Northeast Center for Food Entrepreneurship Receives USDA Secretary’s Annual Honor Award

By Kelvin Tan, Cornell University

The Northeast Center for Food Entrepreneurship (NECFE) in Geneva, NY, has received a Department of Agriculture (USDA) Secretary’s Honor Award in the category “Supporting Increased Economic Opportunities and Improved Quality of Life in Rural Areas.”

Olga Padilla-Zakour, assistant professor of food science and technology at Cornell University and director of NECFE, accepted the award on behalf of NECFE during the 58th award ceremony held in the Ronald Reagan International Trade Center on Friday, June 25, 2004, in Washington, D.C.

“The Honor Awards highlight the dedication and talents of USDA employees who contribute in so many ways to improving the world around us,” said Ann M. Veneman, the 2004 Secretary of Agriculture. “Each of these honorees is to be commended for their accomplishments in public service.”

The Secretary’s Honor Awards acknowledge outstanding contributions to agriculture, the consumers of agricultural products, and the American public, and are the most significant awards bestowed by the USDA. The honorees were nominated by the Cooperative State Research, Education, and Extension Service (CSREES). The Honor Awards Program was created in 1947.
Entrepreneur Profile

Katie Camarro  
Sundaes Best Hot Fudge Sauce

Katie Camarro and Jeff Shinaman, owners of Greenfield’s Greatest Food Company, Inc. in Greenfield Center, New York, produce Sundaes Best Hot Fudge Sauce using Saratoga County dairy products. The recipe has been in Jeff’s family for over 50 years, and according to their website, “…made from the very best ingredients including real chocolate and cocoa, wholesome milk, cream and sweet butter that comes straight from local dairies.”

Ten years ago, Katie started a marketing consulting business and for special occasions she gave her clients gifts of hot fudge sauce which she made from Jeff’s mom’s recipe. It was such a hit that her clients urged her to sell the sauce. About three years ago, Katie began the process of getting her hot fudge sauce to market. “It only took me seven years to finally listen to my clients and get to the development point,” laughs Katie, who began production in November 2001. In less than three years, Sundaes Best Hot Fudge Sauce has made a name for itself in the marketplace and Katie is her own most famous marketing client. She has dropped all contracts to concentrate on her own business. “I am a ‘one-trick pony,’ says Katie, “hot fudge sauce is my only product.” She is continuing to develop her market base and will then look toward adding other products to the line in the near future.

Business really took off when Sundaes Best Hot Fudge Sauce was featured on Roker on the Road on the Food Network this past February just before Valentine’s Day. The same show aired again as a rerun in June.

Katie oversees every aspect of the business - production, distribution, marketing, and selling. Every other week, Katie trucks her ingredients to the Vermont Food Venture Center to make the hot fudge sauce. She supervises every aspect of the processing on site along with Brian Norder, the facility’s director, and Jeff Mitchell.

Sundaes Best is distributed (via UPS) to over 175 stores across the country and currently production is over 20,000 jars of sauce a year. She also sells at craft shows and does tastings of her sauce at some of her client’s stores - “Feeding the world one hot fudge-covered pretzel at a time,” jokes Katie.

Katie is a big fan of the NYS Food Venture Center. She is particularly grateful to Don Downing, Judy Anderson and Randy Worobo for their technical expertise in ironing out problems that arose during the scale-up of the recipe for production and to Bob Weybright for his advice in business development.

To find out more about Sundaes Best, go to their website at http://www.sundaesbest.com/
NECFE was cited for “development of a highly productive center which provides comprehensive assistance to beginning and established food entrepreneurs that resulted in sustainable economic development of rural communities.” Cited were Olga Padilla-Zakour, group leader; Judy L. Anderson, Donald L. Downing, Thomas A. Gibson, Cheryl A. Leach, Chang Y. Lee, Sarah J. Lincoln, Kawaijiet S. Tandon, Robert J. Weybright, from the New York State Agricultural Experiment Station at Cornell University in Geneva. Dennis E. Shaw was named from Cornell University’s Ithaca campus. Catherine W. Donnelly, Susan F. Callahan, Michele R. Cranwell, Cecilia A. Golnazarian, Jane M. Kolodinsky, Todd J. Pritchard and Brian A. Norder, were named from the University of Vermont.

“This award exemplifies our department’s unique mission and service to New York State and the regional food industry,” said Chang Y. Lee, chairman of the department of food science and technology at Geneva. “NECFE has contributed tremendously to our local and state’s economy for the last four years. Under Dr. Padilla-Zakour’s leadership, her group has done an outstanding job.”

NECFE was funded by a $3.8 million, four-year grant from the U.S. Department of Agriculture in 2000. The partnership between Cornell University and the University of Vermont provides comprehensive assistance to beginning and established food entrepreneurs, helps promote sustainable economic development in rural communities, maintains the rural landscape, and protects the environment. NECFE addresses food safety and business development and marketing for small-scale food processing through one-on-one assistance, workshops and conferences.

Since its inception, NECFE has worked with over 500 entrepreneurs who needed food safety evaluations and regulatory compliance for over 1500 new products. More than 1800 food prototypes were analyzed for safety and commercial production feasibility, more than 3100 inquiries for assistance on marketing specialty foods were answered, and more than 300 entrepreneurs received direct assistance.

The following articles, courtesy of IFT, can be found in the IFT Weekly Newsletter dated August 25, 2004.

FDA posts revised food facilities registration guide

On October 10, 2003, FDA issued an interim final regulation to implement the Bioterrorism Act’s requirement that domestic and foreign facilities that manufacture, process, pack, or hold food for human or animal consumption in the United States must register with FDA. A revised version (4th edition) of the guidelines to registration has been posted to the FDA’s website. For a copy, see http://www.cfsan.fda.gov/~dms/ffregui4.html.
Branding is a complex process that involves commitment, discipline, and practice. A brand is not something you have because you say you have it. A brand exists only when you have established a relationship with customers based on common values and trust that certain behaviors will be repeated. The brand exists within your customers. The customers own it. You shepherd it.

A brand is more than a name and a logo, though both are part of a brand’s identity. A brand is more than advertising. The creator of the famous 1960’s Volkswagen ads, Bill Bernbach of Doyle, Dane, and Bernbach, once said, “Advertising does. A brand is.”

What makes a brand? Differentiation and marketing. Both are necessary. Marketing, of course, is all the things that you do to touch the customer. Differentiation is based on 1) relevance to your customer (what you promise has to matter), 2) your competitors’ positions (you must be different and original in order to have differentiation), and 3) the tangible and intangible benefits you offer.

Being different can be tough. There’s pressure to follow what the other guy is doing because he’s successful. How did he become successful? By being different in some way and by understanding what is important to his customers. That’s what you need to discover too. But then ask yourself: what position is the competition missing that I can take, or who is the competition missing that wants or needs my product? Think strategically and creatively. It’s not only what you say, but also how you say it, that tells who you are.

Key to having a successful brand is the ability to answer this question: What is most important to your customers that your organization can support? (Customers include consumers, buyers, shareholders, donors, influencers, etc. – all those audiences that have something you want.)

Remember that the brand exists within your customers, so it is vital that you know what is relevant, what will sing, with the audiences you intend to go after. This will take research. Done correctly, even though research takes time and money, there is no substitute for accurate knowledge. It will enable you to ‘sell’ the brand internally as well as externally. (Internal commitment to your brand is critical to success.) It’ll ensure you have the information you need to objectively and accurately direct your brand strategies and creative process. It’ll be the guiding light in deciding what will make your brand promise both meaningful to all your audiences and different from all the other players.

Who should brand? Among the critical factors are 1) the internal commitment to keeping a brand promise, 2) management’s support, and 3) willingness to invest in a sustained marketing effort.

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buyer. An image branding strategy focuses on a well-defined segment of the market offering not only product attributes but also emotional drivers. Nike and Jaguar are two brands that sell ‘image’ at a premium. Image brands make one feel he or she is part of a special group and can be found in categories such as clothing, alcoholic beverages, cars and trucks, kid-targeted products, and even credit cards. Image brands are those that instill a belief that they will make people look better, feel better about oneself, perform better, or all three. Image brands typically focus on a consumer buyer, but this strategy is also an influencer on the business-to-business side when the consumer brand strength carries over to the B2B buyer’s decision-making process.

The fourth brand strategy is experience branding. Some proclaim that we are now ‘an experience economy,’ one in which it is the totality of the brand’s interaction with its audiences that drives today’s buying decisions. To ‘sell’ an experience brand one must have multiple touch points with the consumers, all carefully orchestrated contacts that deliver a highly differentiated, desirable experience. An experience branding strategy can be very effective for service or product providers who can control the environment surrounding the customer and the inputs received. Often the experience is seamless to the customer, but a great deal of time and attention has been devoted to each point of sensory contact.

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The following article, courtesy of IFT, can be found in the IFT Weekly Newsletter dated July 28, 2004.

The continuing challenge of space food

How to feed astronauts on a mission lasting several years is a question that has dogged space agencies for years. Food scientists at the Institute of Food Technologists Annual Meeting and Food Expo presented prototypes of some of the first attempts at answering this question.

R. Paul Singh, a food engineering professor at University of California at Davis, showed the prototype of a fruit and vegetable processing system designed to process tomatoes by slicing, dicing, crushing and juicing them for soup, sauce and paste. Sudhir K. Sastry, professor of food engineering at Ohio State University, unveiled a gadget for reheating and sterilization - a food package equipped with electrodes that heat the packaged food. After an astronaut eats the food prepared in this container, the same package is used to sterilize bodily waste and store it until it can be jettisoned.

A mission to Mars is years off at best, and there are many more questions about feeding astronauts, but scientists continue to seek answers.

Our company has been producing small-batch gourmet items for the Hudson Valley since 1993. But we’re ready to hand over the reins to another foodie with an entrepreneurial spirit.

We currently serve sixteen gourmet stores, high-end markets, and farm stands in Rockland, Putnam, Dutchess, and Ulster Counties. The company enjoys excellent success and esteem within its niche market, and has never had a complaint from a customer or vendor.

We produce a variety of bottled marinara sauces (including organic), as well as basil pesto and sun-dried tomato pesto, tapenade, hummus, salsa and salsa, among other items. Our philosophy has always been to make products using the best obtainable ingredients without the use of preservatives, sugars, or extenders.

While we elected to keep our business small, experience indicates there is significant opportunity for expansion into the markets of existing and neighboring areas. To learn more, please call Gretchen Primack at (845) 340-1090, or email her at gaprimack@yahoo.com

The Specialty Food Business looking for a New Home

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Selling from p.4
Selecting Acids to Adjust the pH of Acid and Acidified Products
By Olga I. Padilla-Zakour

Introduction to acid and acidified foods
Many products manufactured by entrepreneurs fall into the category of acid and acidified foods. Acid foods, including formulated acid foods, whose ingredients have enough natural acid that their pH values are below 4.6. pH refers to the amount of acid ions in a water solution and therefore determines the degree of acidity. The lower the pH number, the higher the acidity. Acidified foods are produced by adding acids or acid foods to low acid foods, to end up with a product with a pH below 4.6. Acidified products begin with a food that has very little acid naturally and one that has a pH above 4.6. Examples of low acid foods are meats, eggs, fish, milk, beans, vegetables. Examples of acid foods include citrus, berries and stone fruits. Acidified foods would include pickled vegetables, pickled meats, pickled eggs and so forth. An example of a formulated acid food is a BBQ sauce made from tomato puree, cider vinegar, brown sugar, prepared mustard, oil and spices.

Formulating and processing acid and acidified foods
Since marketing of shelf-stable products is less difficult than marketing refrigerated or frozen products, start-up entrepreneurs often design their first commercial food as acid or acidified products that can be made shelf-stable by the combined effect of heat (below 212°F) and the addition of an acid. If a product is properly acidified to a target pH, typically below 4.2, heated to the appropriate temperature and packaged to maintain a hermetic seal, the food will be shelf stable.

Heating under acid conditions destroys the pathogenic and spoilage microorganisms that are capable of growing at room temperature, and deactivates the enzymes that could degrade the food. There are two ways to accomplish these objectives: by hot-packing (bringing the acid food to the target temperature and filling it hot into the container) or by using a boiling water bath process (filing the acid food into the container, closing and immersing into boiling water for a specified period of time). In either case, the entrepreneur must consult with a Process Authority before manufacturing these products as the regulations require constant monitoring of the critical control points, including acidification/pH control and heating time and temperature; the filing of an approved process and formulation (called a schedule process); registration with state and federal agencies such as FDA and USDA; production in an approved kitchen/plant; and attending FDA/USDA certification courses. NECFE has Process Authorities that will help the entrepreneur with the product and process development of safe acid and acidified foods.

Since pH is one of the critical factors, it is important to understand that there are several options available to increase the acidity of a food to reach the target pH level. All acids will increase acidity, but the effect on the flavor and perceived tartness will be different depending on the acid selected and the interactions with the ingredients used. The best place to start is to use an acid that is already present in the food or ingredients. For example, if the product being designed contains tomatoes, then citric acid would be a good choice as it is the natural acid present in tomatoes. In some cases, a mixture, which utilizes the properties of two or three different acids, can be beneficial. In addition, the sweetness level and type of spices or flavorings can play a significant role in moderating the sour taste.

In order to better understand how to select acids in product formulations, the following section describes the acids most commonly used in food products. All the acids listed are considered safe to use in food products by the FDA.

Citric acid
Citric acid is the most commonly used acid in foods due to its low cost and high acid strength. It is the predominant acid in citrus fruits including oranges, lemons and limes. It is produced from lemon juice, lime juice and pineapple canning residue, or from controlled mold fermentation of sugar solutions. It is available in powder or fine crystals, and has a strong acidic flavor that disappears quickly after tasting. It is also an antioxidant (mainly by sequestering metal ions that accelerate chemical reactions known as chelating activity) that helps preserve color, flavor and vitamin C content of foods. Citric acid is a good acidifying agent for tomato products and other foods, such as fruit preserves, where a citrus flavor is desirable. Typical levels in fruit drinks and carbonated beverages is 0.25 to 0.40%, in cheese at 3-4%. It is very soluble in water and absorbs humidity from the environment (hygroscopic) and therefore needs to be properly stored.

Malic acid
Malic acid is an acid which occurs naturally in fruits, and in higher proportions in apples, plums, cherries and watermelon. It is available as an odorless white powder. The acidic flavor is slightly more pronounced than citric acid but produces a different profile when consumed. Unlike citric acid, the acid perception builds up and gradually decreases resulting in a lingering effect. Similar to citric acid, malic acid is hygroscopic, has excellent solubility in water and has antioxidant properties due to chelating activity. It is used in soft drinks, dry-mix beverages, puddings, jellies and fruit fillings.

Tartaric acid
Tartaric acid is the predominant acid in grapes. It is a white crystalline powder with a strong fruit acid flavor. It has very high water solubility and it is only slightly hygroscopic. It is used as an acidulant in fruit products.

Fumaric acid
Fumaric acid is a strong acid with low solubility in water. Available as a white,
crystalline, free-flowing powder. It is not as hygroscopic as other acids and therefore is used in dry beverage mixes, gelatin mix, pectin mixes. The acid flavor in solution is stronger than citric, and the acid perception is also more prolonged. It can be used in combination with other acids to achieve the desired flavor profile.

**Acetic acid/Vinegar**

Acetic acid is the typical pickling acid found in vinegar, and is produced by the conversion of alcohol to acid. Common white distilled vinegar contains 5% acetic acid, although vinegars can be purchased from commercial suppliers in liquid form with strengths from 4 to 30%. Vinegar strength is sometimes measured in ‘grains’, which denotes the percentage of acetic acid multiplied by 10. A 50-grain vinegar has 5% acetic acid and 95% water. Specialty vinegars are produced from raw materials that impart characteristic flavors such as wine, corn, rice, malt and balsamic. Acetic acid is used as a preservative in foods because, at the right concentration and pH values, it can inhibit the growth of yeasts and molds. It is used as a preservative, acidulant, and flavoring agent in mayonnaise, ketchup, pickles and mustard.

**Lactic acid**

Lactic acid is the natural organic acid present in milk, cheese, meat, and beer. It can be chemically synthesized or produced through sugar fermentation. It is normally available as a colorless liquid form at 50-88% solution in water, although a powder form that uses calcium as a carrier can also be found. It is stable to heating and has a smooth mild acid taste that does not mask or overpower weaker flavors. Lactic acid is the most effective acid for inhibiting lactic acid bacteria - the spoilage microorganisms commonly found in acid products such as dressings, sauces and beverages. It is preferred in meat, pasta, potato, cheese, ranch/blue cheese dressings, salsa and other savory products due to its mild taste. It helps prevent spoilage in Spanish olives. Commercial mixtures of lactic and acetic acids are available for minimally processed products such as refrigerated foods that rely on the antimicrobial properties of these two acids for safety and shelf-life extension.

**Phosphoric acid**

Phosphoric acid is a strong inorganic acid that is soluble in water. It imparts a harsh, flat sour taste that is different from organic acids such citric and malic. It is used as a flavoring acid in cola and root beer beverages to deliver the desired flavor and sour taste. It is also used as an acidulant in cheese and pickled garlic.

**Glucono-delta-Lactone (GdL)**

GdL is a fine, white crystalline powder, freely soluble in water. It is practically odorless and has a slightly sweet taste. It is completely metabolized in the body like a carbohydrate. When added to an aqueous solution, GdL rapidly dissolves and subsequently slowly hydrolyzes to gluconic acid; thus it is used as a slow release acidifier. During its hydrolysis, the initial sweet taste of GdL becomes slightly acidic, making the final flavor of an aqueous solution of GdL less tart than when using other acidifiers. In solution both gluconic acid and GdL are always in balance. The formation of the acid is temperature dependent, slow at room temperature and fast at high temperatures. Because the final pH of a food is critical for the pasteurization temperature, the processor must take into account the slow release of acid when using GdL. Accurate trials and documentation must be kept to insure that the target pH is achieved before the final pasteurization or bottling step is conducted.

**Sodium Acid Sulfate - pHase™**

Sodium Acid Sulfate is a newly patented acidulant for the food industry. It is available as a dry granular acid that easily dissolves in water releasing sodium ions, hydrogen ions and sulfate ions. The sodium ion contributes to flavor enhance-
The following article, courtesy of The Association of Dressings & Sauces, can be found on their website at http://www.dressings-sauces.org/pressroom_trends

Salad Dressing and Sauce Trends – Flavor Trends

The latest culinary trends include unique food pairings, continued use of ingredients that both heat and cool the palate, and regional and ethnic cuisines, says McCormick & Company’s latest Flavor Forecast. Here are the trends that McCormick has identified in its latest forecast:

### The top flavors
- Bay leaf
- Chile peppers
- Cinnamon
- Coriander/cilantro
- Lemon grass
- Mustard
- Pepper
- Sea salt
- Sesame
- Turmeric
- Vanilla
- Wasabi

### Seven trends to watch are:
1. Extreme flavor. Aroma, texture and flavor are reaching new heights.
2. The shrinking globe. Discovering regional ethnic cuisines.
3. Food as an occasion. Sharing flavor and fun.
4. You can take it with you. How portable foods continue to change the way Americans eat.
7. Home on the range. Meat is ‘in.’

### Flavored Mayonnaise.
Flavored mayonnaise and sandwich spreads have previously had a small audience of gourmet shoppers, but now the major market players are presenting varieties with market appeal. Hot ‘N Spicy Miracle Whip contains cayenne pepper, dried tomatoes and spices and French’s GourMayo flavors include Chipotle Chili, Wasabi Horseradish and Sun Dried Tomato. All are available in easy to squeeze plastic bottles that can be stored upside down. These launches continue the trend of targeting adults with flavorings designed for that market, which began with Heinz’s flavored ketchup, Kick’rs in early 2002. From *Prepared Foods*

### Chefs’ favorite flavor combinations:
- Lime, cilantro, ginger, garlic, soy sauce, and sesame oil
- Black pepper, cinnamon, clove, and dried red chile peppers
- Sugar cane syrup and chile peppers
- Plum, ginger, mango and habanero peppers
- Fish sauce, lime juice, Serrano chile peppers and honey