the contract in April of 1945, but that these payments were reduced in amounts and finally discontinued in or about the summer of 1947.”

Mitchell is asking that his attorneys (Glines & Collesano of Fredonia, New York) be allowed to look at records and documents owned by Rich Products Corporation so that they can determine the amount of money owed him by Rich Products Corp. Rich Products Corp. was represented by Gibbons, Pottle, O’Shea & Adamson of Buffalo, New York.

Address: 1. 152 W. Main St., Fredonia, New York; 2. 1149 Niagara St., Buffalo, New York.

81. Smith, Robert A. 1951. Re: Notice of meeting of
stockholders of Delsoy Products, Inc. Letter to Mr. Holton W. Diamond, 1831 Davis St., Whiting, Indiana, April 26. 2 p. Typed, with signature on letterhead.

**DELSOY PRODUCTS, INC.**

1847 S. TELEGRAPH ROAD

DEARBORN, MICHIGAN

- **Summary:** The stockholders meeting will be held at 30 Broad St. in New York City on May 15 to reduce the number of directors of the corporation from 7 to 3, to amend the Certificate of Incorporation and By-Laws, to change the office of the corporation from the City of New York to the city of Buffalo, New York.

  “3. To authorize a dissolution of the corporation and a sale of its assets and, after payment of all debts and liabilities, a distribution of the proceeds of the sale to the stockholders, or, in the alternative, to authorize a merger or consolidation of the corporation with a new corporation to be organized under the laws of the State of Michigan to which all of the assets of the corporation shall be transferred in exchange for all of the stock of such Michigan corporation, and to authorize the distribution of such stock of the Michigan corporation to the stockholders of Delsoy Products, Inc., on a share for share basis.”


- **Summary:** “A Fredonia chemist is seeking more than $1,000,000 damages from a Buffalo corporation in connection with the invention and production of ‘whip topping,’ a soy product.

  “Frank S. Mitchell of 152 West Main St., Fredonia, is suing the Rich Products Corporation of 1149 Niagara St. and its president, Robert E. Rich. Supreme Court Justice Raymond A. Knowles today withheld decision on motions for particulars and that certain sections be dropped.

  “Mr. Mitchell complained that he entered an agreement with Mr. Rich in 1944, in which the chemist was to develop a simulated whipped-cream topping. The agreement, the plaintiff charges, allowed him one-third of profits.

  “Production of ‘whip topping’ began in 1945, the complaint alleges, but Mr. Mitchell has not received his share of the profits or been allowed to examine the books.

  “Such a product, together with its formula and the knowledge of the means of manufacture, so delivered to the defendants, was of the value of $800,000,’ Mr. Mitchell claims. The plaintiff asks $296,000 further damages as ‘the reasonable value’ of the formula from April 1946 until the action opened. The plaintiff also asks an injunction to restrain the corporation from further production of the product.

  “Willard M. Pottle and Frank Gibbons, attorneys for the defendants, claim that there was no written agreement between the parties about the invention and production and that the plaintiff’s claims to profits are incorrect. The law firm of Collesano & Gliner of Fredonia represents the plaintiff.”


- **Summary:** Contents: 1. Soybean flour, grits, and flakes: Introduction, early history, types of soybean flour–standard definitions, amount of soybean flour and related products produced, methods of manufacture, soybean flour in bread, soybean flour in other baked goods, soybean flour in the meat industry, soybean flakes in breakfast foods, soybean flakes and derived peptones as brewing adjuncts, miscellaneous uses of soybean flour. 2. Isolated and modified soybean proteins: Aerating agents for confections and related products, neutral spray-dried soybean protein [isolates], soybean protein in [whipped] toppings, soybean protein and flour in confections, soybean protein and flour in ice cream, soy sauce, monosodium glutamate from soybeans, soybean vegetable milk, tofu, miso, yuba, and other Oriental soybean foods (incl. natto and Hamanatto).

  The soy flour industry in the U.S. has grown steadily in recent years. Deliveries of soy flour “from the years 1930 to 1940 averaged about 25 million pounds annually. The deliveries have increased considerably since 1940 partly as a result of an increase in domestic use and partly as a result of deliveries of soybean flour to various government agencies, largely for export. In 1941, Federal purchases amounted to about 10 million pounds of soybean flour. In 1943, the amount increased to 170 million pounds when large shipments were made to Great Britain and the U.S.S.R. under lend-lease. Purchases of soybean flour by the Federal government decreased for several years, but increased in 1946 to an estimated 200 million pounds under the UNRRA [United Nations Relief and Rehabilitation Administration] program. Total soybean flour deliveries for 1946 were approximately 380 million pounds. In the domestic market the bakery industry was the largest consumer. About 40% of the domestic sales of soybean flour were for bakery use. Since the Bureau of Animal Industry has legalized the use of soybean flour as a binder in meat products, about 20% of domestic sales are to the sausage industry. The balance is used in prepared dough mixes, macaroni, candy, and in institutional feeding.

  “In 1947, domestic sales of soybean flour were over 60 million pounds. This amount, plus government purchases and

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exports, amounted to about 415 million pounds. Two-thirds or more of the present domestic consumption of soybean flour is by the bakery, meat processing, and pet foods industries.”

Table 155 (p. 953) shows Bushels of soybeans used for U.S. soy flour production (1942-1947). In 1942-43, the amount of full-fat soy flour produced in the USA was roughly 40% of the amount of defatted. In 1944-45 it was about 49%, but thereafter the percentage dropped rapidly to only 5% in 1946-47.

Note: These statistics relate to Soya Corporation of America, Dr. Armand Burke, and Dr. A.A. Horvath.

Concerning soybean flakes and derived peptones as brewing adjuncts (p. 974-77): “Soybean flakes and grits have been employed by the brewing industry to improve the body and flavor of beer, to increase foam stability, and to stimulate yeast growth.

“Improvement in foam stability and flavor can also be attained by adding directly to the finished beer a hydrolyzed soybean protein which has been broken down to the peptone and proteose stage...

“The early history of the use of soybean products as whipping agents is of interest since this work stimulated the development of processes which eventually led to the production of the present soy albumens. In 1939, Watts and Ulrich pointed out that an active whipping substance could be prepared from solvent-extracted soybean flour in which the protein had not been heat denatured, by leaching it at the isoelectric point of the protein. This extract was found to whip more readily and to a much greater volume than suspensions of the original flour... The active principle in the whipping substance prepared by Watts and Ulrich was probably the nonprotein nitrogenous material present in the soybean flour which is soluble at the isoelectric point of the protein.”

Tables show: (155) Soybeans used in the production of low-fat and full-fat flour and grits (1942-1947, 1,000 bushels). (156) Peroxide value of fat extracted from pastries stored at 17.8ºC. (0ºF.), containing different percentages of soybean flour for periods of 0-6 months. (157) Analysis of uncooked liverwurst emulsion and of processed (water-cooked) sausage containing added soybean flour and water. (158) Losses in cooking liverwurst containing added soybean flour and water. (159) Analysis of frankfurter emulsion and of smoked sausage made with 3.5% of various binders. (160) Losses in smoking frankfurters made with 3.5% of various binders and after consumer cooking. (161) Effect of the addition of soybean peptone on volume and life of foam on beer. (162) Composition and pH of soybean albumens. (163) Composition of ice creams containing soybean flour. (164) Comparison of soybean milk with cow milk. One sample of cow’s milk is compared with 4 samples of soybean milk (probably Oriental) and 3 samples of modern U.S. soybean milk reconstituted (Soyalac for infants, all purpose Soyalac, Soyagen canned from Loma Linda Food Co., California). Figures show: (199-201, p. 981) Comparison of whipping ability of egg albumen and soybean albumen in different proportions and combinations. (202) Flow sheet for the acid hydrolysis process used in making HVP soy sauce. Address: Protein By-Products Research, Research and Technical Div., Wilson & Co., Inc., Chicago, Illinois.


• Summary: This release states that Robert E. Rich and Rich Products Corp. have paid $6,000 to Frank S. Mitchell of West Main St., Fredonia, New York, in settlement of his lawsuit against them. In exchange, Mr. Mitchell releases Rich and his heirs etc. from all further legal actions or responsibilities.


• Summary: Originally Bob Smith worked for Robert Boyer, then Mr. Ford had him operating a separate research laboratory. “Under Boyer they had worked up soybean milk and soybean cream which they found could whip quite well and from which the present product Delsoy is made. When Boyer was concentrating on soybean fiber, Smith was concentrating on milk and cream. Actually he was in a sense competing with Dr. Ruddiman, so you might say there were two food laboratories out there.” Boyer’s laboratory was focused on chemurgic applications. Dr. Ruddiman “was moved from the little rat house [where he kept is laboratory rats and did food experiments; it had previously been a private dining room] to the building that had been originally built for the Dearborn Water Works. This was empty and wasn’t being used for anything else. I am quite sure, but I believe that Smith either went over to work in this laboratory under Ruddiman or about the time that Ruddiman retired...

A man by the name of Jack [sic, Holton W. “Rex”] Diamond claims that he developed this product which Smith sold and commercialized under the name Delsoy. I don’t know very much about it, except that it was very confusing. There was a man from New York [probably Herbert Marshall Taylor] who came over here and told us a great long story about how Smith had stolen something from him, and he was going to sue Smith and the Ford Motor Company and so on. This man went out to see Frank Campsall, and I got assigned the job of interviewing him and trying to smooth his feathers.”
At one time, Mr. Smith reported directly to Mr. Ford. “Mr. Ford went to see him regularly and was keenly interested in the work Bob Smith was doing. Later Bob Smith left the Company and set up a business of his own, based on the Delsoy product, which was developed into quite a nice commercial affair.

“Jack [sic, “Rex”] Diamond left and I think he tried to set up competition to Bob Smith. Bob Smith had no prior technical training, I think he was another Trade School graduate. I would classify the Trade School not as a collegiate rank but as junior collegiate training that many of the boys acquired. Jack Diamond, however, was a trained chemist, and he may be right when he stated that he developed it” [soy-based whip topping]. Address: Chemist, in charge of the Chemical and Metallurgical Lab.


• Summary: Mr. Evans visited Super Whip, Inc., Beatrice Foods Co., Durkee Famous Foods Shortening Div., and Dairy Whip Division of Aerated Containers Corp. He found an active interest in a good vegetable topping base such as Rex Diamond has developed. Beatrice Foods and Super Whip would like to test the product. Details of individual visits are given. Delsoy Products is believed to be “selling the equivalent of 90,000 pounds of mix per year in pressurized cans plus topping for bakery use. Rich [Products] of Buffalo, New York, moves an equivalent of 130,000 pounds of mix per year in cans plus a substantial quantity in a form for mechanical whipping... Volume of business done by Rich and Delsoy (given above) was based upon the number of valves and caps for pressurized cans purchased.”

Note: This is the earliest document seen (Oct. 2001) that contains industry and market statistics for soy protein isolates (or concentrates, or textured soy protein products) by individual companies. Address: Dr., Director of Research, American Maize-Products Co., Roby, Indiana.


• Summary: Concerns the production of a “dessert mix” or “frozen dessert” made with the neutral soy protein isolate of soy protein, plus dextrose, sucrose, hydrogenated vegetable oil, stabilizer, water. “I have discovered that a frozen dessert of the ice cream type can be produced with acceptable body, texture, and overrun characteristics by effecting a partial reversal of the phases of the dessert mix emulsion during aeration and chilling.” In the 9 examples given, hydrogenated cottonseed oil is used as the source of fat in 7, but hydrogenated soy bean oil in the other two.

Note: Rex Diamond was working for the American Maize Co. when he applied for this patent. Address: Whiting, Indiana.


• Summary: The process described in this patent was developed while Rex Diamond was working for American Maize Products Co. in Whiting, Indiana, from 1949-1955. They wanted a spray-dried product with a long shelf-life since they had no facilities for handling a refrigerated product. For 7 years, Rex worked closely with Niro Spray-Drying Company, but they were unable to develop equipment that would successfully spray dry a high-fat product. After sitting on the shelf for a while, the fat would seep out from each particle in the high-fat product causing the particles to clump together.

Example 1 shows the ingredients (by weight) that might typically be used in the process: Neutral sodium proteinate of soy protein 2.6, dextrose 10.0, sucrose 17.0, hydrogenated cottonseed oil 64.4, stabilizer 2.4, residual moisture 1.0, flavoring substances 2.6. Address: Whiting, Indiana.


Spot. Date and source unknown. “Promotional posters: A set of five free promotional posters are being offered by Super Sundi-Whip manufacturer, Rich Products. The full color, 17 inch by 22 inch window posters feature six of the most popular soft serve menu items: strawberry, peach, butterscotch, hot fudge sundaes, banana boats and chocolate sodas. For display continuity, all feature illustrations of happy, active children, a picture and name of the dessert that’s topped with Sundi-Whip, and three price slots. These posters are free upon request.” An illustration with the heading “Strawberry Sundae” shows a cartoon of a little boy holding up a huge sundae piled high with whipped topping.

A photo sent by Rich Products Corp to Soyfoods Center shows a large pressurized can of Sundi-Whip on an exhibit display. It can be used to top pumpkin pie, hot chocolate, sundaes, sodas.

Billoni. 1980. “Thirty Degrees Below Zero.” p. 10-12. “First of the new products was Rich’s Green Label Whip Topping which was developed for bakery and institutional
use. This proved soy whipping cream could be whipped to stiffness never before attained by any cream or filled cream...

Then came Sundi-Whip, which is used extensively by soda fountains and for over-the-counter sales.”

Letter from Robert E. Rich, CEO of Rich Products Corp. 1993. July 26. This product was introduced in 1952. It was always sold frozen in pressurized cans—8 or 16 oz. The original ingredients included soy protein (which was not modified/hydrolyzed) and soy oil. The company address in 1952 was 1149 Niagara St., Buffalo 13, New York. Ingredients: Incl. soy protein isolate and soy oil. Wt/Vol., Packaging, Price: 8 oz. or 16 oz. pressurized cans. Frozen.


Letter from Robert E. Rich, CEO of Rich Products Corp. 1993. July 26. This product was introduced in Feb. 1953. It was filled with Rich’s Whip Topping. It was always sold frozen, with 4 eclairs in an 8 oz. wax coated cardboard folding carton. The original ingredients were the same as for Rich’s Green Label; they included soy protein (which was not modified/hydrolyzed) and soy oil. The company address in Feb. 1953 was 1149 Niagara St., Buffalo 13, New York. Ingredients: Incl. soy protein isolate and soy oil. Wt/Vol., Packaging, Price: 4 eclairs in an 8 oz. wax coated cardboard folding carton. Frozen.


• Summary: This document shows that on 16 Sept. 1953 Rex Diamond does sell, assign, transfer, and convey, for the sum of $1.00 three U.S. patents that he owned (#2,487,698, 2,619,421 [later changed to 2,619,423], and 2,619,422) as part of a larger agreement between the parties dated 23 Aug. 1950. Address: Indiana.


• New Product–Documentation: Gunther Products Catalog. 1988. “These are the most versatile of our functional whipping and foaming agents. Extremely bland in flavor, they are highly efficient, demonstrating more than twice the
whipping capabilities (in volume) or egg or soy albumen. Stable over a wide range of temperatures and pH, they may be processed by steam injection cooking or through HTST pasteurization equipment with no appreciable loss in aeration performance. They are suitable for use in a wide variety of desserts, frozen desserts, beverages, baked goods, marshmallows, icings, etc. to achieve aeration and/or texture modification.


Talk with Janice West. 1989. Sept. 7. This is Gunther’s most popular line. This enzyme modified product is basically an egg replacer used in whipping applications such as nougats, mousses, cake mixes. Its key attribute is that it whips well in a system WITH fat. Mira-Foam requires a fat-free or low fat system. Sales are booming. The company is 30 days behind in its orders. Two factors seem to be driving demand: The current high price of eggs and consumer concerns with cholesterol. The biggest percentage growth has been in the kosher Versa-Whip products. Ingredients: 500: Modified soy protein; 510: Modified soy protein, sucrose; 520: Vegetable soy protein, sodium hexametaphosphate, sucrose. Wt/Vol., Packaging, Price: 100-125 lb pack. Shelf stable.


- New Product–Documentation: Quick Frozen Foods. 1955. “The Rich story: 10th anniversary. 1945-1955.” Feb. p. 91-114. “Within the last three years the original Whip Topping for home use was joined by two brothers—Rich’s Green Label Whip Topping for bakery and institutional use, and Sundi-whip, a package for fountains and over-the-counter trade.” A photo shows the product in 1-quart a Pure-Pak carton. The front panel reads: “Rich’s Whip Topping: A delicious topping for desserts and fruit salads—a filling for cakes and pastries.” The ingredients (though hard to read) appear to be: Water, hydrogenated soya oil with added propylene glycol monostearate, soy protein, corn syrup, salt, artificial flavor and color. A full-page ad by Rich Products Corp. reads: “Rich’s Green Label Whip Topping. Less than a penny per serving. Keeps desserts fresh looking all day! Restaurants, cafeterias, and other large scale feeding operations often prepare desserts well before serving time. When decorated with ordinary topping, such desserts often lose their appetizing appearance and become soggy. Rich’s Whip Topping in quarts is designed to meet this problem—and then some! For this amazing topping—prepared especially for institutional users—keeps desserts fresh looking and fresh tasting not only through meal hours, but actually for more than 24 hours! Rich’s Whip Topping in quarts is less expensive, too (just half the whipped cost of whipping cream, for instance), and the convenience of frozen storage is a strong selling feature.”

Billoni. 1980. “Thirty Degrees Below Zero.” p. 10-12. “First of the new products was Rich’s Green Label Whip Topping which was developed for bakery and institutional use. This proved soy whipping cream could be whipped to stiffness never before attained by any cream or filled cream. It retained freshness, flavor, and a ‘decorator’s edge’ for more than 48 hours at temperatures as high as 80 degrees fahrenheit [sic, Fahrenheit] with no overrun.”

Letter from Robert E. Rich, CEO of Rich Products Corp. 1993. July 26. This product was introduced in the early 1950s. The ingredients shown above are correct. The soy protein was not hydrolyzed. It was sold in Pure Pak quart containers, frozen. Ingredients: Water, hydrogenated soya oil
with added propylene glycol monostearate, soy protein, corn syrup, salt, artificial flavor and color. Wt/Vol., Packaging, Price: Pure Pack quart cartons. Frozen.


**Summary:** Contains the best “official” company version of its history seen, with many photos, of this company’s first ten years making a soy-based non-dairy whipped topping. There is a good illustration of the original Whip Topping (p. 96). And there is a full-page message of congratulations from Spencer Kellogg and Sons, Inc. (Buffalo 5, New York), which has worked closely with Rich Products in the development of Rich’s Whip Topping.


*Ten years ago, in April 1945, a new industry was founded when the newly organized Rich Products Corp. brought out a vegetable whipping cream. Whip Topping was born. Rich’s Whip Topping was a war baby...*

“Today Rich’s Whip Topping is sold in more than 60,000 grocery stores in 48 states and possessions through 38 frozen food brokers and more than 700 distributors... Within the last three years the original Whip Topping for home use was joined by two brothers–Rich’s Green Label Whip Topping for bakery and institutional use, and Sundi-whip, a package for fountains and over-the-counter trade. And just six months ago a lusty addition to the family was born–Rich’s Frozen Chocolate Eclairs. Demand for this product has already outstripped Rich’s production facilities. As a result a second processing plant is being rushed to completion...”

“The industry founded by Robert E. Rich owes its inception to the food restrictions and government red tape imposed by World War II conditions. The word *Ersatz* became a temporary part of the nation’s language to define products evolved as substitutes for staples which were unavailable or in short supply. Sales of whipping cream were forbidden during the war. So Bob Rich went to the soy bean to find a substitute.”

One day in 1942 Bob Rich had “a chance meeting with the chief purchasing agent of Detroit’s Ford Hospital–a meeting which sparkled Rich’s idea for soy bean whipping cream.” The man explained: “The hospital’s entire supply of milk and cream is produced by the George Washington Carver Laboratories–*from soy beans!*”

“Those last words ignited a spark. Rich urged the hospital purchasing agent to tell him more about this soy bean cream. For 90 minutes he listened to the story of Carver’s scientific achievement.

“He heard how the laboratories had evolved a continuous method of extracting soy protein from the bean as early as 1940; were able to produce soy milk and cream, but were still unable to produce a soy cream that would whip. Rich arranged to have himself invited to visit and inspect the Carver operation.

“For almost three years Rich held to his idea of perfecting soy cream that would whip. After resigning from WFA, he returned to Buffalo and engaged chemists to help him transform his idea into reality. They worked with every known type of emulsifying agent in an effort to give whipping properties to the soy cream.

“After several months of exhaustive study, the experiments bore fruit. Under the guidance of Dr. Alexander Schwarzmann, vice president and research director of Spencer Kellogg & Sons, a salable whipping cream was produced.

“With the product ready to go into large-scale production, Rich wrote to the Carver laboratories for rights to its patented method of continuous extraction–a request he had been led to believe would be granted as a matter of routine.

“The Carver laboratories, however, were reluctant to give up the rights to their extracting methods. Weeks passed. ‘Exasperated, Rich sought help from one of the nation’s leading dairy engineers. With his aid a new batch extraction method was developed. It surpassed the Carver system in efficiency. Thus, in April, 1945, Whip Topping was born.”

Note: No mention is made of Frank S. Mitchell.


**Summary:** “I have become convinced, recently, that the topping project offers practically no promise of furnishing a product in any form which is suited to American Maize’s present manufacturing and distribution facilities. I believe the only way we can obtain a profit on the project is to sell it in its entirety, for I have made developments which can be exploited by other organizations having appropriate manufacturing and distribution facilities. I would like you and the rest of Maize management to approve a sale of the entire project.”

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On 13 June 1955 Mr. Taylor expressed a willingness to discuss the transfer and was certain they could “reach a mutually agreeable basis for distributing the returns form such a sale between” Diamond and American Maize. Address: Roby, Indiana.


• **Summary:** The term “vegetable whip fats” is used to mean whippable emulsions used as alternatives for whipping cream. “When we say that an emulsion is whippable, we mean that it is capable of undergoing a change in physical state from a liquid to a solid form by the retention of ingested air or other gas.” No one knows for sure why some emulsions are whippable and others are not.

“In addition to fat and water, two other ingredients are essential in the formulation of whippable emulsions. One of these is a dispersant, generally a proteinaceous material of some kind; for example, non-fat milk solids, soy bean protein, gelatin, or whole egg. The other is a surface active material, without which the emulsion may be stable, but not whippable. Among the materials of this kind often used are mono- and diglycerides, phospholipids, sorbitan derivatives, and polyoxyethylene derivatives. Additional ingredients such as corn syrup solids, sucrose, and salt are usually added, but fat, surfactant, dispersant and water are the four essential elements of the emulsion.”

Pages 4-5 state: “The use of special vegetable shortenings which contain not only hydrogenated vegetable oil, but also one or more surface active materials, is quite common in the topping business. It is well to remember in this connection that if these shortenings are made for some other use, they may introduce variations in the properties of the topping emulsions. A shortening containing mono and diglycerides may be controlled within tolerances which are adequate for its use in baked goods but not for its use in toppings.”

“The careful selection and formulation of the essential emulsion ingredients comprises the most important factor in the control of whippable emulsion properties.”

Note: Diamond felt this new understanding of the crucial role played by mono- and diglycerides represented an important discovery related to non-dairy whipped toppings.


• **Summary:** Shortly before 19 Aug. 1955 Spencer Kellogg and Sons received a job application from Holton W. Diamond, who had been working for American Maize-Products Co. Renfrew wrote Evans asking for more information about Diamond. Evans responded: “Mr. Holton Diamond has been with American Maize since 1949. He is a very good researcher with a truly creative mind. If Mr. Diamond leaves us it will be, as he stated, only because we do not plan to manufacture and merchandise dessert topping of the type he has developed... Mr. Diamond’s creative talents are of a nature that he can work on many food items. His devotion to the toppings results from the many years he has spent on the products and not from inflexibility. He has worked on other projects for us and has a well balanced personality.” Address: Dr., Director of Research, American Maize-Products Co., Roby, Indiana.


• **Summary:** “Confirming our conversation of last Saturday, we are interested in acquiring your services and the patent rights and applications which we discussed.

“We are willing to pay the sum of $5,000 for your patents and applications and offer you a salary of $7,000 per year, plus a profit sharing bonus which will vary according
to company profits, but we will guarantee a minimum of $500.00 per year.

“We would like to sign a contract with you covering a period of three to five years on these terms. We will pay the cost of moving your furniture from Chicago to Detroit if we get together on this deal.”

Note that the company name has changed from Delsoy Products, Inc. to Delsoy Distributors. Printed in the lower left corner of the letter is a small photo of a pressurized can of Delsoy Presto Whip. In the lower right corner is a photo of a container of Delsoy Topping in the shape of a truncated cone. Address: Delsoy Distributors, 1847 South Telegraph Rd., Dearborn 8, Michigan. Phone: Logan 3-1007.


**Summary:** Discusses his present employment in the Research Department of American Maize-Products Co., the three patents he has been issued, one patent application, products developed, and potential products. Diamond is willing to offer Rich Products both his patent rights and his technical services. He concludes: “I will be glad to come to Buffalo for a conference and interview at your convenience, and bring samples of my new topping, if you will defray my necessary expenses for so doing.” Address: Whiting, Indiana.


**Summary:** An attached letter shows how .0017% corresponds with $.0125 “per case half pint equivalent… I agree with you that a percentage basis makes it easier in figuring a bonus on new products… Herb is working on your housing accommodations now and I am sure he will have a choice of two or three four-room apartments that will be very much to your liking.”

Note 1. At the base of Rich Products’ letterhead is printed: “America’s Leading Manufacturer of Dessert Toppings.” Note 2. It would appear that Diamond has already accepted an employment offer by Rich Products. Address: Rich Products Corp., 1145 Niagara St., Buffalo 13, New York. Phone: GArfield 3211.


**Summary:** “We are now getting the preliminary work readied to go into the bakery field with both feet. Rex, I think with your new formula, plus our country-wide distribution, we can make a terrific dent in this bakery field in short order…

“I believe we will differentiate this new bakery product from our regular line by calling it ‘Rich’s Whip Topping–Diamond Process’, if you think this is a good idea. The world ‘Diamond’ gives us possibilities showing diamonds on the sketches as well as using diamonds on our brochures and literature. In addition, it should help to make you well-known to the trade.”

Concerning 4 questions that Rich asked Diamond about the product, Diamond responded on Nov. 7 that he would: (1) flavor the product with only a trace of ethyl vanillin to mask any native shortening aroma; (2) prefer a concentrate to a regular strength product; (3) suggest a tin can container, appropriately lined, rather than a paper one; (4) suggest two sizes, quart and 3 quart (#10 can). He notes that B.R. Taylor is Vice President of Finance for American Maize. Rex plans to arrive in Buffalo on Nov. 15. Address: Rich Products Corp., 1145 Niagara St., Buffalo 13, New York. Phone: GArfield 3211.


**Summary:** “We feel that an equitable arrangement would be to transfer to you the three original patents for sale to Rich Products Corporation at the $5,000 which they offer you, with the understanding that you will reimburse us for Mr. Mann’s legal services in connection with these patents…

“We would also agree that the patent application (#473,044), involving research work carried out by you while in the employ of Maize may, at your own expense or at the expense of your new employers, be carried to conclusion and transferred to yourself or Rich Products Corp. However, this is with the understanding that Maize would maintain a royalty-free, non-exclusive license to use the inventions covered by such patent.” Address: American Maize-Products Co., 250 Park Ave., New York 17, NY. Phone: Cable: AMAIZO.


**Summary:** This document states that on 8 Nov. 1955 American Maize sold, assigned, and transferred all rights, titles, and interests to all of Rex Diamond’s patents (3 issued and 1 applied for) to Rex Diamond in return for $1.00, “subject however to the terms of said agreement of even date herewith” (i.e. Agreement of Nov. 8). Address: New York.


**Summary:** This agreement concerns transfers of patents and patent applications from American Maize-Products Co. to Holton W. Diamond, and payment of a sum not to exceed
$1,744 by Diamond at Maize. However American Maize Products Co. is granted a royalty-free, non-exclusive license under the invention of patent application No. 473,044 titled “Salad and Dessert Topping and Method of Making Same” [which was issued as U.S. Patent 2,863,653 on 13 Jan. 1959]. The agreement is signed by the president of American Maize-Products Co and by Diamond. Address: New York. Aug. 1950. Diamond desires to sell to Rich and Rich desired to purchase from Diamond all these rights. For the sum of $10.00 Diamond agrees to use his best efforts, without delay, to obtain from American Maize these rights and titles. As soon has he has done so he will transfer the rights to Rich Products Corp. in exchange for $5,000. Address: Buffalo, New York.


- **Summary:** In Nov. 1955 Holton W. “Rex” Diamond went to work for Robert E. “Bob” Rich, president of Rich Products in Buffalo, New York. Rex and Florence lived at 29 Campus Dr. in East Buffalo. This document shows that on 25 Nov. 1955, as part of a business deal, Rex sold, assigned, and transferred all rights, titles, and interests to all of his patents (3 issued and 1 applied for) to Bob Rich in return for $5,000. American Maize Products Co. was granted a royalty-free, non-exclusive license under the invention of patent application No. 473,044 titled “Salad and Dessert Topping and Method of Making Same” [which was issued as U.S. Patent 2,863,653 on 13 Jan. 1959]. The agreement is signed by Holton W. Diamond.

Note: The process described in the patent titled “Salad and Dessert Topping and Method of Making Same” (No. 2,863,653) was used to make a new version of Rich-Whip, which soon became Rich Products’ most successful product. It was a non-dairy protein-free whipped topping that used methyl ethyl cellulose as its key ingredient. Address: Buffalo, New York.


- **Summary:** Rich Products hereby employs Holton W. Diamond for a period beginning November 15, 1955, for 3 years. “Diamond shall be in charge of the laboratory and development and research of Rich Products.” Diamond shall receive a “minimum fixed salary” of $8,500 per annum the first year and until 31 Dec. 1956, $9,500 for 1957 and $10,000 for 1958. He will also be paid “an amount equal to .0017% of the volume (in terms of dollars) of sales of all of the products of Rich Products in any contract year.” The contact shall renew itself for additional 3-year periods unless either party gives 6 months prior written notice. Robert E. Rich and Holton W. Diamond signed the document. Address: Buffalo, New York.


- **Summary:** Lists 3 patents and 1 patent application issued to or applied for by Rex Diamond. States that certain rights related to these patents and applications were obtained by American Maize-Products Co. in an agreement dated 23 Aug. 1950. Diamond desires to sell to Rich and Rich desired to purchase from Diamond all these rights. For the sum of $10.00 Diamond agrees to use his best efforts, without delay, to obtain from American Maize these rights and titles. As soon has he has done so he will transfer the rights to Rich Products Corp. in exchange for $5,000. Address: Buffalo, New York.


- **Summary:** Rich Products agrees to employ Rex Diamond from 1 Nov. 1959 to 31 Oct. 1969. “Diamond shall be in charge of the laboratory and development and research of Rich Products.” His “minimum fixed salary” is now $10,200 per year. He is also paid a bonus of 1.5 cents for each case of “half pint equivalent” sold. The term “half pint equivalent” is then carefully defined for the following products which contain the whip topping he invented: Whip Topping (7 oz, 10 oz, 12 oz, or 1 quart), Newburg Sauce (32 oz or 7 lb), Whip Topping Base (30 lb, 7 lb), Eclairs (2 pack or 4 pack). The agreement is signed by Diamond and Rich. Address: Buffalo, New York.


- **Summary:** “Holton W. Diamond has been appointed research director of the Rich Products Corporation, 1145 Niagara St.

“Mr. Diamond has been in research and development of new food items for the American Maize Products Co., Roby, Indiana, and is a former chief chemist of the George Washington Carver Laboratory of the Ford Motor Co. He holds a number of basic patents in the soy bean whipping-cream field. Mr. Diamond is a 1936 graduate of Wilmington College [Ohio] and has studied in Wayne University and the Massachusetts Institute of Technology.”

A portrait photo shows Rex Diamond.


- **Summary:** This assignment by Rex Diamond to Robert E. Rich of his 3 patents and 1 patent application seems very similar to that finalized on 25 Nov. 1955 except that the assignment is now made to Mr. Rich, who resides at 29 Beard Ave., Buffalo, New York. Address: Buffalo, New York.


great success of “Diamond Process” institutional whip topping, apparently launched in a quart size in May 1956.

Letter from Robert E. Rich to his brokers. 1956. Aug. 22. “In all my years in the frozen food game, and you know we are the oldest specialty packer in operation today, I have never seen a single product with the sales potential of our Rich’s Diamond Process Whip Topping. We’re so enthusiastic about it that we’ve already begun the second story on our plant just to begin to handle the increased production we know is forth coming…”

Leaflet. ca. 1956. “Dietitians’ Data Sheet. Rich’s Diamond Process Whip Topping.” A photo shows a smiling woman holding a spoonful of a white topping. Next to her is a can of “Rich’s Whip Topping.” On the front panel, below the product name is written prominently “diamond process.” Ingredients: Water, hydrogenated vegetable oil 23.0%, invert sugar 16.0%, modified vegetable stabilizers, vegetable emulsifiers (less than 2% for both; derived from vegetable sources), salt, artificial flavor, carotene. “One quart of heavy cream ordinarily whips to 1.8 quarts; one quart of Rich’s Diamond Process whips to 4.0 quarts” but under ideal conditions can whip to 4.9 quarts. Whipped cream contains 3.8 calories per gram, whereas Rich’s Diamond Process Whip Topping contains only 2.9 calories per gram (less than one-half as many).


An undated photo sent by Rich Products Corp. to Soyfoods Center shows a large photo of can of this product on the back wall of an exhibit. The label on the can is the same as the product name shown above. But the larger sign next to the can on the back wall of the display reads: “Rich’s diamond process Whip Topping.”

An undated leaflet titled “Technical data for Rich’s Whip Topping—Diamond Process” shows a man looking into a microscope and discusses the following: Fat, cholesterol, carbohydrates, protein, stabilizers, emulsifiers, ash, and color. “Rich’s Diamond Process Whip Topping emulsions contain no protein. They are unique in this country in this respect and are protected by United States Patent No. 2,868,653.” Stabilizers include cellulose gum, methyl cellulose, methyl ethyl cellulose, and sodium carboxy methyl cellulose (carboxymethylcellulose or CMC). Note 1. The latter, a word first used in 1947, is used as a thickening, emulsifying, and stabilizing agent.

On the reverse side of the leaflet a page, titled “proximate analysis” compares the composition of two types of Rich’s Diamond Process Whip Topping: (1) Ready to use in 2 lb cans; or Base for dilution in 2 lb, 7 lb, or 30 lb cans.

Note 2. This product contained no soy and no protein.


• Summary: Discusses the great success of “Diamond Process” institutional whip topping. “Since the convention introduction you have all been pretty well posted on the progress of the ‘Diamond Process’ developments on our institutional product...

“In a very brief six week period our ‘Diamond Process’, has started to indicate some effect on our sales figures. In May, in 15 days our quart picture showed a 125% increase over the whole May of 1955. Immediate product acceptance, and elimination of competing institutional products became daily by words. Our May of ’56 surpassed any May before in history, in fact the second week of May ’56 was the greatest single 6 day sales period ever experienced in Rich Products History... Our quart development in a large measure has brought about these wonderful, wonderful happenings, but other things have contributed a share too.”

Note: This newsletter is published “occasionally” (irregularly) by Rich Products Corp. and mailed to its salesmen, brokers, distributors, and customers.


• Summary: “In all my years in the frozen food game, and you know we are the oldest specialty packer in operation today, I have never seen a single product with the sales potential of our Rich’s Diamond Process Whip Topping. We’re so enthusiastic about it that we’ve already begun the second story on our plant just to begin to handle the increased production we know is forth coming...

“This promotion is on a far greater scale than anything we, or anyone in our field, has ever done before. But this product is so far above anything of its kind, it deserves the best.”

Note 1. At the bottom of the company’s letterhead is written “America’s leading manufacturer of dessert toppings.” Note 2. This product, based on methyl ethyl cellulose, contains no soy protein. Address: Rich Products
Rich's Whip Topping—the diamond process” in his right place, he is holding a metal can (about 1 quart capacity) of stainless steel mixer.

- **Summary:** Rich has decided to raise Rex Diamond’s guaranteed annual income to $12,000. “This $12,000.00 figure to include Rich Products share of the Pension Trust payment of $851.67. It was agreed that your bonus would be adjusted to the following: $5,200 base plus $.015 per case of 24/8 ounce—half pint equivalent.” Address: Rich Products Corp., 1145 Niagara St., Buffalo 13, New York. Phone: GArfield 3211.


- **Summary:** Rich has decided to raise Rex Diamond’s guaranteed annual income to $12,000. “This $12,000.00 figure to include Rich Products share of the Pension Trust payment of $851.67. It was agreed that your bonus would be adjusted to the following: $5,200 base plus $.015 per case of 24/8 ounce—half pint equivalent.” Address: Rich Products Corp., 1145 Niagara St., Buffalo 13, New York. Phone: GArfield 3211.


- **New Product—Documentation:** Talk with Walt Cunningham of Dunkirk, New York. 1993. July 14. Walt worked for Mitchell Foods from 1950 until the early 1980s. In the mid-1950s the company had decided to enter the non-dairy coffee creamer business. Their first such product (and their third product overall), named Mocha-Mate, was launched in about 1956, sold only to the institutional trade. It contained both soy protein and soy oil. After a while, a big company that made Coffee-Mate and owned a registered trademark on it forced Mitchell Foods to stop using the Mocha-Mate name, claiming that it was too similar to Coffee-Mate. So Mitchell Foods changed the product’s name to White Nectar. Wt/Vol., Packaging, Price: Pure-Pak Carton. Frozen.


- **Summary:** See next page. Rex Diamond, dressed in a white lab coat, standing near a laboratory bench, looking at a stainless steel mixer.

In a similar photo, taken on the same day at the same place, he is holding a metal can (about 1 quart capacity) of “Rich’s Whip Topping—the diamond process” in his right hand. Address: Buffalo, New York.


- **Summary:** A remarkable vegetarian cookbook with a Christian message and references to many Biblical passages. It would be vegan, except for the use of honey. The author is a devout Christian and is probably a Seventh-day Adventist since (1) Ellen G. White is quoted on several pages (p. 2, 214-17, etc.), (2) it contains so many soy recipes at a relatively early date, and (3) it mentions some brands of soy products (e.g. Madison Health Food Company’s Cheze-O-Soy = tofu) made by Adventist companies. Page 14 has a short section on soy oil and page 14 a long section on soy beans, including soy oil. Soy-related recipes include: Soy beans (p. 44). Soy paste (with soy milk powder, p. 50). Soy-whole wheat noodles (with soy flour, p. 62). All purpose soy milk no. 1, no. 2, and no. 4 (made with El Molino Soya Milk Powder, p. 66-67). All purpose soy bean milk no. 3 (made from whole soy beans). Hot carob drink (with soy milk, p. 66). Almond milk. Cashew nut milk. Sesame milk (p. 67). “Liquefy together: 1 cup sesame seeds and 2 cups water. Then strain the milk through a fine cloth; squeeze to get out all the milk. Then liquefy with a little honey, salt, oil, or liquid lecithin”).

Note: This is the earliest English-language document seen (Aug. 2013) that contains the term “sesame milk”–or a recipe for making it at home.


Note: This is the earliest document seen (Feb. 2012) that contains the term “Scrambled tofu” or that contains a recipe for “Scrambled tofu.” The book actually gives 3 recipes for scrambled tofu (pages 73, 80, and 115).

Note 1. We are unable to find a recipe or definition for “soy whipped cream” anywhere in this book.

Note 2. This is the earliest English-language document seen (Oct. 2013) that contains the term “soy whipped cream” (regardless of capitalization).


Chapter 18, “Grandma’s remedies” is about fasting, including “A week or fourteen day fast” (p. 204). A large portrait photo on the front cover shows Sally Zerling. Address: 24629 N. Arch St., Newhall, California.

• Summary: “The election of Jerrold W. Hannon as vice president in charge of sales and Holton W. Diamond as vice president in charge of research of Rich Products Corp., 1145 Niagara St., was announced today by President Robert E. Rich.

“Mr. Hannon has been with Rich Products since its inception in 1945 and for the past 12 years has been national sales manager. Prior to that time he was sales manager of the Wilber Farms Dairy, a Rich-owned operation.

“Mr. Diamond has been with Rich Products since 1955. Before joining Rich, he was chief chemist of the Ford Motor Co.’s George Washington Carver Laboratory.” Photos show both men.

120. Diamond, Holton W. 1958. Re: Update on his life and work. Letter to Dr. O.F. Boyd, Prof. of Chemistry, Emeritus, Wilmington College, Wilmington, Ohio, April 15. 2 p. Typed, without signature (carbon copy).
• Summary: Prof. Boyd apparently taught Rex Diamond chemistry at Wilmington College in Wilmington, Ohio. “Following my graduation in 1936, I roved among a number of jobs and activities, never quite satisfied. This orientation period included a term in the Methodist ministry, at Drew University Graduate School of Theology. You may recall my interest in YMCA and Gospel Team Work while I was a student at Wilmington College.”

“During 1942, while working in Detroit [Michigan], I enrolled in night school at Wayne State University [in Detroit], taking courses, among others, in Advanced Organic and High Polymers. From the University I obtained a position in the Research Department of the Ford Motor Company, in the synthetic rubber development department, supervising a project group on butadiene synthesis. When the entire synthetic rubber research program at Ford was abandoned, I was given a choice of three other jobs in the Company’s technical organizations, and chose to go to the George Washington Carver Laboratory in Dearborn, where I became acquainted with soy bean foods and the late Henry Ford, who maintained the laboratory as a sort of personal hobby, officially as a memorial to his good friend, Dr. Carver. Mr. Ford spent a great deal of time at the laboratory, usually dropping in two or three times a week to visit, and often spending the entire day with us. Working for him and sharing his ideas, as you can imagine, was a stimulating and interesting experience.

“I also became acquainted at the George Washington Carver Laboratory with a girl whom I interviewed for a job in the laboratory, Florence Barbier, a graduate of Stephens College, and with whom I have since become much better acquainted. Before we were married, she washed the dishes for me.

“I have been interested in soy foods, particularly ‘soy cream’, and the phenomenon involved in the ‘whipping’ or phase-reversal, of such emulsions, for the past fifteen years.

“Rich Products Corporation is America’s oldest and largest manufacturer of frozen whippable emulsions, and the oldest specialty packer in the entire frozen food industry. We carry inventories in over one hundred public warehouses across the country, and number the world’s largest users among our customers. We manufacture a variety of these emulsions, some for fountain use, some for household use, and others for bakery applications. Most people are a little surprised to learn of the large quantities of these materials used; as for example, a customer of ours in New England whips 700 to 1000 gallons of our emulsion per day, to cover the tops of ‘soft’ pies, chocolate, coconut cream, and the like. I have enjoyed very much being associated with such a new and growing technology, and being a part of a dynamic and thriving business. In January of this year I was elected to the Board of Directors of Rich Products Corporation, and appointed a vice-president.

“We have no children, and Flo and I are conveniently cliff dwellers at the address shown above, on the top floor of Buffalo’s tallest apartment building.” Address: 800 West Ferry St., Buffalo, New York.

• Summary: “Dr. Harry Willis Miller, director of the international Nutrition Research Foundation [INRF], Arlington, California, was born 79 years ago in Ludlow Falls, Ohio. Although renowned as one of the world’s leading thyroid surgeons, he also has spent many years in soybean research and has done much to perfect and promote soybean food products on the American market.

“As a medical missionary sent to pioneer the work of
Seventh-Day Adventists in China from 1903 to 1911, he wondered how he could aid the millions of undernourished Chinese children—hundreds of infants dying daily from malnutrition.

“After years of investigation and practical experimentation with one of the most staple foods in China, he discovered a method of ‘milking’ soybeans and perfected a palatable formula suitable for both infants and adults.

“The response to the product was spectacular. To meet the immediate demand machinery was shipped to China, and under Dr. Miller’s management the first modern vegetable milk plant in the world was put into operation. Until the outbreak of war in Shanghai in 1937, fresh soybean milk was delivered daily to hundreds of homes in Shanghai.

“For the service he rendered to the people of Free China in saving the lives of countless thousands of infants with the use of soybean milk and for his untiring efforts in establishing a dozen or so sanitariums-hospital clinics in the Orient, he has received National China’s highest honor. In 1956 Dr. Miller was decorated with the Brilliant Blue Star by Generalissimo Chiang Kai-shek himself.

“Although Dr. Miller has certificates to practice medicine in nine of the 49 states and 11 foreign countries, and even at his age retains a steady hand for surgery cases, he continues to devote much time to the development and perfection of soybean foods.

“Despite his full life as a general medical practitioner, and many years spent superintending numerous Chinese sanitarium-hospitals, serving as president of the Seventh-Day Adventist mission in prewar China, managing and editing the Chinese Signs of the Times, authoring many medical books and articles and lecturing around the world, he has managed to continue his soybean research and experimentation whatever his location.

“From 1939 to 1950, while medical director of the Mount Vernon, Ohio, sanitarium and hospital, he opened a research laboratory where he developed a new improved soy milk, soy-olive sandwich spread, and numerous other nutritious foods made from soybeans and grains, and initiated the International Nutrition Laboratory of America which later became the INRF which he has heavily endowed.

“In 1951 he sold his growing soybean food industry to the Loma Linda Food Co. and came to Arlington, California, where he now makes his home and spends as much time as possible in the new laboratory placed at his disposal by Loma Linda. Two years ago, the World Health Organization became interested in Dr. Miller’s progress in developing a superior soy milk and modeled a million-dollar factory in Indonesia after the Loma Linda food factory which he had pioneered in Mount Vernon, Ohio. At the present time WHO is also providing $30,000 for an intensive 2-year infant nutrition research program at a leading U.S. hospital using his soy milk formula.

“Since his appointment as director of the INRF, laboratory and experimental work have frequently interrupted to answer please for help from his medical colleagues in foreign lands. From 1954-1956 he went to Penang [Malaysia] and Formosa to serve as medical director and surgeon for the hospitals there, took a similar post for 2 months in Trinidad in 1956, another in Libya in 1957, and he is now filling the post of medical director and surgeon at the Tokyo Sanitarium-Hospital in Japan during a 6-month leave of absence by an SDA medical-missionary.

“Despite his present busy daily routine at the sanitarium he is continuing his work with soybeans and has a nearby tofu shop deliver soy milk daily to the sanitarium in 5-gallon containers. Since his arrival he has introduced soy whipping cream for daily use at the sanitarium and routinely prescribes soy milk to allergic Chinese infants. He writes that he was surprised to find that the soy milk he helped perfect for the Loma Linda Food Co. is now obtainable by military personnel at the U.S. army post exchanges in Japan.”

Note 1. This is the earliest published English-language document seen (Oct. 2013) that contains the term “Soy whipping cream.”

“While other men have rightly taken up golf, fishing, or other hobbies, Dr. Miller has devoted most of his spare time to research and development of vegetable foods. ‘Soybeans have been my lifetime hobby,’ he declares. Small wonder he is known from East to West as the man who gets ‘milk from an iron cow.’

“Over the years Dr. Miller has been among the most active supporters of the American Soybean Association. He was chosen an honorary life member of the Association at the Des Moines convention. The award was made in his absence in Tokyo during the annual banquet.”

Photos show: (1) Dr. and Mrs. Miller with Madam and Generalissimo Chiang Kai-shek. (2) Dr. Miller in Libya in 1957—standing outdoors and dressed in his plain white doctor’s outfit. (3) “C.G. Simcox presents honorary life membership award to C.P. Miles, manager Loma Linda Food Co., Mt. Vernon, Ohio, in behalf of Dr. H.W. Miller. Award will be formally presented to Dr. Miller in Tokyo by Shizuko Hayashi, managing director of the Japanese American Soybean Institute.”


Nutritional value for human beings and animals (isolated soy protein, soybean oil meal, soybean milk, soybean curd, and Oriental products), amino acid composition, supplementation (mutual supplementation, isolated soy protein as a source of lysine). Food uses of edible isolated soy protein: Dairy-type products (including recipes for All-vegetable coffee “cream,” All-vegetable whipped toppings, All-vegetable “cream cheese,” Non-milk chocolate frozen dessert [ice cream], All-vegetable high-protein chocolate drink, All-vegetable high-protein non-starch chocolate pudding) meat-type products (including recipes for All-vegetable “meat loaf,” and All-vegetable “frankfurters”), baked and cooked products based on dough, cereal-type products, macaroni-type products, oriental-type foods, specialty foods, confections and preserves, coatings, feed uses, modified soybean protein products, summary and conclusions. Address: The Glidden Co., Chicago, Illinois.


• Summary: See next page. Rex Diamond is seated at his desk talking on the phone. Behind him and to the right, are his framed whipped toppings patents.

On 15 Nov. 1955 Rex Diamond went to work for Robert E. “Bob” Rich, president of Rich Products Corp. in Buffalo, New York. He was in charge of the laboratory and development and research of Rich Products. From that time until at least 1959 he was the only chemist employed by the company. Address: Buffalo, New York.

124. Photograph of the employees of Rich Products Corp. in Buffalo, New York, standing on the steps of the company building. 1958.

• Summary: See page after next. In the front row (left to right) are Jerry Hannon, Robert E. Rich (president) and H.W. “Rex” Diamond. Address: Buffalo, New York.


• Summary: This is the patent for the “Diamond Process” whip toppings that played a key role in making Rich Products a successful company. Rex Diamond developed this process while he was working for American Maize Co. The product is unique among whipped toppings in that it contains no protein. Methyl ethyl cellulose is the key stabilizer. One example of the ingredients by weight: Water soluble methyl ethyl cellulose 2.0, hydrogenated cottonseed oil 30.0, polyoxyethylene glycol monostearate 0.2, water 67.8. The rights to the patent were assigned to Robert E. Rich by Holton W. Diamond on 25 Nov. 1955. Address: 1. Whiting, Indiana; 2. Chicago, Illinois.


• Summary: Promine isolated soybean protein contains 92% protein, is free of undesirable flavor characteristics, and has no indigestible carbohydrates. Gives a list of almost 100 products in which Promine may be used, including bakery products, cereal products, confections, “dairy type products (Cheddar-type cheese, ‘cream’, all vegetable,’ ‘cream cheese,’ ‘cottage cheese,’ flavored drinks, fortified ‘milk,’ frozen desserts, ‘ice cream,’ margarine, sour ‘cream,’ spreads, whipped toppings, ‘whipped cream,’ ‘yogurt’), egg type products, edible coatings, macaroni type products, meat and meat type products, oriental type food products (incl. tofu and yuba), specialty foods, and animal feeds.

Note: This is the earliest English-language document seen (Oct. 2013) that uses the term “Cheddar-type cheese” to refer to a Western-style soy cheese. Address: 1. Manager, Edible Protein Products; 2. Research Associate, Chemurgy Div., Central Soya Co., Inc.


• Summary: “The Rich Products Corp. and Wilber Farms Inc. have purchased the two-story building at 1146-60 Niagara St. for expansion. The building now houses the Canada Dry Bottling Co. of Buffalo Inc.”

“The structure was acquired for the expansion of Rich Products, manufacturer of dessert toppings, and for the immediate requirements of the Wilber Farms Dairy. Both companies will continue in their present locations at 1145 Niagara St.”


• Summary: Gives a brief history of the company, but focuses on Promine, the company’s new “commercial isolated soya food protein. The opening of the new Promine plant Oct. 27 [at 1825 N. Laramie in Chicago, Illinois] marked the latest milestone in the 25-year story of progress by Central Soya since it was founded in 1934. Officials of the company are very optimistic about their new product and the possibilities of uses are unlimited. Dr. Edwin Meyer, chemurgy research director, stated, ‘If we could convert the entire [U.S.] soybean crop into Promine it would supply our nation with enough protein for one year to maintain our present high protein diets.’”

Dale W. McMillen founded Central Soya in the midst of the depression when he was age 54. “Mr. Mac” will soon celebrate his 80th birthday. Today Central Soya ranks 81st in gross sales and 4th in sales per employee among America’s 500 largest industrial corporations.
“Examples of present-day foods being improved by the addition of Promine include many baby foods, cereals, bakery products, confections, pressure dispensed whipped toppings, many types of prepared meats, and other high protein foods.” At the ceremony opening the new plant, samples of an “all vegetable ‘Hot Dog’” were dispensed to visitors.

Central Soya researchers were the first “to develop the commercial isolation of a food grade soya protein in 1949.” Their first commercial isolated soya protein product was “Alpha” protein, launched in 1937, for use as an adhesive in pigment coated paper by the paper industry. New edible soy flours include Soyafluff, Soyalose, and Soyarich. Spraysoy, Prosein, and Prossoy have been developed for industrial use in plywood glue, wallpaper coating, and in light duty abrasives. Lecithin is used in margarine as an anti-spattering ingredient. A granular type RG Lecithin is being used as an aid in lowering blood cholesterol.

Photos show: (1) An aerial view of the Chemurgy Division of Central Soya Co. in Chicago, including the recently completed Promine plant. (2) Promine being filled into 50 lb bags labeled “Promine D Edible Isolated Soya Protein.” (3) American Soybean Association’s president Carle G. Simcox and Central Soya’s founder Dale W. McMillen shake hands at the opening of the firm’s Promine plant on Oct. 27 in Chicago. (4-6) Small portraits of Dale W. McMillen, Harold W. McMillen, and Edwin W. Meyer.

Note: This is the earliest document seen (Feb. 2002) that contains the term “food grade” in connection with soy.


152 Main Street, Fredonia, New York.
• New Product–Documentation: Ray Dearlove. 1975. Observer (Dunkirk, New York). May 25. “Mitchell Foods profit in switch to retailing.” “The 26-year-old Mitchell Foods Inc. had relied on its whipped topping product called Whipped Filling Base for revenues from 1949 until 1964. The product was developed by Frank S. Mitchell, founder of Mitchell Foods, Inc. It was a concentrated, non-dairy product sold mostly to commercial baking suppliers as toppings for pies... But as more and more of the major pie makers started producing their own non-dairy whipped toppings, Mitchell realized his company would have to try the retail field.” So the company developed Perx, a non-dairy creamer.


• Summary: See next page. Rex Diamond holding a quart carton of Coffee Rich, the coffee creamer developed, made and sold by Rich Products.


• New Product–Documentation: Talk with David and Harvey Whitehouse. 1992. Feb. 4. Most of the sales of Delsoy Topping were to bakers and restaurants—not to consumers. At some point prior to 1961 the name of their frozen product, Delsoy Topping, was changed to Delwhip Topping, and a new product named Delwhip Topping Base was introduced; it was a concentrate to which one had to add water to reconstitute it. The name of Presto Whip remained unchanged. Ingredients: Incl. soymilk, vegetable oil, sugar. Frozen.

Leaflet. 1960 or 1961. How to get the most from Rich’s Whip Topping (“the diamond process; 7 lb. concentrated base product”). It is shipped frozen. Keep it stored under refrigeration. Let it thaw gradually to 40°F. Mix it with cold water, below 38°F. Keep refrigerated. The company is at 1152 Niagara St.


An undated leaflet titled “Technical data for Rich’s Whip Topping–Diamond Process” shows a man looking into a microscope and discusses the following: Fat, cholesterol, carbohydrates, protein, stabilizers, emulsifiers, ash, and color. “Rich’s Diamond Process Whip Topping emulsions contain no protein. They are unique in this country in this respect and are protected by United States Patent No. 2,868,653.” Stabilizers include cellulose gum, methyl cellulose, methyl ethyl cellulose, and sodium carboxy methyl cellulose. On the reverse side of the leaflet a page, titled “proximate analysis” compares the composition of two types of Rich’s Diamond Process Whip Topping: (1) Ready to use in 2 lb cans; or Base for dilution in 2 lb, 7 lb, or 30 lb cans.

Undated leaflet. “Balance your summer profits with Rich’s lemon or lime parfait pies.” “When you use Rich’s Diamond Process Whip Topping, you have guaranteed high summer profits.” Recipes for each pie call for the use of “Rich’s Whip Topping Base.” Note: This product contained no soy and no protein.

Letter from Robert E. Rich, CEO of Rich Products Corp. 1993. July 26. This product was frozen had to be defrosted and mixed with equal parts of water or skim milk or fruit juice. It was packed in 2 sizes: 7 lb and 30 lb cans. Wt/Vol., Packaging, Price: 7 lb and 30 lb cans. Frozen.
• Summary: “Frank S. Mitchell president of Mitchell Foods, Inc. of West Main Street, Fredonia announced the purchase of the Good Seed company today. The plant located at 112 West Main Street at the foot of West Hill will be utilized as a storage facility for his food processing business for the present. The Mitchell concern, established in 1949, was one of the first processors in the nation of frozen topping manufactured exclusively for the baking industry. The company supplies restaurants, hotels, hospitals, and commercial bakeries.”

“The three-section building has a total of 40,000 square feet of floor space and all sections are at the ground level. It has elevator facilities.”

“The Mitchell company has experienced considerable growth since the advent of frozen cream pies created a boom in the whipped topping market, which it distributes. The company now employs 15 persons, three outside salesmen and a technical service representative.”

“The building has been vacant since July.”

• Summary: “The State Department of Agriculture said today it had issued a restraining order preventing the sale of Coffee Rich, a vegetable product, in Wisconsin. F.J. Griffith, department counsel said that the product has been ordered quarantined at various wholesale plants in the state because it is being sold as an imitation dairy product. The state law prohibits sale of any imitation dairy products.

“Mr. Griffith said that the product had been sold and used as an imitation cream, although there apparently has been no intent by the sellers to violate the law.


“Harvey J. Weavers, chief of the Food Division of the Department said that the product ‘looks like cream,’ and acts like it.”

• Summary: “A wartime developed substitute for whipped cream has today evolved into a product that is in several respects superior to the thing it was designed to replace and has become the basis for a profitable $10-million business for a Buffalo firm. It all started in 1945 when Robert F. Rich, then milk market administrator for the State of Michigan under the wartime controls systems set up by the Department of Agriculture, saw market possibilities in some experiments being conducted at the George Washington Carver Laboratories sponsored by Henry Ford.” Rich developed a soy-based whip topping “with help from some of the chemists at the Spencer Kellogg laboratory here. Spencer Kellogg & Sons Co. supplied the soybean oil... It met with instantaneous success. Sales in 1946 totaled more than $100,000.” As early as 1949 Rich started marketing his product in pressure cans. And “today whip topping sales for his company exceed $7 million.” The formula has been changed greatly. In 1957 the firm eliminated the soybean oil base entirely and went to more expensive, and better, nut oils. These gave the product a lighter, cleaner taste. [Note: A major change in 1956 was the switch to the “Diamond Process” which uses no protein. This is not mentioned.]

“Today Rich Products Corp. is the largest producer of whip topping in the nation.”

• Summary: Rich Products Corp. is represented by the firm of Arnall, Golden & Gregory of Atlanta, Georgia. Robert E. Rich resides at 29 Beard Ave., Buffalo, New York. He is the president and sole owner of both Rich Products Corp. and its wholly owned subsidiary, Coffee-Rich, Inc. The latter company, which was formed in the latter part of 1960, makes only one product, frozen Coffee-Rich. The formula is very similar to that of Rich’s Whip Topping “with a slight change in the emulsifying program and a lesser amount of fat...” Coconut oil is now being used in both products. The two products are similar. “In fact, we feel that Coffee-Rich comes within the boundaries of one of the four basic patents that are owned by Rich Products Corporation.” Coffee-Rich is “being sold in each one of the fifty states. [Made and solely] Packed in our plant in Buffalo [1145 Niagara St.] and frozen and shipped to 126 warehouses throughout the country.” The product has 1,700 frozen food distributors.

Before starting Rich Products Corp. in 1945, Robert Rich was the president and sole owner of a company which at that time was called Wilbur [sic, Wilber] Farm Dairy; the name was later changed to Jones-Rich Milk Corporation, but he remains the sole owner and president. “I have been in the dairy business and owner of the dairy since 1935. Before that my family had been in the ice cream business, so I have been associated with the dairy industry all my life.” In addition “I was Alternate Administrator of National War Food Order No. 8, and I was Milk Administrator for the State of Michigan.” Address: Richmond, Virginia.

• New Product–Documentation: Ad (undated, about 1960s). “It takes just a little Coffee Rich to make a tremendous cup of coffee.” A small bottle of Coffee Rich is held between the
thorn and forefinger of someone’s hand.

Leafllet (undated, about 1960s). “Technical information. New liquid Rich’s Coffee Rich.” A photo shows that Coffee Rich is sold in a quart Pure-Pak carton. It is “an all-vegetable fat emulsion designed primarily for use in coffee.” It can also be used in cooking, is non-perishable, has a good, uniform taste and its stability resists “feathering,” oiling off, and separation defects. “Economical: Coffee Rich is not a substitute product. It is a superior new product... Savings on present costs is but one important feature.” Quantitative analysis: Fat 12%, corn syrup solids 14%, sodium caseinate 0.80% (used as a major emulsion stabilizer), sodium ion 0.1%, cholesterol free, beta carotene supplies about 300 I.U. of vitamin A activity per quart, calories–160 per 100 gm.

Shurtleff & Aoyagi. 1985. History of Rich Products’ work with soy proteins. When this product was launched in about 1960, it was based on coconut oil and contained no protein. “The lack of protein gave the product a long shelf life when sold refrigerated in dairy cases, as was planned. But the product started settling out, so the company switched to using sodium caseinate as a protein source, then in about 1963 began using soy protein (typically 0.75% by weight) as the main protein source. In the mid-1970s, soy oil replaced half the coconut oil, then later in the 1970s all of it. The dairy industry spent a small fortune trying to keep Coffee Rich off the market.” The first lawsuit was in Louisiana in 1961. “By 1974 the number of court cases and victories for Rich Products had grown to 40. That year the Kansas Supreme Court declared Coffee Rich ‘a new and distinct food’ and the milk lobby gave up. Rich Products’ success in these suits led to the creation of a new product category: Coffee whitener."


• Summary: Coffee-Rich Inc., a subsidiary of Rich Products Corp. of Buffalo, New York, scored another victory last week in its “nationwide fight to gain acceptance of its product, a nondairy coffee whitener.”

Robert E. Rich, president of the company, has welcomed the court cases by dairy interests, which have been waging legal battles against him at every step of the way. He has used these cases to prove the superiority of his product, a vegetable oil derivative. This time the Washington State Department of Agriculture lost its court case to have Coffee Rich banned for sale in the state unless it was labeled an imitation cream or a “filled milk.”


• Summary: “The manufacture of vegetable fat replacements for dairy products has increased tremendously in the last few decades.” In all cases the butter fat has been replaced by vegetable fat, but in many cases the entire finished food may be described as “all vegetable.” “We have soybean milk, margarine, and ‘mellorine.’ We have the vegetable alternate for cottage cheese, and in certain parts of the Orient rather elaborately cultured and fermented soybean materials are manufactured and used as replacement for cheddar and other types of cheeses.” Address: Vice President—Research, Rich Products Corp., 1145 Niagara St., Buffalo 13, New York.


• Summary: This suit began in late 1961 as Rich Products attempted to protect its sales of Coffee-Rich in the state of Michigan. This document is an appeal from the Circuit Court for the County of Wayne, Hon. George E. Bowles, Circuit Judge. John R. Dykema and Ellis Arnall represented Rich Products. On 23 Dec. 1963 it was decided that Coffee-Rich was not an imitation cream, milk, or half-and-half and therefore did not need to have the word “imitation” printed on its label.

The Chil-Zert case is discussed on pages 43-44. Chil-Zert was found to be an imitation product because there was (1) identity in method of manufacture, (2) identity of ingredients, and (3) substitution of one element for another. “Chil-Zert contained the identical ingredients of chocolate ice cream, except for the substitution of vegetable fat for milk-fat protein... Chil-Zert and chocolate ice cream were manufactured in the same manner and with use of similar machinery.” Chil-Zert was sold frozen like ice cream, and it had the same taste, appearance, color, texture, body and melting qualities. Address: Michigan.


• Summary: “The new program, Mr. Rich said, is designed to increase the company’s export sales and retail sales in this country. It will cover new facilities for converting the company’s Whip Topping and Coffee Rich vegetable-oil-based dessert and coffee products into powdered form.”
“Rich Products, founded in Buffalo in 1945 by Mr. Rich, had sales last year of slightly more than $10 million, the first time sales had crossed the $10 million mark.”

“Rich Products employs about 120 persons, including 25 of its own salesmen, stationed all over the country. Its products are distributed by more than 2000 frozen-food distributors.”


**New Product–Documentation:** Talk with David and Harvey Whitehouse of Delsoy Products and Whitehouse Products. 1992. Feb. 4. Harvey Whitehouse bought out Bob Smith in 1963, and a month or so thereafter David became president of the company. Shortly after the buyout, the company name was changed from Delsoy Products to Whitehouse Products. The brand and logo then became Whitehouse and product names were changed. Delwhip Topping became Whitehouse Whipped Topping, Delwhip Topping Base became Whitehouse Whipped Topping Base, and Presto Whip became Whitehouse Presto Whip. All continued to be made with soy protein. At about the same time, the company began to private label their products for other companies under other brands. They continued to sell the products under their own brands as well.


**Summary:** See next page The decision in the original case was rendered on 4 Sept. 1962 in the District Court of Shawnee County, Kansas, holding that Coffee-Rich is not an imitation of milk, half-and-half, or cream, and is not misbranded. The decision was appealed to the Kansas Supreme Court which, in this document, affirmed the lower court decision on 25 Jan. 1964. This document discusses both Coffee-Rich and Chil-Zert (p. 15-17). “The ingredients of Chil-Zert and its method of manufacture were identical with that of ice cream except for the substitution of vegetable fat in Chil-Zert for the milk fat in ice cream. It was contended that the Chocolate Chil-Zert should be labeled “imitation chocolate ice cream” by virtue of Section 403 of the Federal Food, Drug and Cosmetic Act...”

Page 16 states that Chil-Zert “contains the usual ingredients of chocolate-flavoured ice cream in approximately the same proportions, except that soy fat and soy protein are used therein in place of milk fat and milk protein... The retail price of pint packages of chocolate Chil-Zert is substantially lower than the average retail price of a pint of ice cream, as shown by Labor Department statistics for 1951, cited by the claimant.”

Note: The Syllabus and opinion handed down by the Kansas Supreme Court were reprinted in toto in *Food Processing* magazine, April 1964, p. 25-34.


**Summary:** “In an unbroken series of favorable decisions, nine different courts in seven states have recognized the legal right of Coffee-Rich, Inc. of Buffalo, New York, not to use the crepe-word ‘imitation’ on the company’s new coffee-Rich coffee whitener—a replacement for traditional dairy cream.

“Because the issues involved in the Kansas decision are typical of all seven states in which Coffee-Rich has overcome the legal challenge of local dairy interests, Food Processing is reproducing in toto the Syllabus and opinion handed down by the Kansas Supreme Court.”

The states in which Rich Products has won its legal battles against the dairy industry and the dates of the decision are as follows: Louisiana, 17 Nov. 1961; Indiana, 18 May 1962; Virginia, 29 Oct. 1962; Kansas, 4 Sept. 1962; Washington state, 28 Jan. 1963; Wisconsin, 1 Nov. 1963; Michigan, 23 Dec. 1963. In each case it was decided that Coffee-Rich was not an imitation cream, milk, or half-and-half and therefore did not need to have the word “imitation” printed on its label. “General Counsel for Rich Products Corporation and its wholly owned subsidiary, Coffee Rich Inc., is Arnall, Golden & Gregory of Atlanta, Georgia. All of the successful litigation has been handled by Ellis Arnall, Senior Partner, and Elliott H. Levitas, Junior Partner. Mr. Arnall is former Attorney General and Governor of Georgia.”

Within the article is a 2-page sidebar titled “How a man’s vision furthers new forms of food.” A small portrait photo shows Robert E. Rich. and states: “Weaning the world from the cow by means of tailor-made vegetable-fat and vegetable-and-protein products that do specific jobs better than their cow-born counterparts—and usually at much lower cost—has been almost a personal crusade for Robert E. Rich, President of Rich Products Corporation and Coffee-Rich, Inc., its wholly owned subsidiary.

“Like all crusades, this one is costly; Rich has spent...
IN THE SUPREME COURT OF THE STATE OF KANSAS

COFFEE-RICH, INC.,
Appellee,

vs.

THE KANSAS STATE BOARD OF HEALTH: EVAN WRIGHT, Director; Food and Drug Division of the Kansas State Board of Health; WALTER E. FRAESE, RALPH REED, M.D., HAROLD W. POWERS, M.D., J. ALAN BRADBURY, D.V.M., V. A. LEOPOLD, D.O., A. A. FINK, M.D., THOMAS P. BUTCHER, M.D., FRANK C. CAROTHERS, D.D.S., ROBERT H. HESS, GEORGE E. BURKET, JR., M.D., As Members of the Kansas State Board of Health; ROBERT H. RIEDEL, M.D., As Executive Secretary of the Kansas State Board of Health and As State Health Officer of the State of Kansas, Appellants.

Appeal from District Court of Shawnee County, Kan.
Honorable Beryl R. Johnson, Judge.

BRIEF OF APPELLEE.

ELLIS ARNALL,
ELLIOIT H. LEVITAS,
Atlanta, Georgia;
WARREN W. SHAW,
Topeka, Kansas;
EDWARD F. ARN,
RICHARD F. MULLINS,
MILO M. UNRUH,
H. R. KUHN,
LOUIS W. CATES,
Wichita, Kansas;

Attorneys for Appellee.

KELLEY PRINTING CO., TOPEKA
upwards of a half-million dollars and continues to spend large sums of money for legal fees, court costs, etc., as he "blazes the trail" for technological advance in state after state (see box score at left).

"Interestingly, considering the consternation he produces among entrenched dairy interests, Rich has a dairy-plant background, and even today continues to head up the largest solely-owned dairy in the U.S.

"Rich's pioneering in non-dairy whip toppings and whipped emulsions began immediately after World War II. As milk order administrator for the state of Michigan during the war, he had learned about the Ford Motor Company's George Washington Carver Laboratories' successful development of a continuous method of producing soy milk and cream by extracting soy protein from the bean

"In April, 1945, using a new batch-extraction process that surpassed the original Carver extraction method in efficiency, Rich produced his original soy-cream Whip Topping. By freezing it, he was able to market it throughout the U.S., over extended periods of time.

"The new synthetic product had several advantages over cream. It could be re-whipped, even several days after initial whipping. It produced almost twice the whipped yield of regular cream—more than tripling its liquid bulk when it was whipped. Stiffness and overrun were retained longer, and the product possessed markedly better keeping qualities. And, it cost less.

"In addition, when kept frozen, it can be stored for more than two years—then thawed and used. This is utterly beyond the capabilities of whipping cream.

"In 1956, Rich acquired the research "jewel" who since has boosted the company into the position of largest U.S. specialist manufacturer of whip happable emulsions. Holton W. Diamond, who had been chief chemist of The George Washington Carver Laboratory of The Ford Motor Company, came to direct Rich Products' research.

"Diamond's 'Diamond Process' patents for producing vegetable-fat whipable emulsions enabled Rich to market a line of bases and toppings with remarkable shelf-life, resistance to mechanical breakdown, compatibility with fruit acids and other qualities that could not be approached by conventional cream-derived products.

"Newest all-vegetable-fat emulsion product—liquid 'Coffee-Rich' is a coffee "whitener" which, although shipped frozen, exhibits great stability after thawing, remaining fresh up to two-to-three weeks under normal refrigeration. This unusually protracted shelf-life results principally from absence of protein—except for .8 per cent of sodium caseinate, used as stabilizer.

"Since Coffee-Rich is slow to sour or spoil or curdle, it eliminates a major problem encountered with coffee-vending machines. Restaurants, hospitals, cafeteria's and other large-volume feeding outlets also are prime prospects."

Concerning Chil-Zert soy ice cream: In United States v. 651 Cases, Etc. the court held that Chil-Zert was an imitation of chocolate ice cream since it "contained the identical ingredients of Chocolate-flavored ice cream in approximately the same proportions, 'except that soy fat and soy protein are used therein in place of milk fat and milk protein'; that it was manufactured in substantially the same manner as Chocolate ice cream, and with the use of similar machinery; that it was similar in taste, appearance, color, texture, body and melting qualities; that it had identical use and that "its composition differs only from ice cream in the substitution of a cheaper ingredient; namely vegetable oil in place of milk products."


• Summary: "The Rich Products Corp., which has increased its sales nearly a thousandfold in its 19-year history, is undertaking still another broad expansion of its Buffalo plant facilities. It will cost more than $500,000... Mr. Rich disclosed that the company will establish a new plant for packaging its spray-dried Coffee Rich and Whip Topping products at 1150 Niagara St., across the street from the main plant at 1145 Niagara... Rich Products bought the 25,000-square-foot 1150 Niagara building, a former Canada Dry bottling plant, five years ago. It has extensive laboratories and a computerized data-processing center on the second floor. The ground floor had been used for garage space for the Jones-Rich Milk Corp., a wholly owned subsidiary. Mr. Rich said this space has been made available by the purchase of the Ahr's Garage building at 1512 Main St...

"Rich Products’ employment has been edging upward steadily. It now totals 156, including a smaller operation for making frozen chocolate eclairs in West Palm Beach, Florida. Another 224 workers are employed by Jones-Rich Milk, giving the Rich-owned companies total work forces of 380. Mr. Rich said sales of his companies this year will be 'well above $20 million,' compared with $19.4 million last year. These figures include Jones-Rich Milk."


• Summary: Sales of Whip Topping in ½ pints decreased from $422,848 in 1946, to $111,366 in 1949, to $195 in 1953, the last year it was sold.

Sales of Whip Topping in pressure cans rose from $104,478 in 1949 (the first year it was sold) to $1,329,888 in 1952, to $2,242,669 in 1962 (the peak year).

Total sales of Rich’s Whip Topping in all containers rose from $495,040 in 1946 to $559,878 in 1950, to $1,520,207 in 1955, to $3,587,272 in 1960, to a record $6,897,951 in 1963.
“soybean pulp” = okara, oil free butter spread [made with ½ cup soy milk, ¼ cup lecithin, a little salt, and one recipe of Soybean Pulp (okara; see p. 24)].

Cereals (p. 30) (flax cereals [2 types], soy crackers [with soybean pulp], soybean and corn meal muffins [with whole soybeans], sprouted grain granola [breakfast cereal]). Soy bread recipes (eight-grain sprouted soy bread, whole wheat soy bread, bread recipes without soybeans, basic variable whole wheat bread, enriched whole wheat bread, bran whole wheat bread, carob bread, peanut bread, eight-grain sprouted bread), waffles (soy waffles, eight-grain soy waffles, pigeon feed waffles).

Entrees (p. 41) (gluten supreme [meat substitute], malt flavored ice cream, mayonnaise, salad dressing, concentrated dressing base, gravy, soybean souffle, dextrinizing (heating starchy foods to turn the starch into more easily digested sugar), suggestions for using prepared soybeans without using a liquefier [pickle cooked soybeans in concentrated dressing base], yogurt (soy-based medium for culture, yogurt made from soy milk), watermelon and cantaloupe seed, fresh kelp relish.


This book contains considerable information about gluten and the use of the gluten rinse water (as in breads or soups). Pages 41-42 contain a unique recipe for making 2 pounds of gluten at home from whole wheat flour. The gluten is then baked with a seasoning mix and the rinse water for 10 hours at 108ºF to make Gluten Supreme.

Concerning dextrinizing: “This process is acclaimed by many health authorities to be a more healthful way of eating some starchy foods. Many people who have digestive problems with starchy foods can eat them prepared by the dextrinizing process. This process is said to turn the starch into a more easily digested sugar.” Breads, cereals, or flour can be dextrinized by baking at 225ºF until lightly browned.

Note: This is the earliest English-language document seen (June 2013) that uses the word “soybean pulp” to refer to okara. Address: Box 1326, Escondido, California.

152 Main Street, Fredonia, New York.  

Evening Observer (Dunkirk, New York). 1975. May 25. “Mitchell Foods profit in switch to retailing.” “The 26-year-old Mitchell Foods Inc. had relied on its whipped topping product called Whipped Filling Base for revenues from 1949 until 1964. The product, developed by Frank S. Mitchell, founder of Mitchell Foods, Inc. was a concentrated, non-dairy product sold mostly to commercial baking companies as toppings for pies... But as more and more of the major pie makers started producing their own non-dairy whipped toppings, Mitchell realized his company would have to try the retail field. Aided by the introduction of Perx, a non-dairy creamer that the company developed, the emphasis was put on retail distribution and has resulted in a $5 million a year business for Mitchell Foods.”  

Talk with Walt Cunningham of Dunkirk, New York. 1993. July 14. Walt worked for Mitchell Foods from 1950 until the early 1980s. The company’s fourth and last product–and its first retail product–named Perx, was a non-dairy coffee creamer launched in about 1957. Prior to this the company had distributed its products using foodservice and institutional distributors. Everything was shipped via common carrier; they had no refrigeration in the trailers so everything was kept frozen with dry ice. The company established its first relationships with food brokers. “We had a very good product and it just sold like crazy. Everybody that tried it, loved. And they loved the fact that it stayed in their refrigerator for weeks and weeks without spoiling.” It was sold frozen in a Pure-Pak carton (they had a Pure-Pak machine), in either 1 pint or 1 quart sizes. Perx was distributed nationwide, including Alaska, Hawaii, Montana, California, and even the Caribbean. The product’s main distribution was to New York City. Wt/Vol., Packaging, Price: 1 pint or 1 quart Pure-Pak cartons. Frozen.

• Summary: “Whipped toppings made by Mitchell Foods Inc. of Fredonia are enough like those made by Rich Products Corp. to infringe upon a patent held by Rich, U.S. District Judge Harold P. Burke ruled today.

“Rich Products claimed in their Federal Court suit that Mitchell’s Scotch Topping and Mitchell’s Whip Filling Base used a patented formula which Rich had purchased from the inventors and used for their Rich’s Whip Topping.  

“During trial of the case in Rochester last September, Mitchell argued that the patent was not really different from past topping formulas and also that Mitchell’s products were different enough chemically not to infringe upon the patent.  

“In his conclusions of law, Judge Burke said that the products manufactured and sold by Mitchell after the issuance of the patent and before and after the filing of the suit incorporated the invention of the patent and infringed upon it without Rich’s permission.  

“Judge Burke also said Frank S. Mitchell is personally liable jointly with Mitchell Foods Inc. because he was actively in control of the company, including the acts of infringement.  

“Rich Products is entitled to an injunction restraining Mitchell Foods from further infringing the patent and also for damages to compensate for the infringement, Judge Burke ruled.  

“Attorneys for Rich said they did not know how much would be asked in damages, but that it would be ‘substantial.’”  

• Summary: “Damages totaling about $1 million will be sought by Rich Products Corp. in its Federal Court patent infringement suit against Mitchell Foods Inc. of Fredonia.  

“This was learned Thursday after Federal Judge Harold
P. Burke denied Mitchell’s motion to stay an injunction prohibiting further infringement, pending results of an appeal to the Second Circuit U.S. Court of Appeals in New York.

“The judge also ruled that no accounting of damages be made pending the appeal from his ruling last month that Mitchell infringed Rich’s patent.

“Rich claimed that Mitchell’s Scotch Topping and Mitchell’s Whip Filling Base used a patented formula which Rich had purchased from the inventors and used for Rich’s Whip Topping.

“Hugh A. Chapin, New York attorney for Rich, said that ‘at this juncture’ the alleged damages sought are expected to be ‘at least a million dollars.’


• Summary: “Few local companies, if any, have ever had to spend as much time and money in court fighting just for the right to market their products as has Buffalo’s Rich Products Corp. With perhaps the most significant of a long string of court victories under his belt this week, President Robert E. Rich added up the cost in legal fees so far and came up with a figure in excess of $400,000. He says he probably can count on the cost being up close to $500,000 by the end of the year."

“A significant court case the Buffalo company won this week was in Wisconsin... Rich Products draws on powerful legal talent to carry the ball. Its top legal man is Ellis Arnall of Atlanta, former governor of Georgia... Mr. Rich says his company’s sales of Coffee Rich and Whip Topping in all 50 states will top $13 million this year, which helps make all the court fights worthwhile.”


• Summary: Rich Products, a 20th century pioneer and leader in frozen food specialties, now in its 21st year of operation, is located on the banks of the Niagara River above Niagara Falls. “When the Buffalo concern introduced its Whip Topping as a ‘wartime replacement’ in 1945, the frozen food industry was doing a total annual volume of less than $200,000,000 a year. Today the industry is generating more than $5,000,000,000 in sales annually. Included in the story are bits of history.

“The fledgling Buffalo concern did $28,000 worth of business in 1945. Today its total sales are exceeding $25,000,000 a year. The largest portion of sales are in the frozen food division, the remainder in dry Coffee Rich, Whip Topping, and the fluid milk operation.”

The two opening pages (printed with black and blue, then black and red ink) showcase Rich’s many non-dairy products—mostly frozen—such as Rich’s Whip Topping, Non-Dairy Coffee Rich, Sundi-whip. Photos show: (1) Bob Rich seated at his desk. (2) Small portrait photos of Herb Kusche, Jerry Hannon, Joe Robida, Ed Andrews, Rex Diamond, Bill Meyers, Oscar Albert PhD, Jo Ann Lang, Bill Wright, Dick Middleton, Bob Steele, Gordon Tebb. (3) Six individual photos of products (p. 144). (4) Rich’s West Palm Beach,
Success Story

Rich's WHIP TOPPING

the diamond for

COFFEE RICH

Rich's NON-DAIRY COFFEE RICH

Rich's whip TOPPING

Rich Products

IN 1944... AN IDEA
— IN 1965... THE QUALITY
STANDARD BY WHICH ALL
COMPARISONS ARE MADE

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Throughout the story are many pages of congratulatory ads, big and small, from suppliers, distributors, contractors, packagers and container manufacturers, food brokers, etc. On the last page is a letter of thanks from Bob Rich (typed, with signature on letterhead) to all the above companies and individuals that have contributed to the growth of Rich Products over the past 21 years. Address: Buffalo, New York.


• Summary: These are legal-size documents, divided into 8 sections with divider tabs, with each page numbered in red, in a large 3-ring loose-leaf binder. These documents cover the period 1945-1966, including Diamond’s youth, and work for the Ford Motor Co. at the Carver Laboratory, Vegetable Products Corp., American Maize Products Corp., and Rich Products Corp. Diamond prepared this collection of documents for use by his attorney, Arthur Allan Smith, of Dearborn, Michigan, in a possible lawsuit by Diamond against Rich Products Corp. The materials were sent on 4 Jan. 1966. On the first page is written: “The peregrinations, perils, and adventures of an inventor–entrepreneur. Question: How can I get out of my present predicament legally and ethically without further injury and with reasonably favorable prospects of continuing my work profitably?”


A photo shows that the Diamonds moved into their home at 300 Depew Ave. in Jan. 1963. Address: 300 Depew Ave., Buffalo, New York, 14214.


- **New Product—Documentation:** Product with label purchased at Safeway supermarket in Lafayette, California. 1996. June 4. 6 inches diameter. White and red on dark blue. Note: This product bears the words “Non Dairy” in the product name yet contains sodium caseinate, which is derived from cow’s milk. However in the ingredients listing the words “sodium caseinate (a milk derived ingredient),” are printed in bright red, whereas the other ingredients are printed in blue, so these words stand out for the consumer.

  “Directions: Thaw unopened four hours in refrigerator. For best results, do not thaw on countertop. Do not stir. Keeps fresh in refrigerator 2 weeks. Can be re-frozen. For longer storage, place in freezer. Yields 3 ½ cups.” A recipe for Lemonade Stand Pie appears on the back of the lift-up top label.

  Letter to then talk with Pat Browne-Riso S1-3, Corporate Affairs, Kraft Foods Inc., 250 North St, White Plains, NY 10625. 1996. In April 1966 CoolWhip went into test market, and in April 1967 it went national, with national distribution. The product was developed by the corporate headquarters of General Foods Corporation (Birds Eye Div.), 250 North Street, White Plains, New York. General Foods is still located at this address but is now part of Kraft Foods. In 1929 General Foods had acquired Birds Eye. The first CoolWhip was manufactured at plants in Waseca, Minnesota, and Avon, New York.

  Note: This is the earliest commercial product seen (April 2001) that is labeled as “Non-Dairy” but actually contains sodium caseinate—a milk-derived ingredient. Soy is not an ingredient. Ingredients: Water, hydrogenated vegetable oils (coconut and palm kernel oils), corn syrup, high fructose corn syrup, sugar, sodium caseinate (a milk derived ingredient), less than one percent of natural and artificial flavors, polysorbate 60 and sorbitan monostearate (for uniform dispersion of oil), xanthan gum and guar gum (thickeners), beta carotene (for color). Wt/Vol., Packaging, Price: 8 oz (226 gm) plastic tub. Frozen. Nutrition: Per 2 tablespoon (8 gm) serving: Calories 25, calories from fat 15, total fat 1.5 gm (2% daily value; saturated fat 1.5 gm), sodium 0 mg, total carbohydrate 2 gm (sugars 1 gm), protein 0 gm. Percent daily values are based on a 2,000 calorie diet.


- **Summary:** “The Supreme Court [of the United States] has been asked to review a Western New York case involving whipped cream.

  “Mitchell Foods Inc. of Fredonia has appealed a court ruling that it infringed the patent of Rich Products Corp. on the use of food emulsifying agents in whipped cream.

  “The Second U.S. Circuit Court of Appeals upheld a finding by Federal Judge Harold P. Burke that the Rich patent was a valid one and Mitchell infringed it. He ruled Rich’s substitution of the new agents was ‘of an inventive and patentable character.’

  “Mitchell charged the Rich patent was invalid because it involved only the obvious use of new synthetic emulsifiers that were already publicly known as products that would improve the whipping properties of natural cream.”


- **Summary:** “Plans for a $600,000 expansion of the Rich Products Corp. plant at 1145 Niagara St. were announced today by President Robert E. Rich. The new facility will be used for a freezing operation in the production of the company’s Whip Topping and Coffee Rich products.”


- **Summary:** This invention to a “process for preparing a composition which can be whipped to provide a dessert topping or icing for cakes and the like.” The formula given in Example 1 includes the following by weight: Sucrose (white sugar) 51.4%, corn syrup solids 30.0%, margarine oil (lightly hydrogenated blend of cottonseed oil and soybean oil) 9.0%, glyceryl lactopalmitate 5.0%, sodium caseinate (protein) 3.0%, lecithin 0.8%, etc. Fatty acids of soybean oil may be used to prepare the emulsifier. Protein is used in this topping.

  “A wide variety of proteinaceous materials can be employed. Representative thereof are non-fat milk solids, whey solids, water soluble soy protein derivatives, egg albumen, dried cream cheese, gelatin and sodium caseinate. The protein stabilizes the topping or icing prepared from the whippable composition and is preferably sodium caseinate.”

  Address: Minneapolis, Minnesota.


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**Summary:** “Rich and his staff are firm in their stand that vegetable cream products are not a substitute for milk products, nor an imitation of them. They are, says Rich, superior to anything ever produced by the sleepy-eyed, cud-chewing ‘Old Bossy.’

“To prove this point, Rich has spent more than $600,000 on court cases throughout the country. He has won them all.” Rich “became the champion of the non-dairy vs. dairy battles...”


**Summary:** Rich Products Corp. of Buffalo now does $30 million a year.


**New Product–Documentation:** Talk with Eddie Goldstein.

1989. Feb. 27. These products were launched in 1966 in Miami, sold only to institutions. The sour cream was widely used for years by Howard Johnsons on their cheesecakes. The coffee cream sold for $0.32/quart vs. $0.80 for the dairy-based product.


**Summary:** “Rich Products Corp. of Buffalo has filed the final papers in its successful fight to uphold its patent rights on whipped-topping products, it was learned today.

“A satisfaction of judgment was filed Jan. 5 by Rich which explained today that this was for damages of $243,000 paid by Mitchell Foods Inc. of Fredonia.

“Rich had sued Mitchell in 1962 for patent infringement. It was successful before Federal Judge Harold P. Burke and was upheld in the Circuit Court of Appeals. The Supreme Court on Oct. 10 refused to review the decision and the parties were then directed by the lower courts to agree on the damages, which they did.”


**Summary:** Mitchell “came to Fredonia from Buffalo in 1949. A native of Bradford, Illinois, Mr. Mitchell earned a BS in chemistry from Bradley University in Peoria, Illinois, and an M.S. in chemistry at North Dakota State university. He formerly was employed by the Rich company [Rich Products in Buffalo, New York] and Spencer Kellogg and Son in Buffalo.


“Oriental soy foods:... In the Orient soybeans have, for centuries, played an important part in human diets as soy milk for infants, shoyu, or soy sauce as we call it, miso, tofu, tempeh, kinako, natto, yuba, etc.”

“Isolates and concentrates: In the mid-1930’s processes for further refining the protein factors of soy began to appear. The first 70% soy protein concentrate was turned out by Mead Johnson Co. using the Bonato process of sulfur dioxide and sulfurous acid extraction, but was discontinued for lack of adequate markets for the product. In 1936 the Glidden Co. began working on the production of an isolated protein [90-100% protein] from extracted soy flakes for industrial uses. Glidden, as a major manufacturer of resin, wanted the isolate as a stabilizer for the resin used in sizing paper to provide wet strength. By 1939 Glidden was producing an enzyme hydrolyzed isolated protein to be used with egg albumen for its whipping capacity in producing food toppings... Over the years soy protein isolates have found their greatest application in the industrial field, particularly as paper coatings for high gloss products.”

A photo shows cans of Worthington Choplets, Soyameat (3 varieties), and Numete—all made from spun soy protein fibers. Address: Soypro International Inc.

*Summary:* Pages 5-6 state: “The finest vegetable milk which I have seen is that which was made at one time at the George Washington Carver Laboratory in Dearborn, Michigan. During my work there in the years between 1940 and 1946, a great deal of technology was developed in the manufacture of many kinds of vegetable dairy products. A pilot type soy bean milk plant in which we made 150 gallons per day of soy bean milk and soy bean cream was part of the laboratory. The milk and cream were supplied at no cost to mothers of infants who were allergic to cow’s milk, and to others; and the technology was shared freely with all who were interested. The laboratory was supported by the late Henry Ford, and he visited us often. A very great deal has been done since, but much of the basic technology now in use in this field originated in this small laboratory, in research which was made possible by the interest of Henry Ford in the soy bean and in what has come to be called ‘chemurgy,’ the industrial use of the products of the farm and of the soil...

“If you will share with me one experience, you can imagine how I may have become prejudiced in my outlook on cultured cheeses. Across a period of several months, at my direction, a laboratory technician at the George Washington Carver Laboratory inoculated samples of soy bean milk and soy bean cream with portions of Cheddar, Limburger, Roquefort, Camembert, Liederkranz and other cheeses.” None of the workmen wanted to open the incubator door; in fact, they drew straws each Monday morning to see who would have to do it.

Concerning the concept of “imitation” products: “A product which is demonstrably less well suited to its intended purposes than is a well known precursor which it resembles and which is used for the same purposes is inferior. Because of its inferiority, it is properly labeled and referred to in a derogatory way as an ‘imitation’, for this word, both as an adjective and as a noun, connotes inferiority.

“We are no longer ashamed of new or mixed-ingredient materials merely because they are new or comprised of components of different origins.” In almost every case they are less expensive, and in some cases they are clearly superior in at least some characteristics to their dairy counterparts. Address: Rex Diamond Laboratories, Inc., Detroit, Michigan.


*Summary:* Mitchell, “president of Mitchell Foods, Inc., Fredonia, has been appointed chairman of the Fredonia and Pomfret area Cancer Crusade.”

Mitchell, his wife, and 2 sons reside at 403 East Main St. A photo shows Mitchell.


*Summary:* A very important, pioneering, indeed classic American vegan cookbook, which uses no animal products (except in one chapter at the end titled “Recipes Using Milk and Eggs,” “for those who are in the transitional period. However, we encourage all those who still cling to milk and eggs to become acquainted with the facts concerning their use, and become weaned through this process”). Some recipes also use honey.

Contains more than 750 unique recipes (plus color photos), including many innovative soy recipes, including the first recipe for shakes made with soy milk ice cream.

Vegetarian chow mein (with soy sprouts, p. 199). Peanut-soy meat (with soy flour, p. 200; steamed for 2-3 hours in greased cans). Soy not-meat (p. 202, with soaked ground soybeans or “the soybean pulp from the soy bean milk. This way the pulp is not wasted” [i.e. okara]). Peanut-soy round (p. 202). Soy meat (p. 203; made with 2 cups homemade gluten, 1 cup toasted ground peanuts, and 1 cup soaked blended soybeans, plus water, seasonings, oil and salt, steamed for 3 hours in greased cans). Soya peanut soufflé (p. 204). Soybean soufflé (p. 204). Tofu & rice croquettes (p. 206).

The chapter titled “Nuts, seeds, olives” (p. 209-20) includes: Glossary of nuts, raw nuts for your enzymes, nut notes, almond butter (king of the nuts), raw nut butters, cashew nut butter, cashew Brazil-nut butter, peanut butter, nut butter clusters, peanuts–oven blanched, dry roasting–soya nuts, malted nuts, browned sesame seeds, seed cereal topping (sunflower seeds, sesame seeds, flax seed), peanut butter-seed spread (tahini, sunflower seeds), peanut butter balls, simple sesame squares, sprouted sunflower clusters, olives, tree chestnuts, roasted chestnuts, roasted chick peas.


Talk with Rosalie Hurd. 1991. June 3. Ten Talents is now going into its 44th printing. More than 250,000 copies have been sold. The latest was published by College Press in 1985. The first edition was published in May 1968. Frank, originally a chiropractor, is now a medical doctor. The Hurds now live most of the year in Fountain City, Wisconsin, where they run Alpine Springs, a live-in lifestyle program and center on 585 acres of land offering treatment and education in natural health.

Note 1. This is the earliest cookbook seen (Oct. 2013) that contains a recipe for soy sour cream. For the basic recipe: Pour 3/4 cup soy bean milk into a blender. Gradually add 3/4 cup soy oil until desired thickness is reached. Stir in 1-2 tablespoons lemon juice and ½ teaspoon salt. Chill. “Delicious on fresh cubed cucumbers with a dash of dill.” An alternative recipe calls for the use of: ½ cup soy starter (not dextrinized, see p. 69, 262), ¼ cup water, and ½ teaspoon honey.

Note 2. This is the earliest English-language document seen (Nov. 2003) that contains the word “Soymeat” (p. 200), or the term “Soy Not-Meat,” or the term “Soy Meat” (p. 203) as a recipe name.

Note 3. This is the earliest dated English-language document or book seen (Sept. 2012) that contains the modern term “Soy yogurt.”

Talk with Rosalie and Dr. Frank Hurd. 2005. Feb. 9. Both have moved to Oregon to warmer weather. They have a daughter there. Ten Talents is now in its 48th printing. They are working on a revision. He was born in March 1936 and she in April 1937.

Talk with Rosalie Hurd. 2009. Jan. 19. Frank is still working as a doctor and she as his helper. They are both in good health. The greatly enlarged 40th anniversary edition of Ten Talents has been published and is now available.

The term “Ten Talents” comes from the teachings of Ellen G. White: “The one who understands the art of properly preparing food, and who uses this knowledge, is worthy of higher commendation than those engaged in any other line of work. This talent should be regarded as equal in value to ten talents; for its right use has much to do with keeping the human organism in health. Because so inseparably connected with life and health, it is the most valuable of all gifts” (Ellen G. White, Counsels on Diet and Foods, p. 251). Address: 1. D.C. [Doctor of Chiropractic]; 2. B.S. Both: Box 86A–Route 1, Chisholm, Minnesota 55719.


Simulated whipping cream has been known technically for several years. H.W. Diamond was a pioneer in this field. Whipped toppings, generally based on vegetable fats, offer some advantages over natural products: lower cost, uniformity of whip, and good acceptability. Proteins may or may not be used. “Vegetable-derived proteins such as soya” differ in performance depending on type and processing. The primary purpose of protein in a topping is to act as a film former. Address: Atlas Chemical Industries, Inc.,
Imitation milk is decreasing. Uncomfortable knowledge that butterfat consumption has been burdened with butterfat surpluses, and with the uncomfortable knowledge that butterfat consumption has been decreasing.

Imitation milk is defined as a beverage made to resemble milk but containing no dairy product. “It is destined to be the dairy farmer’s greatest future adversary.”

Sodium caseinate is used as a ‘non-dairy protein source’ in imitation milk, although this chemical in reality is a derivative of milk and actually may exist as a natural component of cow’s milk and surely does in fermented milk products. Ultimately however the soybean appears destined to become the principal source of protein for imitation milk.

Note: This is the earliest document seen (Aug. 2013) which states clearly that sodium caseinate, derived from dairy milk, can be considered a non-dairy product. Watch out vegans! The Code of Federal Regulations (CFR) states in Title 21, Part 101, Sect. 101.4 (Revised 1 April 2013): “(d) When foods characterized on the label as ‘non-dairy’ contain a caseinate ingredient, the caseinate ingredient shall be followed by a parenthetical statement identifying its source. For example, if the manufacturer uses the term ‘nondairy’ on a creamer that contains sodium caseinate, it shall include a parenthetical term such as ‘a milk derivative’ after the listing of sodium caseinate in the ingredient list.” Address: Cornell Univ., Ithaca, New York.

174. Evening Observer (Dunkirk, New York). 1968. Mitchell Foods has purchased plant in Mass. [Massachusetts]. Dec. 6. • Summary: “Frank S. Mitchell, president of Mitchell Foods, has announced the purchase of additional facilities for his company in Abington, Massachusetts, on the outskirts of Brockton. This consists of what was formerly the Bay State Ice Cream company, an approximate 100,000 square feet of structure. Thirty thousand feet is devoted to a modern freezer unit with the remainder available for production and offices. This acquisition will enable the company to expand its present production by some 150 per cent.

“Mitchell Foods was started in 1949 in Fredonia by Mr. Mitchell, who was a pioneer in developing toppings and coffee lighter products in the frozen, non-dairy industry for the commercial and mass-feeding trade. In 1964 Mitchell Foods introduced ‘Perx’, a high quality coffee lighter, cereal creamer and creamed sauce ingredient into the retail grocery market. Today ‘Perx’, as a result of its instant consumer acceptance and extensive advertising, is one of the fastest-selling super market items in the U.S.”

A photo shows the front of the Bay State Ice Cream Plant.

175. Buffalo Evening News (New York). 1968. ‘Hot ice cream’ suit melts: Inventor frozen out as Buffalo company is awarded rights. Dec. 12. • Summary: “A Buffalo concern has been declared the rightful owner of patent rights to a product which reportedly could revolutionize the ice cream industry.

“Supreme Court Justice Joseph P. Kuszynski Wednesday granted judgment in favor of Rich Products Corp., 1145 Niagara St., against Holton W. Diamond, an inventor living in Detroit.

“Invented in 1963-64: At stake are the rights to ‘high temperature ice cream,’ a non-dairy product which is supposed to be storable as a shelf item because of its relatively high melting temperature.

“The product, made from a vegetable base, is supposed to be re-freezable after melting. What’s more, it’s supposed to taste as good as regular ice cream.

“The product was invented by Mr. Diamond in 1963 and 1964, when he was employed by the Buffalo company. Justice Kuszynski said the contract under which the inventor was employed unmistakably makes all discoveries the exclusive property of Rich Products.

“The inventor and company had a disagreement and Mr. Diamond left April 15, 1966. Counsel for Mr. Diamond argued that he was wrongfully discharged and therefore has refused to sign over the rights.

“Suit filed in U.S. court: Justice Kuszynski’s decision affects only one of three issues in the company’s breach-of-contract suit against Mr. Diamond. The other two issues are expected to be tried in Supreme Court.

“Meanwhile, Mr. Diamond has filed a suit in U.S. District Court in Michigan, charging the company owes him some $293,000 in salaries and bonuses.

“Mr. Diamond is credited with developing a soybean-based synthetic whipped cream which has had tremendous sales, and reportedly, is working on a bacon-like product which can be fried without spattering.”

176. General Foods Corp. (White Plains, New York; a corporation of Delaware). 1969. Whippable composition and manufacture thereof. British Patent 1,140,937. Application filed 30 June 1967. Accepted 22 Jan. 1969. • Summary: This invention relates to a dried emulsion or powdered fat composition especially adapted for use in preparing whipped toppings and to a method of making such toppings. The main ingredients in this composition are fat (25-60 parts by weight), carbohydrate (combination of sugars; 20-75 parts by weight), protein (5-15 parts), emulsifier (5-15 parts), lecithin (0.5 to 1.5 parts) plus small amounts of flavoring agents, acid, vitamins, minerals, and dyes or colorants. Sodium caseinate (10 parts by weight)

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is the protein source used in the two examples, but other proteinaceous materials can also be used, including "soy protein derivatives." Hydroxylated soy lecithin (1.1 parts by weight) is used in both examples, as is hydrogenated coconut oil (39.6 parts), sucrose (28 or 35 parts), and propylene glycol monostearate (approximately 45% mono-esters).

Address: 250 North Street, White Plains, New York.


• Summary: In recent years, "coffee whiteners" have come to be increasingly important in our food industry. While the primary purpose of a coffee whitener is the development of a desirable color change, it also imports a cream-like flavor, adds body to the coffee, and softens the acid flavor of the so-called caffetannic acids—which are not true tannins. Coffee whiteners are presently available in powdered, fluid, and frozen forms; all are emulsions and fat is the most important ingredient in the formulation.

Table 1 shows the main ingredients in a typical powdered coffee whitener formulation: Vegetable fat 10%, protein 2%, sucrose 2.5%, corn syrup solids 2.5%, emulsifier 0.5%, stabilizer (colloid) 0.15%, stabilizing salts 0.15%. Distilled water, flavor, and color are added to make 100%.

Note: This is the earliest document seen (Jan. 1999) with the term “coffee whiteners" (or "coffee whitener") in the title. Address: Atlas Chemical Industries, Inc., Wilmington, Delaware 19899.


• Summary: "Abstract of the disclosure: A frozen whipped topping comprising fat, protein, emulsifier, stabilizer and water is prepared by homogenization of the mix of ingredients at pressures above 6000 p.s.i., followed by whipping and freezing the homogenized mix; the topping is characterized by its stability both upon thawing and refrigerated storage.

This invention relates... to a process for preparing a frozen whipped topping composition suitable for use as a whipped cream substitute and as a topping for desserts, icing for cakes, and the like.

The protein which may be employed may be of any of a large group including non-fat milk solids, water soluble soy protein derivatives, egg albumen, gelatin, sodium caseinate, calcium caseinate, and the like, and mixtures thereof. The protein apparently serves to effect stabilization of the whipped topping composition.”

Sodium caseinate appears to be the preferred protein ingredient. Fatty acids of various oils, including soybean oil, may be used to make the emulsifier.

Example 1 calls for the following main ingredients by weight: Water 47.15%, fat (hydrogenated vegetable) 25.77%, carbohydrate (sugar) 22.60%, flavor (vanilla) 1.61%, protein (sodium caseinate) 1.14%, stabilizer (carrageenan and guar gum) 0.76%, etc. Address: Scarborough, New York.


Address: Consulting Food Technologist, Baltimore, Maryland.


• Summary: Writing in a critical tone, the author discusses the various products resembling meat and dairy products now available to American shoppers. “Turkey meat that has never held a feather and milk that has never been near a cow... These foods are making progress in markets around the world. Like the prospect or not, it is obvious we shall have to live with laboratory-bred proteins in the not-too-distant future.” For more than a decade, food companies have been developing imitation animal proteins, based largely on soya bean proteins. Soya bean derivatives are being used to “stretch” low-cost meats.

“The American dairy industry has yet to find an answer to soya-protein based coffee whiteners, whipped cake toppings, cream-type and frozen desserts. The consuming public has fully accepted them some time ago—and likes them. Are synthetics a real threat to animal products? Expert opinion on this question is deeply divided.” Mr. J.L. Hagle, president of Worthington Foods Inc. (“at present the major producer of ‘synthetic foods’”) believes that “Granted enough time, the relative efficiency of man-made foods will work in their favour.”

“Professor C.O. Chichester, University of California, puts it even more bluntly: ‘... the isolation of plant proteins and their processing into textured products may very well result in a major change in the eating habits of the world.’”

“‘Meatless’ meats, also called ‘synthetic meats,’ ‘analogue meats’ and ‘textured meats’ are made from isolated soya-protein (90 per cent. protein), which is a tasteless, odorless powder.”

“Worthington Foods Inc. is already marketing about 30 different ‘meat’ items, including fried chicken, dried beef, meat loaf casseroles, croquettes, chicken show mein, ‘soymeat’ sandwiches, sandwich spread, bacon bits and so
Experts predict plenty of competition in the field of "high-protein drinks" (H.P.D.s). Large companies like Monsanto (a chemical company), Pillsbury (a flour mill), and Swift (a meat packer) have already entered this market. They are all aware of the success story of "Vita-Soy" [Vitasoy], "a straight, three per cent. protein soya-bean milk drink," which sells 60 million bottles a year and has captured 25% of the Hong Kong soft drink market; it sells for as little as 5 pence per bottle. And they are aware of a similar powdered soy protein drink [Saridele] which contains 18% protein and is being marketed successfully in Djakarta, Indonesia and was introduced in 1957; 300 tons/year are now being produced.

The author concludes that these new foods are a necessity from the viewpoint of global nutrition.

Note: This is the earliest English-language document seen (Nov. 2003) that contains the term "meatless meats" or "meatless meat" (with any combination of quotation marks).

181. Gentry, Robert E.; Connolly, Eleanor M. 1969. "Three other publications also used this term later in 1969."

June 27. *


- **New Product–Documentation**: Talk with David and Harvey Whitehouse of Delsoy Products and Whitehouse Products. 1992. Feb. 4. In the late 1960s, Whitehouse Products (formerly Delsoy Products) developed a soy-based non-dairy creamer named Whitehouse Coffee Fresh. After several years the soy was replaced by another ingredient.


In 1969 food utilization of protein ingredients was as follows: soy flour and grits 121 million lb, soy protein concentrates 33 million lb, soy protein isolates 38 million lb, casein 100.4 million lb, nonfat dry milk 1,106.5 million lb.

Soy flour and grits are used as follows (million lb):
- Bakery 57.9, processed meats 34.9, beverages 11.7, breakfast cereals 7.0, macaroni/pasta 0.2, all other uses 9.3. Total 121.0. Casein is widely used in coffee whiteners. Address: Dep. of Agricultural Economics, Cornell Univ. Agric. Exp. Station, New York State College of Agriculture, A Statutory College of the State Univ., Ithaca, New York.


Soy milk: "Soy milk has been used for centuries in the Orient for infant feeding [sic] and other purposes... the process has been refined and its application greatly extended in the Far East by Dr. H.W. Miller and others. K.S. Lo [of Vitasoy, Hong Kong] has been bottling soy milk as a nutritious low-cost soft drink and selling many millions of bottles yearly." In 1959 the World Health Organization built a $1 million soy milk plant in Indonesia [to make spray-dried Saridele]. In the Western soy protein [isolate] is used in soy-based infant formulas. "It is also used by adults with allergies, diabetes, or who for other reasons prefer" a non-dairy milk.


- (2) Protein cost per pound of various foods:
  - Beef (retail) $4.44.
  - Chicken (dressed) $1.50.
  - Wheat flour $0.60.
  - Bulgar wheat [bulgur] $0.47.
  - Peanut meal (defatted) $0.43.
  - Dry skim milk [nonfat dry milk] $0.40.
  - Wheat (whole) $0.30.
  - Cottonseed flour $0.17.
  - Fish meal (food) $0.14.
  - Soy flour (food) $0.11 (from Bean 1966).

- (3) Efficiency of land use for protein production. Three columns give the name of the crop or animal, average yield per acre, and pounds of protein per acre.
  - Soybean, 24.2 bu, 508 lb.
  - Other legumes, 20.7 bu, 293 lb.
  - Maize, 64.2 bu, 323 lb.
  - Wheat, 25.1 bu, 180 lb.
  - Milk, 2,780.0 lb, 97 lb.
  - Beef, 342.0 lb, 58 lb.

Note: No earlier source of this table can be found; it is not in Bean (1966).

Photos show: (1) Sukiyaki made with textured vegetable protein. (2) A stable whip of soy protein being ejected from the spout of a pressurized can onto the top of a parfait dessert. (3) Defatted soy flakes, which are the raw material for defatted soy flour, special soy protein concentrate, isolated soy protein. Address: General Manager, Vegetable Protein Products, Swift Chemical Co.


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**Summary:** The story begins: “Almost 50 per cent of all North Americans who used to like cream with their coffee no longer take it.” Instead they use a “coffee-whitener” such as Coffee Rich, a non-dairy product is made by Rich Products Corp. of Buffalo, New York. It has captured 90% of the U.S. coffee whitener market. This is the story of Rich Products, of the company’s first product, soya-based whip topping, and how Rich learned that he could freeze it, and of Coffee Rich in England.

188. The wedding of Kazuko Aoyagi and Travis Venters at International Christian University (ICU) in Tokyo and the wedding cake with tofu icing / frosting (Photograph). 1972.

**Summary:** Two photographs of this wedding, which took place on 11 June 1972, are owned by Soyfoods Center. The first, 4½ by 3¼ inches, color, shows Travis and Kazuko standing in a room at ICU, dressed in wedding clothes. Standing behind them are 10-15 people. Standing to their left, dressed all in white, is Jeffrey Broadbent, who is reading from a book of scriptures. Standing to his left is Yosiko Aoyagi. Bananas and pineapples are piled on two tables.

The second, 6 by 4 inches, black and white, taken 10-15 minutes after the first, shows Travis and Kazuko standing outside on the ICU lawn, with about 15 people standing close behind them, as rice is being thrown over them. Akiko Aoyagi is standing just to the left of Kazuko and William Shurtleff is standing just behind her. Everyone is smiling and having a good time.

A remarkable cake was served at this wedding—though no photograph of it can be found. It was made by Gretchen Broadbent. Gretchen, a very creative cook interested in natural foods and tofu, volunteered to make all the food for the wedding party. The centerpiece of her creations, which 5-6 people remembered clearly more than 25 years later (Jan. 1999), was the wedding cake. It was a sensation. The icing / frosting was made of tofu! No one had ever seen anything like it. It was a round layered cake, with each layer being a fruitcake that was slightly smaller than the one below it. Made entirely of natural foods, it contained whole-wheat flour instead of white flour and honey or fruits instead of sugar. Thus, it was rather heavy. Gretchen made the frosting—her own invention—by whipping firmly pressed tofu in a blender with honey. The cake even had a theme—evolution. Gretchen formed many small creatures out of dough, then deep-fried them. There were little crabs and starfish on the bottom layer, then little animals on the second layer, and finally on the top—guess what—human beings—our precious species. Because Gretchen did not have an oven in her apartment, she baked the cake on the ICU campus in an oven at the home of Steve and Marty Caldwell. She recalls: “I was really into that cake!”


**New Product–Documentation:** Shurtleff & Aoyagi. 1985. Tofutti & Other Soy Ice Creams, p. 37. “Louis Santi was an ice cream manufacturer who got out of ice cream and into the non-dairy business, founding Pure Pak Products in Arlington, Tennessee. The company’s first product was a pre-whip topping. Then Santi had hired two researchers away from RGB Laboratories (Presto) in Kansas City to help him develop a frozen dessert made by rippling non-dairy whip topping into a casein and coconut oil base. In about 1972 Pure Pak launched Hostess (brand) Non-Dairy Frozen Dessert. It was first marketed in Detroit, and targeted for those with lactose intolerance. A few years later the name was changed to Double Good or Double Whip (depending on the area). The product immediately ran into huge opposition from state dairy associations; the entire first shipment was returned. Nevertheless, many larger dairies wanted to distribute it with their ice cream and it eventually sold fairly well in Detroit and elsewhere. Yet many states had special laws requiring the product to have special labels and names, such as ‘parevine’ in the Northeast, ‘imitation mellorine’ in the Southwest, or ‘imitation ice cream’ in some other areas. This was a nuisance and raised costs. After about 1978 soy protein and soy oil became the key ingredients when coconut oil prices started to rise. A trickle of the product remained available over the years. The Kellogg Co. bought Pure Pak in 1978-79 and in 1983 test marketed basically the same product (called Kellogg’s Double Good) in St. Louis, but it didn’t get off the ground (Dick Borne 1985; Frank Macko 1985; Tarn Hilton 1985; personal communications).”


21), by Loren B. Sjöström (Vice-President, Arthur D. Little, Inc., Cambridge, Massachusetts) notes (p. 513): “In the context of flavor, the term ‘potentiator’ is only a few years old. The identification of flavor potentiators is a twentieth century accomplishment, an area of research still in its infancy.” Yet seasonings (such as salt), as well as herbs and spices, have been used since ancient times.

The section on “Flavor enhancers” begins (p. 515): “The best known and most widely used flavor enhancer is monosodium glutamate (MSG). In 1866, a German chemist, Rittausen, isolated glutamic acid. Later another chemist converted the acid to a sodium salt, monosodium glutamate. In 1866, a German chemist, Rittausen, isolated glutamic acid. Later another chemist converted the acid to a sodium salt, monosodium glutamate. In doing their work, neither had any interest in flavor.

“More than 40 years later, in 1908, a Japanese chemist at the University of Tokyo, Dr. Kikunae Ikeda, discovered the flavor enhancing properties of MSG. Dr. Ikeda had set out to find out why and how a certain seaweed, Laminaria japonica, affected flavor. Japanese cooks had used this seaweed for centuries to improve the flavor of soups and certain other foods. Dr. Ikeda discovered that the ingredient in the seaweed that made the difference was MSG, and that it had an unusual ability to enhance or intensify the flavor of many high protein foods.

“After isolating MSG, Dr. Ikeda developed a process for extracting it from wheat flour and other flours. Working with the Japanese chemical company, Suzuki and Co., he supervised the construction of a plant and, as a partner with the company, began commercial production of MSG in 1909.

“There were several attempts to produce MSG in the United States in the years following, but it was not until the 1940’s that large-scale MSG production began in this country. By 1968, U.S. production had grown to 46 million pounds per year and world consumption had increased to more than 150 million pounds per year.”

The section titled “Types of potentiators” discusses 5’-nucleotides, maltol, diocetyl sodium sulfosuccinate, and several others. The 5’-nucleotides are synergistic with salt, and especially with MSG; they can have something like a multiplier effect in increasing the effectiveness of salt or MSG.

Note: Soy does not appear in the index of this book. Nor can we find it mentioned in Chapter 12. Yet there are scattered mentions throughout the book: Soy protein concentrate (p. 5). Soy sauce, tamari sauce, and miso–made for centuries in the Orient using fungal protease (p. 59). Studies on breads supplemented with soy, nonfat dry milk, and lysine (p. 114).

Experimental use of esters of p-hydrobenzoic acid in soy sauce and other foods (p. 128). Gas sterilants: Ethylene and propylene oxides. The ethylene oxide process was used during World War I to reduce the bacterial counts in soy flour and cereal products used in processed meat products for the Armed Forces (p. 156). An excellent acidulant for hams and soy bean curds [tofu] has been obtained by coating citric acid with suitable animal or plant oils (p. 242-43).

“Synthetic aroma for soy sauce,” by K. Ebihara. 1954 Japanese patent No. 5250’54 (p. 258). Soy flour as a widely used binder for processed meat (p. 425). Soy flakes (31.5% parts by weight) and soy hulls (3.0%) as ingredients in “Soft moist pet food” (p. 445).

Cake doughnut mixes sometimes contain soy flour (p. 656). Completely synthetic coffee whiteners usually contain a combination of vegetable fats, sodium caseinate or soy protein, gums as viscosity stabilizers, phosphate or citrate salts as stabilizers for the proteins and as buffering agents, corn syrup solids or sugar as sweeteners and bodying agents, liquid-type emulsifiers, and colors to duplicate the color of cream (p. 671-72). Whipped toppings are used to replace high-fat cream products just as coffee whiteners are used to replace low-fat cream products. Both use protein, which may be soy protein (p. 672).

Imitation sour cream, sour cream dressings, and chip dips. Replacements for fermented cream products represent a growing market. These non-dairy products contain vegetable oil / fat, protein (either soy protein or sodium caseinate [derived from milk], gum stabilizers, etc., p. 673). When partially hydrolyzed soy protein and sodium hexametaphosphate (SHMP) are added to dried egg white, an angel food cake mix can be prepared in which all of the ingredients can be included in a single mixing stage (p. 679). Gelsoy, a patented soy protein made from specially processed, defatted and dehulled soybean flakes, is reported to have improved water- and fat-binding capabilities when treated with SHMP (p. 746, 778).

Improving protein whipping properties: Sevall and Schaeffer prepared protein whipping compositions from soy protein by combining the protein with SHMP etc. (p. 747). Gunther made an entirely new whipping protein composition by combining an enzyme-modified soy protein similar to Gelsoy, with gelatin and a polyphosphate (p. 747). A long table on the regulatory status of direct food additives mentions “Isolated soy protein” (p. 874-75); its use as a binder is regulated by the Meat Inspection Division (MID) of the USDA.

The word “soybean” is mentioned on 22 pages; all of these concern soybean oil except when noted (p. 65 {soybean protein}, 67 {soybean meal, soybean flour / flours}, 99, 114 {soybean products}, 192, 193, 197, 198, 207, 221, 222, 263, 264, 280, 289, 290, 319 {the soybean plant resembles the guar plant}, 350 {soybean protein, soybean methylcellulose}, 424, 746 {soybean flakes}, 747 {soybean protein}, 749 {soybean milk}). Address: Technical Development Manager, Industrial Chemicals Div., Geigy Chemical Corp., Ardsley, New York; President, Intechmark Corp., Palo Alto, California.


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• Summary: Contents: 1. Flavor: Taste panel results, flavor components, plastein formation and flavor, plastein formation and nutrition, some food uses tolerant of soy flavor. 2. Bread and pastries: Soy flour history, effect of soy flour on baking characteristics, soy protein isolate in bread, soy flour and flavor, enzyme active soy flour, soy flour in Britain, detecting of soy flour in wheat flour. 3. Other baked goods: General, doughnuts, snack products. 4. Breakfast cereals. 5. Macaroni products. 6. Dairy-type products: Imitation milk, soy milk, filled milk, soybean cheese, imitation cream cheese, coffee whiteners, whip toppings, and frozen desserts, yogurt type products. 7. Comminuted meat products and meat analogs: Comminuted meat products, meat analogs, spun fiber type meat analog, extrusion-cooked type meat analog, heat-gelled type meat analog, meat fibers in heat-gelled protein matrix, assay of soy protein products in meat-type foods. 8. Gelling and aerating agents: Gelsoy as gelling agent, soy protein isolate as gelling agent, soy protein isolate as aerating agent, soy whey protein as aerating agent, enzyme modified isolates as aerating agent, foam-mat drying adjunct, foaming agent for soda water. 9. Miscellaneous food applications: Brew flakes, soups, gravies and sauces, confections, imitation nut meats, and [soy] nut butters, spray drying adjunct. 10. Nonfermented Oriental soybean foods: Introduction, Chinese soy milk, dried soybean whole and defatted milks, tofu (fresh tofu, bagged tofu, dried tofu, fried tofu), yuba, kinako (“The Japanese have a product which is similar to full-fat soy flour except that it is made from whole roasted soybean and this contains the seed coat”), soybean sprouts (compositional changes).

Concerning Brew Flakes (p. 373): “Soy flakes, grits, and peptones have been used since about 1937 or earlier (Burnett 1951) as adjuncts in brewing beer. Grits and ground meal from screw press processing were the first products used in brewing but later they were replaced by solvent-extracted flakes. The best results are obtained with flakes or flour having a high NSI (nitrogen solubility index) with a minimum of heat treatment in processing. Up to 0.75 lb. of flakes per barrel of beer has been recommended by Hayward (1941).

“The flakes may be used in the normal mashing operation to provide amino acids, peptides, minerals, and vitamins as nutrients for the yeast. It was reported by Wahl (1944) and Wahl and Wahl (1937) that addition of hydrolyzed soybean protein directly to the beer improves foam stability, flavor, and body of the beer.” Address: NRRL, Peoria, Illinois.


• Summary: “Dairene of Florida, a manufacturer of a soybean ‘milk,’ has announced plans to construct Dairene plants in Charlotte, North Carolina; Springfield, Missouri; Woonsocket, Rhode Island; and El Paso, Houston, and Dallas, Texas.

“Dairene received a favorable ruling last December when a Circuit Court judge ruled that the Dairene firm should be classified as a food producer, and not subject to regulation by the state agriculture department’s dairy division.

“President of Dairene of Florida is Eddie Goldstein, who was previously associated with Reddi-Whip and Fount-Wip, imitation whipped cream manufacturers. Goldstein says the soybean milk powder, called Pureblend, is manufactured from 35 ingredients in Newark, New Jersey. His processing operation is simple: ‘Mix the powder with water, run it through a pasteurizer at 170º, cool it down to 36º and you have milk.’

“Goldstein says that Miami will become the big test market for his products. He notes that ‘Imitation Vitamin D Milk’ will retail for 59 cents a half gallon in Miami stores and will have the advantage of ‘complete uniformity.’”


A glossary of “New or Unfamiliar Foods” (p. 212-14) includes good descriptions of tamari, miso soy bean paste, kuzu, and tekka. Address: Phonecia, New York.


Pages 118 and 119 list all commercial vegetable protein analogs made by Loma Linda Food Co (Arlington, California) and Worthington Foods, Inc. (Worthington, Ohio). Address: Glendale, California.


Table IV on p. 292 lists the “Use of some soyabean specialty products in the USA in 1969-70.” Figures are in tons. Values in parentheses are in million dollars: Products: Coffee whiteners 35,000 ($63.0); Relatively little soya-bean tons. Values in parentheses are in million dollars: Products: Specialty products in the USA in 1969-70.” Figures are in oilseed proteins.


• **Summary:** Preparation and properties of the following soy-based product groups are given: Beverages: traditional unfermented soy milks, traditional fermented–yogurt-like milks, simulated milks based on soy protein isolate incl. fermented yogurt-like types, still non-carbonated beverages, carbonated beverages.


“Table vegetable, green soybeans, and [soy] bean sprouts. Available in canned form, also fresh in season in some areas. Dry beans can be sprouted in home.

“Soups. Protein fortification as thickener (soy flour, soy protein concentrate, or soy protein isolate) or in high protein noodles or croutons. Oriental use of yuba.” Address: Anderson Clayton Foods, Richardson, Texas.


• **Summary:** “This session provides a forum for the discussion of the uses of soy protein products in specific foods such as: infant formulations and baby foods; coffee whiteners; whip toppings; cheese-like foods; frozen and chilled desserts; margarine and other spread products; beverages, including dietary and nutritional beverages of the carbonated, still, or milk-like varieties; confections, including candies; imitation meat and nut butters; whipping agents; and dairy foods, including calorie-reduced foods.” Address: Central Soya Co., Chicago, Illinois.


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**Summary:** 1974 Feb. 28. Meet Bill Shurtleff and Mr. Masa Miyashita of Kikkoman export dept. (good man, speaks fluent English) at the Imperial Hotel (Teikoku Hoteru, built in the 1920s by Frank Lloyd Wright) in Tokyo. Talk for 4 hours. Westbrae hires Shurtleff as an interpreter and guide.

March 1. Dinner at Sasa-no-Yuki, beautiful old restaurant that specializes in tofu cuisine.

March 4, Monday. Visit Kikkoman in Noda with Shurtleff and Miyashita. Tour Plant #7, then Plant #4 (the Goyo-Gura), which produces the emperor’s shoyu in the traditional, natural way. “Saw 5 batches of moromi mash from 1 month old to 12 months old, and tasted each one. Delicious. Great color change between the 1 month and the 12 month moromi. We saw all the traditional tools. The moromi vats were made of cedar and last approximately 200 years.” See a movie on how shoyu is made. Lunch at a sushi shop. Visit two miso retail shops with Shurtleff near his home. One had 42-45 types of miso (mostly rice miso, with 1 each Hatcho, barley, and cooked miso), the other 32-35 types. Tasted many and learned the differences. I buy Saikyo sweet white miso and Hatcho miso.

March 5, Tues. Attend a cooking class at Lima Ohsawa’s house, then have dinner with Lima and the class members. Sick for the next 2 days.

March 9, Sat. Call then meet Mr. Kazama of Mitoku. He represents Erewhon. We may import through Kikkoman’s Pacific Trading. Plan trip to Sendai Miso-Shoyu. Sendai is interested in using organic soybeans to make shoyu but would like a contract stating that all of it will be purchased when done. Dinner at the natural foods restaurant, Hakumon run by a Frenchman named Pierre.

March 11, Mon. Meet Shurtleff early at Tokyo station. Take bullet train (Shinkansen) to visit two Hatcho miso plants (Hayakawa Kyuemon Shoten, and Ota Shoten in Okazaki city, Aichi prefecture). Both plants claim to be over 600 years old. They use modern steamers and koji rooms. They pile 4-6 tons of rocks atop each large vat of miso, age it for 2 summers. It becomes very mellow when fully aged. They also use about half of their Hatcho miso to make Akadashi miso. It also contains caramel coloring, barley syrup, MSG, shoyu, a white miso, and preservatives. They sell a lot of Akadashi but only a little Hatcho miso. Lunch at an udon noodle shop that hand makes and cuts the noodles. Lots of slurping. Then visit a plant that makes real tamari and shoyu. All the tamari is mixed with junk. Train to Kyoto; stay at Friends World College. Note: This is the earliest English-language document seen (March 2012) that contains the term “real tamari.”

March 12, Tues. Visit a tofu maker, a yuba maker (Yuba Han), then the company that makes Saikyo sweet white miso. The owner lies to us initially about his miso aging and caramel coloring (which tastes and looks like tar). Then he reverses himself without batting an eye. Lunch at a 300 year old Zen vegetarian restaurant (Okutan near Nanzenji temple); so beautiful that I start crying. Fantastic place. Light snow falling by the pond. Enjoy Simmering Tofu (Yu-dofu) in a broth. Then we go to a 400-year old tofu restaurant (Nakamura-ro) at a shrine (Gion) for dessert of amazake and Dengaku (skewered and braised with sweet miso). To a second miso factory. It is a bore and the owner does not seem sincere but he has a great reputation among macrobiotics. He makes both natural and sweet white miso. Shurtleff visited him last year. For white miso the soybeans are boiled; for red miso they are steamed. Some white miso contains sodium thiosulphate bleach. Visit another yuba shop. They use granite grinding stones to make soy milk, cast iron pot to cook it in and copper skimming tables. A very beautiful place. Meet Ty Smith at a soba shop. He is a chain smoker, just quit working for Muso, and promoting a cooperative effort between Janus, Chico-San, Erewhon, and The Well to import foods from Japan. Evening at Jittoku coffee house, owned by an American, in a large old Japanese treasury (kura). Back to Tokyo by train. Talk until 1:00 A.M.

March 14, Thurs. Meet Kazama and Shurtleff, and take express train to Sendai Miso-Shoyu. We are treated royally by Mr. Muro. Long introduction and discussion. Visit their 2 plants, one modern, one traditional, natural. They make only rice miso. Their production of natural miso is more than all that imported to America by Erewhon and Janus. They age their natural shoyu 18-24 months at the request of Michio Kushi and Erewhon. They have 9 aging vats for the first year, then it is switched to other tanks. They invite us to have a shoyu taste test among 3 products: Kikkoman regular shoyu, Sendai regular, Sendai natural. Both Bill and I choose Kikkoman as best; good aroma, color, and taste. They congratulate us on our good taste. Sendai regular had very strong salty taste. We both liked the Sendai natural least; good color, no aroma, very mild taste. Sendai people say only one year is needed to ferment shoyu naturally. We might sell them organic soybeans (we had purchased 12 truckloads from a farmer) and get shoyu back in 1 year. We meet the president (Sasaki?), born 1928. Elegant geisha-hosted tempura and sushi dinner with president, 2 vice presidents, production manager, and a consulting professor (Shibasakensei). After dinner to a traditional bar for doburoku (thick, unrefined sake with a low alcohol content [or was it nigori-zake?]), then a sushi house. Shurtleff leaves for Tokyo on night train.

March 16, Sat. Visit Shurtleff and Aoyagi’s home for lunch. We have dried-frozen tofu main dish, salad with creamy tofu dressing, strawberries with tofu whipped cream. Delicious. Then we learn how to make tofu at home. It’s easy. I’ll make it at home in California, then at our Westbrae Natural Foods retail store on Gilman Street (Note: This led to a long series of tofu classes by Gerner, Liz Horowitz, and later Shurtleff & Aoyagi; The retail store changed its name in late 1976 to Gilman Street Gourmet).

Note 1. This is the earliest document seen (April 2006)
concerning Westbrae Natural Foods.

Note 2. This is the earliest English-language document seen (Jan. 2012) that contains the term “creamy tofu dressing” (or “dressings”) a term coined by Shurtleff and Aoyagi in The Book of Tofu (p. 108).

Note 3. This is the earliest English-language document seen (April 2013) that uses the term “dried-frozen tofu.”

Note 4. This is the earliest English-language document seen (Oct. 2013) that contains the term “Tofu whipped cream” (regardless of capitalization). Continued. Address: President & Chairman of the Board, Westbrae Natural Foods Inc., 1224 10th St., Berkeley, California 94710.

200. Gerner, Bob. 1974. Log of trip to Japan to study traditional natural foods, 28 Feb.–2 March 1974. Part II (Log–unpublished). Westbrae Natural Foods Inc., Berkeley, CA 94710. 26 p. Unpublished log. Handwritten. 20 x 8 cm. • Summary: Continued: March 19, Tues. Take bullet train to Kyoto to meet Steve Earle of Muso Shokuhin. We 3 go to Okayama to see Fuchu Miso, that makes mugi miso (the barley miso sold in our store) and sweet white miso. The president’s wife is the epitome of Japanese woman. For lunch we have tofu burgers with Italian sauce and mushrooms in a bento made by Akiko. Delicious. Take a boat to Shodo-shima where Marushima Shoyu Co. is located. Island is also famous for toasted sesame oil. Arrive at a ryokan at 6:30 P.M. VIP treatment. Bath before dinner and served in private room by geisha. Too much fish! Note: This is the earliest English-language document seen (April 2013) that contains the term “tofu burgers.”

March 20, Wed. Miso soup for breakfast. Visit Marushima Shoyu where Muso gets its “natural” shoyu for export to America. They have the newest wheat roasters (they roast it with sand), biggest presses. We see cement aging tanks in a temperature-controlled room, then onto a large red building with 150 aging tanks. But we see no whole soybeans, only soybean meal (dashi daizu). “I feel the owner is a liar and this is a bogus operation. The scene gets heavy and ugly. Bill is great and presses on with questions.” The owner claims that 40% of their shoyu is natural, aged for 3 years and made with whole soybeans; 60% made with soybean meal, temperature controlled for 7 months. Thus there should be about 120 vats of natural versus 60 regular. But where is the natural? Their faces turn red. We have caught them red handed. The owner take us to one musty, dirty old building with 25 vats, only 8 of which contain shoyu, some only half full. Lots of cockroaches. Looks like no one ever goes here. Still no sign of a single whole soybean. Uneasy departure. Steve Earle is embarrassed. We take a train to Tokyo. We present Earle/Muso with a list of inconsistencies and ask for a written reply.

March 21, Thurs. Visit Mr. Kazama’s miso factory (Ikeda Kojiro Miso Shoten in Kawaguchi-shi near Tokyo), that makes barley miso, the only brown rice miso in Japan, and shoyu. Call Ty Smith of Muso. He says Muso was very happy with our findings concerning the problems at Marushima, and that they have contacted a new source in Kyushu. Marushima said their president died a year or so ago and his son took over. They have lost the old feeling and tradition.

March 22, Fri. 6:00 A.M. Meet with Bill Shurtleff at his tofu master’s tofu shop (San-Gen-Ya, run by Mr. Toshiro Arai). We watch how he makes tofu. Beautiful place (12 feet square) attached to their home. Beautiful people; they don’t speak English. Both make tofu starting early in the morning. He delivers in the afternoon and she sells out of the shop. He gave me hot rich soymilk (from kinugoshi) with wild mountain honey. Both incredible. So sweet and delicious. They also serve us freshly made agé, kinugoshi, and natto. Lunch at Shurtleff and Aoyagi’s home: Noodles and tofu, Chinese fried tofu, tofu pudding, agé, kinugoshi, and mikan orange. We go over my notes from the miso factory. We copy all of his notes. Then I leave, very sad, but the friendship will remain. Akiko is a remarkable lady. Meet Mr. Kazama and go to Pacific Trading. Lousy meeting with Mr. Masaaki Miki (sales manager), and Masa Miyashita (export dept). Go to airport.

Results of the trip: (1) Westbrae started (about 9 months later) to import many varieties of miso, plus shoyu, and other products from Mr. Kazama in Japan. Bob Gerner was the founder, president, and chairman of the board of Westbrae; (2) Bob Gerner and Liz Horowitz taught “Tofu and Miso Cookery Classes” in Berkeley during 1976; (3) Westbrae published and distributed widely two brochures, What is Miso? (May 1976) and What is Tofu? (July 1976) written by Shurtleff and Aoyagi; (4) In 1976 Westbrae Natural Foods Inc. decided to sell its retail store at 1336 Gilman St. in order to focus on being a distributor and importer. The store had been losing money. Bob Gerner bought it in June 1976 for the low price offered by the highest bidder. He remodeled the store, renamed it Gilman Street Gourmet, and re-opened it in Sept. 1976. In the spring of 1977 Gerner added a deli to the store; there he made and sold Tofu Burgers, Tofu Treasure Balls, and Tofu Steaks Sauteed in Ginger Sauce. The same week that the deli opened, Gerner sold 3,000 to 4,000 of his new Tofu Burgers out of the Westbrae booth at the New Earth Exposition in San Francisco. Bob’s nephew and sister (Margaret) made the tofu burgers. The burgers sold equally well at the same Expo in 1978 and 1979; (5) Shurtleff and Aoyagi wrote The Book of Miso and their New-age Foods Study Center moved toward becoming Soyfoods Center.

Note: In late November 1974 Mr. Kazama came to a meeting at Pajaro Dunes by Santa Cruz, sponsored by The Well. The idea was to set up a natural foods trade association. Erewhon wanted to control all imports of Japanese natural foods from Japan. Janus and The Well both had to import through Erewhon. They said Westbrae must buy through them via The Well (Roger Hillyard/Pure &

One chapter, titled “Soybean Magic” (p. 121-26) contains the following soy-related recipes: Soybean concentrate: Replaces milk and eggs in many recipes (Note: This is fresh soybean puree, or go, made with the hot water grind method). Soy milk and concentrated soy milk. Cream sauces. Soy whipped topping. Soy cream. Soy sour cream. Sweet cream custard sauce.


• Summary: The Farm is a community of 600 people living on a 1,700 acre farm in Summertown, Tennessee. They have about 300 acres under cultivation, and during the summer about 200 of this is in soybeans. They practice a complete and total vegetarian diet; no one eats flesh foods or dairy products, drinks alcohol, or smokes tobacco. They do this for religious reasons, to be compassionate to animals and to leave enough food for everyone. “It is so grossly uneconomical and energy expensive to run soybeans through a cow and then eat the cow instead of just eating the soybeans that its virtually criminal.”

One two-page spread titled “Yay Soybeans!” begins: “Here’s a spiritual reason for being a vegetarian. You can get ten times as much protein growing soybeans than eating beef cattle. If everyone was vegetarian, there would already be enough to go around, and no one would be hungry.” It contains recipes for: Soy milk. Soy cheese (let soy milk stand in a warm place until the curd has separated from the whey, then boil the curds with salt, drain and press). Soy yogurt (cultured). Soy butter (made with 3/4 cups each soy flour and water, 1 teaspoon salt, and 1 cup oil). Soy mayonnaise. Granola (with soy flour). Raw gluten. Gluten roast. Fried gluten. Gluten burritos. Soybean stroganoff.

Another two-page spread is titled “The Soy Dairy: Soy Milk,” by Alexander and the Soy Dairy. It begins: “Soy milk is an easily digestible form of soybean protein. It can be made into whipped cream, sour cream, ice cream, cheese and yogurt. It contains the same amount of protein as cow’s milk, but less calcium and no cholesterol. We made 60 gallons a day for total cost of 30 cents a gallon.” There follows a description of exactly how The Farm’s soy dairy makes soymilk, what equipment is used, and where it was obtained. The text ends: “Please write to the soy dairy if you have any questions about soy milk, or stop by for a visit and tour, and we’ll be happy to give you a glass of milk to taste. Love, Alexander and the Soy Dairy.”

This book is loaded with wonderful photos, including: (1) Shunryu Suzuki, roshi. (2) A large field of soybeans. (3) Three long-haired members of The Farm eating (L-R): David Chalmers, Charles Hunnicutt, and Wilbur Jordan. (4) A little girl, Susannah Frohman, sitting on a stool drinking a cup of soymilk, with her other hand on a gallon jar of soymilk. (5) The inside of the soy dairy. (6) Leslie Jordan happily drinking soymilk from a gallon jar in front of a truck that is delivering soymilk in milk cans. Standing by the truck is Roger Kanies. Mitchell and Nancy Shapiro are sitting on the ground nearby. (7) Many views of Stephen Gaskin. (8) Growing, harvesting, crushing, and cooking sweet sorghum.
for use as a sweetener (a light, sweet syrup). Address: Summertown, Tennessee.


• Summary: For the bittersweet story of how this book came to be published, see interview with Doris Kloss Gardiner (Nov. 1990).

Facing p. 7 are photos of Jethro Kloss, his daughter Promise Kloss Moffitt, his granddaughter Doris Kloss Gardiner, and his son, Eden Kloss.

The chapter titled “Soy milk, soy cheese, soy butter and cream” (p. 35-40) has this contents: Introduction. Soy milk (homemade from whole soybeans). Quick soy milk (from soy flour). How to curd soy milk (with citric acid to make a smooth cheese [tofu]). Soy buttermilk. Soy butter (from soy flour and soy oil). Soy cream (from rich soy milk and soy oil). Soy cream cheese (“Use unsweetened Soy Milk. Let it stand until it thickens {not sour}, put it on the stove and boil a minute or two…”). Soy cottage cheese. Soy cheese (from raw peanut butter, tomato puree and Soy Milk). Quick soy cheese (from soy flour). Original soy cheese (using whole soybeans, hot water grind in a liqueurier; curded with the juice of 2 lemons). A substitute for egg yolk (made from water, soy flour and soy oil). Address: USA.


• Summary: This early and beautifully presented natural foods cookbook contains very innovative and tasty tofu dessert recipes made with limited natural sweeteners and no dairy products. It discusses the harmful effects of refined and denatured foods, with details on white flour, sugar, oil, salt, eggs, milk, and baking powder [which contains alum, a product of aluminum; “it may even be harmful”].


The inside dust jacket gives a brief biography of the author, who was born and raised in New York. In Berkeley, California, she studied Japanese and natural-food cooking, and helped to start a “noodle bar” where she baked her first dessert. Now she lives in Boston and caters weddings, parties and school fairs with natural and organic foods and desserts.

An Appendix (p. 151-52) lists the name and address of 39 suppliers of natural foods in the USA (divided into five regions) 2 in Canada. This list includes the following companies. Northeast: Erewhon Trading Co. (33 Farnsworth St., Boston, Massachusetts 02210), Good Nature Distributing Co. (Box 447, Export, Pennsylvania 15632), Infinity Co. (173 Duane Ave., New York, NY 10005), Shadowfax (25 N. Depot St., Binghamton, NY 13901), Sundance Organic Food (R.D. #1, Box 146A, Coventry, Connecticut 06238), Walnut Acres (Penns Creek, Pennsylvania 17862; founded by Paul Keene).

Southeast: Collegedale Distributors (Box 492, Collegedale, Tennessee 37315), Laurelbrook Foods (Box 47, Bel Air, Maryland 21014), Tree of Life (Box 1391, St. Augustine, Florida 32084).

Midwest and Mountain States: Ceres, Inc. (2582 Durango Dr., Colorado Springs, Colorado 80910), Cliffrose (129 Coffman St., Longmont, Colorado 80501), Eden Foods (Box 100, Ann Arbor, Michigan 48107), Food for Life (420 Wrightwood St., Elmhurst, Illinois 60126).

Southwest: Akin Distributors (Box 2747, Tulsa, Oklahoma 74101), Arrowhead Mills (Box 866, Hereford, Texas 79045), Shiloh Farms (Box 97, Sulphur Springs, Arizona 72768), Sunrise Distributors (Box 5216, Phoenix, Arizona 83010).

West Coast: Erewhon Trading Co. (8454 Steller Dr., Culver City, California 90230), Janus Natural Foods (1523 Airport Way, South, Seattle, Washington 98134), New Day Distributors (1242 S. Berendo St., Los Angeles, CA 90006), The Well / Pure & Simple (795 West Hedding St., San Jose, CA 95126).

Canada: Lifeflora Natural Foods, Ltd. (724-26 W. 6th Ave., Vancouver 9, BC), and Natural Foodstuffs (1 Main St., Box 27, Sutton, Quebec).


Address: Boston, Massachusetts.


• Summary: Casein, one of man’s oldest manufactured
products, is the protein fraction of cow milk. Housewives may be most familiar with the product “in its purest dairy food form, not as casein, but as ‘low fat’ cottage cheese. Casein comprises about 3% of the weight of whole milk. Until the late 1940s, almost all casein produced was for industrial applications, such as glue and paper coating. However today, an estimated 60-70% of the casein produced is for edible use in the form of casein or caseinates.

Caseinates: Casein, because of its amphoteric properties, reacts with acids or bases to form salts—such as sodium caseinate or calcium caseinate. Casein solubilized with alkalis is known as caseinate. Caseinates provide both nutritional and functional properties. They are used nutritionally to fortify and give texture to breakfast foods, breads, etc. They are used functionally in nondairy coffee creamers, nondairy whip toppings, icings, etc. Address: Sheffield Chemical Div., Kraftco Corp., 2400 Morris Ave., Union, New Jersey 07083.


• Summary: On a page titled “Utilization,” color photos show many soy products including: Milnot (can), Worthington Soyameat (can), Nabisco Sociables (paperboard box), Candied Pernuts: Toasted Soybeans (paperboard box), Bac*Os (glass jar), Crisco (shortening; can), Hain Soy Oil (glass jar), Dream Whip: Whipped Topping Mix (paperboard box), Hamburger Helper (paperboard box), Worthington Veja-Links (can), RG Lecithin (jar), Yoshihara Oil Mill, Ltd. Golden Soybean Salad Oil (can, 2 sizes), and 3 brands of bottled soymilk made in Korea. Another page shows Soyor bottled soy oil. The addresses of American Soybean Association offices in Hudson, Iowa (USA), Tokyo (Japan), Taipei (Taiwan), Brussels (Belgium), Hamburg (West Germany), Vienna (Austria), and Mexico City (Mexico) are given. Address: Hudson, Iowa.


The rear cover states: “We are a large, long-haired spiritual community in Tennessee. We came together through open meetings in San Francisco with Stephen. We have 750 people, including 250 kids, living on 1,750 acres. This cookbook is to help as many people be vegetarians as possible without turning any of them off and making them think it’s strange or weird and to let people know that it tastes good, is nice, graceful, and it can be a turn-on, that it’d be really neat to eat, and make you look forward to meal-times and make you really happy to eat such good food.” The Introduction, by Stephen, begins: “The thing about our cookbook is we don’t want to be faddish or cultish or scare people off. We just honestly want them to know how to make it on vegies, even somebody who doesn’t particularly have a moral reason for being a vegetarian, but just wants to eat a little cheaper, or somebody who learns to be a vegetarian to lose weight, cause you maintain a really healthy natural weight on vegetables... The main thing is that we’re absolute vegetarians. We don’t do meat or milk or eggs or cheese or fish or fowl.”

“You can increase the world’s food supply by being a vegetarian. So its good for everybody else, its good for the individual for health, and its good for the soul and the spirit not to be involved in killing. And I understand that vegetables are alive, but like I’ve said before, I’ve been to pig stickings, and I’ve been to rice boilings, and rice boilings have better vibrations than pig stickings.”

Photos show: Facing title page: People planting white potatoes at the edge of a large field in front of the woods. The lady in front is Sylvia Tepper, Robert Tepper’s wife. Pages: (1) Little Susannah Frohman eating a rolled up soybean tortilla. (18) Ruth Thomas, making lunch in the kitchen of the only house on the property when Farm folks first came here. It housed The Farm’s clinic, school, bank of operations, and receptionist for a number of years until other facilities were built for these purposes. Ruth could make a mean soybean burger (which is pictured). (23) Laurie Sythe making potato soup on the other side of the same kitchen Ruth was pictured in. (35) Poblano chili plants. (60-61) Tempeh sliced to be round to fit on buns, resting on a plate (L) and a tray (R). (64). Uncle Bill (age 82, center, surrounded, from left by: Marilyn Keating, Jeffrey Keating, Ruth Thomas, Patrick Thomas, Uncle Bill, Joel Kachinsky, Roberta Kachinsky, Bruce Moore, Roslyn Moore {holding baby Sam}. All at their home on Schoolhouse Ridge. The house, named “Kissingtree,” was originally built for Stephen and family, but he declared it “too fancy” for him, and he passed it on to this group {women were mostly schoolteachers in our school}). (67) Janice Hunter making stir fry at the Tower Road House kitchen. (68) John Hurgeton drinking a glass of soymilk on a construction site somewhere. (71) Sue Ellen, who worked in The Farm’s soy dairy, holding a glass of soymilk and relaxing. (89) Sour soymilk Danish pastry. (100) A lady rolling over dough on a table.
whipped topping product called Whipped Filling Base for revenues from 1949 until 1964. The product, developed by Frank S. Mitchell, founder of Mitchell Foods, was a concentrated nondairy product sold mostly to commercial baking companies as toppings for pies.

“Pie producers liked the product because it was less expensive and allowed larger production of soft pies which were more profitable than fruit pies.

“But as more and more of the major pie makers started producing their own non-dairy whipped toppings, Mitchell realized his company would have to try the retail field. Aided by the introduction of Perx, a non-dairy creamer that the company developed, the emphasis was put on retail distribution and has resulted in a $5 million a year business for Mitchell Foods.

“Mitchell, a native of Bradford, Illinois, had long been associated with food development prior to forming his own company. A graduate in chemistry of Bradley University, Peoria, Illinois, he went on to obtain a master’s degree in fats and oils chemistry from North Dakota State University’s School of Agriculture, Fargo, North Dakota.

“Mitchell eventually wound up working for the former Spencer Kellogg & Sons of Buffalo, now the Spencer Kellogg Div. of Textron Inc. He worked in the research department of Spencer Kellogg for nine years prior to 1949 when he formed Mitchell Foods.

“While with Spencer Kellogg, Mitchell had worked in the Edible Oils Div. It was this experience that led him to develop his non-dairy whipped topping.

“When he heard that an ice cream and dairy plant was up for sale in Fredonia, he acquired the 6,000-sq.-ft. facility at 152 W. Main St. to house Mitchell Foods.

“Mitchell perfected his whipped topping formula and set out to create a market for the product. Traveling extensively, he hit big cities such as Buffalo, Cleveland, Detroit, Cincinnati, Pittsburgh, Philadelphia, etc.

“It was strictly a one-man operation from the start, with Mitchell getting orders while on his trips, then hurrying back to his Fredonia facility to make the product to fill the orders.

“From the start, Mitchell sold only to institutional and commercial bakeries, basically pie companies. Trying to create a marketing setup for a new product proved costly to Mitchell who lost $35,000 the first year Mitchell Foods was in business.

“The first-year loss, however, was the only loss Mitchell Foods has ever had. The company turned a profit in its second year and has been growing ever since.

“Within a year of forming Mitchell Foods, Mitchell hired his first employee and within the first three years, had three working in the plant. Mitchell himself continued to expand the marketing area for his product which was being shipped to customers frozen in 30 pound tins.

“In 1958, the big pie makers such as ITT Continental Baking Co. Inc. started mass production of frozen cream pies which by then had become big sellers. Mitchell Foods was fortunate to acquire a majority of the business in whipped toppings for the pies and Mitchell Foods’ business was suddenly increased several hundred per cent.

“By 1962, Mitchell Foods employed about 50 persons and the company was supplying Continental Baking Co.’s big pie plants in Iowa and Virginia among others. In 1963, Continental and most of the other major pie makers started to produce their own non-dairy whipped toppings.

“By this time, Mitchell Foods had developed a concentrated topping that became the backbone of the company’s expansion as a supplier to frozen food distributors selling to the food service industry. Also by this time, Frank Mitchell had formulated a non-dairy creamer that the company started marketing under the brand name of White Nectar.

“White Nectar was sold as an all-purpose lightener for restaurants, lounges, institutions and hospitals, and chefs and waiters liked the product so well, they asked that the product be made available in retail stores for their home use. This led to the introduction in 1964 of the company’s Perx non-dairy creamer which when frozen, could be stored indefinitely.

“Perx was introduced in the metropolitan New York City market and soon became the leading brand in that area, capturing up to 35 per cent of the frozen and powdered non-dairy creamer market. Mitchell Foods was solidly into the retail market.

“By 1969, the Fredonia plant had been expanded but couldn’t handle the volume of business that was being done by Mitchell Foods. To supplement production, the company purchased an ice cream plant in North Abington, Massachusetts, and converted it to produce the same product lines as the Fredonia plant.
“In 1971, Mitchell Foods got another product boost with the introduction of its Poly-Perx, a polyunsaturated non-dairy creamer. The company developed the product at the request of the American Heart Association and the American Diabetic Association.

“Poly-Perx contains no cholesterol or lactic acid and because it filled a specific consumer need, it began to be stocked by an increasing number of supermarkets. The marketing area for Perx and Poly-Perx was soon expanded from the East Coast to the Rocky Mountain area.

“Mitchell Foods only delivers its products to frozen food warehouses, mainly by common carrier. The company currently employs 60 persons.

“Sales at Mitchell Foods hit the $1 million mark for the first time in 1959 and have averaged in the $5 million area for the past several years. The company expects to stay in that area this year.

“Frank Mitchell has been president and treasurer of Mitchell Foods from the beginning, and his wife, Evelyn, has been vice president and secretary. Their son Lawrence, joined the company in 1973 in accounting and has been assistant treasurer since 1974. He is a graduate of the University of Palm Beach, Palm Beach, Florida.

“Harry A. Hebbard has been executive vice president and sales manager of Mitchell Foods since joining the company in 1967. A graduate of Bucknell University, Lewisburg, Pennsylvania, he was formerly in the advertising field and was a vice president at Stokely-Van Camp Inc.

“Alfred Naraway has been comptroller of the company since joining in 1970. He was born and educated in England and came to the U.S. in the mid-1960’s.

“Mitchell Foods is currently doing research on new products related to its field. If it’s as fruitful as previous research has been future growth will be assured.”


*Summary:* Accompanying a 2-page outline about Mr. Rich, this is a more detailed story of his life and work. “Bob Rich has always been known throughout the frozen food industry as a man with keen foresight and unequalled determination.”

“After graduation from the University of Buffalo in 1935, with a degree in Business Administration, Rich purchased a small milk business, Wilber Farms in Buffalo, and actively ran it until World War II when he was called to Washington where he was a consultant to the dairy section of the War Food Administration.

“Shortly thereafter he was sent to Detroit by the WFA to be the milk order administrator for Michigan. It was during his Detroit stay that he got the idea for a whipping cream replacement to made from soy bean oil—after learning about some successful research conducted by the George Washington Carver Laboratories to develop a milk and cream replacement using soy oil.

“On his return to Buffalo, and his dairy business, Rich pursued his idea for a whipping cream from the soy oil (the Carver ‘milk’ and ‘cream’ would not whip) and Buffalo’s Spencer Kellogg & Sons research and development team came up with a whippable and saleable whipping cream from the soy bean.”

In 1975 the company packaged its 500 millionth retail pint and quart carton of Coffee Rich.

“In 1975 the company had 11 regional sales offices, 48 field sales people, 1200 employees at eight production centers and sales topped $100 million for the first time.”

“Bob Rich has gone to court more than 40 times to prevent such restrictions and has been successful in all but one instance. His position throughout has been that his company’s non-dairy products are not imitations of anything and are actually functionally superior products. He is so dedicated to this legal fight that he formed the National Association for Advanced Foods in 1968 with other non-dairy producers and suppliers to combat onerous legislation on an industry-wide united front.”

“In 1969 Jones-Rich was sold to the Dairylea cooperative because as he (Rich) puts it, ‘we wouldn’t be carrying frozen non-dairy business on one shoulder and a fresh milk processing company on the other.’”

“In 1958 U of B [University of Buffalo] honored him with its Distinguished Service Award and in 1959 he received the General Alumni Board’s coveted Samuel P. Capen Award ‘for notable meritorious service to the university.’ He was elected to the school’s Athletic Hall of Fame in 1966.

“Bob Rich has always had a deep interest in athletics. At U of B as an undergraduate he was captain of the football team his junior and senior years. He also captained the wrestling team as a senior... He later coached U of B’s freshman football team for two undefeated seasons.”

“His summers are spent at his Point Abino, Ontario [Canada], home. During his six-month winter stay in Florida, Mr. Rich travels to Buffalo almost every Sunday night and is at his Niagara Street desk early Monday morning for Buffalo business Monday and Tuesday.”

“One of Bob Rich’s crowning achievements in the field of community relations came in 1973 when the company purchased the naming rights to Erie County’s magnificent new 80,000-seat stadium in Orchard Park, New York (a suburb of Buffalo). Rich Stadium is the home of Buffalo’s National Football League entry.”

“It was Bob Rich’s early determination to find a superior replacement for a hard-to-get natural product that led to the founding of a whole new industry, the non-dairy foods processing industry,” Address: Buffalo, New York. Phone: 716-883-3211.

Company founder Robert E. Rich, 62, likes to quip that someday you may have to go to the zoo to see a cow. His products aren’t just imitations, they’re functionally superior; they won’t curdle, separate, or even sour for weeks after thawing. Moreover, they are less expensive to start with, and they save money on spoilage and refrigeration.

Bob Rich happened to hear about the idea in 1945 when, as an official for the War Food Administration, he heard of the George Washington Carver Institute’s efforts to develop soy substitutes to counter wartime shortages of dairy products.

He took the idea with him to his family’s dairy business in Buffalo, and worked to refine it with a research team. Eventually he sold the family’s dairy business to Dairylea. He already knew the cow was a pretty poor economic creature; the supply is unreliable and the quality varies, Bacteria grow in it and its 87% water.

Rich’s Whip Topping, probably the company’s most famous product, is sold as a frozen concentrate or as a ready-to-use product to schools, hospitals, restaurants, and bakeries; it will keep indefinitely. And these non-dairy products are very valuable to people allergic to milk.

A photo shows Bob Rich of Rich Products.


Summary: “At the present time, Rich Products does an estimated $100 million a year.”


Summary: This pioneering work started the “tofu revolution” in America. Contents: Preface. Acknowledgments. Part I. Tofu: Food for mankind. 1. Protein East and West. 2. Tofu as a food: Introduction, rich in high quality protein (NPU, biological value, protein score, amino acid content), high protein complementarity (tofu contains an abundance of lysine, an essential amino acid that is deficient in many cereal grains; increase usable protein by combining tofu with wheat, rice, corn, etc.), easy to digest, an ideal diet food, low in saturated fats and free of cholesterol, rich in vitamins and minerals, a health-giving natural food, backbone of the meatless / vegetarian diet, free of chemical toxins, low in cost, easily made at home, quick & easy to use, versatile.

3. Getting started: Introduction, buying and storing tofu, basic ingredients (whole-wheat flour, miso {rice-, barley-, and soybean miso, special Japanese miso, Chinese chiang}, oil, brown rice, salt, shoyu {natural shoyu, shoyu, Chinese soy sauce, synthetic or chemical soy sauce}, sugar, vinegar, monosodium glutamate {MSG}), Japanese kitchen tools (each illustrated), preparatory techniques (salt rubbing, rinsing and pressing leeks and onions, soaking burdock root, reconstituting dried sea vegetables {dried hijiki, wakame, agar}, wheat gluten and kampyo {kamyp}, parboiling, cutting tofu and vegetables, using sesame seeds, toasting nori, preparing a steamer), basic recipes (soup stocks and broths {dashi}), basic shoyu dipping sauces {tsuke-jiru}, miso toppings {sweet simmered miso / nerimiso, miso sauté / abura miso, special miso toppings and dipping sauces, finger lickin’ miso, and regular miso}, miso salad dressings, nut and seed butter toppings, spreads and dressings, basic sauces, rice, noodles and other basic preparations.

Our favorite tofu recipes (lists about 80 recipe names for each of the different types of tofu, plus soymilk, yuba, whole soybeans, go, okara, and curds; very favorites that are also quick and easy to prepare are preceded by an asterisk).

Part II. Cooking with tofu: Recipes from East and West (500 recipes). 4. Soybeans: History of soybeans and “soybean foods,” cooking with whole dry soybeans, roasted soybeans (iri-mame), fresh green soybeans (edamame, incl. a recipe for “Sweet emerald bean paste {Jinda}”), kinako (roasted full-fat soy flour, incl. Japanese health food treats such as kinako amé, gokabo, kokusen, kankanbo, abekawa mochi), soybean sprouts (daizu no moyashi).
THE BOOK OF

TOFU

FOOD FOR MANKIND

500 RECIPES

WILLIAM SHURTLEFF & AKIKO AYOYAGI

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natto ("sticky fermented whole soybeans," with "gossamer threads"), tempeh (fermented soybean cakes), Hamanatto and Daitokuji natto (raisin-like natto), modern western soybean foods (natural soy flour [full-fat], soy granules, defatted soy flour and grits, soy protein concentrates, soy protein isolates, spun protein fibers, textured vegetable protein [TVP], soy oil products). 5. Gô (a thick white puree of well-soaked uncooked soybeans). 6. Okara or Unohana. 7. Curls and whey. 8. Tofu (includes history, and preparatory techniques: Parboiling, draining, pressing {towel and fridge method, slanting press method, sliced tofu method{), squeezing, scrambling, reshaping, crumbling, grinding, homemade tofu (basic, from powdered soymilk, fermentation method related to soymilk yogurt{), tofu quick and easy {incl. Chilled tofu–Hiya-yakko{, tofu dressings, spreads, dips and hors d’oeuvre {incl. Creamy tofu dressings and dips, Tofu mayonnaise dressing, Tofu tartare sauce, Tofu cream cheese, Tofu sour cream, Tofu cottage cheese, Tofu guacamole{, tofu in salads {Western style and Japanese style salads incl. Shirae{, tofu with sandwiches and toast, tofu in soups {Western style and Japanese style soups, incl. miso soup{, tofu in sauces, tofu in breakfast egg dishes, tofu baked{, tofu saucéd, stir-fried or topped with sauces {incl. Mabo-dofu [Ma Po doufu]{, deep-fried tofu, tofu with grains, tofu broiled {incl. Tofu dengaku{, tofu simmered in one-pot cookery and seasoned broths, tofu steamed, tofu desserts {incl. Tofu whipped cream or yogurt, Banana tofu milkshake, Tofu icing, Tofu ice cream, Tofu cheesecake, Tofu-peanut butter cookies{). 9. Deep-fried tofu: Thick agé or nama-agé {incl. atsu-age meaning "thick deep-fried tofu," "three-cornered agé" {sankaku-agé} in Kyoto{, agé cubes {kaku-agé}{, "five-color agé" {gomoku-agé}{, gamno or gammodoki {incl. hirozu / hirou{, "Flying Dragon's Heads," "treasure balls{, "Gamno treasure balls"{, agé or aburage {incl. kiji{, "agé puffs{, "crisp agé{, kanso aburage{, "agé puffs{, "fried soybean cakes{, "hollow agé cubes{, "Smoked tofu{, p. 189-91, 197). Note 1. This is the earliest English-language document seen (April 2013) that contains the following terms related to deep-fried tofu {p. 180-90{; "Thick agé{, "nama-agé{, atsu-agé{, Hiryozu{, "Dragon{, "Flying Dragon’s Heads{, "treasure balls{, "five-color agé{, gomoku-agé{, "Gamno treasure balls"{, "fresh or raw deep-fried tofu{, "three-cornered agé" {sankaku-agé{, "agé cubes{, kaku-agé{, kiji{, "agé puffs{, "crisp agé{, kanso aburage{, "agé puffs{, "fried soybean cakes{, or "hollow agé cubes{. 10. Soymilk. 11. Kinugoshi {"Kinu means 'silk'; kosu means 'to strain'; well named, kinugoshi tofu has a texture so smooth that it seems to have been strained through silk{. It is made from concentrated soymilk{. 12. Grilled tofu {incl. sukiyaki{. 13. Frozen and dried-frozen tofu. 14. Yuba {incl. many meat alternatives such as Yuba mock broiled eels, Buddha’s chicken, Buddha’s ham, sausage{. 15. Tofu and yuba in China, Taiwan, and Korea {incl. Savory tofu {wu-hsiang kan{; see p. 258 for illustrations of many meat alternatives, incl. Buddha’s fish, chicken, drumsticks, and duck{, plus vegetarian liver and tripe, molded pig’s head, and molded ham{. One type of Korean soybean miso is called kotsu jang {sic, kochu jang}. When tofu is served with miso {Korean-style, Tenjang} as the dominant seasoning, and with rice{, "it becomes the popular Tenjang Chige Pekpem" {p. 262}. 16. Special tofu. Note 2. This is the earliest (and only) English-language document seen (March 2009) that uses the word "Tenjang" to refer to Korean-style soybean jang {miso{. Part III–Japanese farmhouse tofu: Making tofu for more and more people. 17. The quest. 18. Making community tofu. 19. The traditional craftsman. 20. Making tofu in the traditional way. Appendices: A. Tofu restaurants in Japan; many are vegetarian: In Tokyo: Sasa-no-yuki / Sasano-yuki{, Goemon{, Hisago{, Sanko-in{, Shinoda-zushi{, Dengaku {south of Tokyo in Kamakura{. In Kyoto: Nakamura-ro{, Okutan{, Takocho{, Izusen{, Junsei{, Nishiki{, Hakuun-an{, Rengetsu{, Sagano{, Sorin-an{. Tea ceremony cuisine {Kaiseki ryori}. Zen temple cookery or Buddhist vegetarian cookery {Shojin ryori}. Tea ceremony cookery from China {Fucha ryori}. Wild gathered cookery {Sansai ryori}. A directory of these and others, with addresses and phone numbers, is given (p. 312). B. Tofu shops in the West {Directory of 43 shops in the USA{, 3 in Europe{, and 3-7 in Latin America {Mexico City{, Rio de Janeiro{, and Sao Paolo{, Brazil}). C. People and institutions connected with tofu. D. Table of equivalents. Bibliography. Glossary. Index. About the authors {biographical sketches; a photo shows Shurtleff and Aoyagi, and gives their address as New-Age Foods Study Center, 278-28 Higashi Oizumi{, Nerima-ku{, Tokyo, Japan 177}. Sending tofu in the four directions. Pudding recipes include: Rice pudding with gô and apple {p. 76{, incl. 2 cups soymilk{. Tofu chawan-mushi {p. 147{, Steamed egg-vegetable custard with tofu{. Tofu fruit whips {p. 148}{. Tofu rice pudding {p. 150{, incl. 1 cup soymilk{. Tofu custard pudding {p. 152}. Soymilk custard pudding {p. 208}{. Brown rice pudding {p. 208{, with 2 cups soymilk{. Soymilk chawan-mushi {p. 209}. Chawan-mushi with yuba {p. 249}. Dessert recipes include: Tofu whipped cream or yogurt {p. 148{, resembles a pudding or parfait}. Tofu ice cream {p. 149{, with chilled tofu{, honey{, vanilla extract and salt{. Banana-tofu milkshake {p. 149}. Tofu cream cheese dessert balls {p. 149}. Tofu icing {for cake{, p. 149}. Tofu cheesecake {p. 150}. Tofu-pineapple sherbet {p. 151}. Also: Soymilk yogurt {cultured, p. 205}. Healthy banana milkshake {p. 206}. On p. 160 is a recipe for "Mock tuna salad with deep fried tofu." Note 3. This is the earliest English-language document seen (Sept. 2013) that uses the term "Tofu ice cream" to refer to soy ice cream or that contains a recipe for "Tofu ice
cream.”

Note 4. This is the earliest English-language document seen (April 2013) that uses the term “Tofu Cheesecake” and the first to give a recipe for a tofu cheesecake.

Note 5. This is the earliest English-language document seen (Oct. 2013) that uses the term “Tofu sour cream” (p. 109) or that contains a recipe for “Tofu sour cream.”

Note 6. This is the earliest English-language document seen (April 2013) that uses the term “tofu milkshake” or that gives a recipe for a shake made with tofu.

Note 7. This is the earliest English-language document seen (Jan. 2012) that uses the term “sticky fermented” to refer to natto.

Note 8. This is the 2nd earliest English-language document seen (April 2013) that uses the term “dried-frozen tofu.”

Note 9. This is the earliest English-language document seen (April 2013) that describes preparatory techniques for tofu (p. 96-98).

Note 10. This is the earliest English-language document seen (April 2013) that contains the term “smoked tofu.”

Note 11. This is also the earliest English-language document seen (April 2013) that uses the term “kinugoshi tofu” to refer to silken tofu.

Note 12. As of March 2007, the various English-language editions of this book have sold more than 616,000 copies.

Note 13. This is the earliest English-language document seen (Aug. 2011) that contains the term “Modern Western soybean foods” (see p. 69), a term that Shurtleff would soon (by 1983) replace by the more accurate “Modern soy protein products.”

Note 14. This is the earliest published English-language document seen (Jan. 2012) that contains the term “creamy tofu dressings” (or “dressing”).

Note 15. This is the earliest English-language document seen (Sept. 2012) that contains the term “Soymilk yogurt.”

Note 16. This is the earliest document seen (Oct. 2012) that contains an adequate or detailed description of how to make yuba at home.

Note 17. This is the earliest English-language document seen (June 2013) that contains the term “whole dry soybeans.”

Note 18. This is the earliest published English-language document seen (Oct. 2013) that contains the term “Tofu whipped cream” (regardless of capitalization). This term appears on pages 113, 148 (with recipe), 149, 153, and 179. Address: c/o Aoyagi, 278-28 Higashi Oizumi, Nerima-ku, Tokyo 177, Japan. Phone: (03) 925-4974.


• Summary: Continued: Illustrations (line drawings, both numbered and unnumbered) show: A hearth in a traditional Japanese farmhouse with tofu dengaku roasting around a bed of coals in a sunken open-hearth fireplace. An old Japanese plum tree blossoming in winter. Three pieces of skewered tofu dengaku with a sansho leaf atop each in a special serving box. A sprig of sansho with berries. Stylized top of a soybean plant in a circle. Fig. (4) Tofu products available in the West (tofu, dofu, kinugoshi, thick aged triangles, cubes, and cake, aged and aged puffs, hollow aged cubes, soymilk, tofu pudding, doufu-ru {white and red}, gamo {patties, small balls, and treasure balls}, grilled tofu, dried-frozen tofu, instant powdered tofu, okara, dried yuba, soymilk curds, pressed tofu, savory tofu). A wooden cutting board and Japanese broad-bladed vegetable knife (nagiri-bōcho) with vegetables and tofu on a woven bamboo tray.


Note 2. This is the earliest English-language document seen (May 2012) that contains the terms “deep-fried thick agé triangles” (p. 181) or “hollow agé cubes” (p. 23).


wakame, agar, nori, kombu. (129) Japanese vegetables (27 illustrations). Address: c/o Aoyagi, 278-28 Higashi Oizumi, Nerima-ku, Tokyo 177, Japan. Phone: (03) 925-4974.

- Mitchell Foods alleges that Rich Foods has infringed on their trademarked name for a non-dairy creamer, Poly Perx.
- Ingredients: Incl. enzyme-modified isolated soy protein.

- Summary: This typewritten vegan cookbook with no price on it, copyrighted in 1975 by Burton Waldbaum, expresses the group’s world view. The cover title is hand written below an illustration (line drawing) of a girl kneeling down with a cow, lamb, pig, and chicken. The book contains a good collection of 62 vegan recipes, which are straightforward, appetizing, and nutritious.
- This spiritual vegan community, founded by Burton Waldbaum (who is also called “Light”), was later renamed “World of God,” and after that “Gentle World.”
- The Introduction begins: “The Human Race (that is, the race to reach human perfection) has evolved to an exciting point; at least this is true of those who are in the lead. There is a world of truly gentle people on this planet, growing stronger, and surer, and healthier, and happier, and higher every day. And it’s time for the rest of the race to have a good look at them, and to see that it’s their gentleness that allows them to run faster and better; so that everyone can eventually reach the goal of evolving; so that everyone can win its rewards.
- “In spite of all the pessimism, all the cruelty, all the brain dirtying, all the lies, all the injustice and all the hypocrisy; in spite of all the internal and external pollution that men and women have been heir to, there is a new breed emerging, and it’s rising clear and sweet and free. Never before, in the history of the world, have so many people stood up in front of each other and announced, very bravely, ‘I don’t eat meat anymore.’ And that standing up has been as a seed that has been nourished and spread, and that will bear much fruit in the New World—a world in which all creatures are gentle; all creatures are unafraid.
- “… which is leading the world to a new, much higher, loving and understanding of GOD. Gentleness is the necessary beginning for a new world, but it is only the beginning…”
- Soy-related recipes include: Granola (with “½ cup soy granules, {optional},” p. 5.). Bran muffins (with “1½ cups soy milk {1 cup water and 4 T [tablespoons] soy flour}, p. 7.”
- Tomato soup (with soy powder, p. 21). Carob ice cream (with soy powder, p. 25). Vanilla ice cream (with soy powder, p. 25).
- Quick buckwheat pancakes (with soy or nut milk, and soy powder, p. 25). Carob cookies (with soy powder, p. 27). Carob cake (with soy or nut milk, and soy powder, p. 27).
- Frosting for carob cake (with soy powder, p. 28). Soy butter (Mix ¼ cup water, ½ cup soy powder or soy flour, ¼ cup oil, 1 tablespoon of sweetener, 1 tablespoon herba-mare [seasoning salt mixture]. Delicious with muffins, bread, or crackers). The glossary (p. 29) lists two soy products: “Soy powder–made from soy beans. Used instead of milk or eggs. As an egg substitute: 1 egg equals 1 tablespoon soy powder and ½ tablespoons water. As a milk substitute: 4 tablespoons soy powder to 1 cup water, blend.”
- Tamari–made from aged soybeans, A pure soy sauce. A definite must in all vegetarian kitchens. Used in almost everything that you will be cooking.” Indeed, tamari is used to season more than half the recipes in this book; most are not specifically mentioned above. Address: Brooksville, Florida.

- Note: This is the earliest English-language document
seen (Oct. 2013) that uses the term “imitation cheese” to refer to a Western-style soy cheese. Address: General Foods Corp., Corporate Research Dep., White Plains, New York.


A table titled “Irritating substances” (p. 123) lists the name of the substance, the chemical, and the effect. The substances are: Black pepper, chili peppers, cayenne, horseradish, cloves, cinnamon, mustard seed, ginger, nutmeg, vinegar, baking soda, baking powder, salt (sodium chloride). On the facing page is a list of 25 “Safe herbs.”

Note: A later edition of the book was copyrighted in 1979, then revised in 1983. The title was changed to “East for Strength” and the author was listed as Dr. Agatha Thrash. Yuchi Pines Institute (renamed Uchee Pines Inst. in the late 1980s or early 1990s) was founded in 1970 by Drs. Agatha and Calvin Thrash, who are both physicians and Seventh-day Adventists. As of April 1992 both are still living at Uchee Pines.

Talk with Dr. Agatha Thrash. 1999. June 4. This book was first published (with the above title) in 1975. They copyrighted it in 1979. Address: Route 1, Box 273, Seale, Alabama.

218. *Food Engineering*. 1976. Soy isolate replaces casein: First use is in coffee whiteners. 48(4):41. April. • **Summary:** Supro 710, is a new soy protein isolate, is made by Ralston Purina Co., St. Louis, Missouri. It can be used to replace casein or caseinate, especially in coffee whiteners.

219. Andres, Cal. 1976. Soy isolate imparts functionality of caseinates: 2 way cost reduction—lower usage—lower cost per pound. *Food Processing* (Chicago). June. p. 75-76. • **Summary:** Cenpro G, which has been developed specifically for use in coffee whiteners and whipped toppings, is available from Central Soya Co., Chemurgy Div., 1825 N. Laramie, Chicago, Illinois 60639. Three color photos show ready to serve products that contain Cenpro G. Address: Associate Editor.

220. Farm Food Company. 1976. August. New soyfoods restaurant or deli. 820 B. St., San Rafael, CA 94901. • **Summary:** Shurtleff & Aoyagi. 1976. Sept. Tofu & Miso America Tour Itinerary. Contact: Kathleen Sandler. Questionnaire filled out by Robert & Constance Dolgin. 1980. Jan. The Farm Food Co. in San Rafael opened its deli in about Aug. 1976, and the same month started making tempeh, tofu and soymilk. Shurtleff & Aoyagi visited in Sept. 1976. A list is given of dishes containing soyfoods served at the deli during its first year in business: Fried tofu sandwiches, tofu salads [like eggless egg salads], tofu salad dressings, and tofu cheesecake; tempeh burger, deep-fried tempeh cutlet, tempeh with creamy tofu topping, and Indonesian delight (tempeh strips with peanut butter and miso sauce over rice); soymilk ice cream, soymilk shakes, soy yogurt, soymilk mayonnaise, and soy whipped creme; soybean stroganoff and burritos; TVP chili; and Vege-Links (canned Loma Linda meatless hot dogs). Also for sale at the
food store were packaged tofu, soymilk, tempeh, soy mayo, and Ice Bean [soy ice cream], all made in the same building.


Laurie Sythe Praskin. 1985. “The Farm soy history: An overview.” States (p. 3) that it was named “Farm Foods Cafe.”

Note 1. This is America’s first “soy deli,” offering a host of highly creative and delicious recipes, served at a counter or tables.

Note 2. At this deli was developed and made the world’s first “Tofu Salad,” which would soon be made by various companies, including Farm Foods in San Francisco, one of America’s first popular tofu products, widely called “Eggless Egg Salad” (1977), “Tofu No-Egg Salad” (1978), and “Missing Egg Salad” (1978). Address: San Rafael, California. Phone: 415-454-3797.

221. Dun’s Review. 1976. The five best-managed companies: Ralston Purina’s protein growth. 108(6):39, 48-50. Dec. • Summary: “Besides being the world’s largest producer of animal feed and pet food, Ralston Purina is also a leader in protein production and nutrition research, which have vast implications for the company’s future.” Chairman Hal (for Robert Halladay) Dean notes: “We are still a broadly based agricultural company. Our basics haven’t changed. But the growth we see is in other areas... Call us a nutrition company...” Over the past 5 years the company’s earnings have more than doubled. It was the increases in such high-margin consumer operations as cereals, tuna, pet foods, and restaurants (Jack-in-the-box) that contributed most to the profits. The 900-unit Jack-in-the-Box chain, which serves burgers and tacos, is America’s third largest fast-food operation—after McDonald’s and Burger King. Since Ralston acquired the chain in 1968, sales have nearly tripled to $350 million. The company “today gets about half its operating profits from consumer products. It markets such familiar foods as Chex, Ralston and Freakies cereals as well as Ry-Krisp, and it holds the top position in pet foods (Purina dog and cat chows, Chuck Wagon, Tender Vittles, Lovin’ Spoonfuls) with an estimated 35% of the market. It also processes Chicken of the Sea and Van Camp tuna, which serves as a hedge against the decline in demand for meat protein and animal feed.”

The company crushes more than 50 million bushels of soybeans a year. “In protein technology, Ralston Purina is a leader in soy isolates, which are used as food additives. The company has already developed nine soy protein isolates containing a minimum of 90% protein, which are marketed to food manufacturers as binders, emulsifiers and enhancers of color and texture in a wide variety of foods. It is the only company to develop successfully a soy isolate for nondairy creamers.”

Ralston Purina dominates the soy isolate business, which seems to gave a very bright future. The company “currently produces about 75 million pounds of soy isolates from three plants (a fourth is being built). The venture represents less than 1% of sales and has only just begun to turn a profit. But Dean is convinced that as more food processors recognize the ‘functionality’ of soy isolates as food enhancers, the business will become a key element in Ralston Purina’s future growth. Analysts estimate that by 1980 the company’s soy-protein sales could reach $200 million and contribute 10% of company profits.”

222. Gorton, Laurie A. 1977. Soy “nuts” improve yield/lb 30-40%. Baking Industry 144(1758):12. Jan. • Summary: Pro-Nuts are made by Edible Soy Products, 711 Seventh St., Hudson, Iowa 50643. They “resemble dry roasted split peanuts. They are neutral in flavor after basic processing.” A table shows the nutritional composition of Pro-Nuts, peanuts (dry roasted), black walnuts, cashew nuts, almonds, English walnuts, Brazil nuts, macadamia nuts, filberts, and pecans. Pro-Nuts contain 47.4% protein (highest of all nuts on the chart by far), 19.5% fat (2nd lowest after cashew nuts), 23.5% carbohydrates, 2.0% water, 3.73% ash (2nd highest after peanuts), 3.81% fiber (2nd highest after peanuts), and 355 calories per 100 gm (lowest).

Flavored soy “nuts” put the crunch into the compound coating for Sno-Cap Eclair Cookies. They are an excellent substitute for nutmeats in many baked goods such as nut bread, banana bread, and other batter batters, cookie doughs, and cake and muffin batters. They can add crunchy texture to toppings, streusels, glazes, icings, and coatings. They are already used as an ingredient in granola mixes. Address: Editor.


224. Organic Gardening and Farming. 1977. Tofu cooking: Tofu will give your meals that true Oriental taste and your nutrition a big boost. 24:106, 108, 112. April. • Summary: “If America were to have a tofu expert, it would be the team of William Shurtleff and Akiko Aoyagi. For three years they studied the preparation and use of tofu throughout Japan. Their efforts resulted in the encyclopedic work, The Book of Tofu ($7.95 from Autumn Press, 7 Littell Road, Brookline, Massachusetts 02146). The following recipes have been carefully developed by them to suit American tastes.”

Recipes include: Creamy tofu dressing with curry (or

• Summary: “Rich Products Corp. on Monday was hit with a lawsuit alleging the giant Buffalo company has employed anticompetitive practices to corner the frozen, nondairy creamer market. The action was filed in Federal Court by Mitchell Foods Inc. of Fredonia, a smaller manufacturer of nondairy creamers. It claims that Rich has ‘conspired with certain distributors to boycott’ Mitchell products and has recently introduced a new frozen creamer with a name similar to a product offered by Mitchell.

“The Buffalo firm, of 1145 Niagara St., is one of the nation’s largest manufacturer’s and processors of specialty frozen food products. According to its president, Robert Rich Sr., the suit has ‘no merit whatsoever.’ Specifically, the lawsuit contends that Rich has ‘extended discriminatory prices’ to certain outlets in metropolitan areas, particularly in markets where it competes with Mitchell. At the same time, higher prices are charged to retailers in areas where Mitchell does not compete, the suit claimed. As a result, numerous distributors with which Rich deals are boycotting Mitchell products, the suit said. In addition, the Buffalo firm recently introduced a new frozen, nondairy creamer which it labels ‘Poly Rich’ in conscious and deliberate imitation of Mitchell Food’s trademark ‘Poly Perx’, according to the suit.

“The result of the latter action has been a substantial loss in business to Mitchell, the suit claims. It contends that action taken by Rich constitute violations of the Sherman Act and Robinson-Patman act, federal measures which bar anticompetitive practice in industry. The suit seeks a court order barring Rich from continuing its allegedly illegal activities, a second order turning over to Mitchell all of the funds Rich has received from the sale of its product and unspecified monetary damages.”

• Summary: A history of innovation and innovators in prepared frozen foods. Big Food jumped in with acquisitions in the mid-1950s. Product creativity blooms as industry enters the post-war era. In a society where more housewives than ever were holding full-time jobs, a new mass market for convenience foods was created. But affluence was the real key to this new “built-in maid service.” Photos (p. 91) show “Early innovators” including Robert Rich.

“One of the more novel frozen convenience foods, born out of wartime exigency, was a vegetable-base whipped topping introduced in 1945 by Rich Products Corporation, Buffalo, New York.

“Like many another packer, Rich Products got into the frozen food business by accident. Robert Rich, president, recalls the circumstances surrounding his firm’s entry into the industry.

“‘I was attempting to sell a New York wagon jobber and, for my train trip to the big city, I had inadvertently put too much dry ice in the packing case containing our fluid Rich’s Whip Topping.

“When I got to my demonstration I found I had a frozen product on my hands instead of a liquid one. There I was with no other sample and facing an impatient sales manager and 18 salesmen who were coerced in from the field for my demonstration. I had no other choice but to try and whip the quickly thawed product. It whipped to perfection. Three months later, we were freezing all our product and in the frozen food business lock, stock and barrel.’

“Today, Rich Products, in addition to Rich’s Whip Topping, markets non-dairy coffee creamer, which it also pioneered, plus specialty dessert items and frozen bakery products for the retail, in-store, bake-off and food service markets.

“With processing facilities in Buffalo, New York; West Palm Beach, Florida; Appleton, Wisconsin; Winchester, Virginia; Fort Erie, Ontario, Canada; and Fresno and Claremont, California, the company’s annual sales are now more than $110 million. A new frozen dough products plant is also under construction in Murfreesboro, Tennessee” (p. 92, 97)

A photo at the bottom of page 97, titled “Happy accident,” shows a pressurized can of Rich’s Whip Topping. “The first vegetable-based whipped topping, whose inadvertent freezing made industry history,...”

• Summary: “The New England Soy Dairy, 305 Wells Street, in Greenfield, has opened the doors on its new manufacturing plant... The firm has recently completed a long-projected expansion into more spacious and efficient facilities where it utilizes special tofu-making equipment imported from Japan enabling the company to produce nearly 10,000 pounds of tofu every week. The Soy Dairy ships this out all across New England, New York City, and Pennsylvania.” The tofu, which retails for about $0.75/lb is “made from organically grown soybeans, water, and nigari, a coagulant extracted from seawater...

“The company uses the term ‘dairy’ to indicate its intention to provide a full range of alternative dairy-like products all derived from soybeans, including ice cream, yogurt, cream cheese, mayonnaise, whipped cream, tartar sauce, plain and flavored soymilk. In addition, other less familiar items will be introduced, such as miso soy bean
paste, deep-fried tofu, and a fermented product, called

tempeh. The Dairy operates at a medium level of technology,
fusing traditional hand craftsmanship with modern labor
saving equipment.”

“The company is open Monday through Saturday, 8 a.m.
to 6 p.m. and visitors are welcome.” A photo shows Kathy
Whelan Leviton cutting a large sheet of tofu into cakes.

Note: This is the earliest English-language document

seen (Aug. 2013) that contains the word “dairy-like”
(hyphenated) in connection with soyfoods.

228. Lane, Martha. 1978. Those food additives used for
15. p. 5.

• Summary: Since Dr. Oscar Albert joined Rich Products
Corp. in 1964 he has been developing improved versions of
the company’s non-dairy frozen whipped topping and coffee
whitener. A photo shows Albert with most of the company’s
products. Address: Food editor.

229. Starenkyj, Danièle. 1978. Le bonheur du végétarisme:
Principes de vie & recettes. 2ième éd. [The happiness of
vegetarianism: Principles of life and recipes. 2nd. ed.].
Armagh, Quebec, Canada: Orion. 351 p. Oct. Illust. by
Stefan Starenkyj. Index. 23 cm. First ed. 1977. [26 ref. Fre]

• Summary: Soy-related recipes include: Soy coffee (p.
101). Soya souffle (with whole soybeans, p. 204). Chapter
14, titled “A cow in your kitchen” (p. 207-27), contains
extensive information on soymilk, soymilk products, and
problems with cow’s milk. It’s contents: Introduction. What
is soya? The proteins of the soybean (la fève soja). The
carbohydrates of the soybean. The vitamins and minerals of
the soybean. The oils of the soybean. Soymilk: The cow of
China. Reasons for replacing animal milk in your diet with
soymilk: Many people are allergic to animal milk. Animal
milk is a cause of anemia. Animal milk can be a cause of
infection of the urinary tract, particularly in infants. Animal
milk is polluted. Comparison of the composition of soymilk
and cow’s milk (100 gm each). How to make soymilk at
home. Soymilk whipped cream. Soy mayonnaise without
Nutritive value of tofu. How to make tofu at home. Tofu
Grilled tofu. Okara (La pulpe de soja). Okara pâté (Pâté à la
pulpe de soja). Soya butter (Buercr de soja: made from 1 cup
lightly grilled soy flour, 2 cups water, a little salt, and about
½ cup oil). Address: Ottawa, Canada.


Nasoya. Letter to William Shurtleff at New-Age Foods Study
Center, Nov. 20. 3 p. Typed, on letterhead.

• Summary: Written after Shurtleff and Wataru Takai paid
a surprise visit to Nasoya in the summer of 1978: “I’m sure
you felt my surprise when in the middle of our daily tofu

making routine, I turned around and spotted the man whose
Book of Tofu became the impetus for our shop. We were all
so pleased by your visit.

“Sarah, my wife, was making a delicious tofu cream
cheese, and cottage cheese for sale in and around Boston.
She is a wonderful cook and with the aid of her friend,
Winnie Bourgeois, developed some recipes which are on the
following page. We are happy to pass these on to you. We
also hope to be marketing these products again in 1979.

“I would like to wish you great success with your new
Book of Tofu. It is also our dream at Nasoya, to help improve
the health and happiness of all people by making available
a more natural and healthful diet. We are grateful to you for
your contribution in the preparation and use of Tofu, Miso,
and other foods. These are already becoming important
staple foods for many people throughout America, enabling
them to choose and eat in a pure and balanced way.”

Note: The bottom one-third of this letter has been cut off
and is missing. Address: President, Nasoya Foods, P.O. Box
841, Leominster, Massachusetts 01453. Phone: 617-537-
0713.


History of Rich Products’ work with soy proteins. This was
the first product made by the company’s revolutionary new
Freeze Flo process, which makes it possible to use a frozen
food without thawing it. Bettercreme is also used as a filling
in the company’s eclairs. Ingredients: Incl. enzyme-modified
isolated soy protein.

232. Swan Food Corp. 1978. Collected papers (Archival
collection). Miami, Florida. 5 file folders, 1½ linear inches.

• Summary: Swan Foods was the first soyfoods company
in the United States to make a wide variety of innovative
soyfoods products—and to make them from organically
grown soybeans. The company’s papers are located at
Soyfoods Center in Lafayette, California. In December 1978,
when the company declared bankruptcy after about two
intense years in business, Danny Paolucci cleaned out the
office, keeping all documents that he believed might be of
future importance. He kept them for 19 years, then sent them
to Bill Shurtleff at Soyfoods Center at Shurtleff’s request.
Most of the papers relate to recipes. There are no commercial
papers (invoices, ledgers, etc.).

Folder 1: Bulk soyfoods recipes, typed. Each recipe is
typed on a sheet of 8½ by 11 inch lined paper. Recipes made
in a Hobart mixer are marked with an asterisk (*) after the
recipe name. The recipes (listed alphabetically) are: Baked

tofu (with tamari sauce for marinade, bake at 350ºF for 30-35
minutes). Caraway tofu (add 5 ingredients to curding tofu;

stir and let curds form). Carob cream cake* with topping
(incl. 2 gallons soymelk). Cashew carob swirl cake* (incl. 3
gallons soymelk). Devils food cream cake* (incl. 2 gallons soymelk and tofu topping). Eggless egg salad* (incl. 10 lb boiled and cooled Swan Tofu). Marinade for tofu (incl. 1 gallon tamarind; mix all ingredients in a 5 gallon bucket, add sliced tofu, and seal). Soy burgers* (incl. 2 gallons each cooked rice and fresh okara, and ½ cups tamarind). Tofu chip dip* (large and small; the small incl. 6 lb tofu boiled and cooled, ¼ cup tamarind, and ¼ cup umeboshi plum paste; the large incl. 42 lb tofu).

Folder 2: Lists of ingredients for various soyfoods products typed on Swan Foods’ blue-on-white letterhead: The products (listed alphabetically) are: Carob swirl marble cake (non-dairy) (incl. soy milk). Okara granola. Roasted cashew tofu pie (incl. tofu and organic soy milk). Soyogurt (non-dairy): Note: These ingredients are handwritten below a sample label design on the back of the bottom half of a Swan Foods order form.

Folder 3: Legal-sized yellow lined note pad with 17 pages of notes written in blue ink—probably by Mary Pung. Subjects: Nutrition Almanac (soybeans and soy milk, p. 71; malt, p. 76). One page of 6 bibliographic references for publications related to soy, with a large note: “Sell Book of Tofu, etc. in shop.” The Health Food Dictionary & recipes (mu tea, p. 102; soybean, p. 159; tofu, p. 174). Diet for a Small Planet (Lappé, 1975 ed.) (protein table III–Legumes; notes on tofu, p. 102, soy yogurt vs. milk yogurt, p. 128-29; tofu, p. 132). Recipes for a Small Planet (Ewald, 1973) (table showing no. of calories you have to consume in order to get one gram of usable protein, p. 16; notes on Net Protein Utilization). Soybean Diet (Herman Aihara, 1974) (table of nutrients in various foods; cow’s milk, p. 44; soybeans can help with environmental problems, p. 4; soybeans vs. meat, p. 6, 8-9; tofu preparation, p. 115; nigari, p. 116; nutrient value of tofu, p. 125). The Book of Tofu (Shurtleff & Aoyagi, 1975) (moral and emotional appeal, health, religion, ecology, economic, p. 19; complementary proteins, p. 24, 26; easy to digest and diet food, p. 26; low in saturated fats and cholesterol, linoleic acid, rich in minerals and vitamins, p. 27; nigari, free of chemical toxins, p. 28; quick and easy to use, p. 29; ecological, nitrogen from the air, p. 55; okara, p. 77-78; uses of agé, deep-fried tofu, p. 154-55; soymilk, p. 200). Six interesting teas.

Folder 4: Handwritten recipes (some very rough) and notes, in pen and pencil, mostly on individual sheets of paper. Soy-related recipe names (listed alphabetically): Basic tofu cheesecake. Basic tofu pie. Carob marble cake. Carob on blonde with tofu topping (also called Blonde on carob; baked, with soy milk). Carob tofu pie. Dips in tofu containers: Chive tofu dip, pimento tofu dip, sea tofu dip, Italian herb tofu dip, pimento olive dip (ideas only). Dressings: Miso, avocado, green goddess, creamy garlic, red Russian, spinach Russian (ideas only). Eggless egg salad. Eggless tofu salad. Frozen tofu cutlets. Mary’s deluxe pizza (with tofu, from “Swan Food Corp.”). Milk shake. Nori rolls. Okara products: burgers, burritos, falafels (ideas only). Pumpkin pie. Quiche with tofu. Sweetened carob shake. Tofu lemon pie. Tofu mayonnaise. Tofu pie filling. Tofu pudding, vanilla. Tofu quiche lorraine [Note: According to the Joy of Cooking (1975, p. 254-55), early recipes for quiche called for bacon and cream, but later cheese was added. When sautéed onions were included, the dish was called Quiche Alsacienne. Quiche Lorraine now typically contains egg white, bacon, milk or cream, and Swiss cheese]. Tofu rice salad. Tofu tarts. Tofu turkey (Barbara’s, with stuffing). Yogurt dressing. The names of some people are included: Diane Kellar. Sherry (nori rolls).


• Summary: The author was born on 9 April 1923 at Henry Ford Hospital. His mother was Evangeline C. Dahlinger, who was married at the time to Raymond C. Dahlinger, one of Henry Ford’s most trusted employees and later Manager of the Ford Farms. The author makes the case convincingly that Henry Ford was his father, making him Henry Ford’s illegitimate son.

Chapter 12, titled “Quadrupeds are out” (p. 170-77) contains extensive information about Ford’s work with soybeans and soyfoods. Ford believed that the world of the future would be a world without quadrupeds. “We don’t need horses. We’ve got the tractor. We’ve got the automobile. We don’t need cows—we can make synthetic milk. We can make meat substitutes out of soybean and coconuts—you can hardly tell the difference. We don’t need sheep. We will be able to make wool out of synthetic things—it will be better than wool... Ford had good reason to distrust horses. He told me that when he was a young boy, his foot caught in the stirrup when a horse bolted. He was dragged around and could have been killed. I don’t recall ever seeing him ride a horse... Ford considered the horse a very inefficient instrument. He called it a thousand-pound hay-burning motor with one-horse power.

“As Henry Ford worked toward his great vision of a world that had no need of quadrupeds, I was his guinea pig. And I wasn’t the only one. Everyone had to eat the strange concoctions he was putting together and calling milk, meat, and vegetables, depending on their color. Soybean milk was his triumph. I had to drink it while he asked me eagerly, ‘Can you tell the difference? Isn’t that a fine glass of milk?’ “I loved milk, but his soybean milk almost cured me. It
tasted like chalk. I was perfectly satisfied with the job a cow did, and his version was simply terrible. For a time, Ford was eating so much ersatz foods he was concocting that Mrs. Ford worried about his health.

“Ford would eat soybean pie and drink the soybean milk that made even milk of magnesia taste good. Ford was working on a soybean body for an automobile. They used to say that if it didn’t run, Ford could eat it.

Ford had a “car body built from the soil” with wheat straw, flax, and hemp [Cannabis] that proved to be so strong it was promoted in photo sessions by whacking it with an ax.

“Ford’s ultimate triumph along the soybean line was the soybean dinner he himself dreamed up and had served at the time of the Ford exhibit at the Chicago Century of Progress Fair in August 1934.” A list of the 16 items served is given; soy ice cream is not mentioned.

“I was about eleven [i.e. in about 1934] when Ford was at the peak of his excitement about soybeans. You had only to talk to him for five minutes and soybeans would enter the conversation. He kept bottles of soybean milk in our refrigerator in case he got thirsty and in case I weakened a little to drink a little too. I only drank it, however, under the greatest duress.

“I still have the recipe he gave to mother for making soybean milk. The formula was developed by his chemical engineers... Soak one-half pound soybeans overnight and grind to a fine powder. Add two quarts of water and heat in a double boiler for one-half hour. Strain liquid through a fine cloth and season with a dash of salt. Add one or two tablespoons of syrup to sweeten. A dash of banana oil can also be added to make it resemble cow’s milk more closely. Ford was always shifting the formula around a trip to see which sweetening syrup was best—maple or sorghum or honey—and whether a little more or less salt would improve the taste.

“Ford was evangelical about soybeans. He talked of how cooked soybeans tasted much better than lima beans did, and how soybean spread was much better for children than peanut butter. He advised me to try it in a soybean and jelly sandwich.

“Ford urged Mother to tell our cook to use a lot of soybeans in cooking and to overcome the strong flavor of the beans by adding plenty of onions. In his own household the cooks were ordered to sneak a few soybeans into every food on the table—into soup, salad, the peas or other vegetable of the day.

“Ford would now and then flash a letter around from some doctor or other who was grateful for Ford’s experiments with soybean milk because babies who were allergic to cow’s milk were able to use inexpensive, life-saving soybean milk. And also those adults who were allergic to milk were able to enjoy puddings and things that they had never been able to enjoy before.

“Incidentally, Ford’s son was named after the man who was in charge of food research at Ford, Doctor Edsel Ruddiman. Ruddiman worked in the engineering lab and was one of Ford’s favorite people. Ford, of course, worked closely with Dr. Ruddiman in maximizing the uses of soybeans.” Ford also fancied soybean cottage cheese.

“If I recall correctly, Ford at one time had twenty thousand acres of soybeans under cultivation under Dad’s direction, and it was said he was spending over a million dollars a year experimenting with the plant in various ways—as food, as plastic, as animal food, as a high-protein, low-calorie diet food, and as a source of industrial oils. Ford would brag about how there was nothing in the soybean plant that was wasted; even the stalk could be made into fiber.

“As Ford saw the world of the future—and I’m sorry it didn’t come to pass—every farmer would become wealthy by running his own little factory, or ‘cottage industry,’ as Ford called it. He would produce soybeans in his field and make at least one soybean product for sale to factories or grocery stores.

“As Ford foresaw the world, farmers wouldn’t need barns. ‘With no animals, there need be no buildings on a farm except the granaries,’ he said. Except, of course, the little farm factories...” (p. 176).

Henry Ford grew marijuana [hemp] for experimental reasons. It was “enclosed by a large cyclone fence. The Ford people thought it had all been destroyed after Ford died, but some years ago they found it growing wild again” (p. 177).

“His campaign against the quadruped never quite ceased. He was forever sounding off against four-footed animals, especially those that provided meat. As early as 1919 or ’20 he had said that the world would be better off without meat... And he further insulted the cow by calling it ‘the crudest machine in the world’” (p. 177).

Ford was as trim and lean as a split rail fence. He did not smoke or drink alcohol. He was a “health nut” and for a time he preached that sugar was dangerous (p. 78). At the top of things he disliked most were Franklin Roosevelt, “monied” Jews and Judaism, Catholics and Catholicism (p. 216).


A table lists 15 soy-based infant formulas, showing the product name, form (powdered, ready to feed, or concentrated liquid), and manufacturer. The product names are Bon Lact, Espelin, Isomil, Lactopriv, Mull-Soy, Multilac, Neo-Mull-Soy, Nursoy, Nutri-Soya, Prosobee, Sobee, Soja Semp, Soyalac, i-Soyalac, Vegebaby.


This new edition features: (1) New recipes: Over fifty new American-style tofu recipes including Creamy Tofu Dressings, Tofu Teriyaki, Tofu Burgers, Tofu Eggless Egg Salad, and the like. The key to the book is an updated list of favorite tofu recipes plus suggestions for incorporating them into a weekly menu (p. 56). (2) New sections: An extensive new introduction to Soy Protein Foods (p. 66), dairylike products made from tofu (p. 150), dairylike products made from soymilk (p. 302) including soymilk yogurt (fermented), ice cream, kefir, mayonnaise, whipped cream, popsicles, buttermilk, and soy shakes. (3) New chapters: Fermented Tofu and Varieties of Tofu in East Asia. (4) New basic methodologies: The key recipes for homemade tofu and homemade soymilk have been simplified and improved. (5) Updates: A complete listing of the 120 tofu shops and soy dairies now operating in the West; over 60 Caucasian-run shops have opened in the past two years. (6) New Americanized tofu names: Including deep-fried tofu burgers, deep-fried tofu cutlets, deep-fried tofu pouches, deep-fried tofu cutlets “fried tofu cutlets” (p. v, to refer to nama-age), “fried tofu burgers” or “deep-fried tofu burgers (to refer to gannmodoki), “tofu treasure balls” or “deep-fried tofu treasure balls” (p. v, 269, to refer to Hiryozu), “fried tofu pouches” or “deep-fried tofu pouches” (p. v, to refer to aburage).

Page 110: “In Japan, tofu is also called momen-goshi (‘cotton-filtered’) to distinguish it from its popular counterpart kimu-goshi (‘silken tofu’).” Note 4. This is the earliest English-language document seen (April 2013) that uses the term “silken tofu.”

Note 5. This is the 2nd earliest English-language document seen (Oct. 2011) that contains the term “Wine-fermented tofu” (p. 361).

In Jan. 1988 a new printing (but not a new edition) of this book (the 13th), slightly revised, appeared. It had a new cover and many new small illustrations. The subtitle was “Protein Source of the Future—Now!” The heading: “The World’s Bestselling Book on Tofu.” Address: New-Age Foods Study Center, P.O. Box 234, Lafayette, California 94549.
“Yogurt: Two styles of yogurt are popular in the U.S. These are Swiss and sundae styles. The Swiss style is a stirred yogurt incubated in bulk. Fruit and flavorings are commonly combined with the yogurt before packaging. The sundae style is produced by the addition of fruit and flavoring to the retail cup followed by the addition of an inoculated milk to the container.”

“Research has been conducted to investigate the potential use of isolated soy proteins as replacement of some of the stabilizer products such as plant hydrocolloids and sodium caseinate. The addition of isolated soy protein contributes to increased viscosity and gel strength and will contribute to the protein content while many of the stabilizer products do not. Isolated soy protein may be used to replace the nonfat dry milk or sodium caseinate that is added to milk to improve viscosity and texture of yogurt. In addition, the isolate is effective in reducing syneresis or whey separation from the gel structure of the yogurt.” A photo shows Kolar.

Note: This is the earliest published document seen with the term “coffee creamers” (or “coffee creamer”) in the title. Address: Ralston Purina Co., St. Louis, Missouri.


• Summary: By the 1940s, many U.S. states had a fill milk law, which prevents the blending of vegetable fats (which cost about half as much as butterfat) with dairy products to make any product which simulates a milk product—such as ice cream or whipped cream. During World War II, a restriction stated that cream could not contain more than 18% butter fat, in order to conserve butter fat which was in short supply. To circumvent this law, two partners in Chicago, Illinois, Eric Russell Swanson (the production man, who owned the Swanson Dairy in Chicago) and Herbert Marshall Taylor (the promoter and salesman) formed the Russell Taylor Company and developed a whipping cream product made by adding 17% vegetable fat to cream containing 17% butterfat. It was a very successful product in the Chicago area and was eventually bought out by the Bowman Dairy Co. So they decided to come to Michigan, which didn’t have a filled milk law, and develop a similar product—which they named Devonshire Topping. It, too, was very successful, so the Michigan dairies had the state legislature pass a law to prohibit it.

Taylor had read about Henry Ford’s soybean milk through the publicity it was getting. He visited Bob Smith at the Carver Laboratory and asked if Smith could make whipping cream from soybeans. Smith had never tried this before but in a few days work at the Laboratory (using a soymilk process first developed at Moir House Lab) he had samples that Taylor was very pleased with. Taylor said he wanted to start producing the product commercially in Michigan using the Ford soybean base. Henry Ford said that he did not want to get into the business of producing soybean milk for sale, but he gave Smith permission to give Taylor small amounts to experiment with and to work with Taylor to design a plant to produce the soy base product in Dearborn. Ford wisely warned Smith to be very careful with Taylor (who looked like a promoter) and not to get involved in any stock deals.

Starting in the spring of 1943, Smith worked in his spare time, designed all the equipment (based on the design of the equipment in the Carver Laboratory but on a larger scale), and built a plant in the old Livonia Dairy at 2001 S. Telegraph Road (at Harvard) in Dearborn. Several other people also worked on the job. The plant’s initial capacity was about 1,000 gallons per day (one shift). The equipment in Ford’s Carver Lab was designed to produce 150 gallons of soymilk per day in a small non-stop stream. The funds needed to equip and establish the plant in Dearborn came from profits made by selling Devonshire Topping in Detroit. In the latter part of 1943 we began production [of soy-based whip topping] in the [Livonia] dairy. We had lots of problems getting the equipment because of the war and the scarcity of materials. Eventually we got the thing going. We started experimentally, selling across state lines to test the law. We advised the Agricultural Department what we were doing. We shipped to Toledo and we sold in Detroit. The product sold very well. Of course, there was no whipping cream. We just couldn’t make enough of the product to supply the demand.”

To make Delsoy they started by making soymilk from low-fat soybean meal, then added vegetable oil and liquid sugar (a blend of a small amount of corn sugar and a larger amount of sucrose from either sugar cane or sugar beets) to make about 3,000 gallons a day of the base for the topping. The protein produces the foam that makes the whipping possible. The fat produces the stabilizing that keeps it whipped. The sugar is added to give a sweet flavor.

The name Delsoy was Herbert Marshall Taylor’s idea. The filled milk product that his company had been selling previously in Detroit was named Devonshire Topping. But that name was contested by the people at Devonshire-Melba Co. and they prevailed. Taylor was going to have to change the name of his product, and at the same time he was changing it from a dairy-based product to a soy product—so he thought of “delicious soy” or “Delsoy.” In addition, the first letter was the same as the D in Devonshire, which would help in advertising the new product to former customers. The Russell Taylor Co. manufactured Delsoy for the first year or so, until the company name was changed to Delsoy Products. The company name was composed of Eric Russell Swanson’s middle name and Herbert Marshall Taylor’s last name.

Herbert Marshall Taylor “was the only son of a
superintendent of the Canadian Pacific Railway. He had been raised in kind of a royal fashion. He rode around in private railroad cars and lived pretty well. He was very expert at spending money at a high rate of speed, which was one of our big problems after the company was formed. He spent money like it was going out of style and we always had trouble.”

“Harvey Whitehouse was a dairyman in Detroit and he was hired to operate the Russell Taylor plant. It was in the Grand Trunk Terminal warehouse in Detroit [Russell-Taylor Inc., 1951 East Ferry Ave. at 3rd Ave, Detroit 11]. He didn’t join us until after our plant was completed in Dearborn. When our Dearborn plant was completed, they shut down the warehouse plant in Detroit and he came out and operated the Dearborn plant. At that time I was working at Fords [the Ford Motor Co.] and I was just spending part of my time at the Delsoy product... it was somewhere in the fall of 1943 I believe... Harvey Whitehouse was hired because he was qualified to operate both refrigeration and steam equipment... He was hired from the Rosebud Dairy in Detroit to operate the equipment at the Russell Taylor warehouse on Third Avenue in Detroit. Russell Taylor had... rented an existing plant there, used it on a part-time basis, and paid for the use of the equipment on a per-gallon basis.

“Now when we started Delsoy Products, we had our refrigeration and we had hired our own people to deliver it... We never sold Delsoy out of that warehouse [on Ferry Ave. in Detroit]. All the Delsoy we sold out in the Dearborn plant. That was the Devonshire Topping that we sold out of the Ferry Avenue warehouse.”

H.M. Taylor closed down Devonshire Topping because “he got in trouble with the War Food Board for using too much milk solids in his product. He used about four times his allocated amount of milk solids and was sued by the government and was found guilty. He and Swanson and the rest of the company were fined. They had to stop the operation on account of that.” That was when they shut the warehouse in Detroit. At about the same time the filled milk law went into effect and they couldn’t produce it any more. Delsoy had been in production for about a year before the lawsuit was settled with the government. Taylor got the larger of the two fines because he was the instigator and leader of the idea. “We were definitely anxious to get Taylor out of the company because he was definitely running us into the ground with his wild spending.” Bob Smith put up the money for Taylor to keep him out of jail and in exchange took over Taylor’s stock in the company—which gave Smith control of two-thirds of the company. But he decided it would be best to split the ownership among himself, Swanson, and Whitehouse. Address: Smith: 26351 Hollywood Ave., Roseville, Michigan 48066; Baut: Dearborn Historical Museum, 915 Brady St., Dearborn, Michigan 48124. Phone: Smith: 313-777-5394. Baut: 313-565-3000.


• Summary: The Carver Laboratory developed because Mr. Carver had told Mr. Ford that he knew how to get rubber from domestic plants. World War II was on and Ford’s main rubber supply had been cut off by the Japanese. “Mr. Ford was interested in finding out what Carver’s plants were and what the process was. He decided to entertain Carver and get him to reveal the source of his rubber.” He came to Smith one day and said he would like Smith to convert the waterworks (the plant that had once been the waterworks for the city of Dearborn) into a laboratory and to have it done in one week. “George Washington Carver was coming to Dearborn for a visit and this laboratory was going to be named in his honor. We were supposed to find out through this how to make rubber out of domestic plants.” With all top Ford executives, Charles Lindbergh, the newsreel, newspaper, and wire service people plus photographers in attendance, “we had the big opening and dedicated the laboratory for work on soybeans.” In July 1942, with Mr. Smith in charge, they spent the next 2 weeks with Carver and never did find out how to make rubber from domestic plants. They were convinced he did not know how, but said he did just for publicity.

After the big dedication. Smith moved all his equipment from Moir House to the Carver Lab, where he had a lot more room and equipment. But Bob, with his wife and two daughters, continued to live at the Square House in Dearborn until 1952, when he moved the house to Garden City. Eventually there were 25 employees at the Carver Lab, including 3 chemists. “One of the reasons for moving to the Carver Lab was to have more room to build a [soy] milk plant. He [Mr. Ford] wanted us to build a plant that would produce 150 gallons of milk a day.” Prior to that time they had produced 1-2 quarts a day, all by hand work in the lab. After about 2 months they had the soymilk plant in operation. For the next few years they produced soymilk to supply the Henry Ford Hospital in Detroit and the Ford cafeterias. “The milk wasn’t as good as cow’s milk as far as flavor was concerned but it made good ice cream and we made a lot of ice cream from it.” When asked if they used the word “ice cream,” Smith answered: “Well, it turned out there is a law against making anything that looks like ice cream if it’s not made out of milk. The patent attorney said that we could probably fight it but it would be had publicity for the company so we eventually discontinued it.”

At the Carver Lab extensive research was also conducted on chlorophyll, since it is a very unique substance: (1) its chemical structure is almost identical to that of hemoglobin in the blood; and (2) it is responsible
for transforming solar energy into the various nutrients that can be used by humans and animals. Mr. Ford found these facts fascinating. The Carver Lab became one of Henry Ford’s favorite projects. Bob Smith worked at the Carver Lab from about July 1942 until August 1945; the main job at that time was production of soybean milk. Starting in about Sept. 1942 they made 150 gallons a day by a continuous process that worked around the clock. There were three shifts. The soymilk was made from purified [isolated] soy protein, hydrogenated soy oil, and corn sugar. Then they got involved in making ice cream for the cafeterias, the Ford Veterans and Ford Hospital. They also began testing the value of soybean milk in rats. “We found we could raise six generations of rats with nothing but soybean milk, which was, the doctors thought, pretty unusual. There are very few foods that you can eat exclusively and survive on for very long.” In Aug. 1945 he left to work full time with the Russell Taylor Company making Delsoy [a soy-based non-dairy whip topping]. Clem Glotzhober took over the Lab after Smith left. Mr. Ford got sick in January 1945 when he was in Georgia and he never recovered.

Development of the plastic car was started at the chemical plant, where a solvent extractor produced soybean oil and meal. The defatted meal, when reacted with phenol formaldehyde, produced a good plastic, and many small molded plastic parts went into Ford cars. The story of the development of the plastic car is told. Hud McCarrall was supposed to be the engineer on the project. Lowell Overly designed the first plastic car. “That car was probably 40 or 50 years ahead of its time, like a lot of things Ford did.” The first step was to build a plastic rear deck for Mercury. It was pulled off the molds in about 1938 and cost $3,500,000. Ford liked to slam this rear door with an axe that he carried in the trunk of his car. After the plastic car was demonstrated in 1941, it ended up in the basement of the Engineering Lab, covered with a piece of white cloth.

Smith (p. 25) then tells the story of how Mrs. Edsel Ruddiman wanted her husband, who was almost 80 years old, to retire. “So she spoke to Mr. Ford about getting him to retire. Instead of Ford saying, ‘Edsel, I think you’ve worked long enough. You’d better retire,’ or something like that, he just took his work away from him. He went into his laboratory one day and he said, ‘I want everything cleaned out of here in the next couple of hours.’ So dump trucks backed up to the door and threw everything out. Then they let Ruddiman sit there for a couple of months with nothing to do—in about 1941... He was very bitter about the way the boss was treating him.” At times he cried. After a short time he quit. The Twin Lakes lab was also closed in 1941.


• Summary: Bob Smith left the Ford Motor Co. in Aug. 1945 to work full time with Delsoy Products. Taylor and Smith each owned 1/3 of the stock, Swanson owned 1/6, and various other people owned the remaining 1/6. Swanson and Taylor put in the money and Smith contributed the know-how. Delsoy Topping sold very well because no dairy whipping cream was available. They shipped to Toledo, Ohio, and sold in Detroit, Michigan.

Taylor and Swanson were fined by the federal War Food Board for using too much milk solids in their original dairy-based whipping cream. Smith offered to pay off Taylor’s $6,000 fine to get Taylor out of the company. Taylor was a lavish spender and the source of much conflict. At one point he tried to grab a majority of the stock for himself. Taylor’s interest in the company was to develop a product and then sell the stock to make money on the stock rather than on the sale of the product. Smith, Swanson, and Whitehouse ending up owning Delsoy Products.

Originally Delsoy Topping was sold in paper containers purchased from the Sutherland Paper Co. in Kalamazoo, Michigan. Delsoy bought the containers by the carload, 300,000 a at a time. When Sutherland went out of business, Delsoy switched to buying containers from the Crown Cork and Seal Co. in Philadelphia. During World War II Crown Cork and Seal had developed a pressurized metal can to use for insecticide sprays by the military. Delsoy was the first to realize that the can’s unique valve (produced by the Super Whip Co. in Chicago and used with nitrous oxide gas) made it suitable for whipping cream. So the company modified its formula for Delsoy Topping, put it in this pressurized can, and in 1946 or 1947 named it Presto Whip. They were the first company to ever put a topping in a pressure can and sell it. It immediately became a huge success, was widely advertised, and was soon sold by every chain store in the area. Soon Delsoy Products was working 3 shifts, making 25,000 cans a day–sold mostly in the Detroit area. Soon they were selling the products over a range of 350 miles in lower Michigan, Ohio, and parts of Indiana, Pennsylvania, and New York. By 1963 they had 23 distributors. One of their first big customers was Awrey Bakery, a prestige account, that bought 300 gallons/day, 5 days a week. They mixed equal parts of Delsoy and dairy whipped cream to get a superior product for use in cream puffs. Initially they refrigerated all products. Later they would freeze everything immediately and keep it frozen until it was distributed to the stores.

The process for making Delsoy Topping was a very technical and difficult one—even for people with much experience in making it. There was a patent application made
under the name of Henry Ford and R.A. Smith but it was probably never completely or issued. Initially the soybeans were grown by Ford but after Delsoy Products began, “low temperature soybean meal” with high protein solubility and most of the fat removed was purchased from Central Soya. Being a vegetable product, it was subject to less bacterial deterioration than cream products. To further extend the shelf life, Smith adapted a machine that was developed for the sterilization of orange juice then used it to heat the product to 300 degrees for 1.5 seconds, followed by rapid cooling to produce a sterile product. Delsoy competed very favorably with similar dairy products. It was less expensive and each can contained 40% more product (10 oz. vs. 6-7 oz), and it had superior whipping qualities with much higher whipped volume. Initially the can and valve cost about $0.11 and the product (Presto Whip) cost $0.06. It retailed for $0.29. At one point a chocolate flavor was introduced, but it was soon discontinued. They sold Delsoy Topping to institutions, in quarts to smaller bakeries, 5 gallon cans to larger bakeries, and 10-gallon cans to Awreys.

Zazu Pitts, a famous actress, “health addict,” and close friend of Gloria Swanson got interested in the product, visited the Carver Lab to try the soybean milk, and for a while considered buying a franchise.

After Presto Whip was launched, Delsoy Products began a new company named Delsoy Distributors. The first big product they distributed was Hawaiian Punch. Later they started the Smith, Swanson, Whitehouse Brokerage Co. and distributed Good Luck Margarine, Red Star Yeast, Hawaiian Punch, etc.

In 1963 Bob Smith left the company; Harvey Whitehouse and his son David bought Bob’s stock. Today Delsoy Products is named Whitehouse Products. Note: Bob Smith was born on 1 April 1913, so he was age 66 at the time of this interview.


Talk with Bob Ely at Chadalee Farms Inc. 1992. Feb. 4. The company is now called Chadalee Farms, Inc. and Christoff Gourmet Foods is one division. The only non-dairy product they still make that they acquired from Whitehouse Products is Chadalee Farms is imitation sour cream. They also private label it under other brands, such as Nuggett, Pocahontas, etc. Within the past few months they have discontinued the whipped toppings and the aerosol toppings. When they bought the products from Whitehouse they changed the brand name from Whitehouse to Chadalee Farms. Whitehouse and Chadalee also packed the products under many national brands. For more details, he suggests contacting Dave Whitehouse in Dearborn, Michigan, at 313-562-0242. Dave now works for Chadalee as a salesman.


• Summary: This editorial discusses the remarkable soybean’s many uses. It is good to eat and good for you, and has many uses in industry. “Another culinary import from the Orient is ‘tofu,’ which is made of soybeans. If you are tired of hamburger, try tofu, which is said to be a fine substitute for lean meat and cost about half as much. A tofu maker in Los Angeles [Hinoichi] is turning out about ten tons a day.”

A legume, the soybean adds nitrogen to the soil. “It sort of pays rent for the land which it occupies.” “When we eat meat, milk, cheese, or eggs, we are also consuming soybeans, one step removed, since soy meal is a basic element [the main protein source] in many animal feeds. Soy flour, one of the least expensive sources of edible protein, is used in many foods from bread and other baked goods to sausages and whipped toppings.

The USA now grows well over half the world’s soybeans–more than China. “To the American farmer, the development of the soybean has been a godsend.” The U.S. has begun to warm up to Communist China. However little we may get from the Chinese politically, “we may be thankful for their botanical gift, the amazing soybean.”


• Summary: “The closing of a $1.8 million bond issue for Rich Products Corp. was announced on Thursday by the Erie County Industrial Development Agency.

“The main portion of the issue is being used to build a new corporate headquarters for the company at 1150 Niagara St. It also includes the expansion of the company’s research and development facilities.

“Rich Products manufactures non-dairy products, such as a coffee creamer and whipped topping and frozen dough products.”


• Summary: Contents: Preface. 1. How to start a tofu shop or soy dairy. 2. Setting up shop; The community or village shop; The traditional caldron shop; The steam cooker plant; The pressure cooker plant; The soy dairy; The automatic soap plant.
steam cooker plant; The modern factory. 3. Ingredients. 4. Sanitation and safety. 5. Principles of tofu & soymilk production. 6. Tofu. 7. Firm tofu, pressed tofu & smoked tofu. 8. Foods made from tofu: Introduction, creamy tofu dressing, tofu chip dip, tofu mayonnaise, tofu cream cheese, cottage cheese, sour cream, tartar sauce, tofu eggless egg spread or missing egg salad, tofuafish spread or salad, tofu rice salad, tofu cheesecake (Sprucetree Baking Co. and White Wave), tofu pies, tofu creamsies or tofu-coconut cream bars, tofu tarts, tofu turnovers, tofu puddings, fruit whips, custards and parfaits, tofu cinnamon rolls, tofu whipped cream, tofu icing and cream cakes, marinated tofu (fried or baked, p. 166), tofu jerky [sic, jerky] (p. 166), teriyaki tofu, tofu teriyaki, savory baked tofu, savory pressed tofu (with five spice powder, wu-hsiang toufu-kan), nori rolls with brown rice & tofu, cucumber & brown rice burgers, tofu baby foods, tofu in ready-made sandwiches. 9. Using okara, whey, curds & hulls. Deep-fried tofu (cutlets, cubes, burgers, treasure balls, burger balls, pouches, puffs). 11. Soymilk.


Note 1. This is the earliest English-language book seen with the term “soymilk,” spelled as one word, in the title.

Note 2. This is the earliest document seen (Feb. 2002) that mentions tofu jerky or any kind of soy jerky.

Note 3. This is also the earliest English-language document seen (April 2013) that uses the word “quark,” or “quesillo blanco” in connection with soy cheese or tofu.

Note 4. This is the earliest English-language document seen (Sept. 2012) that contains the term “cultured soymilks” (or “cultured soymilk”).

Note 5. This is the earliest English-language document seen (Sept. 2012) that contains the term “ripened soymilk cheeses” (or “ripened soymilk cheese”).

Note 6. This is the 2nd earliest English-language document seen (April 2013) that uses the term “smoked tofu,” but the first that uses it in its modern sense. Note 7. This book contains the most detailed and complete descriptions seen to date (Oct. 2012) of how to make tofu, soymilk, and yuba on a commercial scale.

Note 8. This book was first printed on 1 Aug. 1977 in a photocopied and rough-typed edition with a yellow and black cover.


• Summary: Contents: Introduction. Frozen soymilk desserts: Soymilk ice cream and soft serve (Soy Ice Bean, Soy Parevine) (The ice cream industry, ice cream production equipment, ingredients, regulations and labeling, about overrun, the ice cream process, soymilk ice cream quality, soymilk ice cream recipes and calculation of mixes {Banana-honey soymilk ice cream on commercial and community scales}, soft serve and other formulas).

Frozen soymilk yogurt (Frozen soyogurt or Frogurt). Other soymilk frozen desserts (Soymilk sherbets, soysicles, frozen soymilk curdust, ice soymilk).

Fermented or cultured soymilks: Soymilk yogurt (Soy yogurt, soyogurt, or soygurt) (Dairylike products made from soymilk yogurt {Soymilk yogurt cream cheese, soymilk yogurt cottage cheese, soymilk yogurt sour cream, soymilk yogurt smoothie, soymilk yogurt cheesecake, frozen soymilk yogurt}).

Acidophilus soymilk (Soyacidophilus).
Soymilk kefir.
Soymilk piima.
Soymilk buttermilk and other fermented milks.
Soymilk cheeses (soy cheese): Unripened fresh soy cheeses, unripened soft fresh dairy cheeses (Quark, ymer, Latin American white cheeses {Quesillo blanco}, panir, ricotta cheese, cottage cheese and pot cheese, baker’s cheese, cream and neufchateau cheese, Mozzarella, milk tofu), ripened soymilk cheeses.
Soymilk mayonnaise, shakes, soy nog and other products: Soymilk mayonnaise (Soyanaise or Soymayo), shakes & energy drinks, soymilk eggnog (soy nog), soymilk whipped cream and chip dips, soymilk rice pudding, plain puddings, and custards. Address: Lafayette, California.
HISTORY OF NON-DAIRY WHIP TOPPING, COFFEE CREAMER 126


• Summary: Rich products was founded in 1944 with a work force of four—Bob Rich, Herbert R. Kusche, Joseph C. Robida, and Jerrold W. Hannon. The company incorporated the following November when Rich’s Whip Topping, the first of the firm’s five major breakthroughs, was invented. “Remembering those early days vividly, Rich smiles and lowers his voice: ‘During that first year, the, company recorded sales of $28,000. And the four of us used to do all of the work. But we loved it.’

“‘It was a dream when we started,” adds Kusche, who has remained an integral part of the corporation and is now executive vice president. ‘We all had a lot of big ideas and we were always talking about reaching a million dollars in sales.’

“‘I learned a lot from Bob. I never saw a guy who fought so hard and wanted to succeed so much. He got guys like Joe (Robida) and I to join the team and we all became fighters. We fought pretty damn hard for what we got,’ adds the 58-year-old Syracuse University alumnus.

“‘I’ve said it before that I would give my right arm for Bob Rich,’ declares Robida, the vice president of non-dairy operations, who remembers the 16-hour days in those early years when everyone would help fill and package the Whip Topping.

“Although he stepped down as president of the company last year, Bob Rich Sr., 66, still has an active role in its growth, which has been slow and well-planned over the years. He will join his son, Robert Edward Rich Jr., the energetic, 38-year-old president of the firm, to head this week’s conclave.”

Rich Products now employs more than 3,500 people in 15 production plants, with 400 employed at its non-dairy products plant at 1145 Niagara St., at W. Ferry, on Buffalo’s west side.

This year, Rich Products and its various subsidiaries, expect to sell a record $250 million in goods. The figure ranks Rich’s frozen-food sales as the fifth largest in the nation—5th out of 1,530 frozen food packers!

“The Fredonia firm alleges that Rich Products deliberately changed the name of its non-dairy creamer to Poly Rich, thus infringing on Mitchell’s trade name of Poly Perx.” Address: Courier-Express staff reporter.


• New Product—Documentation: Talk with Svadesha R. Urban, company founder. 1990. June 13. He introduced this product while his company was still in Einweging. It is made by mashing tofu with herbs to give it a cottage cheese consistency. Wt/ Vol., Packaging, Price: Sold in round plastic deli containers. Refrigerated.


• Summary: This large and colorful poster has a yellow title and color photos of prepared tofu dishes on a black background. The photos on the top two-thirds are: 1. Tofu tomato cheese sauce on broccoli. 2. Tofu garlic dressing on a green salad and alfalfa sprouts. 3. Tofu strawberry whip in a stem glass. 4. Soy milk. 5. Deep fried sweet & sour tofu. 6. Organic Soy Dairy Tofu. 7. Organic Soy Dairy Firm Tofu. The bottom one-third is text and explanation. Address: Greenfield, Massachusetts.
SOY DAIRY TOFU — medium soft texture is best suited for dips, dressings, soups, sauces and desserts. It is also excellent as a replacement for sour cream or cottage cheese.

SOY DAIRY FIRM TOFU — dense texture is ideal in stews, sandwiches, casseroles and main course entrees.

1. Tofu Tomato Cheese Sauce
2. Tofu Garlic Dressing
3. Strawberry Whip
4. Soy Milk
5. Deep Fried Sweet & Sour Tofu
6. Soy Dairy Tofu
7. Soy Dairy Firm Tofu

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• Summary: This two-color leaflet is printed with brown and green on beige. Contents: Introduction to tofu and The Book of Tofu, by Shurtleff and Aoyagi. Nutrition information per serving. Percentage of U.S. Recommended Daily Allowances (protein 15%, iron 15%, phosphorus 15%).


• New Product–Documentation: Booklet (12 p., undated) from Central Soya Co. Chemurgy Div. 1979? Make good foods better with help from the broad line of Central Soya quality proteins and lecithins. Lists each of these soy protein isolate products. Cenpro-F, similar to Promine-F, is a non-gelling sodium proteinate which disperses rapidly in water. Cenpro-G is a “non-gelling sodium proteinate that offers both excellent dispersibility and emulsion stability. It is ideal as a replacement for sodium caseinate in products such as coffee whiteners” and blast-frozen whip toppings.

Cenpro-P, “the newest product in the Cenpro series, is a highly-dispersible, heat-gelling potassium proteinate which incorporates the titanium, vitamins and minerals required to comply with published regulations. When used for pumping ham, corned beef and other cured meats it produces great-tasting, high-quality meat products.” Cenpro-MD is a “non-gelling sodium proteinate similar to Promine-F that combines exceptional dispersibility with high fat and water binding capability. It contains the titanium required for meat systems such as non-specific loaves, where it can be used in place of some nonfat dry milk.”


systems such as non-speci

binding capability. It contains the titanium required for meat

combines exceptional dispersibility with high fat and water

“non-gelling sodium proteinate similar to Promine-F that

isolate products. Cenpro-F, similar to Promine-F, is a non-

quality proteins and lecithins. Lists each of these soy protein

in the diet. But he had been interested in

He was deeply interested in the fact that soy had been used

was most interested in

popularize soybeans and thereby to help farmers. But Ford

in about 1936 by the Edison Institute and titled “Recipes

for Soy Bean Foods.” The purpose of these meals was to

popularize soybeans and thereby to help farmers. But Ford

was most interested in finding industrial uses for farm crops.

He was deeply interested in the fact that soy had been used

in the Orient for so long by millions of people as a key

source of protein in the diet. But he had been interested in

health before he got interested in soybeans. Still, he was very

involved personally with soybeans as foods; he used them a

lot in his own diet.

Ford grew his own soybeans on over 10,000 acres he

bought in southern Michigan. The idea was not to help

farmers by buying their beans but to encourage farmers to

grow soybeans then process them in small-scale solvent

extractors on their own farms. Eventually this village

industry concept proved to be uneconomical so it was

abandoned.

In about 1932 Ford set up his first solvent extractor

near the River Rouge plant. About a year later he set up a

plant to make soy protein isolates from the meal produced

by the solvent extractor. In about the mid-1930s Ford

built a soymilk plant in Greenfield Village. It was just a

demonstration plant that made several hundred gallons of
soy milk a day. The plant was part of the larger research effort; none of the milk was sold commercially. With the arrival of World War II, the process was taken by Bob Smith, one of the fellows who developed it, and used as the basis for a private plant [Delsoy Products] in Dearborn where he sold a lot of soy milk for use in whipped toppings, baked goods and frostings. It was quite successful. A big bakery in Detroit used a lot of the topping. As a result of that, the Rich Products Co. in Buffalo, New York, started making the same type of product and became very big. One of Bob Smith’s workers [Holton “Rex” Diamond] went to Rich Products and made a big success of it. Rich is very well known; they also make coffee creamers.

Henry Ford was not a vegetarian. He ate like most Americans at the time, and he ate many steaks—even though he knew meat was not the best thing for you. Mrs. Ford suffered from arthritis and he sought diets to help her.

World War II killed the idea of the plastic car. The company would have needed to spend lots on dies to make it commercial. Also each plastic body took too long to produce; it had to cure for 3 minutes in the die. Young Henry Ford II threw out everything [not directly related to automobiles] that his grandfather was interested in. General Motors was actually the first company to make a commercial car with a plastic body—the Corvette, whose body was made of fiberglass.

Edsel Ruddiman was the man who got Ford interested in the food side of soybeans. Ruddiman was quite old. He had his own lab (which he got in about 1930-31) and was a very good scientist. He and Boyer worked closely together since their labs were nearby.

Ford grew 10,000 acres of soybeans in southern Michigan. Ford set up his first solvent extraction plant in about 1932 and his soy protein isolate plant a year later. Ford was personally very involved with soyfoods. He used them a lot in his own diet. He built a soy milk plant in Greenfield Village in the mid-1930s as part of his research efforts. He made several hundred gallons a day. The milk was not sold commercially. After the start of World War II the process was taken over by Bob Smith, one of the fellows working on it. Smith built a private plant in Dearborn where he made the milk into frostings for use in baked goods. It was quite successful. A big bakery in Detroit used a lot of it. As a result of that, Rich Product Corp. in Buffalo, New York, got interested and eventually became very successful. One of Bob Smith’s workers, Rex Diamond, went to work for Rich. They also made non-dairy coffee creamers and milk.

Boyer was director of research for The Drackett Co. from 1943-1949.

Ralston Purina’s edible soy isolate plant was in Louisville, Kentucky. It was hard at the beginning to get people to use isolates. Mead Johnson started using an isolate in their infant formula. Address: 632 Edgewater Dr., Apt. 731, Dunedin, Florida 33528. Phone: 813-734-2415.


- **Summary:** “Frank S. Mitchell, age 66, of 227 Seymour Street, Fredonia, president and chairman of the board of Mitchell Foods. Inc. of Fredonia, died suddenly late Tuesday (Nov. 25, 1980) at Brooks hospital. Mr. Mitchell was born in Peoria, Illinois on Dec. 29, 1913... Prior to forming Mitchell Foods in 1949, he was an employee of the Rich company [Rich Products, Buffalo, New York] and Spencer-Kellogg and Son of Buffalo.

- “Mitchell Foods products included a non-dairy creamer named White Nectar, which later led to the introduction in 1964 of the company’s Perx non-dairy creamer which when frozen could be stored indefinitely and in 1971, Poly-Perx, developed by the company at the request of the American Heart Association and the American Diabetic Association. Later emphasis in the company became retail distribution. Mr. Mitchell also served as treasurer of the company.

- “He was a member of the Pioneer District of the Boy Scouts of America, a former member of both the Fredonia Chamber of Commerce and the executive committee of the Chautauqua County YMCA. In 1968, Mr. Mitchell was appointed chairman of the Fredonia and Pomfret area Cancer Crusade. In addition, Mr. Mitchell was a member of the American Oil Chemists society and the American Chemical society.

- “Survivors include his wife, Evelyn (Baetzhold) Mitchell of Fredonia; two sons, Laurence Mitchell of Buffalo, New York; and a brother, Dr. William Mitchell of Naples, Florida. Six grandchildren also survive.

- “Mr. Mitchell was predeceased by his parents and a brother, Emerson Mitchell.”


- **Summary:** This “pamphlet” contains 8 American-style recipes. Any company can have its name and logo printed on the “Getting to know tofu” pamphlet, at the top of the front panel. We have one from Garden of Eatin’.

Note: At about this time, Natural Recipes had the following recipe pads that featured tofu: Creamy tofu dips/dressings. Spicy fried tofu. Sweet & Sour tofu & veggies. Tofu cheesecake. Tofu cutlets parmigiana. Tofu egg-less salad. Tofuburgers. What to do with tofu. They also had the following recipe pads that used tofu as one ingredient, but not the main ingredient: Applesauce cake (icing). Marinated veggies. Old world noodle pudding (dairyless “new world” variation). Peking fried rice. Tokyo fried noodles. Prices: 24-45 pads: $0.88/pad. 50-145 pads: $0.80/pad. 150+ pads:
manufacturing a soybean cream, with emulsifiers added, that could be whipped, Diamond suggested he contact the Ford Motor Company to obtain the rights to their continuous extraction system.

“Diamond told Rich that Mr. Ford was not interested in seeing the use of soybean milk products expanded but that Ford Motor Company would grant him the rights to their ‘Rube McNutt’ [sic, Rube Goldberg or Boob McNutt] system for $1.

“When Rich returned to Buffalo that weekend, he visited with his friend, Dr. Alexander Schwarcman, who was director of research at the Spencer Kellogg Company. Dr. Schwarcman was most enthusiastic about the idea of a whipping cream from an all-vegetable source.

“Rich continued working as the Milk Market administrator for the state of Michigan but on his return to Buffalo every weekend, he spent more time overseeing the development of his soybean cream project than he did on his Wilbur Farms Dairy operation.

“‘When we realized we had something here I wrote the Ford Motor Company asking for the patent rights, which I had been told were readily available, but I did not receive an answer,’ Rich recalled.”

Ford’s general consul told Rich that Ford did not want to be responsible for creating competition for America’s dairy farmers. Rich took that news to Howard Faust in Buffalo; Faust told Rich that he thought they could extract the protein from the soybean using a batch system—which meant (if it worked) he would not need the Ford patent.

The system designed by Faust extracted 68% of the protein from the soy flakes, whereas Ford’s continuous process extracted only 32%—a huge improvement.

“Realizing he was on to something big, Bob Rich Sr. incorporated Rich Products in November 1944. His 12-truck garage behind the Wilber Farms building was converted into a laboratory and a production plant for a non-dairy whipping cream while a nearby city-owned piece of property was leased to house the trucks of the dairy.

“In January 1945, Rich Sr. resigned his position as Michigan’s Milk Market administrator to return to Buffalo to devote all of his time to this new breakthrough in the dairy business.”

Bob Rich’s father, who had been a dairyman all of his life, thought his son’s new venture was “nonsense.” But Bob Rich’s wife noted: “He has always had an incredible drive and a keen foresight to see a light at the end of the tunnel. He knows what he wants to achieve in everything he does. That has proven to be a real gift” (p. 7-6 to 7-8).

“The industry founded by Robert E. Rich Sr. on April 1, 1945, owes its inception to the food restrictions and government red tape imposed by World War II conditions... Sales of whipping cream were forbidden during the war. So Bob Rich Sr. went to the soybean to find a replacement.”

Rich recalls: “Our first production run of whip topping was on March 30, 1945, and we sent it out to our Wilbur Farms Dairy retail customers, with a note attached. ‘The miracle cream from the soybean.’” This cream was “much less expensive, would last longer, and whip better.”

By the late 1940s Reddi-wip, sold in an aerosol can, had become a big competitor. By 1952 Rich products had eight salesmen in the field. On Saturday mornings Rich would meet in his office with his Whip Topping team: Jerry Hannon, Herb Kusche, Joe Robida, Rex Diamond, and Ed Andrews (p. 10-6).

Pete Slaughter, a Rich salesman from Texas, found a remarkably simple way to demonstrate grocery store to buyers that Rich’s Whip Topping superior to Sta-Wip, made by the Reddi-Wip company. He simply sprayed each onto a separate blotter. The Sta-Wip was absorbed into the blotter whereas the Whip Topping stood up in a nice mound (p. 10-8 to 10-9). Address: Buffalo, New York.
soymilk around the world (Continued–Document part IV).


**Summary:** Continued. “From 1939 to 1941 most of Miller’s powdered soymilk and some of his other soyfoods were sold in the Philippines and China. However World War II cut off his business, so he began to promote his soymilk more vigorously in the U.S. not only as an allergy-free infant formula that would not clog the nipple, but as a healthful beverage that alkalized the bloodstream and was good for diabetics, postoperative patients, ulcer and colitis patients, and those with atherosclerosis.

“Before World War II started, Dr. Miller had set up a branch of his International Nutrition Laboratory and a Soymilk plant in the Philippines at 41 Nagtahan in Manila. It was run by Paul Syecip (pronounced SIS-up), a private Chinese Christian (but not Adventist) businessman, who had come briefly to Mt. Vernon to learn Miller’s process, and buy equipment. Miller was in the Philippines helping to set up the plant when the Japanese attacked. During the war the Japanese stole all of the soymilk equipment but did not harm the building. In 1948 Mr. Sinclair Pinnick, a foreman at the Mt. Vernon plant since 1944, went to the Philippines, took new equipment, and got the plant reestablished. It produced regular soymilk, the first ever in the Philippines.

“The expanding success of Soyalac encouraged the growth of competing products but Dr. Miller didn’t mind. A true evangelist, he was happy to see the message finally reaching the people.

“To fully appreciate Dr. Miller’s great energy and diverse talents, we should note that during the early 1940’s, as he developed, produced, and marketed his line of innovative new soyfoods, he also maintained an active medical practice, partially because the other two doctors at the hospital where he worked were called for military duty, and partially to support his work. Prior to World War II he would fly to the Philippines about once a year, do 12 to 15 thyroid surgeries a day for two to three weeks, give half of his income to the hospital there, then return to America with the balance. In 1942 he and his brother bought the local hospital in Mt. Vernon where he worked; his son Clarence came in to manage, renovate, and expand it. Miller was the only surgeon in Knox County (population 35,000).

“At his Mt. Vernon soy dairy, Miller was always the first one to start the day’s work. One day, while experimenting with a new formula, he cut off end of his finger in a food grinder. He calmly picked up the severed part, walked into his office, and sewed it back on.

“During the years he spent introducing soyfoods to America, Dr. Miller was one of the most active supporters of the American Soybean Association, a regular speaker at conventions and contributor of articles to the Soybean Digest. His first speech was “The Role of the Soybean in Human Nutrition” (1940) and his first article “Soybeans and the Orient” (1943), was followed by “Feeding the World with Soya” (1946), “Survey of Soy Foods in East Asia” (1948), and others. Then in September 1958 he was made an honorary member of the Association and awarded a gold medal.

“By the late 1930s the seeds that Dr. Miller had planted in East Asia began to sprout. It is interesting to note that most of the remarkable expansion of interest in and production of soymilk that has taken place throughout Asia during the last half of the twentieth century can trace its origins directly back to the work of Dr. Miller.

“While Dr. Miller was in Shanghai, an Adventist named Howard Hoover had come and learned the soymilk process, then started his own soy dairy and health food plant in a mission school in Canton in about 1938. This was the first offshoot.

“In 1940 Mr. K.S. Lo of Hong Kong asked Hoover if he would help him set up a plant. Hoover got approval from Miller, then went to Hong Kong and designed Lo’s first plant. [Note: K.S. Lo recalls the origin of has company quite differently; we accept his version of the story]. By 1940 Lo’s Hong Kong Milk Factory was making homogenized soymilk and selling it in natural and chocolate flavors, like dairy milk, in standard half-pint bottles sealed with a paper cap and hood. The soymilk was sweeter and a little thinner than Miller’s and had more of the natural (so-called beany) flavor, which the Chinese prefer. By 1942, when the Pacific War broke out, Lo’s company had gone broke. But in 1945, after the war, the company reopened as the Hong Kong Soya Bean Products Co., Ltd, and reintroduced their product, now called Vitasoy, not as a milk substitute, but as the world’s first soymilk soft drink. By 1974 Vitasoy passed Coca Cola to be Hong Kong’s best selling soft drink, with sales of 150 million bottles a year. In the meantime many other large soymilk plants had started up in Singapore, Malaysia, and Thailand.

“In 1948 the Chinese Quartermaster Department, with the help of Dr. Miller’s son, Willis, set up the largest soymilk plant in the world in Shanghai, using a process patterned after that used in Ohio, to make spray-dried soymilk. Costing over $1,000,000, it had a capacity of 5 tons of dry soymilk every 12 hours. The dried soymilk would be mixed with puffed rice, pressed into wafers, and packed into cans, then opened in the field and soaked with hot water for rations. The plant was completed and ready for operation (Dr. Miller was at the dedication ceremony) just prior to the Communist takeover of Shanghai in 1949.

“Research and Work Around The World (1949-1977): In 1949, at age 70, Dr. Miller accepted the invitation of the Adventist church to take over the direction of the Shanghai Sanitarium and reestablish a soy dairy there. China was in the throes of revolutionary war and Shanghai was still held by the Nationalist forces. A daring pilot dropped Miller at the besieged Shanghai airport, hardly pausing to stop. But Shanghai fell to the Communists in May 1949; Miller was
soon evacuated, and returned to America.

“In 1950 Dr. Miller’s second wife died. Shortly thereafter he decided to sell his Mt. Vernon business. There was the increasing pressure of running a food plant and although sales were good ($1.25 million gross in 1950) profits were only $120,000 due to high taxes. He wanted to devote more of his time to research and medicine. Although offered a large sum of money by a private company outside the Adventist denomination, he decided to divide the company into two parts, the meat analogs and the soymilk plus related products, and sell these to Adventist-run firms. In June 1950 he sold the meat-analog part of his business (gluten meats, nut loaves, frankfurters, etc.) to Worthington Foods in Worthington, Ohio, a private company owned by Adventist laymen that had been making meat analogs since 1939. They bought the patents, recipes and formulas, equipment, technology, and good will that went with Miller’s meat analog business. Most of these analogs contained no soy. Worthington kept the brand name “Miller’s” for several years thereafter as they sold Miller’s Cutlets, Miller’s Burger, Miller’s Stew, Vege-Links, and the like. Willis Miller worked with Worthington for some time after the sale.

“In early 1951, Dr. Miller sold the rest of his business at a very low price (book value) to Loma Linda Foods of Riverside, California. This sale included the Mt. Vernon land, buildings, equipment, technology, and recipes and formulas for soymilk, canned fresh green soybeans, Vege-Cheese (a canned tofu cottage cheese) and related products. All these products continued to be produced in Ohio. Loma Linda Foods, an integral part of the Seventh-day Adventist Church, was founded in 1906 and had run a plant in Riverside making meat analogs, soymilk, and other foods since 1936. Dr. Miller had always believed that the process for making soymilk was not something that he had originated; the key to it had been a gift to him from a higher power. Thus, he felt it was simply not his to sell. So he gave the process to the Adventist church but sold the rest of the business to Loma Linda Foods (they operate the Mt. Vernon plant to this day), and loaned them the money to buy it. They paid him in installments and he returned half of the money to them for to set up laboratories and a pilot plant in their headquarters at 11503 Pierce Boulevard in Riverside (the town was then called Arlington). Here he established the International Nutrition Research Foundation, which he further endowed heavily with his own funds; 95 percent of its future research was on soyfoods. He bought a home nearby. For the three years following his wife’s death he worked intensively on soyfoods research. In 1951 Loma Linda first introduced Soyagen, a lightly fortified soymilk for adults to match their Soyalac for babies. Miller did extensive work on further eliminating the beany flavor from soymilk using a vacuum pan and flash pasteurization. By 1958 his labs had developed new and improved soymilks, soy cream, improved acidophilus soymilk and ice cream, cottage cheese, a soy-cream cheese spread, cholesterol-free cheese, and a non-dairy margarine.” Continued. Address: Lafayette, California.


• Summary: Continued. “In 1953, at the age of 74, he married for a third time (his wife was about 35) and shortly thereafter was asked to establish an Adventist Sanitarium in Taipei, Taiwan. With it, of course, he started a soya dairy at a school, which supplied the school, the Sanitarium, and the surrounding community with soymilk daily. In 1956, when it came time for Miller to leave Taiwan, Generalissimo Chiang Kai-shek personally gave him China’s highest award, the Blue Star of China, in appreciation for his tireless service to the people of China in saving the lives of thousands of infants with the use of soymilk and in establishing some twelve sanitarium-hospital clinics. At the time, the Generalissimo, who had been a former patient of Dr. Miller’s, recalled how he had become so fond of the sanitarium’s soymilk that he had once sent his private plane over 1,000 miles to Shanghai to replenish his supply.

“In 1954 the World Health Organization became interested in Miller’s work with soymilk. His oldest son, H.W. (Bill) Miller supervised the construction of a joint FAO / UNICEF soymilk plant in Yogyakarta, Java, Indonesia, which opened in 1957 and produced about two tons a day of a spray-dried soymilk called Sari dele.

“After filling in for other surgeons in Trinidad and Libya from 1956 to 1957, Miller went to Japan in 1957 to spend seven months as medical director and surgeon at the Tokyo Sanitarium-Hospital. He was now 79. Despite his busy medical routine, he found time to set up a small soymilk pilot plant in the hospital kitchen where they made soymilk, soy whipping cream, soy ice cream, and soy spread, which were served to the staff and patients. In cooperation with the Japanese Ministry of Health, he then developed the concept of helping existing small tofu producers to set up a soymilk operation right in their shops by adding on a boiler, pressure cooker, homogenizer, cooler, and bottler. The equipment could be installed for less than $2,000 and would enable each plant to produce 150 pounds of tofu and 200 gallons of soymilk a day using three trained workers. Miller personally helped at least one small rural tofu shop set up such a system; their soymilk was sold fresh and hot or cold and bottled for half the price of fresh dairy milk.

“Starting in about 1955 Dr. Miller began to recommend that the Adventist-run Japan Saniku School serve soymilk instead of cow’s milk to the students; however the staff hesitated because of questions about its nutritional value and flavor. In 1957 two Japanese Adventists, Mr. Hidekazu Watanabe and Mr. Hanzo Ueda (who ran a tofu shop at the time) started making Japan’s first soymilk on a small scale in
Hachioji, Tokyo, bottling it in 180-ml bottles, and selling it locally. Mr. Watanabe later described the great value to them of Dr. Miller’s ongoing technical, nutritional, and spiritual guidance.

“After some time, directors of the Saniku School visited the small soymilk plant, liked the soymilk flavor, and understood its nutritional value. In 1959 they bought similar equipment, set up a small plant in the school, and started to produce soymilk, which was bottled in 180-ml bottles and served to the students at every meal. In 1969 the Saniku School set up an independent food production company called College Health Foods (which later became today’s Saniku Foods) and through it, with the help of Loma Linda Foods in America, began to produce Soyalac soymilk infant formula. That same year, the Luppy Soymilk Company started and went on to produce Japan’s first widely popular commercial soymilk.

“By 1980 Japan’s largest soymilk producers were Kubin Foods (33,000 pacs a day), Saniku Foods (23,000 pacs a day), Okazaki Marusan (23,000 pacs a day), and Mitsubishi Kasei (18,000 pacs a day), A typical pac is 200 ml (6.8 fluid ounces).

“Prior to 1960, a small soymilk plant similar to those established by Miller in Japan, was set up at the Adventist-run Mountain View College in Central Mindanao, Philippines. The college farm raised edible soybeans and the 700 students were served fresh soymilk each morning for breakfast and fresh tofu for lunch.

“In 1960 Dr. Miller again accepted the invitation of the Adventist church to start a new hospital, this time in Hong Kong. As always, it was accompanied by a little soymilk plant. By 1960 soy dairies had also been established in Hong Kong at the South China Union College and at an Adventist-run college in Bandung, Indonesia.

“Dr. Miller spent most of his time from 1960 to 1973 in East Asia. He practiced surgery until the age of 93. In 1961 his biography China Doctor by Raymond S. Moore was published by Harper & Bros. In 1963 Dorothea Van Gundy Jones in The Soybean Cookbook wrote: ‘Certainly Dr. Miller has done more than any other person to introduce soybeans and soybean products, especially the milk, to the population of this country.’

“In 1973 Dr. Miller formally retired from medical practice and returned to California, where he spent the last few years of his life doing the work he loved so much: soyfoods research. He lived about one mile from Loma Linda Foods in Riverside, and he walked to work each morning. He continued his experiments with tofu and soymilk, making improved acidophilus soymilk, tofu-based cheese, and cheese spreads. He made a good tofu-based Cheddar cheese but could not make it melt. His later years were not as productive as they might have been since, in old age, he had lost most of his sense of smell; when he would ask others how new products tasted, they would often tend to flatter him instead of giving an honest and objective response. Yet this work was still of real potential value.

“In 1972 the Southern Asia Division of the Adventist church asked Mr. Pinnick of Mt. Vernon to go to India to set up a soymilk plant at their Spicer Memorial College in Poona. In March 1973 Dr. Miller flew over from Hong Kong to help the operation get started. Pinnick writes: ‘He would work all day with us at the plant (at age 94) then spend nearly-every evening speaking to some group on healthful living. There seemed to be no limit to his endurance.’

“Starting in 1975, while in Japan, I exchanged numerous letters with Dr. Miller. He typed each letter himself and was always full of questions about new developments in tofu and soymilk production in Japan. In 1976 he sponsored and hosted a program about tofu and soymilk that my wife and I did for several hundred members of the faculty and community of Loma Linda University, La Sierra campus. During the day of our visit he took us through his pilot plant and described his latest experiments making tofu-based fermented cheese spreads. He seemed extremely alert and well informed.

“Dr. Miller died on New Year’s Day, 1977, at the age of 97, just as he was getting ready to go to his beloved church. ‘Harry Miller was a shining example of what the Chinese call “The Great Man.” He dedicated his life to the welfare of all beings, human and nonhuman. He chose a life of voluntary simplicity, finding his real joy in giving. Close associates estimate that, in professional fees alone, he turned over some $2.5 million to the hospitals, church, and nutritional work with which he was connected. Spiritual values were at the center of his life. Though world famous, he was the most humble of men; though very busy, he had time for each person who needed him. His vision was fifty years ahead of his time. He left an indelible impression on the world. Would that he could he here with us now to see the blossoming of his work in America and around the globe.

“The author wishes to give special thanks to Dr. Miller’s two sons, Willis and Clarence, and to Glen Blix, plant manager at the Loma Linda Mt. Vernon plant, for extensive information provided in interviews and letters. For a bibliography of Dr. Miller’s publications, send a SASE to Soyfoods magazine.” Address: Lafayette, California.


“Triglyceride composition is an important consideration in the development of fat systems for food products.” Fig. 1, based on gas chromatography, shows triglyceride distribution in salad oil (cottonseed oil), butter and skim milk (butter.
oil), Baker’s chocolate (cocoa butter), margarine (corn oil), nondairy whitener (coconut oil), and white bread (lard).

Soy oil is not mentioned. A photo shows Thomas. Address: Durkee Foods, Div. of SCM Corp., Strongsville, Ohio.


• Summary: This article is in the section titled “Ingredients handbook.” Contents: Introduction. Protein: Soy flour and grits (50-52% protein), soy protein concentrate (70% protein), and isolated soy protein (90% protein or more), extremely versatile, extruded products, spun soy protein made from isolated soy protein, functional benefits of using soy protein, analogs–products resembling conventional foods in appearance, color, flavor and texture (such as breakfast strips ‘bacon’, whipped toppings, and imitation cheese), soy protein makes excellent use of farmlands potential to produce protein, Gallup poll shows 71% of Americans view soy protein favorably, different types of soy flour.

Soy protein suppliers (tells what kinds of products are sold by each company): ADM Foods (Archer Daniels Midland), Cargill Protein Products Dept., Central Soya Co., Dairyland Products, Dawson Food Ingredients (Subsidiary of Dawson Mills), Farmland Agriservices, Inc. (formerly known as Far-Mar-Co., Inc.), Food Ingredients, Inc. (the U.S. “sales representative of a full-fat soy-protein flour produced in Germany), Griffith Laboratories, Kraft Foods (isolates), Lauhoff Grain Co. (soy flours and textured soy flour),Ralston Purina (regular isolates, “blends of isolated soy proteins plus other ingredients such as dairy products.”

“Structured isolated soy proteins are available as a fiber and as a granular product. The fiber is the frozen, hydrated form and is retort-stable with no degradation of fiber. Texture is similar to that of muscle fiber”), A.E. Staley Manufacturing Co. (The Protein People; soy flours and textured soy flours, soy protein concentrates, whipping proteins, hydrolyzed vegetable proteins), Food Protein Council (Washington, DC; has two brochures).

Soybean oil. Suppliers: Capital City Products Co. (Div. of Stokley Van Camp, Inc.), Durkee Foods (Div. of SCM Corp.), Humco Products (Div. of Kraft, Inc.), A.E. Staley.

Lecithin. Lecithin suppliers: Ross and Rowe, Inc. (Div. of ADM; regular and granulated lecithin), Central Soya, A.E. Staley. On the last page is given the full name and address of each supplier mentioned in the article.


• Summary: This is an interview with William Shurtleff plus recipes for their latest favorite (previously unpublished) tofu recipes, including Yummy no-egg carob-applesauce cake with tofu, No-egg tofu carrot cake with tofu-tahini icing, Tofu cheesecake with strawberry topping, Tofu-apple-nut whole-wheat bread, Savory tofu cutlets (fried), Tofu carob parfait, Wonderful creamy tofu dip or dressing: our favorite latest discovery, and Eggless egg salad sandwich. Photos show: Each of the above recipes. Akiko Aoyagi seated behind a table on which are various tofu recipes.

Tempeh is mentioned as a source of vitamin B-12.


• Summary: “Mitchell Foods Inc., of Fredonia suffered an immediate loss of customers for its non-dairy coffee creamer when a rival brand went on the market in 1977, the company’s acting president told Federal Judge John T. Curtin yesterday.

“Harry Hebberd, chief executive of Mitchell Foods, said he felt the rival brand could drive his product right out of the marketplace. Hebberd was the first witness in an antitrust and trademark-infringement action brought by Mitchell Foods against Rich Products Co., 1145 Niagara St. in Buffalo.


“The witness was asked if there would have been any objection if Rich Products had used some other name for its frozen non-dairy coffee creamer. ‘We’d have no reason,’ replied Hebberd, but said there was ‘immediate confusion’ at store levels and on the part of consumers as well.

‘Rich Products introduced Poly Rich to the food service trade in 1975, Hebberd testified. That caused no concern to Mitchell Foods, the witness said, because the company is not in food service. ‘But Mitchell Foods began losing customer accounts for Poly Perx when Rich Products introduced Poly Rich on the retail level in February 1977, Hebberd testified.

‘Price claimed in his opening remarks in the trial that Poly Rich achieved a 95 percent share of the market and...
Mr. Mitchell, who was elected vice president and chief operations officer, to assume responsibility for all accounting, data processing and personnel matters. He will also continue as a member of the board of directors. “Harry A. Heberd, executive vice president, was elected to the board of directors and will assume the responsibility for long range and strategic planning. He will maintain an office in Fredonia.

“The board also announced the promotion of Kenneth C. Muscato to the newly created post of vice president in charge of sales and marketing.

“In his new position, Mr. Muscato, who has been with the firm since 1974, will have overall responsibility for sales, advertising, marketing and new product development. He and Mr. Mitchell will both relocate to Massachusetts.

“In addition, Herbert A. Hall, who has been with the company for 13 years, most recently as the general manager of the Massachusetts facility, was elected vice president in charge of production.

“Mr. Mitchell said that the company plans to expand to semi-national distribution of Poly Perx in the next two years. It will also introduce at least one new product in the same period, he said.”

Summary: Abington–The board of directors of Mitchell Foods Inc., manufacturer of Poly Perx and Perx frozen non-dairy creamers, today announced the relocation of its corporate headquarters from Fredonia, N.Y. to Randolf Street, and the consolidation of all administrative and manufacturing operations in its Abington facility. The board also announced a major realignment of its upper management.

For details on the move and realignment see the following story based on the same company news release: Bill Gill. 1981. Evening Observer (Dunkirk, New York). Aug. 29. “Mitchell Foods to close its Fredonia operation.”

Summary: “Citing an increased need for production space, Mitchell Foods of Fredonia today announced that it is closing its local plant and moving its entire operation to its Abington, Massachusetts facility.

“Company spokesman Laurence Mitchell said on Friday that the company has already begun to move some parts of its local operation to Massachusetts and that the move should be complete ‘just after Labor Day.’

“The closing of the Fredonia plant will mean lost jobs for six local people. Mr. Mitchell said four of the company’s 10 employees will transfer to the Massachusetts facility.

“The company… manufactures Poly Perx and Perx frozen non-dairy creamers.”

“Mr. Mitchell said on Friday that the company actually outgrew its Fredonia facility 12 years ago and at that time purchased the former Bay State Ice Cream Company plant in North Abington, Massachusetts.”

“The company’s board of directors also announced a major realignment of its upper management, with Mr. Mitchell, who was elected vice president and chief operations officer, to assume responsibility for all accounting, data processing and personnel matters. He will also continue as a member of the board of directors. “Harry A. Heberd, executive vice president, was elected to the board of directors and will assume the responsibility for long range and strategic planning. He will maintain an office in Fredonia.

“The board also announced the promotion of Kenneth C. Muscato to the newly created post of vice president in charge of sales and marketing.

“In his new position, Mr. Muscato, who has been with the firm since 1974, will have overall responsibility for sales, advertising, marketing and new product development. He and Mr. Mitchell will both relocate to Massachusetts.

“In addition, Herbert A. Hall, who has been with the company for 13 years, most recently as the general manager of the Massachusetts facility, was elected vice president in charge of production.

“Mr. Mitchell said that the company plans to expand to semi-national distribution of Poly Perx in the next two years. It will also introduce at least one new product in the same period, he said.”

Summary: Abington–Herbert Hall, General Manager of Mitchell Food Co., located on Randolph Street, met with the Board of Health Monday night to explain the obnoxious odor that has been causing area residents to keep their windows closed on even the hottest summer days.”

“The problem which has plagued the neighbors since early spring was caused by a changing in the product from sodium caseinate to soy protein, and an improper pH balance; resulting from a new cleaning method for the soy protein residue... Accompanying Hall were Thomas Panertau, Plant Engineer and Arthur Stetson, Sewerage Supervisor.”


For details on the move and realignment see the following story based on the same company news release: Bill Gill. 1981. Evening Observer (Dunkirk, New York). Aug. 29. “Mitchell Foods to close its Fredonia operation.”
• **Summary:** This large, colorful sideways poster is divided into three parts. On the left one-third is a color photo of three prepared tofu dishes on a dark brown background. They are: A chocolate parfait with a whipped tofu topping in a stem parfait class. A green salad topped with mashed tofu and cherry tomatoes. A tofu quiche.


In the lower right corner is a small inset color photo of two water-packs of pasteurized Soydairy Tofu, one soft style and one firm style. On the front of each is a stylized green soybean leaf, each with three leaflets. Address: Greenfield, Massachusetts.


  • **Summary:** The contents is identical to that of the original Aug. 1979 edition, but the publisher’s name has changed to Soyfoods Center from New-Age Foods Study Center. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.


  • **Summary:** “Mitchell Foods Inc., formerly of Fredonia, has been acquired by Canterbury Industries of Kingston, New York, effective March 1. In a March 5 memo received by the Observer, Laurence Mitchell, vice president of operations for Mitchell Foods, announced that ‘all previously produced Mitchell products will continue to be produced by Perx Products Corp., division of Canterbury Industries.”


  Note: This is the earliest English-language document seen (Dec. 2003) that contains the term “soymilk shakes” (or “soy milk shake”). Address: Lafayette, California. Phone: 415-283-2991.


• **Summary:** A detailed study of the rapidly emerging soyfoods industry and market. Contains original statistics compiled by the Soyfoods Center through interviews with companies. Contents: 1. Terminology: The many types of soyfoods. I. Traditional low-technology soyfoods. 1A–Nonfermented soyfoods: Fresh green soybeans, whole dry soybeans, soynuts and soynut butter, soy sprouts, whole soy flour & grits, roasted soy flour [kinako] & soy coffee, soymilk and dairylike soymilk products, tofu (eight types), okara or soy pulp, yuba.

  1B–Fermented soyfoods: Tempeh, miso, soy sauce, shoyu & tamari, natto & thua-nao, fermented tofu & soymilk, soy nuggets [fermented black soybeans] (Hamanatto & tou-ch’ih).

  II. Modern soy protein foods: Defatted soy flour, grits & flakes, soy protein concentrates, textured soy protein products, soy protein isolates.

  III. Soy oil products: Soy salad oil & cooking oil, soy oil margarine & shortening, soy lecithin.

  2. Soyfoods industry directory: Names and addresses of over 850 soyfoods manufacturers in the Western world, plus major soymilk, miso, shoyu, and yuba manufacturers in East Asia. 3. Analysis of the soyfoods industry in the U.S.

  4. Trends in U.S. and world soybean production: Graph of world soybean production (1922-1979) including graphs.
for the world total, USA, Asia total, and Latin America. "Graph of U.S. soybean production, yields, and exports (1924-1979)."


6. Analysis of the tempeh industry in the West: "Graph of number of tempeh manufacturers. Recipes. Listing of North America’s largest tempeh manufacturers and their weekly output."


9. Other: Analysis of the soynuts industry in the U.S. North America’s larger soyfoods delis, cafes & restaurants. The soybean crushing industry; overview.

10. Soyfoods terminology and standards (Glossary of soyfoods terms): I. Traditional nonfermented soyfoods: Fresh green soybeans, okara, roasted soy flour (soy coffee, soy chocolate), soybeans, soymilk (soymilk ice cream, soymilk soft serve, frozen soymilk yogurt, soymilk mayonnaise, soy shakes, soy nog, soymilk whipped cream), soynuts, soy sprouts, tofu (regular tofu, deep-fried tofu {deep-fried tofu cutlets called nama-age or atsu-age in Japan, deep-fried tofu burgers or burger balls, called ganmodoki or hiryozu in Japan, deep fried tofu pouches (called aburage in Japan; the words “deep-fried” may be dropped from the names after the initial usage, and in recipes or on package labels, if desired}), silken tofu {made without separation of curds and whey, called kinugoshi in Japan; modern types, all made with glucono delta-lactone as coagulant, and all known in Japanese as juten-dofu, are packaged lactone silken tofu, bagged lactone silken tofu (fukuro-dofu), sealed lactone silken tofu (buro-dofu), and Ever-Fresh Lactone Silken Tofu (in Tetra-Pak),), grilled tofu, frozen and dried-frozen tofu. (Note 1. It is illegal to describe the latter product as “freeze-dried tofu,” since freeze-drying is a completely different process), terms associated with making tofu {fresh soy puree, a coagulant or curding agent, forming box, filter bag or pressing sack, tofu comes in cakes, not blocks}), whole soy flour, flakes and grits, yuba.

II. Traditional fermented soyfoods: "Fermented soymilk products (soymilk yogurt {Soy Yogurt, Soyogurt, Soygurt}, acidiophilus soymilk, soymilk kefir, viili, piima, buttermilk {Soy Kefir, etc.}), fermented tofu (wine-fermented tofu, brine-fermented tofu), miso (rice miso, barley miso, soybean miso, Chinese soybean chiang), natto {thua-nao from Thailand and kinema from Nepal; all are non-salted), fermented black soybeans [fermented black soybeans] (Chinese fermented black soybeans know as shih, tou-ch’ih, tou-shih, or dow-si; savory fermented black soybeans called Hamanatto in Japan, Daitokui fermented black soybeans called Daitokui natto in Japan, Philippine fermented black soybeans called tausi or tao-si in the Philippines, Indonesian soy nugget paste called tauco, formerly spelled tao-tjo, Malaysian soy nugget sauce called tao-si), soy sauce (shoyu. The five basic types of Japanese shoyu are: regular shoyu called koikuchi shoyu in Japanese, light-colored shoyu called usukuchi shoyu, tamari shoyu, clear shoyu called shiro shoyu, and rich shoyu called saishikomi shoyu), tempeh, other fermented soyfoods."

Note 2. This is the earliest document seen (Sept. 2012) that uses the word “Soygurt” to refer to soy yogurt.

III. Soy oil and modern soy protein foods: soy oil, defatted soy flour, flakes and grits, soy protein concentrate, soy protein isolate, textured soy protein products (TSP, TVP is a registered trademark of the Archer Daniels Midland Company and cannot be used as a generic name for this product), meat analogs (foods typically made from spun soy protein fibers to resemble meat, fish, or poultry products).


12. Key institutions working with soyfoods in the West: "The Soyfoods Center, Soyfoods Association of North America, INTSOY, American Soybean Association, Bean Machines, Inc., Soycrafters Apprenticeship Program, USDA Northern Regional Research Center, Sojaquelle.

About The Soyfoods Center.

Note 3. This is the 2nd market study published by Shurtleff. Address: Soyfoods Center, P.O. Box 234,
Lafayette, California 94549.


• **Summary:** Brother Ron tells the story of his life and his current work at Unicorn Village, a natural foods restaurant in North Miami Beach. He entered the seminary, became a Franciscan brother, and worked even then in the foodservice business. He graduated at the top of his class from Washburne Trade School, a prominent Chef Training School in Chicago. He then became an executive chef in one of the order’s seminaries in Chicago. “Since 1968 I have been involved in nutrition, and as it escalated, I became a vegetarian and eventually a vegan... My concept is to carry tofu and natural foods into the realm of gourmet and nouvelle cuisine. I want to see—and indeed I will—natural vegetarian foods on the gourmet four star level.”

An Editor’s note describes the Unicorn’s recent welcoming party which cost $15,000, drew 55 invited guests, and featured a dazzling all-natural buffet made primarily from vegetarian foods. The theme of the meal was “Foods for the Future.” The following soy-related dishes were included in the buffet: Italian antipasto, garnished with cucumber and tofu strips. Tofu spinach pie. Raw vegetable platters with creamy sunflower and tofu herb dips. A serving tray with tofu cottage cheese and vegetable garnish and another tray with Tofu-E Salad with black olives and tomatoes. Four styles of canape (tofu butter with pea; carrot paté with pea; pea paté with carrot; tofu butter on lentil paté). Maple cream tofu cheesecake (with granola crust, tahini tofu icing with raspberry filling). In addition, Chef Pickarski unveiled a lifesize flamingo carved from soy butter [probably soy margarine]. Address: Brother, Unicorn Village Restaurant, North Miami Beach, Florida.


• **Summary:** “ADM Food’s search for new applications for its high protein soy isolates have led them to frozen soymilk dessert, a flavored soymilk beverage, imitation cheeses, and, most recently, silken tofu.

“ADM, one of the nation’s largest soy isolate producers, located in Decatur, Illinois, has been devoting considerable research effort to find new product applications for its basic soy ingredient, isolated soy protein. Initial commercial interest in isolates (which contain 90% protein, as most of the carbohydrates have been removed) began in the 1930s when they had industrial uses such as paper coatings. But by 1967, at least 22 million pounds were produced, and by 1981, annual production was estimated at 90 million pounds as isolates were used in numerous foods.

“Soy isolate production begins with defatted soybean flakes, from which protein is extracted, in an aqueous solution, from the insoluble residue with the aid of screens or centrifuges. The ‘soy curd’ is precipitated at the isoelectric point (pH 4.5, where the solubility of the protein is at a minimum) using a food grade acid such as acetic or phosphoric. The curds and whey are separated by centrifuging, the curds are washed, then neutralized with food grade alkali. Finally the isolate is spray-dried for storage.

“Recently ADM Foods announced the development of a ‘wet’ curd isolated soy protein” that has maximum functional properties. The curd is suitable for interaction with milk, whey, and egg proteins in foods. The wet curd can be used as a partial replacement (up to 50%) for casein (a milk-derived protein) in imitation mozzarella cheeses, and as a coffee whitener that will not coagulate after immersion in the hot liquid. The soy isolate slurry is not heat denatured, has a pH of 4.5, solids content of 23%, is easily pumped, can be delivered in stainless steel tanks of 45,000 pounds capacity, and is stable for two days at room temperature.

“At first glance, soy isolates may seem a world away from everyday tofumaking, yet this year ADM researchers began experimenting with their Ardex isolated soy protein for a silken tofu-like product and even custom designed yogurt type desserts. A soy beverage base, made from soy isolate, is heated to 80°C; then 1% (by weight) glucono-delta-lactone (GDL) is added. After 20 minutes the milk has set to a yogurt-style smooth consistency. To make a ‘firmer’ silken tofu, ADM scientists added (5% by weight) kappa-carrageenan and 0.5% tetrapotassium phosphate to the beverage before heating.

“This method, ADM researchers suggest, greatly simplifies the tofumaking process while providing significant cost reductions. ‘These products can be formulated to achieve up to 80% ingredient cost reductions compared to conventional tofu,’ their report states. The use of soy isolates also allows for the extension of several dairy systems using soy such as puddings, sour cream, yogurt, baby food, and frozen desserts.

“ADM Foods has experimented with three processing methods for preparing a soymilk beverage including batch pasteurization, high temperature, short time pasteurization, and ultra high temperature (UHT) for aseptic packaging.

“For the batch method, water at 50-55°C is agitated while the soy isolate powder is mixed in, followed by corn sweetener (fructose) and vegetable oil. The mix is heated to 60°C and held for 30 minutes with constant agitation.

“Next comes a two stage hot homogenization (at 2500 psi, then 500 psi) followed by immediate cooling to 5°C. Flavorings are added and the product is packaged for storage. The ingredient cost per 8 fluid ounce serving for unflavored soy beverage is $0.032 compared to $0.086 for whole milk. The cost per pound of protein served is $1.701 compared to milk’s $4.938. The soy beverage’s nutritional profile includes 3.47% protein, 2.00% fat, total solids 13.97%, and 67.70 calories per 100 grams.

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The soy isolate has been applied in making frozen soymilk ice creams that yield protein contents twice the level of those in standard ice creams. With the isolate-based desserts, as the fat content is reduced, the caloric density is also reduced, so that a 4% fat soy dessert has about 20% less calories than standard ice cream, while a 2% fat dessert has nearly 30% fewer calories. The ingredients include Ardeal soy isolate, sucrose, CornSweet (corn sweetener), corn syrup, stabilizer, emulsifier, while the ingredient cost is $0.017 compared to $0.048 for standard ice cream—a savings of 64.6%. Nutritionally, the product is comparable to standard ice creams, with 1.8% protein, 2.00% fat, 142.50 calories per 100 grams, and 117 calories per 4 fluid ounce serving.

“ADM representatives provided samples of their strawberry soymilk dessert along with chocolate and unflavored (but sweetened) soymilk beverage at the recent U.S. International Food Show in New York City.”


Form filled out by Penny A. Billiter. ca. 1981. Label with a smiling orange star is enclosed. “I am making tempeh, mock happy chicken, and baked tofu for the three health food outlets here in Sandpoint. I am only using 3-4 lb dry beans/week.” Second form states the company started officially on 3 August 1982. Makes Tempeh and Tofu Tarts. Label. 1982, undated. 3.5 by 4 inches. Blue and orange on white. Label. 1983. 2 by 2 inches. Self adhesive. Blue on white with orange smiling star. Soyfoods Center Computerized Mailing List. 1982. July 23. Owner: Penny Billiter. Talk with Penny Billiter Miller. 1993. Feb. 23. She still lives in Sandpoint and is still interested in soyfoods. She called the tarts “puddings” and she made several flavors: carob, vanilla, and banana. Sometimes she omitted the graham-cracker crust and just sold the product as a pudding. The Cottage Tofu, introduced at about the same time as the tempeh and tarts, was on the market for only a short time; she did it through the local food co-op. She still has records. Ingredients: Tofu Tart: Crust: Vegan graham crackers, soy margarine. Soy Whip: Soy oil, soymilk, honey, vanilla.

Fillings: Tofu, honey, vanilla for Vanillafu; plus lemon juice, soy oil and lemon rind for Lemonfu; carob powder and soy milk for Chofu; bananas, soy oil and lemon juice for Bananafu. Wt/Vol., Packaging, Price: Tempeh: 8 oz. perforated poly bag sealed in a printed outer bag. Tart and Cottage Tofu: 2-4 oz small clear plastic cup with snap-on lid. Refrigerated.


• Summary: Starts with a brief introduction to tofu. Contains recipes for: Tofu trio salad (a full dinner salad), Tofu cottage cheese (with “1 cup crushed tofu”), Tofu hummus. Soy mayo (with “1½ lbs. tofu”). Tofu eggless salad.

Note: Brother Ron Pickarski is a Franciscan brother and a world-class vegan chef.


• Summary: “Robert Rich pioneered the non-dairy industry with soybean-based whipping cream and coffee cream that isn’t really cream. For nearly 40 years privately owned Rich Products Corp. has worked this niche profitably.”


• Summary: This is a review and summary of *Soyfoods Industry Directory and Databook 1983* by Shurtleff and Aoyagi. 1982 USA production and retail sales figures are given for the following foods: Tofu (27,500 tons, $50 million in 1981), tempeh (450 tons, $2 million), and miso (750 tons). Four factors contributing to the growth of soyfoods are summarized. “Low-calorie convenience soyfoods products and frozen, meatless ‘heat and serve’ entrees will play and important role in soyfood’s entrance into the mainstream American diet... Dairy-like soymilk and soymilk shakes, yogurt and ice cream, tofu cottage cheese and tofu burgers will soon be low-cost, low-calorie alternatives to mainstream supermarket fare.”


• Summary: The front panel of this leaflet, printed blue on white, lists 14 soy products made by the company. They are:

The logo is a flying bird with a white throat. The slogan: “Where good taste and nutrition come naturally.” The inside three panels discuss: About Brightsong (since 1978). What makes Brightsong Tofu so special. About the other Brightsong products.

Note: This particular leaflet, which was sent to Steve Fiering, c/o The Soy Plant,... Ann Arbor, Michigan 48104, is postmarked 21 Jul 1983. Address: P.O. Box 2536, Petaluma, California 94953. Phone: 707-778-8638.

293. Photographs (color) of Bob Smith and Dick Folsom in Roseville, Michigan, Aug. 15, 1983.
• Summary: See next page. (1) Bob Smith seated in an armchair. (2) Bob Smith (left) and Dick Folsom seated outdoors next to a round white table. (3) Bob Smith astride his “cycle.”
Note: These photos were sent to Soyfoods Center, with permission to use in this book, by Dick Folsom in Feb. 1992.

• Summary: Robert A. Smith was born in Detroit, Michigan, on 1 April 1913. He spent much of his childhood in Detroit. In 1926 he entered the Ford Trade School and graduated as valedictorian of his class in 1930 at age 17. In 1931 he was placed in charge of the Greenfield Village Experimental Greenhouse, trying to find out how waste materials from farms could be used as plant fertilizers. Henry Ford would come in and chin himself on a beam in the Greenhouse. Bob Boyer, who was in charge of the chemical plant, was Smith’s boss. Beginning in late 1933, Bob began to work under the personal direction and guidance of Henry Ford on many unique projects. Henry Ford was so impressed with Bob that in the spring of 1937, he invited Bob and his wife (Roberta) to move into the “Square House,” which Ford had built himself in 1888. The Smiths moved into the house on Henry Ford’s 74th birthday—July 30, 1937. Also in 1937, Henry Ford ordered a laboratory built for Bob in another former Ford residence, the “Moir House.” Bob worked in the “Moir House” until 1942 when he was ordered by Henry Ford to move into the new Carver Laboratory, which was formerly the Dearborn Waterworks. In 1943 Bob co-founded Delsoy Products Corp. (with Henry Ford’s complete approval) to develop, produce, and market soy-related foods. Bob ended his career with the Ford Motor Co. in Aug. 1945, when it became apparent to him that Henry Ford would soon retire. The two men had worked very closely together for 12 years. Bob chose not to continue to work without the guidance, inspiration, and genius of Henry Ford. Bob retired from Delsoy in 1963.

In early 1937 Henry Ford drove Smith over to Moir House and on the way told Smith about how he would like to get rid of cows. Ford asked Smith to work at Moir house to develop a milk that made no use of cows. The Moir House lab was very simple, with the only electricity generated by a windmill. Nearby, Dr. Edsel Ruddiman had a modern lab with fancy equipment and electricity. Nevertheless, Smith’s
approach was to isolate the various components of the soybean (protein, fats, etc.), then re-blend those that were desired. He blended isolated soy protein (from soybean meal) with hydrogenated soybean oil and in a few months had a product that looked and tasted quite a bit like milk. Ford came by every day to see how things were going and to offer encouragement and suggestions. The day this new product was ready, Ford liked it a lot. He wrote in his little book: “First... Good Milk... No Cow!, then he showed Smith the notebook. This was in about mid-1938. Henry came to the Moir House lab to relax and get away from the pressures of work. He was a good teller of stories and jokes when only a few people were around.

After Henry’s son, Edsel, died in about 1943, Henry’s health began to decline. He never seemed to be the same again. The sparkle went out of his eyes and his energy declined.

Smith regrets that he never visited Henry Ford at Fair Lane during his last years when he was sick in bed. “I think he would have liked to have known what I was doing with the soybean milk project. You know we had made it a commercial success [through Delsoy Products].” Mr. Smith greatly enjoyed his association with Henry Ford. Next to his wife, Ford was the most important person in his life.

David L. Lewis (1976, p. 486) says of the square house: “In addition to Fair Lane, four dwellings in which the Fords lived remain. The ‘square house’ or ‘honeymoon house,’ which Clara designed and for which Henry cut the timber and helped build, was the couple’s home from 1889-91. Ford always kept a watchful eye on the place, and in 1937 installed a young company chemist, Robert Smith, and his family in it. When the structure was threatened by highway expansion in 1952, the Smiths removed it a few miles west to 29835 Beechwood, Garden City.” Address: Smith: 26351 Hollywood Ave., Roseville, Michigan 48066; Folsom: 46000 Geddes Rd., Canton Township, Michigan (near Dearborn). Phone: Smith: 313-777-5394. Folsom: 313-495-1379.


• Summary: A good overview of Henry Ford’s work with soybeans starting in about 1930 when Robert Boyer was brought to Dearborn to work at Greenfield Village and put in charge of the Chemical Plant. Ford’s stated objective was to “find industrial uses for farm products.” “Mr. Boyer’s summary of the first year accomplishments describes work extracting oils from orange peels and furfural from garbage, as well as work on wheat, soybeans, and carrots. Boyer’s 1931 summary report [i.e. report of work conducted during the year 1931, written in Jan. 1932] was sent to Mr. Ford at Fort Myers, Florida... In a separate building near the Engineering Laboratory in Dearborn, Dr. Edsel Ruddiman, Henry’s boyhood schoolmate, was working with wheat, soybeans, carrots and tomatoes to ‘make milk without a cow.’

“In 1932 [sic, Dec. 1931] Mr. Ford issued orders to concentrate on the soybean. His tractors began to plant and harvest thousands of acres. In a 25-acre field on Greenfield Village property some 500 experimental varieties of soybeans were grown. In Sept. 1932 Dr. Ruddiman and Mr. Boyer attended the American Soybean Association convention in Washington, DC. That year the Village Chemical Plant was extracting 6 tons per day of soybean oil. The Rouge plant started with 24 tons a day, followed by the Milan and Saline plants. These industries utilized the oil in making paints and plastics. The small Village Plant led the parade, however, with soybean milk, bread, ice cream, and an experimental plastic car (chassis excluded). The soybean foods became standard fare at the Ford plant cafeterias and at Ford Hospital. The ice cream—most delicious—was for years sold as Del(icious) Soy(bean) Topping” [i.e. Delsoy Topping; actually it was a soy-based whipped topping, not an ice cream].

Ford had known of the work of Dr. George Washington Carver since about 1910 but they probably first met in 1936 at the Second Dearborn Conference of the National Farm Chemurgic Council. Both were vegetarians with similar interests, and firm believers in natural foods. Dr. Carver’s assistant, Mr. [Austin W.] Curtis, spent the summer (ca. 1940) working with Robert Boyer in The Soybean
Laboratory.

In July 1942 Dr. Carver came to Dearborn and dedicated the “Nutritional Laboratory” of the Ford Motor Co. It was in the old Water Works building. Soon the laboratory, with its eventual 25 people under Mr. Robert A. Smith, went into volume production of soybean milk and ice cream. On 5 Jan. 1943 Dr. Carver died in Tuskegee, Alabama. The Nutritional Laboratory, soon better known as the Carver Laboratory, operated for at least a while after 1945, when Robert Smith left to go into business for himself, and Clem Glotzhober took charge. After Mr. Ford died on 7 April 1947, the building was again essentially abandoned. Address: Dearborn, Michigan.


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• Summary: In this interview, “the inventor of frozen non-dairy topping and founder of what may be the largest family-owned frozen food business in the country tells about the early days of the industry and how they relate to today’s multi-billion-dollar business.” A photo shows Robert E. Rich, Sr.


• Summary: About Rich Products’ Freeze Flo, which allows (for example) frozen strawberries to be soft and sweet and firm at temperatures far below freezing. “When Bob Rich graduated from the University of Buffalo, his father gave him $5,000. Bob used the money to make a down payment on a dairy. He disliked the milk business as intensely as his father did, but he wanted to assert his independence.

“During World War II, Rich worked for the War Production Board and was appointed milk administrator for the state of Michigan. His job was to divert excess milk supplies to thirsty American soldiers. One day he paid a visit to the George Washington Carver Laboratory, a research institution endowed by Henry Ford. The laboratory’s principal activity was supplying Detroit’s Ford Hospital with a product Rich had never seen before: milk made from soybeans.

“In a certain sense, Henry Ford’s career can be viewed as a plot to eradicate large domestic animals. Having rendered the horse obsolete with his automobile, he had now set out to eliminate the cow. Carver scientists spent their days striving to realize their benefactor’s vision of a cattle-free society. Periodically Ford threw parties for journalists at which he served nothing but milk, ice cream, hamburgers, cheese and other foods made from soybeans. He even built a soybean car.

“Ford’s antagonism toward cows struck a chord in

"I'd always said that the cow was the most inefficient manufacturing plant in America," he explains. 'Its product is 87 percent water, and it's high in bacteria, and it has to be pasteurized..."

In November 1944, he founded Rich Products Corp. to manufacture his invention, converting his dairy's garage into the production plant for the world's first non-dairy whipped topping. Its name: Whip Topping.

"At first, Rich distributed Whip Topping to the customers on his milk routes, billing it variously as 'the Miracle Cream from the soybean' and 'Gold from the Soil.' The early months were not a fabulous success. 'We were not chemists,' an employee later admitted. But gradually Rich refined his formula, and in 1946 he was invited to make a sales presentation to a refrigerated-food distributor on Long Island. He packed some samples in dry ice and newspaper and took the overnight train to New York.

"The following morning, while 50 salesmen looked on, Rich took out his samples and discovered with horror that they had frozen solid. He began to perspire. Cow's cream, he knew, would not whip after freezing. 'I thought briefly about telling them I had brought them all together to unveil a great way to keep newspapers cold.' He stalled for as long as he could, then borrowed a knife and hacked nervously at his frozen soybean cream until he could fit the pieces into a mixing bowl. He held his breath. 'It whipped to perfection.'

"No one was more surprised than Bob Rich. But he had the presence of mind to realize that he had done more than escape from a potentially embarrassing situation: He had invented the world's first frozen non-dairy whipped topping. That meant that his market was no longer limited to Buffalo. Now he could sell Whip Topping anywhere in the world. Quite by accident, Rich Products Corp. had entered the age of frozen food."

• Summary: Uses silken tofu in a Tofu luncheon salad recipe, and regular tofu in White tofu with dark dressing (incl. soy sauce). Two photos accompany the recipes.

• Summary: Some information in Chapter 1, Appendix A, and many advertisements have been changed. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.


• Summary: “Beginning in 1937 and continuing until Carver’s death in 1943, the two men maintained a correspondence on a variety of subjects.” Their letters are now in the Ford Archives and Research Library in Dearborn, Michigan. In 1896 Carver became the first black person to graduate from Iowa State University. His thesis was titled “Plants as Modified by Man.” The Tuskegee Institute in Alabama was organized in 1881 by Booker T. Washington to offer practical education for black students. As head of the Tuskegee Research and Experiment Station at the Tuskegee Institute, Carver revolutionized Southern agriculture while earning a worldwide reputation. In 1906, when the boll weevil struck the cotton crop, Carver recommended peanuts as a replacement crop.

“Meanwhile Ford, having gone on to increasing success as an industrialist, became fearful that the automobile which he had helped spread far and wide had destroyed many of the traditional values to which he was committed. He therefore started on the course that in 1929 led to the establishment of The Edison Institute, comprising Henry Ford Museum and Greenfield Village. Within the village grounds, he built a chemical laboratory and a greenhouse with the objective of finding ‘industrial uses for farm products.’ Robert Boyer was put in charge of what was called the Chemical Plant. In his account of the plant’s first year of operation in 1931, Boyer mentioned the extraction of oils from orange peels, and furfural—a liquid aldehyde—from garbage, as well as experiments with wheat, soybeans, and carrots.

‘... in a building near the Engineering Laboratory in Dearborn, Dr. Edsel Ruddiman, Ford’s boyhood schoolmate, was experimenting with wheat, soybeans, carrots, and tomatoes in an effort to ‘make milk without a cow.’

“In early 1932, Ford issued orders to concentrate on the soybean. His tractors began to plant thousands of acres. In a 25-acre field on Greenfield Village property, some 500 experimental varieties of soybeans were grown. That year the village chemical plant extracted six tons per day of soybean oil, using it to produce soybean bread, milk, butter, ice cream, and an experimental plastic car (chassis excluded).” Carver’s extremely competent research assistant was Austin W. Curtis, Jr. In 1937 Ford and Carver first met; Carver spoke at
the meeting of the National Farm Chemurgic Council in Dearborn. In March 1938 Ford made his first of several visits to Tuskegee. After the Fords visited Carver in March 1940, Carver wrote Mrs. Ford and sent her samples of some meatless soy-based gravies he had developed. “I made this same gravy substituting the soy beans. I ground them up very fine and made a very rich milk, and to one pint of this milk I used a tablespoon of soy bean oil. This was cooked down until it creamed, became thick like the richest creamed chicken gravy.

“I hope you and Mr. Ford will try these gravies. They are so rich in protein and other food nutrients and the meat can be greatly reduced, and with some other of Mr. Ford’s fine soy bean products, can be left off altogether.” Ford and Carver were in complete agreement that plants, not animals, were the solution to human problems. In about 1940 Austin Curtis spent a summer in Dearborn working with Robert Boyer in the Soybean Laboratory.

“The Fords traveled to Tuskegee in early March 1941, to dedicate the George Washington Carver Museum there, inscribing their names in the cement and donating soybeans and a variety of soybean plastic car parts to be placed in the cornerstone.”

In the summer of 1942 Ford had a log cabin replica of Carver’s birthplace constructed in Greenfield Village and converted the abandoned Dearborn Water Works building into the “Nutritional Laboratory” of the Ford Motor Company. Carver came to Dearborn to dedicate the new laboratory and log cabin in July 1942. The laboratory, under the direction of Robert Smith, soon began producing soybean milk and ice cream. “The soybean foods became standard fare at the Ford plant cafeteria and at Henry Ford Hospital in Detroit. The ice cream–most delicious–was later marketed independently by Robert Smith, a Ford Laboratory manager, as Del(icious) Soy(bean) Topping.” Note after talk with Ford Bryan (3 Dec. 1992): Delsoy Topping was a soy-based whipped topping, like whipped cream. It was not an ice cream and Robert Smith never commercialized a soy-based ice cream.

Shortly after Carver died on 5 Jan. 1943, Ford said, in a public statement, “Dr. Carver had the brain of a scientist and the heart of a saint.” Address: Dearborn, Michigan.

303. Rich Products Corp. 1983. Inspiration, insight, innovation, involvement. Buffalo, New York. 10 p. 28 cm. • Summary: A company report, containing many color photos, including photos of Rich’s Coffee Rich, Rich’s Chocolate Eclairs. The company’s “most dramatic new break-through is Freeze Flo. A revolutionary process that makes it possible to take foods from sub-zero temperatures and use them immediately, Freeze Flo not only eliminates the need to thaw, it has changed the very concept of frozen foods.” Address: Buffalo, New York.


Next to the Soyana logo is the simpler Biona logo. Address: Postfach 8039, Zurich, Switzerland.


306. Shurtleff, William; Aoyagi, Akiko. 1984. Japan: Soy milk industry and market (Document part). In: Shurtleff and Aoyagi. 1984. Soymilk Industry and Market: Worldwide and Country by Country Analysis. Vol. 1. 177 p. See p. 63-81. • Summary: Historical. Soymilk was not a part of the traditional diet in Japan, as it was in China. Cow’s milk, which entered Japan in about 1000 A.D., likewise, never became a part of the basic diet. Reference to soymilk (then called toju or “bean liquid”) may have appeared as early as the 1100s, but the first clear reference was not published until 1895, when Inouye did one of the world’s first nutritional analyses of soymilk, and compared it to cow’s milk. In 1906 Katayama wrote two articles on soymilk; in one he described preparation of a fermented soymilk cheese, similar to Swiss cheese. Yet both Inouye and Katayama wrote in English. In 1924 Sato Yoshitane wrote a book called Daizu Kakko, which is said to contain the earliest known reference to the word soymilk (tônyu), written with the present characters.

From this time on (and perhaps from an earlier date) some Japanese (an estimated 1% of the population) would order fresh soymilk from their local tofu shop, usually for health-related reasons, as in diabetic diets or for mothers who had difficulties with breast feeding, or because it was thought or found to be a health-giving beverage.

The earliest known commercial production of soymilk in Japan dates back to the influence of Dr. Harry Miller. In 1957 two Japanese Seventh-day Adventists, following his inspiration, started making soymilk in Hachioji, Tokyo, and selling it locally in 180 ml cartons. In 1958 Dr. Miller set up a small soymilk plant in the kitchen of the Adventist Tokyo Sanitarium. It was used to make soymilk, soy whipping cream, soymilk ice cream, and soy spread, which were...
served to the staff and patients. In 1959 a small soymilk plant was established in the Seventh-day Adventist Saniku School. From this year, Japan’s oldest existing soymilk company, Saniku Foods, traces its origin.

A chronology of the starting date of Japanese soymilk companies is as follows. Only three, each followed by an asterisk, are no longer in business:

During the period from 1973 to 1976 soymilk started to become quite popular in Japan, largely because of developments in processing technology that made it possible to produce soymilk with a bland (non-beany) flavor, and because of promotion by the new soymilk companies. In 1974 Japan’s first major book on soymilk was published. By 1976 the Japanese were making the best soymilk in the world—by Western standards.

A new era began in 1976 when Kyushu Milk Co., a long-established, middle sized dairy milk company, started making soymilk. Tremendous momentum was added to this new direction in April 1979, when Meiji Milk Co., Japan’s second largest milk company also started to sell soymilk (made by Marusan but with the Meiji brand). Meiji first began to make their own soymilk in their own plant in March 1981. That same month Morinaga Milk Co. was licensed by Mitsubishi to distribute their soymilk. Quickly thereafter each of the other major Japanese milk companies (Meito, Yuki-jirushi) followed suit, joining the wave of the future.

1. A growing interest among Japanese in good health and nutrition, through improved diet. A corollary of this was that fundamentally the elite should be especially healthy, both on recommendations of the Committee on Nutrition of the American Academy of Pediatrics. For example, the minimum protein requirement is 1.8 gm/100 kcal and the quality of the protein source must be at least nutritionally equivalent to casein. Address: ARS/USDA.

2. Improved soymilk quality/flavor, and a growing number of varieties and flavors.

3. Popularization of packaging (such as Tetra Brik aseptic cartons) that would give the soymilk a long shelf life, allowing nationwide distribution from one large soymilk plant.

4. Strong interest and support by the media/mass communications followed, after 1981, by extensive advertising and promotion on TV (especially by Kibun and Marusan), in the print media, and with in-store demos by soymilk companies.

5. The aggressive marketing of soymilk by all of Japan’s major milk companies.


7. Large numbers of tofu shops starting selling fresh soymilk (containing its natural “beany” flavor), starting in about mid-1982.

8. Large manufacturers and distributors of beverages and related food products started to buy soymilk in bulk from manufacturers, then to market and distribute it under their own labels. Examples: Kirin Beer, Kagome (a large ketchup maker), Suntory, etc.

From 1978 to 1983 the soymilk market in Japan, on average, more than doubled each year, making it the fast growing food market in Japan! Many new brands started appearing in 1982 and there was a big jump in production. Soymilk was the star and darling of the media and it played a major role in enhancing the image and sales of all soyfoods in Japan.

Market Size and Growth Rate: The following statistics show the increase in size of the Japanese soymilk market:

Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.


• Summary: Discusses defatted soy flours, soy protein concentrates, soy protein isolates, and textured soy protein isolates. Both isolates and concentrates are widely used in processed meats. Other applications for isolates are in whole and nonfat dry milk replacers, coffee whiteners (coffee cream analogs), cake mixes, beverage products, confections, and infant formulas—which are widely fed to infants who are allergic to cow’s milk. Therefore soy may be the only source of dietary protein during the first few months of life. In the USA, the levels of nutrients required in infant formulas are specified by the Infant Formula Act of 1980, based largely on recommendations of the Committee on Nutrition of the American Academy of Pediatrics. For example, the minimum protein requirement is 1.8 gm/100 kcal and the quality of the protein source must be at least nutritionally equivalent to casein. Address: ARS/USDA.


growing. Don’t be put off by its bland which in itself is an expanding market and ripe for further scale, by producing something in the take-away snack line– would be worthwhile to do a little experimenting on a limited between choosing eggs or tofu as an ingredient, perhaps it family no harm–if not a great deal of good.”

“In the US, the use of tofu is estimated to be growing at the rate of 25-35% per year. There are now 150 plants producing well over 45 million pounds of the food, which in monetary terms means about £25 million worth.”

“According to Paul Jones, managing director of Paul’s Tofu, suppliers of baked products to Holland & Barratt, he is successfully using tofu in the manufacture of quiches, savoury pasties and cheese cakes: ‘I also use it for icing and toppings,’ he said. ‘It is white, delicate and blends well.”

“A domestic version of Tofu is already being sold in this country through Sunwheel Foods–part of the Holgran Group of companies. Roy Harris, the company’s sales and marketing director reports that sales last year were up over 35 per cent on the previous year.”

“We have already seen the rise of the Vegeburger, and following closely behind is the Tofuburger. Now is the time...”

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“We have already seen the rise of the Vegeburger, and following closely behind is the Tofuburger. Now is the time for bakers to be seeking ways of cashing in on this relatively new—but nevertheless enthusiastic—search by the British housewife to find foods that she knows will at least do her family no harm—if not a great deal of good.”

“As there would appear to be no cost differential between choosing eggs or tofu as an ingredient, perhaps it would be worthwhile to do a little experimenting on a limited scale, by producing something in the take-away snack line—which in itself is an expanding market and ripe for further growth. Don’t be put off by its bland flavour for its is this very blandness which makes it usable for so many different types of dishes. There is no reason why tofu—although a basic food in itself—should not be utilised to a high degree of sophistication, even to gourmet levels.”


• Summary: Four decades before Tofutti and other types of “soybean ice cream became the latest fashionable East Coast rage, auto magnate Henry Ford was dishing it up to his blue collar Rouge Plant workers. Ford, who rarely ate meat and had an interest in ways to promote more healthful foods, wasn’t just a wizard when it came to designing cars.

“During his experiments with soybeans in the 1940s, when he was in his 70s, he devised whole meals made with the beans, which still grow on 350 acres of Ford property on Dearborn, just north of the Ford Motor Co.’s World Headquarters. Lester Twork, a Dearborn resident who taught job skills to residents at Ford’s apprentice school after World War II, well remembers Ford’s soybean lunches. ‘Mr. Ford would make a point of saying we were having a soybean meal that day. Everything would be made out of soybeans—soybean milk, soybean whipped cream, soybean ice cream, soybean biscuits, a soybean mixture fried like hamburger,’ said Twork, now a volunteer at the Henry Ford Estate—Fair Lane.

“I remember that once, Henry Ford was in line just ahead of me when people were being served cafeteria-style, with large, stainless steel trays with many compartments. He picked up some of the biscuits and turned around and told me they were quite good. I just nodded...”

“Soybeans were planted on 350 acres of Ford Motor Land Development Co.—owned land near the intersection of Ford Road and the Southfield Expressway... The current soybean farmer is none other than Mickey Redmond, the former Detroit Red Wings hockey player who now broadcasts hockey games for the Canadian Broadcasting


**Summary:** Dr. J.S. Sheen, of the University of Kentucky, Lexington, told a meeting of the American Chemical Society in August that the entire soybean plant is more nutritious than just the beans. Protein of better nutritional quality (with a better balance of amino acids) and with more uses can be obtained, and farmers could earn twice as much money per acre harvesting the whole plant than they do for the beans alone.

Protein from the whole plant has physical properties similar to those of egg whites. It can be whipped into a meringue, or used as a protein additive in artificial cheese, puddings etc. It has no flavor and odor. The key to using the whole plant lies in a processing method that separates harvested young plants into protein, soybean molasses, and a fibrous residue.

**Note:** This is the earliest English-language document seen (April 2004) that contains the term “soybean molasses.”

Address: Dep. of Plant Pathology, Univ. of Kentucky, Lexington.


Phone: 313-544-7742.


Ingredients: Whole wheat flour, walnut, carrots, cinnamon, nutmeg, clove, corn oil, soy margarine, honey, barley malt, soy milk, ginger, lemon juice, vanilla, baking powder, baking soda, and salt. With tofu almond butter frosting. Refrigerated.


**New Product–Documentation:** Talk with Robert Atallah, president of Cedarlane. 1988. Feb. 5. He makes and currently sells only these two tofu products. He buys the tofu from San Diego Soy Dairy. The Tofu Luau and Marina are discontinued because they were not feasible. Retailing for $1.99, they did not sell. Yet everybody who tasted them liked them.

Talk with Gary Young of Health in Motion. 1991. Dec. 2. His company, which is in the same large building as Cedarlane (1862 E. 22nd St., Los Angeles) makes a number of tofu products for Cedarlane, such as Tofu Stroganoff, Tofu Luau, and Tofu Cottage Salad.


**Summary:** On the cover are two colorful scoops of ice cream on top of a cone which is an ear of corn. It’s called an “Ice cream corn.”

Contents (soy related): The use of corn sweeteners and soy protein in dairy products... The use of soy protein in fluid and frozen products. The use of soy protein in cheese substitutes and cheese-like products. Characteristics and use of Ardex brand isolated soy protein (90% protein)...

Additional brochures available.”

**Note:** This is the earliest English-language document seen (Oct. 2013) that uses the term “cheese substitute” to refer to a Western-style soy cheese.

“Field performance of soft serve mixes is critical. The product must be dry and stiff to remain on cones.” “Frozen yogurt is likened to something between ice milk and sherbet. Lactic fermentation provides tartness, which is highly compatible with fruit flavors.”

Various types of yogurt include: Regular or unflavored, Swiss style, sunda style, and liquid yogurt.

Ardex F is dispersible isolated soy protein. TVP can be used to add protein and “crunch.” “Ardex isolated soy proteins [F] can be used effectively to produce tofu-like products” (p. 19).


Ardex F is dispersible; used for dairy foods. Ardex SP-6 is dispersible; used primarily for injected whole muscle meat products. Ardex R is used where special functionality is required, e.g. coffee whitener, liqueur, cheese, etc. Ardex D is an emulsion stabilizer for use in meat systems,... Ardex DHV is a water and fat binder and adhesive agent. Address: Illinois.


**Summary:** Contents: Introduction. Fads of demonstrated benefit: Breast-feeding. Fads of probable long-term benefit with some limitations in infants and children: Vegetarian diet. “Strict vegan diets may be inadequate to support growth in the young infant.” Fads of possible (unproven) benefit with minimal nutritional risks: Feingold diet, health foods (incl. natural foods and organic foods), athletic diet. Fads of no benefit with significant nutritional risks: Zen-macrobiotic diet, megavitamin therapy, barley water formula, nondairy creamer formula, prolonged clear liquid and elimination diets. Summary. Address: M.D., Univ. of Southern California School of Medicine and Div. of Gastroenterology and Nutrition, Dep. of Pediatrics, Children’s Hospital of Los Angeles.

318. Grain Processing Corp. 1984? Pro-Fam: Isolated soy protein products (Catalog). 1600 Oregon St., Muscatine, IA
52761. 14 p. Undated. 28 cm.


• Summary: She calls my interest “Pareve ice cream.” Kosher foods are categorized as follows: Fleshig [Fleishig] means “from the flesh.” Milchig means “from the milk.” Parev means neither flesh nor milk, and therefore can be eaten with either. Pareve contains no dairy, no casein, and no sodium caseinate. However it could contain egg whites.

Jewish housewives have been making Pareve ice cream for years at home using one of two basic processes: (1) Use egg whites instead of milk and cream. (2) Buy a Pareve whipped topping like Rich’s Whipping; they would whip it up, put in flavorings, and freeze. It made an excellent substitute. She thinks that all the other early Pareve ice creams used the same concept as Rich’s.

But Tofutti was completely different—and revolutionary. It was the first to contain no cholesterol. It was an entirely different approach. Address: England.


• Summary: Soymilk and soy ice cream: “We made soy ice creams in the early 1930s, as a sort of by-product of our work with soymilk. We actually built quite a nice little production unit for making soymilk. It was a natural evolution to make soymilk from ice cream; we didn’t learn the idea or the process from anyone. To make the ice cream, we coagulated the soymilk to make a curd, like fresh tofu, which we then dispersed (without drying it) in a colloid mill. We found we got a better product from the curd than from the soymilk itself. So you could call the final product a sort of tofu ice cream. The ice creams were made in the laboratories at Greenfield Village in Dearborn. We had 2-3 labs there. Henry Ford used to call it the Engineering Laboratory. The ice creams were served to special visitors. Mr. Ford would put on special press luncheons for journalists, food editors, etc. and soy ice cream was always on the menu. It was also served in the VIP lounge. It remained an experimental item that we and Mr. Ford would serve to impress people with the good taste and versatility of soy. We served it in the basic favorite American flavors: Chocolate, strawberry, and vanilla. I don’t recall whether or not it was served at the 1934 World’s Fair in Chicago [probably not], or whether it was served after the start of World War II.

“Later at Ralston Purina we made soy ice cream prototypes from soy protein isolates in order to show the potential and versatility of isolates. We served the ice creams to potential customers. I started to work with Purina in 1960 and our team (headed by Ralph Hoer and soon joined by Frank Calvert) started building an isolate plant in St. Louis, Missouri, shortly after that, so the first ice creams at Purina were probably made in about 1962-63.

“When I joined Ralston Purina, the company already had a commercial isolate plant in Louisville, Kentucky, that made industrial isolates for paper coatings. It was only after I arrived that Purina became involved in edible food-grade soy protein isolates, and these isolates are now a major, rapidly growing product line—which trace their origin back to Henry Ford.

Rich Products Corp. in Buffalo, New York got interested in soy via Rex Diamond, who worked for Henry Ford as Bob Smith’s assistant. “Rex Diamond was the original spark plug for Rich. I’m not sure who had the original idea for whipped toppings, coffee creamers, etc. Rex finally became the research director for Rich Products Corp. and that company developed the first good whipped topping and coffee whitener.

“When Bob Smith went out on his own to put out his own soymilk [sic, Delsoy whip topping], Rex went with him [though several years later]. After that, Rex left Bob Smith and eventually went with Rich Products. Later there were some hard feelings between Rich Products and Rex, but I don’t know what that was all about. I once visited Rex in Buffalo, New York.” Address: 632 Edgewater Dr., Apt. 731, Dunedin, Florida 33528. Phone: 813-734-2415.


• Summary: “Your readers who avoid milk may be interested in the following: While excluding milk and its derivatives from my diet, I’ve noted that sodium caseinate, a milk derivative, is routinely included in various foods labeled
Trying to clarify this apparent contradiction, I wrote to one of the large supermarket chains, which in turn sent me a copy of a letter from one of the manufacturers. The following is a direct quote from this letter:

“Inasmuch as milk is the chief raw material in the manufacture of sodium caseinate, it might be claimed that a synthetic beverage of which it is a component would not be called a non-dairy creamer. At present, however, sodium caseinate is not regulated by regulatory agencies as a dairy product or milk ingredient but as a chemical or food additive, generally regarded as safe (GRAS) for human consumption.’

Perhaps others who, like myself, avoid animal products on both ethical and health grounds would agree that ‘non-dairy’ on these products is non-truthful advertising.”

Address: Baltimore, Maryland.


• Summary: Early Years to 1949. Bob Rich was born on 7 July 1913 in Buffalo, New York. He was one of five children of a local ice cream manufacturer, formerly a dairyman, who had switched to the ice cream business because he didn’t like selling milk. During the summers Bob acquired a working knowledge of dairy plant operation at his father’s ice cream plant. In 1935 he graduated from the University of Buffalo, where he was two-time captain of the football and wrestling teams. After graduation he used a $5,000 gift from his father to make a down payment on Wilber Farms Dairy, a small milk plant in Buffalo. He eventually developed it into one of the city’s leading wholesale and retail operations. But he grew to dislike the dairy business just as his father had.

“In 1942 Bob Rich, having established a reputation as a milk plant operator, was called to Washington, DC, as a consultant in the dairy section of the War Production Board. A year later he was sent to Detroit by the War Food Administration (WFA) as milk order administrator for the state of Michigan.

“One day in 1943 the chief purchasing agent of Detroit’s Ford Hospital came into Rich’s office in search of additional butter ration points. Rich explained that his job was concerned solely with the diversion of non-essential civilian milk supplies into the production of dry and condensed milk for the U.S. armed forces and for Lend Lease. The purchasing agent replied that the Ford Hospital was not in need of milk. The entire supply of milk and cream was produced in Dearborn, Michigan, by Henry Ford’s Carver Laboratory (named after Dr. George Washington Carver)–from soybeans!

“Those last words sparked what was to become a lifelong interest for Bob Rich. He had never heard of soymilk before, but during the war he had seen the potential for dairy-like foods. After Ford’s purchasing agent had told Rich more about soymilk and soy cream, he invited Rich to visit the Carver Laboratories at Henry Ford’s Greenfield Village in Dearborn, Michigan. (Note: Dearborn and Detroit are about 350 miles by road from Buffalo.) There Rich saw the continuous process, 3-vat system that Ford’s researchers had developed from as early as 1940 for extracting protein from soybean flakes. The extraction equipment resembled a Rube Goldberg contraption. The protein was used as the basis for the soymilk they made for the Ford Hospital. During his visit, Bob Rich met Rex Diamond (chief chemist there), and Diamond told Rich that if Rich was interested in using soy protein to make a soy cream, he could license the rights to Ford’s patented continuous protein extraction process for $1 a year.

“In a sense Henry Ford’s career can be seen as a plot to eradicate large domestic animals. Having rendered the horse obsolete with his automobile, he now set out to eliminate the cow. Ford’s unspoken antagonism toward cows struck a responsive chord in Bob Rich. Though neither the protein extraction nor the soymilk formulation operations were in operation during his visit, Rich was impressed by what he saw that day. Sales of whipping cream were forbidden during the war, so he began to dream of developing a ‘soy cream’ that would whip. For more than a year Rich kept thinking about his new idea.”

After resigning from the WFA in Oct. 1944, Bob returned to Buffalo and engaged a leading chemists and dairy engineer to help him transform his “soy whipping cream” idea into reality. The Ford Motor Co. had backed off on its original offer to license Bob the rights to their patented method of continuous protein extraction. So Bob and his advisors developed a batch process that extracted a significantly higher percentage of isolated soy protein from soy flakes–which he obtained from the Glidden Co. The flakes were first mixed with water in 300-gallon stainless steel tanks. The pH of the flakes was raised to 9.6 to extract the protein, then lowered to near the isoelectric point (pH 4.6) to precipitate the protein. After the supernatant liquid (soy whey) was removed, the isolate curd was neutralized to pH 6.9 then centrifuged with a dairy clarifier (with the discs removed) to lower the moisture content. The wet isolate was then run through cooling tubes into stainless steel settling tanks. The original “soy cream” formulation called for (in order of predominance): water, 27% soy oil shortening, corn syrup, 1.5% isolated soy protein (slurried with water), flavoring, coloring, salt, and the stabilizer they had developed (propylene glycol monostearate). In the all stainless steel processing room, the “soy cream” was pasteurized at 185 °F, homogenized at 3,500 pounds pressure, then cooled to 35 °F. When the product was satisfactory, Bob Rich decided to call it Whip Topping.
In November 1944, after he was satisfied he had a good protein extraction system and a good “soy cream” formulation, Bob Rich founded and incorporated Rich Products Corporation in Buffalo, New York, to manufacture his non-dairy whipped cream. He converted his dairy’s 3-car garage into the production plant. Joe Robida was production manager. Whip topping hit the market in April 1945, shortly after Delsoy was introduced. It was sold as a thick liquid in a ½ pint container the shape of a truncated cone—the same shape as Delsoy’s container. Both companies chose the same unique container because the machine needed to fill it was less expensive and Pure Pak refused to give a license for use of their carton to any competitor of dairy products.

Rich’s Whip Topping had a number of advantages over whipped cream—aside from the fact that whipping cream was completely unavailable during the war: (1) It stood up longer after being whipped, retaining stiffness and overrun better without drooping or weeping; (2) it sold for about 25% less than heavy cream; (3) because it could be frozen (which heavy dairy cream could not, if it was to be later whipped), it stayed fresh longer; (4) it could be re-whipped even several days after it had been whipped initially; (5) one volume of the liquid whipped up to 3.0 volumes of topping in 45 seconds, versus only 1.86 volumes for regular dairy whipping cream. Thus Whip Topping gave 61% more yield by volume; (6) dairy cream could be easily over-whipped, resulting in a kind of buttery substance. This was not a problem with Whip Topping; (7) it was a kosher and pareve product from 1946 on; (8) it was advertised as being almost twice as nourishing as heavy cream and (believe it or not) non-fattening!

Whip topping was a war baby. Initially it was sold only as a retail product. Rich distributed it to the customers on his milk routes, billing it variously as “the Miracle Cream from the Soybean” and “Gold from the Soil.” During the early months it was not a fabulously successful product. Its developers were not chemists and the soy proteins were made by a relatively primitive process, so the product’s quality left much to be desired. Sales during the first year (9 months) were $28,000.

In the summer of 1945 an unexpected breakthrough occurred. Rich had been invited to make a sales presentation to the Henry Pape Co., a refrigerated foods distributor on Long Island, New York. He packed some samples in dry ice and newspaper and set out on the overnight train from Buffalo. The next morning, while facing the sales manager and 18 salesmen, Rich took out his samples then discovered to his horror that they had frozen solid. He had inadvertently packed them in too much dry ice. He began to perspire, for he knew well that cow’s cream would not whip after freezing. He cracked a few jokes to stall as long as he could, then borrowed a knife and hacked nervously at his frozen “soy cream” until he could fit the pieces into a mixing bowl. Then he held his breath. It whipped to perfection!

No one was more surprised than Bob Rich. But he had the presence of mind to realize that he had done more than escape from a potentially embarrassing situation. He had invented the world’s first frozen non-dairy whipped cream. This meant that his market was no longer confined to Buffalo. Now he could sell Whip Topping nationwide. Quite by accident Rich Products Corp. had entered the frozen food business. Three months later the company was freezing all its products. The modern frozen food industry, which often dates its origins from 1929 when Clarence Birdseye froze his epochal fish, was still quite young in 1945, and Rich Products later came to be regarded as one of its pioneers (Frozen Food Age 1977; Owen 1983). (Continued). Address: Chairman of the Board, Rich Products Corp., P.O. Box 245 (1150 Niagara St.), Buffalo, New York. Phone: 716-878-8000.


• Summary: Continued. In January 1946, to get national distribution for his frozen whip topping, Rich Products ran a quarter page ad in Quick Frozen Foods—the company’s first ad for the product. From among the 134 frozen food distributors who responded, Rich Products appointed its first 100 distributors. America’s housewives took to Whip Topping. Sales snowballed. The plant at 1149 Niagara St. began to operate 24 hours a day. Also in January 1946 Rich Products entered the foodservice business, when they sold their first case of Whip Topping to Ohio State University. To use Whip Topping, a chef would chop the frozen product into pieces with a cleaver (one was provided free of charge with each case!), then whip it. Later, Rich Products added sugar to the formulation, which made the product thaw and pour.

Over the years institutional and bulk sales of Rich’s Whip Topping increased. From 1945 on Rich had taken his whip topping to food trade shows and dietitian’s shows, attending up to 30 a year. The pioneering product was well received. A good part of Rich’s success from 1946 on was in the South; there the problem of dairy whipped cream’s turning sour or rancid in the warmer climate restricted its usage, the people were more accustomed to the use and flavor of soy since soy margarine was widely used in frying, and southern frozen food distributors were very aggressive.

Then on 20 November 1946 disaster struck. With no advance notification, the U.S. government lifted all restrictions on the sale of cream and other dairy products, months before the earliest predicted date for such a move. With regular whipping cream now available, retailers and distributors canceled all orders for Whip Topping. For Rich Products, it was a nightmare, and for a while it looked like the young company might perish. But Bob Rich, his sales staff, and his advertising agency worked for days around the
clock on a new marketing strategy to overcome the product’s ersatz wartime image and to play up its many unique attributes.

In December 1946 Soybean Digest ran a nice article on Rich Products and Whip Topping—written before the surprise notification. The firm had just spent $60,000 constructing a new, modern plant, which was working 24 hours a day, 7 days a week producing 1 million half pint containers of Whip Topping a month.

A huge national campaign was launched but recovery came only slowly; not until late 1948 had sales reached their first-year level. At that time Whip Topping was introduced in a pressurized all-metal container, which replaced its former heavy wax paper cartons—half pints for the retail trade and quarts for institutions and bakeries. Previously it had been necessary to partially thaw the product, then whip the topping by hand or in an electric mixer. Now the topping emerged from the container nicely whipped, under 90 pounds pressure from nitrous oxide and carbon dioxide.

As Whip Topping gained popularity, the dairy industry began to take notice. The first lawsuit against the non-dairy product was in 1949 in California. The charge was that Whip Topping was an imitation dairy product, and hence illegal. Rich Products’ defense was that their product was not an imitation (which implies inferiority to the real product) but a replacement. Likewise the Model T Ford was clearly a replacement for the horse and buggy, not an imitation. As we have seen above, Whip Topping had many definite advantages over its dairy counterpart. Rich Products won the case. Then in 1951 the product was seized again. In the interim, the dairy industry had gotten the state food laws changed and, as Bob Rich recalled, “done everything but mention Rich Products’ name.” Rich Products won the 1952 trial, and judge Bernard Shawman notified the state’s attorney general that if he should attack Rich Products at any time in the future, Mr. Rich would have an excellent chance for indemnity against the state. That was the last lawsuit ever brought against Whip Topping.

The 1950s. By the early 1950s, as Whip Topping began to become popular, other companies began to use Rich’s brand name. Although it was a registered trademark, listed on the Supplemental Register, it sounded almost like a generic term. Rich’s attorney’s protected the term, suggesting that those with trademark infringements call their products something else, such as “whipped topping.” But eventually Rich formally renamed his product “Rich’s Whip Topping” to give it better trademark protection.

By 1946, Rich Products had obtained kosher and pareve certification for Whip Topping from the prestigious Union of Orthodox Jewish Congregations of America. By about 1946-47 kosher Jewish catering services in New York City (and soon thereafter housewives) had discovered that Rich’s Whip Topping (which they purchased from Henry Pape Co.) was remarkably similar to real whipped cream in texture and flavor, and could be used to make a completely new type of non-dairy frozen desserts. These were America’s first such desserts based on isolated soy proteins. Soon an estimated 5-10% of Rich’s sales of whip topping to the foodservice market were being used by other companies to make non-dairy kosher ice creams.

Rich’s followed this lead and in about 1951 unveiled Chil-Zert, the world’s first isolate-based commercial non-dairy frozen dessert having a registered trademark. Although Chil-Zert was well made (with 2-3% soy protein, soy oil, and corn syrup) and tasted good, like many pioneering products it ran into problems. First, it was transported and stored by frozen food distributors who couldn’t keep it cold enough. (Ice cream distributors, who operated at 20 degrees below zero, wouldn’t touch Chil-Zert.) No emulsifying system could be found to prevent it from softening then becoming icy when refrozen. Second, the FDA impounded the product from Arrow Frozen Foods in New Orleans, claiming that it was an imitation ice cream and thus misbranded. The case was to be tried in federal court in Syracuse, New York. But Rich Products did not even go to the trial to contend the charge, for distribution problems had already forced them in 1952 to discontinue Chil-Zert. David Rich, son of the company’s founder, enjoyed Chil-Zert as a boy. He recalled that when he first tasted vanilla Tofutti in the 1980s, it distinctly reminded him of Chil-Zert.

On 15 Nov. 1955 Rex Diamond (the Henry Ford researcher that Rich had met on his visit to the Carver Labs) went to work for Bob Rich in Buffalo. Rich hired Diamond after the American Maize Products Co., where Diamond was formerly employed, dropped their plans to make a powdered non-dairy topping. Diamond was put in charge of the laboratory and development and research of Rich Products. From that time until at least 1959 he was the only chemist employed by the company. On 25 Nov. 1955, as part of a business agreement, Diamond sold, assigned, and transferred all rights, titles, and interests to all of his patents (3 issued and 1 applied for) to Bob Rich in return for $5,000.

In May 1956 Rich Products added a completely new formulation of Whip Topping to its line. Named “Rich’s Whip Topping–The Diamond Process,” it contained no protein and was made by a process developed and patented by Diamond. Diamond eventually became vice president of Rich Products. In the new formulation, soy oil was replaced by coconut oil, which had a better flavor. A key new ingredient in the non-protein whip topping was methyl ethyl cellulose, developed by Dow Chemical.

Rich’s new non-protein Whip Topping came in two forms: a base (containing 46% fat) and a regular strength. It was initially sold only to foodservice institutions (which comprised about 20% of total sales); the original soy protein formulation continued to be sold (largely in a pressurized container) to the retail trade, which accounted for 80% of total sales. Rich Products continued to produce its own

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soy isolates. Good quality powdered isolates would not be available commercially in America until about 1959 (Continued). Address: Chairman of the Board, Rich Products Corp., P.O. Box 245 (1150 Niagara St.), Buffalo, New York. Phone: 716-878-8000.


• Summary: Continued. The new formulation had numerous advantages over its predecessor. Its flavor was better and its shelf life at 40ºF was extended to 6 months, from 3-4 weeks. It could be whipped to a stiffness never before attained by any cream or filled cream (containing added vegetable fat). It whipped up to 4 times its liquid volume, giving more than double the yield of dairy whipping cream. It retained overrun, freshness, flavor, and a “decorator’s edge” for more than 48 hours at temperatures as high as 80ºF. The base had a unique advantage over dairy whipping cream. It could be reconstituted or extended with either the usual water or nonfat milk, or with fruit juices to give special effects such as an orange icing or filling. Now Rich began to introduce the new Whip Topping in various sizes. In 1952 came Sundi-whip in an 8-ounce pressurized can for soda fountains and over-the-counter trade. In about 1953 appeared Rich’s Green Label Whip Topping, which was developed for bakery and institutional use. Prior to mid-1955 Whip Topping had been Rich’s only product. At that time they launched Rich’s Frozen Chocolate Eclairs, which had Whip Topping as the filling. The eclairs quickly became enormously successful, and were called “the hottest thing to hit the frozen food industry in the last five years.” In February 1955 Quick Frozen Foods published an excellent 27-page, tenth anniversary story of Rich Products’ first decade, upon which we have drawn heavily. The 1960s. In 1963 Rich Products introduced Coffee Rich, a frozen liquid coffee whitener. It was test marketed in Baltimore. Rich deliberately used the generic disclaimer “coffee whitener” rather than “non-dairy creamer” to avoid as much as possible stepping on the toes of dairy interests. Coffee Rich was the second such liquid product to be sold in America; Presto Food Products in Kansas City, Missouri, had introduced a non-dairy coffee creamer named Mocha Mix (containing soy protein) in 1950, although Rich was not aware of it. But Rich’s product was the first frozen liquid non-dairy creamer. The original Coffee Rich used coconut oil and contained no protein, being based on the 1953 patent formulation. The lack of protein gave the product a long shelf life when sold refrigerated in dairy cases, as was planned. But the product started settling out, so the company switched to using soy caseinate as a protein source, then in about 1963 began using soy protein (typically about 0.75% by weight) as the main protein source. In the mid-1970s soy oil replaced half of the coconut oil, then later in the 1970s all of it. The dairy industry spent a small fortune trying to keep Coffee Rich off the market. Its fight against Whip Topping had been short lived largely because heavy whipping cream (of which little was sold and lots spoiled) was not a big money maker for milk dealers and dairies. But cream was the “bread and butter” of the dairy industry, and it girded to fight in state after state to the bitter end. In some states dairy interests claimed Coffee Rich was an “imitation cream” and hence against the state law; in others they claimed it was mislabeled because the words “imitation cream” did not appear on the label. The first lawsuit was in Louisiana in 1961. Rich Products won in a one-day trial. The defense was exactly the same as it had been for Whip Topping. Coffee Rich was a replacement, not an imitation. Angered by this defeat and hoping to break Rich by exhausting his financial resources on court cases, dairy interests had Coffee Rich seized in Virginia, Michigan, and Washington. But the former college wrestling and football star wasn’t easily downed. He parried by persuading the Carnation Company (which sold Coffee Mate, a powdered caseinate-based coffee whitener) to split all forthcoming legal fees. Two or three years later General Foods joined the non-dairy defense fund. Their Birdseye Division sold Dream Whip, a powdered whip topping, and later the famous non-dairy Cool Whip. Now all legal fees were split three ways. Dick Borne of RGB Labs says they were sharing expenses too before the association was formed, and the General Mills case came in after. At about this time (in 1968) the group finally established the National Association for Advanced Foods, to defend the rights of non-dairy products and to be sure that no small companies went off half-cocked and lost precedent setting lawsuits. Ellis Arnall was the Association’s first director; they charged annual dues plus assessments and took in new members. The many trials continued to be fought in the name of Rich Products Corp., since it had prestige. In the 1960s a small company selling Instant Blend, a non-dairy creamer or topping, after deciding to defend itself, lost its lawsuit 7-0 in the Massachusetts supreme court. They were kindly permitted to continuing selling the product as long as it was distinctively colored–blue! The dairy industry gloated. A year later Rich Products deliberately sold Coffee Rich in Massachusetts so that it would be seized. Their case also went to the state supreme court, but this time Rich’s team of seasoned attorneys won... 7-0! By 1966 some 15 consecutive court decisions had ruled in Rich’s favor, though five of these went as far as the state supreme court. By 1974 the number of cases and victories for Coffee Rich had grown to 40. That year the Kansas Supreme Court declared Coffee Rich “a new and distinct food” and the milk lobby gave up. Rich Products’ success in these suits led to the creation of a new food product category: Coffee whitener. Coffee Rich was the company’s third product to contain a significant amount of soy protein. But Rich did not especially promote the fact that
his products contained soy on the labels or in advertising, though he often discussed it with reporters. The company initially bought its isolated soy protein isolates for Coffee Rich from one or more of the big manufacturers (Central Soya, ADM, or Glidden). In the mid-1960s a powdered Coffee Rich was developed. In about 1965 Rich Products stopped using soy protein in its retail Whip Topping and switched over to the non-protein formulation adopted for institutional use in 1953. At about that time, company stopped making isolated soy proteins. By 1967 Bob Rich had built Wilber Farms Dairy into the largest solely owned, independent milk company in America. That year he decided to sell it and get out of the dairy business. Rich Products (whose plant was now 140,000 square feet) was doing well enough with non-dairy products to support him amply. In 1969 Bob Rich’s oldest son, Robert Rich, Jr., started to work at the company’s Buffalo headquarters as sales manager. After graduating from Williams College in 1963, he had run the Rich Products plant in Fort Erie, Ontario, Canada. After setting up the company’s first marketing department in Buffalo, he embarked on a bold program of acquisitions, based on the observation that Rich Products then had more frozen food distributors than any other frozen food packer in the USA. Company sales in 1969 were $33 million. The first acquisition, that year, was the Elmtree Baking Co. in Appleton, Wisconsin. Sales began to rise by leaps and bounds. The 1970s. In 1975 food sales from Rich Products and affiliates had topped $100 million a year. That year the company was awarded the National Frozen Foods Convention’s first Grand Award, for “achievement in developing the frozen food industry...” and for his “pioneering work in researching and popularizing simulated frozen dairy products” (Quick Frozen Foods 1975). In November 1978 Rich Products launched an exciting new product and a revolutionary new process. The product was Bettercreme, a non-dairy icing that whips and is used primarily on cakes. It contained an enzyme-modified isolated soy protein (made perhaps by A.E. Staley’s Gunther Products) (Continued). Address: Chairman of the Board, Rich Products Corp., P.O. Box 245 (1150 Niagara St.), Buffalo, New York. Phone: 716-878-8000.


• Summary: Continued. The process was Freeze Flo, a dramatic processing breakthrough that was “first used to make Bettercreme. Freeze Flo makes it possible to use a frozen food without thawing it. By eliminating the need to thaw, Freeze Flo quickly began to change the very concept of frozen foods. The process, invented by Marvin L. Kahn (who worked with a company Rich acquired), replaces free water in a product with water bound to fructose or other natural sugars in the product. Binding water in a product (such as a fresh or dried fruit) it does two things: (1) It eliminates a medium for bacteria to grow, so that spoilage is greatly retarded, and (2) it makes it impossible for ice crystals to form. Rich Products soon had high hopes that Freeze Flo might become the most revolutionary development in this field since Clarence Birds Eye froze his first fish in 1929.

In 1978 Bob Rich Jr. became president of Rich Products. His father retired but remained chairman of the board and chief executive officer, and his brother, David, was head of the public relations department.

The 1980s. By the early 1980s Freeze Flo had already become very popular in Europe, some exciting medical applications were being investigated. By 1983 Rich Products was using the Freeze Flo process to make many of its “Fresh ‘n Ready No Thaw Desserts,” including Grand America (a dairy ice cream), Fresh ‘n Frosty (a mellorine, resembling ice cream but with the butterfat replaced by soy oil), the fillings for chocolate eclairs, Bavarian cream puffs, creme pies, cakes, and cheesecakes—also as well as Bettercreme. It was billing this “gentle freezing process” as “the most significant breakthrough in Frozen Foods in 50 years.” Because of Freeze Flo, the ice cream and mellorine, both introduced in 1983, could rise in temperature to 5º above zero without defrosting; typical ice creams defrost at 20º below zero. But Freeze Flo is not used to make some other of Rich’s products, such as frozen fish and meat balls (Rich Products 1983; Owen 1983).

In the late 1970s Rich hired Mike Billoni, a local sports reporter, to write a company history. It was to be titled 35 Years Below Zero and published in 1980 to commemorate the company’s 35th anniversary. But so many exciting things began happening with Freeze Flo that Rich postponed publication and is now hoping that it will eventually be the first chapter in a longer work. The company also maintains a large scrapbook that goes back to the founding in 1944.

In 1985 Rich Products, still privately owned, was the world’s largest maker of non-dairy products, with sales of $545 million a year. Roughly 75% of Rich Products’ sales were to foodservice organizations, and 25% to retail consumers. Starting in 1972, I.D. magazine picked Rich Products for 12 out of 13 years as the outstanding frozen foodservice packer in America. The most popular retail products (in descending order of sales) were Coffee Rich, Rich’s Frozen Chocolate Eclairs, and Rich’s Donuts. A little of Rich’s Whip Topping is sold retail in pressurized containers. Rich Whip Topping, a beat-it-yourself liquid, sells well only in Milwaukee and Minneapolis.

From the 1970s on, the only two of Rich’s products contained a significant amount of soy protein: Coffee Rich and Bettercreme. Of the two, Coffee Rich used the larger amount in total annual tonnage. The company bought its isolated soy proteins from Ralston Purina. But as of 1985...
Rich Products was seriously considering at least one product that would get the company much more actively involved with soy protein. It is still on the drawing boards, so details are not yet available.

There are two basic types of coffee whiteners or coffee creamers: Powdered and non-powdered. Coffee Rich is the only non-powdered coffee whitener that is distributed nationally. It has an estimated 90% of the branded, non-powdered market.

In 1985 Robert E. Rich Sr. recalled: “In the frozen food business, my heart has always been in the non-dairy segment of it. I always figured that was my baby. That’s what put our company on the map. . . Its always interesting to recall the early days of the soybean business. I foresee a steady growth in that area” (personal communication) (Continued).


• **Summary:** RGB Labs is a sister company of Presto Food Products, 1602 Forest St., Kansas City, Missouri 64108. Presto Food Products did early work using isolated soy proteins in non-dairy products. Founded in June 1936 by Melvin S. Morse in Kansas City, Missouri, the company acquired a franchise from the Instant Whip Company in Columbus, Ohio, to make Instant Whip, an aerosol dairy whipped cream. For details, see Shurtleff & Aoyagi. 1985. *Tofutti and Other Soy Ice Creams*. Address: RGB Labs, 1531 Charlotte St., Kansas City, Missouri 64108. Phone: 816-474-3342.


• **Summary:** Dale went to work for Glidden in 1948. The following people worked at Glidden: Walter Bain, Sidney Circle (who now has Parkinson’s disease), Andy Engstrom, Art Levinson (who was with Spencer Kellogg & Sons in the 1920s and 1930s before coming to Glidden), Willard C. Lighter, Ed Meyer, Joseph Rakosky. People who worked at Central Soya before Central shut down their food labs in early 1949: Louis Sair who went to Griffith Laboratories, Ken Gunther who founded Gunther Products, and E.B. Oberg who went to Glidden and then Carnation.

Industrial soy protein isolates really started commercially in about 1934. They were originally used mainly as coatings for paper, but some were used in paints, shoe polish, and other miscellaneous uses. Procter & Gamble started making industrial soy protein isolates in the late 1930s or early 1940s; they made an isolate that went into Spic and Span, a wall cleanser. The isolate served both as a good detergent and to give a coating to a painted wall to make it easier to clean the second time.

Also discusses Promine D, Amisoy, Ralston Purina, Pillsbury’s work with soy isolates, Picot Laboratory in Mexico, General Foods, Pillsbury, Morel, Sidney Circle’s move to Anderson Clayton in 1967, why Central Soya sold its isolate business to ADM, the story of how Glidden developed soy protein concentrate (first commercialized as Promosoy by Central Soya in the early 1960s), first big sale of Promosoy in the early 1960s to Mead Johnson for use in their Metrecal Wafer (it was not used in liquid Metrecal), Central Soya’s concentrate plant at Gibson City, Illinois, Henry Ford’s researchers who did the pioneering work in whipped toppings, especially Rex Diamond who eventually went to Rich Products and ended up committing suicide, and Bob Smith who went to Delsoy, Bob Boyer and Francis Calvert went to Ralston Purina, Bill Atkinson went to ADM, Jim Liggett at Central Soya developed Rich Freeze (a soy ice cream). Address: Food Ingredients (Minnesota), Inc., 2121 Toledo Ave. No., Golden Valley, Minnesota 55422. Phone: 612-588-9456.


• **Summary:** Presto Food Products was a pioneer in using isolated soy proteins in non-dairy products. Founded in June 1936 by Melvin S. Morse in Kansas City, Missouri, the company acquired a franchise from the Instant Whip Company in Columbus, Ohio to make Instant Whip, an aerosol dairy whipped cream. Sold to the restaurant trade, this was Presto’s sole product until 1949. In 1937 Morse started a second plant in Los Angeles. The years of World War II were hard ones, with dairy products in short supply. When the price of butterfat skyrocketed right after the war, Morse asked Dick Borne, an employee in Los Angeles with a background in pharmacy, to develop a line of non-dairy products. Borne and Morse started RGB Laboratories in Kansas City, Missouri, and Borne set to work. A key early innovation was a method (still secret) of reducing soy off-flavors. In 1949-50 Presto in Kansas City introduced the company’s first non-dairy product, an aerosol whip topping sold to the restaurant trade in a returnable pint can. In 1950 they brought out Mocha Mix Coffee Creamer, America’s first such commercial non-dairy cream replacer, and in 1951 D-Zert Whip Topping. In 1951 Rich Products won a lawsuit in California allowing them to sell Rich’s Whip Topping in that state; Morse was in the audience at the suit. Shortly thereafter Presto/California began to make the same products.
as its Kansas City Division was making. In 1957-58 Presto stopped producing dairy products, focusing only on non-dairy.

In 1964, after 9 years of R&D by RGB Laboratories, Presto Foods launched America’s second commercial soy ice cream. Called Affair, it was a delicious product made for Presto by Swift & Co. at their kosher supervised ice cream plant, using soy protein from Central Soya and coconut fat. Targeted primarily to the kosher Jewish market in New York, it was kosher pareve and came in chocolate, vanilla, and strawberry flavors. The demand for the product was there but Presto had great difficulty getting it distributed. The ice cream distributors wouldn’t touch it and Presto did not have their own distribution. So it failed and was withdrawn after about a year. In 1965 Presto licensed Nissei Co. in Osaka, Japan to make their soy ice cream, which Nissei was still doing in 1985, although at some point they changed the protein source from isolated soy proteins to casein. It was not until 1981 that Presto Foods tried to introduce a frozen dessert again, this time with Mocha Mix Non-Dairy Frozen Dessert (Borne 1985, personal communication).

In 1959 RGB Laboratories had licensed a small company named Nutritional Food Industries in Wallington, New Jersey, to manufacture Mocha Mix Non-Dairy Creamer and D-zert Whip Topping, using a concentrate produced by RGB Labs. The company was owned by three men, one of whom was named Seymour Heller. The franchise with Nutritional Foods did not work out, so RGB Labs bought the company in the early 1960s, took it over, and lost a lot of money on the deal. Heller signed a five-year non-compete agreement. Thereafter, in 1970, he formed a new company, Heller Enterprises, and launched a line of similar, competing products.

In October 1981 Presto Food Products of Los Angeles introduced Mocha Mix Non-Dairy Frozen Dessert. Now one of America’s leading makers of pre-whipped non-dairy toppings, Presto also made the popular Mocha Mix Non-Dairy Creamer, a cream substitute based on soy protein. Mocha Mix Non-Dairy Frozen Dessert, which was free of milk products and cholesterol, and low in saturated fats, was not targeted to the natural food trade since it contained a number of artificial ingredients. Now Presto had its own distribution system and the product’s cholesterol-free, polyunsaturated attributes were widely recognized as a nutritional plus. It sold well from the outset, primarily in supermarkets in California and Arizona; it was the first product of its type to become widely available in West Coast superstores. While the company does not disclose sales or production figures, and distribution is confined to only two states, Mocha Mix may well be second only to Tofutti in total volume nationwide. Sales are thought to be 2-3 times larger than Ice Bean, and are in the millions of dollars per year.

The main soy ingredient in Mocha Mix is isolated soy proteins. The price of a hard pack quart of Mocha Mix, made in Los Angeles and sold in California supermarkets in 1984 averaged $1.99, which was twice as expensive as the least expensive dairy ice cream, but only 40% as expensive as Tofutti. In terms of nutritional composition, Mocha Mix was very low in protein (less than 1 gm per 4 fluid ounce serving), and fairly low in fat (7 gm per serving; 48% of calories from fat).

Note: This is the earliest document seen (Jan. 1999) that uses the term “cream replacer.”


• Summary: Henry “Ford’s researchers did much of the important early work with non-dairy products in America, but there was no attempt to commercialize them. In the 1930s [Robert] Boyer [plus Bob Smith] and co-workers made America’s first experimental whip toppings, coffee creamer, and most other dairy analogs from soymilk. The pioneering work with whip toppings played a key role in the future development of soy ice creams. By Aug. 1935 Henry Ford was serving soy ice cream for dessert at VIP and press luncheons held at the Ford Engineering Laboratory. Until the 1940s Ford’s tofu ice cream remained an experimental food, meant to demonstrate the good taste and versatility of soy. When Ford’s soybean researchers finally left the Ford Motor Co. in the early 1940s, when World War II forced Ford to abandon his soybean research, they took what they had learned to a number of pioneering companies that launched successful products. Thus Ford was the fountainhead of commercial soy ice creams in America (R. Boyer 1981, 1985; Dick Borne 1985; Bob Rich 1985, personal communications; Dahlinger 1978).”

“For a while during World War II, the Ford Motor Company, as a result of Henry Ford’s interest in soybean products, sold soybean ‘ice cream’ in its cafeterias. All the usual milk ingredients of ice cream were replaced by soy ingredients” (M.L. Anson 1958, p. 281).

“Robert E. Rich had owned a milk retail and distribution company since 1935. During World War II he was a milk order administrator for the War Food Administration in Detroit, Michigan. One day in 1943 he heard that Henry Ford’s researchers had developed a soymilk plant and were producing all the milk they needed for Henry Ford’s hospital during this time of milk rationing. Rich visited the Carver Laboratory (named after Dr. George Washington Carver) at Henry Ford’s Greenfield Village in Dearborn (Bob Smith and Rex Diamond were top researchers on the project), studied the soymilk process, and was impressed. Sales of whipping cream were forbidden during the war; Rich began to dream of developing a whipped cream made out of “soy cream”
or soy proteins. In 1944 he founded a company named Rich Products Corporation in Buffalo, New York, to make non-dairy foods. The company’s first product was Rich’s Whip Topping, a non-dairy whipped cream, made from isolated soy proteins that were produced from soybean flakes at Rich’s plant. It was introduced on 30 March 1945, a little more than one year after Delsoy [the first soy-based whipped topping] had been introduced... It has grown in popularity over the decades and was still a best-seller in 1985."

“In the early days, Rich’s got O-U kosher certification. By about 1946-47 kosher Jewish catering services in New York City (and soon thereafter housewives) had discovered that Rich’s Whip Topping, so similar to real whipped cream in texture and flavor, could be used to make a completely new type of non-dairy frozen dessert. These were America’s first such desserts based on isolated soy proteins. Soon an estimated 5-10% of Rich’s sales of whip topping to the foodservice market were being used by other companies to make non-dairy kosher ice creams. Rich’s followed this lead and in about 1951 unveiled Chil-Zert, the world’s first isolate-based commercial non-dairy frozen dessert having a registered trademark.”

In short, Chil-Zert was the world’s first commercial soy ice cream. Unfortunately, however, due to various problems, Chil-Zert was discontinued in 1952. By the mid-1980s Rich Products was the world’s largest manufacturer of non-dairy products, with sales of $500 million a year. (Quick Frozen Foods 1955, 1975; Rich Products Corp. 1983; Robert E. Rich and Robert Boyer 1985, personal communications).


• Summary: Gunther Products Inc. was founded by J. Kenneth Gunther in 1949. He received a degree in biological chemistry at the University of Illinois in 1946, then worked briefly as a researcher at Swift & Co. in Chicago. In September 1944 he was offered a job by Central Soya Co. as director of their Central Research Laboratory; there he began his first research work with soy proteins.

Before he arrived, Central Soya had done work on developing a whipping agent from soy proteins. They hired an egg albumen expert from Armour & Co. named John R. (“Ray”) Turner to sell the product, but it didn’t sell well because of its poor quality. Though not trained as a researcher, Turner was nevertheless technically inclined and very curious. He did some experimental work to improve the product and made several key discoveries, including the first successful use of enzyme hydrolysis of proteins with pepsin to make a whipping agent. In May and October of 1945 Turner applied for patents on his inventions; these were granted in 1949 and 1950 (U.S. Patent 2,489,208 and 2,520,581). In June 1946 Turner wrote an article in The Manufacturing Confectioner about “soy albumen,” which had come into demand as a result of scarcities during World War II.

At Central Soya Ken Gunther also conducted research on whipping proteins made from soy protein. There he and Louis Sair improved on Turner’s original, landmark patent invention. Like Turner, they hydrolyzed the soy proteins with pepsin, but they also separated and removed much of the insoluble protein from the solubles and added a little sodium chloride, giving a more concentrated whipping agent with greater whipping strength. On 6 June 1947 Raymond S. Burnett and James K. Gunther applied for a U.S. patent on this improved process for making soy albumen. The patent (No. 2,489,173) was granted on 22 Nov. 1949–before either of Turner’s patents were granted!

Whipping agents and whip toppings are very different soy-based products. The whip toppings, such as Delsoy or Rich’s Whip Topping, had a high fat and moisture content (about 35% fat, 55% water, and 10% sugar), and were used in place of whipping cream; they used a small amount of sodium proteinate that was not enzyme modified. Whipping agents or “soy albumen” type products, by contrast contained no fat, were modified (hydrolyzed) with enzymes, and were used in place of egg whites.

In the late 1940s Central Soya’s founder, D.W. McMillen, forecast a huge depression. In early 1949 he fired most of his research staff, including Gunther. The outbreak of the Korean War in mid-1950 revived the U.S. economy so that McMillen’s predicted depression was aborted.

In the summer of 1949 Ken Gunther founded Gunther Products in his home town of Galesburg, Illinois, where his family still lived and owned property. He purchased an exclusive license from Central Soya to manufacture enzyme-modified non-fat isolates under their patent. He paid license fees of 4% on sales for the next 14 years. Gunther Products bought food-grade soybean flakes (containing about 50% protein, also used in making soy flour) from A.E. Staley Mfg. Co. and from ADM. The main uses of Gunther’s whipping proteins were in confectionery products, especially nougat-like or marshmallow-like nougat candies. The maker of Mars Candy Bars was one big customer. Most of the rest was used in icings and as an ingredient in a sponge cake mix (which sold very well in Australia). Lever Brothers was interested in Gunther’s products for 2-3 years.

In 1969 Gunther Products was sold to the A.E. Staley Manufacturing Co. Ken Gunther, who was 62 years old at the time, needed $750,000 to expand his plants to meet demand and Staley was very interested in getting into this kind of soy protein business. Before that time Staley had done almost no research on soy protein foods in their huge laboratories—except for a little work on soy flour during World War II. Ken stayed on to run the business (which continued to be very successful), retiring in about 1973. Address: Gunther Products, 701 W. 6th St., Galesburg, Illinois 61401. Phone: 309-342-0119.

• Summary: Gives the patent numbers of 5 early soy patents and numerous recent Freeze Flo patents. Address: L.H.D., Administrative Vice-President, Rich Products Corp., P.O. Box 245 (1150 Niagara St.), Buffalo, New York 14240. Phone: 716-878-8000.


• Summary: Bob checked his records and found that government restrictions on domestic use of whipping cream and whipped cream were lifted in Nov. 1946. This “is evidenced by the fact that in Oct. 1946 we [Rich Products] sold 812,785 half pints of whip topping; in November sales dropped to 457,528 which is proof that the restrictions were lifted some time in November. Our sales declined further to 109,992 in Dec. 1946. The December 1946 Soybean Digest story must have been written during the early part of October when we were running at full tilt.”

“Mrs. Maurer is compiling a sizable packet of material pertaining to the early days of manufacturing at Rich Products; included with this information is a letter that I asked Marvin Kahn, our Director of Research, to send to you pertaining to patents that were issued to us in our early days as well as patents that we are now working under.

“After you have received the packet of information, if there is any clarification that you need, please drop me a note.” Address: Chairman of the Board, Rich Products Corp., P.O. Box 245 (1150 Niagara St.), Buffalo, New York 14240. Phone: 716-878-8000.


• Summary: In response to letter for March 20 she encloses: 1. Copies of articles from various publications. 2. Glossy prints of old photographs. 3. Old promotion materials. 4. Old advertisements and press clippings. 5. A copy of the manuscript Thirty Years Below Zero (a book which was never published). ‘The glossy black-and-white photos (most undated, but probably from the mid-1940s) include: (1) An attractive lady in a black dress and high heels standing behind a table in a Rich’s Whip Topping booth at a trade show. An oval sign reads: “Costs less. Tastes better.” (2) Another booth for Rich’s Whip Topping. (3) A man’s hand holding an aerosol can of Rich’s Whip Topping. Written across the bottom: “Always Fresh!” (4) The same can standing upright. (5) A lady in a white dress standing behind a table in a Rich’s Whip Topping booth in Los Angeles, Oct. 1946.

(6) Three containers in one photo: (1) A small aerosol can of Rich’s Whip Topping–Contains no milk or Milk Fat! (2) A tall Pure-Pack carton of Rich’s Whip Topping. A small aerosol can of Sundi-whip–Fountain Topping. Address: Asst. Secretary, Rich Products Corp., P.O. Box 245 (1150 Niagara St.), Buffalo, New York 14240. Phone: 716-878-8000.


• Summary: Bob Smith developed a whipped topping while working in a laboratory for Henry Ford. Smith then built a plant in the old Livonia Dairy on Telegraph Road at Harvard in Dearborn; its initial capacity was about 1,000 gallons per day. Across the front, in large raised concrete letters, we read: “Delsoy Products Corporation.”

In April 1951 Bob Smith was President, Delsoy Products, Inc., 1847 S. Telegraph Rd., Dearborn, Michigan

Note: This photo was sent to Soyfoods Center, with permission to use in this book, by Dick Folsom in Feb. 1992.

335. Worthington Foods, Inc. 1985. June. Tofu Topper (Spread or Potato Topping) [Herbs & Spice Pate, Pepper & Onion Pate, or Spicy Mexican Pate]. 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.

**Summary:** The company receptionist answers the phone “Tofutti-All-Rootie.” “Thank God, I’ve been blessed with taste buds that like what the masses love.” New products? “Next comes tofu jogger, an instant breakfast soy drink. In the future, consumers can expect to see soy-based chocolate and vanilla pudding, potato topping, onion dip, tofu cultured non-dairy yogurt, tofu whipped cream and pancakes... His personal Mount Everest is a tofu burger... To meet the question, ‘Has New York gone totally Tofutti?’ causes a staid board of directors meeting to erupt into frenzied dancing to ‘Tofutti-All-Rootie,’ which sounds a lot like Little Richard’s 1955 hit ‘Tutti-Frutti.’”

A large photo shows David Mintz, behind many of his products, holding a Tofutti bar on a stick.


**Summary:** Part I describes ADM’s daily work. “ADM. Where the people who feed the world buy their groceries.” Pages 8-9 note: “We unlock the protein inside the soybean.”

Contains color photos of many soy products including Protovel Vegetable Goulash, and Betty Crocker Hamburger Helper (p. 1), Similac (p. 7), ProSobee, Rich’s Coffee Rich, Betty Crocker Bac*O’s, and Protovel Sizzles (p. 9), Tofutti (p. 15).

Part II, an insert in the portfolio, is the annual report financial data (34 pages). Net sales and operating income: $4,738,767,000. Net earnings: 163,908,000. Total current assets: $1,367,826,000. Total current liabilities: $328,822,000. Address: Decatur, Illinois.


**Summary:** “World Premiere! Israel introduces Eternity. The world’s first all-vegetable ice cream parlor. A futuristic concept in healthful eating. What is all-vegetable ice cream? Eternity is a rich, creamy, delicate ice cream made fresh daily from calcium-rich soybean milk that has: No cholesterol. No salt. No dairy products. No preservatives. It’s Pareve!! We use only the sweetest seasonal fruits, richest tehina [sesame tahini], quality brown sugar, and all natural flavorings. We even have our own Eternity whole wheat ice cream cones! In addition to our calcium-rich soybean ice cream, we also serve tantalizing soybean tofu cuisine—created from soybean milk and prepared in a variety of ways. We offer flavorful rich tofu cream pies; pungent tofu cheeses; smooth, sweet tofu puddings; tasty tofu yogurt; and mellow tofu cottage cheese. Enjoy Eternity all-vegetable ice cream and tofu entrees. We know once you have tried them you will be a friend for Eternity!”

Note: This is the earliest document seen (Sept. 2012) that uses the term “tofu yogurt” to refer to soy yogurt. Address: Tel Aviv, Israel. Phone: 03-363674.


**Summary:** This is perhaps the best, most comprehensive book seen to date by Aveline and Michio Kushi about the macrobiotic diet. The rear cover states:

“Humanity has been continuously degenerating in spite of scientific and technological achievements. This degeneration is reflected in physical disorders, psychological disorders, and general distrust in human relations. Since diet affects our physical and psychological functions, macrobiotics strives to change our health and behavior through a proper diet in harmony with the environment in which we live.

“This book is a basic and readable presentation of the principles behind the macrobiotic diet. It explains the foodstuffs that comprise the diet, appropriate cooking techniques, proper attitudes toward food and its preparation, and applications of the diet for weight loss, increased energy, relief from and prevention of sickness, and encouragement of psychological health, spiritual development and social stability. Dietary adjustments and modifications are given for men, women, and children, as well as differing climates, levels of activity, and ages.”

Macrobiotics, which originated in Japan, has done much to introduce Westerners to soyfoods. This book is an excellent example: The chapter on “Soup” has a long section on miso soup (p. 99-101, 104-05) and the main varieties of miso: Barley miso, soybean miso (Hatcho miso), brown rice miso, light misos, and natto miso (a spicy condiment not usually used in soups).

In the chapter on “Vegetables,” the section on “Pickling” has subsections (p. 118-19) on “Tamari soy sauce pickles” and “Miso pickles.”

In the chapter on “Beans and bean products” is a long section on “Soybeans” (p. 141-49) which includes an introduction (discusses the “vegetable soybean” vs. “field soybean”) and descriptions of miso, natto, okara, soy flour, soy grits, soy milk, soy oil, tamari soy sauce, tempeh, tofu (incl. nigari, oden, Yu-dofu, aburage, inari-zushi), viilia (somewhat like soy yogurt from Finland), and yuba.
The subsection on “Soybeans” (for example, p. 147) states: “Yellow soybeans are hard and require thorough cooking. They should be soaked overnight with a strip of kombu and then pressure-cooked for a short time prior to boiling. Properly cooked, yellow soybeans are very soft and delicious and give no problems with gas. A delicious dish called Colorful Soybean Casserole is made from yellow soybeans, kombu, shiitake mushroom, lotus root, dried tofu, daikon, carrot, burdock, and celery. The yellow variety also goes very well served with hijiki sea vegetables. Black soybeans, also known as Japanese black beans, have a strong, delicious taste. They may be prepared plain or cooked with rice. To sweeten black soybeans, a little barley malt, rice syrup, or mirin is often added. Black soybeans are usually cleaned by rubbing with a damp towel to prevent their skins from falling off under water. During cooking, some of the skins from these beans may float to the surface and should be skimmed off. Foam also arises and needs to be discarded. Yellow soybeans are nice seasoned during cooking with a little tamari soy sauce or miso. Black soybeans are usually seasoned with tamari soy sauce.”

The chapter on “Snacks and desserts” has a good section on Amazaké (p. 190, 196) and also notes: “In the West, the introduction of tofu has resulted in the creation of many tofu-based desserts such as tofu cheesecake, tofu ice cream, and tofu whip topping. In the Far East, however, tofu is not traditionally combined with barley malt, rice syrup, or other sweetener. It is recognized that tofu’s cooling qualities are naturally balanced by a salty taste, not a sweet one. As a result, tofu is customarily cooked and served warm, rather than prepared raw or eaten cold, except in special cases for cooling and refreshment, usually in the hot summer. The macrobiotic diet does not encourage the use of tofu in sweetened desserts except for those in transition from dishes made with dairy food and sugar.”

The chapter on “Salt, oil, and other seasonings” includes sections on tamari soy sauce (p. 203-04, 209), miso (p. 204, 210-11), and soybean oil (p. 207).

The chapter on “Dressings, sauces, garnishes, and condiments” includes sections on “Dressings” (p. 215-16, with tamari soy sauce dressings, umeboshi dressings, miso dressings, tofu dressings, sesame dressings), “Condiments” (p. 216-17, with gomashio or sesame salt, sea vegetable powders, tekka, umeboshi plums, miso with scallions or onions, etc.).

The chapter on “Beverages” has sections on amazake and soy milk (if naturally processed, good for those in transition from cow’s milk and other dairy foods).

This book also contains a wealth of information (see the index) on such varied foods as azuki beans, barley malt, brown rice, kuzu, sea vegetables (many species), sesame seeds and sesame oil, umeboshi, etc.

Note: The macrobiotic diet is not vegetarian; it allows the inclusion of fish and seafood (see index). Address:

Brookline and Becket, Massachusetts.


• **Summary:** The company is coming out with “Moms and Pops,” frozen Tofutti on a stick, and a non-dairy coffee creamer with tofu and without all the chemicals. Mintz is also busily working on a cookbook featuring tofu recipes.

Address: Staff writer.


• **Summary:** To soymilk is added glucose/dextrose and 10,000 living organisms of Saccharomyces cerevisiae per ml. The milk separates into curds and whey; the curds have no beany flavor, but rather a subtle alcoholic flavor. Details of the study are presented in the journal Nihon Kogyō Gakkai-shi.


• **Summary:** Contents: Explanatory memorandum on the designations used in the marketing of milk and milk products: Issued by the EEC Commission on 20 May 1986. Introduction: General: Definitions (milk products [milk, milk products, composite products], imitation and substitute products), list of imitation products. Market for imitation milk and milk products: Factors influencing the market, market situation, commentary and forecasts. Labelling/publicity. Conclusions.

Concerning the market situation: (a) “Cheese imitation: the UK market for these products was estimated at 2,000 tonnes/year or 0.8% of the 240,000 tonnes of UK natural cheese production in 1981. The substitute products were mainly used in formulated foods as a replacement for imported cheese.”

“In the USA imitation cheese is presenting increased competition for natural cheese. In 1980 it accounted for available reports differ—either 73,000 tonnes (4.2% of total cheese production) or 95,000 tonnes (5% of total cheese production) or up 150% from 1978.  

“The major uses of imitation cheeses are in the production of frozen pizzas and school meals. Increased consumer acceptance of these products is explained in particular by their lower prices. A market forecast estimates the annual growth rate at 6.8% and sales for 1988 at 135,000 tonnes. Another market forecast for the USA suggests that by 1987 imitation cheese products could hold 15% of the
343. Quong Hop & Co. 1986. March. The Soy Deli Cottage Salad (Tofu-Based Non-Dairy Cottage Cheese). P.O. Box 78 084, 1 Wallingford St., Grey Lynn, Auckland, New Zealand. 


Note: This report is contained within an undated 1987 booklet titled “Soymilk Versus EEC Legislation,” published by STS–Soya Technology Systems. It is also summarized in the April 1987 edition of Soyfoods (ESFA). 1(2):11-17. The full bibliography of 17 references is included. Address: Brussels, Belgium.


• Summary: About David Mintz and Tofutti. Mintz, who was born in Brooklyn, comes from a long line of bakers. He got his start in the food business at age 28 when he ran a small take-out gourmet shop in Brighton Beach.

Today, a age 54, Mintz lives in Alpine, Bergen County, New Jersey. A suburb of New York City, it is located 15 miles northwest of Midtown Manhattan.

Note: In 2012, Forbes ranked Alpine as America’s most expensive ZIP code with a median home price of $4.25 million.

Mintz is now at work on meatless meatballs, eggless quiche, nondairy creamers, and cookies without butter or milk. All these products contain tofu, that “spongy white substance made from soybeans,” that can be used as a high-protein, cholesterol-free alternative to dairy products to make all sorts of food.

A huge photo shows David Mintz, wearing large sunglasses, holding up two pint cartons of Tofutti. Address: Correspondent.

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In Switzerland the Union Fromagere estimates that exports of Swiss cheese fell by 6.5% per year between 1982 and 1983 due to sales of imitation Emmentaler, Gruyere and Sbrinz on many major European markets.

“In Sweden it was reported in 1984 that imitation cheese products accounted for 2.5% of the cheese market.

“(b) Yellow fats: A report on the UK market for 1983 states that, in volume terms, butter accounted for 36% of the yellow fats market, compared with 64% for margarine and low-fat spreads...

“(c) Soya milk: In the United Kingdom, sales of soya milk increased fivefold to total UK£3.5 million and estimates are that sales could reach UK£20 million by mid-1988.

Taking the retail price at UK£0.64 per liter, these values correspond to 5,600 tonnes of soya milk for 1984 and 32,000 tonnes projected for 1988. (d) Coffee whiteners and artificial creams: A report dating from 1979 stated that these products accounted for less than 1% of condensed milk and cream consumption. In Denmark a report dating from 1979 stated that they account for 3% of the market in cream.”

Note: This report is contained within an undated 1987 booklet titled “Soymilk Versus EEC Legislation,” published by STS–Soya Technology Systems. It is also summarized in the April 1987 edition of Soyfoods (ESFA). 1(2):11-17. The full bibliography of 17 references is included. Address: Brussels, Belgium.

In 1971 Mintz read about tofu in a health magazine... For the next 10 years he spent all his free time creating Tofutti. ‘It was a whole new world. It became an obsession.’ Today more than 38,000 outlets in all 50 states carry the product. It is also sold in Canada, Australia, Korea, Hong Kong, and the U.S. Virgin Islands. Recently he developed an ‘egg’ without cholesterol called ‘Eggwatchers’ and a coffee whitenier without milk.”

An estimated 60,000 tonnes of imitation products are consumed today in the EEC. A French law of 24 June 1934 prohibits in France the production, sale, import, or export of all products that imitate cream, cheese, powdered milk, condensed milk, ice cream, etc. The French Ministry of Agriculture still supports this law and demands strict regulation of imitation dairy products. The European Commission’s position advocating free trade and freedom of choice for consumers was first set forth in the spring of 1984 and upheld in April 1986. The regulation of imitation products within the EEC varies widely. Belgium is the most liberal. The UK and Ireland allow these products but place emphasis on labeling. Denmark, Germany (RFA) and the Netherlands are opposed to imitation products but make

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allowances for things like coffee whiteners. Italy and France are not much concerned. France and Luxembourg prohibit them firmly.

But it is difficult to define exactly what products are imitations. The problems started in 1869 when the Frenchman Hyppolite Mauries [sic, Hippolyte Mège] was issued a patent for margarine. Soymilk (“lait de soja,” a term which is clearly a misnomer) is one of the clearest imitation products; 9-10 million liters were consumed in the EEC in 1983. This is not much compared with 30,000 million liters of cow’s milk. Tofu can be used as a substitute for meat and fish. An estimated 5,000 tonnes are consumed yearly in the EEC, not much, but the market seems to have a promising future in part due to tofu’s excellent nutritional properties. Yet it can also be used in place of milk and cheese. The main tofu makers in France are Sojadoc and Soy (in Cerny). Soy uses soybeans grown organically in southwest France. Labels of 3 of Soy’s products (Croque Tofou in Leek/Ginger, Mushroom, and Emmential flavors) are shown. In the USA the tofu market is making rapid progress, growing at 15-20% a year and having 181 producers.

Coffee whiteners are also a problem. In the USA 100,000 tonnes are made. In the UK, Carnation has 80% of the market and is the sole producer in Belgium. In the UK production has grown 20% a year, from 2,850 tonnes in 1978 to 6,700 tonnes in 1984. Still another problem is imitation cheeses. In the USA in 1984 they represented more than 5% of the total cheese market, estimated to grow to 12.5% by 1990.

Little by little soy-based imitation products are gaining ground. Recently soyfoods producers have organized the European Soyfoods Association to defend their interests against unfriendly regulators. They held a conference at Dravail on 13-14 March 1986. The association is headquartered in Paris and Philippe Vandenmoortele of Alpro is its head. Its secretary general is Guy Coudert, director of communication and marketing at ONIDOL, the French national interprofessional oilseeds organization (Organisation Nationale Interprofessionnelle Oléagineux). Address: France.


Dim sum and snacks: New Year dumplings with sweet black bean paste (with “½ cup sweet black bean paste (dow sa),” p. 113). Bean paste sesame balls (with “sweet black bean paste,” p. 118). Dow sa won ton (“Prepare the same as Fried Won Tons {p. 139} except use dow sa (black bean paste) as a filling... Dow sa is available at Chinese bakery shops, p. 140).


• Summary: Two years ago the author lost 100 pounds on Diet Center’s Reducing Diet. Since then she has been working as a Diet Center Counselor in Stillwater. This cookbook (which is not vegetarian) contains Mori-Nu Tofu in more than half its recipes. Page 6 contains an endorsement for Mori-Nu Tofu. “All of the recipes in this cookbook were created and tested with Mori-Nu Tofu. I found it to be fresher and lighter in taste and texture than any other tofu I have used.” Tofu is a major ingredient in Non flour zucchini caraway bread, Banana bread, Strawberry cheesecake, Sour cream cake (with “5 oz. Mori-Nu Tofu”), Strawberry cake, Banana-Almond cake, Hawaiian delight, Lemon chiffon, Sloppy Joe dip, Cinnamon apple dip, Taco chicken, Yasmine’s Malaysian dip, Bacon and horseradish, Pineapple, Chopped spinach dip, Tofu spread or dip, Tofu potato salad, Quiche, Tofu burgers, Chicken, Lemon eggs, Lemon pie, Strawberry pie, Polynesian pie, Blueberry pie, Raspberry pie, Mocha pie, Berry pie, Summer lemon chicken salad, Tofu pancakes, Tofu ice cream, Pimento spread, Cream of chicken soup, Trout chowder, Eggnog. The eighth printing of this book was April 1988.

Art Mio notes that Sibyl Ferguson, the founder of Diet Center, had a cookbook that contained some tofu recipes.
Doris tried some of these and told Art (in her Oklahoman southern accent) that she “had to run to the sink and spit it out.” Address: Stillwater, Oklahoma.

• Summary: A complete guide to nutrition, health, and diet during pregnancy and after—with easy recipes for mother and baby to enjoy together. The author “is one of England’s most popular cookbook writers, a radio and TV commentator, and a columnist. A vegetarian since the age of three, she is also the author of Vegetarian Dishes from Around the World and The Festive Vegetarian.” She has also raised three children according to the principles described in this book. Contents: Part I: A vegetarian diet for healthy mothers and babies. Part II: Recipes. Appendix. A. Summary of Nutrients: Where they are and what they do. B. How it all adds up: Analysis of one day’s vegetarian menus. C. Recommended daily dietary allowances for women.

In Part I, the author recommends that if soy milk is used, it should be fortified with riboflavin (vitamin B-2), and calcium. Regular soymilk provides a little (0.5 mg/cup) of zinc. In Part II, soy-related recipes include: Miso pick-me-up (p. 99; with watercress). Tofu dressing (p. 110). Soybean salad (p. 127). Curried soybean and apple spread (p. 137). Soy sausages (p. 159; made with cooked whole soybeans). Soy and walnut loaf (p. 160; made with cooked whole soybeans). Mushroom and tofu quiche (p. 175). Tofu fritters with lemon (p. 186). Creamy tofu and almond topping (p. 203; for use like heavy cream with desserts). Whipped tofu topping (p. 204). Tofu ice cream (p. 218). Vegan yogurt (p. 219; made with soy milk; fermented).

In the Sept/Oct. 1994 issue of Vegetarian Journal, Reed Mangels, PhD, RD, an expert on vegetarian nutrition, says that this is her favorite book on pregnancy for vegetarian women.

Note: This is the earliest English-language document seen (Oct. 2013) that contains the term “Whip tofu topping” (regardless of capitalization). Address: England.

• Summary: Part 1 by B.P. is titled “The debate is launched concerning substitute dairy products.” A table lists the following countries: Austria, Belgium, Canada, Denmark, UK, Finland, Japan, Netherlands, Switzerland, and the USA. Column 2 lists substitute products (such as cheese, cream, milk, melorine). Column 3 lists the market share of these products in 1983. And column 4 compares the price of the substitute with the real dairy product. For example, in the USA: imitation cream (non-dairy creamer) has 50% of the market and is less expensive. Imitation cheese has 5% of the market and is 30% less expensive. Flavored milklike drinks have 15% of the market and are 25% less expensive. No imitation products are shown to have a significant market share in Europe.

Part II by C.R. is about CAC in Colmar, its Cacoja subsidiary founded in Jan. 1987, and its Bioforme line of soymilks and soymilk desserts. Address: France.

• Summary: Americans consume over 33 million gallons of coffee a day. To improve its acidic or bitter flavor and to give it a light, creamy appearance, they add cream, milk, or a formulated non-dairy creamer. A table gives the typical formulation for liquid coffee creamer. The first six ingredients (by weight) are: Water 73.0%. Corn syrup solids 15.0%. Vegetable fat 10.1%. Isolated soy protein 0.8%. Mono- and di-glycerides 0.5%. Sodium stearoyl-2-lactylate 0.2%. Address: PhD, Manager, Dietary Healthy Industry R&D, Protein Technologies International, Div. of Ralston Purina Co., St. Louis, Missouri.

• Summary: Contents: Introduction. Ingredients. Margarine. Spreads (a flowchart for a spread using a soy protein-lipid concentrate is given). Imitation cheese. Coffee/tea whiteners. Coffee complete and tea complete. Milk-like products: Filled milk, imitation or artificial milks, protein concentrate beverages (Miltone, developed by CFTRI and made at Bangalore based on whole buffalo milk extended or “toned” with groundnut (peanut) protein isolate, and Sipso, marketed in northern India, are both sold commercially. A soy-whey beverage with 4% protein has been developed by the National Dairy Research Inst. at Karnal). Soya yoghurt and lassi. Baby foods. Weaning foods. Ice cream analogues. Miscellaneous: Mango milk powder, banana milk powder, simulated sour cream and whipped toppings. The main advantage of these products is low cost due to the use of inexpensive ingredients, such as vegetable proteins and oils, emulsifiers and stabilizers. Dried milk and caseinates are also commonly used in these products.

Concerning weaning foods: “Recently, two low-cost nutritious weaning food formulations were developed at NDRI [National Dairy Research Inst.] Karnal, using soybean, dairy byproducts and cereal combinations. A spray dried soy-whey weaning food (SWWF) has been made (Fig. 6) from cheddar cheese whey (65 parts, on solid basis) and blanched soybean cotyledons (35 parts). A jowar-soybean-
skim milk (JSM) weaning food includes 60 parts jowar (sorghum) flour, 30 parts soybean solids and 10 parts skim milk solids (Fig. 7). This has been specifically formulated to meet the need of jowar-growing areas where, incidentally, the problem of malnourishment is more prevalent than in the other areas of the country. The SWWF and JSM conform to the guidelines laid down by the Protein Advisory Group of the United Nations. Their respective protein efficiency ratios (PER) are 3.2 and 2.6 as compared to 2.5 for casein. Both these formulations are commendably low-cost ones (approximately Rs. 8.00 per kg, exclusive of packaging). Thus these products show great promise of becoming instrumental in combating malnutrition among children...

“An acceptable soft serve ice cream based on soybean and buttermilk (6.8 parts soy SNF [solids nonfat]–5.2 parts buttermilk SNF) has been developed at National Dairy Research Institute, Karnal. This product contains 9% fat, 12% SNF and 15% sugar. Its manufacture does not require the use of a stabilizer, thus saving on the cost of stabilizer.”

Address: National Dairy Research Inst., Karnal 132001, India.


• Summary: Dorothy Hwang, owner of Michigan Soy Products in Royal Oak, has a doctorate in chemistry from the University of Kansas and has a research associate in chemistry for 14 years at Wayne State University. She opened her tofu business 5 years ago. Since then sales have tripled; she now makes 2,000 lb/week of tofu. She uses some of this to make tofu burgers, salads, and a frozen manicotti entree. She is marketing a tofu coconut pudding, which she may soon make herself. She also takes special orders for tofu cheesecake, cakes with tofu frosting, and tofu cream pies, including pumpkin.


• Summary: This vegan cookbook contains no recipes calling for eggs or dairy products. At last, a macrobiotic cookbook without fish. This book has a brief, unstuffy introduction to macrobiotics and tasty, creative recipes. Includes 11 recipes featuring tofu, 4 with tempeh, 1 using black soybeans, and many using miso and shoyu. Note the correct use of the term “shoyu” throughout. Also has recipes for “amasake” and “amasake frosting.” Address: Washington.


• Summary: “In celebration of the 125th anniversary of Henry Ford’s birth, you are invited to a very special soybean buffet. Soybean research captured Mr. Ford’s imagination. He felt that development of the soybean would help the farmer to become more independent. In fact, Mr. Ford considered his activities in soybean development to be one of his most significant contributions to the world.

“The buffet will recreate the meal that was served to the press at the Century of Progress Exhibition in Chicago in 1934. Mr. Jan Willemse, creator of the original menu, will cater this event and be available for press interviews. Also present will be Mr. Clem Glotzhober, Mr. Bob Smith, and Mr. Austin Curtis, soybean scientists and researchers for Mr. Ford at the Nutritional Laboratory in Dearborn, and Mrs.
Peggy Campbell, grandniece of the Fords and chairman of the Henry Ford Estate Development Committee.

The buffet will be served at the Henry Ford Estate in Dearborn on February 29, 1988 at 10 a.m. to 12 p.m. Shuttle busses will be on hand to take you to the Waterworks Restaurant–formerly Ford’s Nutritional Laboratory dedicated to Ford’s friend George Washington Carver. This event will kick off the many activities planned for the anniversary year. Note: From Eden Foods, Tim Redmond will go and help with the food and questions; Ron Roller may go.

Talk with Alice Cerniglia (Research and Publicity) of Ford Fair Lane Estate (313-593-5590). Dr. Ruddiman was Ford’s friend from school days. Jan Willemsen was brought from Massachusetts, where he was a chef, to be a baker at the Ford Motor Co. cafeterias. Mr. Ford was very impressed by him. When they closed down the cafeterias, in the 1920s or 1930s, Jan became Mr. Ford’s personal baker. He didn’t know anything about soybeans before he met Mr. Ford, but he experimented, developed a lot of recipes, then gave them to Robert Boyer to test in the lab and analyze their nutritional composition. Jan is still very interested in soybeans and their food uses. The purpose of this event is to introduce the estate and Henry Ford to the public. He was very pivotal in many of his enterprises. They are located in Dearborn; the Henry Ford museum and Greenfield Village are located right across the street. There will be an exhibit on Ford’s work with soy.

Talk with Alice Cerniglia. 1988. April 11. “About 50 media people attended the event. The food was wonderful. It was received very well and a number of articles resulted. It was a delight for Jan. He was just thrilled. He’s such a delightful man. Bob Smith talked to some reporters about his non-dairy whipped cream [Delsoy] and dispenser, and his work on America’s first soy ice cream.”

Talk with Robert Boyer. 1988. April 11. He does not know Jan Willemsen and did know about the event. He has written 40-50 pages on his autobiography but has not yet gotten to the part about his work with soy. He recently fell and broke his hip. Address: Dearborn, Michigan.


• Summary: Peter believes that the earliest recipe for amazake in a U.S. cookbook was in Cornelia Aihara’s The Chico-San Cookbook. This was later reprinted as The Macrobiotic Kitchen by Japan Publications. The original book was a labor of love by Cornelia for Chico-San, edited by Peter Milbury and Dave Schleiger. Cornelia has always taught using amazake as a sweetener, and she prefers it to rice syrup. She has a wonderful cake, sweetened with amazake and with an amazake frosting. She was a pioneer in introducing amazake to America.

Junsei Yamazaki is now selling his own miso. He is at Route 1, Box 1333, Orland, CA 95963. Phone: 916-865-5979. The product name is Junsei Amazake Miso.

Concerning the future of amazake: “I think it’s hot. It’s just got nowhere to go but explode. It’s such a wonderful product, with so many variations. All the beverages are now dessert drinks. Someone should make an amazake counterpart to soymilk, sold in larger quantities, with a smoother consistency, less solids, and less sweetness. Chico-San is now working on an amazake powder with California Natural Products (CNP); mix with warm water and serve as a drink. Rice syrup also has great potential as a sweetener. Chico San’s Yinnies, a malted sweetener, were the first product of their type in America. Sjon Welters of Nasoya is at least thinking about using amazake as a sweetener for soymilk. Sjon spent a week in the Chico-San rice syrup operation before it was shut down and moved to CNP. The amazake used for Rice Dream is much sweeter than a typical amazake. “I think Rice Dream is one of the most fantastic products I’ve ever tasted. Originally Chico-San was going to make the product for him. Then we shifted down to CNP. One company that might have interest in amazake is JGR Resources, Inc. Dr. Adam Lambert is Technical Director. P.O. Box 97, Haskell, New Jersey 07420. Phone: 201-835-7644. Their product is Koji-Converted Rice-O-Sweet Brown Rice Syrup. They are a wholly owned minority corporation, that took over a brewery.

The first attempt Peter ever heard of to package amazake in Tetra Pak was in Jan. 1985, just after Heinz took over Chico-San. Bob Kennedy and he set up a run with Real Fresh in Visalia. Real Fresh botched the homogenization. By this time Chico-San had a lock-tight exclusive contract with CNP to make rice syrup and amazake just for them, using their rice. Chico-San set up CNP in the rice syrup and amazake business and spent enormous amounts of time showing them how to do it. Before that, starting in 1972, Chico-San made its own rice syrup in Chico using not koji but a combination of malted brewer’s barley and commercial enzymes from Miles Laboratories. At that time CNP would make the amazake for Robert Nissenbaum, but Chico-San would do the billing. This changed after Heinz took over and couldn’t meet their commitment to the contract with CNP. So CNP got out of the contract and dealt directly with Nissenbaum.

Milbury and Belleme say Macromuse (Peggy Rosoff; 301-656-4313, Bethesda, Maryland Circ. 12,000) is much better for long in-depth articles than East West. Address: Lundberg Farm, Box 369, Richvale, California 95974. Phone: 916-882-4551.

360. Photograph of (left to right) Austin Curtis, “Chef Jan” Willemsen, and Bob Smith, at Fair Lane, Dearborn, Michigan, Feb. 29. 1988.

• Summary: Fair Lane is the name of the estate of Ford Motor Company founder Henry Ford and his wife Clara Ford in Dearborn, Michigan. Chef Jan, dressed in a toque (the tall, round, pleated, starched white hat worn by chefs) and white
chef’s uniform, has prepared some food (probably from soybeans), which he is explaining to the other two men.

Note: This photo was sent to Soyfoods Center, with permission to use in this book, by Dick Folsom in Feb. 1992.


• Summary: This pink leaflet, printed both sides, describes amazake and each of the company’s varieties: Almond (the best-seller), apricot, mocha-Java, and plain. “Grainaissance Amazake is a rich, refreshing drink made from cultured whole grain brown rice... Koji (fermented rice) is added to the cooked rice causing an enzyme action to break down the starches. As the mixture incubates, the natural sweetness develops, creating a nectar-like beverage. This is Amazake. Grainaissance Amazake contains no alcohol, no added salt, and no added sugars.”

   Nutritional composition per 8 oz serving of the plain/almond are protein 3.7 gm, fat 1/8 gm, carbohydrates 49/48 gm, calories 210/295. Recipes (developed by Laurel Plotkin) are given for Creamy Banana-Sesame Amazake Drink, Amazake Popsicles, Carob Amazake Frosting, Zesty Amazake Salad Dressing, Warm Ginger Amazake, Amazake Gelatin Dessert, plus suggestions for baking with amazake. The Popsicles, Salad Dressing, and Frosting are Tony Plotkin’s favorites. Address: 1580 62nd St., Emeryville, California 94608.


• Summary: In 1943 Bob had co-founded Delsoy Products, Inc. (with Henry Ford’s complete approval) to develop, produce, and market soy-related foods. Bob ended his career with the Ford Motor Co. in Aug. 1945, when it became apparent to him that Henry Ford would soon retire. At that time, he went to work at Delsoy Products, whose main
product was Delsoy, a non-dairy whipped topping made from the soymilk that Bob Smith had developed at the Ford Motor Co. One competing product was a whipping cream made with filled milk by a company in Chicago, Illinois, on Telegraph Road and Harvard, by Michigan Ave.

Originally Delsoy Topping was sold in paper cartons. In about 1946, Delsoy Products became the first to sell a non-dairy whipped topping in pressurized cans—major innovation. The new product, named Presto Whip, was a non-dairy soy-based whipped topping very similar to Delsoy Topping except that it had a lower fat content to allow it to be used in a pressurized can. The pressure can was developed by Crown Cork and Seal to contain DDT for U.S. troops in the Pacific. The pressure can was developed by Crown except that it had a lower fat content to allow it to be used in soy-based whipped topping very similar to Delsoy Topping. Then some company developed a valve that was suitable for cream purposes. Delsoy was the first company to use the can with the valve for any food product. They couldn’t put cream in the can since there was a pro-dairy law prohibiting putting anything in a can less than 3 gallons in size. So they put their soybean topping in it. Sales of the new product increased rapidly.

Presto Whip is still sold by a company in Lowell, Michigan. [Note: Whitehouse Products was purchased in 1983 by C.J. Christoff & Sons of Lowell, Michigan. The company is now called Chaldean Farms, Inc.] After Presto Whip became available, Delsoy continued to be sold to bakers who made whipped cream products, mostly in 5- and 10-gallon cans. As long as Smith was with the company, they sold both products.

Bob is not sure how much Delsoy Topping was sold. Their company would buy 500,000 pressurized cans at a time. Sometimes they produced 25,000 cans/day. Twenty people were employed in the little plant. After World War II, sales grew steadily year after year. They kept expanding their territory. The company’s first real competitor was Redi-Whip, but Presto Whip had the highest sales per store. At one point Delsoy Products was negotiating with Lever Brothers, who wanted to buy the company, but the deal never worked out. At one point, Bob Rich of Rich Products Corp. in Buffalo, New York tried to hire Bob Smith.

In 1958 Harvey Whitehouse, Bob Smith’s partner, bought out Bob Smith’s interest in the company, and changed its name from Delsoy Products to Whitehouse Products. Later Harvey Whitehouse sold his company to the dairy in Lowell, Michigan.

Bob retired from Delsoy Products in 1963. The company was sold to the dairy in Lowell, Michigan (as described above). Delsoy is still being made as a whipped topping in a pressurized can. It still has the same label it had in 1963.


• Summary: Three years ago General Foods was acquired by Philip Morris. Now the cigarette giant is bidding $11 billion for Kraft Inc., which owns some of America’s best known brands.

A pie chart shows 1987 sales for the new company which has two parts and six segments: (1) Kraft Foods $9.9 billion, including: Consumer foods $4.5 billion (Kraft, Miracle Whip topping, Parkay margarine, Velveta cheese, Breyer’s ice cream, Breakstone dairy products, Frusen Gladje, Budget Gourmet frozen dinners, Tombstone pizza), Food service and ingredients $3.0 billion, International Foods $2.3 billion. (2) Philip Morris $27.7 billion, including: Brewing $3.1 billion (Miller, Lite, Matilda Bay wine coolers), General Foods $10.0 billion (Maxwell House coffee, Birds Eye frozen foods, Jell-O, Entenmann’s, Oscar Meyer meats, Post cereals, Ronzoni), Cigarettes $14.6 billion (Malboro, Benson & Hedges, Virginia Slims).

A table shows the most profitable consumer food companies, with annual sales (in millions of dollars) and operating profit margin for each, in descending order of operating profit margin (earnings before taxes, interest and depreciation as a percentage of sales), as follows: Kellogg ($3,793, 21.2%), Ralston Purina ($5,868, 16.3%), Heinz ($5,244, 15.7%), Hershey Foods ($2,434, 15.0%), RJR Nabisco (food operations only; $9,420, 13.7%), Campbell Soup ($4,869, 12.7%), Quaker Oats ($5,330, 12.0%), General Mills ($5,179, 12.0%), Borden ($6,514, 11.7%), Pillsbury ($6,191, 11.1%), Kraft ($9,876, 9.5%), General Foods (Philip Morris; $9,946, 8.1%), Sara Lee ($10,424, 7.7%).

In 1984 Kraft acquired Celestial Seasonings, the herbal-tea company, then aggressively extended the line to include many new flavors, and put the brand on mixed seasonings, salad dressings, and even cosmetics. This proved to be a blunder, so last year Kraft sold Celestial (barely profitable despite $38 million in sales) to a management group.

Address: Staff reporter.


366. Chow, Edward T.S.; Wei, L.S.; DeVor, R.E.; Steinberg,

**Summary:** Most commercial non-dairy whipped toppings use soybean caseinate as the major protein source; they come in various forms, such as liquid, liquid concentrate, aerosol, powdered, and frozen pre-whipped. The authors discuss the performance of “Illinois Soybean Beverage” in various whipped topping systems. The systems contained 1.5-3.5% soybean solids, Hydrol 91 (partially hydrogenated coconut oil), Span 60 (sorbitan monostearate), Tween 60 (polyoxyethylene sorbitan monostearate), sucrose, and water. Desired foam characteristics were obtained with numerous ingredient combinations. Foaming characteristics were improved by partial removal of cell wall particles and decrease in particle size. Address: 1. Yung Wah Industrial Co. (PTE) Ltd., 121 Neythal Road, Jurong, Singapore 2262; 2&4. Dep. of Food of Science; 3. Dep. of Mechanical & Industrial Engineering. Last 3: Univ. of Illinois, 382D Agricultural Engineering Science Bldg., 1304 W. Pennsylvania Ave., Urbana, Illinois 61801.


**Summary:** “Dedication: to those cooks who have realized the need to change the American diet.” This is largely a vegetarian cookbook—but not completely (see p. 117).

From April to October Rick is found on Hurricane Island, off the coast of Rockland, Maine, where he has been the food service director for the Hurricane Island Outward Bound School since 1975.

Chapter 3, “Real foods” (p. 32-45) includes whole grains (incl. whole wheat, brown rice, corn, millet, quinoa). The section on “The amazing soybean” begins: “The versatile soybean is truly the food of the future.” It discusses miso, tamari, tempeh, and tofu. The section on “Oil” mentions soy oil. The section on “seaweeds” begins: “I prefer to call them sea vegetables...”

Chapter 5, “Ordering staples and setting up a grain room” has a large table for various foods showing the quantity in pounds and barrel size in gallons. Foods include: Aduki beans (azuki). Brown rice, shortgrain. Brown rice, sweet. Sesame seeds. Soybeans.


Talk with the toll-free customer service line at Rich Products Corp. 1995. Nov. 1. This product was launched in 1988. It is sold in original, lite, and fat free flavors. It is distributed throughout the East Coast but only as far west as Chicago, Illinois. It can be used as a coffee creamer or as an alternative milk; an 8 oz glass (1 cup) of Fat-free Farm Rich contains less than 4 gm of fat in the form of partially hydrogenated soybean oil. Note: Though technically legal, we feel it is deceptive to say that this product can be used as an alternative to milk, then claim it is fat free. By comparison with cow’s milk: Low-fat milk contains (per 1 cup): total fat 2.5 gm (incl. saturated fat 1.5 gm), calories 130, and calories from fat 20. And 2% fat + fortified milk contains (per cup) total fat 5 gm (incl. saturated fat 3 gm), calories 140, and calories from fat 45. Thus Farm Rich contains about 60% more fat than low-fat milk, but only about 80% as much as 2% fat milk. Whole milk (about 3.5% fat) is no longer sold at Safeway supermarket in Lafayette. Ingredients: Original: Water, corn syrup, partially hydrogenated soybean oil, contains 2% or less of the following: soy protein isolate, dipotassium phosphate, emulsifiers (mono and diglycerides, sodium stearoyl lactylate, polyysorbate 60), salt, sodium acid pyrophosphate, artificial flavor, beta carotene (for color). Wt/ Vol., Packaging, Price: Quart Pure Pak (gable top) carton. Retail for $1.39 (Fat Free) or $1.45 (Original) (10/95, Michigan). Refrigerated. Nutrition: Per 1 tablespoon (15 ml): Calories 20, calories from fat 15, total fat 1.5 gm (2% daily value; saturated fat 0 gm), cholesterol 0 mg, sodium 5 mg (0%), total carbohydrate 1 gm, protein 0 gm. Not a significant source of dietary fiber, sugars, vitamin A, vitamin C, calcium and iron. Percent daily values are based on a 2,000 calorie diet.


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* Summary: Florence Diamond (who resides at 1112 Pawnee Trail #2, Georgetown, Kentucky 40324) donated the Holton W. Diamond papers to the Henry Ford Museum on 20 June 1989. There is about 10-15 linear feet of material. The gift was received by Judith E. Endelman. The remarks on the accession record 89.432 state: “Diamond was the inventor of a non-dairy creamer and whipped topping [Wonder Whip]. Diamond’s initial work was at the Carver Laboratory in the old Dearborn Water Works. Diamond subsequently sued the Rich [Products] Co. for patent infringement. The papers include at least one lab. notebook from the Carver Lab. and papers reflecting his legal battles with Rich.”

A finding aid for this collection has been created (it was published in Jan. 2011) and is easily accessible online. Or contact research.center@thehenryford.org.


* New Product—Documentation: See next page. Carol Harvey. 1990. City Sports. June. p. 66, 68. Talk with Miyoko Nishimoto. 1990. June 4. Miyoko grew up in America and majored in philosophy at St. John’s College in Annapolis, Maryland. She started her business in San Francisco in July 1989. She makes the products at a bakery and sells them all herself. She has a line of 6 European-style layer cakes, and a line of two loaf-type cakes. The former are made from both tofu and okara, while the latter contain no tofu, only okara used as a flour substitute. She buys her tofu from Quong Hop; she used to buy from Wildwood. The tofu is firm nigari tofu made with organically grown soybeans. She uses a Cuisinart to puree the tofu and it takes much too long. The cake layers are all make from okara, and the creams, fillings, and frostings are made from tofu. She has a brochure describing the products. She has gotten a lot of media coverage, incl. San Francisco Focus (March 1990). Some of the cakes are sold at the bakery where she makes them. Most of the ingredients are organically grown. She uses only a little whole wheat flour.

She is now writing a cookbook which may be titled Not for Vegetarians Only that will be published by The Book Publishing Co. at The Farm in Tennessee. It will be a vegan cookbook that has mainstream appeal, with some French cooking techniques. She is now 6 months pregnant and wondering what will happen to her business. She wants to find a baker.

Manufacturer’s brochure (full color, 11 by 8.5 inches). 1989. “Now and Zen: An enlightened bakery. Indulgence is good for you, but only Now & Zen.” A lovely color photo shows 5 delectable looking round cakes and 3 rectangular loaf cakes.


* Summary: In 1949 Ken Gunther (soon joined by his brother Bob) founded a soy products manufacturing plant in Galesburg, Illinois. “Staley acquired Gunther Products in 1969; and Ken and Bob Gunther retired in 1973 and 1981, respectively. But Gunther Products is still taking soybean flakes and turning them into specialty food ingredients.

“In 1949, the company’s protein-based whipping agents, specialty blends, and hydrolyzed protein flavorings were unique; today, they remain the only enzyme-modified soy protein products in the world.

“The whipping agents and Ultra-Bake and Ultra-Freeze specialty blends are used in such foods as candy nougats, icings, instant mousses, premium ice creams, sponge cakes, and chewy granola bars. Producing the specialty products requires more labor than some other Staley products, with correspondingly higher profit margins.

“Competing products include egg albumen, gelatin, and modified milk protein products, none of which have all the same properties as the soy products. For example, egg albumen tends to vary dramatically in price and can harbor bacteria.

“Joe Empen is general manager for Gunther Products. He says the plant’s small size (29 people work there) gives it a special atmosphere. ‘We don’t have formal work rules...
"Unlike Staley’s larger plants, which rarely shut down, ‘Galesburg normally runs 5 days a week, 3 shifts a day,’ Empen says. ‘Business is good—we’re in the process of expanding to 7 days a week.’... Gunther’s largest domestic customers currently include M&M Mars, Brach’s, Pearson’s Mints, General Mills, Foodways National, and Coca-Cola.”


• Summary: Although the Chinese had produced a type of isolated soy protein product (tofu) since the tenth century A.D., western research on the isolation of soy proteins began in Germany 1883, when Meissl and Boecker introduced the terms soy casein and soy albumin. Similar work was published in 1898 by Osborne and Campbell at the Connecticut Agricultural Experiment Station in the USA. In 1903 Oscar Nagel of New York described in detail how he produced “soy casein” and discussed it potential applications as a commercial product. Since that time, the United States has been the world leader in soy protein research and production.

The world’s earliest known commercial food product made from isolated or concentrated soy protein was Albusoy, introduced in 1939 by the Soya Products Division of the Glidden Co. in Chicago. This was an enzyme-modified isolated soy protein product used as a whipping agent. Many of the earliest soy protein products were used like Albusoy in whipping applications. Soyco, launched in 1944 by Soybean Products Co. in Chicago, was a hydrolyzed soy protein...
whipping agent used as an egg white substitute. Rich’s Whip Topping, introduced in March 1945 by Rich Products Corporation in Buffalo, New York, was used as an alternate for whipped cream. In 1947 Archer Daniels Midland Co. introduced Nutriwhip, the Borden Company debuted Soyco, and Central Soya Co. launched Soy Albumen, all whipping agents.

In 1951 the first patent for spun soy protein fibers was issued to Robert Boyer, formerly a soy researcher at the Ford Motor Co. In 1952 the first soymilk based on soy protein isolate, Soymel, was introduced by Worthington Foods. Isolates soon replaced soy flour in non-dairy infant formulas worldwide. In 1959 the first food-grade soy-protein concentrates were introduced by Griffith Laboratories.

The 1960s put modern soy protein products on the map. In 1960 the Boyer patent and its 1954 revision started the high-tech meat analog industry when Worthington Foods launched Fri-Chik, a meatless drumstick. In 1961 and 1966 conferences on soy protein foods were at the USDA Northern Regional Research Center in Peoria, Illinois. Many of the 276 attendees at the second conference were pioneers in the field. A major theme at both was that protein malnutrition was the world’s most widespread deficiency disease. In 1966 General Mills introduced Bac-O’s, meatless fried bacon bits made from spun soy protein fiber. At a May 1968 Conference on Protein Rich Food Products from Oilseeds held by the USDA in New Orleans, Louisiana, oilseed proteins were increasingly seen as the answer to the “protein crisis.” Also that year International Action to Avert the Impending Protein Crisis, a United Nations publication, recommends soybeans as the single most promising protein source to close the “protein gap.” In Nov. 1969 General Mills launched its second bacon analog, Bac-o-Bits, this time made from textured soy flour. Frozen Bontrae meat analogs were sold to the foodservice trade. This pioneering work nationwide by one of America’s largest food companies indicated to the foodservice trade. This pioneering work nationwide by one of America’s largest food companies indicated to the foodservice trade.

During the 1970s soy protein products entered the mainstream. In Jan. 1970 W.T. Atkinson, assignor to the Archer Daniels Midland Co., was issued a key patent for a “Meat-like protein food product,” which was soon widely sold under the registered trademark TVP. In Feb. 1971 textured soy protein products were authorized for use as meat extenders in the U.S. National School Lunch program, opening up a huge potential new market for TVP type products. The amount of products used jumped from 8.5 million lb dry weight in 1971-72 to 87.5 million lb in 1976-77. Also in 1971 the Food Protein Council (renamed the Soy Protein Council in Dec. 1981) was established as a trade association for major soy protein manufacturers.

In March 1973, as meat prices skyrocketed, beef-soy blends containing 25% hydrated textured soy flour began to be introduced to U.S. supermarket chains, marketed for their lower price and higher nutritional value. Predictions of huge future markets (which failed to materialize) were published. In Nov. 1973 the first World Soy Protein Conference was held in Munich, Germany, attended by over 1,000 people from 45 countries. In late 1974 Miles Laboratories/Worthington Foods launched the Morningstar Farms line of meat analogs based on spun soy protein fiber nationwide at U.S. supermarkets. In Aug. 1975 Japan Vegetable Protein Food Association was founded to promote modern soy protein products, primarily soy protein isolates. In Oct. 1976 seminars on the use of soy protein for foods and meal for feeds were held in Moscow, sponsored jointly by three U.S. groups. More than 200 Soviet officials attended.

In May 1978 The Keystone Conference on Soy Protein and Human Nutrition was held at Keystone Colorado. Sponsored by Ralston Purina Co., it presented a new view of soy protein quality. In Jan. 1978 the International Soya Protein Food Conference was held in Singapore; 400 people from 24 countries participated. And in Oct./Nov. 1978 the World Conference on Vegetable Food Proteins was held in Amsterdam, The Netherlands; More than 1,000 people attended.

In 1980 soy protein products were approved for use as a beef extender by the U.S. Armed Forces. That same year the World Conference on Soya Processing and Utilization was held in Acapulco, Mexico. In Aug. 1980 Archer Daniels Midland Co. entered the soy protein isolate market with its purchase of Central Soya’s isolate plant. Then in April 1985 Central Soya bought Griffith Laboratories’ line of protein products. And in Feb. 1986 Central Soya purchased the Staley protein line, including Mira-Tex, Procon, and Textured Procon brands. In July 1987 Ralston Purina Co. of St. Louis, Missouri, established Protein Technologies International as a wholly-owned subsidiary to focus on sales of soy protein for food uses. The company’s sales of soy protein products were $139.8 million in 1986. But during the 1980s the total market for soy protein products grew very slowly, if at all. In 1984 Dr. Walter Wolf of the USDA Northern Regional Research Center estimated U.S. production as follows: Soy protein concentrates 36,000 tonnes (metric tons), soy isolates 41,000 tonnes, textured soy flour 43,000 tonnes, and textured soy concentrates 4,000 tonnes. The segment showing greatest growth appeared to be that of soy protein isolates, of which Ralston Purina/Protein Technologies International is the largest manufacturer.

Still there is widespread hope that, with the growing concern over dietary cholesterol, the low cost of soy protein relative to meat protein, the inevitable widening of this cost gap in the years to come, and the increasingly positive
consumer attitudes toward soy protein products shown in polls, the market for these products will soon begin to realize its long-forecast potential.

This is the most comprehensive bibliography ever published on modern soy protein products. It is also the single most current and useful source of information on this subject available today, since 53% of all references (and most of the current ones) contain a summary/abstract averaging 68 words in length.

One of more than 40 bibliographies on soybeans and soyfoods being published by the Soyfoods Center, it is based on historical principles, listing all known documents and commercial products in chronological order. Containing 37 different document types (both published and unpublished, including many original interviews and partial translations of Japanese and European works), it is a powerful tool for understanding the development of this subject and related products from its earliest beginnings to the present, worldwide.

Compiled one record at a time over a period of 15 years, each reference in this bibliography features (in addition to the typical author, date, title, volume and pages information) the author’s address, number of references cited, original title of all non-English publications together with an English translation, month and issue of publication, and the first author’s first name (if given).

It also includes details on 651 commercial soy products, including the product name, date of introduction, manufacturer’s name, address and phone number, and (in many cases) ingredients, weight, packaging and price, storage requirements, nutritional composition, and a description of the label. Sources of additional information on each product (such as references to and summaries of advertisements, articles, patents, etc.) are also given.

Details on how to use the bibliography, a complete subject and geographical index, an author/company index, and a bibliometric analysis of the composition of the book (by language, document type, year, leading countries, states, and related subjects) are also included. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549. Phone: 415-283-2991.

• New Product–Documentation: Talk with Liz Appel. 1989. Nov. 9. This product was introduced 1 month ago. The name is now Ambrosia, with “Soy Yogurt” as a subtitle in smaller letters. But she may have to change the name because there is a company in the area named Ambrosia Yogurt that makes soft-serve frozen yogurt. The product is extremely popular, they can’t keep up with demand. Sales have doubled in several weeks. Present flavors are plain, blueberry, raspberry, and strawberry; they will probably introduce an apricot-mango in 1-2 months. It is a kosher cultured soymilk, but is not Pareve. There really is no such thing as a Pareve culture, despite what Cream of the Bean says. To prepare: Put fruit on the bottom of the cup, run in the soymilk-yogurt mixture, seal, incubate until set. They plan to use a stabilizer since they do not add any soy [milk] powder. In July she was flown to Milwaukee, Wisconsin, by Aurotech, a culture company in nearby Menomonee Falls that owned half of Cream of the Bean. They wined and dined her, put her up in a hotel, made yogurt for her, wanted her to make soy yogurt with them and they wanted ownership in return for their expertise, but after a lot of investigation, she feels they do not have the expertise they claim to because their product itself was never very good. They kept going over the numbers, and wanted to put in the product she disagreed with. So she decided not to work with them. Their game is to look for little companies that need capital or expertise, and offer to show them how to make a good product in exchange for part ownership. The soy yogurt is a very hard product to make, but they are getting better. She does not see her product as competing with Jofu, which is a non-cultured product with added tofu powder. Hers is marketed as a lactose-free yogurt, and most people don’t realize that Jofu is a non-dairy yogurt. She prefers to sell to health food stores rather than supermarkets. She has been in Waldbaun’s Foodmart, a major supermarket chain, since Feb. 1989 and its tough, with much lower profits. Her aim for the company is to be a full-fledged soy dairy, with 5-6 trucks, and making sour cream, non-dairy creamer, etc. “When people think of soy, they think of us. We’ll have a whole new look and set of labels in several months.” She is now looking for capital to get a new facility. She has been in touch with Woody Yeh.


Kathryn Bennett was born in Texas and raised in New Mexico. While in New Mexico, she developed a deep interest in the Indian people. She obtained a Naturopathic degree and is involved in wholistic counseling. She has operated a natural food business in Los Angeles for the past
10 years. Address: Santa Monica, California. Phone: 213-204-1137.


• Summary: “I have been extremely busy in establishing the National Research Centre for Soybean, which is one of its own kind, at least in India, if not in Asia. This institution is working solely on soybean... In addition to research on all aspects of soybean production, I am continuing work on utilization of product process development with special reference to screening varieties suitable for soy-food products. Our preliminary work has indicated that soybean varieties Punjab-1, PK-472 and Hardee are most suitable for the production of soy-dairy products particularly Tofu. With slight modification in the process of Tofu making, we are able to develop a product which is a very low priced substitute of pressed cottage cheese commonly known as 'paneer' in India. A food dish having ingredient of 'paneer' is considered to be a priced item and is invariably found in all parties of status.

“While milk paneer (pressed cottage cheese) is sold on an average for Rs. 30 to 40 a kg, soy-paneer 'Tofu' can be made available for Rs. 10/ per kg. This includes packing and marginal profit as well. In contrast to the tofu yield mentioned in your publications, we are able to get a little less than 2 kg soy-paneer from 1 kg dry beans by following modified method. I am very optimistic for the future of the product in the country.”

The Dr. Bhatnagar adds on 24 March 1990: “The soybean has occupied an important place in the agricultural and oil economy of India. However, it is yet to be fully exploited as the most efficient low priced source of high quality protein. The urgent need is to develop domestic demand for defatted soy flour.” Address: Director, National Research Centre for Soybean, Khandwa Road, Indore 452 011, India.


• Summary: Chapter 19, titled “Henry Ford’s friend–Dr. Carver,” discusses Ford’s work with farming and soybeans and the Carver Laboratory at Dearborn.

“Henry Ford was intensely interested in agriculture, although he seems to have been somewhat at odds with the horse and the cow. As soon as Mr. Ford began to realize a significant profit from the manufacture of automobiles (1909), he began to buy land and operate farms in the Dearborn area. With money to spend, he immediately accelerated his experiments with a farm tractor designed to replace the horse, and with a large ultra-modern dairy farm, started experiments with milk and milk products.”

“When the Dearborn Water Works ceased pumping water in the early 1930s, Mr. Ford was concentrating on Greenfield Village. Within the Village grounds a chemical laboratory and a greenhouse were built... Robert Boyer was put in charge of the Chemical Plant. Mr. Ford’s stated objective was to ‘find industrial uses for farm products... In a separate building near the Engineering Laboratory in Dearborn, Dr. Edsel Ruddiman, Henry’s boyhood schoolmate, was working with wheat, soybeans, carrots and tomatoes to ‘make milk without a cow.’

“In 1932 [sic, Dec. 1931], Mr. Ford issued orders to concentrate on the soybean. His tractors began to plant and harvest thousands of acres. In a 25-acre field on Greenfield Village property some 500 experimental varieties of soybeans were grown. In September, 1932, Dr. Ruddiman and Mr. Boyer attended the American Soy Bean Association Convention in Washington, D.C. That year the Village Chemical Plant was extracting six tons per day of soybean oil. The Rouge started with twenty-four tons a day, followed by Milan and Saline Plants. These industries utilized the oil in making paints and plastics. The small Village Plant led the parade, however, with soybean milk, bread, ice cream and an experimental plastic car (chassis excluded). The soybean foods became standard fare at the Ford plant cafeterias and at Ford Hospital. The ice cream—most delicious—was for years sold as Del(icious) Soy(bean) Topping.

“In May, 1935, Mr. Ford hosted the First Dearborn Conference of the National Farm Chemurgic Council. This was the charter meeting of some 300 agricultural chemists who, in Mr. Ford’s replica of Independence Hall, signed a ‘Declaration of Dependence Upon the Soil.’ Again, in 1936, the same group met in Dearborn and Dr. Carver, then the Director of Research at Tuskegee Institute, was invited to attend. Mr. Ford visited with him in his suite at the Dearborn Inn. This is perhaps the first time the two had met in person. Dr. Carver now had a very competent research assistant, Mr. Austin W. Curtis, Jr...

“Mr. Curtis spent a summer (ca. 1940) in Dearborn working with Robert Boyer in The Soybean Laboratory. During these years, reports of research being conducted in Dearborn by R.H. McCarroll, Robert Smith and Robert Boyer were being forwarded to Dr. Carver...

“The Fords traveled to Tuskegee in March, 1941, where Henry and Clara dedicated the Carver Museum, inscribing their names in the cement and donating soybeans and a variety of soybean plastic car parts to be placed in the cornerstone.”

In July 1941 Carver visited Ford in Dearborn. A log cabin replica of Carver’s birthplace was dedicated. On 21 July 1942 a laboratory building on 8.3 acres on Michigan Ave. was dedicated by Dr. Carver. Initially named the “Nutritional Laboratory” of the Ford Motor Co., it later became better known as the Carver Laboratory. Outside
the building a greenhouse was added and the land beside
the building was planted to corn, soybeans and potatoes.
“Both Dr. Carver and Mr. Ford were firm believers in natural
foods.” The Laboratory, which eventually housed a staff of
25 under Mr. Robert A. Smith, went into volume production
of soybean milk and ice cream. On 5 Jan. 1943 Dr. Carver
died in Tuskegee.

The Carver Laboratory operated for at least a while after
1945 when Robert Smith left to go into business for himself,
and Clem Glotzhober took charge. After Mr. Ford died in
1947 the building was essentially abandoned. Address:
Dearborn, Michigan.

proteins. American Oil Chemists’ Society, P.O. Box 3489,
Champaign, IL 61826. vii + 440 p. 24 cm.

• Summary: Includes 23 chapters by various authors
concerning various types of proteins from various sources. 1.
The role of dynamics and solvation in protein structure and
function, by J.W. Brady. 2. Protein structure in solution, by
I.D. Kuntz. 3. Interrelationship of molecular and functional
properties of food proteins, by Srinivasan Damodaran. 4.
Structure: Function relationships in food proteins, film and
foaming behavior, by J.E. Kinsella and L.G. Phillips. 5. Film
properties of modified proteins, by Srinivasan Damodaran.
6. Glycosylation of Beta-lactoglobulin and surface active
properties, by Ralph D. Wasnica and John E. Kinsella. 7.
Molecular properties of proteins important in foams, by
J.B. German and L.G. Phillips. 8. Lipid-protein-emulsifier-
water interactions in whipped emulsions, by N.M. Barford,
N. Krog, and W. Buchheim. 9. Molecular properties and
functionality of proteins in food emulsions: liquid food
systems, by M.E. Mangino. 10. Are comminuted meat
products emulsions or a gel matrix, by Joe M. Regenstein.
11. Molecular properties and functionality of proteins in
food gels, by E. Allen Foegeding. 12. Functional roles
of heat induced protein gelation in processed meat, by
James C. Acton and Rhoda L. Dick. 13. Effects of medium
composition, preheating, and chemical modification upon
thermal behavior of oat globulin and Beta-lactoglobulin,
changes (SH groups and hydrophobicity) of food proteins
and their functionality, by E. Li-Chan and S. Nakai. 15.
Relationship of SH groups to functionality of ovalbumin,
by Etsushiro Doi, Naofumi Kitabatake, Hajime Hatta, and
Taihei Koseki. 16. Use of radio-labeled proteins to study
the thiol-disulfide exchange reaction in heated milk, by Bong
Soo Noh and Tom Richardson. 17. Genetic modification of
milk proteins, by Lawrence Creamer, Sang Suk Oh, Robert
McKnight, Rafael Jimenez-Flores, and Tom Richardson. 18.
Inactivation and analysis of soybean inhibitors of digestive
enzymes, by Mendel Friedman, Michael R. Gumbmann,
David L. Brandon, and Anne H. Bates. 19. The nutritional
significance of lectins, by Irvin E. Liener. 20. α-Amylase
inhibitors of higher plants and microorganisms, by John
R. Whitaker. 21. Toxic compounds in plant foodstuffs:
 cyanogens, by Jonathan E. Poulton. 22. New perspectives
on the antinutritional effects of tannins, by Larry G. Butler. 23.
Nutritional and physiological effects of phytic acid, by Lilian
U. Thompson.

Part I provides reviews and research regarding protein
structure, functional relationships and interactions in gels,
emulsions and foams and the six chapters in Part II discuss
-toxic compounds associated with food proteins. “With the
advent of protein engineering, an understanding of the
molecular structure and molecular interactions between
proteins and other food components, including toxins, is
clearly needed to enable the food processor to select the most
appropriate functional and healthy ingredients for specific
applications.” Surprisingly, this book contains no index.
Address: 1. Inst. of Food Science, Cornell Univ., Ithaca, New
York 14853.

380. Rakosky, Joseph, Jr. 1989. Protein additives in
foodservice preparations. New York, NY: Van Nostrand
[187 ref]

• Summary: Contents: 1. Protein additives: Use and
regulations. 2. Proteins, amino acids, and derivatives.
3. Nutritional considerations. 4. Functional properties
and economics. 5. Bakery products. 6. Pasta products. 7.
Processed meats. 8. Dairy-type applications: Introduction,
regulatory aspects (filled milk, casein and caseinates), dairy
products: modified and/or simulated, beverages (filled milk,
soymilk, soymilk preparations), coffee whiteners, whipped
toppings, frozen desserts, cheese analogs, tofu. 9. Dietary
and miscellaneous uses. This book discusses both animal and
vegetable proteins. Among the vegetable proteins, it focuses
mostly on modern soy protein products—soy flour, soy
protein isolates, concentrates, textured soy protein products—
and gluten, however information is also given on tofu (p.
187, 211, 225-27) and soymilk (p. 187, 192-95), especially in
chapter 8, “Dairy-type applications.”

Concerning regulation of casein and caseinates, p. 190
notes: “Almost all casein produced until the later 1940s was
for industrial application, such as glue and paper coating
(Reed 1974). Most persons accepted casein as an industrial
product rather than an edible dairy product; it was generally
considered a chemical derivative. Later, as Reed (1974)
pointed out, improved processing and developments changed
this. Today, an estimated 60 to 70 percent of the casein
produced is for edible use in the form of casein or caseinates.

“Since caseinates were designated chemical products,
formulations using caseinates were considered nondairy-

hence, the appearance of ‘non-dairy creamers’ and ‘non-
dairy toppings.’ Many feel that this is misleading because
many people want to know whether a milk protein is present
for religious and/or medical reasons. Present FDA policy
still allows the use of caseinate in nondairy creamers, but they recommend that the ingredient statement show, in parentheses, that the caseinate is derived from milk (Sheeler/Sheeles 1985, personal communication)."

Concerning whipped toppings (p. 200-203): “Whipped toppings are formulated to simulate whipped cream. Their widespread use in foodservice began when certain benefits were realized: convenience, eye appeal, stable structure, good shelf life, wide acceptance, and low cost. There is also an appeal for those people who prefer nondairy products for one reason or another.

“The typical topping formulation is composed of fat, protein, sugar, sweetener, stabilizer, emulsifier, buffering salts, and, in some cases, artificial color and flavor. The formulation is very much like the formulation for a coffee whitener except that toppings have more fat. There are also minor differences in proportions of the other ingredients. As with coffee whiteners, each ingredient has a specific requirement placed on it.” The requirements for each ingredient are then discussed in detail. Concerning protein: “Protein serves two emulsification functions in toppings: as an emulsifier of fat and as an emulsifier of air. As with coffee whiteners, protein also contributes to body and taste. Any number of protein products can be used. In the early days of development, the two most used protein products were caseinates and nonfat dry milk (NFDM).” NFDM was generally found to give the best results. However since soy processors “learned how to obtain more desirable products for this use, they are now more competitive with dairy-derived additives. This is especially so as the price of dairy products rises. or this reason, more functional nondairy protein products are being produced and utilized in dairy simulated products.”

Address: Food Industry Consultant, J. Rakosky Services, Morton Grove, Illinois.


• New Product–Documentation: Letter and Label sent by Kris Duville of Productos Alimenticios Soyavyn. 1992. June 2. These two products were introduced in May 1990. These fresh dairy analogs are prepared from soymilk coagulated with calcium chloride. They are prepared from soymilk curds mixed with milk, vegetable oil, and other ingredients.

Letter from Chris Duville. 1992. Dec. 13. Crema de Soya and Requesón are sold in white blank pouches, only identified by a small label giving the name and maker (Soyavyn). The volume is too small to order specially printed labels. Nutrition: Per 100 gm.: Protein 9.7 gm, fat 5.6 gm, minerals 0.4 gm, carbohydrate 3.1 gm.


• Summary: Ruediger Urban was born in about 1940. After 3-4 years of studying photography, in about 1969, he began working in a restaurant named Hotel Brauneberg that had been started by his brother in the city of Traben-Trarbach on Mosel (Moselle) River. At the restaurant he came across a large, high quality cookbook (covered in white silk) by Werner Fischer [or perhaps Alfred Walterspiel] titled Meine Kuenst in Kueche und Restaurant (My Art, Kitchen, and Restaurant) that contained 2-3 pages of information in German about how to make tofu. He started to buy the ingredients, but he was so overworked that he had no time to really start experimenting with tofu.

Then he went to work in a “Macro-Shop” in Deggendorf, in the Bavarian Forest, but he did not do anything with tofu there. Meanwhile he sold arts and crafts at marketplaces for several years to support himself and his two sons.

Then, in about 1979, he started on the side to make tofu in a little farmhouse at Winterlehen 1½, Einweging, in the Bavarian Forest (Bayerischer Wald). He ordered a copy of The Farm Vegetarian Cookbook, from which he learned more about tofu. He made only one product, tofu, using organically grown soybeans and niger coagulant. Initially he tried making the tofu without removing the okara, but he soon filtered the milk to removed the okara. He made the tofu using a gas stove, which he sometimes used in the kitchen and sometimes moved out into the garden. The tofu was sold under his name Svadesha (he was a disciple of Bhagavan Sri Rajneesh) but he had no officially registered business. On weekends his two sons, Premdeva (the elder) and Gyandeva, helped with the tofu business. Twice a week he produced about 30-40 kg of tofu, which he packed in small plastic tubs, loaded into his car? and drove more than 200 km (120 miles) into Munich. There he personally delivered it to a handful of the new generation of natural food stores (Biolaeden) that sold all of his tofu. These pioneer natural foods shops included Erdgarten (the first), and Macro-Shop on Amalienstrasse. While still in Einweging he introduced his second product, K reinforced Tofu (Herb Tofu), made by mixing and mashing herbs into finished pressed tofu to make a sort of seasoned tofu cottage cheese.

After about a year making tofu at this location, he decided to go to India for 6 months, so he entrusted his small business to another person while he was gone. The company fell apart during this time. Upon his return from India, Svadesha moved the business to Aeusere Koetzingerstr. 52a, D-8492 Fuerth im Wald, very near the Czechoslovakian border, and farther away (about 200 km or 120 miles) from Munich. He knew a woman friend there where he could work and stay. This new tofu shop began operation on 1 March 1981 and, because of pressure from retailers who needed official invoices, he registered the company under the
name Svadesha Pflanzen-Feinkost. By mid-1982 was using 20 lb of soybeans each time to make tofu 3 times a week. In Furth im Wald he introduced a new product, Tofu Pflanzarl, a special kind of Bavarian meatless meatballs or “Bolleten.” Soon he was getting more and more orders.

So in 1983 Svadesha moved his company into Munich, his main market, and set up shop in Das Werkhaus at Leonrodstr. 19. Alexander Nabben’s tofu shop was in the same building, but Alexander kindly offered to stop making tofu at that time. Svadesha changed his company’s name to Tofurei Svadesha Naturkost Produkte. During this period, at meetings of Germany’s various German tofu makers, the question arose as to which company had started first. It was clearly decided and agreed that Svadesha had been the first. Other early companies were Alexander’s Tofu Shop (an underground business founded by Alexander Nabben at the Werkhaus on Leonrodstr. in Munich; started tofu production by Jan. 1981), and Auenland Tofu und Soja Produkte (founded by Peter Wiegand at Prien-Chiemsee; started tofu production in March 1982). Svadesha thinks (but is not sure) that Biogarten sold tofu made by other companies (including Svadesha’s) but never made their own. Note that all of West Germany’s early tofu companies started in southeastern Germany in the area around Munich.

In Munich, Svadesha kept making improved versions of his regular tofu, herb tofu, and tofu meatless meatballs. He also launched a new Tofu Pastete (Tofu Spread), and Räucher Tofu (Smoked Tofu, in 3 flavors). In 1985 Svadesha moved again, this time to a suburb east of Munich near Denning, into a former butcher shop (at Ospreussenstr. 22, D-8000 Munich 81), the company’s present location. There the company really started to earn money. They introduced a new type of Tofu Pflanzarl, new Tofu Pastete (one with herbs, and one with tempeh), Tofu Burgers, Spice Tofu, Tofu Spring Rolls, and Schnitten (Tofu Slices) marinated in shoyu then fried, and Sauerkraut Schnitten (Tofu slices filled with sauerkraut). He also started selling tempeh, which was made by Byodo Naturkost.

On 1 June 1990 Svadesha sold his company for a good price to Robert Mayer and Erhardt Schwartz. He had learned 1 year before that he had cancer of the cheeks. At that time the company acquired a new structure and the name became Tofurei Svadesha Naturkost Produkte GmbH. The new owners agree with Svadesha’s philosophy and have solid business experience, so the future looks promising. The company’s best selling products are now, in descending order of popularity: Plain Tofu, Tofu Pflanzarl, Smoked Tofu, Tofu Schnitten, and Sauerkraut Schnitten. Address: Home: Waldstr. 4, D-8015 Ottenhofen, West Germany.


• Summary: This book contains the most popular vegan recipes from Country Life vegetarian restaurants. In 1966 the first Country Life Restaurant opened its doors in Grand Rapids, Michigan. Today the 15 Country Life Restaurants, though all independently owned and staffed by Seventh-day Adventists, “share a common commitment to serve delicious, wholesome, 100 percent vegetarian food. They are also dedicated to furnishing educational programs, to ministering to the needs of the community, and to providing a relaxed, Christian atmosphere as a refuge for customers from the stresses of the work-a-day world.” A list of the addresses and phone numbers of the 15 Country Life restaurants (10 in the USA, 3 in Europe, and 2 in East Asia) is given on page 4.


Soy milk (#1 from soy beans, #2 from soy base, p. 149). Soy base (from soy flour, p. 150). Basic nut milk (with cashews, walnuts, filberts, or Brazil nuts, and honey or dates, p. 151). Cashew-pear milk (p. 152). Half and half (with cashews and almonds). Almond milk supreme... plus many other nut and fruit milks.
One innovative ingredient in many recipes is “Lecithin-oil slicker: This is a replacement for products such as Pam, a food release spray. Pour 6 parts oil, not olive, peanut or sunflower, into a jar with 1 part liquid lecithin. Cover tightly and shake well. Keep at room temperature. Do not use lecithin granules. Measure oil first then use the same utensil to measure lecithin to help prevent sticking of lecithin on utensil.”

At the end of the book are several very interesting chapters: “The protein myth: When too much of a good thing is a bad thing,” by M.G. Hardinge and W.C. Andress. One very interesting table (taken largely from G. Bunge 1902) shows that the longer it takes for a baby animal to double its birth weight, the lower the protein content of the mother’s milk. Humans, with 1.4% protein in the milk, take 180 days (the longest). Cats, with 9.5% protein in the milk, take only 7 days (the shortest). A second chapter is titled “Dietary fat—good or bad?,” by Bernell E. Baldwin. Address: Michigan.


• **Summary:** “The Rich Products Corp. of the United States, a US$750 million-a-year non-dairy cream products business based on the humble soyabean, is gradually building up its presence in Asia after relying on agents for more than 20 years. Visiting Hongkong—the group’s regional headquarters—last week on a round-the-world tour of its operations, the company’s founder, Mr. Robert Rich, was confident of continued regional growth...

“Rich Products Corp has grown into America’s largest privately-held frozen foods manufacturer with more than 1,000 different lines which now spread beyond non-dairy substitute products to frozen dough, baked goods, specialty meats, fruits and seafood.”

Contains a large photo of Robert Rich.


• **Summary:** Contains many new advertisements, plus changes on the copyright page, on page 14 (Soyfoods Association in now located at Bar Harbor, Maine), and rear cover of both paperback and hardcover editions (new ISBN for each). Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.


• **New Product—Documentation:** Label sent by Leah Leneman of Scotland. 1992. Jan. 2. 2.75 inch diameter foil cup lid and 2.5 inch high cup. Yellow, white, gold and light green on green. Illustrations of yellow daffodils and a butterfly on foil lid. Lid: “High in polyunsaturates. Low in saturates. Cholesterol free.” Cup: “Soycreem is a new, cholesterol-free alternative to cream, made without animal fats or milk derivatives. Pour over desserts in the same way as fresh cream. (Not recommended for use in coffee.) Suitable for vegetarians and vegans.”

Talk with Ray Pierce of Genice. 1994. Feb. 10. In 1990 chilled So Good Soycreem was launched as a non-dairy alternative to dairy double cream, but low in cholesterol, high in polyunsaturates, and low in saturates. It was made for Haldane in a little beige plastic pot with a green foil lid, packed at the Genice plant. It contains a trace of cholesterol because law requires that it contain 36% oil, including some palm oil. In 1991 a shelf-stable UHT version (completely sterilized, with a 9-month shelf life), now named Granose Soya Creem, was launched in a 225 ml Combibloc pack, made for Genice by a large dairy in Ireland which had Combibloc packaging equipment. The chilled So Good Soycreem was discontinued. Ingredients: Organic soya milk, vegetable oils, corn syrup, emulsifier (vegetable mono-diglycerides), stabilisers (xanthan gum, locust bean gum, guar gum), natural colour (beta-carotene). Wt/Vol., Packaging, Price: 120 gm plastic cup. Refrigerated. Nutrition: Per 100 gm.: Energy 1827 Kjoules / 437 Kcal (calories), protein 3 gm, carbohydrate 12 gm, fat 36 gm (of which polyunsaturates 47%, and saturates 23%), sodium 0.1%.


• **Summary:** Lindsay Wagner, whose lovely color photo appears on the cover, first achieved widespread television in the early 1970s as “The Bionic Woman.” Recently she starred in the Academy-Award winning film The Paper Chase. This vegan cookbook uses no meat, dairy products, or eggs. A section titled “Raising the Dairy Question” (p. 13) discusses problems with milk and concludes: “A terrific substitute for milk products comes from that little marvel, the soy bean. Soy milk has the look and consistency of milk, and some brands even taste like it. Try some on your breakfast cereal, top your pies with our creamless Whipped Cream, spread your sandwiches with eggless Mayo Spread and enjoy Huevos-less Rancheros for brunch. You’ll never look at another carton of milk.”

Chapter 4, “About the ingredients,” includes discussions of Braggs Aminos, cold-pressed oil, kuzu, lecithin, miso, mochi, nori, soy milk, soy sauce, tempeh, tofu. Soy-related recipes include: Huevo-less rancheros (with tofu and soy milk, p. 65). Vegetarian “salami” (with firm tofu, p. 82-83). Mayo spread II (with soy milk, p. 88). Ginger tamari


An interesting last chapter titled “Afterword: Meat–We can live without it! Here’s why” discusses the role of an “animal-based diet” on destruction of the environment. Address: 1. California; 2. Woodland Hills, California.


• Summary: Chapter 9, titled “Dairy alternatives,” has a recipe for “Soy ‘n’ Rice Cream” (made with soymilk), discusses “Amasaki” [sic, amazake] and Rice Dream, and has a recipe for “Amasaki Sherbet.”

Note: This is the earliest English-language document seen (Sept. 2013) that uses the term “Dairy alternatives” (or “Dairy alternative”) to refer to soy ice cream.

Chapter 10, titled “Soy Ice Cream,” discusses Tofutti, soy protein, soy milk, milking the bean, soy ice cream, and flavors. Eight recipes (mostly made with soymilk) follow. Part II of this chapter is about soy yogurt (cultured; p. 145-47), with 2 recipes for frozen soy yogurt. Part III is on tofu and tofu ice cream, with 6 recipes, including a tofu sherbet. Part IV is soy sundae; one topping includes soynuts. There is also a recipe for “Whipped Tofu Cream.” The appendix on supplies gives two sources of powdered soymilk.

The hardcover book features 8 full-color photos, 24 black-and-white photos, 50 illustrations (line drawings), 200 home recipes, and a glossary of ice cream lover’s jargon. Address: Tennessee Technological Univ., Cookeville, TN.


• New Product–Documentation: Product with Label purchased at Safeway supermarket in Lafayette, California. 1997. Aug. 24. Lucerne is a Safeway brand. Blue, red, brown, and white on yellow. Illustration on 3 panels shows creamer being poured from a pitcher into a cup of coffee. “100% milk free. No cholesterol.” Note: This is truly a non-dairy product, containing no casein.

Talk with Patty MacArthur, consumer affairs representative for Safeway private label department, Walnut Creek, California. 1997. Sept. 15. This product was introduced in March 1991. Ingredients: 1997: Water, partially hydrogenated soybean oil, corn syrup solids, sugar, soy protein, mono- and diglycerides, dipotassium phosphate, polysorbate 60, sodium stearoyl lactylate, carrageenan, artificial flavors, annatto, turmeric. Wt/Vol., Packaging, Price: Quart Pure-Pak carton. Retail for $0.99 (1997/08, Lafayette, California). Refrigerated. Nutrition: Per 1 tablespoon (15 ml): Calories 20, calories from fat 15, total fat 1.5 gm (2% daily value; saturated fat 0 gm), cholesterol 0 mg, sodium 0 mg (0%), total carbohydrate 2 gm, protein 0 gm. Percent daily values are based on a 2,000 calorie diet.


• Summary: This is a stylish vegan cookbook, with a wealth of sophisticated and delectable soyfoods recipes. The author recommends only high-quality ingredients. Brother Ron grew up in Michigan and during high school spent time in the restaurant business flipping hamburgers. Later he became a Franciscan monk (OFM). A look at his own health revealed the need to change his diet. So Brother Ron changed to a natural vegetarian diet and experienced weight loss and renewed energy. Now he considers himself a food missionary—helping people transform their lives through food. Friendly foods are “foods that are friendly to our bodies, our pocket books, our busy schedules, and our environment.”

In the section on dairy-like products, the author recommends soy milk and some “tofu ice creams.” He recommends use of soy cheeses sparingly since they are high in fats (especially the softer types). He considers nondairy creamers to be a less healthful than their dairy counterparts, since they are high in saturated fats and artificial additives. “Typically, nondairy creamers contain corn syrup solids, partially hydrogenated vegetable oil (including coconut oil, cottonseed oil, palm oil, or palm kernel oil), sodium caseinate, sodium phosphates, mono- and diglycerides, sodium silico aluminate, and artificial color. I do not consider this type of product to be an example of a high-quality food.”

Soy-related recipes include: Marinated vegetables with marinated tofu (p. 41). Shish kebabs (with marinated tofu, p. 42). Marinated tofu with scallions (p. 43). Gefilte tofu with horseradish and charoset sauce (p. 49-50). Zucchini bisque


The last section of the book, titled “The Culinary Olympics,” gives recipes that Brother Ron prepared while competing in these Olympics, starting in 1978. These Olympics are held every four years at Frankfurt, Germany, by the International Cooks Society. The American Culinary Federation is the U.S. organization that promotes the competition. “In 1978 I won a gold medal in the national competition, which qualified me to compete in the 1980 Culinary Olympics. In 1980 I founded the American natural foods team and, with this team, international competition to gain widespread competition for vegetarian cuisine. In that year, I became the first professional vegetarian chef to compete in the Olympics and win a medal for totally vegetarian foods. I also competed in 1984 and 1988... My team won bronze and silver medals in all three years that we entered the competition.” Soy-related recipes dominate this section, and include: Baked tofu pâtés (spinach, tarragon, or carrot, p. 241-42; won a bronze medal in 1984). Tofu and sea vegetable quenelles (beet, spinach, or carrot, p. 243-45; won a silver medal in 1988). New York cima roll (with tofu, p. 248-49; won a silver medal in 1988). Tofu seitan Wellington (p. 250-51; won a bronze medal in 1984). Vegan London broil (with seitan, miso, and tamari, p. 251-52; won a bronze medal in 1984). Southern blackened tempeh with tomato-apricot-ginger coulis (p. 253-54; won a silver medal in 1988). Carrot cream in squash shell (with soy milk and tofu, p. 255-56; won a silver medal in 1988). Chocolate squash confection (with Tofu Chocolate Ganache, p. 259-60; won a silver medal in 1988). Address: O.F.M., St. Anthony’s Shrine.
1993. March 29. Shows the product package and label (which is red and green on white), and gives complete details about the product, including ingredients.


- Summary: Dave’s father, Harvey Whitehouse, and Bob Smith were partners in Delsoy Products. Since Bob Smith was connected with Henry Ford, he was the one to attract the media attention and get the interviews. Neither Dave nor Bob know where the company’s early files are now kept. The Detroit News Times and Detroit Free Press may have run articles on the company. The dairy industry disliked Delsoy, so dairy magazines probably didn’t run any articles. Eric R. Swanson brought in Bob Smith (who was working for Henry Ford) for his chemical knowledge. Then in Nov. 1944 Swanson brought in Harvey Whitehouse (who had been
production manager at two large dairies in Detroit–Belrose Creamery then Rosebud Creamery) as production manager for the soy milk. David entered the company in about 1961.

They have heard that at one point, when Herbert Marshall Taylor was still with Delsoy Products, Bob Rich wanted to get a franchise to manufacture Delsoy Topping. He never got it, but he was able to get a very similar formula from Rex Diamond who was working at Ford’s Carver Laboratory. Rich Products was the first to freeze a soy-based whipped topping. In about 1960, when Bob Smith began to talk about retiring, Harvey went to freezing Presto Whip, then Delsoy Topping so that he could store these products frozen and ship them nationwide— but they were never advertised as frozen. Most of the sales of Delsoy Topping were to bakers and restaurants—not to consumers.

At some point prior to 1961 the name of their frozen product, Delsoy Topping, was changed to Delwhip Topping, and a new product named Delwhip Topping Base was introduced; it was a concentrate to which one had to add water to reconstitute it. The name of Presto Whip remained unchanged.

Harvey brought out Bob Smith in 1963, and a month or so thereafter David became president of the company. Shortly after the buyout, the company name was changed from Delsoy Products to Whitehouse Products. The brand and logo then became Whitehouse and product names were changed. Delwhip Topping became Whitehouse Whipped Topping, Delwhip Topping Base became Whitehouse Whipped Topping Base, and Presto Whip became Whitehouse Presto Whip. All continued to be made with soy protein.

At about the same time, the company began to private label their products for other companies under other brands. They continued to sell the products under their own brands as well. The company continued to make the two soy-based whipped toppings then in the late 1960s they developed an imitation sour cream; it contained no soy protein but it did contain vegetable oil. They bought the formulation from another company. About the same time they also developed a soy-based non-dairy creamer named Whitehouse Coffee Fresh.

Christoff/Chadalee Farms purchased Whitehouse Products in about 1983. At that time David was president of the company and Harvey was in the process of retiring. Again the product names were changed to Chadalee Farms Whipped Topping and Chadalee Farms Whipped Topping Base. They are now finishing a phaseout of those products, largely because they do not have any other frozen products. David is now the national accounts manager for Chadalee Farms, Inc.

Rex Diamond was never employed full time for Delsoy Products. In the early days he worked at the company for a day or two now and then in the plant doing soybean extraction—not as a consultant, but as a friend of Bob Smith’s. Then Rex pulled a fast one. He left, set up his own company named Vegetable Products Corp. in Saline, Michigan (located inside Henry Fords’ old soybean extraction plant there), and began to make a soy-based whipped topping named Wonder Whip (non-pressurized in a cone-shaped container), which was designed to be whipped with an egg beater. But he did not know how to run a food plant. One day Bob Smith was visiting one of his chain store accounts when the buyer told Bob that Rex Diamond was telling all the distributors that Delsoy Products had quit making their topping—so that Rex could take over the accounts. Diamond had so many problems with the quality of his product that his company never got off the ground, and in less than a year went out of business. He tried to sell his used equipment to Delsoy.

In the late 1940s and early 1950s Diamond worked for American Maize Co. in Chicago. The company wanted him to develop a dried dairy-free whipped topping. He was granted several patents, then American Maize dropped the project. So Diamond approached Delsoy, asking if they would like to go in with him on a joint venture; after past bad experiences, they declined.

Then in Nov. 1952 Bob Rich of Rich Products hired Rex Diamond and there Diamond was successful in developing a product named Coffee Rich. Bob Rich and Rex Diamond set up a separate corporation named Coffee Rich Inc. just to manufacture and sell the Coffee Rich; it did very well financially. Diamond was in the process of building a large home in Buffalo, New York, but then he was unexpectedly fired by Bob Rich. One of the contingencies of the stock agreement between Rich and Diamond was that if either person was terminated or left the company, he had to sell his stock back to the corporation. Diamond felt he had been fired because the company (and Diamond) had made so much money; Rich had to fire Diamond to get control of the stock. Diamond, who had signed a bad contract, was very upset. The same thing happened to the sales manager for Coffee Rich. Again Diamond approached Delsoy Products, asking if he could manufacture toppings in their plant, but again they declined. Meanwhile Diamond returned to his home town in Detroit, and went to an attorney. The attorney settled with Rich Products for a much smaller sum than Diamond hoped to get. Within a year or two of his termination from Rich Products, Diamond committed suicide in Detroit.

HISTORY OF NON-DAIRY WHIP TOPPING, COFFEE CREAMER


- **Summary:** “Since the Dutch law banning dairy substitutes was over-ruled by the EC in 1989 the Dutch dairy industry fears it could lose 5-10% of its domestic sales to dairy alternatives... Margarine is seen as the real threat with 40,000 tonnes market volume lost to margarine producers. The dairy industry also loses out to coffee creamers.”


Tables show: (1) Soy meal consumption in the USA by type of animal: Poultry 41.1% of total 18.9 million metric tons, swine 27.4%, beef cattle 9.0%, dairy cattle 9.0%, other livestock 9.5%, human food 3.2%, industrial 0.5%. Thus, industrial (nonfood, nonfeed) uses for soybeans presently comprise no more than 0.5% of the protein produced from soybeans grown in the United States. (3) U.S. companies supplying protein in 1948-50 versus 1990 (industrial and edible flours, concentrates, and isolates). 23 companies then vs. 5 in 1990.

Note: Talk with Ed Milligan of EMI by phone. 1992. May 5. This article contains some misleading information. It refers to an article by Ken Becker written in 1971. In 1958-59 USDA developed a laboratory prototype of flash desolventizing. In 1959 they contacted EMI corporation in Des Plaines to commercialize the flash desolventizing system for production of light-colored, edible soybean flakes, for soy flour and grits, with a maximum PDI (protein dispersibility index). At that time Ed Milligan was just a newly hired member EMI, which undertook the project. Ed designed and installed the world’s first commercial flash desolventizing
system for Honeymead Products Corp. in Mankato, Minnesota, in 1960. Note that this system was used to make food, rather than feed. All but 2 systems have been used exclusively to make foods. All such systems produce a flake with a very light color and controlled PDI, whereas a DT (desolventizer-toaster) produces a golden colored flake. He is leaving for India in a few weeks to commission EMI’s 22nd such unit. He has designed, installed, and started every one of the 22. Address: Center for Crops Utilization Research, Iowa State Univ., Ames, Iowa 50111.


• New Product–Documentation: Talk with Lynne Minsky, Marketing Manager of Westbrae. 1992. April 28. This innovative product, Westbrae’s most recent soy product, was introduced at the Anaheim trade show in April 1992, will be shipped in late April, and should be in stores by May 1992. The product is sold as a liquid, packaged like the Maldets in a foil retort pouch. They would have preferred to put it in a Tetra Pak but the process would not allow them to do it. Vestro is a holding company, and they consider Westbrae to be an independent company. Westbrae moved to this address in Jan. 1992 from Commerce, California. Little Bear (which makes natural food tortilla chips, Bearitos, etc.), also owned by Vestro, moved into the same offices and warehouse with Westbrae. Westbrae’s soy beverage line is a major growth category and the company is putting a lot of energy into developing and promoting it.


One leaflet claims that the product won’t separate in coffee or tea. Soyfoods Center product evaluation. Label design: Excellent. Product quality: Excellent flavor (tastes like cream or condensed soymilk) and consistency. Does not separate in hot coffee.

Note: This is the earliest known commercial nondairy coffee creamer based on soymilk. Ingredients: Filtered water, whole organic soybeans*, brown rice syrup (brown rice, water), expeller pressed corn oil, natural flavor, tricalcium phosphate, sea salt. * = Organically grown and processed in accordance with the California Organic Foods Act of 1990. Wt/Vol., Packaging, Price: 6 fl. oz. foil retort pouch. Retails for $0.98 in California. Shelf stable; refrigerate after opening. Nutrition: Per tablespoon: Calories 10, protein less than 1 gm, carbohydrate 2 gm, fat less than 1 gm, cholesterol 0 mg, sodium 10 mg, potassium 20 mg.


• Summary: “Soy milk is the biggest seller in the non-dairy beverage category within the health food industry. About 95% of all soy milk is sold through natural food stores. Several supermarkets are beginning to carry this beverage.”

In 1983 when Eden Foods introduced its Edensoy, about 283,000 gallons of aseptically packaged soy milk were sold in the natural foods industry [in the USA]. According to Peter Golbitz of Soyatech Inc. in Bar Harbor, Maine, by 1991 that figure had jumped to 6.5 million gallons. Golbitz estimates the market for aseptic soymilk in the USA to be $52 million in retail sales (in natural food stores only) and growing at 15-20% annually. The top 3 soymilk manufacturers in America are American Soy Products [Edensoy], Westbrae, and Vitasoy; together they produce over 95% of the aseptically-packaged soymilk in the U.S. according to Golbitz.

New soymilk products: WestSoy Plus is fortified with vitamins A and D, and calcium to make it nutritionally equivalent to dairy milk. Westbrae also has a new nondairy creamer. Westbrae uses only rice syrup to sweeten its soymilks and is looking closely at producing a fresh (non-aseptically packaged) soymilk. Vitasoy has teamed up with The Yogi Tea Company to produce a cappuccino alternative. This delicious blend of soymilk and herb tea can be made in an espresso machine. Protein Technologies International in St. Louis, Missouri, has developed a new technology–stabilized calcium phosphate and soy protein isolates. When added to soymilk it gives a product comparable in protein and calcium content to dairy milk.

Also discusses amazake and White Almond Beverage. A photo shows Sara Starr. Address: President of Starr Track, a business consulting firm for the natural foods and products industries.


• Summary: Both Joel and Wendy remember a tofu cheesecake made by Sprucetree Bakery and another served at The Seventh Inn. Joel’s favorite tofu cheesecake was made at the Last Chance Café in Cambridge, Massachusetts, by Eduardo Jimenez (pronounced HIM-eh-nez). He used to age it so that the flavors would marry. It was available by 1979. Before that, Marcea (pronounced mar-SEE-uh) Newman, used to make delicious tofu cheesecakes. In the early 1970s she was living with Murray Snyder. She used to be a freelance caterer. Whenever a cake was needed for a birthday, wedding, or party, Marcea would be the one to bake it. At the time, she was experimenting with these recipes, including cheesecakes, for her cookbook The sweet
life: Marcea Newman’s natural-food dessert book, which was published in 1974. Thus her cheesecakes were sold commercially, but not in stores. Joel is quite sure Marcea (her last name is now Weber) is still in Australia. Address: Joel Wollner / Genesis, P.O. Box 1343, Clifton Park, New York 12065. Phone: 518-371-7014. Fax: 518-373-8337.


• Summary: Highlights, with color photos, Living Lightly non-dairy soy ice cream from Turtle Mountain, Tofifle (eggless tofu waffle) from Dae Han, Tofutti Better than Cream Cheese, Westsoy Lite Non Dairy Creamer, Pita Melts from Health in Wealth, Meatless Tofu Steaks from White Wave, Ken & Robert’s Veggie Pockets.

“Soy much to learn. Want to learn more about soy? Send a self-addressed, stamped, business envelope to the Soyfoods Center...”


• Summary: Casein became classified as a chemical and a non-dairy product in about 1948-49 by the Federal Trade Commission, at about the same time that price supports for dairy products began. At that time it was used almost exclusively for industrial applications (such as adhesives and sizings) rather than in foods. Today about 80% of the casein in America is used for foods—mainly imitation cheeses, whip toppings, and other imitation dairy products, plus medical and nutritional products prescribed by doctors. The remaining 20% is used for industrial purposes—mainly adhesives and sizings.

There are presently no companies in America that make casein; government price supports for milk price it out of the world market. The last U.S. manufacturer, Land O’Lakes, stopped in the 1970s. All casein used today in America is imported, mainly from New Zealand, Ireland, France and the Netherlands.

Note: If this outdated and misleading classification of casein as a non-dairy product could be changed, it would open up a huge market for soy protein products (isolates, soymilk, tofu), primarily in foods and beverages. Address: American Casein Co., 109 Elbow Lane, Burlington, New Jersey 08016. Phone: 609-387-3130.


• New Product—Documentation: Product with Label purchased at Safeway supermarket in Lafayette, California. 1997. Sept. 21. Lucerne is a Safeway brand. Blue, red, brown, and white on tan. Illustration on 3 panels shows creamer being poured from a pitcher into a cup of coffee. “100% milk free. No cholesterol. 50% less fat than regular non-dairy creamer.” Note: This is truly a non-dairy product, containing no casein.

Talk with Patty MacArthur, consumer affairs representative for Safeway private label department, Walnut Creek, California. 1997. Sept. 15. This product was introduced in Sept. 1992. Ingredients: 1997: Water, corn syrup solids, partially hydrogenated soybean oil, sugar, soy protein, mono- and diglycerides, dipotassium phosphate, polysorbate 60, sodium stearoyl lactylate, carrageenan, artificial flavors, annatto, turmeric. Wt/Vol., Packaging, Price: Quart (946 ml) Pure-Pak carton. Retail for $1.19 (1997/09, Lafayette, California). Refrigerated. Nutrition: Per 1 tablespoon (15 ml): Calories 10, calories from fat 5, total fat 1 gm (1% daily value; saturated fat 0 gm), cholesterol 0 mg, sodium 0 mg (0%), total carbohydrate 1 gm, protein 0 gm. Percent daily values are based on a 2,000 calorie diet.


• Summary: Mr. Bryan, who is working to try to have the Chemical Plant (later often called the Soybean Lab) restored due to its historical importance related to soybeans, believes that this plant was the personal property of Henry Ford, not the Ford Motor Company. Within a month of Henry Ford’s death in 1947, his wife, Clara Ford, asked to have the Chemical Plant cleaned out, having found rats and mice occupying it. Equipment was removed and much of it was sent to the Rouge Plant, some for scrap and some assigned to other laboratories. In the meantime the exterior of the Chemical Plant has been maintained in good condition, although the greenhouse has been removed. Recent conversation with the president of Henry Ford Museum and Greenfield Village (HFM&GV) indicates consideration is being given to future interior restoration for the purpose of interpreting the building in a manner properly emphasizing its historical importance.

HFM&GV is an independent, nonprofit, educational institution that is not part of or supported by the Ford Motor Company or the Ford Foundation. The museum depends on admission fees, revenue from visitor services, income from a small endowment, and contributions from individuals, corporations, and foundations for the funding of its programs. Annual expenses are approximately $20 million.

The Edison Institute, Greenfield Village, and the Henry Ford Museum were established in 1929 and opened officially in 1933. The Village and Institute are located side by side. The best book on the subject is titled Home for Our Heritage, by G.C. Uprichard (1979, Henry Ford Museum Press, 191 p.); that book, however, has nothing to say about the Soybean Laboratory.

The Edison Institute, which was founded in 1929, is still
the central organization acting as an umbrella corporation owning Henry Ford Museum & Greenfield Village. The Edison Institute was at one time primarily a school, and has previously owned other properties such as the Dearborn Inn, and the Carver Laboratory. Now those other properties have been sold, and Henry Ford Museum & Greenfield Village are presumably the Edison Institute’s sole business. Therefore the Edison Institute is presented to the public as Henry Ford Museum & Greenfield Village.

What used to be the Carver Laboratory is now a private restaurant named The Waterworks Restaurant. The Edison Institute sold it when the railroad cut it off from the rest of Greenfield Village.

Holton W. “Rex” Diamond definitely worked for Henry Ford, according to Clem Glotzhober of Dearborn. Both Mr. Diamond and Mr. Glotzhober worked under Bob Smith—partly at the Carver Laboratory. Diamond was sort of “low man on the totem pole.” The HF&M&GV has an accession contributed in mid-1989 by Mr. Diamond’s wife of Georgetown, Kentucky. Mr. Diamond spent many of the last years of his life in litigation with the Rich Products Co. of Buffalo, New York, related to patents.

Mr. Bryan has never seen any early articles on Jan Willemse in the archives of the Henry Ford Museum.

Address: 21800 Morley, Apt. 1203, Dearborn, Michigan 48124.

404. DMV USA. Div. of DMV, Inc. 1992. November. Soymilk Powder (Regular, or Reduced Fat), Tofu Powder (Regular, or Reduced Fat), Soy/Whey Blend, Textured Soy Flour, Soy Flour (9% fat), 2340 Enterprise Ave., P.O. Box 1628, La Crosse, WI 54602-1628. Phone: 1-800-359-2345.

• New Product–Documentation: Ad in ‘92 Soya Bluebook, p. 52. “Quality ingredients from soya. Chemical-free process. Kosher / Parve & organic available.” Talk with Craig Albrecht, Technical Sales Manager at DMV USA. 1993. March 19. This company buys soy flour and makes all the above products from it. The line was introduced in the fall of 1992, before Craig arrived at the DMV. DMV is a Dutch-owned dairy cooperative with $4,000 to $5,000 million in sales worldwide. They have had a presence in the USA for about 3 years. DMV USA imports various caseinates and whip toppings, and also makes various dairy products such as nonfat dry milk, buttermilk, whole milk, whey, whey protein concentrate, cheese, imitation cheese, etc. They sell these products to foodservice organizations and the food industry. The soy products are still a minor part of their total business, but growing. Ed Pedrick came from Clofine to work for DMV.


• Summary: Florence is the widow of Rex Diamond. Holton Whittier “Rex” Diamond was born on 15 June 1915 in Lucasville, Scioto county, Ohio, the son of Walter V. Diamond and Ethel Pigg. He was a very bright boy, chosen valedictorian of his Valley High School class and, as valedictorian, he presented “The Seniors’ Farewell Message” at the graduation ceremony on 10 May 1932. After entering Wilmington College in Wilmington, Ohio, on a scholarship, the school newspaper noted that he added “to a brilliant scholastic record” by “being the first freshman to make a perfect grade in the state-wide English examination. Diamond also holds national, state, and county scholarship awards in Latin, French, chemistry and English.” Another article reported that he was the first entering freshman in the 60 year history of the college to score 100% on the timed entrance exam. Upon graduation from Wilmington in 1936, he was awarded the Chi Beta Pi national honorary fraternity “annual Grand Chapter award [a gold key] for outstanding scholarship, research ability, and service to the school and chapter.” While in college, he was president of the college YMCA, and a member of the varsity tennis team, college band, and yearbook staff. After graduating from Wilmington in 1936 (with a BSc and a BSc in Education degree, and a major in chemistry), he worked briefly as a surveyor in Scioto county, then for several years as a chemist for Mead Paper Co. in Chillicothe, Ohio until entering Drew Seminary Graduate School of Theology for the fall 1938–Spring 1939 school year. (This was a term in the Methodist ministry; he had been interested in YMCA and Gospel Team Work in college.) Then he moved to Detroit, lived at the YMCA in 1940, and worked as a chemist in the lab of a steel mill, then as a “soda jerk” in a soda fountain. He also attended the downtown Methodist church and often wrote poetry.

During 1942, while working in Detroit, he enrolled in night school at Wayne State University in Detroit, taking courses in advanced organic and high polymers, dyes, biochemistry, and chemical literature—obtained no graduate degrees. He pursued these graduate studies until 1945. Continued. Address: 1112 Pawnee Trail #2, Georgetown, Kentucky 40324. Phone: 502-863-5055.


• Summary: Continued: In about 1942, through Wayne State University, Rex Diamond obtained a position in the research
department of the Ford Motor Company, in the synthetic rubber development department, supervising a project group on butadiene synthesis. More specifically, his work was at Greenfield Village on "dum-dum," a silencing material for cars. When the entire synthetic rubber research program at Ford was abandoned, in about June 1943, he was transferred to the George Washington Carver Laboratory.

He worked under Robert A. "Bob" Smith (the chief chemist and his boss) on soybean milk, cheese, ice cream and tofu, and developed a whipped topping (his first) based on soymilk. Of these products, the found the whipped topping (which was later commercialized by 3 different companies) to be by far the most interesting.

Rex continued to work at the Carver Laboratory throughout World War II—his first research concerned chlorophyll. On 9 May 1945 Diamond and Smith applied (as assignors to the Ford Motor Co.) for a U.S. patent (No. 2,476,358) titled "Soluble compound of chlorophyll and synthesis thereof." The patent was issued on 19 July 1949.

One day in 1945 a man named Herbert Marshall Taylor came into the Carver Laboratory with a soybean product that would whip—but it wasn’t very good and you could not rely upon it to whip every time or to whip the same way. Florence is not sure where Mr. Taylor got this product. [Note: Compare this version of events concerning Mr. Taylor and soy-based whip topping with that told by Robert A. Smith in May 1979.]

Several days later, Rex analyzed the product and went to work on developing an improved and reliable whipped topping. He recorded the results of his work [starting on 24 March 1945] in his notebooks, which are now at the Henry Ford Museum at Dearborn. Prior to this time, nobody at the Carver Lab. had done research on a whipped topping. Rex discovered at some point, while working at the Carver Lab., that mono- and diglycerides played a critical role in whip toppings. Taylor was using a typical "bakery shortening" as a key ingredient in his whipped topping. It contained mono- and diglycerides, but their amounts were not carefully controlled, since these levels were not critical in typical baking applications. Later (on 12 June 1955) in a paper titled “Vegetable Fat Whips for Bakery and Household Use,” presented to the Institute for Food Technologists, he stated: “The use of special vegetable shortening, which contain not only hydrogenated vegetable oil but also one or more surface active materials quite common in the topping business. It is well to remember in this connection that most of these shortenings are made for some other use, they may introduce variations in the properties of the topping emulsions. A shortening containing mono- and diglycerides may be controlled within tolerances which are adequate for its use in baked goods but not for its use in toppings.” Rex felt he had solved Taylor’s problem and made an important discovery related to non-dairy whipped toppings.

Florence has the impression that Mr. Taylor was a very outgoing person who inadvertently sometimes got into trouble; he did not have bad intentions, but was sometimes misguided. He was a big spender when he had the money; later he felt he had been cheated by Delsoy Products and the owners of Delsoy felt they had been cheated by him. Florence also recalls that Rex, not Bob Smith, did most of the research and development work on the soy-based whipped topping at the Carver Lab.

A photo shows the 12-member staff of the Carver Laboratory in 1945, including Rex Diamond, Clem Glotzhober, and Florence Barbier. Bob Smith was absent. A caption notes that here “Diamond did the [sic, his] first work in developing a whipped topping.”

A W-2 form shows that during 1945 Holton W. Diamond (who lived at 1648 May Ave., Dearborn, Michigan) was employed by “Russell-Taylor Inc., 1951 E. Ferry Ave., Detroit 11, Michigan.” [Note: Diamond was working on their whip topping]. His wages totaled $552.13 in 1945. A 1946 form shows he was paid wages $68.25 by Russell-Taylor in the first quarter of 1946.

At about the time World War II was over (Aug. 1945), Florence Barbier, a graduate of Stephens College (Columbia, Missouri) was transferred from the Rouge Chemical Laboratory (where she had worked during the war) to the Carver Laboratory. There she first met Rex—who interviewed her for the job. She ran analyses on the soymilk that they made there frequently, worked on the development of a fermented soymilk cheese (which was never very good), and made some tofu. Soymilk was made at the Carver Lab. in 100 gallon batches approximately 2 to 3 times a week. Alberta Hardy (who now lives in Lansing, Michigan) was one of the people who helped make the soymilk. Some of this soymilk was given to any woman in the Dearborn area (not just Ford employees) who could not tolerate cow’s milk and who wanted to stop by and pick some up free of charge. It was also sent to the Henry Ford Hospital and to Henry Ford’s Greenfield Village Schools where it was served free of charge at recess each morning and afternoon. It was also served to the students for their noon meal at the Clinton Inn in Greenfield Village. Florence recalls soymilk being served in this way when she was a high school student there in the mid-1930s. The soymilk was poured from a large metal container into glasses, which were placed in the hallways at recess times for anyone who wanted it. “Henry Ford wanted all the experimental work done at the Carver Lab. to be of benefit to the public. Even the inventions were to be made available to anyone who wanted them.” Florence’s father, A. Roy Barbier, had worked for Henry Ford as advertising manager for the Ford Motor Co. from 1924 to the autumn of 1941. Barbier worked closely with Edsel Ford and considered him an intelligent and very competent person—indeed one of the finest people he ever met. But Edsel was overshadowed by his famous father, Henry Ford. Barbier thought Edsel never received the credit he so richly deserved.

On 21 Feb. 1946 Rex Diamond applied (alone, and not
as an assignor to the Ford Motor Co.) for a U.S. patent (No. 2,487,698) titled “Topping for salads, desserts, and similar products.” The patent was issued on 8 Nov. 1949. The all-vegetable topping called for the use of about 1.5% soy bean protein, 25-35% hydrogenated soybean oil, etc.

Prior to the formation of Vegetable Products Corporation, Rex made many trips to try to procure a source of shortening (still in short supply after the war) to be used in the manufacture of the whipped topping he planned to make. On 28 Feb. 1946, on a flight to New York City, he wrote to Florence that on the plane he enjoyed “an apricot cobbler topped with what I am almost sure was Delsoy Topping”—a non-dairy whipped topping introduced in late 1943 and made by Bob Smith. (Note: Bob Smith left the Ford Motor Co. in Aug. 1945 to work full time with Delsoy Products.) While Rex was still employed at the Carver Laboratory, he did some part time evening and weekend work as a consultant for Delsoy Products, conducting experiments to try to improve Delsoy. On 13 June 1946, before he left Ford, he obtained a written release from Mr. E.C. McRae, of the Ford Motor Co. patent dept. stating: “Inasmuch as the Ford Motor Company is not in any way interested in the manufacture of soybean food products, we have no objection to your participating any ideas you may have along this line.” Again, Diamond was planning for his whipped topping.

In Aug. 1946 Rex started thinking seriously about and developing a business plan and finding sources of raw materials for starting a “soy bean dairy” to make whip topping, soy ice cream, soy cheese, and chocolate malted. With the help of attorney Arthur M. Smith, he wrote Mr. Adrian Joyce [of The Glidden Co.] on 16 Aug. 1946 to see if Joyce had any interest in his ideas and inventions. Continued. Address: 1112 Pawnee Trail #2, Georgetown, Kentucky 40324. Phone: 502-863-5055.


• Summary: Continued: Rex left the Ford Motor Co. in about Nov. 1946, shortly before the Carver Laboratory was closed; his wages for 1946 were $3,313.20. On 14 Nov. 1946 he applied to the state of Michigan for unemployment compensation. Note: It appears from the above that the Carver Laboratory closed in late 1946.

After leaving the Ford Motor Co., Rex may have done a little more part-time work with Bob Smith at Delsoy Products. On 6 July 1945 Herbert Marshall Taylor, President of Delsoy Products, Inc., at the suggestion of Mr. Bob Smith, had given Rex 12 shares of their stock and invited him to work for them on a full-time basis. But both Rex and his father-in-law, A. Roy Barbier, felt terms offered by Delsoy for Rex’s services were unacceptable. Mr. Barbier felt that Rex would never get a good deal from Bob Smith, and that influenced Rex’s decision. Moreover, Rex’s dream was to start his own company making the whipped topping that he had pioneered at Ford. So after a short time, he stopped working with Delsoy and began work on starting a company named Vegetable Products Corporation (VPC) to produce a whipped topping named Wonder Whip, which was similar to Delsoy. There were no hard feelings after this parting and Rex remained friends over the years with both Bob Smith and Herbert Marshall Taylor—though Taylor long remained bitter over his own split with Delsoy. Florence and Rex were married on 9 Aug. 1947 in Dearborn, and they lived in Dearborn for the next year.

Rex had plenty of good ideas but no money. With considerable help from Arthur M. Smith, his patent attorney, Rex found investors and on 26 Aug. 1947 he signed an agreement that established Vegetable Products Corporation to raise money in order to get his non-dairy whipped topping on the market. There were about 5 investors, who probably contributed equal amounts of capital, totaling about $10,000 to $20,000—a relatively small amount, leaving the business underfinanced. The investors were John J. Hamel Jr. (a friend of Arthur M. Smith), A. Roy Barbier (Florence’s father), Robert Walker, Elmer Hitt, and Joe Higgason. Redid not invest any capital. The corporation was headquartered in Birmingham, Michigan, which was where John Hamel, the president, had his office and lived. However Hamel didn’t participate much in VPC. Rex was formally the corporation’s treasurer, though he did almost all of the day-to-day work. It was about 2 months after this agreement was signed that VPC began to manufacture Wonder Whip at Bodker’s Dairy in Detroit. [For another view of the events related to Delsoy, see interview with David and Harvey Whitehouse, Feb. 1992.]

VPC started in the fall of 1947 inside of Chris Bodker’s Dairy at 25440 Five Mile Road in Detroit, Michigan. The local dairy association did not know that Bodker was allowing a non-dairy product to be made inside his dairy. Florence’s father, who was head of the advertising department for the Ford Motor Co., chose the name Wonder Whip and also designed the logo, which contained the words “Wonder Whip” inside a diamond. Chris Bodker wanted to distribute Wonder Whip (using his trucks) to his customers, but he was told by the local dairy association that if he distributed a non-dairy product, he would be “out of business.” Shortly after their marriage, and after only 2-3 months of developmental work, VPC began producing Wonder Whip at Bodker’s Dairy. It was distributed by Tabor Meat Distributing Co. VPC operated out of Bodker’s for only 1-2 months, then Rex moved the business out to Saline, Michigan, and into the second floor of the old Henry Ford soybean extraction plant that had been purchased by the
Hamel family’s Valley Chemical Company in Oct. 1947 after Henry Ford’s death and still had a solvent extraction plant that produced soybean meal and soy oil. As part of a written agreement, John Hamel let VPC use the second floor of the Saline building rent free. That included use of a little laboratory and of some stainless steel equipment that Henry Ford had previously used to make white soy paints using soy protein. Rex and Florence continued to live in Dearborn, driving to work each day in Saline; after several months, they moved to Saline, thus eliminating the long drive. By late 1947 or early 1948 VPC began to make (on the second floor) and continued to sell Wonder Whip, a liquid soy-based whipped topping, packaged in a small ½-pint cardboard container shaped like a truncated cone [the same shape as the containers for Delsoy and Rich’s Whipped Topping, which were similar competing products]. They first distributed their product in a jeep and small trailer to the meat distributor in Detroit (owned by Mr. Tabor, a friend of Florence’s father) who continued to distribute the product. In 1948 VPC had a booth at the Michigan State Fair, where 55,000 people tasted Wonder Whip. But Rex’s company was undercapitalized, had weak distribution, and local competition from 2 other non-dairy whipped toppings which were improved by technical innovations.

One major competing product was Delsoy Super Whip (apparently launched in about 1947, perhaps the first such product in a pressurized can; it was later renamed Presto Whip). The second competing product was frozen Whip Topping, introduced in late 1945 by Bob Rich of Rich Products Corp. in Buffalo, New York. This was the first frozen whip topping. As its distribution expanded into Michigan, it severely hurt sales of Wonder Whip. In April 1949 Rex tried to expand into new non-dairy products with a soy ice cream, made from basically the same ingredients as his Wonder Whip, but VPC didn’t have the funds to develop and launch such a new product, so the it was never sold. Delsoy in the pressurized can was a more serious competitor in the local area, but Rich’s frozen Whip Topping was more of a threat in more distant markets and as it expanded into Michigan. VPC could not survive this competition from its weak position. Moreover, Rex was not an experienced businessman. So the company was forced to cease operations on 26 March 1949, after less than 2 years in business.

In early April 1949 Bob Smith of Delsoy Products offered Rex a job any time he wanted it. Smith also expressed interest in acquiring Diamond’s pending patent applications as well as the name of his company, which he thought was better than his own “Delsoy Products Inc.”

In March 1949 Rex wrote several food corporations to see if they might be interested in manufacturing Wonder Whip and paying him a royalty. General Food Corp. in New York said they were not interested. Sadly, Rex was ahead of the market, for about 8 years later General Mills launched Dream Whip, and about 15 years later Whip ‘n Chill, both similar products.

American Maize Products Co. in Whiting, Indiana, responded favorably, so Rex went to work as a chemist for them from the fall of 1949 to Nov. 1955, working closely with B.R. Taylor, Manager of Planning and Development. However they wanted a spray-dried product with a long shelf-life since they had no facilities for handling a refrigerated product. For the next 7 years, Rex worked closely with Nichols of Rich Products Corp., but they were unable to successfully spray dry a high-fat vegetable cream in their very small Niro spray dryer. The same type of formulas could be easily spray dried in the next larger Niro unit. After sitting on the shelf for a while, the fat would seep out from each particle in the high-fat product causing the particles to clump together. During the summer of 1951 he studied food technology at Massachusetts Institute of Technology. On 30 March 1950 Rex applied for a patent titled “Powdered Topping and Method of Making Same” (No. 2,619,423) which was issued on 25 Nov. 1952. Then he changed the formula radically, abandoning the use of soy (and of all protein), and made a much better product whose key ingredient was methyl ethyl cellulose, used as a stabilizer. He and Eugene L. Powell applied for a patent (No. 2,863,653) on this product, titled “Salad and Dessert Topping” on 3 Dec. 1954. It was issued on 13 Jan. 1959, after Rex had assigned the rights to Rich Products Corp. upon his employment with that company in the fall of 1955. Rex did no further work with soy. When American Maize decided they were not in a position to exploit the new methyl ethyl cellulose process of making topping, Rex wanted to move on so he could be actively engaged in the commercial exploitation of this new process. Even though American Maize wanted him to sell the patent to a manufacturer and stay on with them, they parted on friendly terms, and American Maize transferred the rights to the patent to Rex before he left. Florence thinks that Rex, at his own suggestion, paid American Maize a small sum to cover the expenses of applying for the patent.

On 12 June 1955 Rex presented a 9-page paper with 9 slides on “Vegetable fats for bakery and household use” at the annual meeting of the Institute of Food Technologists. He noted that in the USA, either soy protein or non-fat milk solids was generally used as the protein dispersant. Continued. Address: 1112 Pawnee Trail #2, Georgetown, Kentucky 40324. Phone: 502-863-5055.


Products Corp. in Buffalo, New York. He was in charge of the laboratory and development and research of Rich Products. From that time until at least 1959 he was the only chemist employed by the company. Rex and Florence lived at 29 Campus Dr. in East Buffalo. On 25 Nov. 1955, as part of a business agreement, Rex sold, assigned, and transferred all rights, titles, and interests to all of his patents (3 issued and 1 applied for) to Bob Rich in return for $5,000. American Maize Products Co. was granted a royalty-free, non-exclusive license under the invention of patent application No. 473,044 titled “Salad and Dessert Topping and Method of Making Same.”

In May 1956 Rich Products added a completely new formulation of Whip Topping to its line. Named “Rich’s Whip Topping–The Diamond Process,” it contained no protein and was made by the process developed and patented by Rex Diamond. In a letter to his brokers dated 22 Aug. 1956 Robert E. Rich expressed his enthusiasm for the new product: “In all my years in the frozen food game, and you know we are the oldest specialty packer in operation today, I have never seen a single product with the sales potential of our Rich’s Diamond Process Whip Topping. We’re so enthusiastic about it that we’ve already begun the second story on our plant just to begin to handle the increased production we know is forth coming...”

Florence recalls that Rex had a good relationship with Rich Products for the first 7-8 years he worked there and he was promoted rapidly. In Jan. 1958 Rex was chosen to be the company’s vice president in charge of research. “Bob Rich was as kind and nice to Rex and me as he could be, calling us one of the family and all.”

Starting in Dec. 1958, and continuing until at least late 1964, Rex began extensive participation as an expert witness in litigation, defending Rich Products in at least 7 lawsuits involving non-dairy products. He also worked very closely and extensively with Rich’s attorneys to develop their legal strategy in these lawsuits. Rex worked closely with Ellis Arnall, testified frequently, and spent roughly 25% of all working days of each year out of town. In Nov. 1959 his contract was renewed for 10 years and his bonus payments were adjusted to his satisfaction. On 11 Nov. 1962 Ellis Arnall wrote him from London: “We could win our case here if you were along to be our star witness.” On 28 Jan. 1963 Arnall again wrote him, this time from Atlanta, Georgia: “With each appearance on the witness stand you grow more profound, more persuasive and more sincere. I have observed many witnesses adducing testimony, but never have I seen a witness who can develop such an atmosphere of candor, fairness and conscientiousness in the way in which you do. Hearty congratulations!”

In June 1960 Rex presented a paper titled “Continuous process data recording in the manufacture of vegetable fat whipping emulsions” at the annual meeting of the Institute of Food Technologists. On 8 March 1962 he presented a paper titled “Observations on Whippable Emulsions for Pie Toppings: Their Characteristics and Performance” to the American Society of Bakery Engineers. Extensive excerpts were published in the society’s 1962 proceedings. On 4 Feb. 1963 he presented a paper on vegetable fat replacement for dairy products to the Massachusetts Dairy Technology Society. He noted that “The manufacture of vegetable fat replacements for dairy products has increased tremendously in the past few decades.” He also mentioned soy milk. In April 1961 Bob Rich installed 3 officers in the new corporation Coffee Rich Inc.; he was president, Rex Diamond was vice president, and Herbert R. Kusche was secretary and treasurer.

Outside of work, in Jan. 1963 Rex and Florence moved to 300 Depew Ave. in Buffalo. In 1964 Rex was elected president of the City Club of Buffalo. In April 1964 he ran successfully for Council of the University Club. His printed brochure, which contains a nice portrait. At work, he was Vice-President in Charge of Research of the Rich Products Corporation, Vice-President of Rich Pressure Dispensers, Inc., and Vice-President of Coffee Rich, Inc. “Avocations and hobbies: Music, photography, golf, and woodworking. Current memberships: The City Club of Buffalo, The Other Office Club of Buffalo, The University Club of Buffalo, Cherry Hill Country Club; in New York City, the Chemists’ Club.”

Florence states that Rich Products had lost money for 3 years prior to Rex’s arrival. After Rex joined the company and his new product started to be made and sold, Rich Products’ sales began to increase and the company became profitable. A document (Plaintiff’s Exhibit #28) from the trial of Rich Products Corp. vs. Mitchell Foods shows that Rich’s sales of Whipped Topping were roughly static at $1.5 million/year from 1952 to 1955. Rex Diamond began working for Rich Products in Nov. 1955. Thereafter sales grew to approximately $2.0 million in 1957, $3.0 million in 1959, $5.0 million in 1961, and 6.9 million in 1963. Advertising and promotional expenses stayed at about 9% of sales during this period, though they reached a peak of about 11% in 1955, and fell slowly thereafter to a low of about 7% in 1963. Florence recalls that sales had reached about $12 million by 1965.

Rex Diamond’s income also rose steadily, approximating in rate the growth of the company, from $8,500 in 1955 to $22,000 in 1960, $29,000 in 1961, an estimated $37,000 in 1962, and an estimated $45,000 in 1963. In April 1962 he was able to write Sol Golden, an attorney in Atlanta: “I am receiving, in a sense, too much salary.” He was looking for ways to retain more after taxes.

A separate document, apparently prepared by Rex Diamond in about 1957, shows Rich Products’ Institutional Whip Topping Sales grew from $67,435 in 1946 to a peak of $130,931 in 1952, then fell to $93,288 in 1955. “During 1956, the institutional Whip Topping Formula was changed...”
to the Diamond Process with a resulting increase in sales to $207,345. In Nov. 1957 sales for the entire year of 1957 (based on known figures for the first 11 months) were projected to be $630,451.

By Jan. 1964 Rex was at work on a new ice cream process and product for Rich Products; it would withstand more changes in temperature than ordinary ice cream without deterioration. It was an outgrowth of his whip topping technology.


409. Diamond, Florence Barbier. 1992. The life and work of Holton W. “Rex” Diamond. Part V. Work at Rich Products. There was a dispute over who owned the patent to the outcome of Rex’s suicide. “He was a man who betrayed and cheated.” In 1965 Rex earned $58,851 from Rich Products Corp. Rex brought a lawsuit against Rich Products, and Rich Products filed a counter lawsuit. These lawsuits dragged on and on for years, and Rex was running out of money trying to pay his lawyers. Rex decided to try to settle for the rights to process he had developed for a dairy ice cream that melted very slowly, and forgo the compensation owed him under his contract with Rich Products. There was a dispute over who owned the patent concerning slow-melting ice cream. As the legal battle continued, Rich had enough money to outlast Rex. Finally Rex ran out of money completely, was unable to pay his debts, and felt he had reached the end of his rope. He committed suicide on 20 Oct. 1971.

Florence thinks that Bob Rich deliberately forced the process to the outcome of Rex’s suicide. “He was a man who lacked human kindness.” She thinks “he was relieved to hear of Rex’s death, and after that tragedy Bob Rich never offered any condolences.” One night, driving home from Canada to Buffalo, Bob Rich’s mother told Rex and Florence: “I am so glad about the way Robert has turned out. When he was just a young boy, papa and I knew we had created a bad seed. We knew that the other 4 kids would grow up to be all right, but we were really concerned about him. One day he went after his brother Paul with a baseball bat and might have killed him if papa hadn’t been there to stop the fight. The elder Richs set up all their boys in business for themselves. There was some kind of friction between Bob Rich and his father, and he didn’t speak to his father for a number of years. After his father died, he kind of regretted that he had never made amends with his father.”

A third problem arose over Bob Rich’s motives concerning Rex. Florence and Rex felt that Bob Rich planned to use Rex, pick his brains, keep him around as long as he needed him, and then let him go when he started making substantial amounts of money from his bonus agreement.

A fourth problem concerned the quality of the Rich-Whip topping made using the “Diamond process.” Rex was very upset that Bob Rich was lowering the quality of the product in order to make more money.

A fifth problem concerned a written agreement that Bob Rich asked his employees to sign (in about 1965) offering to contribute a certain amount of money to a new holding company or pension trust. Rex felt that Bob Rich was using the agreement to try, in effect, to steal from his employees, so Rex refused to sign it. Florence thinks that the plan “never went through because Rich’s own lawyers stopped it.”

Florence recalls that “When Rex was fired, he felt betrayed and cheated.” In 1965 Rex earned $58,851 from Rich Products Corp. Rex brought a lawsuit against Rich Products, and Rich Products filed a counter lawsuit. These lawsuits dragged on and on for years, and Rex was running out of money trying to pay his lawyers. Rex decided to try to settle for the rights to process he had developed for a dairy ice cream that melted very slowly, and forgo the compensation owed him under his contract with Rich Products. There was a dispute over who owned the patent concerning slow-melting ice cream. As the legal battle continued, Rich had enough money to outlast Rex. Finally Rex ran out of money completely, was unable to pay his debts, and felt he had reached the end of his rope. He committed suicide on 20 Oct. 1971.

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Obituary: “Florence B. Diamond, 88, widow of Holton W. Diamond died Thursday, Oct. 22, 2009 at Tanbark Health Care Center, Lexington, Kentucky. A native of Dearborn, Michigan, she was the daughter of the late A. Roy & Alice Perkins Barbier and was a graduate of the Greenfield Village
School and Stephens College and an active member of the Homemakers. She was also preceded in death by a brother, Roy Barbier... There are no services planned. Burial will be in Myrtle Chapel Cemetery in Louisa, Kentucky.” Address: 1112 Pawnee Trail #2, Georgetown, Kentucky 40324. Phone: 502-863-5055.


• Summary: Rich Products Corporation’s sales are now approaching $850 million per year.

The non-dairy whipped topping market has 3 segments: In the retail market, 100 million lb of product generate retail sales of $222 million per year. The top retail brands, in descending order of market share, are CoolWhip (Bird’s Eye, Div. of Kraft General Foods, Inc.), Rich-Whip (Rich Products Corp.), Presto Whip (Presto Foods, California), and La Creme (Pet).

In the foodservice market (including hospitals, institutional restaurants, school lunch programs, etc.) 75 million lb of product yield sales of about $150 million per year. And in the bakery industry (including in-store bakeries), 92.5 million lb generate sales of $81.4 million.

Thus, in total, 265.5 million lb of non-dairy whipped topping create sales of $453.4 million—a huge industry! Note: This entire industry originated at the Carver Laboratory of the Ford Motor Company in the early 1940s. The first 3 companies that manufactured non-dairy whipped toppings were started by Bob Smith, Bob Rich, and Rex Diamond. Smith and Diamond were chemists at the Carver Laboratory, and Bob Rich visited the Carver Laboratory and learned about the process there from Rex Diamond. Address: Secretary to Robert Rich, Sr., Rich Products Corp., 1150 Niagara St., Buffalo, New York 14240. Phone: 716-878-502-863-5055.


• Summary: This excellent vegetarian (actually vegan), ecological cookbook, proves that the most environmentally sound diet is also the healthiest and, for many, the most delicious and economical. It emphasizes whole grains, fruits and vegetables, focuses on unprocessed and minimally packaged foods, use of regional and seasonal foods, efficient menu planning, and creative recycling of leftovers. Delightful quotations relevant to the book’s subject are scattered throughout.

The author’s guiding principles for cooking ecologically are: “Eat a plant-based [vegan] diet; buy organic, regional, seasonal produce whenever possible; and use nontoxic products to keep your kitchen clean.”


The very fine chapter / glossary “Ingredients A to Z” (p. 399-468) includes: Aduki / azuki beans, agar, almond butter, almonds, amaranth, amasake (incl. koji), arame, barley malt syrup.

Black beans–fermented (salty black beans): “Black beans, fermented (Salty black beans): A little of this Chinese specialty–small black soybeans preserved in salt–goes a long way. About 1 tablespoon adds a deliciously complex flavor to stir-fries. Chop the beans finely to disperse their flavor. If you like the taste but want to reduce the salt, soak the beans briefly in water before using. Fermented black beans last for about a year in a well-sealed jar under refrigeration.

“Bragg Liquid Aminos: This is a very tasty soy-sauce-like condiment made by extracting amino acids from organic soybeans. Its flavor is more winelike and complex than most soy sauces. It is salty, so sprinkle sparingly. (There is no added salt, but 125 milligrams of sodium per ½ teaspoon come from the natural sodium in the soybeans.)

“Unlike soy sauce, Bragg Liquid Aminos is not fermented, making it an ideal seasoning for those who suffer from yeast sensitivities. Delicious added to stir-fries or plain-cooked grains. It is readily available in health food stores.” Also in natural food stores.

Daikon, dulse, gomashio, hijicki / hizicki [sic, hijiki], job’s tears, kombu, kuzu (kudzu), kuzu kiri, lupins, miso, mochi, natto, nigari, nori, peanut butter, peanuts, quinoa, rice–brown, rice cakes, rice syrup, sea vegetables, tamarind roasting seeds, seitain (wheat gluten), sesame butter (tahini), sesame oil, sesame seeds, shoyu, soybeans, soybeans–black, soy cheese, soy flakes, soy flour, soyfoods, soy gruits, soy ice cream, soy milk, soynuts, soy oil, soy powder (powdered soy milk), soysage, soy sauce, soy yogurt (fermented), tahini, tamari soy sauce, tempeh, tofu, umeboshi plums, wakame, wasabi, winged beans. Note: Also contains recipes for many of these glossary items.

A color portrait photo on the inside rear dust jacket shows Lorna Sass–with a brief biography; she is a culinary historian, cookbook author, and food writer. Address: Box 704, New York City, NY 10024.

412. Hamel, Elmer; Parsons, Bruce. 1993. Recollections

• Summary: First a little background. In 1845 Schuyler Haywood built a water-powered 4-story wooden gristmill and flour mill beside the Saline River near its headwaters. Called “Schuyler Mill” or “Schuyler Mills,” it was located just west of the town of Saline, Michigan (on what is now U.S. highway 112), 31 miles west of Dearborn and about 8 miles south of Ann Arbor. Until 1911, the mill was riven by water power, then new machinery, driven by a gasoline motor was installed. In 1927 the mill had a capacity of 60-70 barrels of flour a day. For a more detailed history of this building, see Paul A. Meyer et al. 1976 “Weller’s.”

In 1934 the old mill was unused and deteriorating. Henry Ford bought it that year, moved the foundations about 30 feet south, renovated it elegantly with beautiful indoor paneling and hardwood floors, added a new turbine, an 80 horsepower generator, and another building to house a solvent extraction plant about 50 feet away (solvent was dangerous since it could explode). Then he created a park-like setting of rolling lawns around the buildings. Henry Ford’s first rural soybean solvent extraction plant began operation here in Aug. 1938 as part of his industrial decentralization program. It also housed a coil plant, which manufactured ignition coils encased in soy bean plastic, and a plant that made white exterior paint based on soy protein. These operations continued until the start of World War II.

In Nov. 1946 the Ford Motor Co. sold its soybean processing plant at Saline, Michigan, to Soybrands, Inc. Elmer recalls that when Robert McNamara and his group of 6 took over to make the Ford Motor Co. more efficient, the company sold off almost all unprofitable enterprises—including most or all of the village industries. Ford first sold the Saline plant to Soybrands, Inc., a corporation created by 2-3 investors to buy the plant. The main investor was Harold? Johns who ran the Park Motor Co., a very successful Lincoln-Mercury automobile dealership (Ford Motor Co. made these cars) on Woodward Ave. in Detroit. Soybrands, Inc. tried (unsuccessfully) to run the plant for a little less than a year then shut it down for several months.

On 13 Oct. 1947 Soybrands Inc. sold the plant to Valley Chemical Co. (in Mt. Pleasant, Michigan), a rendering company owned by the Hamel family (Elmer’s parents and siblings) which made a livestock and poultry feed ingredient out of animal by-products (meat scraps); they sold this ingredient to feed compounders. Elmer’s parents bought the company partly because they fell in love with the beautiful riverside building with its water-powered generator, and partly because the processing machinery, end products, and customers for those products are similar. The Hamels hoped to use the soybean meal to manufacture some feed (which they never did), because at the time feeds were in scarce supply and high priced. After they bought the Saline mill, the price of feeds dropped rapidly. Soybrands became a division of the Valley Chemical Co. (it was never a separate corporation or company; “Soybrands” was also used as a brand name). Elmer and his brother-in-law Bruce Parsons ran Soybrands. Bruce moved to Saline in September 1948, moving into the former Henry Ford School (located across the street from the soybean mill); Bruce had purchased the lovely school building early in the spring of 1948 and had it remodeled. He worked at the plant every day as mill superintendent, working closely with Orville Laidgard, who was plant manager, responsible for the equipment. Orville took the place of Dan Levleit, who had worked at the plant for Henry Ford and for Soybrands, Inc. and who lived on a farm just outside Saline. Elmer, as treasurer, spent 50-75% of his working time in the office at Saline, with the rest spent in Mt. Pleasant and Detroit. John Hamel, Elmer’s older brother, worked in Detroit and wasn’t involved much at Saline. Soybrands used the solvent extraction equipment developed by Ford to transform the soybeans into oil and defatted meal. The crude (unrefined) soy oil was sold to a local vegetable oil refinery and to soap companies. The “44 per cent soybean oil meal” was bagged in 100-pound bags and sold at wholesale prices to local elevator around Saline and Tecumseh; they mixed it with other ingredients to make feeds for livestock, poultry, and dogs. Soybrands used the water-powered generator to produce almost all of their own electricity in the spring and fall (and they even sold a little of their surplus back to Detroit Edison), but during the winter and summer (when hydropower was unreliable due to reduced water flow) they had to buy most of their electricity from Detroit Edison Co. In winter the pond was covered with ice. The electricity was used to run the electric motors that were used to grind soybeans, run the elevators and lights, etc.

The original main mill building in the front consisted of three stories/floors and a basement. It was built into a little bank or hillside. If you entered from the uphill: In the basement were 2 boilers, a coal bin, storage space for soybean meal and the meal bagging equipment. On the ground floor was space for bagged meal storage. On the first floor was where Henry Ford had his machines for making plastic parts. On the second floor was where Henry Ford kept his stainless steel equipment for making white paint, and where Rex Diamond later made his whipped topping. The attic was used for storing soybeans. The little building 50 feet to the rear housed the solvent extraction equipment and the toaster.

Rex Diamond came to know about Soybrands through Elmer’s brother, John, who died in 1991. Elmer met Rex Diamond through John, and he remembers Rex as “a very nice young man who seemed like a competent chemist without much business experience. John also liked Rex very much.” Rex probably started to use the Saline building sometime in late 1947 or early 1948. (Note: His company was named Vegetable Products Corporation and his product
was Wonder Whip, a soy-based non-dairy whipped topping.)

Bruce’s memories of Rex Diamond’s work with whipped
topping are quite clear; Elmer’s are vague. Elmer recalls that
Soybrands had a little laboratory on the second floor of the
building, and Rex came in every working day and sometimes
on weekends to use it. Rex also brought in some of his own
laboratory equipment. Bruce recalls that Rex was making a
commercial soy-based whipped topping on the second floor
of the Saline plant. Rex used the all stainless steel equipment
that Henry Ford had previously used in making a white
exterior house-or-barn soy paint using soy protein. Bruce
recalls: “This was beautiful white paint; I painted my fence
across the street many a time with it.” Rex also used the
steam from the plant boilers, and purchased defatted soybean
meal from Soybrands and used it to extract the protein for his
whipped topping. John Hamel was an investor in Vegetable
Products Corp. (VPC) so VPC operated from the Hamels’
Saline plant rent free. Rex had a new product and a very
small company; he had stiff competition from Delsoy (a
similar product made by Bob Smith), and he had sales and
distribution problems. Bruce and his wife both used Rex’s
whipped topping at home regularly and they both remember
it as an very good product. Vegetable Products Corp. used
the building in Saline for a little less than 1½ years.

Valley Chemical operated the Saline plant for about 3
years, then shut it down at the very beginning of the Korean
conflict in June 1950. The U.S. government established
a base price to farmers for soybeans and there was no
processing margin between that and the market price of the
company’s finished products. In July 1951 Soybrands tried
unsuccessfully to sell the historic mill to the City of Saline.
The plant stood idle for a quite a while (perhaps 2-5 years),
but each summer from July 1953 to 1962, Elmer’s niece,
Barbara Hamel (his brother’s daughter), came in and, with
Warren Pickett, helped to run a summer theater in the round
(called Dramarama) in the extraction building. The rest of
the year, any losses were written off on the books of Valley
Chemical Co. In 1962 Valley Chemical sold the building.
In 1967 Carl and Mickey Weller purchased the mill; they
had owned a furniture company in Ypsilanti. Currently
the original mill buildings house the Town and Country Antiques
Mall, the Raisin River Cafe (a “winter breakfast house”
operated by Wendy Weller, open only from January through
April–the off season for the catering business, which is the
family’s main source of income–and then only on Saturdays
and Sundays. The rest of the year it is used for catered
parties and wedding receptions) below on the back side
ground level, and private apartments on the top two floors.
The former solvent extraction building constructed by Henry
Ford is now called “Weller’s Carriage House.”

Elmer recalls that there were articles about Soybrands in
the Ann Arbor News, the weekly Saline Reporter (originally
named the Saline Observer), and the Washtenaw Post (no
longer in existence but back issues are in the Clements
Library of the University of Michigan at Ann Arbor).
Address: 1. 1955 Boulder Dr., Ann Arbor, Michigan 48104;
2. 807 Riverview Dr., Jekyll Island, Georgia 31527. Phone:
(1) 313-677-4732; (2) 912-635-2908.

413. SoyaScan Notes. 1993. NLEA requirements for
nondairy products (Overview). April 28. Compiled by
William Shurtleff of Soyfoods Center.

• Summary: NLEA is the FDA’s Nutrition, Labeling and
Education Act of 1990. This act unfortunately does not
make it illegal to characterize on the label as “nondairy” a
product which contains casein or caseinate. But it does deal
with this problem as follows (21 CFR Ch. 1(4-1-93 Edition),
p. 21). 101.4 (d) “When foods characterized on the label
as ‘nondairy’ contain a caseinate ingredient, the caseinate
ingredient shall be followed by a parenthetical statement
identifying its source. For example, if the manufacturer
uses the term ‘nondairy’ on a creamer that contains sodium
caseinate, it shall include a parenthetical term such as
‘milk derivative’ after the listing of sodium caseinate in the
ingredient list.”

Ford and his researchers’ work with soybeans, soyfoods,
and chemurgy–Bibliography and sourcebook, 1921 to
1993: Detailed information on 439 published documents
(extensively annotated bibliography), 79 unpublished
archival documents, 71 original interviews (many full text)
and overviews, 13 commercial soy products. Lafayette,
California: Soyfoods Center. 249 p. Subject/geographical
index. Author/company index. Language index. Printed May
19. 28 cm. [567 ref]

• Summary: This is the most comprehensive book ever
published about the work of Henry Ford and his researchers
with soybeans and soyfoods. It has been compiled, one
record at a time over a period of 18 years, in an attempt to
document the history of this subject. It is also the single
most current and useful source of information on this
subject, since 96% of all records contain a summary/abstract
averaging 286 words in length.

This is one of more than 40 books on soybeans and
soyfoods being compiled by William Shurtleff and Akiko
Aoyagi, and published by the Soyfoods Center. It is based
on historical principles, listing all known documents and
commercial products in chronological order. It features: 30
different document types, both published and unpublished;
every known publication on the subject in every language;
66 original Soyfoods Center interviews and overviews
never before published. Thus, it is a powerful tool for
understanding this subject from its earliest beginnings to the
present.

The bibliographic records in this book include
439 published documents and 79 unpublished archival
documents. Each contains (in addition to the typical author,
date, title, volume and pages information) the author’s
address, number of references cited, original title of all non-
English publications together with an English translation of
the title, month and issue of publication, and the first author’s
first name (if given).

The book also includes details on 13 commercial soy
products, including the product name, date of introduction,
manufacturer’s name, address and phone number, and (in
many cases) ingredients, weight, packaging and price,
storage requirements, nutritional composition, and a
description of the label. Sources of additional information
on each product (such as references to and summaries of
advertisements, articles, patents, etc.) are also given.

Details on how to make best use of this book, a
complete subject and geographical index, an author/company
index, a language index, and a bibliographic analysis of
the composition of the book (by decade, document type,
language, leading periodicals or patents, leading countries,
states, and related subjects, plus a histogram by year) are
also included. Address: Soyfoods Center, P.O. Box 234,
Lafayette, California 94549. Phone: 510-283-2991.

Corporation’s work with soy-based dairy analogs
Shurtleff of Soyfoods Center.

• Summary: Rich Products does not have any documents
in its archives on the various small companies (such as
Delsoy Products) that were the first to make soy-based whip
toppings starting in about 1944-45. However Bob remembers
them well and what they did. Delsoy started with a filled
cream named Devonshire Topping which they sold mostly
in Detroit, Michigan. Then they came out with a soybean
cream that was not frozen. The majority of their early sales
were in the filled cream. Delsoy was never sold in Buffalo,
New York, and thus was not a competitor to Rich’s Whip
Topping. Even after Whip Topping was frozen, Delsoy was
never much of a competitor. Bob is not sure when Delsoy
was launched, but he has the feeling that it was on the market
only several months before his Whip Topping.

Concerning the article by F. Olmsted in the 16 April
1945 issue of the Detroit News, Bob (who worked for the
War Food Administration or WFA) never heard of the WFA
issuing an order placing a 19% limit on all fats used in any
dairy product. This information was probably supplied to
Olmsted by Herbert Marshall Taylor, who Bob remembers
as “a wild man.” Bob conjectures that maybe the reason
Taylor switched to a soy-based topping was to allow him to
ship the product across state lines. In those times a company
could not sell a filled cream product (which was what he
had) across state lines, and there were only 7 states in which
filled milk products could be made and sold within the state.
In fact the Milnot Company had a plant near Litchfield,
Illinois, situated exactly on the state line between Illinois
and Indiana. They had a filled milk processing room on each
side of the line, i.e. in each state. They never made a soy-
based product. At one time, Milnot started shipping its filled
milk across a state line either to test the law or because they
thought they could get away with it. The government seized
their product and took the president to court. He was judged
guilty and had to spend the weekend in jail until he could get
a bail bond. He was sentenced to a year in jail but he never
served time because president Franklin Roosevelt gave him a
presidential pardon.

Rich Products was involved in about 40 lawsuits with
various states involving its non-dairy products—and the
company won them all. But if the lawsuits had taken place a
few years earlier, Bob thinks Rich Products could have been
beaten. The climate was changing, led by more favorable
attitudes toward legalization of margarine—which replaced
a dairy product. The first lawsuit against Rich Products
took place in California in 1949. The charge was that Whip
Topping was an imitation dairy product, and hence illegal.
Arguing that the product was a replacement, not an imitation,
the company won the case.

Most of the subsequent cases were against Coffee Rich
(a non-dairy coffee whitener) starting in 1961. Whip Topping
was not much of a threat to the dairy industry. Most milk
routes used to take out 6 half pints of heavy cream (38-40%
fat; housewives would use it to make whipped cream) in
the morning and maybe bring back 8 in the afternoon—due
to souring, etc. So heavy cream was not of much interest to
milk dealers. But Coffee Rich was a real threat because much
more light cream (19-20% fat; for use in coffee) and medium
cream (28-30% fat; for use on cereal) was than heavy cream.

Last Wednesday (July 7) Bob celebrated his 80th
birthday. He is still chairman of the board of Rich Products
Corp., his son Robert Jr. is president, and Herb Kusche is
directive vice president. Last year his company did $940
million in sales. Next year, which will be the company’s
50th anniversary, they expect to go over $1,000 million.
The company has a research department in Buffalo with 75
researchers, plus 6,000 employees and 26 plants worldwide.
They have 7 people in their London office, 5 in the Hong
Kong office, 6 in Mexico City, 2 in Singapore, 2 in Brisbane
(Australia), and 2 in Tokyo—all their own people.

The FreezeFlo Process has become very successful,
especially in frozen fruits and in their great-tasting product
tamed Bettercreme—which was launched in April 1977 and
which keeps fresh without bacterial growth or spoilage at
room temperature without preservatives. It is sold as such to
foodservice organizations and bakeries, which keep it frozen,
then whip it for use on cakes and pies; the latter will go stale
before the Bettercreme! It is also used as the filling in Rich’s
Frozen Chocolate Éclair. Though the company spent a lot of
money hoping to find medical applications for the Freeze Flo
Process, nothing has yet been commercialized.

Rich Products does not have a good archives with
documents from the early years of the company. “In those days we didn’t save things, although we have nice displays in our memorabilia room here in our 250,000 square foot building which is called Rich Renaissance Niagara. Our offices and research center are in that building–but it houses no manufacturing operations.”

Bob has heard that Edsel Ford died of either unguulate fever or cancer of the intestine. If it were ungulate fever, that could be one more reason why Henry Ford was so interested in promoting the use of soymilk—as at the Henry Ford Hospital. Bob thinks they also served a soy coffee cream (soymilk thickened with propylene glycol) at the hospital.

Note from Ford Bryan, researcher at the Ford Archives, in response to an inquiry from William Shurtleff. 1993. Aug. 9. “I’m fairly certain Henry Ford disliked cows as a boy—long before Edsel’s illness. We do not seem to have a copy of Edsel Ford’s death certificate. As far as we know, the cause of Edsel’s death was cancer of the stomach, perhaps complicated by unguulate fever.”


• Summary: Frank Mitchell initially worked as a chemist for Spencer Kellogg & Sons, Inc. right across from the airport in Cheektowaga (a suburb east of Buffalo, New York). While working for Spencer Kellogg he got involved with Rich Products and taught Rich Products how to make a whip topping that he had invented. Note: His secret formula involved the use of isolated soy proteins. Until the summer of 1947 he received a royalty from Rich Products as a percentage of sales of his product. Frank left Spencer Kellogg and started his own business, Mitchell Foods, Inc., which he incorporated in Feb. 1949 in Fredonia, New York. Fredonia is located about 50 miles southwest of Buffalo, New York, also on the shores of Lake Erie.

Mitchell bought an old dairy and ice cream plant (with all the equipment in place) from Mr. William Gamble (who was from Bemus Point, New York). Gamble had purchased the plant two years earlier from the Kellers. The plant was located on top of West Hill at 152 West Main St. in Fredonia. The Mitchell’s home was in front, with the plant right behind it.

Walt was the first full-time employee of Mitchell Foods. He worked for the company from early 1950 shortly after the first product, Scotch Topping, was launched in 1949, until the end of 1981. Initially he, Frank Mitchell, and Evelyn Mitchell (Frank’s wife, who did the bookkeeping) ran the company Walt worked in the plant making the whipped topping. Later he moved into the office, and was in charge of all the purchasing, personnel, and order traffic (eventually in two plants).

In Fredonia, Mitchell continued to use isolated soy proteins to make non-dairy whip toppings. The company purchased soybean meal, mixed it with water in a very large vat, extracted the soy protein with chemicals, and precipitated it with hydrochloric acid. After the protein settled to the bottom, they washed it with running water all night long, then they mixed up the topping formula, which included sugar, a fat source, Not many people in those days knew how to produce food-grade isolated soy protein. They made 2 batches per day. Their first product was named Scotch Topping, a non-dairy whip topping, which was not a concentrate and which was first sold in 1949. It was sold almost entirely to bakeries (not to retail outlets) frozen in 10 or 30 lb tins.

Note: In Feb. 1951 Mitchell sued Rich Products for allegedly failing to pay him proper royalties on the whip topping invented for Rich by Mitchell; his payments were allegedly suspended in the summer of 1947. In Jan. 1952 Mitchell was awarded a settlement of $6,000.

The company’s next product was named Whip Filling Base. Introduced in about 1953-54, it was a concentrated non-dairy whip topping. It was also sold to bakeries, frozen, in 10 and 30 lb tins. In the mid-1950s the company decided to enter the non-dairy coffee creamer business. Their first product, named Mocha-Mate, was launched in about 1956, sold only to the institutional trade. It contained both soy protein and soy oil (which replaced the coconut oil used previously). After a while, a big company that made Coffee-Mate and owned a registered trademark on it forced Mitchell Foods to stop using the Mocha-Mate name, claiming that it was too similar to Coffee-Mate. So Mitchell Foods changed the product’s name to White Nectar.

In 1959 Mitchell Foods’ sales topped $1 million for the first time.

In Oct. 1961 Frank Mitchell bought the Good Seed Company ½ block away at 112 West Main St, at the foot of West Hill in Fredonia, for $38,000 for use as a storage facility for soybean meal, cans, and other raw materials. At that time Mitchell Foods was storing its raw materials at the Lakeside Warehouse way down on the edge of Dunkirk—a large distance and inconvenience.

Also in 1961 Don Furman joined the company as foreman of production; he reported to Walt Cunningham and continued to work for Mitchell Foods until 1981.

A turning point for Mitchell Foods came in 1963, when they landed the Morton Frozen Food account. This huge food company in Virginia, a division of ITT Continental, made cream pies which they topped with Mitchell’s Whip Filling Base (made in far-away Fredonia, New York) and sold frozen nationwide. That account, worth many millions of dollars a year, drove Mitchell Foods to new levels of financial success.
and profitability.

When Mitchell Foods’ four products were introduced, they each contained soy protein isolates, made in-house, as their main protein source. The company never purchased powdered isolates from another source. However in about 1962 Mitchell switched from using isolates to sodium caseinate in its coffee creamers. The reason: It was much easier to buy a ready-to-use ingredient than to make its equivalent from soybean meal. Neither the taste nor the price were much better for the caseinate. Initially Mitchell purchased sodium caseinate from the USA but later they found a better type and source in New Zealand. Continued.


417. Cunningham, Walter; Furman, Don. 1993. History of Mitchell Foods, Inc. Part II (Interview). SoyaScan Notes. July 14. Conducted by William Shurtleff of Soyfoods Center. • Summary: In 1964 Mitchell Foods’ first retail product, named Perx, was launched. It was a frozen non-dairy coffee creamer. Prior to this the company had distributed its products using foodservice and institutional distributors. Everything was shipped via common carrier; they had no refrigeration in the trailers so everything was kept frozen with dry ice. The company established its first relationships with food brokers. “We had a very good product and it just sold like crazy. Everybody that tried it, loved. And they loved the fact that it stayed in their refrigerator for weeks and weeks without spoiling.” It was sold frozen in a Pure-Pak carton (they had a Pure-Pak machine), in either 1 pint or 1 quart sizes. Perx was distributed nationwide, including Alaska, Hawaii, Montana, California, and even the Caribbean. The product’s main distribution was to New York City. Mitchell Foods never made an ice cream—either nondairy or dairy.

In Sept. 1964, shortly after Perx went onto the market, Rich Products sued Mitchell Foods for patent infringement, including illegal use of some ingredient (perhaps methylcellulose or methyl ethyl cellulose, an emulsifier) in a patented formula owned by Rich Products. The trial was held in Rochester and, after several years, Rich won. In early 1967 Mitchell Foods was required to pay Rich Products several hundred thousand dollars (actually $243,000) and stop using the particular ingredient. Don recalls that Mitchell Foods stopped making whip topping for a while, then they started it again later. Walt remembers how, when Mitchell Foods paid the first $100,000, he, Frank Mitchell, and their lawyer, Don Brandt (now deceased), went up to Westfield, New York and “celebrated” in jest by having dinner. “The incident deprived the company of a little money but was not at all a serious blow.”

By 1968 the Fredonia was operating at full capacity so the company began looking for a new building into which they could expand Perx manufacturing operations. In Dec. 1968 Mitchell Foods purchased the old Bay State Ice Cream Co. plant, at North Abington (a village in eastern Massachusetts just outside of Brockton, about 20 miles south of Boston) which was up for sale. It had all the necessary equipment, homogenizers, freezers, freezing and frozen storage capacity, etc. The huge (100,000 square feet) facility was a lifesaver for Mitchell Foods, moving them about 450 miles closer to their key New York market, where they had frozen distribution to almost 100% of the markets. All the whip topping continued to be made in Fredonia, and only non-dairy coffee creamer was made in Massachusetts. At that point they also began private labeling Perx for chains such as A&P, Grand Union, the Wakefern Food Corp. (which owned Shop-Rite, the biggest chain), and Supermarkets General (second biggest).

In 1971 Mitchell Foods introduced Poly-Perx, a polyunsaturated non-dairy creamer. The company developed the product at the request of the American Heart Association and the American Diabetic Association.

In the mid-1970s, Mitchell Foods employed about 60 people and had annual sales of about $5 million. At the peak of its prosperity, operating two food manufacturing plants, Mitchell Foods had about 70-80 employees on its payroll with annual sales of $8-9 million.

In May 1977, in the third and last lawsuit between Mitchell Foods and Rich Products, Mitchell sued Rich for price fixing and predatory pricing. He apparently felt that Rich Products salesmen or dealers were going into markets where Mitchell Products was strong, then slashing prices in an attempt to push Mitchell out. The trail was held in Buffalo and Mitchell lost. Both Walt and Don personally believe that (1) Rich was fixing and dropping prices and trying to force Mitchell Foods out of their key markets, (2) the loss of the suit hurt Mitchell Products but not severely, and (3) the pressure from the loss of so much business to Rich Products and from the impending trial was a major crisis for Frank Mitchell and contributed to his death from a heart attack; and (4) Rich Products had the money to make the suit drag on and on to run up the lawyer bills, knowing that the smaller company would run out of money before Rich Products did. In the end, Mitchell Foods had to pay legal fees only.

After this lawsuit, “Mitchell Foods kept sailing right along. Our business was good. We kept all our customers that we private labeled for.” Then Frank Mitchell died on 25 Nov. 1980 at age 66. He was very active in the business until the day of his death—which was the event that marked the beginning of the end for Mitchell Foods. A month before his death, the company was in good shape, financially and otherwise. It had survived loss of the last lawsuit quite well, with plenty of money to spare. After his death, his adopted son, Larry [Laurence], took over. A graduate of the University of Palm Beach, Palm Beach, Florida, Larry had joined the company in 1973 in accounting and became
assistant treasurer in 1974. Yet he knew almost nothing about running a company. Frank had totally failed to plan for and groom a successor. Walt wishes that he could have run the company, but Larry convinced his mother that he could run it adequately. Larry did a very poor job managing Mitchell Foods; he spent money like water and he wouldn’t listen to advice or warnings from Walt. Walt watched the company slowly go down the drain. At one point in the 1970s, the production plant in Fredonia that made whip topping was closed down, but the building was used as refrigerated storage for coffee creamer made in Massachusetts for transshipment to the Midwest. Walt, Don, and several secretaries continued to work there. The entire operation was closed in Aug. 1981, and 4 of the 10 employees there were transferred to North Abington. Eventually in 1983 Frank’s widow sold the building to the state policemen that ran the Troopers Toys for Tots. Then Larry decided to cash in by selling the Mitchell Foods’ plant in Massachusetts; he could live as he liked without working for the rest of his life. The problem was, he picked the wrong buyer. First Larry sold the company to an outfit located in Rye, New York [Canterbury Industries of Kingston, New York], which in turn was owned by another company in Montreal, Quebec, Canada. When they sold the company, Walt was out of a job. He heard that Larry Mitchell never received a single payment for the company in Rye. The company in Rye sold it to some other outfit, and again Larry never got a payment. In 1981 Mitchell Foods moved its corporate headquarters from Fredonia to Abington.

Walt apologizes that he is on high blood pressure medication which has erased some of his memory. Don notes that Frank Mitchell’s son, Laurence/Larry, lives in Forestville, New York (Phone: 716-965-2130). His former executive vice-president (Harry Hebberd, who joined the company at a late date) and his widow (who has lost most of her memory) lives in Fredonia. Address: 1. 420 Swan St., Dunkirk, New York 14048-2022. Phone: 716-366-6984.

418. Rich, Robert. 1993. Re: Rich Products Corporation. Letter to William Shurtleff at Soyfoods Center, July 26—in reply to inquiry. 2 p. Typed, with signature on letterhead. • Summary: It is immaterial to Mr. Rich whether he is referred to as Bob or Robert. He started work in the Food Section of the War Production Board in February 1942 and transferred to the War Food Administration (WFA) when that came into existence 4 or 5 months later. He resigned from the WFA in Oct. 1944.

In the early years, when Rich Products Corp. used soy protein as the protein source in its non-dairy products, it obtained the protein from defatted soybean flakes purchased from the Archer-Daniels-Midland Co. (ADM).

Bob thinks that Reddi-Whip (a dairy-based whipping cream in a pressurized can) was first sold in early 1948. Super Whip Valve Company was also a distributor of Super Whip Dairy Topping and it was owned by Illinois Creamery Supply Company. When Rich Products Corp. tried to use its Whip Topping in the pressurized can, the valve leaked; this problem was solved by reformulating the product to reduce the amount of an ingredient that was clogging the valve.


Rich Products Corp. did not construct Rich Stadium in Buffalo, New York, but it did purchase the naming rights in May 1973 for $1.5 million. The facility’s first game was played on 7 Aug. 1973.

Bettercreme is a very successful new product based on the Freeze Flo process. It was first sold commercially in April 1977.

“I am enclosing several of Rich’s magazines, as well as other product booklets, that will give you information about the history of our company which started with frozen Whip Topping. The initial batches of Whip Topping were test marketed at the end of 1944 and we went into production on March 31, 1945. Our frozen Bake-Off business, which we started with an acquisition in 1969, has outgrown our frozen non-dairy business. Along the way we purchased the SeaPak Company from the W.R. Grace Company and Rich-SeaPak is now the largest breaded shrimp processor in the country. We also purchased the Casa DiBertacchi Company, manufacturers of frozen meatballs and pasta items; Byrons Frozen Foods, the country’s leading barbecue manufacturer, as well as other acquisitions including 2 radio stations and 3 professional minor league baseball franchises totaling 32 acquisitions. We will pass the billion dollar figure this year as we will be very close to that sales figure this year and we will celebrate it at our 50th Anniversary. Incidentally, we sold our milk business in 1967 which, at the time, was the largest solely owned milk company in the country.” Address: Chairman of the Board, Rich Products Corp., P.O. Box 245 (1150 Niagara St.), Buffalo, New York 14240. Phone: 716-878-8000.

HISTORY OF NON-DAIRY WHIP TOPPING, COFFEE CREAMER

Vol. 2, No. 2. Winter. “All for the family: Rich’s dedicates new child center to Mrs. Janet Rich. In this issue (p. 2) is a half-page section titled “Spotlight: Robert E. Rich: Rich’s founder joins industry pioneers in Hall of Fame.” “It was an October party reserved for the frozen food industry’s most distinguished pioneers.

“The site was the grand ballroom of the San Francisco Hilton Hotel and, with an audience of over 1,000 frozen food industry executives from throughout the country in attendance including Rich’s divisional executives, Rich Products Founder and Chairman of the Board Robert E. Rich received the industry’s highest honor as he was inducted into the first class to enter the Frozen Food Hall of Fame.

“Rich joined such frozen food household names as Clarence Birdseye and contemporaries John F. Baugh, food distribution pioneer and founder of Sysco Corporation, and C. James McNutt, retired president of Campbell’s Sales Company, and entered the Hall on the heels of a standing ovation which saluted his work as the father of the non-dairy frozen foods segment.

“It is a great honor to be one of the first of four chosen to enter the Frozen Food Hall of Fame,” said Rich.

“When I began in this industry 45 years ago, we didn’t have a frozen food convention, we met with the canners. Today, the frozen food industry stands as an integral part of the American way of life and Rich Products is recognized worldwide as the pioneer of the non-dairy segment. I’m very proud to receive this honor and very proud of our company’s record in all aspects of our great industry.’

“The Frozen Food Industry Hall of Fame was co-founded by the National Frozen Food Association, Harrisburg, Pennsylvania, which represents all segments of the industry including over 1,000 members nationally, and by the Distinguished Order of Zerocrats, a national organization made up of industry leaders who have contributed to the image and advancement of the frozen food industry. A maximum of four industry representatives are inducted into the Hall of Fame each year.”


(7) Welcome to the club: Rich’s. 1991. On page 2 is a large photo including Bob Rich in about 1945 titled “The creation of Whip Topping was the beginning of a long list of Rich’s frozen food innovations.”


(9) Rich Products’ corporate chain account network. Undated. Address: P.O. Box 245 (1150 Niagara St.), Buffalo, New York. Phone: (507) 365-8400.

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to the University of Michigan at Dearborn by the Ford Motor Co.

In the Preface, Jan’s three children write: “The qualities
our father and we admired most in Henry Ford were his
simple manner, his genuine interest in his employees and
their families, and his many kindnesses to them.”

Born in Holland, Jan’s training as a cook began at age
12 in his home town of Hilversum. He came to America in
1919 settling in Boston where he met and married his wife
Annie. He first came in contact with the Ford family in 1931
when he was cooking at the Nautilus Hotel in Miami Beach.
Florida. He took food to Edsel Ford and the crew of his
yacht, which was moored at the marina. Edsel thought Jan
was a good cook. Henry Ford had just opened the Dearborn
Inn in Dearborn, Michigan, and Edsel thought Jan would
be a good executive chef. Henry Ford wrote Jan asking if
he’s come to Dearborn and take the job of head chef. After
a while, Jan accepted. Mr. Ford didn’t want any alcohol
served at the inn and he was very much against smoking. Jan
soon met Edsel Ruddiman, Henry Ford’s chemist. Jan never
cooked at Fair Lane, the Ford’s home and mansion, while the
Fords lived there.

In 1934, at Mr. Ford’s request, Jan started experimenting
with soybeans. Dr. Ruddiman had the miller send him
samples of soybean flour. He started by making soft rolls,
and then began experimenting with many different foods.
Whatever Jan made had to be approved by Dr. Ruddiman
before he could send it to the Ford family. However, it could
be served at the Dearborn Inn without his approval. He made
many recipes in the next 5 or 6 months, and as far as he
knows no other soy recipes were around.

While Jan researched food recipes with soybeans,
Dr. Ruddiman and chemist Bob Smith experimented with
making a substitute for milk and ice cream from the beans
(p. 47). The first products were served at the Dearborn Inn,
but weren’t well liked. Several other soybean researchers Jan
remembers were R.H. McCarron and Harold Joyce.

Jan worked as pastry chef at the Dearborn Inn until
1932. Then he went into Dr. Ruddiman’s laboratory in
Greenfield Village. “This soybean experiment was a sideline,
you might say. It started small but grew to be very important
to Mr. Ford. He wanted more and more food made with the
soybean. Clara Ford was not as interested in the soybean as
her husband, but she especially liked some soybean food
such as cookies made with white chocolate chips, and soy
bread. She wanted the bread sent to the mansion every day. A
favorite of Mr. Ford’s was a soybean cracker that he named
the Model T...” A recipe for “Model T. Crackers” is given.

The section titled “Soybean Recipes” (p. 51-72)
contains 42 such recipes. The main soy ingredients used
in these recipes are soybean flour (used in 18 recipes),
soybean margarine (in 17 recipes), soybean milk (10), whole
soybeans (cooked, 9), soybean oil (8), roasted soybeans [soy
nuts] (5), soy sprouts (1), TVP (textured soy flour, 1), and
canned green soybeans (1). There are also two recipes for
making soybean milk (one from soybean flour and 1 from
whole soybeans), and one recipe each for making roasted
soybeans (salted and baked) and homemade soybean coffee.

A photo (p. 66, supplied by Willemsen) shows the “Menu
of Dinner Served at Ford Exhibit, Century of Progress,
August 17, 1934.” The names of 17 dishes, each containing
soya, are listed. The text on the facing page states: “I planned
this menu of all soya bean food...” served at The Ford Exhibit
in Chicago, Illinois.

When Henry Ford ceased to be active in the Ford Motor
Co., Jan left the company and started a catering business on
his own. The Clinton Inn (pictured) was the first building
Henry Ford acquired for Greenfield Village in 1927. Jan
helped to open it to the public. Of the various friends
of Henry Ford that Jan met, the one who impressed him most
was George Washington Carver. “Of all the people I met,
the prince of them all was Henry Ford. He was a wonderful
man. He was so interested in everything and everybody. He
loved children. He helped them, and the poor too, whenever
he could.” Jan also thought a lot of Dr. Ruddiman, who told
him many times that “you are what you eat... Well, I’ve eaten
soybean foods ever since I started experimenting with them.”

“It used to be everyone thought soybeans were just
food for animals. Mr. Ford helped people realize that they
are perfect food for human beings. He once said that, next
to the Model T, he considered his soybean research to be his
greatest work.”

This book contains many fine old photos including the
following: The Carver Laboratory interior (p. 46; it was used
for soybean research), The Carver Laboratory exterior in
1942 (p. 50). Henry Ford standing by George Washington
Carver (p. 65). Austin W. Curtis Jr., Jan Willemsen, and Bob
Smith sampling soybean foods that Jan served at a soybean
brunch at the Henry Ford Estate–Fair Lane in 1988 (p.
138). Two giant pressurized cans of Presto Whip which
attracted the attention of passers-by on Telegraph Road,
south of Michigan Ave. in Dearborn for many years. Stored
inside the structures were soybean oil and sugar used to
make the soy-based non-dairy whip topping developed by
Robert Smith, food chemist, at the request of Henry Ford
(p. 144). Photos on the last page, titled “About the Authors”
 autobiographical) show both Willemse and Eaton. Jan still
bakes soybean cookies (recipe p. 61). Address: Willemsen:
130 Nightingale, Dearborn, Michigan 48128. Phone: 313-
561-4088.

422. Presto Food Products, Inc. Renamed Morningstar
Free Non-Dairy Creamer. P.O. Box 584, City of Industry, CA
91747-0584. Phone: 626-810-1775.
• New Product–Documentation: Product with Label
 purchased at Safeway supermarket in Lafayette, California.

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the front panel shows creamer being poured into a cup of coffee from the top. A photo on the back shows a side view of the same scene. “No cholesterol. Fat free. Lactose free. Now, creamier than ever.” Back panel: “Sinfully rich and creamy. Without the sin.” Note: This is truly a non-dairy product, containing no casein.

Talk with Donna in Consumer Affairs. 1997. Sept. 4. Presto Food Products was purchased by another company on 1 Jan. 1997 and since that date has been named Morningstar Foods, Inc. The Fat Free Mocha Mix was introduced in 1993.

Ingredients: 1997: Water, corn syrup, partially hydrogenated soybean oil (adds a dietarily insignificant amount of fat), dipotassium phosphate (buffering salt–controls acidity), soy protein, maltodextrin, mono- & diglycerides**, cellulose gum, microcrystalline cellulose, polysorbate 60**, sodium stearoyl lactylate** (not a milk derivative), salt, titanium dioxide, artificial flavor, beta carotene (for color). ** = emulsifier or stabilizer from soybean or cottonseed oil—to keep oil and water from separating. Wt/Vol., Packaging, Price: Quart Pure-Pak carton. Retails for $1.49 (1997/08, Lafayette, California). Refrigerated. Nutrition: Per 1 tablespoon (15 ml): Calories 10, calories from fat 0, total fat 0 gm (0% daily value); saturated fat 0 gm), cholesterol 0 mg, sodium 5 mg (0%), total carbohydrate 1 gm, protein 0 gm. Percent daily values are based on a 2,000 calorie diet.


• Summary: Continued: Genice developed its first soy yogurt in 1988; it was a chilled/refrigerated product that the company never actually launched. Genice has never made or sold a soy yogurt under the Genice brand, for reasons mentioned earlier— that the company wants to focus on product development and manufacturing, not marketing. Not long after April 1989, when Genice joined the Haldane Foods Group, they started to make Haldane Yoga, a chilled soy yogurt owned by the Haldane Group, but originally launched by the Regular Tofu Company in 1986. This and all subsequent soy yogurts made by Genice have been cultured products. Haldane Yoga product sold at the rate of about 500 to 1,000 cases per week, continuing until early 1990 when Genice developed a unique process for making pasteurized yogurts that have a 4-month shelf life at ambient temperatures. One other dairy company in the UK [Bridge Farm Dairies] was already producing an ambient stable product, but it suffered from protein degradation and did not contain large pieces of fruit. Genice attacked the problem from two directions—process design and product development. The process design concentrated on the necessity of pasteurizing the yogurt containing large chunks of fruit without degrading the soya protein. The product development consisted of producing a product with heat-stable natural flavors and colors at low pH (range: 3.6 to 3.8 when done). The results were highly successful.

The secret to the Genice process for making shelf-stable products is the “protein protection.” If the process is not done correctly, all the protein precipitates, resulting in a very poor lumpy product that looks like porridge. The TVC (total viable count) is less than 10 in each soy yogurt product right after packaging, so they are almost as sterile as if they had been treated by UHT. The pH ranges from about 3.8 to 4.0, which gives added protection. This allows them to sell their yogurts using unrefrigerated distribution, which is much more economical. In the UK, most refrigerated distribution is done only by very large food companies.

Genice now makes 4 different brands of non-dairy soya yogurts for sale in the UK in 12 flavors. (1) So Good Yoghurt (launched in early 1990 in 3 flavors—strawberry, black cherry, and peach & passion fruit; this is the Haldane brand; the So Good name has no connection with the same name used by Sanitarium Foods in Australia); (2) Unisoy Soya Yogurt (launched in late 1990 in 3 flavors—raspberry, peach melba, and black cherry; Genice made these yogurt products for Unisoy before they joined the Haldane Group; before that, they were made by Bridge Farm Dairies in southern England—which attempted to make a shelf-stable product using dairy technology); and (3) Granose Soya Yogurt (launched in late 1990 in 4 flavors—peach melba, strawberry, apricot, and blackcurrant & apple; Granose became part of the Haldane Group in Jan. 1991); (4) Granose Hi-Fruit Premium Yogurt (launched in late 1992, with double the fruit content, 20%, in 3 flavors—kiwi & passion fruit, nectarine and pineapple, and fruits of the forest). Note that there is some duplication of flavors among different brands.

Starting in 1992 Genice started to sell its soy yogurts outside the UK. First in 1992 the So Good line of soy yogurts was launched in Spain, in cups printed in Spanish, for ADM-owned Arkady ADM Iberica S.A. (Carretera de Hospialalet 42, Cornella de Llobregat, Barcelona, Spain) with the addition of two new flavors–orange and natural. In late 1992 the Spaniards requested their own brand, so So Good was changed to Alisana; Four Soya Yogerts (120 gm each) were sold in each pack. The Spaniards are apparently becoming very health conscious, because Spain is now Genice’s biggest export market, taking about 20% of all the soy yogurt that Genice makes. In late 1992 the So Good line was launched in Sweden, Norway, and Denmark using, in part, the pre-existing Granose distribution network. One product, named So Good Soya Frutty, was sold to all 3 Scandinavian countries. The label was in Swedish and the names of all 3 distributors were on it. The distributors are: (1) Kung Markatta AB, Hjalmarsberg, S-705 95 Oreo, Sweden (this is Genice’s second largest export market); (2) Alternative Mat A/S, AVD Import, Kubben, 2150 Arnes, Norway; (3) Grön Distribution, Hoje Gladksaxe Torv 2, 2860.
Soborg, Denmark (Genice has not dealt with Grön since 1992). At about the same time the So Good Yoghert (with its regular English label) was introduced to Finland, distributed by Oy Makrobios AB, Leksavall, 10600 Ekenas, Finland.

Then in early 1993 Genice’s So Good soy yogurt was launched in Italy, in English with a sticker applied by Genice, thru a company partly owned by ADM named AFG Italy S.r.l. (Via S. Cassiano 76, Trecate, Novara 28069, Italy) and in mid-1993 in Portugal with an English label through another ADM subsidiary, Natisir (Centro Dietetico Lda., Rua de Santo Antonia, Estrela No. 31-B, 1300 Lisburn, Portugal). Italy is one of the two fastest growing yogurt markets in Europe, and it may soon pass Sweden to become Genice’s second largest export market. Continued. Address: Founder, Genice Foods Ltd., Pinfold Lane, Llay Industrial Estate, Llay near Wrexham, Clwyd, LL12 0PX, Wales/Cymru, UK. Phone: 0978-853-787.


• Summary: Ray feels that these soy yogurts are excellent products. Consumers must have the same opinion since the market is growing very rapidly. “In retail terms, this soya yoghurt market is now worth around £2 million sterling ($3 million), whereas it was worth only about £30,000 sterling in 1985.” The market was almost totally created in the last four years—since Genice started making soy yogurt using its unique process that gives a shelf-stable product.

Today Genice now sells about ten times as much soy yogurt as soy ice cream. Moreover, sales of soy ice cream are fairly static, while sales of soy yogurt are leaping ahead. Genice makes at least 90% of the soy yogurts sold in the UK. In short, Genice started as a non-dairy ice cream company, which has in fact turned into a non-dairy yogurt company! “The soy yogurts really sold themselves. It was amazing how they took off so well.” There are about 1,500 health food shops in the UK, and no more than half of those have a freezer, so they cannot sell ice cream. Even those with a freezer, usually have very limited frozen storage capacity and the competition for that small space (as from dairy ice creams) is intense. Almost all of those with no freezer also have no refrigerated storage; they sell mainly “pills and potions” etc.” So a refrigerated or frozen product can be sold in less than half of all health food stores. This gives shelf-stable products, such as Genice’s soy yogurts, a big advantage. Genice is moving its soy yogurts into Italy and Portugal in a bigger way, and is launching two new yogurts for Spain this year (competing soy yogurts are sold on a small scale in Spain). Other concepts and flavours will be introduced into the yoghurt area in 1994, together with the quest for other export markets continuing both in Europe and the rest of the world.

Genice uses fresh soymilk (produced by Unisoy) to make about 50% of its total volume of soy yogurt, and isolated soy proteins to make the other 50%. Powdered soymilk is not used because it is very expensive and too hard to obtain. Isolates are more convenient to use but Ray now feels that fresh soymilk gives a slightly better product—though this is very subjective and different people have different opinions. Isolates also give an excellent soy yogurt.

One of the markets that Genice has not yet entered—and would like to— is Germany, where there are large sales of soy milk and twice as many health shops (Reform Houses) as in the UK. Since most of the Reform Houses do not have chilled or frozen cabinets, Genice’s shelf-stable products would fit perfectly; they could be sold on the shelf next to the Muesli. In the smaller health food shops in the UK, Genice’s shelf-stable soy products are usually sold unchilled, but in the bigger shops, like Holland & Barrett, they sold chilled, since they taste better after being chilled.

Other dairylike non-dairy products that Genice has made are as follows: In 1990 chilled So Good Soycreem was launched as a non-dairy alternative to dairy double cream, but low in cholesterol, high in polysaturateds, and low in saturates. It was made for Haldane in a little beige plastic pot with a green foil lid, packed at the Genice plant. It contains a trace of cholesterol because law requires that it contain 36% oil, including some palm oil. In 1991 a shelf-stable UHT version (completely sterilized, with a 9-month shelf life), now named Granose Soya Cream, was launched in a 225 ml Combibloc pack, made for Genice by a large dairy in Ireland which had Combibloc packaging equipment. The chilled So Good Soycreem was discontinued. In 1992 Genice installed a vegetarian margarine plant, which also makes Granose Soya Margarine that is sold chilled. This margarine was developed in Germany, so they took over the business and reformulated the product.

Genice is doing very well. The plant has expanded to 15,000 square feet from its original 2,500—a 6-fold increase. Their turnover (gross sales) has doubled virtually every year since they have been in business. Being owned by ADM has been of great benefit to Genice because ADM has been extremely generous in providing the money that Genice needs for its ongoing expansion and implementation of new ideas. Genice would eventually like to enter the U.S. market (starting in New York) with its shelf-stable non-dairy yogurt products, since there are no such products in America.

When yogurt is pasteurized, the beneficial effects of the yogurt bacteria are nullified. But Ray was just told by Dr. Glen Gibson that oligofructose, a sugar, has the effect of promoting the growth of the small quantities of Bifidobacteria in the human digestive system. Thus a pasteurized soy yogurt could be made into an even healthier product if it were sweetened by oligofructose.

Ray is a native of Wales and his wife is a teacher who
often teaches in Welsh. Both are happy to see the revival of the Welsh language. Ray is not a vegetarian, but he has a good feeling and high regard for vegetarianism, he likes vegetarian food, and he has some vegetarian ideals but they go beyond the food to more ethical issues. He finds that many of the people in other companies that he deals with are more ethical people. He would estimate that 85-90% of the consumers who buy products made by Genice are vegetarians or vegans. Address: Founder, Genice Foods Ltd., Pinfold Lane, Llay Industrial Estate, Llay near Wrexham, Clwyd, LL12 OPX, Wales/Cymru, UK. Phone: 0978-853-787.


• Summary: This is the most comprehensive book ever published about non-dairy whip toppings—which resemble whipped cream. It has been compiled, one record at a time over a period of 19 years, in an attempt to document the history of this subject. Its scope includes all known information about soy-based non-dairy whip toppings, worldwide, from 1944 to the present, plus considerable information about non-dairy whip toppings that are historically related to soy-based whip toppings. It does not attempt to give comprehensive coverage of other so-called non-dairy whip toppings—most of which are based on casein, the major protein found in cow’s milk, yet which nevertheless are allowed to be labeled “non-dairy.”

This book is also the single most current and useful source of information on non-dairy whip toppings, since 99% of all records contain a summary/abstract averaging 348 words in length.

This is one of more than 40 books on soybeans and soyfoods being compiled by William Shurtleff and Akiko Aoyagi, and published by the Soyfoods Center. It is based on historical principles, listing all known documents and commercial products in chronological order. It features: 27 different document types, both published and unpublished; every known publication on the subject in every language—including 200 in English, 2 in French, and 1 in German; 48 original Soyfoods Center interviews and overviews never before published. Thus, it is a powerful tool for understanding the development of soy-based non-dairy whip toppings and related products from their earliest beginnings to the present.

The bibliographic records in this book include 115 published documents and 49 unpublished archival documents. Each contains (in addition to the typical author, date, title, volume and pages information) the author’s address, number of references cited, original title of all non-English publications together with an English translation of the title, month and issue of publication, and the first author’s first name (if given).

The book also includes details on 21 commercial whip topping products, including the product name, date of introduction, manufacturer’s name, address and phone number, and (in many cases) ingredients, weight, packaging and price, storage requirements, nutritional composition, and a description of the label. Sources of additional information on each product (such as references to and summaries of advertisements, articles, patents, etc.) are also given.

Details on how to make best use of this book, a complete subject and geographical index, an author/company index, a language index, and a bibliometric analysis of the composition of the book (by decade, document type, language, leading periodicals or patents, leading countries, states, and related subjects, plus a histogram by year) are also included. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549. Phone: 510-283-2991.


• Summary: Dorothy, age 73, graduated from Iowa State University with a degree in food, nutrition, and journalism. Then she began her career as a home economist for Swift & Company, a Chicago-based food company. In 1945 she married and moved to Hawaií, where her two children were born. In 1968 [actually about 1973 or 1974] her daughter-in-law Cynthia prepared a few simple dishes at Dorothy’s home in Connecticut using tofu, tempeh, soy sauce, and textured vegetable protein. This had a profound effect on the direction of Dorothy’s life. Sensing a story, Dorothy called the food editor from the local newspaper [Elizabeth Squires of the Wilton Bulletin in Wilton, Connecticut] to photograph the dishes and write about soy products. Now age 50, and a lover of the rich desserts of French cuisine, Dorothy had little idea that she would eventually be writing vegetarian cookbooks—such as The Tempeh Cookbook, and The TVP Cookbook.

Contains 9 soyfoods recipes, including: Super-easy chocolate mousse (with silken tofu), and Whipped topping (with firm tofu).

A sidebar (p. 31-32) discusses soybeans, diet, disease prevention, and genistein.


• Summary: The many recipes in this vegan cookbook are
low in fat (only 3 grams of fat per recipe), use no dairy products or eggs, and contain no cholesterol. Twenty-five attractive full-page color photos show the prepared recipes. The glossary of ingredients contains entries for the following soy ingredients:

“Lite silken tofu—a reduced-fat form of silken tofu. It is sold in aseptic packages in large supermarkets and natural food stores. Lite silken tofu has 75% less fat than regular silken tofu and does not sacrifice flavor or texture.”

“Silken Tofu—a smooth-textured, custard-like tofu that is sold in aseptic packages and is available in most supermarkets and natural food stores. Like regular tofu it is made from soybeans. Silken tofu is an effective egg substitute when used in ¼ cup tofu to one egg proportions. It is also available in soft, firm and extra firm consistencies. I prefer the extra firm consistency.”

“Soy buttermilk—a good substitute for dairy buttermilk in baked goods. It is made by adding 2 tablespoons of lemon juice to 1 cup of soy milk.”

“Soy milk lite—a reduced fat soy milk that is 1% fat. It is available in large supermarkets and natural food stores.” Soy milk lite was first introduced in the USA in March 1990 as WestSoy Lite. Also in 1990 it was introduced in Australia as Sanitarium So Good Lite.

The glossary also defines “Rice milk” as “a delicious non-dairy beverage with a mildly sweet flavor that can be used in place of dairy milk and soy milk. The Rice Dream (R) brand is available in both original (plain) or vanilla flavors and contains 1% fat and no cholesterol.”

It also defines the following sweeteners: Barley malt syrup, brown rice syrup, date sugar, FruitSource (made from grapes and grains), maple syrup, Mystic Lake fruit sweetener, natural applesauce, and Sucanat (granulated organic sugar cane juice).

At the listing for “Tofu” in the index, we are asked to “see lite silken tofu,”—which is used in 33 dessert recipes—including the following (listed alphabetically): Almond streusel cake. Apricot almond custard Austrian apple torte. Banana cream pie. Blueberry custard pie. Chocolate dream pie. Chocolate truffles. Classic pumpkin pie. Lemon yellow icing. Peaches ’n cream parfait. Raspberry banana mousse. Strawberry Nice Cream (creamy frozen dessert like ice cream).

In the introduction to the chapter on cakes, the author says: “One way I achieve a rich cake without eggs or dairy is to use lite silken tofu. Its creamy, custard-like consistency is perfect for replacing the eggs and milk found in traditional cakes. And its low-fat profile will keep you coming back for seconds.

A small color photo on the rear cover shows Marie Oser, who has been a vegetarian since 1971. She left a career in TV advertising to pursue her interest in food and nutrition.

Note: The words “low-fat” are hyphenated on the cover but not on the title page. Address: Agoura Hills, California 91391. Phone: 818-707-7353.


• Summary: This is an excellent, very creative cookbook with a poor index, developed especially for people who, due to choice or chance, have eliminated cheese from their diet. The recipes are well designed to satisfy any compelling cheese fantasies you may have.


Many other recipes also call for “low-fat, dairy-free (vegan) milk” which is defined (p. 183) as “a generic term which refers to any creamy beverage such as soymilk, nut milk, or rice milk that is produced from non-animal products.

Interesting products in the glossary (p. 180-184) include: Agar, barley malt syrup, brown rice syrup, liquid aminos, mirin, miso, seitan, tahini, tamari, tempah, toasted sesame oil, tofu, umeboshi plum paste, vegan milk, yeast–nutritional (Saccharomyces cerevisiae). Note: This is the earliest English-language document seen (Oct. 2013) that contains the term “Tofu whip topping” (regardless of capitalization).


• Summary: Under Canada’s Edible Oil Act, the blending of most soy and dairy products is not legal, although certain specific products, such as coffee whiteners and edible oil topping (whip topping) that were on the market when the law was written were grandfathered and kept legal. Duff would guess that this Act was passed in the 1950s or 1960s.

If illegal imported products are noticed on the shelves of Canadian food stores, any person may complain to the Canadian Ministry of Agriculture. Inspectors will investigate the case. Address: Ontario Ministry of Agriculture and Food,

*Summary:* Silken tofu is a key ingredient in the recipe for both this vegan Chocolate Rum Cake (1 cup firm tofu) and its frosting (10½ oz extra firm). In the cake, tofu replaces the eggs and butter, acting as a binder and leavener. In the frosting, tofu replaces the fat and provides creaminess. Here is luscious flavor without fear or guilt.

Makes 12 servings. Per serving: Calories 290, protein 9 gm, fat 6 gm, carbohydrates 44 gm, cholesterol 0 gm, sodium 11 mg, fiber 6 gm. Address: Owner, Now and Zen Enlightened Bistro and Bakery, 1826-B Buchanan St., San Francisco, California 94115. Phone: (415) 922 9696.


*Summary:* Contents: Continued from p. x. Continued Part IV: Distribution and retail. Distribution (Two distinct channels, mass-market products–warehouse delivery used most, natural foods products–independent distributors used most, distributors offer wide range of services, direct buying, several large distributors dominate health food channel, margins for the two channels differ, brokers support marketers’ sales efforts, marketers’ sales forces work with brokers), at the retail level–natural foods stores (the leading outlet–natural foods stores, soy-based products the heart and soul of natural foods store, products sold in several locations, stores adding refrigerator and freezer space, margins, product price comparison, meat alternatives–table, milk substitutes–table, cheese alternatives–table, frozen non-dairy desserts–table, prepared meals–table, in-store demos are top promotional activity, an increase in store advertising, examples of retail promotions), at the retail level–mass market (most products not in mass market, store placement of meat alternatives varies, store-within-a-store, increased selection and space, targeting the vegetarian consumer, margins, warehouse clubs, Cergro pricing data).

Part V: The consumer. Consumer use–soyfoods (About 25 million U.S. adults use soyfoods, natural foods shoppers more likely to purchase soy products, demographics of meatless burger consumers, use by type–tofu and soy burger use most common, other types of soyfoods used by about 2% of consumers, types of soyfoods eaten five or more times in the past year–table), the vegetarian consumer (what is a vegetarian, 12-22 million vegetarians and growing, small number of strict vegans, meat restrictors–a broader target of 77 million, who are vegetarians, demographic characteristics of vegetarians–table), consumer attitudes (main reason for choosing vegetarian foods, most important reason for becoming a vegetarian–table, concern about health higher among semi-vegetarians, most important reason for choosing vegetarian foods–table, cholesterol-fat primary health concerns, primary health concern when becoming a vegetarian–table, grocery store shoppers more influenced by doctor’s orders, health also key reason given by restaurant diners, fat–salt–fiber and cholesterol top health concerns for meatless burger consumers, environment pollution tops list of other social concerns of vegetarians, vegetarians considered nutrition advisors, a slow transition to vegetarianism, attitudes about meat alternatives, room for improvement on taste, consumers have a positive image on soy, more interest in soymilk from natural foods shoppers). Appendix I: Examples of consumer and trade advertising and promotions [photocopies of ads]. Appendix II: Addresses of selected marketers.

Scope of the report: This is a study of vegetarian foods made to resemble meat and dairy products and sold at retail, mostly through supermarkets and health and natural food stores. These products include meatless burgers and luncheon slices, soymilk and rice milk, cheese alternatives, non-dairy desserts (usually non-dairy ice creams), and prepared vegetarian meals containing meat and dairy alternatives as major ingredients.

Products not covered: (1) Bulk and packaged tofu, unflavored tempeh–However products such as tofu- or tempeh burgers are covered. (2) Margarine, non-dairy creamer, non-dairy whip toppings, and egg substitutes.

Although the first three of these categories are alternative to dairy products, they have become well accepted in the American diet and are not necessarily purchased by consumers wishing to avoid dairy products. “Also, the sheer size of these categories–each of which is many times larger than the overall meat and dairy alternatives market–would drastically skew the market numbers and trend information away from the products that are the focus of this report. For similar reasons, egg substitutes are also excluded.”


mellorine shortenings, coffee whitener shortenings, imitation cheeses, whipped toppings, margarines. Specialty products: Shortening chips, icing stabilizers, emulsifier bases, high-stability oils, confectioners’ fats.

Tables: 1. Relative oxidation rates of fatty acids (oleic is 1, linoleic is 10, linolenic is 25). 2. Shortening plastic ranges. 3. Typical fluid shortening compositions and SFI values. 4. Additives used in liquid shortenings. 5. Foodservice frying shortenings. 6. Foodservice pan and grill products. 7. Typical snack frying shortenings. 8. Selected nondairy shortenings compared with butterfat. 9. Mono- and diglyceride functionality.

Figures: 1. SFI curves for various types of shortenings (SFI, solid fat index, measures the ration of solids to liquid in a fat at several standard temperatures). 2. Bakery shortening development.


• Summary: Diehl Specialties International, the maker of Vitamite, is a subsidiary of Diehl, Inc. 1870–The company was established as the Christ. Diehl Brewing Company and operated as same until 1920 when Prohibition was enacted.

1920–The Diehl Milk Products Company was established and one-half of the brewery was converted to an evaporated milk plant. The balance of the facility was used to bottle water, soft drinks, and “Near Beer.”

1933–When Prohibition was repealed, the production of beer was resumed and continued until 1955.

1964–The company began producing spray-dried products–non-dairy creamers, powdered vegetable shortenings, whipped topping mixes and other special formulations as required by industry. Diehl is a leading producer of private label non-dairy creamers.

1966–Acquired the Wilson Milk Co.

1981–Acquired the evaporated milk operations of United Dairy. 1982–Acquired the evaporated milk operations of Westerville Creamery.

1982–Acquired Diehl Specialties, Inc. (DSI), St. Louis [Missouri], and renamed it Diehl Specialties International, (DSI) in 1985. DSI produces non-dairy milk substitutes, chocolate and other flavor powdered drink mixes. It makes private label products for over 100 companies with over 300 labels, has national distribution with warehouses in all major markets, and employs an average of 135 people at two plants. Address: 24 N. Clinton St., Defiance, Ohio 43512-1899. Phone: (419) 782-8219.


• Summary: The cover of this portfolio is filled with an illustration of white milk being poured and splashing against a blue background. Across the top is written “Vitamite” in white letters on a red background. The 12 documents enclosed in this portfolio (mostly and flyers and brochures) include: Facts on lactose intolerance (2 p.). Vitamite: The answer up to 50 million Americans are looking for could be on your shelf (1 p.; Up to 50 million Americans cannot drink milk–11.5% to 19% of the total U.S. population. This includes 15% of northern European whites, 60% of Hispanics, 80% of Jewish people, 90% of Asian Americans, and 75% of African Americans).


• Summary: Contents: Foreword, by Louise Hagler. Introduction, by Mark Messina and Virginia Messina: Introduction, soybeans–a powerhouse of nutrition, soy and cancer (soybeans–a phytochemical factory, genistein and non-hormone cancers, soy and cancer treatment, isoflavones in the diet), soyfoods and heart disease–beyond cholesterol, soyfoods and bone health, soyfoods and kidney disease, menopause, perspective on soyfoods, about the Messinas. Basic soyfoods (glossary): Whole soybeans, fresh green soybeans, soymilk, okara (soy pulp), soymilk powder, soy protein concentrates, soy protein isolates, tofu, freeze-dried tofu, tempeh, textured vegetable protein, miso, soy flour or grits, yuba or bean curd stick or sheet, natto, soy sauce, soy
oil, soy lecithin, convenience soyfoods (frozen soyburgers, frozen tamales and burritos, frozen soy hot dogs or wiener, frozen fat-free soy ground meat replacement, frozen soy pizza, tempeh burgers, frozen tofu lasagne, stuffed shells, manicotti, tortellini or ravioli, frozen soy breakfast links or "sausages" or tempeh "bacon," "ground" tofu, meatless chili mixes, meatless burger mixes, soy "cheeses," eggless soy mayonnaise, tofu salad dressings, soy ice creams, frozen pot pies, frozen pocket breads, instant miso soup, eggless soy cake, quick bread, pancake and waffle mixes, liquid soy coffee creamer, smoked or baked tofu). Feeding babies and children soyfoods. Breakfast, brunch & bread. Whole soybeans. Sauces, spreads, dips & dressings. Soup & salad. Main dishes. Desserts. Drinks & yogurt.

No dairy products or eggs are used; honey is called for in some recipes. Optional microwave instructions are sometimes included. Address: Summertown, Tennessee. Phone: 615-964-3571.

No dairy products or eggs are used; honey is called for in some recipes. Optional microwave instructions are sometimes included. Address: Summertown, Tennessee. Phone: 615-964-3571.


• Summary: A vegan cookbook, with a substantial section on vegan nutrition. Contains 11 tofu recipes and 1 recipe for tempeh sandwich.

Contents: Acknowledgements. Introduction (most Americans eat too much protein and far too much fat). Choosing food for optimum health. Protein. Calcium. Protein myths and facts. Putting fat in its place. Cutting the fat. Dairy products and eggs (why each is cruel to animals; soy and rice milks are excellent alternatives to cow’s milk; tofu can be scrambled in place of eggs. Five good books about factory farming. Contact information for three organizations “working to end the horrors of factory farming”). A note about sweeteners. Coking dried beans. Equipping your kitchen. Stocking your pantry for healthful eating. What to eat when you don’t eat meat. Foods which may be new to you [glossary] (includes aseptically packaged tofu, barley malt, low-sodium soy sauce, mirin, miso, Nayonaise [eggless, dairyless, cholesterol-free mayonnaise], non-dairy frozen dessert, non-dairy yogurt, reduced-fat tofu, rice milk, rice syrup, silicon tofu, soy milk, Spectrum Natural Spread {similar to soft margarine but made without hydrogenated fats}, tempeh, textured vegetable protein {TVP}).

“Until he extends the circle of his compassion to all living things, man will not himself find peace”–Albert Schweitzer.

Recipes: Breakfasts. Breads. Sandwiches. Salads & salad dressings, etc. A portrait photo (p. 159) shows Jennifer Raymond. “She works as a chef and nutrition specialist with Dean Ornish, M.D. in his ‘Open your heart program,’ teaching patients how a delicious, easily prepared vegetarian diet can reverse heart disease.” “Her first cookbook, The Best of Jenny’s Kitchen, was published by Avon books in 1981 and was followed closely by her television series Cooking Naturally! Jennifer lives in Calistoga, California, with her husband Stephen Avis and their five dogs.”


Talk with Jennifer Raymond. 1996. May 30. The new enlarged edition was available on 2 May 1996. There are new recipes and with each recipe is a nutritional analysis. The book is still available from the author, as well as nationwide because it is distributed by The Book Publishing Company in Summertown, Tennessee. She is now working closely with Dr. Dean Ornish, and adds: “He is at the center of where things are happening related to vegetarianism, diet, and health. His work has had a more profound impact on the way that the medical profession and people in general view vegetarianism than that of almost any other person. It has allowed vegetarianism to turn a really big corner.” Address: 1418 Cedar St., Calistoga, California 94515. Phone: 707-942-2180.


• Summary: About 30 million Americans are lactose intolerant. Between 4% and 6% of infants develop allergies to the proteins in one or more foods, with cow’s milk being the most allergenic. And many other people have moral or philosophical objections to drinking milk (e.g. widespread use of antibiotics, use of genetically engineered Bovine Growth Hormone [rBGH, made by Monsanto], the suffering of calves when forcefully removed from their mother, etc.). Until quite recently, these people had to live without dairy products, but now that has all changed—thanks to soyfoods, which are widely available and usually quite delicious.

Foods marked with one asterisk (*) are sold at most natural food stores and some health food stores and supermarkets (look in your Yellow Pages at “Health & Diet Food Products–Retail”). Foods marked with two asterisks are also sold at most supermarkets.

If you use dairy alternatives regularly, you can save money by making them yourself: See the index of The Book of Tofu by Shurtleff & Aoyagi (Ballantine Books edition) for carefully tested, home-scale recipes for soymilk, soy ice cream, soy yogurt (from soymilk or from tofu), tofu, cream cheese, sour cream, whipped cream (from tofu or soymilk), tangy tofu cottage cheese, tofu icing, frozen-banana tofu shake, soymilk kefir, soy mayonnaise (from tofu or soymilk),
Soymilk* is the most popular type of dairy alternative. It is sold in many flavors, often fortified with calcium, vitamin D, antioxidants, etc. in quarts and half gallons. It costs about 1.7 times as much as milk (so if a quart cow’s milk costs $1.00, a quart of soymilk will cost about $1.70). Popular brands: Edensoy, Westbrae, Westsoy, Vitasoy, So-Yum, Silk, and Pacific Foods. For a tasty soymilk shake, try Westbrae Malted. Rice Dream is a delicious non-dairy rice milk and also an ice cream; both products are made by Imagine Foods. Many other brands of rice beverage (some of whose quality we think is not as good) are also available.

Soy ice cream* is sold in an outrageous variety of flavors and forms. Hard-pack pints are the most popular, followed by soft-serve, ice cream sandwiches, etc. Popular brands: Tofutti, Living Rightly, Sweet Nothings (fat free), and Ice Bean. Rice Dream is a delicious rice-based non-dairy ice cream.

Soy yogurt* is sold in typical small yogurt cups, in a wide variety of flavors. The most popular brand is White Wave Dairyless. Try their Lemon-Kiwi flavor! Most soy yogurts are fermented/cultured with live cultures, but some are like a parfait (not fermented) made by blending silken tofu, fruits, and a sweetener.

Tofu**, the world’s most popular soyfood, is now sold at very reasonable prices in most supermarkets across America. It makes an excellent replacement for cheese in many dishes where the cheese is not required to melt: Salads, sandwiches, in Lasagna for the ricotta cheese, etc. You can also use tofu to make your own soy yogurts and ice creams at home.

Soy cream cheese*. These products, based on tofu, are delicious and moderately priced. Our favorite brand is Tofutti Better than Cream Cheese, which comes in flavors such as Garlic & Herb, French Onion, Herbs & Chives, Plain, Wildberry, or Smoked Salmon. Some bagel shops (such as Noah’s Bagels in Northern California) sell this product. VeganRella Cream Cheese (in plain & onion & dill flavors) uses more natural ingredients (no hydrogenated oils, or mono- or diglycerides).

Soy sour cream*. Again, this product is based on tofu. Our favorite brand is Tofutti Sour Supreme—Better than Sour Cream.

Soy cheese* is our least favorite dairy alternative. Most brands contain casein (the protein from cow’s milk), which allows them to melt, but which also (technically) disqualifies them from being a truly non-dairy product. A few brands are truly non-dairy but they melt in a sort of thick puddle. Top brands with casein: Soya Kaas, TofuRella, Zero-FatRella, HempRella (soy free), and AlmondRella (soy free). Top brands without casein: VeganRella (2 flavors), Soymage.

Soy-based infant formula. Available at most pharmacies and many supermarkets, this is a carefully formulated and regulated product designed to meet the critical needs of infants when served as the sole source of nutrition. It is widely fed to infants who are allergic to cow’s milk. But note that 15% to 50% of infants with cow’s milk allergy will also develop allergies to soy protein. Soy protein was recently ranked 11th among foods in terms of allergenicity; animal proteins such as milk and eggs remain the most allergenic foods.

Whip Topping**. Sold as “non-dairy whip topping” at most supermarkets, as far as we know, these all contain casein or sodium caseinate from cow’s milk. Leading brands: CoolWhip.

For more information on non-dairy products on the World Wide Web, go to http://www.rella.com. This website is produced by Sharon’s Finest in California.


• New Product—Documentation: Product with Label purchased at Safeway supermarket in Lafayette, California. 1996. May 27. 6 inches diameter. Dark blue, red, and white on light blue. Note: This product bears the words “Non-Dairy” in the product name yet contains sodium caseinate, which is derived from cow’s milk. Directions: Thaw unwhipped four hours in refrigerator. Do not thaw on countertop. Keeps fresh in refrigerator 2 weeks. Can be re-frozen. Ingredients: Water, corn syrup, partially hydrogenated vegetable oil (Contains one or more of the following: coconut oil, cottonseed oil, palm kernel oil, soybean oil), sugar, sodium caseinate (milk derived), polysorbate 60, natural & artificial flavor, microcrystalline cellulose, cellulose gum, mono & diglycerides, guar gum, diacetyl tartaric ester of mono & diglycerides, beta carotene (for color). Wt/Vol., Packaging. Price: 8 oz (226 gm) plastic tub. Frozen. Nutrition: Per 2 tablespoon (8 gm) serving: Calories 25, calories from fat 15, total fat 1.5 gm (2% daily value; saturated fat 1.5 gm), cholesterol 0 mg, sodium 0 mg, total carbohydrate 2 gm (dietary fiber 0 gm [0%], sugars 1 gm), protein 0 gm. Vitamin A 0%, calcium 0%, vitamin C 0%, iron 0%. Percent daily values are based on a 2,000 calorie diet.


• Summary: On the cover is written: “This wonder bean can help fight cholesterol, high blood pressure, blood sugar, cancer, ease menstrual and menopause symptoms, and keep a colon healthy. Includes a cookbook of 50 soy recipes from New York’s Natural Gourmet Cookery School.”

Contents: Introduction: The Cinderella bean. 1. How soy protects the heart and blood vessels: Full of fiber, the Eskimo secret omega-3 fatty acids, lecithin and vitamin E, preventing strokes, magnificent magnesium, soy and the Mediterranean diet, foam to wash out cholesterol?, cholesterol competitors—phytosterols, is it thyroid hormone [when thyroxine levels...
rise, cholesterol falls]? amino acid at work?, could it be the B’s?, is it the flavonoids?, the bean and obesity, high blood pressure and the bean, could it be just avoiding meat and dairy products?, summing it up. 2. How soy protects against cancer: Protease inhibitors, trypsin inhibitors, plant estrogens, polyphenols, terpenes–antioxidants, fighting phytales, maybe it’s due to low-count amino acid, saponins, inositol–the cancer-fighting phytic acid, which soy products have the most anticancer potential?, potential adverse effects of soybeans. 3. How soy helps ease digestive problems: Promoting regularity, calcium and soybeans. 4. How soy is beneficial in diabetic diets. 5. How soy is proving beneficial to women: The soy and the cycle, other hormonal benefits, magnesium, PMS and pregnancy, contraceptive or fertility inducer?, so “B” it, the bones need it, magnesium and bones, boron and bones, it could be the phytales. 6. Soy and men: Soy and sex, protein power. 7. Soy products and their nutritional value: Soybeans, edamame, soybean sprouts, tofu (also known as bean curd and dou fu-tofu), tempeh, soy milk, yuba, soy cheese, okara, soy yogurt, soy sauce, soy oil, soybean lecithin, soy nuts, miso, natto, soy flour, soy powder, soy protein isolates (a major component in “many dairylike products, including cheese, milk, nondairy frozen desserts, and coffee whiteners. They are in hot dogs, soy ice cream,...”), concentrates and gits, texturized soy protein, convenience of soy foods. 8. Easy ways to add soy to your diet: Some other easy ways to add soy to your diet, sensible soybean use. 9. Recipes: Appetizers, soups, salads, main dishes/entrées, side dishes/breakfast, sauces/dips, desserts. Glossary. Where to get more information. References. Address: M.S., Health and science writer, Short Hills, New Jersey.

• Summary: This second, expanded edition of the directory contains more than 270 company listings. Contents: Foreword. How to use the Soyfoods Directory (incl. Internet access). Daily soyfood guide pyramid (color). Soyfood descriptions (alphabetical): Introduction, green vegetable soybeans (edamame), hydrolyzed vegetable protein (HVP), infant formulas–soy based, lecithin, meat alternatives (meat analogs), miso, natto, nondairy soy frozen dessert, okara (see soy fiber), soy cheese, soy fiber (okara, soy bran, soy isolate fiber), soy flour, soy grits, soy protein concentrate, soy protein isolate, soy protein–textured, soy sauce (tamari, shoyu, teriyaki), soy yogurt, soybeans, soymilk (soy beverages), soynut butter, soynuts, soyoil & products, sprouts–soy, tempeh, tofu & tofu products, whipped toppings (soy based–“similar to other nondairy whipped toppings, except that hydrogenated soyoil is used instead of other vegetable oils”), yuba. Soybean products chart: From whole soybeans, from soybean meal, from soyoil and lecithin. Soyfood companies by product (products listed alphabetically).

Composition and nutrient content of soyfoods (large table, p. 14). Soyfood companies (alphabetical by company name; Each listing contains address, contact, phone, soy products, product names, distribution, to locate product, classification). Mail-order soyfoods: Soyfood mail order companies (listed alphabetically by company). Soyfood companies by state (alphabetical by state; California has by far the most). Soybean promotion & research organizations (national, and state). Professional associations and industry information resources. Soycookbooks (19). Soy resource books (10). Soyfood fact sheets and recipes: 1-2 pages each for meat alternatives, miso, soyoil, soy flour, soymilk, tofu, textured soy protein, whole soybeans. Soyfoods directory survey.

This directory is on the Internet’s World Wide Web at http://www.soyfoods.com. For more information or suggestions, call 1-800-301-3153. The Internet version of the Directory continues to improve. “The first year saw hits to our site increase from 1,000 the first month to more than 8,000 per month now. We have added a new search engine that makes it easier to find information and a new monthly e-mail newsletter, SoyfoodsUSA, designed to inform media sources, dietitians and consumers about the latest soyfoods information. To subscribe to this popular newsletter, just send an e-mail message to soyfoods@ind.com with the words ‘Subscribe SoyfoodsUSA’ in the body or subject field.”

Talk with Roger Stevens. 1997. March 10. The 1997 directory was first available in January 1997. About 100,000 copies of this directory were printed, and all but 7,000 have already been sent out free of charge. About 77,000 copies were sent to registered dietitians nationwide; all are members of the American Dietetic Association. Another 10,000 copies were sent to the American Association of Family and Consumer Sciences–basically extension personnel at the Cooperative Extension Service in each county; these people provide a lot of consumer information about foods and agriculture. About 500 copies were sent to each of the 20 state soybean development councils. The remaining 6,000 copies were sent to callers who left their name and address at a toll-free answering service. The next step is to do a media tour in Indiana. Traveling with a registered dietitian, they expect to generate a lot of requests from citizens of Indiana. One of the goals is to show other states that if you promote soyfoods in this manner, you will get a lot of interest. Roger hopes to encourage other states to take a more active role in promoting soyfoods. The directory has generated a tremendous amount of information on the part of dietitians who call the toll-free number and have many questions about soyfoods; Roger tries to refer them to people who have the answers—such as 1-800-Talk-Soy. The Indiana Soybean Council has had to hire a new person just to handle the
requests for this directory.

Next Roger plans to do a survey of registered dietitians to learn more about their responses to the 1997 directory. He might ask: Did you receive the book? Do you use it? If so, in what way and how often? How many people do you influence with regards to soyfoods as a result of this book? So if each of the 77,000 dietitians influences, on average, 10 people a year, the directory has reached more than 750,000 people. One major goal of this book is to help dietitians include more soyfoods in their own diets and in the diets of their clients. How can we better help you do this? Do you want a cookbook? A starter kit? Shall we include coupons?

From the focus groups he has already conducted, Roger thinks that future editions of the directory will be presented more like a cookbook or recipe book, with the directory in the back. "People really like the recipes. They just hand them out to their clients. We get requests for 100 books at a time from dietitians, who give the entire book to their clients at classes, in their offices, etc." Roger has the funds to do the research to find out exactly what dietitians want in the way of soyfoods recipes and how they want them organized.

Other possible questions: Which part or parts of the book do you find most valuable? Which do you find least valuable. Is there any information which is not in the book that you wish were included?

Roger would also like to develop for the next edition of this book a graphic presentation of the inside of a typical supermarket showing all the different products which contain soy.

Note: The word “soyoil” is used instead of “soy oil” throughout this directory. Address: Stevens & Associates, 4816 North Pennsylvania Street, Indianapolis, Indiana 46205. Phone: 317-926-6272.


Advertisements (p. 10-21), including ads for Tofutti, Patricia Greenberg “The Joy of Soy” cooking classes, JFC International Inc., House Foods America Corporation (full page, inside rear cover). Address: Little Tokyo Service Center (Resource Development Center), 231 East 3rd St., Los Angeles, California 90013. Phone: 213-473-1600.


• Summary: This is the first edition of this Guide. On the cover is a paper grocery bag resting on a bed of soybeans and chock full of foods: Veggie Slices (soy cheese), soynut butter, veggie burger, tofu, soymilk, soy flour, plus carrots, celery, and cooking oil. Contents: Food pyramid. Soyfoods descriptions–Meat the Bean: Introduction, green vegetable soybeans (edamame), hydrolyzed vegetable protein (HVP), infant formulas–soy based, lecithin, meat alternatives (meat analogs), miso, natto, nondairy soy frozen desserts, soy cheese, soy fiber (okara, soy bran, soy isolate fiber),

Soyfoods market search map; where to find soyfoods in the supermarket (a two page color layout of a supermarket displaying where soyfoods are located). Soybeans... they’re in almost everything. Finding soyfoods at the supermarket (store listings by county). Address: Indianapolis, Indiana 46205-1744. Phone: 1-800-275-7679.

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plant, where it is processed. Avoset Food Co. is probably the predecessor which sold itself somehow to Morningstar which sold itself to Suiza. Steve is not aware of any relationship between Morningstar and the former nondairy pioneer Presto Food Products, which introduced Mocha-Mix Coffee Creamer in 1950 (Note: This product was later renamed Mocha Mix Non-Dairy Creamer).

Ted Nordquist has not been buying soymilk from International ProSoya Corp. (IPC) in British Columbia, Canada, for the last six months—to the best of Steve’s knowledge. The soy base mix currently used to make Steve’s Silk is made using TAN’s plant at Soyfoods of America. There were numerous problems with the Silk product during the 6 months that TAN was making the transition from IPC to Soyfoods of America. Because of the nature of Steve’s contractual relationship with TAN, Steve had no information about what was happening so he was unable to help smooth the transition. He inherited the problems and had to deal with them in a hindsight fashion.

Steve has an exclusive supply contract with TAN for all nondairy beverage in the USA as long as he meets specified minimums of purchase from TAN; he has always exceeded these minimums. Steve now believes it is no longer exclusive because of the new Trader Joe’s soymilk. This will probably be grounds for a lawsuit. Steve feels that TAN has used White Wave and Silk as his springboard—while the contract is still in effect. Ted has a good product and he is going to be a competitor, and he has made plenty of money from the sale of Silk.

TAN decided (about 6 months ago) to stop buying soymilk from IPC and not the other way around. TAN made the switch for two reasons—both economic. First, TAN realized it would be more profitable the make the soymilk closer to Gustine, where it was packaged. The transportation cost of shipping soymilk from Vancouver to central California was about $2,600 per tanker-truck, compared with only about $1,500 for shipping from Duarte to Gustine. At least one truck is shipped per week—sometimes two. Second, since TAN now owns the equipment on which the soymilk is made, the profit margin associated with making the concentrate is now TAN’s.

Steve has tasted several of the SoNice soymilk products made by IPC. He thought one of them was good tasting and competitively priced. The others he thought were typical soymilk formulations that were relatively weak. They had some off flavors and problems with balance, color, thickness. Steve thinks “there are a couple of fracture points of focus with the way they are approaching the market.” They have both an aseptic line and a refrigerated line (in five flavors and two different sizes). The essence of refrigerated soymilk production is the ability to turn it fast enough so that you never have spoilage on the shelf. White Wave has never suffered returns on its refrigerated soymilk (Silk) but it took a lot of hard work to get their minimums up to that critical mass point where the product was turning fast. With soymilk in an ESL carton, the carton, not the soymilk, is the limiting factor. Silk has a use-by 84 days from the date of manufacture, but it will usually last for 100 days.

Steve has found it very difficult to work with the contract set up by Ted Nordquist, so much so that he plans to terminate the relationship. Steve feels this is unfortunate—“it’s like working with a black box.” Steve has no idea how Silk is processed at the Soyfoods Unlimited or at the Avoset plant—what the costs are. Steve flew with his people to San Francisco, and Ted and his people flew to Boulder—but they were unable to resolve the problems to Steve’s satisfaction. “We have a great name, a great package, and a great product—but we have no control over costs.” That means that if White Wave proves to the market that refrigerated soymilk is a big category, they will be “beat up” by competitors because of their inability to control costs. Ted basically says: “I will deliver the product to you at the following cost per gallon.” Steve would like to continually lower the price of Silk—and he plans to do so soon. It will go under $3.00 per half gallon.

Steve suggested that Ted take a royalty for the rest of his life and let White Wave deal with all manufacturing and cost reduction issues. But Ted wants control. Steve thinks he was “burned” in Sweden; he is a very good product developer but not such a skillful businessman. IPC tried to introduce SoNice into the U.S. market with a low price strategy, but White Wave beat them to it. White Wave has contracts with all of the major chains that they exist in so that their pricing plus their support programs will pretty much negate IPC’s attempt to come in at a lower price. If IPC really wanted to do so, they would have to cut their prices again—which is a hard way to go with a new product.

Which soymilk does Steve like the best, simply in terms of organoleptics (flavor, color, consistency, etc.)? One SKU from Vitasoy is very good, the Silk made by TAN is a little bit better, but Steve feels that the new version of Silk developed by Jonathan Gordon (completely independently from TAN and not yet on the market) is better than either of those two products.

During the last year, White Wave has worked on new formulations with Tetra Pak at their research facility in Chicago, Illinois. The first major tanker-truck production run was last Friday. White Wave is now in full production with this new formulation of Silk. It will be processed at one plant in Utah and one on the East Coast. Many taste tests have shown that this new Silk is superior to the former Silk made and formulated by TAN. Silk will remain a refrigerated product; it will never be sold in aseptic cartons in the USA—that will be a fracture of focus that sends a mixed message. On the new carton will be two quotations: One from Suzuki roshi about “Beginner’s Mind,” and the other from Yogi Berra (“You can’t hit and think at the same time!”) Also at the top front of the carton is written: “32 mg isoflavones per serving.” Plus, there is an offer for more free information on
isoflavones. White Wave is working to start the educational process on isoflavones—and is also using its Web site and toll-free 1-800 number.

The big ad campaign in Los Angeles from Protein Technologies is teaching about isoflavones but the products (Health Source) are not doing well. So the publicity is helping White Wave. “Like a guy on a bicycle, we’re drafting. We’re going to try to stay in the draft of the ADMs and PTIs and see where it takes us. We don’t have that much pride.” Continued. Address: President, White Wave Inc., 1990 North 57th Court, Boulder, Colorado 80301.


• Summary: This one-third page color ad shows three of Westbrae’s main categories of soy beverages: Nonfat (vanilla and plain), lite (vanilla, plain, and cocoa), and plus (vanilla, plain, and cocoa, fortified with calcium and vitamins A&D). Other Westbrae non dairy products include Malteeds, Lite Malted, Lite Creamer, and Rice Drink. Address: P.O. Box 48006, Gardena, California 90248.


• Summary: This innovative little book contains “42 delicious, sugar-free, dairy free desserts.” Soymilk is widely used in place of dairy milk (as in fillings), and tofu is used in many frostings. Maple syrup is used as the sweetener. Address: Great Barrington, Massachusetts.

448. Ginsberg, Beth; Milken, Mike. 1998. The taste for living cookbook: Mike Milken’s favorite recipes for fighting cancer. Santa Monica, California: CaP CURE. Distributed by Time-Life Books. 118 p. Illust. Index. 26 x 27 cm. [2 ref]

• Summary: This is a gorgeous, low-fat vegetarian cookbook in which about half the recipes use soy as a major ingredient. It is loaded with color photos (many full page), playful graphics, and good advice. Many desserts contain more than 2 cups of natural cane sugar—Healthy? Note: 100% of the proceeds from this book are used to fund prostate cancer research. The book is available at bookstores nationwide, or it can be ordered by dialing toll-free 1-877-884-5433 (LIFE).

Contents: Introduction, by Michael Milken. Preface, by Beth Ginsberg. Four nutritional principles of CaP CURE to fight prostate cancer and other hormonal cancers: (1) Limit dietary fat to 15% of total energy intake (calories). (2) Eat 5 or more fruit and vegetable servings per day. (3) Consume 25 to 35 grams of dietary fiber a day. (4) Consume 40 to 60 grams of soy protein a day. “Americans have a five times higher incidence of prostate cancer than people living in Asia and eating a traditional diet. Soups. Exercise. Entrees. Soy and soybeans. Sandwiches and sides. Cruciferous vegetables. Breaks and shakes. Desserts. Healthy pantry. Afterword, by Donald S. Coffey, PhD, President of the American Assoc. for Cancer Research and Professor of Urology, Oncology, Pharmacology and Molecular Sciences, Johns Hopkins Hospital, Baltimore, Maryland: We are what we eat, how does food cause or protect us from cancer (ROS = reactive oxygen species), how did we lose our way?, how did our diet change (“The great apes were primarily vegetarian, consuming great quantities of vegetables that are high in fiber”), what should we do? About CaP CURE.


Note. This is the earliest English-language document seen (April 2013) that contains the term “roasted tofu;” it refers to grilled tofu.


• Summary: Leaflet (glossy color) sent by White Wave. 1998. Oct. 28. On the front is a photo of 7 cartons of Silk soymilk, and Silk Dairyless Coffee Creamer against an
orange and yellow background. Address: 1990 North 57th Court, Boulder, Colorado 80301.


Pennsylvania.

Soy-related recipes or discussion: Soymilk (p. 188-89).
Soy cheese, soy yogurt and sour cream (made from silken
tofu), vegan cream, puddings, ice cream, and popsicles (p.
190-91). Use of tofu in place of eggs to bind or thicken (p.
192-93). Miso, tamari and shoyu (p. 256-57). Tofu, regular
and silken (p. 258). Quinoa, seitan, tahini (p. 258). Sour
cream and onion dip (with tofu, p. 275). Sesame-miso
spread (p. 275). Tofu-vegetable spread (p. 277). Miso master
dressing (p. 282). Curried tofu salad sandwiches (p. 290).
Roasted vegetable pizza with tomato-tinged tofu (p. 300-
01). Savory baked tofu (p. 302). Baked potatoes Florentine
(with tofu, p. 305). Tofu ricotta (p. 308). Vegan mayonnaise
(with tofu, p. 310). Tofu sour cream (p. 310). Creamy
fudge frosting (with tofu, p. 315). Address: Swissvale,
Pennsylvania.

Part III (Interview). SoyaScan Notes. Jan. 6. Followed by a
letter from Gretchen dated Jan. 13. Conducted by William
Shurtleff of Soyfoods Center.

• Summary: Continued:

On 25 December 1971 (Christmas eve) Shurtleff had
met Kazuko Aoyagi, who was a student at ICU, through their
mutual friend Travis Venters. Venters, an American from
North Carolina, taught English at ICU and was Kazuko’s
English teacher. The next day Kazuko introduced Shurtleff to
her sister, Akiko Aoyagi, and they soon became close friends.
Kazuko likewise became very close to Travis, and soon they
were engaged to be married.

Bill and Jeffrey’s course in Japanese at ICU ended in
June 1972. On June 11 Kazuko and Travis were married;
their wedding ceremony was held at a hall on the ICU
campus. Gretchen, a very creative cook interested in natural
foods, volunteered to make all the food for the wedding
party. The centerpiece of her creations, which everyone
remembers clearly to this day (25 years later) was the
wedding cake. It was a sensation. The icing / frosting was
made of tofu! No one had ever seen anything like it. It was
a round layered cake, with each layer being a fruitcake that
was slightly smaller than the one below it. Made entirely
of natural foods, it contained whole-wheat flour instead of
white flour and honey or fruits instead of sugar. Thus, it was
rather heavy. Gretchen made the icing / frosting—her own
related to food and macrobiotics. She may have met Beverly at one of Lima Ohsawa’s cooking classes in Tokyo. Then the Stiskins invited Jeffrey and Gretchen Broadbent to dinner at their attractive home in Hayama, south of Tokyo. After that Jeffrey Broadbent got the inspiration to introduce Bill Shurtleff to Nahum Stiskin. Jeffrey may have called Nahum to check out the idea before suggesting such a meeting to Shurtleff. Address: RFD 1, Box 100, East Calais, Vermont 05650. Phone: 802-456-7091.


• Summary: This is the fourth edition of the U.S. Soyfoods Directory. Page 2 states: “And a special thanks goes to the Soy Protein Partnership for sponsoring this project.” For a list of farmers and companies that grow soybeans organically, see p. 28. This 1999 Soyfoods directory is now available online at www.talksoy.com. Address: Stevens & Associates, 4816 North Pennsylvania Street, Indianapolis, Indiana 46205. Phone: 317-926-6272.

454. White Wave Inc. 1999. An introduction to our family of wholesome foods, with recipes and quick ideas for every meal, every taste. Fast + easy. Healthy. Delicious (Lea

• New Product–Documentation: Talk with Steve Demos, founder and president of White Wave. 1999. Aug. 27. Silk Creamer was introduced in March 1999 at the Natural Products Expo at Anaheim, California. Based on organic Silk soymilk and non-hydrogenated oils, its sales have already exceeded the first year’s sales after only 6 months. It’s a huge category. Dean Foods is the No. 1 producer of non-dairy creamers in the USA, but they make powders and Silk is a liquid. Some new flavors are planned for the near future.

Leaflet (color) sent by Mia Fox, Marketing Manager of White Wave. 1999. Aug. “The natural way to smooth out your coffee. The non-dairy creamer you put into your coffee or tea should be as full of goodness as it can be... We include minimally treated, naturally occurring minerals and compounds... to give you a silky smooth creamer that won’t curdle in your beverage. Silk Soymilk Creamer is lactose free, dairy free, cholesterol free, organic, and 100% natural.” On the front is a large color photo of the product. On the back are ingredients and nutrition facts.


* = Organically grown and processed in accordance with the California Organic Foods Act of 1990. Certified by QAI. Wt/Vol., Packaging, Price: Pint gable-top carton. Refrigerated. Nutrition: Per 1 tablespoon (15 ml): Calories 15, calories from fat 10, total fat 1 gm (2% daily value; saturated fat 0 gm), cholesterol 0 mg, sodium 5 mg, total carbohydrate 1 gm (dietary fiber 0, sugars less than 1 gm), protein 0 gm. Vitamin A 0%, vitamin C 0%, calcium 0%, iron 0%. Percent daily values are based on a 2,000 calorie diet.


• Summary: Note: In Thirty Years Below Zero, Mike Billoni states (1980, unpublished manuscript) in the chapter titled “Aerosol Cans” (p. 10-11): “In 1948 a company out of Chicago [Illinois] introduced traditional whipped cream in an aerosol can called Reddi-Wip. For the first time in history, the housewife had a convenience food in the kitchen. “Suddenly the time spent hunched over a counter whipping cream to top desserts was gone. An aerosol can was able to eliminate that chore.” The “whipping was done by a combination of 85% nitrous oxide and 15% carbon dioxide which forced the cream from the container under pressure.” The new metal container was disposable.
Silk
PUT THE FASTEST GROWING
SOY MILK
IN YOUR DAIRY CASE
The Natural Way to Smooth Out Your Coffee.

THE NON-DAIRY CREAMER you put in your coffee or tea should be as full of goodness as it can be. That’s why we make Silk™ Soymilk Creamer from certified organic soybeans, certified organic expeller pressed canola oil (non-hydrogenated) and certified organic cane crystals.

We include minimally treated, naturally occurring minerals and compounds such as potassium phosphate (a mineral salt) and sodium citrate (from fermented corn) to give you a silky smooth creamer that won’t curdle in your beverage. Silk™ Soymilk Creamer is lactose free, dairy free, cholesterol free, organic and 100% natural.

(It’s wonderful over fresh fruit or your morning cereal, too.)

When it comes to good food, we use our beans.
British Columbia. SoyaWorld now advertises its soymilk
Nathoo, CEO of the new SoyaWorld Inc. of Vancouver,
same pace for the next 4-5 years–according to Maheb
grew 75% Last year and is expected to grow at about the
In Canada, the soymilk market is also booming; it

makeover moves soy milk into mainstream. Wall Street
• Summary: Sales of soymilk in the USA are predicted to
top $300 million in 1999, up 38% over 1998, and a rise
from only $2 million in 1980–according to Soyatech Inc. of
Bar Harbor, Maine. Sales of Silk, the soymilk product that
pioneered the new and booming refrigerated category, are
expected to double this year, says Steve Demos, president
of White Wave. Silk is now distributed through dairies
across the U.S. Sales of Vitasoy in the USA rose 34% during
the last year, according to Jennifer Corsiglia Keim, the
company’s marketing manager.

Indeed soymilk is one of the few products that has been
able to cross over from natural- and health-food stores into
supermarkets. One of the keys to this cross-over is expected
to be the change of packaging and positioning. Traditionally
soymilk was sold in “special airtight boxes that require no
refrigeration.” Now, starting with Silk, it is being sold next
to milk in cartons that look like milk cartons. Imagine Foods
of Palo Alto is currently introducing a refrigerated version of
its Soy Dream brand of soymilk. White Wave plans to hand
out several million half-pint samples of Silk during the next
12 months to further stimulate demand. He says he has been
making soyfoods for the last 21 years just “waiting for this
year.”

One reason for the growing interest in soymilk is the
growing body of scientific evidence showing that soy has
health benefits. Former junk-bond king Michael Milken,
who was diagnosed with prostate cancer six years ago, tries
to consume 40 grams of soy protein per day–including a soy
hot dog and soy shake. Another reason is improvement in the
taste of soymilk. Soymilk sales are expected to get another
boost if the U.S. Food and Drug Administration allows a
health claim saying that soy products reduce cholesterol.

Soymilk is also being promoted in coffee houses. About
one year ago Peet’s Coffee & Tea (Berkeley, California)
introduced Vitasoy as a coffee creamer at its 47 coffeehouse
outlets. The consumer response has been “terrific.”

In Canada, the soymilk market is also booming; it
grew 75% Last year and is expected to grow at about the
same pace for the next 4-5 years–according to Maheb
Nathoo, CEO of the new SoyaWorld Inc. of Vancouver,
British Columbia. SoyaWorld now advertises its soymilk

459. SoyaScan Notes. 1999. The soybean: Animal, vegetable
or mineral? (Overview). Aug. 4. Compiled by William
Shurtleff of Soyfoods Center.
• Summary: A traditional American parlor game and
quiz show named “Twenty Questions” was based on the
assumption that all things in the universe could be classified
as either animal, vegetable, or mineral. Clearly the soybean
is a vegetable, and it is most like a vegetable when served
as edamame or green vegetable soybeans. But soybean pods
and leaves are unusually hairy, and the soybean can easily
be transformed into alternatives to almost every known
animal food product–more specifically into all kinds of meats
dairy products. It can be made into meatless burgers,
hot dogs (wiener), breakfast sausages, beef jerky, bacon
bits (such as Bac*Os) or meatless bacon, juicy chicken
drumsticks or meatless chick nuggets, meatless steak, and the
like. Or it can be made into all the dairy alternatives such as
milk, yogurt, ice cream, cheese, cream cheese, cheesesake,
sour cream, coffee creamer, whip topping and the like.

Soybean oil can also be made to imitate the greatest
commodity of the 20th century: petroleum. We now have soy
ink, soy diesel fuel, soy resins, soy paints and varnishes, etc.

Thus, of all the vegetables in the world, the soybean is
the most versatile–the most like an animal and the most like
a vegetable. What will they think of next?

Note: Twenty Questions began on radio in 1946, then
played on television from Nov. 1949 until May 1955.

460. White Wave, Inc. 1999. Dean Foods announces alliance
with White Wave Soyfoods: Becomes minority shareholder
Aug. 18.
• Summary: Dean Foods (Franklin Park, Illinois) and White
Wave (Boulder, Colorado) will work together to place Silk
soymilk into the refrigerated dairy case of supermarkets
across America. Howard M. Dean is Chairman and CEO
of Dean Foods Company (NYSE: DF), “the country’s
number one dairy processor and distributor.” Steve Demos
is “President and Founder of White Wave, Inc., America’s
number one soyfoods company.” Today they jointly

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announced the new relationship. “This alliance will support White Wave’s new product development and marketing initiatives to reach new audiences. White Wave has annual sales of approximately $21 million. Its product line includes the successful Silk organic soymilk line, the first nationally distributed fresh, refrigerated soymilk sold in the dairy case.”

“Mr. Dean remarked, ‘Through this collaboration, we are investing in the future of soyfoods in America. As Dean Foods has been an innovator in the dairy market, White Wave is a leader in the innovation and integration of soyfoods into the American diet. We look forward to supporting White Wave as it expands its reach in both the natural products and mainstream market place.’

“Steve Demos stated that ‘Dean Foods has shown vision in supporting organics and soy, realizes the current and future value of the natural foods market, and has embraced the concept of promoting complementary proteins–dairy and soy–thus giving American consumers more options. It’s a great fit.’”

White Wave is riding a wave of soyfoods popularity. “Annual sales are up over 30% in each of the last five years, while some products such as the company’s Silk Soymilk line have seen over 100% growth in each of the last three years. For more information, see the White Wave website at www.whitewave.com.

“Dean Foods is the nation’s leading dairy processor and distributor, producing a full line of branded and private label products, including fluid milk, cottage cheese, and ice cream sold under the Dean’s and other regional brand names. Dean dips and Marie’s refrigerated salad dressings are the leading brand names in their respective categories, while Dean Foods is also the leader in private-label pickles and non-dairy creamers. For more information see Dean Foods website at www.deanfoods.com.”

Note 1. This is the earliest document seen (Aug. 2013) that mentions both White Wave and Dean Foods.

Note 2. Dean Foods has ESL packaging plants in Kentucky and Florida, and will soon have one in California. The company operates a trucking business and has 11,200 employees.

Note 3. A 3-page brochure titled “Dean Foods–Introduction” (from about 1996) states: “Dean Foods was founded in 1925 as a small Midwestern dairy. What began as the Dean Evaporated Milk Company with one plant in Pecatonia, Illinois has grown into a major Fortune 500 broad based Dairy and Specialty Foods manufacturer with over 12,000 employees and annual sales of over 2.7 billion dollars.” Specialty Foods are now an important part of the company with brands like Birds Eye (acquired in 1993), Freshlike, and Veg-All. About 50% of Dean Foods’ growth has come from acquiring other companies; the rest is internal growth, with much of that coming from new product introductions. “The Company’s first formal Research and Development lab was established in Rockford in 1943. The original powdered non-dairy creamer was one of the first major product innovations to come out of this lab.” Address: Boulder, Colorado. Phone: 303-449-2526.


• Summary: White Wave now has its Silk soymilk in 6,000 supermarkets and chain stores—not counting natural foods chains like Whole Foods Market. White Wave’s goal is 10K by 2K = 10,000 stores by the year 2000. In most cases Silk is in the refrigerated dairy case, but in a few cases it is in specialty food or soft drink refrigerated cases. Fred Meyer has Silk in the health food section, but White Wave is battling for the dairy case. But at Ralph’s in Los Angeles it is next to Lactaid in the dairy case.

White Wave has already won the footrace in the USA with SoyaWorld and Dairyworld. From now on it’s a question of who has the most money to stimulate consumers to try their brand. That’s the last face of the mountain to climb. Dean Foods brings to the alliance the fact that they distribute to 17,500 stores (mainly supermarkets and chains), and they have the national brokerage and delivery trucks and 70 factories that support that system. They own two ESL plants today (in Florida and Kentucky) and they have several more on the books (one in California). White Wave also has two coming in, and they now work with Western Quality Foods in Utah (Dairy Farmers of America and Sinton Dairy out of Colorado).

Dean Foods is a superfactory for Nestle. Nestle has three or four superfactories: H.P. Hood, Dean Foods in Kentucky, and Ador in Los Angeles. Dairy Gold in Seattle, Washington, may be a fourth. Nestle Quick, the chocolate milk, is a billion dollar brand. That warrants tremendous investments in systems and efficiencies, which leads to co-pack opportunities for things that are beyond our dreams. Dean was the inventor of The Chug—a single-serve chocolate milk in a disposable plastic bottle, with a screw cap, that looks like an old-fashioned milk bottle; this made it possible to sell single-serve chocolate milk from convenience stores, and per-capita consumption of chocolate milk jumped. The Chug was a $600 million a year innovation. Also are headed toward the aseptic single serving, Dean Foods is definitely endorsing soy as a concept.

In the dairy business, per-capita consumption of fluid white milk has been decreasing for the past 50 years. The “Got Milk?” and “Milk Mustache” ad campaigns have only slowed the rate of decline from 4% down to 2% a year—but these ads are costing the dairy industry more than $100 million a year. Part of the problem is that milk has never been considered a pleasure beverage; its just a commodity.

How did White Wave contact Dean Foods? “It’s kind of like fishing. You put out your hook with the bait, seen
who bites, then let them come after you.” Indeed, Steve went after them and convinced them that this is a concept and category worth paying attention to. Suiza Foods Corp., because they have been associated for a year with Horizon Organic in Boulder, was not a potential partner. Suiza has already invested $10 million in Horizon. Notice that the plant in Gustine, California, where TAN Industries packaged soymilk, is owned by Morningstar, which is a Suiza division—you can figure out in a hurry where this war is going to be fought. The rumor that Suiza will get into soymilk through its alliance with Horizon will soon be confirmed. The Gustine facility turned down business from Lactaid, which wanted to introduce a soymilk because White Wave is making such a dent in their sales. The people at Gustine told Lactaid that they did not want to start a project that they would have to stop in Jan. 2000, when they planned to introduce their own brand of soymilk.

“It’s now a whole new game for White Wave. There’s no time to take a breath.” The deal with Dean Foods was a very unusual one in that everyone seemed to come out winning. White Wave got everything that they wanted, plus a huge vote of confidence. Steve anticipated their future desires and he accommodated those in the agreement by certain opportunities as time goes on. “I think the biggest accomplishment was we get to ride this thing for a while.”

The news release was picked up as a blurb in the back of the Wall Street Journal last Tuesday, but the announcement has been getting a lot of national play. The news release and the recent (Aug. 3) Wall Street Journal article on Silk have been reinforcing one another, and creating a new round of interest in White Wave and its products, which is translating sales. The local papers and trade journals also picked up the news release. Natural Foods Merchandiser, Prepared Foods, and Dairy Foods all plan to do stories. They story appeared in 3-4 national TV announcements. It’s very exciting for people throughout the company. For example, the advertising and marketing people are now interviewing full agencies—which were previously unaffordable. “The ability to influence me enough to take my hands off the throat of this focus, you can spoon feed them a lot of very wholesome, beneficial things. Our job now is to gain their trust and attention. We have always been say that we deliver more than food; we deliver a little bit of entertainment, and a bunch of information. We want you to think of the package as part of the product.” On using the Silk carton for advertising: “Serve people’s intelligence and needs and you give them two products instead of one. Once you have the consumer’s attention and focus, you can spoon feed them a lot of very wholesome, beneficial things. Our job now is to gain their trust and attention. We have always been say that we deliver more than food; we deliver a little bit of entertainment, and a bunch of information. We want you to think of the package as part of the product.” On the red half-gallon Silk, James Terman has put the story of Henry Ford’s work with soy. “At least 25-33% of our packages will always be used for some additional information other than ‘Buy my stuff.’” The carton of Silk, along with breakfast cereal, is one of the few packages that gets onto the breakfast table or dining table. Steve learned this lesson when he heard from dairy people about all the complaints they received about pictures of missing children on milk cartons. That meant people were reading the cartons; its the perfect captive market. Quotations from Suzuki roshi and Yogi Berra appeared together on one of the Silk cartons. “In the beginner’s mind there are many possibilities; in the expert’s mind there are few”—said Roshi. “You can’t think and hit at the same time”—said Berra. “James Terman and I went into stitches when we put the two of those together. It was such great juxtaposition–so enlightening–just way out there.” Address: President, White Wave Inc., 1990 North 57th Court, Boulder, Colorado 80301.

White Wave has big plans in the dairy alternatives market—for every product you can imagine. Silk Creamer, based on organic Silk soymilk and non-hydrogenated oils, was introduced at Anaheim in March of this year; after only six months, its sales have surpassed its first year projections—and supermarkets are major buyers. Its a huge category.

Dean Foods is the No. 1 producer of non-dairy creams in the USA, but they make powders and Silk is a liquid. Some new flavors are planned for the near future. The Silk brand represents dairy alternatives and the White Wave brand represents tofu. “Silk” is the word that the public is saying. It’s a cool word, and “Smooth as...” There’s lot of room for play and fun: “Silk boxes in every carton.” White Wave has dabbled and played with non-dairy frozen desserts in the past; now they could go big time—pretty fast. But the company will not step outside the dairy alternatives category with things like energy bars or power drinks; it will keep tightly focused on dairy-like non-dairy products.

“It’s very important to conduct your mission with some levity and fun—otherwise it never works. Business is an excuse to have parties. We need to pursue that philosophy for as long as possible. We just scheduled our next party; I rented a theater in Boulder for the middle of October.” On using the Silk carton for advertising: “Serve people’s intelligence and needs and you give them two products instead of one. Once you have the consumer’s attention and focus, you can spoon feed them a lot of very wholesome, beneficial things. Our job now is to gain their trust and attention. We have always been say that we deliver more than food; we deliver a little bit of entertainment, and a bunch of information. We want you to think of the package as part of the product.” On the red half-gallon Silk, James Terman has put the story of Henry Ford’s work with soy. “At least 25-33% of our packages will always be used for some additional information other than ‘Buy my stuff.’” The carton of Silk, along with breakfast cereal, is one of the few packages that gets onto the breakfast table or dining table. Steve learned this lesson when he heard from dairy people about all the complaints they received about pictures of missing children on milk cartons. That meant people were reading the cartons; its the perfect captive market. Quotations from Suzuki roshi and Yogi Berra appeared together on one of the Silk cartons. “In the beginner’s mind there are many possibilities; in the expert’s mind there are few”—said Roshi. “You can’t think and hit at the same time”—said Berra. “James Terman and I went into stitches when we put the two of those together. It was such great juxtaposition–so enlightening–just way out there.” Address: President, White Wave Inc., 1990 North 57th Court, Boulder, Colorado 80301.


Hip Whip™
The first real food dairy free whipped topping
- 100% dairy free and vegan
- All natural and delicious
- Fruit juice sweetened – no hydrogenated oil
- Great on fruit, pies, sundaes and parfaits
- Find Hip Whip in the freezer case – just thaw & serve


   • Summary: This guide is available only on a limited basis to dietitians and health professionals. Contents: Health: Add soy to diet to reduce heart disease (FDA recommends 25 grams of soy protein a day to reduce blood cholesterol levels), sample day soy meal planner (easy ways to add 25 grams of soy protein). Daily soyfood guide pyramid. Soy and your health–Scientists are learning about soy’s health benefits: Isoflavones, heart disease, menopause & osteoporosis, cancer, allergies, diabetes & kidney disease, fat. Soyfood Descriptions: Meet the bean: Green vegetable soybeans (edamame), hydrolyzed vegetable protein (HVP), infant formulas, soy-based, lecithin, meat alternatives (meat analogs), miso, natto, nondairy soy frozen desserts, soy cheese, soy fiber (okara, soy bran, soy isolate fiber), soy flour (50% protein), soy grits, soy protein concentrate, soy protein isolate (isolated soy protein, 90% protein), soy protein, textured (flour or concentrate), soy sauce (tamari, shoyu, teriyaki), soy yogurt, soybeans, soymilk, soy beverages, soynut butter, soynuts, soybean oil & products, sprouts (soy), tamari (see soy sauce), tempeh, Teriyaki sauce (see soy sauce), tofu & tofu products, whipped toppings, soy-based, yuba. Helpful charts: Soyfood substitutions, soyfood isofoavone content. Soyfoods web site. Soyfood composition. Recipes using: Meat alternatives, textured soy protein, whole soybeans, soy flour, soynut butter, soymilk, tofu. Address: 4816 North Pennsylvania Street, Indianapolis, Indiana 46205. Phone: 317-926-6272.

   Leaflet (22 x 15 cm, glossy color) sent by Patricia Smith from Natural Products Expo East. 2000. Sept. “More flavor for your coffee. Naturally.” A large photo shows a package of the creamer. “Lactose free. Dairy free. Cholesterol free. Organic. 100% natural.” Ingredients: Organic soymilk* (filtered water, organic whole soybeans*), expeller pressed organic canola oil*, organic evaporated cane juice*, natural flavors, soy lecithin, potassium phosphate, sodium citrate, carrageenan, tapioca starch. * = Organically grown and processed in accordance with the California Organic Foods Act of 1990. Certified by QAI. Silk is certified to contain no GMO soybeans. Wt/Vol., Packaging, Price: Pint gable-top carton. Refrigerated. Nutrition: Per 1 tablespoon (15 ml): Calories 20, calories from fat 10, total fat 1 gm (2% daily value; saturated fat 0 gm), cholesterol 0 mg, sodium 5 mg, total carbohydrate 1 gm (dietary fiber 0, sugars 3 gm), protein 0 gm. Vitamin A 0%, vitamin C 0%, calcium 0%, iron 0%). Percent daily values are based on a 2,000 calorie diet.


**Summary:** The plant in Gustine (where Ann has worked in research for 26 years) used to be called Avoset Food Corp. Avoset has been a pioneer in ESL products since the company started; this plant is almost 90 years old. Originally it was a creamery, owned by Foremost, then by Smith-Kline (a pharmaceutical company). In the 1940s, during World War II, Avoset pioneered ultra-pasteurized products for the U.S. military—such as whipping cream in little glass jars for use on submarines. In the 1950s they pioneered whipped toppings in pressurized squirt cans. In the mid-1960s Avoset was the first U.S. company to install a gable-top ESL (extended shelf-life) packaging machine, which packaged long-life whipping cream, and half-and-half. The non-ESL products had a shelf-life of 10-14 days and were considered “nuisance items” by fluid dairies and retailers. In about 1975 Smith-Kline sold Avoset to Anderson Clayton, which broke up the company and sold it to Quaker Foods, which sold it in June 1987 to Kraft, which sold it in about 1988 Morningstar—which was basically a group of venture capitalists from the Southland. In about 1997 (3 years ago) Suiza Foods Corp. purchased Morningstar. Suiza started with one dairy in Puerto Rico in the 1980s; then they started to buy other dairies, and became a major “dairy consolidator,” putting together these many dairies under umbrella. Suiza was basically an acquisitions firm, which did not have any corporate structure beyond the people in the main office who were involved in acquiring new companies. One of the reasons they purchased Morningstar was for the corporate structure—human resources, research labs, etc. So all the research work for Suiza is done by Morningstar. After Morningstar bought Avoset, the technology, packaging, and formulations improved, but the basic business remained unchanged—until 5-6 years ago when Ted Nordquist arrived and Morningstar first began to work with soy. The first development of formulation for Silk soymilk was done at Gustine. Ann knows Ted extremely well.

On the front of the building where Ann works is written “Morningstar Foods” in large letters; below that in smaller letters is written “Avoset.” Gustine is near Merced, California. Morningstar and Suiza have their corporate headquarters in the same building in Dallas, Texas. For information on Sun Soy (which is sold at Ralph’s supermarkets in southern California), contact Patty Her beck (phone: 214-303-3400) in Dallas. Wildwood soymilk is also made at the Gustine plant. They also package products for Trader Joe’s. At Morningstar’s yogurt plant in Fullerton, they package soy yogurts for Ted Nordquist and Trader Joe’s. Address: Research Dep., Morningstar Foods (a Suiza Company), 299 Fifth Ave., Gustine, California 95322. Phone: 209-854-6461.


**Summary:** 1917–California Milk Products Company builds a milk sugar (lactose) plant in Gustine, in the San Joaquin Valley of California. It is built by Roy Kruger at First Avenue and Fourth Street. It faced Highway 33 and a spur track was built from the railroad to the plant. This was the first such plant built in the United States.

Later in 1917 California Milk Products Co. is purchased by Smith, Kline and French Laboratories (SK&F, of Philadelphia, Pennsylvania; now Smith Kline Corp.), a manufacturer of pharmaceuticals and other health care products. The company is looking for a source of milk sugar (lactose), which is a critical ingredient in Eskay’s Baby Food, a product it made and sold at the time—and in other baby food products and military flares.

In Tillamook, Oregon, an area famous for its cheese, SK&F finds a bankrupt company that has equipment for removing milk sugar from whey. They purchase this equipment and move it to Gustine, some 700 miles away.

Soon, both the casein and the milk sugar lines are rolling at CMP, a subsidiary of SK&F. The casein produced at Gustine, known as K-B Brand Casein, became the quality standard for U.S. paper-coating caseins. The lactose was used in making baby foods and pharmaceutical products. These milk derivatives (plus butter) were sold in bulk to processors who used them to manufacture consumer products.

1929–SK&F purchased a company named Gustine Creamery to ensure a constant source of quality skim milk.

1930s–The company started a research program to develop new products from milk. Laboratories were constructed at Gustine and grants were awarded to colleges to aid in the research.

1939–A new process was discovered for sterilizing liquid foods. Arrangements were soon made with the inventor of the process to develop it commercially. Sterilized cream had never been made successfully before as a commercial product. The cream had to be heated to a high temperature rapidly, then cooled just as rapidly in a sterile environment with sterile packaging. Most important, the product had to taste good to consumers. The first product made using this process was a sterilized cream named and trade-marked Avoset. The word could be pronounced in any language—in anticipation of an international market. Avoset cream stayed sweet for many months on the refrigerator shelf.

1940 July–A company, named Real Cream, Inc., is...
formed to market Avoset.

1941–Avoset was first sold commercially. It was the company’s first venture into consumer products. Is less than a year the new sterilized cream was being sold in many countries where fresh cream was difficult or impossible to obtain.

1943–The Sterile Cream Division of the Gustine Creamery is manufacturing “stabilized cream” for the United States Army, Navy, and Lend-Lease purposes, only (The Redskin, “Gustine Helps” {High School Newspaper} 1943).

1945 late–The Avoset Company introduces another new product, a sterilized whole milk named Avo. It was readily accepted, along with Avoset, by the U.S. armed forces and in many foreign countries where refrigerating foods was a problem. Avo, later renamed Avoset Sterilized Whole Milk, kept its fresh taste for months without chilling. It lasted a year or longer without refrigeration and soon became a household word wherever it was sold.

1947–The Gustine Creamery, California Milk Products Co., and Avoset merge into one company named Avoset Company.

1950 summer–Avoset introduces Qwip, a real cream topping packaged in an aerosol can. It soon became the company’s best-seller.

1960–Avoset began to offer its experience in packaging sterilized liquid foods to other manufacturers who were in need of that know-how using the concept of “contract packing.” Its first two products were a sterilized infant-food formula and a sterilized ice-cream mix. Avoset did not own the formula and did not market the products. Avoset’s private label business grew rapidly; more than 60 companies now buy their own-label milk products from Avoset. Yet Avoset is still the only company in the world that produces a sterilized, pressurized whipping cream.

1963–Avoset establishes a department to market the company’s aerosol foam-type valve to other companies packaging foam-type aerosols.

1967–Avoset saw the need for sterilized products in Pure-Pak paper containers. With Avoset’s background in sterilized processing, it wasn’t long before dairy and nondairy products were being aseptically packaged under the labels of Avoset’s customers.

Recently (about 1967) the company introduced ‘True Whip, a pressurized nondairy dessert topping—indicating a possible new direction for the company.


1968–Avoset starts apply its aseptic packaging knowledge to portion control packaging. By 1976 Avoset provided most major airlines with individual three quarter ounce servings of salad dressings and sterilized non-dairy half-ounce portion control creamers for coffee that comes with airline meals. Avoset is regarded as a pioneer in “portion control packaging.”


1978–Avoset is sold to Anderson, Clayton Co. (Houston, Texas).

1987–Quaker Oats buys Anderson Clayton Co and thereby acquired Avoset.

1988 April–Kraft sells Avoset to Duncan-Cook, a Houston based investment group. Avoset is now a 125,000 square foot facility in Gustine.

2000 April–The name over the door at 299 5th Ave. in Gustine now says “Morningstar Foods,” with “Avoset” on the 2nd line. Morningstar Foods belongs to Suiza of Houston, Texas.

In 2012 Ted Nordquist wrote: “In 1994-95 I developed the Silk soymilk using formulations I brought from Sweden, using the Morningstar pilot plant and the help of Laura Tewnion and Ann Shaw. We never produced soybase at the Morningstar (Avoset) plant in Gustine. We had soybase made using our equipment at Soyfoods of America in Duarte, California, and this soybase was shipped in 6,000 gallon tankers to Gustine, where, according to my formula, the Gustine plant produced Silk soymilk for Steve Demos (White Wave) beginning in January, 1996, until March 1998. Our equipment was integrated with Soyfoods of America equipment; we paid Soyfoods of America for this soybase by the gallon.”

Note: Thanks to Patricia Snoke of the Gustine Historical Society for sending (on 17 April 2000) a packet of 13 documents she assembled concerning the history of Avoset.


• Summary: Net sales in 1999 was $4,065 million ($4.065 billion). Net income after taxes was $106.118 million. This annual report contains an excellent history and chronology of the company, and also a list of its “firsts.”

1925 June–Dean Foods begins as Sam Dean, Sr. purchased the Pecatonica Marketing Co., an evaporated milk processing facility in northwestern Illinois.

1927 Jan.–The company name was changed to Dean Evaporated Milk Company. During 1927 Dean purchased dairy plants in Belvidere and Chemung, Illinois. 1929–The company name was changed to Dean Milk Company. 1936–The last horse-drawn milk wagon was replaced by a Dean
milk truck.

1940–Dean introduced fluid milk, packaged in waxed paper cartons.

1993 Dec.–Dean acquired its first national brand label, Birds Eye frozen vegetables. But then Dean vegetable operations were sold in Sept. 1998.

1998–Dean introduced its innovative Chug packaging, providing single-serve containers for on-the-go consumers with the “Milk Where You Want It” slogan.

2000 July–Dean completed its largest dairy acquisition with the purchase of the Land O’ Lakes Upper Midwest fluid Dairy operations, expanding Dean’s marketing area.

Accompanying the annual report is an announcement of the Annual Meeting of Shareholders and Proxy Statement (26 p.). Howard M. Dean is chairman of the board and CEO. This year (2000) his salary was $700,000 and his bonus $677,408. He was also granted 86,000 shares of company stock, with each share worth $37.31 = $3,208,660.

Under “Specialty Products” (p. 15) we read: “Another promising relationship was established in fiscal 2000 with an equity investment in Colorado-based White Wave, Inc., a producer of soy-based products. White Wave sells its refrigerated soymilk products under the brand name Silk. Other products include soy-based yogurt and tofu products. Recent focus on the value of soy-based products and the related health benefits has increased consumer awareness in this area and contributed to White Wave’s strong sales growth. We are encouraged by the long-term prospects in this exciting functional food area.” Color photos show a half-gallon carton of Silk Vanilla Soymilk, and a pint carton of Silk Soymilk Creamer. Address: 3600 North River Rd., Franklin Park, Illinois 60131. Phone: 847-678-1680.

  • Summary: Kyo Tofu Fujino, a famous Kyoto tofu shop, is trying to survive by reinventing itself as an upscale, designer chain selling European-style tofu confections. Seiji Fujino, the company’s second-generation president, says he wants to teach kids, who are growing up on McDonald’s and Mr. Donut, how to eat tofu. The company already has outlets in fancy department stores in Kyoto, Osaka, and Tokyo, plus its own specialty stores and a tofu restaurant. It opened the latter, Tofu Kaho, in April at Fujino, a quiet neighborhood of northern Kyoto. Its offerings: Tofu doughnuts, chocolate peach soy-cake layer cake, tofu cream fig shortcake, or a pastry filled with whipped soy cream and purple sweet potato. In addition to many types of cakes and puddings made with tofu, the sweet shop also offers four flavors of tofu ice cream–ginger, white sesame, vanilla, and black bean coffee. And it bakes cookies using the left-over okara. Then there are traditional dishes: Oboro-dofu (served cold), tofu flavored with yuzu (a citrus-like lime), sesame tofu, black bean tofu, and deep-fried tofu with lotus root.

Recently, some 500–600 neighborhood tofu shops across Japan have gone bankrupt each year, although there are still some 16,500 shops in Japan–according to the Japan Tofu Association. In 1967 the average Japanese household consumed 72 pounds of tofu; by 1999 that figure had fallen to 59 pounds–an 18% decline in 32 years. During the same period, consumption of rice and fish also fell, which meat consumption rose sharply.

Fujino tofu, like many other brands, carries a label stating that it contains no genetically modified soybeans. Address: Los Angeles Times.

  • Summary: This is a book about how to make delicious soy desserts that are actually good for you! Contents: Introduction. Cakes and frostings. Pies and tarts. Quickbreads, muffins, brownies, bars and scones. Candy and cookies. Parfaits, custards, mousses, puddings, and soy ice creams. Soy source index. Contains 8 full-page color photos in the middle of the book. These recipes call for soymilk, soy cream cheese, soy yogurt, tofu, soy flour, and soy margarine. Contains four recipes for Tofu cheesecake. On the inside back dust jacket is a photo and brief biography of Patricia Greenberg. Address: P.O. Box 10853, Beverly Hills, California 90213. Phone: (323) 938-3975.

  • Summary: Contains many new advertisements, plus changes on the title page, copyright page, and rear cover of both paperback and hardcover editions (new ISBN for each). Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549. Phone: 925-283-2991.

  • Summary: This mini-book (only 5½ inches high) was sold (for $1.19) next to the tabloid magazines at the checkout stand at Longs Drug Store in Lafayette, California. On the little cover is a color photo of a grey-haired and healthy-looking lady holding a glass of soymilk. Contents: All about soy: Inside the soybean (phytoestrogen, isoavones, genistein, protease inhibitors), eight of soy’s top health benefits (antioxidant protection from free radicals, breast cancer protection, cholesterol control, colon cancer protection, strong bones, hot flash reduction, a strong immune system, and kidney disease prevention), different

The author frequently refers to Earl Mindell, PhD, but has no real scientific references. Many of the recipes were provided by the United Soybean Board. On the last page are two sources of more information and recipes: The United Soybean Board website www.talksoy.com and the Indiana Soybean Board website www.soyfoods.com.


• Summary: Ted has just returned from two weeks (Aug. 4-18) in Russia working as a volunteer consultant to Soya-Ch [pronounced SOYA-chee], a small tofu company in Cheboksary, which is a city of about 340,000 people situated on the Volga River about 650 km east of Moscow—a 14-hour train ride from Moscow. “They were great people and I had a wonderful time.” He was sent there by ACDI/VOCA, a volunteer overseas organization that uses American tax dollars to send American consultants overseas to help businesses that apply to VOCA for help. VOCA stands for “Volunteers in Overseas Cooperative Assistance.” Website: www.acdivoca.org.

The tofu company is: Soya-Ch Closed Joint Stock Company, 42800 Chuvashia Republic, Cheboksary, Kanashskoe shosse, 19, Russia. Phone: 8352/66-93-78 or 66-92-69. Director: Alexeeva Anna Alexandrovna.

This tofu company was started in 1998 by Alexeeva, a woman who had previously been hospitalized with severe digestive problems. The doctors couldn’t figure out what her problem was; she was near death. Fortunately, her closest friend had read about soy, so in the hospital she stopped consuming dairy products and started eating soyfoods. Her symptoms quickly disappeared, which proved that she was lactose intolerant. As soon as she got out of the hospital, she started a company making tofu. She is now director and she hired her husband, Alexeev Vaycheslav Konstantinovich, as deputy director, and the son of her closest friend as marketing director. They have 32 employees and make about 17 tonnes (metric tons) of tofu a year—which is not very much.

They have two Russian-made SoyaCow USM-150 semi-continuous systems. Each SoyaCow produces 150 liters/hour of soymilk, so the two lines produce about 300 liters/hour. The equipment is very poor quality (it does not use the airless cold grind process so the soymilk has a beany flavor) and the process by which they make tofu is extremely slow and inefficient because their instruction manuals are so poorly written. Each line makes only about 16 kg/hour of tofu. The equipment is made illegally in Russia with no supervision or license from ProSoya Inc., Raj Gupta’s company in Canada.

Soya-Ch produces plain tofu and five types of flavored or seasoned tofu (with raisins, dried apricots, caraway, seaweed or laminaria \{konbu, a type of sea vegetable\}, or salt). They call their tofu “soy cheese” and consumers buy it and use it like cheese. They typically slice it and serve it on bread; it is never pan-fried, deep-fried, sauteed, stir-fried, etc. It retails for about 30% less than dairy cheese—which is its most important selling point in Russia.
The company’s total tofu production is about 15,000 kg/month; over 80% of this is plain tofu, which is sold in bulk to a dairy which uses the tofu as an extender for their low-fat dairy cheese. Of the remaining 20%: (1) About 30% is sold as plain tofu 125 gm packs; (2) About 50% is sold as flavored tofu (five flavors) in 125 gm packs; and (3) About 20% is sold as flavored soy cottage cheese dessert in 125 gm round cups.

To make the soy dessert: Place whole raisins or bits of pre-chopped dried apricots in the bottom of a curding vat. Run hot soymilk into the vat in three stages, adding one-third of the total nigari coagulant at each stage. The soymilk flowing into the vat stirs both the fruits and the nigari; no paddle is used for stirring. The fruit distributes itself evenly distributed throughout the curds—naturally! While the soymilk is finishing its coagulation, line a second perforated vat with a cloth pressing sack. Ladle the curd-fruit mixture into the pressing sack; whey will begin to drain out through the holes in the vat. When the sack (and vat) is full, lift the sack out of the barrel and hang it in a cold place over a drain or basin to catch the dripping whey. For best results, hang the sack in a walk-in cooler with a strong fan to hasten cooling and extend the shelf-life of the finished product. Package the fruit-sweetened curds in 125 mg cups. Serve cold as a ready-to-eat dessert. No added sweetener is needed. Ted found this latter product to be very innovative and interesting.

The company sells its tofu at all 42 supermarkets in Cheboksary, and they deliver it in their own refrigerated trucks. They do not make any soymilk for sale as such because of the expense of packaging; however they may sell a small amount in bulk. Financially, they are doing quite well.

It was very easy for Ted to show them how to make tofu correctly, and how to make many additional new products such as flavored tofu, soy yogurt, and soymilk. After Ted’s visit, they plan to make soy yogurt using a 140 liter/hour yogurt plant from Israel. They expect to be able to make and sell soy yogurt for 25% less than dairy yogurt. Ted advised them to price the soy yogurt at the same price as dairy yogurt, but to periodically put it on sale at 20-25% off—a Western marketing trick! When they introduce the product, or introduce it to a new store or chain, have it on sale for one month. Then, 2-3 times per year, for one month at a time, have it on sale for 25% off; at those times, try to have demo in as many stores or chains as possible. When introducing new flavors, have the product on sale.

One big problem in Russia is the Sanitation Board. Each new product a company makes must get a permit from this department, but only after they have started to make the product. The product is then sent to Moscow where a bureaucrat must give it his stamp. “The one thing they seem to like most in Russia is stamps.” Address: TAN Industries, Inc., 49 Stevenson St., Suite 1075, San Francisco, California 94105-2975; 660 Vischer Ct., Sonoma, CA 95476. Phone: 415-495-2870.


• Summary: 1982–After Carol Ann and Timothy Huang were divorced, Carol Ann lived in Arizona with her kids and started making jewelry. She was director of the Graham County Food Buying Club, grew a huge organic garden, and began traveling to craft fairs, Grateful Dead shows, and festivals where she sold her jewelry. Dealing with rheumatoid arthritis put her on the path of natural healing and interest in diet and nutrition. She found that stress, overwork, lack of sleep, lack of water, lack of green leafy vegetables, and a poor, non-organic diet all made her arthritis worse (it flared up), while their opposite made it better. From 1982 to 1989 she lived on a ranch in Pima, Arizona. In 1982 she met and married Richard Sansom. 1989–Carol Ann and Richard are divorced; she moved to Boulder Creek, California, where she lived for the next 4 years.

1990 June–She met her third life partner, Wild Bill, at the Health and Harmony Festival. He was part of the original Renaissance Festival in Northern California, and he played for a belly dance troupe. They began to co-create the Casbah Tea House. He had created a Bedouin-style tent–40 by 32 feet; he would set it up and serve tea, coffee, and treats. Musicians would play and belly-dancers perform. Carol, who now had a long history of feeding people, began to add more food. Soon they became a traveling tea house on the summer festival circuit, serving an organic vegetarian menu based on the foods she had been involved with for the past 20 years. They served a Middle East type menu–hummus, tabouli, pita sandwiches, Greek salads, etc.–which were very refreshing at a hot festival. However many regular meat-eating Americans couldn’t relate to the food. So they added tempeh burgers, vegetarian chili and chili cheese soup, veggie dogs, organic french fries, and tempeh fries–which could serve a wider array of people. Carol bought her basic foods in bulk (e.g., 24 pounds of tempeh) from Mountain People’s Warehouse, a natural foods distributor.

1995–They rented a building on 4th Avenue in the university district of Tucson. They put their crafts/imports into a shop in front called the Creative Spirit Gallery. In the back they developed the tea house concept. Over the past six years they have become a full service restaurant with evening entertainment of music and belly dance. “It is a beautiful international scene that embraces many cultures from around the world. It is decorated with low hand carved chairs from Afghanistan, brass trays from India, a bronze gong and carved wooden statues from Bali, and carpets from Persia. The tea house comes into fruition during the International Gem and Mineral Show when Buddhist, Muslim, Hindu, Christian, and pagan people from around the world come together and be at peace drinking tea and sharing a meal... It is a vision of the beauty and diversity of this world in its fullness.”

1997–Carol and Bill split up. He went into retirement and she had a new tent made from hemp fabric and ropes. She continued to travel with the Casbah Tea House on the festival circuit each summer, serving a menu based largely on soy.

1999–The hand-written Casbah Tea House Festival Menu includes Middle Eastern favorites plus: Veggie Dog, Veggie Chili Cheese Dog, Vegetarian Chili, Tempeh (Soy)
Burgers, and Tempeh Reuben.

2001 Feb.–The typeset Casbah Teahouse Tour Menu includes some new Middle Eastern favorites plus: Tofu Veggie Stir Fry, Vegetarian Chili, Tempeh Pita, and three types of soy burgers served with blue corn chips and a dill pickle: Tempeh Burger, Tempeh Cheese Burger, and Tempeh Reuben Burger. Veggie Hot Dogs (made from soy and seitan). Veggie Chili Cheese Dogs, and Tempeh Fries. A color photo (8 by 4½ inches) shows the colorful Casbah Tea House tent outdoors at the 2001 Seattle Hemp Fest (Washington state).

2002 spring–Carol Ann expanded, moving the gallery down the street to 549 N. 4th Ave., where it has three times as much space—the fullness to be a real store. The teahouse is now expanding into being a deli, bakery, and cafe in the front of the building. They make a lot of desserts that are vegan and sugar free, using tofu in their frostings. “We struggle with being a commercial operation trying to survive and holding to our values of providing as much organic high quality ingredients as we can.

“All three of my kids are now grown up, ages 21, 23, and 25. Emma attends the University of Arizona in the art department; she is our main baker and cake decorator. Eva is attending Pima College in graphic computer arts and is our main cook. Ethan is a part-time cook. Today I walked in here and there were nine gorgeous girls running around. They’re all in their 20s, all vivacious and healthy and beautiful. Emma’s assistant in the bakery is Rebecca, who is making tofu cheesecakes; her parents worked with us at Yellow Bean in Detroit, Michigan, when Rebecca was 5 years old. It’s pretty neat how everything has come around.

“We are developing the wholesale aspect slowly, providing the co-op with packaged food items that we make. We’ll see how it all evolves. What a long strange trip it’s been. One love.” Address: 438 South Star Ave., Tucson, Arizona 85719. Phone: 520-740-0393.


• Summary: Continued: Vegetarian? “You were either Indian (from India) or you could have been a left-over hippy from the 1960s, and then there were the Seventh-day Adventists. My father often talked about a couple of people that he was in business with that were into yoga and were vegetarians. I didn’t know anybody who was not eating any animal products.

Non-dairy? “Rich Products and whipped toppings or coffee creamers were starting to come about, and maybe infant formula. I think that would be about it for non-dairy.

In the 1960s, Steve bought tofu from a store named Seeds of Life on Telegraph Avenue in Berkeley; it sold foods only in bulk—no packaging. “You weighed your food and priced it yourself. It was Utopian food shopping.”

Meat alternatives? “That would have to be Worthington Foods with fake sausage. And they certainly weren’t called ‘meat alternatives.’ They were called ‘meat analogs.’”

The diet-health connection? “That idea came in in 1984 with a Time magazine cover story—‘And now the bad news.’ There were two fried eggs for eyes and a piece of bacon doing a downward grin. I use that in a lot of my talks. That was the beginning of the mainstream diet-health consciousness. Up until that point it was calories and calories only—which had to do with gaining weight; it was not yet about disease and diet and well being. Up until that time the cholesterol hypothesis—the theory that cholesterol caused heart disease—had not been proved. Francis Moore Lappe and Diet for a Small Planet arrived in the early 1970s—diet and the planet. Now we had diet and consciousness, and environment and consciousness. This whole idea that diet and health were related did not reach most Americans until the 1980s.” When Steve started making tofu he saw it as a complete food low on the food chain. It seemed to him inevitable that such foods had a bright future. “To me, it was the environmental and the moral animal-rights issues that I was focusing on, far more than I was on diet and health issues. Yet we were looking at tofu as a healthier food—no question. But it was only in the mid-1980s that Americans started to get into the disease-related part of that. Remember, our generation organized the first Earth Day in April 1970, so there was already the realization ‘Aren’t we living a little too high on the hog?’ From there people began asking ‘How are we going to save the planet?’ Many of us tried to apply ourselves to this question in some individual way. Lots of us ended up working with food.”

Health benefits of soy in 1977? “Complete protein is the only thing I can think of. And most people didn’t even think that soy was a complete protein. Many people still don’t know that.

“The key thing about founding White Wave in 1977 was we had no experience, no money and no access to any. And those translate to no confidence. You don’t need both experience and money, just one or the other—in order to have confidence. Now, we know this market. We helped to create it. So we have a high degree of confidence in what we think about it and where we’re going with it. That’s a big difference. I have all the faith in the world that I know how to think; the question was what I wanted to think about. Making tofu looked like a pretty good thing to think about. So I just paid attention and learned as I went along. I also know that I had some genetic tendencies that way because of my father, Anthony.

“He was a successful entrepreneur—and still is. He started his own company semi-processing minerals and alloys when he was in his 30s. He would crush and size, and then sell that material to the welding-rod or steel industry. His company now has sales of a few hundred million dollars
and has a few hundred employees. When we sold White Wave to Dean Foods he was ecstatic. He was an investor in White Wave to boot. He made double digit millions on the deal. He didn’t have much faith in his son when I started in 1977, but he does now! He first invested in about 1983-84 when White Wave was in deep financial trouble. Steve’s mom, Lorraine, is still alive and her support for Steve has always been strong and positive. She always believed I was an OK person, and she let me know that–like any good mother. My actions had to be honorable; it didn’t matter much what they were. My father, likewise, is a man of very high integrity—he just didn’t believe in what I was doing. But he started relating to me in a completely different way after we sold White Wave.

“I grew up outside of Philadelphia near Villanova and Bryn Mawr. One brother was a surgeon, the other an attorney. In the 1970s my family basically gave up on me. The joke was: Where’s Steve? Oh, he’s off in India, up some tree somewhere. We paid for his education; what a waste. But he who laughs last laughs hardest. There is a certain vindication when everybody in your family is capable of retiring because of what you’ve done.

“I remember going to visit Azumaya (I don’t recall what year), and I was very impressed at how big it was—so industrial. It looked like such big equipment. And I remember that they were hand curding and hand ladling. I thought: It will take me decades to get near the money to buy equipment like this. I tried to get money many times, but no bank would lend money to a small tofu manufacturer. White Wave got almost all its money from my family—and Pat Calhoun’s folks, but to a much smaller extent. White Wave’s five major shareholders are: (1) My elder brother, Jack, who is a surgeon and who carried the investment for the company. (2) My father, Anthony. (3) Myself. (4) Pat Calhoun. (5) A man by the name of Michael Sutton—an attorney friend of ours, early in the game, who ended up investing a lot. He’s the luckiest person on the planet right now. That was the only way White Wave was able to finance its growth over the years.

“The first bank loan came in about the mid- to late 1980s, and it was for equipment. At one point White Wave got an SBA (Small Business Administration) loan for several hundred thousand dollars; it ended up being a nightmare. That helped finance the expansion into two production facilities. Within the last 3 years White Wave issued industrial revenue bonds through a state & federal program and raised $13 million. We used the money to build two Silk extraction facilities and to rebuild the tofu factory.

“When Dean Foods made its first investment of $5 million in White Wave in Aug. 1999, all of the money was used for product placement and marketing of Silk. Half of that money went specifically to slotting allowances / fees to supermarkets. We almost never lost a slot, but in some cases we actually went back and paid twice. The rest the money was used for samples, PR (public relations) and advertising. In May 2000 we got a new PR agency that is still with us: Carmichael Lynch Spong, of Minneapolis, Minnesota. They have done a great job for us. We had already put in place all of the financing of the equipment for the capacity expansion. It’s not too hard to raise money for equipment; the risk-takers can always take back the equipment and sell it.”

Nine months later, having spent the initial $5 million, White Wave went back to Dean Foods. But things had changed for the better. Sales had now risen to $28 million. This time Dean invested $10 million.

Did White Wave have any important firsts? “(1) We took a deep look at foods and challenged how they were being presented. We didn’t stop challenging until we found a way that worked and was accepted. We put Silk soymilk in gable-top cartons like milk and put it in the dairy case. When Silk took off, it was everything we could do just to hold on. Silk now has sales of $170 million a year; all of White Wave’s other products might be $10-15 million. (2) We flavored tempeh and tofu, and basically created the ‘flavored tofu’ category. (3) We were the first to do shelf sets with soyfoods. We put up ‘Vegetarian Cuisine’ centers in Whole Foods markets in the San Francisco area. Ultimately we ended up organizing the entire case around vegetarian foods. (4) Use of the word ‘vegetarian’ boldly with our product line. It was just one more extension of our lifestyle. The Farm in Tennessee did much the same thing but on a much smaller scale. We need to get back to that idea” (Continued).

Address: President, White Wave Inc., 1990 North 57th Court, Boulder, Colorado 80301.

• Summary: A superb, massive book, “with more than 1,000 robust recipes with notes on cooking, eating, loving, and living fearlessly”—as the cover proclaims. Very nicely designed, with many delicious recipes. The author is an outstanding writer with a deep knowledge of ingredients—including soyfoods.

tofus (cupboard, like silken tofu). Other miscellaneous tofus (tofu burgers and sausages, deep-fried tofu, freeze-dried tofu [dried frozen tofu], tofu hot dogs, yuba).

Concerning yuba the author writes (p. 656): “I believe this traditional Asian product will explode onto the American soy-scene soon because it is so versatile and delicious and has a long and honorable history as a meat alternative. It is the unique thin-chewy texture of yuba sheets, when layered with seasonings and shaped, stacked, cut, and prepared in certain ways, that gives such a convincingly ‘meaty’ feeling to such dishes.”


• Summary: According to the Encyclopedia Britannica (2002), titanium is a chemical element–a lightweight, high-strength, low-corrosion, structural metal. Titanium dioxide, a nontoxic, pure white powder, is extensively used as a pigment in paints, enamels, and lacquers.

The SoyaScan database presently contains 20 records that mention “titanium dioxide.” From 1936 to 1961 (3 records) it is used as a pigment to whiten paints. In 1953 The Glidden Company, in a joint venture, started a large plant in Japan to manufacture titanium dioxide. From 1965 to 1981 (4 records) it is used as a tracer or tag, mixed with isolated soy proteins (ISP) or textured soy protein products, so that their presence could be detected when used in meat products. One label read: “0.1% titanium incorporated as food grade titanium dioxide in accordance with USDA regulations.” In 1984, during the Reagan administration, the USDA eliminated the requirement that titanium dioxide be added to soy protein products as a tracer.

In 1993 it was used as a whitener in Mocha Mix Fat Free Non-Dairy Creamer (made by Presto Food Products). In 1997 it was used as a whitener in Rice Moo (Non Dairy Beverage Mix) (Original and Vanilla flavors, made by Sovex Foods). Also in 1997 it was used as a whitener in SoySoft Deep Treatment Penetrating Cream (made by SoySoft, Inc.) In 1988 its use as a whitening pigment for paper coatings was discussed. According to Ted Nordquist (Dec. 2003), he saw it on the label of 8th Continent Soymilk (Vanilla and Original flavors, made by General Mills) in which it was presumably used as a whitener when the product was first launched in about 2001, however (Dec. 2003) it presently no longer appears on the label.

• New Product–Documentation: Ceres Sales sheet and business card sent by Jon Kessler, Sales and Marketing Director, Tofutown North America. 2012. July 30. The sales sheet shows the front panel: “Vegan. Dairy-free. No cholesterol. Best soy on planet earth.” Letter (e-mail) from Jon Kessler. 2012. Aug. 10. Gives the date each product was first sold commercially. The labels were changed to the present more American and less European labels in April 2012. Ingredients: Organic soymilk (water, organic soybeans), coconut oil, organic sugar-beet syrup, organic maltodextrin (from corn or rice), fractionated palm oil, Contains less that 2% of: natural vanilla extract, tartaric acid, carrageenan, sea salt, fractionated palm kernel oil. Wt/Vol., Packaging, Price: 10.14 fl oz (300 ml). Refrigerate after opening.

• Summary: Cedar River Candle Co. was founded by three Cedar County (Iowa) farmers, all of whom initially worked for Candleworks, Michael’s candle-making business: Owen Nebergall (Michael’s brother-in-law), Scott (last name unknown), and Chuck Nous. When Michael’s landlord sold his building, forcing him to relocate to a new factory, Michael said to these three employees that he had two large purchase orders. Since he knew that relocating would take a long time, he offered to sell them soy wax and let them make the candles to fill the purchase orders.
The natural choice for smoother coffee.
About 3 years ago, Jon Nicholiasen, made a major investment in Cedar River Candle Co. Jon, who was recently quoted in *USA Today*, is the investor who brought the money to the tiny fledgling company (Cedar River Candle Co.) that Michael’s brother-in-law (Owen Nebergall) had started. Jon had a company that made coffee creamers (alternatives to cream) using soy, so he was aware of soy from that perspective. Before investing in soy candles, he sold his coffee creamer company to Dean Foods. It is said that that left him working capital of about $34 million. He devoted one year to investigating where the next major investment opportunity was; he came to soy wax.

So he bought a major interest in Cedar River Candle Co., which was a privately held Iowa corporation. Owen Nebergall, one of the people who was instrumental in bringing Jon in, passed away during the transition process. Jon is now the president, but Michael is not sure if he is the sole owner. After about 6 months, Jon moved the business out of a small machine shed near the barn on Owen’s farm (in the tiny town of Tipton, Cedar County, Iowa), 130 miles north and into a factory building in an industrial park in the town of New Hampton, Iowa, where Jon Nicholiasen lived. A lot of new candle-making equipment was purchased at this time. The company is now named Soy Basics, and it has three brands: Beanpod, Cedar River, and Scentsations. Michael has visited that factory about 10 times. Nicholiasen’s goal from day one, about 3 years ago, has been to build it into a big company and then sell it. He seems to be good at doing that. In three years they went from non-existent to the biggest player in the soy wax industry. They now project sales of $25 million for the year 2004 to the Iowa Soybean Promotion Board.


Today Soy Basics is the largest single buyer of C-1 (the soy wax developed by Michael and made by Cargill); they buy either 1 or 2 full tankers of it every month.

Scott has recently launched another soy wax candle company named Soy UR Burning (located in Cedar Rapids); they buy half truckloads of Michael’s soy wax from Cargill.

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brand name into German foods retail (supermarkets, warehouses, Cash&Carry, discounters, etc.). This new label is called VeggieLife (slogan: ‘happy without meat’), encompasses at present some 15 products and has made its way into 500 supermarkets within just 9 months.”

As many as 15,000 users visit the company’s websites each week. “We believe in Food Democracy. The Tofutown.com philosophy is that every human should have the opportunity to get an entirely vegetarian product whenever and wherever he or she is hungry or thirsty. If it comes from Tofutown, it’s much more delicious and far healthier than something similar containing meat or dairy products. Today’s consumers know that they shape their own future with their purchases.”

Tofutown.com makes “500,000 tofu burgers and 1,000,000 real vegetarian sausages per year.” There are “500,000 faithful and enthusiastic Viana customers...and approximately 35 employees.” Address: Wiesbaum, Germany.


- Summary: Contents: Introduction. Technological development. Functional properties: Solubility, gelation, emulsification, water binding, viscosity, dispersibility, foaming and whipping. Applications in food systems:

Hydration of isolated soy proteins, flavor and odor issues, product storage and handling, health and nutrition applications (nutritional bars and other confectionery-type products, liquid nutritional beverages, powdered nutritional beverages, protein tablets), clinical and pediatric nutritional products, meat product applications (injection and marination applications, coarse ground meats, emulsified meats, dry fermented meats), meat analogs products, extruded cereals and snacks, bread and other baked goods, dairy alternative products (soymilks, yogurt, sour creams and soft cheeses, frozen desserts), other processed foods (pasta, soups and sauces, reduced-fat and other spreads). Summary.

Figures: (1) Flow chart of processing schematic for water-washed and alcohol-washed isolated soy proteins.

Tables: (1) Functional characteristics of various isolated soy proteins. (2) Functional properties of isolated soy protein in food systems. Address: Archer Daniels Midland Co., 4666 East Faries Parkway, Decatur, Illinois, 62526, USA.

487. Drohsihn, Bernd. 2004. Re: Viana Naturkost GmbH has been renamed Tofutown.com GmbH and has moved to the village of Wiesbaum. Letter to William Shurtleff at Soyfoods Center, Nov. 5. 2 p. Typed, with signature on letterhead.

- Summary: Tofutown.com is the company’s new name; it is not a consumer brand. Wiesbaum, a village too small to appear on most maps of Germany, is located in southwest Germany, south of Bonn, south of Cologne, and west of Koblenz. The major business in town is Vukan Electronic, and a map and directions can be found on their website.
www.vulcanelectronic.com. The name “tofutown” was given to Bernd by the village of Wiesbaum. Bernd registered the “Tofutown” name in Europe’s and Germany’s brand registries—prior to White Wave registering it in the United States.

A major reason for the change of name is that the company’s new and very successful mainstream supermarket brand “Veggielif” is becoming more and more important. Viana is still the company’s traditional brand for health food stores in Europe; the new name is helpful to consumers in making a clear separation between the company name and brand names. The company also now makes a lot of private labelled products.

Two tofu makers in Eastern Europe are Veto in the Czech Republic and Polsoja in Poland.


Follow-up e-mail from Bernd. 2004. Dec. 17. In 2001 Bernd moved his food factory from Euskirchen-Kuchenheim to Wiesbaum and started making soy products there in the summer of 2001. He moved because the company had grown and they needed a “state of the art building and machinery” to attract new professional customers—who did come. Bernd now lives in Bonn (the capital of Germany, on the Rhine River near Cologne) and enjoys the drive to Wiesbaum which is in very beautiful and rural surroundings. It is a hillside area with pure water and air, near Belgium and Luxembourg.

In the autumn of 2003 Bernd changed his company name from Viana Naturkost GmbH to Tofutown.com GmbH, Industrie und Gewerbe Park, D 54578 Tofutown Wiesbaum, Germany. Phone: 06593 9967-0.


• Summary: Catalog (glossy color) sent by Patricia Smith from Natural Products Expo West (Anaheim, California). 2007. March. Bound with a black comb. ach page is printed, single sided, in color. Each page is devoted to basics and details about one subject or line of products. At the top of each page is the word “Silk” in white on a blue background. On the cover, a photo shows diced baked tofu on a cutting board and in a skillet against a black background. Below the photo is the White Wave logo.


• Summary: This document is officially known as “Form 10.” The Specialty Foods Group segment (mainly pickles), WhiteWave Foods segment (branded products), and the Dairy Group are each different entities. This new company, TreeHouse Foods, Inc., will include Dean Foods’ pickles segment, Cremora non-dairy powdered creamer, Mocha-Mix non-dairy liquid creamer, and Second Nature, a liquid egg substitute, plus salad dressings sold in foodservice channels. The CEO and president of the new company is Sam K. Reed, age 58, former CEO of Keebler Foods Co. His base salary will be $750,000, with a target bonus percentage of 100%. TreeHouse will include approximately 1,800 employees based in 11 manufacturing facilities dedicated solely to TreeHouse. The company will be located in Downers Grove, Illinois. Dean Foods will not own any shares of TreeHouse common stock after the distribution (p. 8).

Note: White Wave, the maker of silk, tofu, and other soy products, will remain part of Dean Foods. Address: 2515 McKinney Ave., Suite 1200, Dallas, Texas 75201. Phone:


This unusual approach raises several questions: Did the...
Rich, Creamy, Delicious Taste!
The First and Only All-Natural, Vegetarian Whipped Cream

- Dairy Free
- 100% Vegetarian
- No Hydrogenated Oils
- GMO Free
- Wheat Free
- Low Calorie

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author request a kickback for promoting these products? Why does one need recipes for soymilk? Or for Tofutti Mozzarella Soy-Cheese Slices? Or Tofutti America Soy-Cheese Slices? Or for Boca Meatless Cheeseburgers? Or Morningstar Farms Veggie Breakfast Bacon Strips? How about all the people who don’t shop at supermarkets?

In the first section, titled “Main street American is cooking with soy–because its good for your health,” the author states: “If you are a health-food store ‘purist,’ then this book probably isn’t for you. But if you are willing to try new recipes that taste the same as your old favorites but feature soy products, then I think you’ll be mighty pleased with the results. I want to ‘bring to the table’ all those men, women, and children who aren’t necessarily vegetarians or already consuming lots of soy foods and food products.”

Address: Author and speaker, DeWitt, Iowa.

494. Los Angeles Times. 2006. Obituaries: Robert E. Rich Sr., 92; Invented nondairy whipped topping. Feb. 17. p. B10. • Summary: Robert Rich died on Wednesday, Feb. 15, at his home in Palm Beach, Florida. The cause of death was not disclosed. A food industry pioneer, he created nondairy whipped topping in 1945. Marketed under the name Rich’s Whip Topping, it was superior to cream because it could be frozen. It soon became a staple of school cafeterias, restaurants, and bakeries. From this basic idea, Rich spun off nondairy icings, fillings, dessert toppings, and a coffee creamer. “His company, Rich Products, grew into an international operation with 7,000 employees and annual sales exceeding $2.5 billion.”

In 1990 Rich’s contributions to the food industry were recognized when he became one of the first four inductees into the National Frozen Food Hall of Fame. A portrait photo shows Robert Rich.


Leaflet sent by Ceres Organics. 2006. Feb. 10. 8½ by 11 inches. “Introducing a new dairy-free whipped dessert topping. 100% vegan and no cholesterol. 0% trans fat per serving and heart healthy. 40% less fat than classic whipped cream. Perfect with fruit, desserts & beverages. Incredible flavor and texture. No soy bean aftertaste. GMO free.” A color photo shows the front of the product.


Note: This carton was introduced after White Wave was purchased by Dean Foods. Notice that the word “soymilk”
Soy Whip
Whipped Soy Topping
Introducing a new Dairy-Free whipped dessert topping

- 100% vegan & no cholesterol
- lactose-free & gluten free
- 40% less fat than classic whipped cream
- 0% trans fat & heart healthy
- incredible flavor and texture
- perfect compliment to fruits, desserts & beverages
- shelf life - 12 months

Ingredients: organic soy milk (water, organic soybeans), coconut oil, sugar beet syrup, organic maltodextrin (from corn or rice), fractionated palm oil. Contains less than 2% of: natural vanilla extract, tartaric acid, carrageenan, sea salt, fractionated palm kernel oil propellant: nitrous oxide

REFRIGERATED ITEM

Imported by Ceres Organics
Saint Paul, MN 55108
tel +1.866.542.1559 / fax +1.303.474.6466
www.ceresorganic.com
Product of Germany
www.soyatoo-usa.com

© Copyright Soyinfo Center 2013
Soyatoo Whipped Soy Cream

Introducing a new Dairy-Free whipped dessert topping perfect for the holidays

- 100% Vegan & no cholesterol
- 40% less fat than classic whipped cream
- 0% Trans Fat & heart-healthy
- Made with organic ingredients
- Perfect with fruit, desserts and beverages

Ingredients: organic soymilk (water, soybeans), organic coconut oil, organic fractionated palm kernel oil, organic sugar-beet syrup, organic maltodextrin, tartaric acid, carrageenan, sea salt, natural vanilla extract
Propellant: nitrous oxide

Nutrition Facts
Serving Size: 2 Tablespoons (6g)
Servings Per Container About 42

<table>
<thead>
<tr>
<th>Amount Per Serving</th>
<th>Calories 10</th>
<th>Calories from Fat 5</th>
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<tbody>
<tr>
<td>Total Fat 0.5g</td>
<td>% Daily Value*</td>
<td></td>
</tr>
<tr>
<td>Saturated Fat 0.5g</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>Trans Fat 0g</td>
<td>0</td>
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</tr>
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<td>Cholesterol 0mg</td>
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<tr>
<td>Sodium 0mg</td>
<td>0%</td>
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</tr>
<tr>
<td>Total Carbohydrate 1g</td>
<td>0%</td>
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</tr>
<tr>
<td>Dietary Fiber 0g</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Sugars 1g</td>
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<td></td>
</tr>
<tr>
<td>Protein 0g</td>
<td>0%</td>
<td></td>
</tr>
</tbody>
</table>

Vitamin A 0%  •  Vitamin C 0%
Calcium 0%  •  Iron 0%

*Percent Daily Values are based on a 2,000 calorie diet.

Ceres Organics
Boulder, CO 80301
📞 +1.866.542.1559
📞 +1.303.265.9949
www.ceresorganics.com

Ceres Organics
Auckland, NZ
📞 +64.9.574.0373
📞 +64.9.527.4513
www.ceres.co.nz
soymilk (no longer appears in the product name. Ingredients: Organic natural lecithin, potassium phosphate, sodium citrate, tapioca starch, natural flavors, carrageenan. Wt/Vol., Packaging, Price: Pint gable-top carton. Retails for $0.99 (2007/01, Pleasant Hill, California). Refrigerated. Nutrition: Per 1 tablespoon (15 ml): Calories 15, calories from fat 10, total fat 1 gm (2% daily value; saturated fat 0 gm, trans fat 0 gm), cholesterol 0 mg, sodium 10 mg, total carbohydrate 1 gm (dietary fiber 0, sugars less than 1 gm), protein 0 gm. Vitamin A 0%, vitamin C 0%, calcium 0%, iron 0%. Percent daily values are based on a 2,000 calorie diet.


• Summary: A remarkable, milestone book! Every person with a heart should read this book. Advocates a plant-based diet with no oil or nuts. On the cover: “Based on the findings of a now 20-year study first published in the American Journal of Cardiology [in Dec. 1995]. With more than 150 great-tasting recipes.”


This book is based on a 20 plus year study of coronary artery disease using diet and lifestyle modifications; it reports the results of that study. President Bill Clinton has spoken (in public and on TV) very highly of this book and of Dr. Esselstyn (pronounced ES-sul-stun, not ES-sul-stine); the name is Dutch.

The dietary rules (p. 120-21): 1. Don’t eat any meat, chicken or fish. 2. Do not eat any dairy products. 3. Do not eat eggs; that includes egg whites and even egg substitutes that include egg whites. 4. Do not consume any oil at all—Not even virgin olive oil or canola oil. 5. Use only whole grain products, including brown rice. That means no white flour products. 6. Do not drink fruit juice–but its fine to eat fruit. 7. Do not eat any nuts. 8. Do not eat avocados (or guacamole). 9. Do not eat coconut. 10. “Eat soy products cautiously. Many are highly processed and high in fat. Use ‘light’ tofu. Avoid soy cheese, which almost always contains oil and casein.” 11. Read The China Study, by T. Colin Campbell.

After having cautioned the reader to “Eat soy products cautiously,” the plant-based recipe section of the book (p. 119-286), by Ann Crile Esselstyn, calls for soyfoods in many recipes. Some of the breakfast cereals call for plantmilk using a standard format: “2 cups oat, multigrain, almond, or nonfat soymilk” (p. 129-32, 162, 231, 276, 283). A comparison of the caloric, fat, sodium, and sugar content of nine plantmilks (six of them containing soy) is given on pages 136-37. “Low-sodium tamari” and Bragg Liquid Aminos (which contain sodium by no salt) are widely used in small amounts for seasoning (p. 128, 158-59, 165-66, 168, 170-72, 177, 179, 184, 251, etc.). White miso is used occasionally as a combination seasoning and sweetener (p. 163, 191). Seitan (made from wheat gluten) is occasionally used as a meat substitute (p. 213, 250-51). Light silken tofu or light extra-firm tofu (often one 12.3-ounce package) is used as a dairy alternative in dessert recipes such as: Chocolate mousse (p. 272-73). Blueberry purple passion (p. 273). Pineapple paradise (p. 274). Lemon whipped topping (p. 275). Pineapple frosting (p. 278). Creamy fudge frosting (p. 279).

Sweeteners are used in moderation and the chapter on “Desserts” begins: “Its best not to eat dessert every night. Make it a rare treat, when there are lots of people around—and no temptation to eat too much.” Many fruits are naturally sweet and make good desserts. One format is: “3 tablespoons maple syrup, honey, agar nectar, or sugar.”

Acknowledgments (p. 287): “Kindred spirits in the transition to healthier living have my gratitude for their own inspiring work. Among them: Neal Barnard, Colin Campbell, Antonia Demas, Hans Diehl, Joel Fuhrman, Mladen Galubic, Alan Holdhamer, William Harris, Michael Jacobson, Michael
Klaper, Robert Kradjian, Doug Lisle, Howard Lyman, John McDougall, Jeff Nelson, Dean Ornish, John Robbins.”

“My late father, Caldwell B. Esselstyn, M.D. And long before it became fashionable, he argued that the only way out of the impossible health-care burden that confronts the United States is to teach people how to live healthier lives.” (p. 288).

Publisher’s summary: “Heart disease remains the leading cause of death in this country for men and women. And while we spend millions of dollars each year developing treatments, traditional procedures fail patients by focusing only on the symptoms of the disease, not the underlying causes. In Prevent and Reverse Heart Disease, Dr. Caldwell B. Esselstyn, Jr., a former surgeon, researcher, and clinician at the Cleveland Clinic, challenges conventional cardiology by posing a compelling, revolutionary idea—that we can, in fact, abolish the heart disease epidemic by changing our diets.

“The proof is in the incredible results of the patients who have followed Dr. Esselstyn’s ground-breaking program. The men and women in his twenty-year nutritional study—the most comprehensive study of its kind—came to him with advanced coronary disease. Despite the aggressive traditional treatment they received—including bypasses and angioplasties—a number had been told by their cardiologists that they had less than a year to live. Within months of following a plant-based, oil free diet, their angina symptoms eased, their cholesterol levels dropped significantly and they experienced a marked improvement in blood flow to the heart. Twenty years later they remain free of symptoms. Drawing on the results of this revolutionary study and his ongoing work with patients all over the country, Dr. Esselstyn convincingly argues that plant based, oil free nutrition can not only prevent and stop the progression of heart disease, but also reverse its effects.

“Furthermore, it can eliminate the need for expensive and invasive surgical intervention except in acute emergencies, no matter how far the disease has progressed. Prevent and Reverse Heart Disease explains the science behind these dramatic results, and offers readers the same, simple plan that has changed the lives of Dr. Esselstyn’s patients forever. In addition, the book offers more than 150 delicious recipes developed by Ann Crile Esselstyn, that the Esselstyns and their patients have enjoyed for years. Clearly written and backed by irrefutable scientific evidence, startling photos of angiograms and inspiring personal stories, this book will empower readers to take charge of their heart health. It is an important call for a paradigm shift in heart disease therapy.”

About the author: Caldwell Blakeman Esselstyn Jr., M.D., (born December 12, 1933) is an American physician, author, and former Olympic rowing champion. His color portrait photo appears on the front dust jacket. Esselstyn graduated from Deerfield Academy and in 1956 graduated from Yale University, where he was a member of Skull and Bones. Caldwell Esselstyn competed at the 1956 Summer Olympics in Melbourne, where he won a gold medal in eights with the American team. On 1 May 1961 his engagement to Ann Crile was announced by the New York Times; they were married on 18 June 1961. 1961–He received his M.D. from Western Reserve University. 1985–He began his famous study at the Cleveland Clinic of 22 patients who had previously had heart attacks. 1988–He and his family began to move toward a plant-based diet. Dr. Esselstyn and his wife, Ann Crile Esselstyn, have mostly followed a vegan diet since the mid-1980s. He attributes the success of his 12 year trial with heart patients to low mean levels of both total cholesterol (145 mg/dl) and LDL cholesterol (82 mg/dl). In 2010 after cardiac surgery, former U.S. president Bill Clinton mostly adopted the plant-based diet recommended by Caldwell Esselstyn, Dean Ornish and T. Colin Campbell. Source: Wikipedia, at Caldwell Esselstyn. May 2011.

Dr. Esselstyn and Ann Kriile were married on 18 June 1961 in Cleveland, Ohio. They have four grown children: Rip (born in 1963), Ted (1964), Jane (1965), and Zeb (1967). Three are married, and Dr. Esselstyn and Ann have six grandchildren (p. 288). In 1988 the Esselstyn family joined together in moving toward eliminating dairy products, meats, and oils from their diet. Their eldest son, Rip, became an all-American swimmer at the University of Texas at Austin; after graduating he was a professional triathlete for 11 years. Today (2011) he is a teacher and writer about diet and health—advocating a “plant-strong diet.” Their second son, Ted, set a 200-yard backstroke record at Yale University, and their daughter, Jane, won the Big Ten 200-yard backstroke championship while attending the university of Michigan. Their youngest son, Zeb, as an Ohio high school junior, was the state butterfly swimming champion. And Ann, now in her early seventies, runs for 40 to 70 minutes almost every day. Clearly their plant-based diet provides them with plenty of strength and energy (p. 78-79). Address: M.D., former surgeon, researcher and clinician, Cleveland Clinic, Ohio—for 35+ years.


• Summary: Contents: Preface. Acknowledgements. Part I. Tofu: Food for mankind. 1. Protein East and West. 2. Tofu as a food. 3. Getting started. Our favorite tofu recipes (lists about 80 recipe names for each of the different types of tofu, plus soymilk, yuba, whole soybeans, go, okara, and curds; very favorites that are also quick and easy to prepare are preceded by an asterisk).


Part III–Japanese farmhouse tofu: Making tofu for more and more people. 17. The quest. 18. Making community tofu. 19. The traditional craftsman. 20. Making tofu in the traditional way. Appendices: A. Tofu restaurants in Japan (many are vegetarian). B. Tofu shops in the West (Directory of 43 shops in the USA, 3 in Europe {Germany, Austria, Belgium, Denmark, Finland, France, Ireland, Italy, Netherlands, Portugal, Spain, Switzerland, UK, Wales}, and 3 in Latin America {Brazil, Colombia, El Salvador, Guatemala, Mexico}). C. People and institutions connected with tofu. D. Table of equivalents. Bibliography. Glossary. Index. About the authors (autobiographical sketches; a photo shows Shurtleff and Aoyagi, and gives their address as New-Age Foods Study Center, 278-28 Higashi Oizumi, Nerima-ku, Tokyo, Japan 177). Sending tofu in the four directions.


Note. This is the earliest French-language document seen (Sept. 2013) that mentions soy cream cheese (p. 125), which it calls Fromage à la crème au tofu. Address: Soyinfo Center, P.O. Box 234, Lafayette, California 94549 USA. Phone: 925-283-2991.


• Summary: Contents: Introduction. Nutrition. Taste. Cost. Tables show: (1) Vegan cheese brands and purchasing information. Nine companies now make vegan cheeses: Cheezly (available only online; <www.redwoodfoods @ nakedearthusa.com>). Galaxy Nutritional Foods, Panos, Road’s End Organics, Scheese (Bute Island Foods, Scotland. Available only online; <www.buteisland.com> or <www.blackduckimports.com>), Soyatoo! (Tofutown, Germany), Tofutti, Vegan Gourmet (Follow Your Heart). For each company is given: Products, brand characteristics, where to purchase.

(2) Nutritional content of vegan cheese slices (per slice) (3 products + 1 dairy product for comparison).

(3) Nutritional content of vegan cheese in block form (per ounce) (5 products + 1 dairy product for comparison).

(4) Nutritional content of vegan cream cheese (2 tablespoons) (4 products + 1 dairy product for comparison).

(5) Nutritional content of vegan sour cream (2 tablespoons) (2 products + 1 dairy product for comparison).

(6) Nutritional content of vegan cheese dips (serving sizes vary) (3 products + 1 dairy product for comparison).

(7) Nutritional content of vegan cheese toppings (2 teaspoons) (1 product + 1 dairy product for comparison).

Best products by category: “Tofutti Soy Cheese Slices was the most preferred cheese slice alternative.

“Sheese Cheese Alternative, in block form, was chosen as the brand with the most palatable flavor.

“Tofutti’s Better Than Cream Cheese was the clear winner amongst the cream cheese alternatives. It most resembled its dairy counterpart for flavor and spreadability.

“Vegan Gourmet and Tofutti tied for best sour cream alternative. They both had a nice tangy taste.
“Road’s End Organics Cheddar Style Chresse Mix was the favorite in the dip category. Despite the extra preparation required (as compared to the ready-to-use dip in the jar), the flavor was delicious.

“The more moisture and fat a cheese contains, the easier it is to melt. The more protein it contains, the tougher it will become when heated. With regard to meltability, VeganRella, Cheezly, and Vegan Gourmet were the best. VeganRella and Cheezly could stretch once melted. Cheezly did not have greasy pools and would be ideal for making pizza.” Address: VRG Dietetic Intern.

• Summary: A feast for the eyes, the mind, and the palate. Filled with more than 1,300 beautiful color photos; many of them accompany over 1,000 healthful, natural recipes, but others show the great variety of natural foods, from colorful fruits to basic whole grains. Brimming with sound advice on diet, lifestyle, and health.

This is the new edition of a very important, pioneering, indeed classic American vegan cookbook. On the front and back covers is an idyllic painting of the Garden of Eden. Author Rosalie Hurd is seated under The Tree, reading the Bible–Genesis 1:29, which describes God’s original diet for men and women. The book uses no animal products (except in one chapter at the end titled “Recipes Using Milk and Eggs,” “for those who are in the transitional period. However, we encourage all those who still cling to milk and eggs to become acquainted with the facts concerning their use, and become weaned through this process”). Some recipes also use honey.

Contains even more innovative soy recipes than the original 1968 edition. A minor point: some of the soy terminology is inconsistent and/or outdated. Address: 1. D.C. [Doctor of Chiropractic], M.D.; 2. B.S. Both: P.O. Box 5209, Grants Pass, Oregon 97527. Phone: 541-472-1113.


• Summary: Dedicated: “To those who are guided by the open heart and open mind of compassion.”

Being vegan is “not about being on some trendy new diet; it is a lifestyle” (p. 85). The index contains 48 entries for tofu, 37 for tamari, 30 for soymilk, 8 for tempeh, 6 for TVP, 4 each for miso, soy yogurt, tofu cream cheese, and seitain, 2 for silken tofu and Soyrizo, and 1 each for edamame, soynut butter, and Soyatoo (natural nondairy whipped topping).

“There are so many reasons to go vegan–health and nutrition, weight loss, green and sustainable living, and prevention of cruelty to animals. With over 200 mouth-watering recipes and tips for converting meat- and dairy-based dishes into vegan ones, The Complete Idiot’s Guide to Vegan Cooking will help readers enjoy a healthy vegan diet without sacrificing taste” (publisher’s description). Address: 1. Vegan chef, author, and host of veganchef.com since 1999; 2. Long-time vegan cook and “foodie”.

• Summary: “1. Silk, a pioneering brand [of soymilk] in the organic marketplace, used 100% organic soybeans in their products prior to their acquisition by Dean Foods.

“2. Dean Foods is an $11 billion agribusiness giant and the largest milk processor in the United States. They own over 50 milk labels around the country, including Horizon Organic, a brand that heavily depends on factory farms each milking thousands of cows.

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“3. According to reports by farmers and farmer-owned cooperatives, after Dean Foods purchased the company, they discontinued buying some or all of their organic soybeans from domestic organic producers and told the farmers that their decision was based on price—a price that American farmers could not match.

“4. Dean Foods gradually started introducing additional varieties and flavors of Soy milk, many made with ‘natural’ soybeans. These are conventional soybeans. The percentage of their products manufactured with organic soybeans declined steadily over the years, and recently plummeted.

“5. Dean Foods’ statement about buying all North American soybeans was recently put up, presumably, since we had announced the imminent release of our report. We have no way of verifying whether the information is accurate. Unlike their two competitors in the refrigerated dairy case (Organic Valley and Wildwood), Dean Foods refused to transparently participate in Cornucopia’s study—depriving their customers of an independently verified review of their practices.

“6. In terms of Dean Foods buying a ‘small portion’ of their soybeans from China in the past, that seems to contradict the reports from organic growers in the United States, and the company has never released any hard data on their purchases.

“7. Recently, Dean Foods reformulated their Silk product line changing almost all their products over to ‘natural’ (conventional) soybeans. They did this, quietly, without telling retailers or changing the UPC code numbers on the products. Many retailers reported that they didn’t find out until their customers noticed and complained.

“8. To add insult to injury, not only did the price of Silk products not go down when they converted to cheaper conventional soybeans, but they now reintroduced three products with organic soybeans and raised the price on those. Greedy profiteering plain and simple.

“On a recent visit to Whole Foods in Milwaukee (May, 2009) the store was offering 25 different Silk soy milk products, in different sizes and flavors, including creamers, of which only one (1) was organic. So much for Dean Foods and their WhiteWave division’s commitment to the environment, consumer health and the hard-working family farmers that produce certified organic soybeans in this country.” Address: The Cornucopia Institute, P.O. Box 126, Cornucopia, Wisconsin 54827.


• Summary: A full-color vegan cookbook. The index contains 21 entries for tofu (including tofu ricotta, p. 82-83), 15 for Gardein, 11 for tempeh, 5 for soy milk, 3 for seitan, 2 each for miso and for soy cheese, and 1 each for soy creamer and soy yogurt.


Address: Vegan chef, lives in Los Angeles and Vancouver, BC.


• Summary: Contents: Tofu is coming: In 1980 tofu was sold in about 100 Reform Houses, Bioläden, and vegetarian restaurants in Germany. In 2010 it is sold at more than 40,000 locations in a great variety of forms. Tofutown is there: Making it easy for people to eat and drink without going through the detour of animals.

After 30 years of making tofu in Germany, all is well. Photos show and earlier and present view of the company’s plant.


Protecting animals and the environment, health. We believe in food democracy. Tofuismus No. 6. “In a Tofu Body lives a Tofu Spirit.”

Tofu Fact No. 4. Four photos inside and outside the company’s headquarters.

Nine website URLs and four photos. Very big numbers. Awards and prizes.

Milestones in the company’s history / chronology: 1981/82—Founding of the tofu collective Soystern, at the time the 3rd so-called “Tofurei” in Germany. In the 1970s and 1980s many small tofu projects were based on vegetarianism.

1988—Founding of Viana Naturkost GmbH on Cologne.

1990—Move to a larger building in Cologne.

1992—Move to a former dairy in Euskirchen Kuchenheim.


1999—Move into a new building in Wiesbaum / Vulkaneifel.


2002—Develop the “Veggie Life” brand.

2003—Rename the company Tofutown GmbH.

2004—Development of the “Soyatoo!” brand.

2005—Major expansion of the cold storage area and the final packing area.

2007—Expansion of production.

2008—Start-up a Spaceshuttle Tofu- and Soymilk plant.

2009—Establish Tofutown North America LLC in San
Francisco, California, for marketing the company’s products in North America and Canada.

Note: During the years 2008 (Inbetriebnahme) and 2010 (Take over a modern production facility formerly owned by De-Vau-Ge Gesundkostwerk in Lueneberg) the story gets very complex, so Shurtleff writes Drosihn to please explain what it means. He kindly explains the 2010 entry in an e-mail dated 1 Nov. 2010: “I’ll try to answer your questions. It is a little Gordian [knot] and complex: De-Vau-Ge in Lueneburg is a ‘big city’ and we did take over a ‘small garage’ (a small but separate building including about 60 employees) where the home of the ‘vegetarian production’ has been situated for years. The present owners of the ‘De-Vau-Ge Dailycer Group’ (50% is owned by ‘One Private Equity’ a Chase Manhattan Bank PE Company and 50% is owned by the Seventh-day Adventist Foundation ‘MSP’) focused the company strictly to the core business ‘breakfast cereals’ and carved out everything else to spin off. (Vegetarian Products) to Tofutown, Baby Food (to Sunval Company) and so on.

Already in 2007 all the health food businesses (brands for so called ‘Reform Häuser’ and natural food stores and supermarkets) owned by De-Vau-Ge has been carved out to a daughter company named ‘Prima Vita’ and moved to ‘Heimertingen’ in the South of Germany. So they did concentrate on the health food brands (most important one is ‘Granovita,’ the other ones are ‘Eden,’ ‘Linusit,’ ‘Granovital’ and also the smaller ones ‘Martin Evers’ and ‘Bruno Fischer,’ in total maybe 10 to 15 health food brands). Nowadays also the other European businesses are consolidated into the newly developed ‘Bio Herba Group’ which is beside the ‘Prima Vita’ in Heimertingen also Granovita UK and Granovita Spain. This health food business in total is, compared to the De-Vau-Ge Dailycer Group, of almost no economic importance and is still owned by Seventh-day Adventist money. The De-Vau-Ge Dailycer Group is a competitor of the Kellogg Co. and Nestlé in breakfast cereals and makes about 500 billion Euro turnover [sales] per year. They have several locations in Europe (France, Netherlands, UK, Switzerland).

‘Tofutown is still very small compared to this big business; it has two production locations in Germany (Wiesbaden and Lueneburg) and a small bureau in San Francisco.

‘A complex story and this is only the short version. Good to hear that you are well and still interested in companies and soy foods and the developments on the market.

Follow-up e-mail (Nov. 2): “There is a SoyaCow (made by ProSoya) grazing and giving milk in Tofutown. Frank Daller and Raj Gupta are both very credible people in the soy market.

“YES, you are right with the mad accountants and also with mad consultants.

“I do use Google Books and Wikipedia as you do. In my Tofography there is a scene where I tried to register a ‘Tofu company’ at the city hall somewhere in the beginning of the nineties and the two guys in the line before me tried to register a ‘search engine.’ Both were completely unknown and therefore nearly impossible to register. Now we have Tofu in every supermarket and we have Google on every computer.” Address: Founder and president, Tofutown.com GmbH, Industrie und Gewerbe Park, D 54578 Tofutown, Wiesbaden, Germany. Phone: 06593 9967-0.


- Soya: the health protector (by Dr. Justine Butler): The health effects of soya, phytoestrogens, heart health, blood pressure, diabetes and CVD, diabetes, menopausal symptoms, bone health, breast cancer, prostate cancer, endometrial cancer, colon cancer, brain power, soya-based infant formula, thyroid function, allergies, soya production, summary, references (35 refs).

- Soya: a global threat? How soya impacts the environment. Bean cuisine! An introduction to cooking with soya (by Jane Easton): Ingredients, stocklists (which soyfood products are available at the following British supermarkets: Asda, Sainsbury, Tesco, Waitrose, Independent health food shops and Oriental food markets. A good online source of soyfoods is Goodness Direct {www.goodnessdirect.co.uk}).

- Soya recipes (p. 35-60).

The section on ingredients includes: Soya beans, edamame (fresh soya beans), tofu (silken tofu, firm tofu, flavored tofu {marinated, smoked, deep-fried, Tofu Rosso, Tofu Basil}), miso, soya sauce, soya dairy alternatives (soya milk, soy yoghurt).


- Granovita (www.granovita.co.uk). Soyato [Tofutown.com] (www.soയato.co.us). Address: 8 York Court, Wilder Street, Bristol BS2 8QH, UK.

• **Summary:** The index contains 24 entries for tofu, 9 for tempeh, two for seitan (p. 21-22, using homemade seitan), and one each for soy chorizo black beans stew (with "½ package [6 ounces, or 170 gm] soy chorizo, p. 62), and for soy or coconut creamer (nondairy creamer and milk, p. 15).

A "slow cooker" is exactly the same as a "Crock Pot"—but the latter is a brand name. For many recipes, below the recipe name is printed "Soy-free. Gluten-free." Address: Durham, North Carolina.


• **Summary:** Color leaflet sent by Mark Brawerman, founder and chairman of Turtle Mountain, LLC. 2013. Sept. 23. Copyright 2011. A photo on the cover shows a scoop of coconut milk ice cream making a splash as it lands in cut-off coconut.

Page 2. “Delivering taste and variety to 60 million strong.” Shows three lines of soy ice creams, with photos of two packages illustrating each line: (1) “Organic So Delicious Premium Dairy Free Frozen desserts: Number 1 selling ‘premium’ dairy free frozen dessert and still growing.” (2) “Purely Decadent Premium Dairy Free Frozen desserts: Number 1 selling ‘super premium’ dairy free frozen dessert and still growing.” (3) “It’s Soy Delicious Fruit Sweetened, Dairy Free Frozen desserts.”


• **Summary:** On 8 April 1996 Jon visited Bernd Drosihn and Viana in Germany (at Shurtleff’s request) and wrote a report for Shurtleff. Today, more than 15 years later Jon is head of Tofutown.com’s sales and marketing operations in the USA. He writes (in answer to a question from Shurtleff): “I had managed Soyatoo for Ceres before Ceres went out of business.

“I started working with Soyatoo [Bernd Drosihn’s soy-based whip topping in a pressurized can] while I still owned and managed Sunergia Soyfoods. It was a joint venture to share marketing expenses with Ceres; we called it ‘Progressive Formulations,’ and that was about fall of 2007. Then in early 2009, Ceres had no more funds to purchase containers of Soyatoo from Tofutown, and could not get any credit anywhere. They soon ceased operations altogether (their main operations were in selling organic wheat for pasta I believe) and sold their off their assets.

“So, Tofutown.com–Bernd’s company, decided to start a subsidiary here in North America, called Tofutown North America. Originally it was managed by Conscious Co., Jaclyn Cardozo and Steven Kern, who lived in SF and had been trying to sell the Viana for a couple years. They became operations managers for the subsidiary and I was the sales manager. The company officially was incorporated on 17 April 2009 in Delaware.

“More recently, Steven and Jaclyn resigned, in the late fall of last year, and I became the chief operating officer ‘COO.’ At that time we moved the ‘headquarters’ from San Francisco to here in Charlottesville, and the whole thing was good timing for me.

“I sold Sunergia to Twin Oaks Community Foods [Louisa, Virginia; founded in 1967] on Aug. 20, 2010; I invented the products, and brand name, after I left the community. I sold the two cheese alternatives (Soy Feta and Soy Bleu) to Scenario International (Elke Heitmeyer who also owns ‘The Organic Gourmet’ line of veggie bouillon etc.; Sherman Oaks, California), on Jan. 15, 2011, and later (Feb. 3, 2012) the brand name, vegcusine.net, was sold to Scenario as well.” Address: Virginia. Phone: 540-894-5126.


• **Summary:** Dean Foods Co., top U.S. dairy company, announced plans on Tuesday to spin off 20% of a unit that
sells Silk soy milk, Horizon Organic dairy products, Alpro products, and International Delight coffee creamer products. The price of Dean’s shares soared 27% based on a quarterly profit that was stronger than expected and cost controls.

Last year Dean suggested that it was looking at a possible spinoff as a way of paying down debt, but the move comes earlier than expected.

Using proceeds from the IPO, Dean plans to pay down its own debt as well as $800 to $925 million borrowed under a new credit facility at WhiteWave Foods.

When the IPO takes place, Gregg Engles, presently chairman and CEO of Dean Foods, will take on the roles of chairman and CEO of WhiteWave. Gregg Tanner, now president of Dean’s fresh dairy business, will be promoted to CEO of Dean Foods. Address: Reuters.


• Summary: Market shares of the U.S. soy yogurt market: WholeSoy (75%), White Wave Silk (12-17%), Wildwood, then Stonyfield O-Soy, then Nancy’s Yogurt.

Market shares in the U.S. non-dairy yogurt market: WholeSoy, Almond yogurt, and So Delicious coconut yogurt. The So Delicious plant is located in Junction City, Oregon, headed by Mark Brawerman, whose office is in Los Angeles; since they got Nestle as a distributor their sales have increased dramatically. He kind of abandoned soy when his coconut milk products (beverages, ice creams, yogurts, and creamers) went so well. Formerly named Turtle Mountain, they have long made So Delicious and Purely Decadent soymilk Ice Creams. So Delicious Coconut Yogurt (6 oz cup) retails for $1.99 compared with $1.19 for WholeSoy; a lot less money for a lot less nutrition, plus saturated fat.

Up until about 3 years ago, Silk Soy Yogurt was the main competitor to WholeSoy Soy Yogurt; they never sold more units than WholeSoy. The about 3 years ago Silk started losing enormous market share. Ted thinks it was part of the scheme whereby Silk tried to change from certified organic ingredients to so-called “natural” ingredients without changing the UPC codes; it gave them such a bad name that they lost a lot of market share, both in their soymilk and in their yogurts.

Today WholeSoy has about 75% of the soy yogurt market (in cups, not liquid in bottles).

In about 2007 when Ted moved his manufacturing plant from SSI in Turlock, northern California, to the Safeway / Lucerne plant at City of Commerce, southern California, he had to abandon his smoothies because the plant did not have the necessary filling or bottling equipment. First Ted dropped the smoothies, then he had to drop his frozen yogurt—and focused on just the soy yogurt, which is where he is now.

Over the past year or so, WholeSoy has invested a lot in social media by updating their website (www.wholesoyco.com), hiring a woman, Yessica, who does nothing but social media (blogging, Facebook, Twitter, etc.). WholeSoy has gotten a large number of hits on that site. They give people information (such as where they can buy WholeSoy), they can fill out a form so if their store doesn’t have it they can request it, they have free coupons, etc.

It is absolutely NOT true (and is never true) that the organisms used to culture yogurt get killed by the acidity of the yogurt. For example, Ted puts 20 billion CFUs (colony forming units, equal to 6-7 quarts of culture) into a 10,000 gallon tank of soymilk. In 9-10 hours those will multiply in the soymilk (they like it so much) to where they are 140 billion CFUs in an 8 oz cup. Even at the end of code, after 30 days, there are still about 70 billion per 8 oz cup.

What is the acidity (pH) of yogurt? In most countries outside the United States, the pH ranges from 3.5 to 5, where low is more acidic and where plain milk or soymilk is about 6.8. In the USA the yogurt is less acidic because it is so sweet. The way to sell yogurt (and) food is to add sugar.

Do the organisms that culture yogurt survive in the gastrointestinal tract? Yes. That is what “probiotics” means. A probiotic food benefits the host. Thus the Japanese have eaten little containers of Yakult since the 1935. In the early 1970s doctors at the Karolinska Institute in Stockholm found that Lactobacillus acidophilus and Bifidobacterium bifidus were essential to good digestion of food, especially after people went off intravenous feeding. In Sweden one can buy A Yogurt (acidophilus) and B Yogurt (bifidus). One is most important in the large intestine and the other is most important in the small intestine. Yet they stop short of saying that one of these bacteria consumed as food survive and live in the intestinal tract.

One should be a skeptic about the benefits of probiotics, says Ted. He has been a member of and on the board of the International Probiotic Association (IPA) since the day it started. The members are mostly big companies such as Danone / Dannon, Chr. Hansen (Milwaukee), Yakult, etc. They have held three world congresses (once every other year), where they invite people to speak. “The science around probiotics is very nebulous.” In Canada and Europe no health claims are allowed for probiotics. WholeSoy makes no health claims. Address: WholeSoy & Co., 49 Stevenson St., Suite 1075, San Francisco, California 94105-2975; 660 Vischer Ct., Sonoma, CA 95476. Phone: 415-495-2870.


• Summary: “Bill, I came across an old spreadsheet, with the original shipping data on Soyatoo. I don’t think I had sent you the exact dates Soyatoo sales started in North America before.

“The first Soyatoo Soy Whip (7 oz pressurized can) was shipped to the US and arrived in the port of New York on


• Summary: Tofu is mentioned on 29 pages in this book, seitan on 29 pages, soy sauce on 28 pages, soymilk on 23 pages, miso on 18 pages, tempeh on 17 pages, fermented black soybeans on 1 page (p. 114), and cooked black soybeans on 1 page (p. 141).

The section on “Soy foods” (p. 26-29) has subsections on: Regular (water-packed, Chinese-style) tofu. Silken (vacuum packed, Japanese-style) tofu, smoked tofu, tempeh, soy curls (or TVP chunks), soy sauce, miso paste, soy creamer. Also: Seitan and vital wheat gluten, Marmite.

What are soy curls? Defatted soy flour extruded in the shape of curls. “I know not everyone has access to soy curls, but they are available online so try to get them if you can. They cook so wonderfully tender and absorb flavor so well. They do not need to be reconstituted prior to use because of the long cooking time. My first preference for a substitute is TVP chunks, then extra-firm tofu or seitan cut into ½-inch cubes.”

Special soy recipes: Black bean beans (“I have a container of black bean sauce, a pungent paste made from fermented black soybeans, in my fridge that I often use for sautéing tofu or green beans,” p. 114). Soy curl and soybean chili (with “1 cup soy curls” and “Two 15-ounce cans cooked black soybeans, drained and rinsed,” p. 141). Address: British Columbia, Canada (born in New Zealand).

515. Turtle Mountain, LLC. 2012. Frozen desserts 2012: You’re SO gonna love this. P.O. Box 21938, Eugene, OR 97402. 3 panels each side. Each panel 8½ x 11 inches. Front and back.


Page 2: A photo shows many almond milk frozen desserts and novelties.


Page 5: “Over 60 million Americans & counting seek dairy free alternatives. Only one dairy free brand meets all their needs, morning, noon and night. Turtle Mountain also offers a wide variety of refrigerated products [such as coconut milk, cultured coconut milk, and coconut milk creamers]. “So passionate. So pure. So kind. So delicious.” Sea Turtle Restoration Program. Farm Sanctuary.


• Summary: “Broomfield, Colo.–(Business Wire)–May 23, 2013–The WhiteWave Foods Company (“WhiteWave”) (NYSE: WWAV) today announced that Dean Foods Company has completed the distribution to Dean Foods stockholders of a portion of its remaining equity interest in WhiteWave. After the close of business today, Dean Foods distributed an aggregate of 47,686,000 shares of WhiteWave Class A common stock and 67,914,000 shares of WhiteWave Class B common stock as a pro rata dividend on shares of Dean Foods common stock outstanding at the close of business on the record date of May 17, 2013.

Based on the shares of Dean Foods common stock outstanding as of May 17, 2013, the record date for the distribution, each share of Dean Foods common stock received 0.25544448 shares of WhiteWave Class A common stock and 0.36380189 shares of WhiteWave Class B common stock in the distribution.

“Fractional shares of WhiteWave Class A common stock and WhiteWave Class B common stock were not distributed to Dean Foods stockholders. Instead, the fractional shares of WhiteWave Class A common stock and WhiteWave Class B common stock will be aggregated and sold in the open market, with the net proceeds distributed pro rata in the form of cash payments to Dean Foods stockholders who would otherwise receive WhiteWave fractional shares. The spin-off was structured to qualify as a tax-free distribution to Dean Foods stockholders for U.S. federal tax purposes. Cash received in lieu of fractional shares will, however, be taxable. Dean Foods stockholders should consult their tax advisors with respect to U.S. federal, state, local and foreign tax consequences of the distribution.

“Effective upon the distribution, the previously announced reduction in the voting rights of WhiteWave
HISTORY OF NON-DAIRY WHIP TOPPING, COFFEE CREAMER

You’re SO gonna love this.™

Over 60 Million Americans & Counting Seek Dairy Free Alternatives.

ONLY ONE DAIRY FREE BRAND MEETS ALL THEIR NEEDS, MORNING, NOON & NIGHT.

SO Passionate.
So Delicious® Dairy Free is dedicated to bringing joy to your shoppers’ dairy free days. Our innovative portfolio solution spans many categories, taste profiles, and nutrition preferences.

SO Pure.
From our stringent allergen testing methods, to the innovative work we do to be free of the unwanted, your shoppers are getting nothing but the best of what they are looking for.

SO Kind.
Things like organic and natural ingredients, Certified Vegan, non-GMO and minimizing and offsetting our environmental impact are as important to us as they are to your shoppers.

SO Delicious.
Like the name says, we’re all about surprising and delighting your shoppers with how delicious dairy free living can be. Generally, once they get their first taste, they are with us for the long haul.

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Class B common stock became effective. Each share of WhiteWave Class B common stock now is entitled to ten votes with respect to the election and removal of WhiteWave directors and one vote with respect to all other matters submitted to a vote of WhiteWave’s stockholders.

"As an independent company, The WhiteWave Foods Company is well positioned to grow and create shareholder value as a result of strong brand equity in on-trend categories," said Gregg Engles, WhiteWave Chairman and CEO. "The spin-off will provide WhiteWave with greater flexibility to build its portfolio of great-tasting, nutritious and responsibly-produced products. We look forward to our future as an independent company with a clear strategy, a leading portfolio of trusted brands and a culture of continuous innovation."

“WhiteWave Class A common stock currently trades on the NYSE under the symbol ‘WWAV’ and, beginning on May 24, 2013, WhiteWave Class B common stock will trade on the NYSE under the symbol ‘WWBV’.

“Following the distribution, Dean Foods continues to own an approximate 19.9% economic interest in WhiteWave, which Dean Foods has stated that it expects to dispose of within 18 months after the distribution in one or more debt-for-equity exchanges or other tax-free dispositions.

“Stock Repurchase Program Authorized: WhiteWave also announced today that its Board of Directors has authorized a share repurchase program, under which the company may repurchase up to $150 million of its common stock. The primary purpose of the program will be to offset dilution from WhiteWave’s equity compensation plans, but the company also may make discretionary, opportunistic purchases. Shares may be repurchased under the program from time to time in one or more open market or other transactions, at the discretion of the company, subject to market conditions and other factors. The authorization to repurchase shares will end when the company has repurchased the maximum amount of shares authorized, or the company’s Board of Directors has determined to discontinue such repurchases."

“About The WhiteWave Foods Company: The WhiteWave Foods Company is a leading consumer packaged food and beverage company that manufactures, markets, distributes, and sells branded plant-based foods and beverages, coffee creamers and beverages, and premium dairy products throughout North America and Europe. WhiteWave is focused on providing consumers with innovative, great-tasting food and beverage choices that meet their increasing desires for nutritious, flavorful, convenient, and responsibly produced products. WhiteWave’s widely-recognized, leading brands distributed in North America include Silk (R) plant-based foods and beverages, International Delight (R) and Land O Lakes (R) coffee creamers and beverages, and Horizon Organic (R) premium dairy products. Its popular European brands of plant-based foods and beverages include Alpro (R) and Provamel (R).

“To learn more about WhiteWave, visit http://www.whitewave.com.”

Talk with Dave Oldani, Investor Relations, WhiteWave Foods Co. 2013. May 28. In Oct. 2012 Dean Foods IPOd basically 13% of the company; that 13% was sold publicly at the end of October. Dean Foods then retained about 87%. They then spun off the other 67% at the end of the day on Thursday, May 23, after the market closed. This means they distributed those shares of WhiteWave Foods, both class A and class B common stock, to Dean Foods shareholders of record on that date. It was done on a tax-free basis. So on May 24 you would have owned both Dean Foods and WhiteWave shares. So if you look at your broker’s account now you should see WhiteWave shares of both Class A and Class B—and it should show up on your next statement.

WhiteWave no longer makes tofu. They do make Silk soy, almond, and coconut beverages. WhiteWave today is composed of two segments and three different platforms. The segments are North America, Europe, International. In Europe you have Alpro plant-based beverages—which is basically Silk. In North America the three platforms are Silk, Horizon Organic (Premium Dairy, organic, established in 1991), and Coffee Creamers and Beverages (International Delight and Land O’Lakes (Mini Moo’s creamer singles and Land O’Lakes Half & Half)).

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To learn more about WhiteWave, visit http://www.whitewave.com.”


• Summary: Continued: 1936 June–Sobee, the world’s earliest known branded soy-based infant formula, is launched by the American Soya Products Corp. of Evansville, Indiana.

1939 autumn–Dr. Harry W. Miller, forced by the war in China to return to the USA, starts making soymilk at Mt. Vernon, Ohio, in a large brick plant which he and coworkers built from the ground up. The first two products are canned liquid soymilk (made in a pressure cooker and fortified with vitamins and minerals) and malted soymilk (Soy-A-Malt). Pressure from the powerful U.S. dairy industry and the USDA convinced Miller not to call his product ‘soymilk,’ so he latinized the name to Soya Lac. This term was first used in late 1939 for Miller’s first American soymilk.

1940 March–K.S. Lo, founder and managing director of the Hong Kong Soya Bean Products Co. Ltd. starts to make soymilk in Hong Kong. His product, originally named Vita Milk (Wai-ta-nai in Chinese) was fortified with calcium, cod-liver oil, and vitamins, and sold in milk bottles, primarily as a nutritious, affordable beverage for refugees. In June 1940 the product was renamed Sunspot, and in 1953 it was
renamed Vitasoy.

1943–Bob Rich first learned about soymilk from employees of Henry Ford, who were making soymilk at the Carver Laboratory in Dearborn, Michigan, for use in the Ford Hospital. In April 1945 Rich Products Corp. launched Whip Topping—a non-dairy product. The first lawsuit against Whip Topping (1949) charges that this is an imitation dairy product—and thus illegal. Bob Rich and Rich Products (Buffalo, New York) mount an aggressive defense, contending that their product is not an imitation (which implies inferiority to the real product) but a replacement. By 1974 Rich Products (which now also made non-dairy Coffee Rich—a coffee whitener or creamer) had won 40 cases. That year the Kansas Supreme Court declared Coffee Rich “a new and distinct food” and the dairy lobby gave up. Were it not for Bob Rich and his lead attorney, Ellis Arnall (former attorney general and governor of Georgia, 1943-47), non-dairy products might still be illegal in the USA!

1950s–Soymilk enters the modern era as it begins to be marketed in bottles like soft drinks, largely due to work for Bob Rich and his lead attorney, Ellis Arnall (former attorney general and governor of Georgia, 1943-47), non-dairy products might still be illegal in the USA!

1956 Dec.–The Plantmilk Society has its first annual general meeting in London. Mr. C.A. Ling is in the chair. This report in The Vegan is the earliest English-language document seen that uses the word “plantmilk” to refer to soymilk and other non-dairy milks—a nice short word.

1957–Japan’s first commercial soymilk, sold in bottles, named Tônyu, is introduced by the Ueda Tofu Shop in Hachioji, Tokyo. Dr. Harry Miller was the inspiration for and helped to establish the shop.


1965–ProSobee, the world’s earliest known non-dairy infant formula based on soy protein isolates, is launched by Mead Johnson & Co. of Evansville, Indiana.

1966–The enzyme lipoxygenase is discovered by scientists at Cornell University [Ithaca, New York] to be responsible for the “beany” flavor in soymilk. They develop a process which can be used to help eliminate this “beany” flavor.

1967–Soymilk begins to be packaged aseptically in Tetra Pak cartons. This allows it to be sold without refrigeration for six months or more. The first such product was Beanvit, made by Yeo Hiap Seng Ltd. in Singapore and packaged in a disposable tetrahedron-shaped container.

1970s and 1980s–Soymilk becomes a popular beverage throughout Asia, spreading to Europe, Australia and the United States.

1979–Hong Kong Soya Bean Products Co. Ltd. starts to export Vitasoy, packed in Tetra Brik cartons, to selected countries throughout the world. By the early 1980s exports were going to over 20 countries, both developed and developing. Exports to the USA began in 1980.

1980 Jan.–DE-VAU-GE Gesundkostwerk, a Seventh-day Adventist food company near Hamburg, Germany, launches GranoVita Soja Drink in 500 ml Tetra Brik cartons; this soymilk product is made by N.V. Vandemoortele (one of Europe’s largest oilseed crushers, founded in 1934) in Izegem, Belgium.

1980 June–N.V. Alpro is founded by Vandemoortele to take over production of this soymilk. Inspired and headed by Philippe Vandemoortele, Alpro purchased the land on which it was located from Vandemoortele, and became an independent manufacturer. Alpro quickly became Europe’s leading producer of soymilk, making private-label brands for scores of companies.

1983 July–Edensoy brand soymilk is launched by Eden Foods of Clinton, Michigan. Imported from Japan (where it is made by Marusan-Ai Co.), it is sold in plain and carob flavors in stand-up foil retort pouches.

1984 Feb.–The first comprehensive study of the soymilk market in the U.S. is published by Soyfoods Center of Lafayette, California. It estimates that total soymilk consumption in the U.S. in 1983 (not including soy-based infant formulas) was 2.68 million gallons (26% of this was imported), and total production of soy-based infant formulas was 32 million gallons.

1984 March–Vitasoy (USA) introduces the first soymilk whose flavor is described as “Original”—meaning dairylike or resembling (as much as possible) dairy milk.

1984 Aug.–Westsoy Natural brand soymilk is launched by Westbrae Natural Foods of Emeryville, California. Imported from Japan (where it is made by San-Iku Foods), it is sold in one flavor in stand-up foil retort pouches.

1984 Oct.–Westbrae Natural Malted’s, a thick soymilk resembling a milk shake, are launched in many flavors by Westbrae Natural Foods, imported from Japan.

1986 Nov.–Edensoy starts to be made in America by American Soy Products (ASP) at a large, modern plant in Saline, Michigan, and sold in Tetra Brik aseptic cartons. ASP is a joint venture of 4 Japanese companies and Eden Foods.

1986–Raj Gupta (of ProSoya Foods International, Ottawa, Ontario, Canada) applies for two patents on the oxygen-free, cold-grind process and equipment that he has invented. The first U.S. patent is issued on 17 May 1988. This process soon becomes widely used to make good-tasting soymilk. ProSoya becomes a major manufacturer of systems used to make soymilk worldwide.

1988 Nov.–Pacific Foods of Oregon launches its first soymilk product, Naturally Northwest Soy Beverage [Plain], in a 1-quart Tetra Brik Aseptic carton. The company’s new factory is in Tualatin, Oregon.

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1990 April—WestSoy Lite, America’s first “lite” soymilk, with a low fat content, is introduced in plain, vanilla, and cocoa flavors by Westbrae Natural Foods. Made by adding water to regular soymilk, the product is less expensive to make, but also contains less nutrients.

1990 June—Alpro opens a new soymilk plant at Wevelgem, Belgium. Costing about US$15 million and having a capacity of 45 million liters a year, it is reputed to be the largest in the world. Alpro now makes about 70% of the soymilk in Europe.

1990 June—Rice Dream, a non-dairy beverage, is launched in a Tetra Pak aseptic carton by Imagine Foods of Palo Alto, California. It is made by California Natural Products of Manteca, California, using an innovative patented process, in which the ground rice is digested by enzymes. Many prefer its flavor to that of soymilk.

Continued. Address: Soyinfo Center, P.O. Box 234, Lafayette, California 94549. Phone: 925-283-2991.


• Summary: In 2007 Turtle Mountain, Inc. launched its first product that was not a soy ice cream—a soy yogurt. It was named So Delicious Cultured Soy.

In the 2nd quarter of 2008 they launched a dairy free coconut yogurt named So Delicious Dairy Free Cultured Coconut Milk. Within 18 months it became America’s #1 dairy free yogurt—as it is still today.

2008 April—Turtle Mountain’s first non-soy frozen dessert, made with coconut milk instead of soymilk, is first shipped to stores—Whole Foods and UNFI. Turtle Mountain introduced 5 flavors of non-dairy coconut ice cream in April. A manufacturer is able to go onto the Whole Foods portal and see how much of his own product is being sold in every Whole Foods store five or six weeks after they first started shipping coconut to Whole Foods, the sales data showed that Turtle Mountain was selling more units of each of these 5 flavors than any other product they were selling to Whole Foods—and at a price 20% higher. It was a revelation! After all these years of building up Soy Delicious. If Mark had not forced the R&D people to develop these coconut frozen desserts, he believes the company would have gone out of business.

By 2009 sales of Turtle Mountain’s soy frozen desserts were decreasing. Turtle Mountain has not introduced any new soy flavors or products since 2008. Yet the company’s website shows that they still offer a lot of soy products. Personally, for his own consumption, Mark prefers the soy to the coconut; he likes the taste better. However Mark prefers coconut oil to soy oil (which is polyunsaturated). But Mark’s attitude has always been: Give consumers what they want so long as it is 100% dairy free and natural.

Turtle Mountain has an elaborate system of allergen control to ensure that a person who is allergic to dairy products can enjoy these products with peace of mind.

All of Turtle Mountain’s frozen desserts belong to the Code of Federal Regulations category “non-dairy frozen desserts” but their brand is “Dairy Free.”

Starting in the last quarter of 2013 all Turtle Mountain brands will changed to be So Delicious; for example “Purely Decadent” will be dropped. The process is expected to take 6-9 months. Why change? There are two sets of reasons. (1) In April 2005 Mark signed a national distribution agreement with what was then Dreyer’s Ice Cream. At that point Turtle Mountain needed to build a plant; their existing co-packers couldn’t make enough product. To raise the money for this plant, Mark had to bring in an investor. He chose Wasserstein & Co. (of New York City). Like all investors, this investor wanted to have the greatest possible return on their investment. They will eventually want to sell Turtle Mountain to some strategic food buyer, some big corporate entity. That is the pact with the Devil that you end up having to make when you don’t have enough money. Mark needed $10 million which he didn’t have. The strategic buyer wants a company with one big, well-known brand—such as So Delicious. Hence the need to change all Turtle Mountain brands to this one. Here is how the realization came about:

Turtle Mountain bought a big motor home and put a trailer behind it that would hold 10,000 little cups in a frozen environment. They were looking for someone to drive that vehicle around the United States and do demos. Tom Lawlor, who had done all of Turtle Mountain’s label design since 1998 (and who was married with a baby daughter) asked if he could have the job. He is very expressive, outgoing, fun-loving, amiable person—and she is too. Besides being a graphic artist and a photographer, he’s a superb marketing person. Tom and his family left California in Feb. 2005 and returned that November. As he recalls “It was an amazing experience.” He found great consumer interest and insight. About 80% of the people to whom he offered a sample tasted it and were very pleasantly surprised. But roughly 20% of the people to whom he offered a sample would not even try it. They pushed it back saying, “I’m sure its good for you, but I know I wouldn’t like it because its made with soy.” Their attitude had nothing to do with health issues with soy; it was only about taste. Because of that, Tom told Mark, “We should change the brand, because if we don’t have the word “soy” screaming on the front of the package, maybe people would be more willing to try it.” Mark agreed.

So shortly before Mark signed the contract with Dreyer’s in April 2005, he went to Tom Delaplane (who was with Dreyer’s for at least 20 years and who built it into the Dreyer’s we know) and explained that he had both good news and bad news. The bad news was that Mark wanted to change the brand of the product Tom thought so much of (Soy Delicious) to “So Delicious.” Mark explained, the soy and taste issue, then added a second point. “And
what happens in the future if we want to sell a product that contains no soy? What are we going to do?” Tom thought for a moment, smiled and said “OK.” So that’s how the name change was decided. On 15 April 2005 Turtle Mountain signed the national distribution contract with Dreyer’s. By late 2005 Turtle Mountain had started to make the actual change to So Delicious from Soy Delicious on its labels and sales sheets.

Back to the year 2005. Mark needed $10 million because he realized he would have to build a plant to manufacture non-dairy frozen desserts. During the previous 2-3 years Mark had been contacted by many people who wanted to buy the company or buy into the company or invest in the company. So in 2005 he chose Wasserstein & Co. (in New York) as the investor and financial partner who would provide the $10 million. They have since invested even more. Mark was able to retain operational control until 2013. Mark got a used warehouse in Springfield, Oregon, hired a plant manager, and built an entire plant to manufacture frozen desserts—but to the more stringent dairy specifications. The key part is the mix room.

In May/June 2008 Turtle Mountain opened its plant in Springfield; it was the world’s first dairy free ice cream plant. There they manufactured mix, froze pints and quarts and tubs, and had an extruded stick bar machine. Turtle Mountain started to make its own extruded novelties. Before that they were doing it with co-packer Oregon Ice Cream in Eugene—which owned cows and made dairy ice cream. They created Turtle Mountain LLC (prior to 2005 the company was named Turtle Mountain, Inc.). Turtle Mountain, Inc. still exists; Mark owns 100% of it. That entity holds Mark’s common and preferred and profit unit interests of the LLC. At about the same time Turtle Mountain moved its offices from Eugene to an industrial park in Springfield, where they also have large warehouse space.

2011–They brought out the no sugar added pints and novelties. This is very significant, in part because they are natural ingredients. They use monk fruit (Siraitia grosvenorii; luo han guo; the extract is nearly 300 times sweeter than sugar) and stevia. This product is also high in fiber, because Turtle Mountain uses all of the coconut, including the dietary fiber. Turtle Mountain’s coconut products are the only ones in the USA that are a significant source of fiber. This is a remarkable innovation.

2012 first quarter–Turtle Mountain introduced its almond ice creams—no soy and no coconut. Hain-Celestial has a similar non-dairy product (Almond Dream) which is selling better because Turtle Mountain’s product is too expensive.

Also in 2012 Turtle Mountain discontinued all its brands with relatively small sales—such as Sweet Nothings, It’s Soy Delicious, etc.

2013 April–Mark stepped down as CEO in April; he is still chairman of the board. The new CEO is Chuck Marcy, who now runs the company.

For the first 7-8 years of Mark’s company’s existence, Turtle Mountain’s net sales were about $2 million a year. In 2013 the company’s net sales will exceed $100 million. Since 2006 net sales have increased by more than 30% a year—and much of this is during the “Great Recession.” The company now employs 175 people. Of this $100 million, about 38% are non-dairy frozen desserts, followed by beverages, cultured products (mostly like yogurt), and non-dairy creamers (the smallest segment). They make the beverages and the creamers as both aseptic / shelf-stable and refrigerated products. Address: Springfield, Oregon.


• Summary: Continued. 1983 Aug.–Robert Tepper of Farm Foods serves Ice Bean soymilk ice cream at the annual American Soybean Association (ASA) convention in Nashville, Tennessee. A special presentation is made to 40 regional overseas ASA directors and officials.


1983–The United States leads the world in annual per capita consumption of (dairy) ice cream with 44.13 pints per person. Australia is second with 37.21 pints (down by 15.7%), followed by New Zealand (35.87), Canada (31.88), and Sweden (28.57) (International Association of Ice Cream Manufacturers. 1984. The Latest Scoop. Aug.).

1984–Tofutti mania spreads across America. Tofutti hits the big time, with huge amounts of free media publicity. Rising to national stardom, it became (to everyone’s astonishment) America’s number one dessert craze. Sales of Tofutti skyrocketed to $9 million in fiscal 1984 (which ended July 31).

1984 June–Robert Nissenbaum of Imagine Foods Inc., of Monticello Farm, Jamestown, Missouri, introduces Rice Dream, a non-dairy frozen dessert based on amazake (cultured rice) made in the traditional way. A truly amazing product, it contains no refined sweeteners and no added oil or fat; most of its sweetness comes from the natural sweetness of amazake, but small amounts of Grade A maple syrup are also added. Imagine Foods soon begins advertising and promoting the product widely. By Oct. 1984 it was sold in 7 hard pack and 4 soft serve flavors.

1984–In the United Kingdom, the first soy ice cream is Soja Frozen Non-Dairy Dessert. It was developed and marketed by John Holt of the Regular Tofu Co. Ltd. and made in Leicester, England, by Rossa Ltd., a dairy ice cream
company. In May 1984 this same company introduced SoyBoy Soymilk Ices, then in June 1985 Sojal Light. Michael Cole was one of the salesmen for this company. Cole then left and went to work for Soya Foods Ltd.

1985 Feb.–Barricini Foods Inc. (Oyster Bay, New York) launches Tofulite (a soy ice cream); it is made in Tennessee by Farm Foods.

1985 May 31–Farm Foods (Summertown, Tennessee), maker of Ice Bean, is acquired by Barricini Foods Inc.

1985–In fiscal 1985 sales of Tofutti soar to a record $17.1 million. Tofu Time is one of the hottest stocks on Wall Street.

By the summer of 1985 at least 26 brands of soy ice cream (many of them with “Tofu” in the product name) are on the market in the USA.

The boom years for soy ice cream in America were 1984-1988. When the craze died down, four national brands were left: Tofutti, Ice Bean, Tofulite, and Mocha Mix.

1985 July–Michael Cole, in England, introduces Sunrise Ice Dream, which quickly became a huge success nationwide. Initially the product was made in Clywd, Wales, by Classic Ices—which was then owned by the Hillsdown Holdings Group. Later in 1985 the founder of Classic Ices, Ray Pierce, and the technical manager, Irene Barclay, leave Classic Ices and start a company named Genice Foods Ltd. (pronounced JEN-ais, also in Clywd, Wales) to specialize in making non-dairy products.

1986 Feb.–Barricini Foods has its first public stock offering which raises $1.5 million gross, to use for marketing Tofulite and Ice Bean soy ice creams.

1986 April–Genice’s first product is Genice Ice Delight. In 1986 the manufacture of Sunrise Ice Dream was transferred to Genice from Classic Ices. Today Genice is the largest maker of soy ice creams in the UK and Europe. In April 1989 Genice became a member of the Haldane Foods Group.

1992–Living Lightly (Light Non-Dairy Frozen Dessert) is introduced by Mark Brawerman and distributed by Turtle Mountain, Inc. of Junction City, Oregon. Sold in pints, it is available in 10 flavors. Sweetened with fruit juices, they contain no added fat. In 1994 the brand was changed to Living Rightly.

1996–The best-selling non-dairy ice creams in natural- and health food stores are now Rice Dream, Tofutti, and Living Rightly.

2001 July–Purely Decadent Soy Delicious—the world’s first super-premium non-dairy frozen dessert (high in calories and oil)—is introduced by Turtle Mountain, Inc. in seven flavors.

2004 March–Soy Delicious is now the best-selling brand of ice cream (both dairy and non-dairy) in the natural foods channel in the USA.

2005 April 15–Mark Brawerman, founder of Turtle Mountain, Inc. signs a national distribution agreement with Dryer’s Ice Cream. The same year he changes the company’s brand on all its products to So Delicious Dairy Free from Soy Delicious. And he brings in an investor to obtain the capital he needs to expand his manufacturing capacity.

2006 late–Turtle Mountain opens the world’s first dairy-free ice cream plant in Springfield, Oregon; it makes only ice cream sandwiches–no mix.

2008 April–Turtle Mountain, Inc. starts to ship coconut milk non-dairy frozen dessert to Whole Foods and distributors nationwide.

2008 May/June–Turtle Mountain, Inc. opens the world’s first dairy-free ice cream plant that makes the basic mix, in Springfield, Oregon.

2012 May–Update on Tofutti Brands Inc., which is struggling. Net sales for 2011 were $15,926 million, down 11.1% from the previous year. Net income was $43,000, down 90.7% from $462,000 the previous year. Despite this 90% drop in profits, the salary paid to CEO Mintz is unchanged at $450,000.

2013–Turtle Mountain’s net sales of non-dairy products this year will exceed $100 million, about 38% of which is non-dairy frozen desserts, followed by beverages, cultured products (mostly like yogurt), and non-dairy creamers (the smallest segment). Since 2006, net sales have increased, on average, by more than 30% a year—much of this during the “Great Recession.” The company now employs 175 people. Address: Soyinfo Center, P.O. Box 234, Lafayette, California 94549. Phone: 925-283-2991.

520. Shurtleff, William; Aoyagi, Akiko. comps. 2013. History of cheese, cream cheese and sour cream alternatives (with or without soy) (1896-2013): Extensively annotated bibliography and sourcebook. Includes tofu cheesecakes and cheesecake alternatives (Continued–Document part II). Lafayette, California: Soyinfo Center. 567 p. Subject/geographical index. Printed 22 Oct. 2013. 28 cm. [8761 ref] • Summary: Continued: In America, this new category has a number of basic characteristics: (1) Casein (a milk protein) or caseinates is used in more than 95% of all products to make them melt and stretch like dairy cheeses. Less than 5% of all products are truly non-dairy; (2) In the late 1980s, most manufacturers, marketers, and retailers deliberately concealed from consumers the fact that casein is derived from cow’s milk (complicated by the fact that FDA regulations allow food products that contain casein to be called “non-dairy”); (3) Many consumers believe that most cheese alternatives are truly non-dairy products. Fortunately, labels and promotional materials have become more honest with each passing year—yet many consumers still remain confused and some deceptive practices still exist; (4) All products are free of cholesterol and lactose, and relatively low in saturated fats. Some are also low in total fats, calories, and sodium; (5) About 95% of the products are soy cheeses and 5% are nut or seed cheeses without soy. Most products
contain tofu (either dried or fresh) as a major ingredient;
(6) Most products are sold at natural- or health food stores, and retail for about 50% more than typical dairy cheese sold at supermarkets; (7) About 95% of the products are hard cheeses and 5% are soft cheeses, mainly cream cheeses.

1986 Jan.–The first major soy cheese to hit the market is Soya Kaas—a landmark product. It was developed and introduced by Richard McIntyre of Soya Kaas Inc., a subsidiary of Swan Gardens Inc. Marketed exclusively by American Natural Snacks of Florida, it is still America’s most popular cheese alternative.

1986 June–Mozzarella Style Tofu-Rella is launched by Richard and Sharon Rose of Brightsong Foods of northern California. In about 1990 the company was renamed Sharon’s Finest and the product was renamed TofuRella.

1986 Oct.–Original Pizsoy (a whole-wheat pizza topped with soy cheese) is introduced by Tree Tavern Products; it is the first product in which soy cheese is used as an ingredient.

1987 Jan.–Soymage is introduced by Soyco Foods, a Division of Galaxy Cheese Co.; This is Soyco’s first soy cheese product and the first modern soy cheese that contains no casein.

1987 April–NuTofu is introduced by Cemac Foods Corp. This is Cemac’s first soy cheese product.

1988 April–Soyco shreds and slices are introduced—the first soy cheese shreds and slices.

1988 Nov.–Soyco Foods introduces the first grated soy cheese; it is sold in shakers and contains casein.

1988–New labels for Sharon’s Finest Tofu-Rella become first (as far as we can tell) to state clearly on the label that the casein in the product is derived from milk.

1990 Nov.–8–Nutrition, Labeling and Education Act (NLEA) of 1990 is signed into law by President George H.W. Bush. The law gives the Food and Drug Administration (FDA) authority to require nutrition labeling of most foods regulated by the Agency. This act unfortunately does not make it illegal to characterize on the label as “nondairy” a product which contains casein or caseinate. But it does deal with this problem as follows (21 CFR Ch. 1(4-1-93 Edition), p. 21). 101.4 (d) “When foods characterized on the label as ‘nondairy’ contain a caseinate ingredient, the caseinate ingredient shall be followed by a parenthetical statement identifying its source. For example, if the manufacturer uses the term ‘nondairy’ on a creamer that contains sodium caseinate, it shall include a parenthetical term such as ‘milk derivative’ after the listing of sodium caseinate in the ingredient list.”

1991 Jan.–Fat-Free Soyco is introduced—the first fat-free soy cheese.

1992 March 27–Tree of Life purchases Soya Kaas, Inc. (founded by Richard McIntyre). American Natural Snacks (ANS, a wholly owned subsidiary of Tree of Life) was McIntyre’s only customer; they had an exclusive arrangement.

1992 Sept.–Soyco Foods introduces Soymage Grated Parmesan Cheese Alternative; it is 100% dairy free and casein free.

1992 Dec.–Almond Cheeze is introduced by Wholesome & Hearty Foods—the first major non-soy cheese alternative in modern times.

1994 April–VeganRella (made from Brazil nuts) is introduced by Sharon’s Finest—a true non-dairy non-soy cheese said to have excellent flavor and texture.

1994 April–The size of the natural foods cheese alternatives market in the USA is about $15 million/year at wholesale and $25 million/year at retail; this is the equivalent of about 5 million lb/year. The category has grown at a remarkable rate—about 20% a year for the past 3-5 years.

According to Packaged Facts (1995): Sales of cheese alternatives (in million dollars at retail) rose from $12.0 in 1989 to $17.3 in 1991 to $25.0 in 1993 and $28.8 in 1994. The average annual sales growth for this period was 19.1%.

1994 Sept.–Sharon’s Finest introduces HempRella (with casein), the first cheese made with hemp. There is no trace of THC (the bioactive/psychedelic substance in marijuana) in the product; the company had it tested by the U.S. government.

1999 March–Richard Rose establishes HempNut, Inc., a new company to handle all of his work with legal hemp in a variety of fields, mostly food.

2005 Feb.–Wholesoy & Co. of San Francisco, California, launches Cream Cheese Style Soy Spread.

The many names of soy cheese, soy cream cheese, tofu cheesecake, and soy sour cream (helpful for digital searching)

Artificial cheese
Cheese alternative
Cheese analog
Cheese substitute
Engineered cheese
Imitation cheese
Imitation sour cream
Sour cream substitute
Soya cheese
Soya Kaas
SoyaRella or Soya Rella
Soybean cheese
Soycheese
Soy cheese
Soy sour cream
Tofu cheese
TofuRella or Tofu Rella
Tofu sour cream
Soya cream cheese
Soybean cream cheese
Soy cream cheese
Tofu cream cheese
Soya Cheesecake
Tofu Cheesecake
Tofu Cream Pie. Address: Soyinfo Center, P.O. Box 234, Lafayette, California 94549. Phone: 925-283-2991.

• Summary: On the front cover is the So Delicious Dairy Free logo. Contents: Dear friends, from John V. Tucker, President (“Sustainability is very much a part of our culture. From using 100% recycled paperboard cartons for our frozen dessert bars and sandwiches to reducing our water consumption and restoring 10 million gallons of water annually to Oregon’s critically dewatered Middle Deschutes River, we’re using less energy, saving forests, and proactively working to minimize our CO2 footprint. We’re committed to being kinder and gentler to our planet, and we’re passionate about creating dairy-free options that are pure and delicious”) (p. 2). Our values: Four pillars. Food: Organic ingredients, supplier stories (the company now uses organic cane sugar), the coconut. Planet: Life cycle assessment, carbon footprint (“All of our products are plant based, but that doesn’t mean we don’t like cows. It’s just that milking them, feeding them, and caring for them has some consequences that negatively impact our environment. What kind of consequences? Well, there’s the energy wasted in the production of cattle feed, the tons of fresh water required to maintain livestock, and the nasty business of methane waste produced by cows in the form of belching and things like ‘manure management’”), annualized energy savings, water consumption (“Conserve what you can and work to restore what you can’t. That sums up our approach to water conservation... we’ve been purchasing Water Restoration Certificates (WRCs) from the Bonneville Environmental Foundation since 2010”), People: Green Office Program, Alternative Commuting Program (offers incentives for employees to ride bikes), Green home upgrades, volunteer day off, community engagement. Our products (p. 19-20, incl. almond milk frozen desserts, coconut milk frozen desserts, almond milk frozen desserts, soy milk frozen desserts). Memberships (p. 21-22). Partnerships (p. 23-24).

In 2012 the company sold So Delicious Dairy Free Cashew Milk (in shelf-stable quarts; Unsweetened and Unsweetened Vanilla), and in 2013 Coconut Milk Creamer (in shelf-stable quarts; Barista style Original and French Vanilla). Address: Eugene, Oregon.

• Summary: As shown on pages 10-13, Turtle Mountains has in its catalog the following “soymilk frozen desserts,” with a photo of the carton, Nutrition Facts, and ingredients for each (p. 10-12): Organic So Delicious Dairy Free: Chocolate Peanut Butter, Chocolate Velvet, Creamy Vanilla, Mint Marble Fudge, Mocha Fudge, Neapolitan (Quarts). Purely Decadent Dairy Free: Chocolate Obsession, Cookie Avalanche, Cookie Dough, Mocha Chocolate Chip, Mocha Almond Fudge, Peanut Butter Zig Zag, Pomegranate Chip, Purely Vanilla, Turtle Trails (Pints).

So Delicious Dairy Free Stick Bars: Creamy Fudge, chocolate enrobed (3 fl. oz. each).
So Delicious Dairy Free Minis (Sandwiches): Vanilla,
Neapolitan (2.3 fl. oz. each).
    It also has coconut milk frozen desserts (p. 4-7) and almond milk frozen desserts (p. 8-9).

AlmondPlus Beverages (p. 16-17). Coconut milk seasonal beverages (p. 18).
Creamers: Coconut milk creamers (p. 19).

A company motto on the front cover and on many pages is “You’re SO gonna love this” (TM). Address: Eugene, Oregon.


• Summary: (a) Soyatoo! (b) Rich’s Whipped Topping (non-dairy). (c) Google Ngram Viewer—“whipped topping” vs. “whipping”.
    (d) Rich’s Whip Topping (can). (e) Rich’s Whip Topping (small carton). (f) Rich’s Whip Topping (tall / quart carton). (g) Whip topping as frosting and one layer in a strawberry cake. (h) Can of Soyatoo!

524. SoyaScan Notes. 2013. The visionary work of Henry Ford and his researchers with soyfoods—then and now:
    Popularized the use of soybeans as foods in America (Overview). Compiled by William Shurtleff of Soyinfo Center.

• Summary: Before Henry Ford began his pioneering work with soybeans in the early 1930s, most American consumers
    and farmers thought their only use was as feed for animals. Ford and his researchers and chefs played a major role in
    developing a remarkable variety of tasty and nutritious American-style foods from soybeans, and in publicizing
    these foods and their health benefits nationwide.

    Prior to 1934 (according to records in the SoyaScan database) only about 188 commercial soyfood products
    had been introduced in America. Of these, 78 had been
    launched in the Hawaiian Islands, so only 110 had been
    introduced on the American mainland. Of these 110, at least
    46 were made by Asian-American companies primarily for
    Asian-Americans (such as Chinese-Americans, Japanese-
    Americans, etc.). Thus only 70 products were made by
    Caucasian-American companies, and, of these, 27 products
    were made by Seventh-day Adventist companies and sold
    mostly to other Seventh-day Adventists. In short, between
    1766-1767 (When Samuel Bowen launched America’s
    first two commercial soy products—Soy-based Vermicelli
    Noodles and Bowen’s Patent Soy [Sauce]) and 1934, only 43
    commercial soy products had been introduced by Caucasian-
    American companies, not including Seventh-day Adventists.

    Henry Ford’s ideas about introducing American-style soyfoods took their first clear form on August 13, 1934,
    when he presented an all-soy gala dinner banquet for the
    American media at the immensely popular Ford Exhibit in
    the Century of Progress World’s Fair in Chicago, Illinois.
    Note first that he chose a world-class event to introduce
    the little-known Cinderella crop. Now listen to the names
    of dishes on the menu: “Tomato juice seasoned with soy
    bean sauce. Salted soy beans. Celery stuffed with soy bean
    cheese [tofu]. Puree of soy bean. Soy bean cracker. Soy bean
    croquettes with tomato sauce. Buttered green soy beans.
    Pineapple ring with soy bean cheese [tofu] and soy bean
    dressing. Soy bean bread with soy bean relish. Soy bean
    biscuit with soy bean butter. Apple pie (soy bean crust).
    Cocoa with soy bean milk. Soy bean coffee. Assorted soy
    bean cookies. Soy bean cakes. Assorted soy bean candy.”

    This menu represented a fresh, new vision of soyfoods
    in America! Note the creative use of tofu in a pineapple
    ring and as a celery stuffing, and of soymilk with cocoa.

    But this was just the beginning. By Aug. 1935 Ford
    was serving soy ice cream for dessert at VIP and press
    luncheons held at the Ford Engineering Laboratory. In about
    1936 Ford’s Edison Institute published a 19-page booklet
    titled “Recipes for Soy Bean Foods,” which contained 58
    innovative American-style preparations including: Soy
    Waffles (with soy flour). Scalloped green soy beans.
    Honey soy bean ice box cookies. Macaroons. Coconut balls
    (with chopped soynuts). Lady fingers. Soy bean chocolate
    bars. Apple sauce cake. Doughnuts. Soy bean custard (with
    soymilk).

    In 1938, when Ford researcher Bob Smith invented
    a new and greatly improved type of soymilk (based on
    soy protein isolates), Ford and his researchers focused on
    developing new dairylike products based on this soymilk,
    including a non-dairy whipped cream, and an improved soy
    ice cream. The soymilk itself was widely served at Ford
    institutions in and around Dearborn, Michigan.

    Indeed a strong case can be made that Henry Ford and
    his coworkers played the leading pioneer role in developing
    American-style soyfoods and introducing them in a big way
    to America. In so doing, they set the stage for the rapid rise
    of soyfoods consumption among typical Americans that
    began in a small way during World War II, and in a big way
    starting in the 1970s and continuing into the 1990s.

525. SoyaScan Notes. 2013. The visionary work of Henry
    Ford and his researchers with soyfoods—then and now:
    Pioneered soy protein isolates (Overview). Compiled by
    William Shurtleff of Soyinfo Center.

• Summary: Robert Boyer and Bob Smith did extensive,
    pioneering work on developing soy protein isolates at the
    Ford Motor Co. Both started research in 1938. Boyer used
    his isolates to make industrial products, such as spun soy
    protein fibers and water-based paints. The soy fibers were
    produced in a pilot-plant with a capacity of 1,000 pounds
    per day of soybean “wool” and soon a fabric containing

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25% soybean wool and 75% sheep’s wool was used in the sidewall upholstery of many Ford cars. Bob Smith used his isolates to make a good-tasting soymilk, that was served in Ford cafeterias and schools, and at the Henry Ford Hospital, and was also used as the base for most of the early commercial soy-based whipped toppings—starting with Delsoy. In Nov. 1943 The Drackett Co. bought Ford’s soybean fiber spinning operations; Boyer, Francis (Frank) Calvert, and William Atkinson went to Drackett from Ford as part of the deal. Drackett made and sold their fibers, Soybean Azlon, spun from soy protein isolates, from 2 Dec. 1943 to 1949. They were used mainly in felt hats by the American Hat Corporation. Drackett also commercialized other industrial soy proteins, such as Protein 110, 112, and 220, Ortho Protein, and plastic molding compounds. Boyer left Drackett in 1949 when they shut down their Azlon fiber spinning plant; he focused all his energy on developing food uses of edible products made from spun soy isolates. In mid-1957 ADM (Archer Daniels Midland Co.) purchased Drackett’s soy protein business. Bob Boyer began to work as a full-time consultant for Ralston Purina in the field of soy proteins starting in early 1960. Since 13 June 1959 Ralston Purina had been manufacturing industrial soy protein isolates (for use in paper coatings) at a plant in Louisville, Kentucky, which they purchased from Procter & Gamble in December 1958. In 1960, after starting consultation with Boyer, Ralston Purina began its first work with edible soy proteins by establishing a research and pilot plant at company headquarters in St. Louis, Missouri. In about September 1962 Boyer was named technical director of protein products sales in the soybean division of the Ralston Purina Co.; he worked for Ralston until his retirement in 1971. Frank Calvert, Boyer’s coworker from the Ford Motor Co. was hired in November 1962 to head up Ralston Purina’s R&D work on food-grade isolated soy protein in St. Louis. In 1965 Calvert was named director of soybean research, and in 1967 director of research of the Protein Division. In 1969 Calvert was promoted to director of research, New Venture Management, and finally in 1971 vice president and research director, New Venture Management. During these years, Calvert developed new soy protein isolation processes, 70 percent soy protein concentrate products, and modified soy protein coating compositions for industrial use. Calvert is considered a visionary in soy protein research and the accomplishments of his career were honored in 1973 when the Ralston Purina plant at Memphis, Tennessee, was dedicated to him in recognition of his years of service and dedication to protein technology.

In Oct. 1962 Ralston Purina began to introduce a line of edible soy protein isolate products made at their plant in Louisville: The first three were Edi-Pro A and Edi-Pro N (spray-dried isoelectric and neutral isolated soy proteins respectively) and Textured Edi Pro (an edible spun soy protein fiber). Supro 610 was launched in October 1966. As sales of these products increased, Ralston Purina soon found itself a leader in this new field—along with the pioneer, Central Soya, which had launched Promine in Oct. 1959. Ralston Purina expanded food grade isolate capacity with new facilities at Memphis, Tennessee, beginning production on April 10, 1973; Pryor, Oklahoma, beginning production on December 1, 1976. By late 1975 the company was making about 75 million pounds per year of isolates from its three plants, and was starting to advertise its isolates in a big way, with full-page color ads. This expansion easily vaulted Ralston Purina into the position of world leader in food-grade isolated soy proteins by 1976. On 21 August 1979 the company began producing soy protein isolates at its first plant located outside the Unites States, in Ieper, Belgium. On 1 July 1987 Ralston Purina established Protein Technologies International (PTI) as a wholly owned subsidiary focused on manufacturing soy protein and fiber products. In 1993 PTI was by far the world’s leading producer of soy protein isolates, controlling about 60% of the U.S. market. PTI’s sales of consumer soy protein products rose from $221.6 million in 1989 to a record $288.1 million in 1992.
no protein. Today about 265 million lb of non-dairy whip toppings worth $453.4 million dollars are sold each year to the retail, foodservice, and bakery trades. Sales of all food products made by Rich Products Corp. are expected to top $1,000 million for the first time in 1994, the company’s 50th anniversary.


• **Summary:** Most American shoppers are familiar with non-dairy whip toppings—alternatives to whipped cream or whipping cream. The top retail brands are CoolWhip (launched in April 1966 by the Birds Eye Division of General Foods, Inc.), RichWhip (Rich Products Corp), Presto Whip, and La Creme; they generate retail sales of about $222 million per year.

But few realize that this food category was a child of World War II (in November 1942 the government’s War Food Administration issued an order outlawing the sale of whipping cream in America during the war) and that all of the earliest non-dairy whip toppings were based on soy protein and had their roots in the work of Henry Ford and his researchers.

The first commercial soy-based whip topping was Delsoy, launched in about August 1944 in Dearborn, Michigan. By 1949 four similar products were on the market; all contained soy protein (derived from soymilk) and none of them contained dairy products.

However an unusual government law, which is now more than 50 years old, allows food manufacturers to use casein (the major protein in cow’s milk) or a casein derivative (such as sodium caseinate) in a food product and still label this product “non-dairy.” Because of this outdated and misleading law, all of the major brands of so-called “non-dairy whip toppings” contain casein. If the law were changed, many new opportunities would arise for true non-dairy products that based on soy protein and containing no casein or other animal products. Address: Soyfoods Center.


• **Summary:** 1911—Beltzer develops isolated soy protein (ISP) for food use in France.

1921—Satow develops ISP for food use in Japan.

1935—First U.S. patent for ISP issued to Buruss & Ruth.

1932—The Glidden Co. (Chicago) first develops ISP for food use in the USA but did not yet make a commercial product.

1939—Albusoy, made by The Glidden Co. in Chicago, is launched. It takes the place of egg albumen (egg whites) in a wide variety of products, especially confections.

1942—Central Soya Co. launches a similar whipping compound named Soy Whip—also meant to replace an animal product—egg whites.

1945—Rich Products Corp. (Buffalo, New York), during World War II when whipping cream is unavailable, launches Whip Topping, made from “Soy Cream,” based on ISP. It is also soon sold frozen, and is a smash success.

1946—Borden Co., Whitson Products Div., launches Soyco—a “soy albumen whipping agent.”


1948—Rich Products Corp. launches Whipping Topping, based on isolated soy protein, in a pressurized aerosol metal can.

1950—Presto Food Products (Industry, California) launches Mocha-Mix Coffee Creamer (later renamed Mocha Mix Non-Dairy Creamer)—based on ISP.

1951—Rich Products Corp. launches Chil-Zert, the first non-dairy frozen dessert (ice cream)—based on ISP.

1951—Hoffman Products (York, Pennsylvania), Subsidiary of York Barbell Co., launches Bob Hoffman’s Hi-Protein (powder)—based on ISP.

1952—Rich Products Corp. launches Suni Whip, a non-dairy fountain topping in a pressurized can—based on ISP.


1959—Central Soya Co. (Chicago, Illinois) launches Promine—food-grade ISP in two types; D is dispersible, R is regular.

1962—Ralston Purina launches Edi-Pro—spray-dried ISP.

**Observations:**

1. Using plant proteins to replace animal proteins is generally a good thing for many reasons, and is definitely a long term green trend.

2. Many people who are unable (allergies, lactose intolerance, heart condition, etc.) or unwilling (vegan, kosher) to use dairy products are extremely grateful for non-dairy alternatives made from soy protein.

3. One of the Buddhist precepts is not to find fault with others... which may be interpreted to include other things. There is a place for just about everything if it is used wisely. The few groups criticizing isolated soy proteins are those promoting animal products (meat, dairy and eggs); they are therefore criticizing the competition—soyfoods and edible soy products.

An asterisk (*) at the end of the record means that SOYFOODS CENTER does not own that document. A plus after eng (eng+) means that SOYFOODS CENTER has done a partial or complete translation into English of that document. An asterisk in a listing of number of references [23* ref] means that most of these references are not about soybeans or soyfoods.
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Natural and Health Foods Retail Chains or Supermarkets: Bread & Circus (Tony Harnett, MA), Frazier Farms (Bill Frazier, Southern Calif.), Fresh Fields (Rockville, MD), GNC = General Nutrition Corp. (Pittsburgh, PA), Mrs. Gooch’s (Los Angeles, CA), Nature Foods Centres (Wilmington, MA; Ronald Rossetti), Trader Joe’s, Whole Foods Market (Austin, TX), Wild Oats. 442, 445, 461, 466

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