

The Food Safety Consortium Newsletter



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Retailers Review Food Safety Issues, Responsibilities

Retailers serve as the last line of defense against food contamination before the consumer purchases a product. Employees throughout a retail business have a hand in the process, and risk avoidance “must include a top-level executive commitment,” said an official with the world’s largest meat processor.

Dean Danilson, vice president for food safety and quality assurance-fresh retail at Tyson Foods, explained several of the hurdles that retailers must clear during the Food Safety Consortium annual meeting on Oct. 14 in Fayetteville, Ark. The three-day meeting attracted about 100 participants from the University of Arkansas, Iowa State University and Kansas State University.

Danilson was one of the presenters during a session on issues in retail food safety. During other segments of the annual meeting, FSC scientists from the three universities presented progress reports on their research projects and toured the new food safety laboratories

at Tyson Foods headquarters in Springdale, Ark.

The types of food products and their respective processes define the degree of food safety risk faced by retailers, Danilson said. Food safety risk and liability management is driven by several factors, including illness outbreaks, recalls, legal requirements, brand integrity and confidence, negative media exposure, customer service and product disruption.

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Billy Hargis, James Denton and Yanbin Li, all of the University of Arkansas, confer during the poster presentation session at the Food Safety Consortium annual meeting in October in Fayetteville, Ark.

Have Tea Not Only With Your Meal, but on It

Even if you don’t usually take tea with your meal, you may have it sprayed on your food before you see it.

Tea extracts can reduce foodborne pathogens, so Daniel Fung of Kansas State University explored how to apply tea and what pathogens it would kill on ready-to-eat foods. Fung, leading a Food Safety Consortium research team, tried five different types of tea extracts on four pathogens. The extracts were effective against two pathogens, *Salmonella aureus*



Daniel Fung

and *Listeria monocytogenes*.

“Tea extracts have been shown to have antibacterial activities by several compounds in them,” Fung said. “The susceptibility of various pathogenic bacteria to teas has been found to differ.”

Tea has traditionally been linked to good health practices. “Since drinking tea after a meal is assumed to be beneficial to cleanse the mouth, many researchers have mainly studied the antibacterial effect of tea extract against cariogenic bacteria such

as *Streptococcus mutans*,” Fung said.

“They reported that green tea extract inhibited the growth of *Streptococcus mutans* and analyzed the main antibacterial component in it.”

Fung obtained black, dunggle, jasmine, green and oolong tea for testing purposes. Green, jasmine and black tea were most effective for reduction of *Salmonella aureus*. Jasmine and green tea were most effective in killing *Listeria monocytogenes*. Tests were also run for *E. coli* O157:H7 and *Salmonella enteritidis*, but the tea extracts were not effective against those pathogens.

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Retailers Review... continued

Food safety problems also create business risk factors. Danilson cited short-term and long-term disruptions to retail customers, plant shutdowns, damage to customers and the company, loss of consumer confidence and criminal and civil penalties.

Tyson is using research and testing to reduce incidents of food contamination, Danilson said.

Wal-Mart employs 1.4 million people worldwide, and the company must educate them as to how food safety procedures affect their jobs, said Joan Menke-Schaenzer, Wal-Mart's vice president of food safety and security.

One example is the relatively simple act of washing hands. "We show them

how to open doors with your elbows instead of your hands," Menke-Schaenzer said. Also, Wal-Mart "has focused on shoring up our environment" to reduce the risk of contamination, she said.

So Wal-Mart can receive word quickly of recalls of products it carries, the company has established a retail link on its Web site. The Web notification process enables suppliers to tell Wal-Mart to pull products from the shelves without awaiting time-consuming telephone notifications, Menke-Schaenzer said.

Retail food safety is a prime focus of the Conference of Food Protection, an organization founded in 1972 under the sponsorship of the Food and Drug Administration. Rich Linton, director of

the Purdue University Center for Food Safety Engineering, said the CFP identifies problems in retail food safety and seeks science-based solutions.

The CFP promotes a uniform interpretation and implementation of food safety regulations and works with stakeholders to build consensus among them on food safety issues, Linton said. Stakeholders include industry, academic institutions and consumers.

The CFP has authorized a committee to develop voluntary programs to accredit food protection managers. It also deals with specific issues such as development of standards in which no bare hands should be allowed in working with food in retail stores, he said. ■

Winners Named in FSC Poster Competition

Graduate students in Food Safety Consortium universities' research programs were recognized for their work during the FSC's annual meeting Oct. 13 in Fayetteville, Ark. Research posters submitted by students were judged by a panel of faculty judges who evaluated posters from universities other than their own. The winning students, their poster titles and faculty mentors were:

■ **First place** — Dr. Vivian C.H. Wu, Kansas State University, "Rapid protocol (5.25 h) for detection of *Escherichia coli* 0157:H7 in raw ground beef by an immunocapture system (Pathatrix) in combination with Colortix and CT-SMAC," mentor: Dr. Daniel Y.C. Fung.

■ **Second place** — Dr. S. Andy Heo, University of Arkansas, "Development and characterization of monoclonal antibody probes with high affinity

and specificity for *Listeria monocytogenes* (heat-killed) and *Campylobacter jejuni*," mentor: Dr. Michael G. Johnson

■ **Third place** — Mr. Abani K. Pradham, University of Arkansas, "A mathematical predictive model for the survival/growth/death of *Salmonella* Typhimurium in broiler hatchery," mentor: Dr. Yanbin Li.

■ **Fourth place** — Ms. Bwalya Lungu, University of Arkansas, "Partial control

of *Listeria monocytogenes* on the surface of full fat turkey frankfurters held at 4°C using zein coating containing nisin and potassium sorbate," mentor: Dr. Michael G. Johnson.

■ **Fifth place** — Dr. Vivian C.H. Wu, Kansas State University, "Evaluation of 5' nuclease (TaqMan) assay with the thin agar layer Oxyrase® method for detection of *Yersinia enterocolitica* in ground pork samples," mentor: Dr. Daniel Y.C. Fung.

■ **Sixth place** — Ms. Priyadarshini Gadgil, Kansas State University, "Acute toxicity and mutagenicity evaluation of 2-dodecylcyclobutanone: A unique radiolytic product," mentor: Dr. J. Scott Smith. ■



Judges from the three universities of the Food Safety Consortium examine the entries and decide the winners during the annual meeting.

FSIS Emphasizing Public Health Throughout Food Chain

These are excerpts of remarks for delivery by Merle Pierson, USDA Deputy Undersecretary for Food Safety, at the American Association for Meat Processors annual meeting, July 18, 2003, in Kansas City, Mo.

Redefining the Farm-to-Table Continuum

Traditionally, FSIS has focused mainly on the slaughter and processing phases of meat and poultry. Our regulatory authority begins at the slaughter plant and continues through the distribution and marketing system, but with emphasis on slaughter and processing. Yet, ultimately, we all have a responsibility to make sure each link in the food chain is strong. I also recognize that each of you is committed to food safety and many of you must wonder what more can be done.

For our part, I believe we must do even more to enhance our effectiveness in protecting public health and defining the role we play in the farm-to-table continuum of meat and poultry production. Consideration of food safety must be made at all stages of the food chain. For example, we need new preventive systems starting with live animal production. We need to see our food safety systems continue to evolve along with the great advances we see in production, transportation and processing technologies, many of which have been pioneered by companies here today.

To that end, we recently released a food safety vision document that will guide our continuing efforts to improve the safety of U.S. meat, poultry and egg products and protect public health. Titled, "Enhancing Public Health: Strategies for the Future," the document outlines accomplishments to date as well as challenges that must be overcome in order to further reduce the incidence of foodborne illness. Goals and strategies to be pursued by FSIS are identified and the paper also reports many key steps taken

in the past year to further protect public health. ...

The food safety system for FSIS currently focuses from the point animals are brought in for slaughter to the time when the product leaves the processing plant. I look at it as if our efforts are akin to a partially opened umbrella that is protecting only part of what should be included. We need to open the umbrella to cover the entire food chain. While FSIS does not have regulatory authority over animal and poultry production, nor are we seeking that authority, we are working with producer groups and others to address effective interventions throughout the food system. In consultation with producers, researchers and other stakeholders, FSIS is developing a list of best management practices for animal production facilities such as feed lots to provide guidance in reducing pathogen loads before slaughter. We need to provide the most effective protection possible for the food supply for the American people. Protecting public health is our number one priority.

Substantial Progress Made

Enhancing our efforts does not mean we should overlook the significant improvements we have made to the current inspection system. There is no doubt that HACCP has been effective and it has been greatly improved since its implementation by the meat and poultry industry. In fact, the Centers for Disease Control and Prevention has reported that the rate of foodborne illnesses, across the board, is down due, in part, to the introduction of HACCP.

Currently, our agency is in the process of reviewing re-assessments of beef slaughter, fabrication and grinding HACCP plans for how they address food safety hazards, in particular *E. coli* O157:H7. We are on target in meeting our published dates. Our Consumer Safety Officers began performing



Merle Pierson

reviews in large and small plants this winter and reviews of re-assessments for very small plants began on April 21. We are holding industry, and ourselves, responsible for successfully operating under the pathogen reduction/HACCP rule.

We have made great strides in improving the technical and scientific knowledge of our inspection force. The introduction of the Consumer Safety Officer corps is just one example of how we have continued to introduce highly-skilled, scientific experts into the field to reinforce our veterinarians and front-line inspectors. We are driven by the fact that the enormity of our responsibility cries out for a science-based system, and we continue to incorporate state-of-the-art science into the meat and poultry inspection process at every opportunity. ...

According to the CDC, there has been a major listeriosis outbreak in the U.S. every two to four years due to ready-to-eat products and *E. coli* O157:H7 outbreaks due to consumption of undercooked hamburgers almost on an annual basis. Research and historical data has shown us much about the prevalence of *E. coli* O157:H7, especially during the summer months. FSIS and industry have done much in the past year to address this issue and preliminary data indicates we are making good progress. Regardless, we must continue to press hard to break the cycle of foodborne illness. ...

Existing Food Safety Gaps

I believe there are three main steps to improve food safety. These are:

1. Bridge the gaps in food safety programs;
2. Develop an infrastructure for science-based policy making; and
3. Encourage application of validated intervention methods from farm-to-table.

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Report from the Coordinator



Gregory J. Weidemann

The government has a vision for food safety in the coming years. We're glad to note that research has a prominent role in it. The priorities are explained in a new vision document released by the federal Food Safety and Inspection Service, an agency of the U.S. Department of Agriculture. The FSIS document is called "Enhancing Public Health: Strategies for the Future" and covers several issues in food safety.

As we've noted previously, the research at the Food Safety Consortium's member universities and other institutions of higher education is an important component in the overall picture of research that is also pursued by industry and government. The FSC's research efforts are supported by a special grant approved by Congress and administered through the USDA's Cooperative State Research, Education and Extension Service.

The new FSIS vision calls for the

agency to work with USDA research offices to coordinate food safety research priorities. The vision document states, "This research agenda will include a mechanism by which research needs in food safety are prioritized and conducted by the Agricultural Research Service and the Cooperative State Research, Education and Extension Service with input from other government agencies, academia and stakeholders in order to improve efficiency in the use of resources and effectiveness in application of research results to better improve food safety."

FSIS also announced it has created a new position of strategic manager for research and technology transfer and has hired a senior scientist-veterinarian from the USDA Agricultural Research Service for the job. The scientist "will greatly facilitate FSIS communication and coordination with its USDA and other research partners," FSIS said.

That's a positive step for all. We can't have too much communication or collaboration among the national food safety community's researchers. The FSC has practiced this concept for many years with collaboration of scientists across department lines on their own campuses, across university lines within the Consortium and across government/academic lines by involving scientists from USDA. The breadth of food safety topics requires as wide a range of expertise as can be gathered in research. Administrative turf is not the important factor; research accomplishments matter the most. The FSC and other government-supported research efforts work best when they work together. ■

FSIS... continued

Bridge the Gaps

Bridging the gaps is a crucial step in taking food safety to the next level. Granted, FSIS does not have jurisdiction over ranches or feed lots. However, we have the expertise necessary to collaborate in developing guidelines for these critical steps in the process, and we are working with producer groups in this regard. In addition, we are working closely with our sister agencies to address the timely clearance of emerging production interventions, such as feed additives and vaccines, so that we may take full advantage of new technologies that will help us open the food safety umbrella of protection over these areas. I think it is time that we better address all steps of the food system.

If we want to truly revolutionize our current food safety system, then we need to identify areas in the food chain that are receiving minimal attention. The control of food safety hazards does not

begin and end in the processing plant or animal production. In addition, once meat and poultry leave the processing stage, they are held in all types of different facilities including warehouses and in-transit containers and transported in numerous ways, as you know. These are important steps in the process and we must consider the extent of our presence at these different points in the food chain to better ensure food safety. ...

Risk Assessment

Currently, we operate under a number of different models and sometimes are required to change policy as new crises emerge. I believe there is a better way. Government, industry, academia and all other interested parties need to come to terms on how best to conduct risk assessments. America has always been the leader in food science and technology. Now we can demonstrate it once again in a way that will

benefit all of our citizens.

In some fashion, we need a central, state-of-the-art source for development of risk assessment models. In our vision paper, we state that FSIS will establish a risk assessment coordination team to better focus and plan long-term risk assessment activities. FSIS also will coordinate with researchers within and outside FSIS so that risk assessments are conducted more efficiently, utilizing the best science. ...

Validated Interventions

The third step in our fight against pathogens needs to be the development and application of validated interventions throughout the farm-to-table continuum.

Industry, academia and the federal government need to further work together to develop and implement validated interventions that work in real-life settings such as those you face every

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Managing the Red in Irradiated Pork

No one may ever get the red out of irradiated pork, but it can be managed so that it's not intense enough to bother consumers.

Irradiation is slowly gaining ground as a way to reduce microbial pathogens on pork, poultry and beef. When pork is irradiated, the redness increases, especially when it is vacuum packaged and stored.

The color intensity doesn't cause any harm, but consumers may be wary of extra color that they would not find on non-irradiated meat. The situation prompted Iowa State University's Food Safety Consortium research team to find out what could be done about it.

"We found that certain packaging combinations reduced the color intensity," explained Dong Ahn, an associate professor of animal science at Iowa State. "Consumers like those pink



Dong Ahn

or red colors in raw pork and poultry breast because it looks fresh. The problem is the color remains in the meat after cooking and that creates a problem because consumers then think the piece is not fully cooked. Preventing those color changes in cooking is very important."

The packaging makes the difference. Irradiation produces carbon monoxide, which increases the intensity of the pork's redness. Earlier research showed that vacuum-packaged pork maintains its intense red color as it remains stored. "If you expose the pork to aerobic conditions, color gradually fades because there is competition between carbon monoxide and the oxygen," Ahn said. "The amount

of oxygen available in the air is hundreds of times greater than the carbon monoxide in the meat."

Ahn's research sought to limit the amount of carbon monoxide that irradiation produces. He used antioxidants, substances that prevent or slow the breakdown of other substances by oxygen. By adding certain antioxidants, scientists can reduce the energy sources that lead to the production of carbon monoxide.

That action provides "more competition between oxygen and carbon monoxide," Ahn explained. "So we are

'Consumers think the piece is not fully cooked. Preventing those color changes in cooking is very important.'

packing antioxidants to minimize those color changes." The identification and characterization of the color compounds in irradiated meat

can lead scientists to new methods that will prevent color changes in the meat. ■

Rosemary Keeps the Original Color in Place

Spice can do more than just enhance the taste of food. One spice can prevent chicken from maintaining its original colors even after being irradiated.

The spice with the extra benefit is rosemary extract. Its effects could be useful for marketing irradiated chicken.

Irradiation kills pathogenic bacteria on chicken, but it can make the chicken become pinker. The effect on the chicken is only cosmetic, but that alone might discourage

buyers who would be suspicious of its appearance.

"Color is one of the most important criteria by which consumers select any packaged food product," said Navam Hettiarachchy, a food science professor in the University of Arkansas Division of Agriculture. "Differences in color can be

perceived in terms of meat quality."

A Food Safety Consortium research group directed by Hettia-

The industry is looking for products that maintain the natural color of poultry products.

rachchy examined the effects of rosemary and found that it enables irradiated chicken to maintain its original level of redness and lightness. Irradiated chicken breasts that had been infused with rosemary maintained the color, and color changes were minimized for 12 days of storage.

"Rosemary is used as an antioxidant in several food products," Hettiarachchy explained. "Antioxidants prevent rancidity. It's a natural extract used in several food products."

Irradiated chicken's pink color remains even after cooking, which could

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Charles Scifres, Former FSC Coordinator, Dies at 62

Charles J. Scifres, who served as coordinator of the Food Safety Consortium and chair of its Steering Committee from 1996 to 2000, died July 28 of an apparent heart attack.

Scifres was affiliated with the FSC while he was at the University of Arkansas as dean of the Dale Bumpers College of Agricultural, Food and Life Sciences and associate vice president for research of the UA Division of Agriculture. He left Arkansas to take a position at Texas A&M University as associate vice chancellor and associate dean for agriculture and life sciences and deputy director of the Texas Agricultural Experiment Station.

Scifres, 62, was named to his Texas A&M executive positions on Jan. 1, 2001.

“Dr. Scifres had a major positive impact during his nearly seven years as dean of the college and chief operating officer of the experiment station,” said Gregory J. Weidemann, who succeeded Scifres in his positions with the FSC and the UA. “He provided visionary leadership for restructuring and strengthening programs to better serve our students and stakeholders. Part of his enduring legacy was to instill into the culture of the college and experiment station a habit of embracing positive change.”

Scifres is credited with restructuring the Arkansas college’s academic departments, establishing a distance education program and helping build an effective

development program.

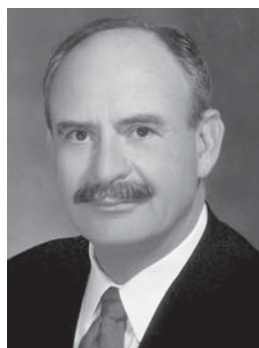
With the FSC, he worked with officials from Iowa State University and Kansas State University to secure additional funding for food safety research through the establishment of the National Alliance for Food Safety, which today consists of 20 universities and the U.S. Department of Agriculture Agricultural Research Service.

“Charley was a key member of our leadership team,” said Dr. Ed Hiler, Texas A&M vice chancellor for agriculture and life sciences and director of the Experiment Station. “All of us will deeply miss his leadership, his wonderful attitude, and his tremendous contributions to TAES and the Agriculture Program.”

Hiler noted that Scifres had excellent academic credentials as a research scientist and that he had successfully led experiment stations in both Oklahoma and Arkansas. His career began at Texas A&M, where he served on the faculty from 1969 to 1987.

At the time of his death, Scifres was responsible for statewide oversight and management of the Experiment Station’s agricultural research programs throughout Texas.

Before his tenure in Arkansas, Scifres spent seven years at Oklahoma State University, first as professor and head of



Charles J. Scifres

the agronomy department. From 1990 to 1994, he was associate director of the Oklahoma Agricultural Experiment Station.

In his first stint with Texas A&M, Scifres rose from assistant professor to full professor in seven years and in 1982 became the first Thomas M. O’Connor Professor of Range Science, a post he

held for five years until his appointment at Oklahoma State.

Scifres authored two books on range improvement and fire ecology and published nearly 150 articles in his field. He had long been an advocate of integrated brush management systems and their ecological impacts. He led an interdisciplinary research team that studied a spectrum of economic, environmental and managerial aspects of range ecosystems in South Texas.

Scifres held bachelor’s and master’s degrees from Oklahoma State. He earned his doctorate in agronomy (weed science and grazing lands) at the University of Nebraska in 1969.

He is survived by his wife Julia of College Station; son Dirk and daughter-in-law Vickie Scifres of College Station; daughter Holly and son-in-law Thomas Wooton of Belgium; and four grandchildren. ■

Rosemary... continued

cause consumers to be skeptical. “Consumers are apprehensive because they think the chicken is undercooked or not cooked right,” Hettiarachchy said. “So the industry is looking for products that maintain the natural color of poultry products.”

“Antioxidant components in rose-

mary prevent lipid oxidation and can reduce color change during irradiation,” Hettiarachchy said.

Additional research should be done on sensory evaluation of irradiated chicken. Hettiarachchy tested the chicken in the lab and did not find any objectionable flavor, but she said a formal sensory testing process should be

conducted to confirm her belief.

“Rosemary has a nice spicy flavor that blends well with the chicken,” Hettiarachchy said. “I don’t foresee any consumers objecting to its use. If irradiation is to be accepted by consumers, rosemary would be one of the natural extracts that would have a lot of consumer demand.” ■

Rama Nannapaneni, with co-authors Michael Johnson, Robert Story and Keith C. Wiggins, all of Arkansas, and Aubrey Mendonca, Iowa State, presented two research posters on virulence/invasiveness of *Listeria monocytogenes* and *Campylobacter jejuni* at the American Society for Microbiology General Meeting in May in Washington and at the International Association for Food Protection meeting in August in New Orleans. Marlene Janes, Arkansas (now at Louisiana State University), with co-author Johnson presented a research poster on control of *Campylobacter* on raw chicken with zein-nisin coatings at the IAFP meeting.

Andy Heo, Bwalya Lungu and Mike Sostrin with co-authors Rama Nannapaneni, Robert Story, Keith C. Wiggins and Michael G. Johnson, Arkansas, presented four research posters on monoclonal antibodies for *L. monocytogenes* and *C. jejuni*, and control with nisin of *Listeria* in frankfurters and non-nutritive buffer solutions at the American Society for Microbiology meeting in May in Washington and at the Institute of Food Technologists meeting in July in Chicago.

Andy Heo, Arkansas, was awarded second place for his presentation on monoclonal antibodies for *L. monocytogenes* and *C. jejuni* at the Institute of Food Technologists meeting in July in the Food Microbiology Division John Ayres Graduate Student Research Poster Competition and earned a prize of \$150. This paper also won a third place award in the Ph.D. graduate student Gamma Sigma Delta University of Arkansas chapter research competition in February.

Bwalya Lungu, Arkansas, was awarded second place for a research poster in the Ozark Food Processors Association Graduate Student competition in March.

W.G. McGlynn, D.R. Davis, Michael Johnson and Phil Crandall, Arkansas, published an article on “Modified Spore Inoculation Method for Thermal Process Verification of Pinto Beans and Green Beans Canned in Two Large Reusable Containers” in the *Journal of Food Science*, 67 (No. 3): 988-991.

Lin Xie, Navam Hettiarachchy, Marlene Janes and Michael Johnson, Arkansas, published “Antimicrobial Activity of Gingo Biloba Leaf Extract on *L. monocytogenes*” in the *Journal of Food Science*, 68: (No. 1): 268-270.

John (Sean) Fox, Kansas State, delivered a presentation on “BSE: Risks and Countermeasures” at the Livestock Marketing Information Center annual meeting in June in Kansas City. Fox also wrote an article on “Mad Cow Disease: United States Must Do More Than Hope for Healthy Burgers” for *The Kansas City Star* op-ed page in June. In May, he was interviewed by the Australian Broadcasting Corp. program “The World Today” for a segment on beef markets rebounding despite mad cow disease discoveries. Fox also published “Influences on Purchase of Irradiated Foods” in *Food Technology*, 56: (Nov. 2002): 34-37, and “Existing U.S. Barrier for BSE Needs Strengthening” in *Feedstuffs*, Feb. 24, 2003, Vol. 75, No. 8.

Curtis Kastner, Kansas State, spoke on food safety and security at the Food Industry Round Table Conference in July at KSU. In August, he delivered a presentation on “*E. coli* and Beef Safety: How Real Is the Issue?” at the Decatur County Feed Yard Beef Short Course at KSU. Kastner also led the KSU Food Safety Consortium team’s organization of the Midwest Carcass Disposal Conference in August in Kansas City, sponsored by the Kansas Animal Health Department. ■

Have Tea... continued

Tea extracts can be sprayed on or directly applied to ready-to-eat foods or other commodities to prevent the growth of pathogenic bacteria. That’s not the only benefit.

“Part of our study is also on the extension of shelf life for food products,” Fung said. The next phase is to concentrate on shelf-life extension of fresh products or even ready-to-eat products.”

One advantage of extracts for shelf life is the natural factor they provide for prolonging the life of ground beef, ground pork, chicken, turkey or fish. “You can rinse them with these natural compounds,” Fung explained. “Consumers like to hear the words ‘natural ingredients.’” ■

FSIS... continued

day. Just because an intervention method is published in a peer reviewed journal and it appears to work in a pilot plant doesn’t mean it will work in actual practice and under the multitude of conditions in the production and processing environment.

A conscious effort has been made when drafting FSIS Notices and Directives to encourage industry to utilize new intervention strategies. Scientific innovation that keeps our food safer should be encouraged. However, validation of such technologies in the plant is not as developed as it should be, and efforts to improve this must be pursued.

My hope is that industry, academia and government will work together to develop intervention methods that will be validated at the various stages of the food chain and then applied from farm-to-table. Once these technologies prove successful then they need to be approved in a fast-track manner. That is where FSIS comes in. Government needs to respond efficiently and effectively when technological safeguards become available and help, not hinder, industry in its implementation of these food safety innovations. I am pleased to tell you that FSIS is working to lessen the time between the development and

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Food Safety Digest

by Dave Edmark

In August the federal Food Safety and Inspection Service launched a New Technology Office, which will encourage industry to use new technologies designed to reduce pathogens on meat and poultry. Elsa Murano, undersecretary for food safety at the U.S. Department of Agriculture, said the office was created to streamline the implementation of new technologies in plants and to reduce the amount of time it takes the agencies to review new technologies.

FSIS cited steam vacuums, steam pasteurization and antimicrobials as examples of advances in food safety technology that have been developed in recent years. The new office will manage the review process for experimental protocols conducted by industry and assess the new uses of approved substances.



FSIS is also opening new regional training centers in Atlanta, Dallas, Philadelphia, Des Moines and Boulder, Colo. The centers are designed to bring workforce training programs to FSIS field employees around the country.

“The most effective way to provide comprehensive training to our field

employees is to bring that training to them,” said FSIS Administrator Garry L. McKee.

The training is coordinated from FSIS headquarters in Washington and will allow the agency to train more inspectors each year to enhance their abilities. During the fiscal year that began in October, FSIS plans to train all new entry-level slaughter establishment inspectors and veterinary medical officers in technical, regulatory and public health methods, the agency said.

Also, FSIS has designated Cmdr. Lynn Hodges of the U.S. Public Health Service to oversee the workforce training program. Hodges will coordinate the program as senior adviser for workforce training and education.



More needs to be done, says the Milbank Memorial Fund of New York and Resources for the Future of Washington, “to address the lack of integration across the food safety system, which prevents the best possible use of research, regulatory and educational resources.”

The organizations issued a report, “Food Safety Updated: Developing Tools for a More Science- and Risk-Based Approach” written by four nationally prominent food safety researchers – Michael R. Taylor, Margaret K. O’Glavin, J. Glenn Morris Jr. and Catherine Woteki.

“Practical tools are lacking for ranking risks and prioritizing opportunities for risk reduction at

appropriate points across the entire farm-to-table spectrum, and this hampers food safety officials’ ability to set priorities and allocate resources effectively,” the report’s executive summary said. “The realization of a science- and risk-based approach to reducing the burden of foodborne illness requires decision tools that will allow for a more systematic collection and analysis of data on foodborne hazards, on their causes, and on the cost and effectiveness of interventions to prevent or minimize hazards.”

The report called for the development of more decision tools and risk-ranking models and models for prioritizing opportunities. The results “will make explicit, and bring greater analytical rigor, to the many health and other factors that properly influence the design and management of a large and multifaceted program to reduce the burden of foodborne illness.”

The report is available on a Web site at <http://www.milbank.org/reports/2003foodsafety/030731foodsafety.html>. ■

FSIS... continued

implementation of new technologies that will improve meat and poultry safety. To accomplish this task, the Agency is establishing a new office of technology approval review so that the process can be streamlined and focused. However, we must always be vigilant to assure that these new strategies are safe and do not introduce new food safety concerns. ... ■

The Food Safety Consortium Newsletter

is a production of the three member schools of the consortium: University of Arkansas, Iowa State University and Kansas State University. Your comments are welcome.

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