



# IDEAS

## For Food Processors

Spring 2006

Volume 5, Issue 1

A Publication of the Food Technology Extension Program  
Cooperative Extension Service, New Mexico State University

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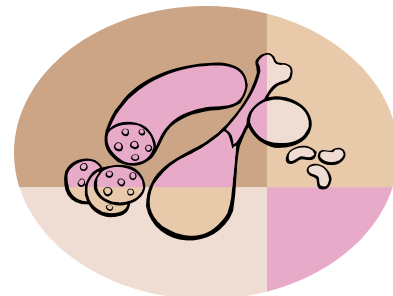
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## Food Safety and Inspection Service (FSIS) Announces Initiative to Reduce *Salmonella* in Meat and Poultry

The U.S. Department of Agriculture's Food Safety and Inspection Service (FSIS) has recently announced the kickoff of a new endeavor to reduce the presence of *Salmonella* in raw meat and poultry products. *Salmonella* is commonly found in raw meat, poultry products, eggs and produce. This plan of action is modeled after the successful initiative of the FSIS to reduce the presence of *E. coli* O157:H7. The goal of the FSIS is to reduce the amount of *Salmonella* on raw products before manufacturing and to provide information about test results to consumers and industry promptly. The FSIS intends to execute the plan by providing the results of *Salmonella* testing to establishments as soon as they become available on a sample-by-sample basis. Receiving individual sample results soon after the samples are taken will help

establishments in their assessment of whether their slaughter dressing (pre-manufacturing) procedures are adequate for pathogen reduction. Plans are also in the making for the FSIS to begin posting quarterly information about the nationwide cumulative sample results to give consumers more complete and timely information about *Salmonella* trends.

Source: Tara Balsley,  
Congressional and Public Affairs



For more information please go to  
<http://www.fsis.usda.gov/>

## Good Agricultural Practices (GAPs) Update

This past winter, New Mexico State University was able to make available for distribution two publications from the National Good Agricultural Practices (GAPs) program at Cornell University.

1) A coloring book designed for children ages 7 to 12 in farming communities entitled "Fun Fruit and Very Vegetable Tour," which emphasizes the importance of washing and produce handling. The books come packaged in a plastic cover with crayons, a wash towel and a bar of soap. This bilingual book contains half of the material in English and flips over to a Spanish version.

2) A kitchen photo novel entitled "Did you know? Your kitchen could be a source of illness!" was also made available. The storyline for this photo novel is about a family preparing dinner and from which several members develop *Salmonellosis*. This photo novel discusses proper food preparation and the prevention of food-borne illness by preventing cross contamination and proper cleaning and

sanitizing of surfaces and kitchen utensils. Proper cooking temperatures and food storage temperatures are also discussed. Specific risks to pregnant women from food products that may contain *Listeria monocytogenes* is highlighted. This booklet is also bilingually written.

The Crop Risk Assessment for the New Mexico Department of Agriculture has been completed. This assessment identifies "pathogen sources and pathways" that are at the very core of what makes the GAPs program the best possible "crop risk assessment tool available to address microbial pathogen contamination on the farm."

A publication through the New Mexico Chile Task Force has just been completed and will be available in March 2006. It is entitled "Good Agricultural Practices: What Growers Should Know."

Source: Roy Pennock, GAPs Research Specialist  
Email: [rpennock@nmsu.edu](mailto:rpennock@nmsu.edu)

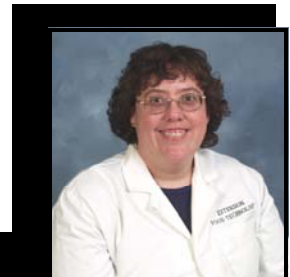
## A Message from the Editor...

Hola and happy spring!

This issue brings forth information on *Salmonella* monitoring, changes in Better Processing School here at New Mexico State University, canned food processing, and use of fiber adjuncts in food products. Although these are various distinct topics, I hope that this issue brings you new ideas and approaches to your food processing business.

Enjoy!

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## IDEAS for Food Processors

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Editor: Nancy C. Flores, Ph.D.

*Nancy Flores*

Extension Food Technology Specialist  
Contributors: Nancy C. Flores

## Calendar of Upcoming Events

### Food Product Association (FPA) Conferences—2006

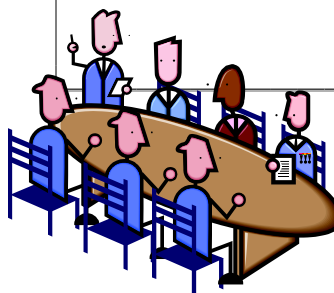
- April 27-29:** FPA Executives Conference. Ritz-Carlton, Naples, Florida. The FPA Executives Conference is the food industry's premier event providing business leaders with cutting-edge information on business and food industry trends and forecasts. Contact Mary Olson at (202) 639-5968, fax (202) 639-5999, or e-mail [MOlsen@FPA-Food.org](mailto:MOlsen@FPA-Food.org).
- May 3-5:** Consumer Complaint Conference. Hotel Valencia Riverwalk, San Antonio, Texas. Successfully Managing Consumer Complaints Now and in the Future: Taking a Step Back To Effectively Move Forward. Contact Debbie Kimmelman at (202) 639-5904 or David Herman at (202) 639-5950. Visit [www.fpa-food.org/event\\_items.asp](http://www.fpa-food.org/event_items.asp).
- May 9-11:** Spring Issues Conference. Crystal Gateway Marriott, 1700 Jefferson Davis Highway, Arlington, Virginia, 22203. Call (703) 920-3230 or 1(800) 228-9290. E-mail David Kimmelman at [DKimmelman@fpa-food.org](mailto:DKimmelman@fpa-food.org).

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Food Products Association  
1350 I (Eye) Street NW, Suite 300  
Washington, DC 20005  
Telephone: (202) 639-5900  
Web site: <http://www.fpa-food.org>

### Institute of Food Technologists (IFT) Short Courses—2006

- April 5-7:** Frying Technologies. Chicago, Illinois. Food professionals involved in the development, manufacture, regulatory requirements and marketing of fried foods. For more information contact Luci Landberg at (312) 782-8424 ext. 277 or e-mail [lalandberg@ift.org](mailto:lalandberg@ift.org).
- April 6-7:** Labeling Requirements. Chicago, Illinois. Regulatory consultants, food label designers, marketing specialists, R&D/QA/QC professionals and anyone responsible for food label development. For more information, contact Luci Landberg at (312) 782-8424 ext. 277 or e-mail [lalandberg@ift.org](mailto:lalandberg@ift.org).
- April 6-7:** Microencapsulation. Chicago, Illinois. Food researchers, product development scientists, ingredient suppliers, and technical managers involved with ingredients. No prior knowledge of encapsulation/controlled delivery is required. For more information, contact Luci Landberg at (312) 782-8424 ext. 277 or e-mail [lalandberg@ift.org](mailto:lalandberg@ift.org).

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Web site: <http://www.ift.org/cms/>



## Keeping Botulism Out of Canned Foods

The U.S. Food and Drug Administration (FDA) has been working diligently to ensure the safety of our canned food supply. A huge spark for this concern stemmed from the outbreaks of botulism in commercially canned foods in the 1960s and early 1970s. Botulism is a food intoxication that occurs when the thermal process of canned foods has been done improperly. In an effort to prevent botulism, the FDA has implemented Low-Acid Canned Food regulations to which the food canning industry both in the U.S. and countries exporting canned goods to the U.S. must comply.



There has been a 40 percent increase in the quantity of canned foods from foreign manufacturers entering U.S. markets. There are many ways in which food manufacturers, both foreign and domestic, can learn proper thermal processing but one of the best methods is through workshops and short courses offered by universities. By enrolling in these workshops and short courses, food manufacturers can gain insight and knowledge of proper thermal procedures and food safety. This knowledge leads to better canned foods, consumer assurance and aids in keeping costs down.

*Source: Simpson, R., Figueroa, I., and Teixeira, A. 2006. Online control strategies to correct deviant thermal processes in batch sterilization of low acid foods. Food Control (in press, corrected proof online Aug. 22, 2005).*

## New Mexico State University— Better Process Control School

### **Better Process Control School**

The Better Process Control School course is required training by the U.S. Department of Agriculture (USDA) for supervisors and operators of acidified and low acid food operations.

New Mexico State University has offered these courses as “acidified only” and at various locations to help participants from adjacent states and areas.

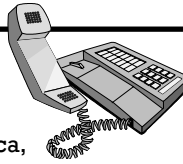
However, because of cost issues, only full courses will be offered on main campus in Las Cruces.

Course schedule, information and registration can be found online at the Web site below.

*Source: Nancy C. Flores, Ph.D.*

**Course information and registration can be found online at:**

<http://cahe.nmsu.edu/bpcs>

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Albuquerque Environmental  
 Health Department  
 (505) 768-2642

**STATE AGENCIES**

**New Mexico Agriculture  
 Department**  
 Las Cruces, NM  
 (505) 646-3007

**New Mexico Health  
 Department**

Scientific Lab Division  
 Pauline Gutierrez  
 Albuquerque, NM  
 (505) 841-250

**New Mexico Environment  
 Department Food Specialists**  
 Albuquerque, NM  
 (505) 841-9452

**District I**

(505) 841-9450  
 Albuquerque (counties served:  
 San Juan, McKinley, Sandoval,  
 Cibola, Torrance and Bernalillo)

**District II**

**Anita Roy** (505) 425-6764  
 Las Vegas (counties served:  
 Santa Fe, Los Alamos, Taos,  
 Rio Arriba, Union, San Miguel,  
 Mora, Harding, Colfax and part  
 of Guadalupe)

**District III**

(505) 524-6300  
 Las Cruces, (counties served:  
 Catron, Grant, Sierra, Hidalgo,  
 Luna, Doña Ana and Otero)

**District IV**

(505) 624-6046  
 Roswell (counties  
 served: Curry, DeBaca,  
 Roosevelt, Chaves, Lea, Quay, Eddy  
 and Lincoln)

**New Mexico Livestock Board**

Meat Inspection Division  
 Arthur P. Marquez  
 Program Manager  
 Albuquerque, NM  
 (505) 250-6115

**New Mexico Organic Commodity  
 Commission**

Joan Quinn  
 Albuquerque, NM  
 (505) 841-9067

**FEDERAL AGENCIES**

**United States Department  
 of Agriculture (USDA), Dist. 15**  
 Boulder, CO  
 (303) 497-5411  
 www.usda.gov

**Animal and Plant Health**

**Inspection Service, USDA**  
 Plant Protection & Quarantine  
 Las Cruces, NM  
 (505) 527-6985

**Meat and Poultry Hotline**

(800) 535-4555

**Food and Drug  
 Administration (FDA)**

**Devine Koontz**  
 Food and Drug Administration  
 (FDA), Public Affairs Specialist  
 Denver, CO  
 (303) 236-3020

**David Arvelo**  
 Small Business Office  
 Southwest Region, FDA  
 Dallas, TX  
 (214) 253-4952

**Mike Zimmerman**  
 Consumer Safety Officer, FDA  
 Albuquerque, NM  
 (505) 248-7377

**Seafood Hotline**

(800) FDA-4010

**ASSOCIATIONS**

**New Mexico Specialty Foods  
 Association (NMSFA)**  
 Anna Shawver  
 Albuquerque, NM  
 (505) 332-2000

**Better Process  
 Control Schools****Better Process Control School**

April 17-20, 2006  
 Purdue University  
 Location: Stewart Center, Purdue University  
 Campus, West Lafayette, IN  
 Registration: Thomas Robertson  
 Tel: (765) 494-7220  
 Fax: (765) 494-0567

**Better Process Control School (Spanish)**

April 18-21, 2006  
 New Mexico State University: El Colegio  
 Latino Americano-Centro Teresiano de  
 Estudios Superiores  
 Location: Auditorio Enrique de Osso, Cd.  
 Juarez, Chih., Mexico  
 Registration: Gloria Hernandez  
 Tel: (505) 646-2198  
 Fax: (505) 646-1889

**Better Process Control School**

April 23-28, 2006  
 Pennsylvania State University  
 Location: Nittany Lion Inn,  
 University Park, PA  
 Registration: Debra Ellis  
 Tel: (814) 865-8301  
 Fax: (814) 865-7050

**Better Process Control School**

May 8-11, 2006  
 Cornell University  
 Location: Ramada Inn, Geneva, NY  
 Registration: Nancy Long  
 Tel: (315) 787-2288  
 Fax: (315) 787-2443

**Better Process Control School**

May 16-19, 2006  
 New Mexico State University  
 Location: Corbett Center, Las Cruces, NM  
 Registration: Gloria Hernandez  
 Tel: (505) 646-2198  
 Fax: (505) 646-1889

**For continuing information, visit the new  
 Web site for the Food Products Association:  
[www.fpi-food.org/content/BPCS.asp](http://www.fpi-food.org/content/BPCS.asp)**

## Fiber Gets a New Image

When thinking of the word fiber, the synonymous words that come to mind are roughage, bulky, bland and boring. Today Americans only consume about half of the recommended daily dietary fiber (28 g for women and 35 g for men). Food scientists and technicians are working to drastically improve the image of fiber with many new and innovative products to help consumers get the fiber they need without necessarily knowing it. There are three main types of fiber: soluble, insoluble and resistant starch. Soluble fiber will dissolve in water gels in the stomach, which slows the absorption of glucose into the bloodstream. Insoluble fiber is fiber which does not dissolve in water; it simply passes through the digestive system intact and increases fecal bulk. Lastly, resistant starches are starches that escape digestion and absorb in the small intestine. The following are different fiber products that are hoping to reshape the way consumers look at fiber.

- **Beneo™**- a new brand by Orafit Active Food Ingredients, emphasizes the benefits of insulin and oligofructose. These ingredients are best known for improving gut health, prebiotic (promoting healthy bacteria) function, replacing fat without forfeiting mouthfeel and replacing sugar without affecting taste. This product works well in such as low-fat ice cream.

- **Citri-Fi**, manufactured by Fiberstar Inc., is a new fiber ingredient made from citrus pulp. This product boasts its excellence in moisture management. Citri-Fi enables a significant amount of additional water to be incorporated into a product without increasing free water. This added moisture improves sensory and quality characteristics. In addition, Citri-Fi may also be used to absorb and bind existing free water in products. This product works well in foods such as bakery goods like muffins and breads.

- **Tate & Lyle Company** has created two new “ingredient solution sets.” These sets are composed of oat fiber, modified food starch and sucralose. Breakfast Cereal Enrich™ 701 is the first solution set and delivers 36 percent total dietary fiber, which allows a product to meet the “good source of fiber” label claim. The second solution set is called

Breakfast Cereal Enrich 702 and adds 50 percent total dietary fiber. This ingredient allows products to boast the “excellent source of fiber” label claim. Both solution set formulations add 8 g of whole grain per 30 g serving and both provide a light, crispy texture with optimum expansion. These two ingredients work well in products such as breakfast cereals.

- **Hi-Maize® 5-1 Fiber**, a product of National Starch Food Innovation, is a natural resistant starch. It provides many health benefits such as weight management, glycemic index management, energy increase and digestive health. This product has functionality benefits as well. A very important functional benefit of Hi-Maize is its low water holding capacity. This function allows the ingredient to be added to low-moisture products without giving up taste, texture or appearance. This ingredient works well in products that involve doughs and batters, such as bread and cookies.



- Other resistant starch products include ActiStar,™ MGPI FiberStar™ 80 and Fiber star 70. ActiStar is produced by Cargill Food & Pharma Specialties and is made from tapioca root. This product has a low water holding capacity and provides 80 percent total dietary fiber. Tapioca root is said to be the blandest of all starches; therefore it does not take away anything from the taste, texture or appearance of finished products. MGPI FiberStar 80 is made from a potato-based resistant starch and provides a minimum of 80 percent total dietary fiber and MGPI

FiberStar 70 is made from a wheat based resistant starch. Both MGPI products have a lower water holding capacity than other wheat products and both have a clean flavor, are extremely white in color and impart a smooth, creamy texture. These resistant starch products work well in food products such as breads and pasta.

- **MaizeWise™** and **GrainWise™** are two new products being made from the Cargill company. MaizeWise is an insoluble fiber whole-grain corn and corn-bran product. This product increases dietary fiber while imparting a negligible amount of flavor and texture. It can be a direct replacement for corn meals, masa and corn flours. GrainWise contains 45 percent dietary fiber and is made from the aleurone (endosperm granular protein) layer of wheat kernel. This product can replace enriched white flour in

## Fiber...continued

products such as breads due to characteristics such as little pigment and flavor. In addition, this product allows manufacturers to promote fiber content claims on their labeling.

- Danisco Sweeteners has come up with a new fiber product for beverages called Litesse polydextrose. This ingredient is 90 percent fiber and is completely transparent in solution which means that beverages show no sign that the fiber is present. Litesse is currently being used in low calorie and sugar-free beverages. It is said to mask off-tastes and aftertastes that often go along with this type of beverage.
- Oats and barley are fast becoming good sources of fiber to include in food and surprisingly, herbal tea products. SunOpta Ingredients has produced a line of products called Canadian Harvest<sup>®</sup> Oat Fibers. These products add fiber while providing longer shelf life, better texture and higher processing yields. Each specific fiber product is designed for different types of food products such as breads, pasta and sugar cones. ConAgra Food Ingredients product Sustagrain<sup>®</sup> is reportedly the first whole grain product that is both naturally high in dietary fiber and low in starch. Roasted barley ingredients from Briess Malt & Ingredients Co. are currently being used to include fiber in herbal teas.
- Fibersol-2 is a product made by Matsutani America and is a digestion-resistant 90 percent soluble maltodextrin dietary fiber produced by

treating corn starch with heat and enzymes. It disperses rapidly, is stable in virtually all processing conditions and is transparent in solution. This ingredient helps to lower the glycemic index of products such as baked goods, dairy products, beverages and confections. Fibersol-2 is odorless, tasteless, provides water-binding characteristics and improved body and texture.

- Cranberry fans will love a new version of a sweetened dried cranberry that contains half the sugar and twice the fiber. Produced by the Ingredient Technology Group of Ocean Spray Cranberries Inc., this product is perfect for baked goods, cereals and trail mix. This ingredient is said to be an example of a low-sugar, high-fiber food. It is aimed at lowering childhood and adult obesity.
- Kerry Ingredients is working on two new products, an encapsulating fiber and whole grain soy flour. The encapsulating fiber is a product that has done well with cookies. It covers the entire cookie with fiber without affecting the taste or texture. A serving of two of these cookies meets the definition of a good source of fiber. The whole grain soy flour can be used as an addition to many products to boost fiber content. This product has 80 percent more dietary fiber than whole wheat and delivers functionality to new products.
- Sensus America has produced a liquid fiber syrup called Fructalose L85 made from chicory root. It has 85 percent fiber, 75 percent solids and a low glycemic index. This product replaces sugar and sugar alcohols in such foods as nutrition bars and confections. Some of the functionality benefits of this product are humectancy, flavor enhancement, sweetness and texture.

Source: Donald E. Pszcaola

Web site: [www.ift.org](http://www.ift.org)

## Non-traditional Retailers May Overtake Supermarkets

By 2013, the majority of food sold will shift from "food-focused retailers" to "general merchandise-focused retailers." Food-focused retailers such as Albertson's, Toucan Market and Lowe's are defined as stores that get two-thirds of their profits from the sales of food and consumables. General merchandise-focused retailers such as Sam's Club, Wal-Mart and Target are defined as stores that get less than two-thirds of their sales from food and consumables. Currently, food focused retailers have around 52 percent of the market share but that number is expected to fall by 2013 to 42 percent according to the predictions of Willard



Bishop. This is projected from the rise of food sold through discounter stores i.e., club stores, super centers, dollar stores, mass merchandisers, super warehouse stores and limited-assortment stores, which now hold 30 percent of the market (up from 25 in 2000). "Manufacturers and suppliers of food and consumables need to understand the implications of this trend. It is critical for them to build trade plans and strategies to address their shifting retail customer base," said Bill Bishop, president of Willard Bishop. If food focused retailers become the underdog of the food market share, these businesses may soon find themselves being pushed out all together.

Source: Dave Fusaro, Editor in Chief

Web site: [www.foodprocessing.com/industrynews/2006/030.html](http://www.foodprocessing.com/industrynews/2006/030.html)

# New ideas?

## Address Change/Corrections? Suggestions/Comments? Subscription?

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