

# THE FOOD SAFETY CONSORTIUM NEWSLETTER

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## FSC Keynote Speaker Declares at Annual Meeting U.S. Scientists Must Spread the Word of Biotech

A trip around the world left no doubt in Lester Crawford's mind that the U.S. system of regulating food is the best. The trip also left Crawford with the idea that American scientists in industry and academia must make their voices heard overseas on the topic of biotechnology.

Crawford, the director of the Georgetown University Center for Food and Nutrition Policy, shared his experiences as the keynote speaker at the Food Safety Consortium's annual meeting in September at the University of Arkansas.

Crawford spent six

weeks visiting 15 nations in a tour sponsored by the State Department to present programs about American efforts in biotechnology. With much skepticism on other continents, the American group aimed to persuade its hosts of biotechnology's potential benefits.



**Lester Crawford of Georgetown University addresses Food Safety Consortium annual meeting in Fayetteville, Ark.**

“We have a formidable adversary in the consumer organizations that is well intentioned in many cases and is so vastly opposed to biotechnology and to the American drug and chemical development

system and to American- and European-based multinational corporations,” Crawford said. “It is a worldwide movement. It is a very serious assault on our system and it is likely to stymie virtually anything we develop in the next few years until we get it reconciled.”

Crawford provided several examples of foreign governments' receptiveness to hostile attitudes toward biotechnology. Australia, he said, has appointed a gene technology regulator who does not answer to the prime minister's government or anyone else. “The law says that this person, when it comes to bioengineered foods, will report to no one.”

Australia's policy has pleased

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## FSC Looks to 2001 Meeting at ISU

After completing the 2000 annual meeting hosted by the University of Arkansas, the Food Safety Consortium Steering Committee decided to meet in 2001 at Iowa State University. The meeting will be held Sept. 16-18 (Sunday through Tuesday).

Kansas State University will host the meeting in 2002, completing the first round of the three-campus rotation of FSC annual meetings that began this year.

About 90 people attended the

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**Casey Owens (far left) of the University of Arkansas poultry science faculty leads group through a tour of the university's pilot poultry processing plant during the FSC annual meeting on campus.**

***U.S. Scientists Must... continued...***

Singapore, which is committed to building biotechnology industries and seeks to be East Asia's leader in the field. Australia's policy, Crawford said, means "not only will you not be able to get a biotech food product approved. You also won't be able to sell them and you won't be able to start a research program."

Crawford's touring group found in Hong Kong that the organization Greenpeace had alleged that two American fast food restaurants were selling french fried potatoes containing genetically modified products.

"It fed into the standard Greenpeace line that it will take 30 years of experience with bioengineered food to know for sure that they're safe," he said. "What they mean is 30 years of us Americans eating bioengineered foods before they know it is safe. I don't know why it's 30 years."

These developments are a serious challenge to the U.S. because of their potential impact on international trade, Crawford said. For American businesses to compete successfully, the U.S. needs to export ideas as well as goods, and Crawford had one particular idea in mind.

"The strongest thing we have going for us is the regulatory decision

process in the U.S.," Crawford said. "It is basically without parallel. It has served us well and has become part of our culture. We need to continue to modify and improve it."

Crawford cited three key elements of the regulatory process as reasons for its success: science-based decision making, public participation and the separation of powers.

The U.S. is unique with regard to science-based decision making, he said. After scientific data are evaluated by the Food and Drug Administration, "they render a judgment of reasonable assurance of no harm. It tells us there is no absolute safety. When FDA lets it on the market, it has a reasonable conviction that this isn't going to harm anybody. But you will never know that for sure, even after 30 years."

The public participation phase provides nine steps between the patenting of a product and its release on the market, including five steps that require public input. "FDA is not required to conduct this as an election," Crawford said. "They read

the comments, take them seriously and respond to each one in writing."

The American separation of powers places responsibility for food regulation in well defined locations, Crawford noted, in contrast to European systems. The FDA and the U.S. Department of Agriculture have authority to make the final decisions.

"They don't have to ask Congress if this is all right," he said. "They don't

have a committee to say if this is all right. They are in charge. And if they don't do it right we just remove them."

Crawford urged scientists to speak out on these issues so other nations will have the benefit of their viewpoints.

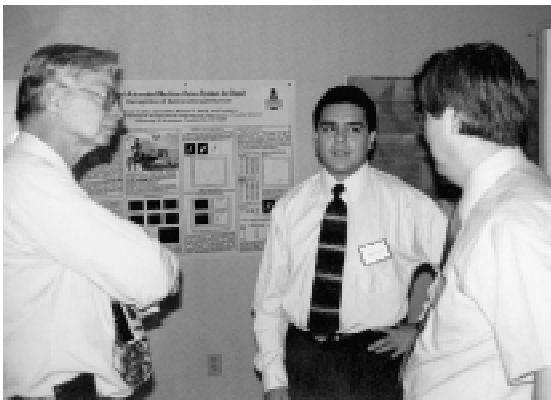
"I think what they really need to hear are

not so much academic scientists as they need to hear from the whole spectrum of scientists in the U.S., he said. "Unfortunately, in this particularly incendiary time, they will not listen to industrial scientists in the biotechnology area. That will come a little later. But we have got to do more in that respect." ■

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*"The strongest thing we have going for us is the regulatory decision process in the U.S. It is basically without parallel."*

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***FSC researchers discuss their work during the poster session at the annual meeting in Fayetteville, Ark. From left are Carl Griffis, Omar Trujillo and Yanbin Li, all of the University of Arkansas.***

***FSC Looks to 2001 Meeting... continued...***

meeting in Fayetteville, Ark., which included a poster session and presentations by researchers on risk assessment, education, consumer issues, control and intervention strategies and sampling protocols and methodology. The meeting also included tours of UA facilities in poultry science and food science.

Plans for the 2001 meeting will take shape gradually, but consideration is being given to devoting the Tuesday morning session to a mini-conference featuring prominent speakers from the outside. A major topic in food safety would highlight the mini-conference as well as the main meeting. Other ideas being explored include keeping posters on display during the entire conference instead of for only the first evening and moving the keynote speaker's address from the Monday luncheon to the Monday dinner.

In other business, the Steering Committee appointed a subcommittee to form a policy regarding the FSC's relations with other nations in food safety exchange efforts. Subcommittee members are James Dickson and Colin Scanes, both of Iowa State, and James Denton of Arkansas. ■

# Education a Never-Ending Process at the Plants

Food processors view food safety education as a continuing effort that must be made available to all levels of employees. When representatives of three meat industry processors discussed their experiences during the Food Safety Consortium annual meeting in September in Fayetteville, Ark., they agreed that turnover in the plants makes the task a challenge.

“You’ll spend all this time and effort training 500 employees and you’re going to have to do it again in three to six months because a large percentage of them will have turned over,” said Billy Lloyd, regulatory liaison for Foodbrands America in Oklahoma City.

The responsibility does not apply only to hourly employees in the packing and production facilities. “Turnover is an extreme problem, not just with the hourly folks but with the management folks as well,” said Rick Roop, vice president for food safety and quality assurance at Tyson Foods

in Springdale, Ark. “There are a lot of opportunities in today’s economy. The training has to be continuous.”

The numbers begin to add up when someone tries to tally the various categories of employees in the industry who need to be educated in food safety. “To educate all the different levels that we’ve got to get to — the line worker, the food service worker, the high school kid who’s working at McDonald’s — there’s just so much education,” said Mike Windisch, corporate technical services manager for the Excel Corp. pork division in Wichita, Kan.

Windisch advised the FSC researchers that industry needs scientific data to help ensure that executives are making the right decisions. Industry must stick to the premise that food safety is science, he added.

“We’ve got to stay science-based,” Windisch said. “If I go strictly to a food safety program based on regulatory or consumer groups or whatever pressures there might be that day, I can’t look at myself in the mirror.”

Supervisory and management personnel are the people who should be involved in teaching the principles of Hazard Analysis and Critical Control Points systems to

plant employees, Lloyd said. HACCP systems, the science-based food safety procedures that each plant is required to devise and implement, exist not just to accommodate regulations but to accomplish a purpose.

Roop said it is up to the companies to involve people at other firms, such as distributors and customers, in the aspects of HACCP and the ability to trace products. “It’s incumbent on us to educate our customers that the type of things that we’re doing in our operations is critical for their operations and the entire effort to protect the consumer.”

Roop also noted that video-tape presentations are most effective for training employees at the line worker level. “You bring in a group of folks during the workday and have a short training session.” The Internet is being used more often by management and may become more widely used by all levels of employees as training centers are established by companies. ■

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*Industry must stick to the premise that food safety is science.*

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***Rick Roop (left) of Tyson Foods confers with James Denton, director of the University of Arkansas Center of Excellence for Poultry Science, before the FSC panel on food safety education.***

# Report From the Coordinator

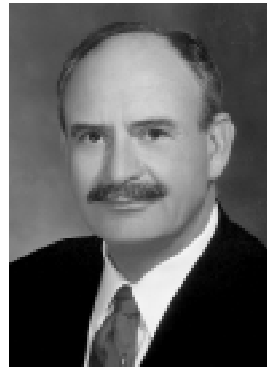
**A**s reported elsewhere in this edition, we wrapped up another annual meeting of the Food Safety Consortium this fall. For those of you who were able to join us here at the University of Arkansas, which hosted the event, we thank you for coming and hope you found the experience worthwhile. Our annual meeting is a gathering that continues to evolve and we're already considering ways to improve it and make next year's meeting the best yet.

Our meeting at the UA in Fayetteville was the first time the Consortium has met on one of its three member university campuses. After several years of meeting in centrally located Kansas City, the FSC steering committee decided it was time for these meetings to be more than just presentations in hotel conference rooms. The research we perform at each campus is unique, which is a key reason that Congress supports this consortium's work. So the FSC has begun rotating its annual meeting sites among the three campuses, enabling

researchers to view the work that is done on site.

With Arkansas hosting the first campus meeting, we provided in-depth tours of our food safety research facilities. At our pilot poultry processing plant, our fellow researchers from Iowa State and Kansas State were able to see a scaled version of modern poultry industry procedures. In our food science labs, our visitors were shown examples of our work on *Listeria monocytogenes* and bacteriocins. An evening tour group took an after-hours look at several laboratories in our five-year-old poultry science building.

The opportunities for on-the-spot questioning and demonstrations of current projects provided a new dimension to our annual meeting. We're looking forward to a repeat



*Charles J. Scifres*

performance at Iowa State in 2001 and at Kansas State in 2002.

We are also looking at ways to enhance the meeting by supplementing our own researchers' presentations with lectures or discussions from prominent figures in the world food safety community. Details will need to be worked out over the next few months, but we hope that by the time

the agenda is set for the meeting in Ames, Iowa, we will have a conference that will attract people across the country with a strong interest in food safety.

Our meetings are designed to be educational experiences and have been just that for the benefit of fellow FSC researchers. As we share the results of research with the world around us, future meetings should enable us to share discussion of current issues with others as well. ■

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## Limited Application Hinders HACCP Benefits

**By Les Crawford**  
**Ceres Forum**  
**Georgetown University Center for Food and Nutrition Policy**

**T**he World Health Organization (WHO) has revised its fact sheet on food safety to reflect worsening conditions in much of the world. Describing foodborne disease as a "widespread and growing public health problem, both in developed and developing countries," the Agency estimated 30 percent of the developed world suffers from food borne disease every year.

The U.S. was cited as having 76

million cases of foodborne disease each year, 5,000 deaths from these diseases and 325,000 food related hospitalizations per annum. The financial cost to the U.S. was estimated at \$37 billion.

There are 1.8 million children plus 400,000 adults who die worldwide from these diseases. While global morbidity figures are elusive, two major epidemics were mentioned: the 1988 hepatitis A outbreak in China with 300,000 illnesses due to bad clams; the 1994 U.S. salmonellosis outbreak with 224,000 cases.

WHO obviously believes that the key to managing the food safety crisis

is information. Monitoring pathogens in food, laboratory-based surveillance of "priority foodborne diseases" and erecting international networks for the reporting of microbiological and toxicological contamination of foods are just part of the massive intelligence campaign envisioned by WHO.

The diseases mentioned most prominently in the report include Campylobacteriosis, salmonellosis, *E. coli* 0157:H7, Listeriosis, BSE, and dioxins. Alarmingly, WHO is in the same context "weighing up the potential risks and benefits of biotechnology."

Another categorical area of concern is

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# Cooked Pork Quality Is Color Blind

The food industry, government agencies, scientists and consumer advocates agree wholeheartedly on at least one thing: only a meat thermometer can accurately determine if meat has been thoroughly cooked to the internal temperature of 160 degrees Fahrenheit necessary to kill harmful bacteria.

Despite such advice and the publicity efforts to spread the word, many consumers are still relying on the old-fashioned and unreliable method of visually examining cooked meat to see if the internal color appears sufficiently brown.

That procedure can be deceptive because of potential “premature browning” — the appearance of ground meat turning brown inside before it is sufficiently cooked.

The appearance of color can also be deceiving for whole muscle pork. “Some appeared more pink than expected and others appeared more well done at lower endpoint temperatures than expected,” said Melvin Hunt, a Food Safety Consortium faculty researcher in the animal sciences department at Kansas State University.

Kansas State researchers conducted experiments to determine how cooked pork with different varieties of muscle quality would appear after being cooked to safe levels. Pork chops with normal or enhanced quality muscle that were cooked to medium doneness (160

degrees Fahrenheit) appeared moderately pink to slightly pink. Only those chops cooked to the higher temperatures of doneness appeared tan, gray or white inside.

Among cooked pork samples of pale, soft and exudative (PSE) muscle quality, the chops were less pink than those of normal muscle quality. Among dark, firm and dry muscle quality pork, the chops appeared to be less well done.

The studies by Kansas State show that PSE pork chops are more susceptible to color variation than normal quality chops, Hunt said. PSE muscle occurs in 10 to 30 percent of all pork. Overseas markets generally don’t want PSE pork so it is usually sold in the U.S.

Just as pork can appear to be done when it really isn’t, the reverse can be true also, especially with PSE pork.

“One piece can look done and another can look less done, even though both are really equally done,” Hunt said. Slightly pink pork can be safe, as

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KSU tests have shown.

The dry, firm and dark muscle quality of pork (DFD) is characterized by its persistent pinking. Even a well-done pork chop of DFD variety would still appear pink.

All of the above reinforces the notion that appearances can be deceiving. Hunt joins professional colleagues in urging consumers to use the various types of disposable thermometers on the market.

“Consumers historically overcook pork because of concerns for safety, yet they want tender, juicy products,” Hunt said. Consumers believe that cooked pork that has a pink color is unsafe. ■

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## Limited Application... continued...

animal feeding practices especially the addition of meat and bone meal and antibiotics to feedstuffs.

How ironic it is that with all the attention given food safety over the last 18 years, the problem has only gotten worse on a worldwide basis. We are no doubt only a short time away from the long-awaited day of reckoning on HACCP when some board of inquiry, perhaps Congress or the EU Parliament, will ask, “Has it helped or hindered?” And, oh yes, what proof do you have that it directly affects human disease.

It may well be too soon to say how

efficacious regulatory HACCP truly is. It is not, however, too soon to say that the HACCP concept is ripe for appraisal and, perhaps, continuing improvement.

One suspects that the present, limited use of HACCP at certain points in the food production continuum is inadequate. One also wonders whether the overselling of HACCP coupled with its limited application did not set the system up for failure or, at the least, modest success.

In a stunning chapter in the new book, *HACCP in the Meat Industry*, J-L Jouve of France probably has set

much of the future tone for food safety and food inspection. Titled “Moving on From HACCP,” Dr. Jouve explains, “Going beyond HACCP towards a risk-based food safety management program will be crucial for companies wishing to move from a regional or national scale to an international one. It is likely that only companies that recognize this need will be successful on the international marketplace during the 21st century.” More details can be found on the web at: [www.woodhead-publishing.com](http://www.woodhead-publishing.com). The book is edited by Martyn Brown and is distributed in the U.S. by CRC Press. ■

# Steps Cited Toward Food Safety Goals

*Here is an excerpt from remarks prepared for delivery by Dr. Catherine Woteki, Under Secretary for Food Safety, before the National Conference on Animal Production Food Safety, Sept. 6, 2000, in St. Louis.*

It has been five years now since the Food Safety and Inspection Service (FSIS) first articulated its food safety goals and a strategy to achieve them. To refresh your memory, that strategy was part of the February 1995 proposed rule on Pathogen Reduction and HACCP Systems. One element of that strategy was the need to approach food safety broadly and address potential hazards that arise throughout the food production and delivery system, including before animals enter FSIS-inspected establishments and after meat and poultry products leave those establishments.

While FSIS articulated the strategy, by no means was this a job that FSIS could carry out alone. It required a team effort among many government agencies — including those represented here today — industry, academia, and consumers. Each had an important role to play.

Nor could all of these changes be made at once. FSIS chose to focus most intensively at first — and appropriately so — on regulatory oversight of slaughter and processing establishments. The Pathogen Reduction and HACCP rule — which mandated HACCP and set performance standards for Salmonella that plants must meet — has now been implemented in all Federal and State plants. This has been a major achievement, thanks to the hard work of both industry and FSIS. HACCP implementation has gone very smoothly and has accomplished dramatic reductions in Salmonella in meat and poultry products.

Now I believe we are seeing the progress we have made at the in-plant

level spread to other segments of the farm-to-table chain. Certainly, the strategies developed for plants are not the same strategies that are appropriate for animal production.

We all have known from the very beginning that a different approach is needed — basically, a focus on voluntary quality control programs, research, and educational outreach — all carried out through partnerships. We are beginning to see the fruits of our labor, as you are hearing during this conference from the various presentations. Certainly, many challenges remain, but I believe we are in a much better place than we were five years ago. ...

I believe there are four major challenges for the future.

First, we must continue progress in all areas of research and risk assessment along the entire farm-to-table chain. For example, in animal production arena, we need to identify cost-effective practices that can be carried out on the farm to reduce food safety hazards. These practices can then be incorporated into quality control and production control programs used by producers. In addition, government agencies need more experience in using risk assessments to guide risk management strategies. I believe this will naturally occur as more risk assessments are conducted.

Second, we must recognize the links between the segments of the farm-to-table chain so that the jump from one segment to the other is not so abrupt. There's still too much shirking of responsibility and assigning blame to others. Attitudes have changed among large segments of producers, slaughters and processors, and retailers, but still some of this occurs. One approach is to

recognize and accept the interdependency among the segments in terms of both industry and government activities. For example,

FSIS is pilot testing a project whereby inspectors can move more freely between in-plant and in-distribution locations in order to ensure the integrity of the marks of inspection on meat and poultry products. This also requires that Federal, State and local government officials better coordinate their activities related to food safety.

Third, I encourage the animal production community to continue to look beyond its own immediate sphere of interest and expertise and participate in food safety issues at a broad level. The adage “think globally, act locally” applies here. For example, I encourage industry representatives at all levels of the farm-to-table chain to participate in the activities of the Codex Alimentarius Commission. The animal health and food safety standards set by the Commission have broad-ranging implications for animal production practices, for public health improvement, and for the economy.

And fourth, we must continue to strengthen partnerships between government and industry in order to continue progress. I believe we've seen progress already made in the animal production food safety area, and much of that is attributable to the voluntary quality assurance programs discussed in this morning's session.

How can we achieve our food safety goals? The answer is to keep focused on farm-to-table, cost-effective interventions.

There are many obstacles that will be encountered. But as Henry Ford once said, “Obstacles are those frightful things you see when you take your eyes off your goal.”



*Catherine Woteki*

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# Food on the Move: ISU Helps the Schools

Transporting food can increase its susceptibility to contamination, a situation understood by managers of “satellite” food operations. Food Safety Consortium faculty at Iowa State University are helping the state’s school food service personnel improve the food safety and quality of satellite-delivered meals by offering courses such as ServSafe.

“School systems that prepare their food in a central kitchen and then transport the food to individual schools for last-minute finishing and service (satelliting) must deal with the problem of keeping the food safe to eat and appealing to the students,” said Jim Huss, an ISU Extension Specialist.

ServSafe is a sanitation certification program developed by the National Restaurant Association. In addition to learning about foodborne pathogens and disease transmission, ServSafe helps the cook/managers target and implement food safety practices that will reduce the potential for foodborne illness in their schools.

Satelliting has been demonstrated to improve productivity and lower costs in a school food service operation, so school districts with multiple food service outlets (“lunchrooms”) are increasingly turning to satelliting instead of building multiple free-standing kitchens. The additional steps of transporting prepared food, and reheating it to serving temperature increases the potential for a foodborne disease outbreak, which could affect many students.

Food service preparation and delivery personnel must be concerned about prepared food being kept in trucks for relatively long periods of time, Huss said. “A focus is main-

tained on keeping the food at safe temperatures when entering the pre-heated food carrier and the maintenance of the food at a temperature above 140 degrees Fahrenheit throughout the delivery process.”

There are many such critical control points in food service, so ISU Food Safety Consortium faculty in Hotel, Restaurant and Institution Management and Food Science and Human Nutrition also offered a one-day course on Hazard Analysis Critical Control Points (HACCP). During the one-day course, managers identified the hazards in their food service operations and then started thinking about how to implement measures to control and reduce the potential of each hazard resulting in a foodborne disease outbreak.

For example, Huss explained, a hazard analysis of the food transport system can provide documentation to local school boards of the need to purchase or repair equipment used in the satelliting process. HACCP implementation will be supplemented

by a web site to assist the managers in writing their HACCP plans.

Distance education has helped bring the ServSafe curriculum to people across

Iowa. The state’s fiber optic system with two-way audio-visual capability links all Iowa schools. “Last year, 160 managers and lead employees enrolled in the ServSafe course at nine different sites,” Huss said. “They did not come to the Iowa State campus — we had seating room for 20 in our room here. The other 140 were scattered around the state.”

In addition to the food safety courses, each summer Iowa State

University Extension and the Iowa Bureau of Food and Nutrition enroll from 500 to 700 school food service managers and employees in courses on management, food production, nutrition, menu planning and computerized nutrient standards menu planning. ■

## Papers & Presentations

**Harley W. Moon**, Iowa State, was installed in the USDA Agricultural Research Service Hall of Fame for research on enterotoxigenic and enterohemorrhagic *E. coli* infections.

Moon also published, with **I.M. Pruimboom-Brees, T.M. Morgan, M.R. Ackerman, Evelyn D. Nystrom, J.E. Samuel** and **N.A. Cornick**, “Cattle lack vascular receptors for *Escherichia coli* 0157:H7 Shiga toxins” in *PNAS*, 97 (19):10325-10329, 2000.

**Curtis Kastner**, Kansas State, received the Advanced Degree of Distinction Award in April from Oklahoma State University. Kastner also received the Gamma Sigma Delta Award of Merit in April at Kansas State. ■

### Steps Cited... continued...

I am confident that if we remain focused on our goal of improving food safety, we can indeed succeed. Your recommendations on research and education will be important to moving forward. ■

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about prepared food  
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# Food Safety Digest

By Dave Edmark

The “archaic” requirements of the Meat Inspection Act of 1909 are hindering the government from responding to the hazards of microbiological contamination in the food supply, a representative of the Council for Agricultural Science and Technology told a U.S. Senate hearing in September.

Mike Doyle of CAST and the University of Georgia Center for Food Safety and Quality Enhancement, testified to the Senate Agriculture Committee that major changes are needed in food safety programs implemented by federal agencies, the agribusiness newspaper *Feedstuffs* reported.

Doyle criticized federal laws that still link the Food Safety and Inspection Service to the pre-HACCP organoleptic inspection system. He said the old system directs the agency to secondary problems.

Also, Dane Bernard, vice president of the National Food Processors Association, told the committee that FSIS’ required tests for salmonella “do not measure whether a product is safe or whether the operation that produced the product is sanitary.” Agriculture Secretary Dan Glickman responded that industry opposition to the tests would

“undermine our performance standards.”

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As irradiation becomes more of a potential factor in food processing, more questions about the topic arise. The Food Safety and Inspection Service has launched a question-and-answer web site at <http://www.fsis.usda.gov/OA/topics/irrmenu.htm> to accommodate the public.

The questions cover subjects such as labeling, ingredients, packaging materials and procedural issues.

More basic information aimed at consumers is available on a Food and Drug Administration web site at <http://www.fda.gov/opacom/catalog/irrdbro.html> which reproduces the text of a recently released brochure.

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The Food Safety and Inspection Service is proposing to share some proprietary information with state and other federal government agencies when a recall of meat or poultry products is being conducted.

Under this proposed rule, FSIS would share some confidential proprietary information with other government agencies in connection with the recalls of meat, poultry and egg products. The federal government is permitted to withhold certain categories of information from public disclosure. Agencies receiving the information would provide written agreements not to disclose proprietary information without the company’s

written permission or written confirmation from FSIS.

Recalls are voluntary actions by plants or distributors in cooperation with federal and state agencies.

■ ■ ■

We’ve already extensively quoted Les Crawford of Georgetown University in this edition of the newsletter. Dr. Crawford has been busy with numerous well-crafted speeches the past few months, so here’s an excerpt from one more that he delivered at the National Conference on Animal Production Food Safety in St. Louis:

“In short, when it comes to human food safety, we are not there yet. Having fun in the plant with HACCP is useless if the food is contaminated upstream and even HACCP cannot systematize safety into all the food all the time when it is employed at only one discrete point.

“Unless we construct a system that inextricably links all the steps in food production to a thoroughgoing food safety plan that concentrates on reducing human disease rather than just counting pathogens, I think we will be back here in 5 years wondering what went wrong. I firmly believe the system that will take us beyond HACCP will turn out to be Food Safety Objectives. It is the only one I know that focuses on the real problem — human disease incidence — as well as being the one system that embraces all aspects of food production and involves all health and food professionals in the effort.” ■

*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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