FDA rules to limit Salmonella in eggs

The U.S. Food and Drug Administration (FDA) has proposed a rule jointly with the U.S. Food Safety Inspection Service (FSIS) to improve farm-to-table shell egg safety. This is a measure to prevent the contamination of shell eggs during production by Salmonella enteritidis (SE). An estimated 118,000 illnesses per year are caused by eating salmonella-contaminated eggs. According to Dr. Lester Crawford, acting FDA deputy commissioner, implementing the rule would reduce the number of illnesses by about 33,500 and would help realize the goal of a 50 percent reduction in salmonellosis and a 50 percent reduction in SE-related illnesses by 2010. This proposed rule is a direct result of a farm-to-table risk assessment of SE in eggs, which identified on-farm prevention measures as a means to reduce the incidence of SE in eggs. Various states have voluntary quality assurance programs for egg production. Although some have resulted in reductions of SE illnesses, the programs are not uniformly administered or comprehensive in their prevention measures.

The proposed rule targets producers with about 3,000 or more hens producing eggs for retail sale that are not further treated (e.g., pasteurization). There are about 4,100 such farms. The rule does not apply to producers having less than 3,000 hens, producers who sell all their eggs directly to consumers, or producers with more than 3,000 hens who treat the eggs in order to achieve a 5 log reduction in SE levels or whose eggs are processed into egg products.

Prevention measures as part of the proposed rule include the following:

- **Procurement of chicks and pullets** – Chicks and pullets from breeder flocks would have to meet the U.S. Department of Agriculture’s (USDA) National Poultry Improvement Plan (NPIP) standards for “US S. enteritidis Monitored” status or equivalent standards.

- **Biosecurity measures** – The rule calls for the establishment of a biosecurity program covering poultry houses, grounds, and facilities to prevent the spread of SE within a farm and to other farms in the area.

- **Pest and rodent control program** – Such a program should protect against rodents, flies, and other pests. Producers may do so by baiting, trapping, and using other effective methods, such as spot cards, Scudder grills, and sticky traps. Outside vegetation and debris would have to be controlled to limit harboring places.

- **Cleaning and disinfection of houses with positive environmental samples** – When environmental samples test positive for SE, the poultry house should be thoroughly cleaned and disinfected before replacement flocks are back in the house.

- **Refrigerated storage on site** – If the eggs are held on the farm for more than 36 hours after lay, they should be stored at or below 45 degrees F (7.2 C). This applies to all producers even if their eggs will ultimately receive a heat treatment or will be processed into egg products.

- **Producer testing of environmental samples** – If environmental samples test positive for SE, they should be followed by egg testing. If eggs test positive, they should be diverted from table egg markets.

- **Responsible person for SE prevention at each farm** – There should be a particular person in charge of SE prevention measures on each farm. This person should be trained by a curriculum recognized by the FDA or should be qualified through job experience.

- **Record-keeping requirements** - Records should be maintained showing compliance with egg sampling requirements, test results, and compliance with egg diversion requirements.

FDA estimates that the cost will be about $82 million annually for farms that have more than 3,000 hens (about 4,100 farms). Depending on the actual number of farms and layers under production, this cost may range from about 19 cents to $1 per layer. It is estimated that about 33,450 SE-related illnesses will be prevented per year at a cost of $2,450 each.
Federal News continued

There is a 90-day comment period on the proposal. Written comments may be submitted to FDA at Dockets Management Branch (HFA-305), Food and Drug Administration, 5630 Fishers Lane, Room 1061, Rockville, MD 20852. Include docket numbers 1996P-0418, 1997P-0197, 1998P-0203, and 2000N-0504 and RIN Number 0910-AC14. Comments may also be submitted online at www.regulations.gov or www.fda.gov/dockets/ecomments or via e-mail (fdadockets@oc.fds.gov) (FDA Press Release P04-90, September 20, 2004, FDA Fact Sheet, September 20, 2004).

New ELGs announced for poultry plants

The U.S. Environmental Protection Agency (EPA) has established new Meat and Poultry Processing Effluent Limitation Guidelines (ELG) for direct-discharging meat and poultry processing plants. The nitrogen limits for red meats are 134 parts per million (ppm) monthly and 194 ppm daily maximum, and for poultry, 103 ppm monthly and 147 ppm daily maximum. For both commodities, the ammonia limits are 4 ppm monthly and 8 ppm daily maximum. In addition to the numerical limitations, the new rule also establishes technology requirements and management practices. This may result in some plants putting up additional costs for new equipment and for permit requirements (Watt PoultryUSA 9/13/04).

Federal agencies and states team to protect food supply

The USDA/FSIS, FDA, and the Department of Homeland Security together with the National Association of State Departments of Agriculture have formed a cooperative agreement in which they will have an integrated response to food and agricultural emergencies. The agreement, Sept. 23, will be implemented in three phases now through June 2005. During phase 1, a workgroup of federal, state, and local officials will gather information about existing emergency response systems and how states handle security emergencies. During phase 2, the workgroup will develop an interagency response plan, conduct tabletop exercises, and test the plan’s functionality and refine it if needed. The final phase will develop guidelines by which federal food and agricultural agencies will cooperate with state and local efforts to make federal assistance available more quickly and appropriately (Meatingplace, 9/27/04).

APHIS receives funds to combat LPAI

As a result of outbreaks in the past three years of low-pathogenic avian influenza (LPAI) in the United States, the poultry industry was left reeling from costs of depopulations, unplaced flocks, and global trade embargoes. Poultry industry representatives such as the National Turkey Federation (NTF), the National Chicken Council (NCC), and the United Egg Producers (UEP) worked with U.S. House of Representatives appropriators to explain the problems and significance of LPAI to the industry. In June, the House Appropriations Committee awarded USDA’s Animal and Plant Health Inspection Service (APHIS) $23 million for 2005 to put long-term measures in place to control LPAI. Some $12 million will be used for an indemnity fund to pay commercial growers and those raising birds for live-bird markets (LBMs). Compensations will go to LBM producers in order to ensure their cooperation with the APHIS surveillance programs. The rest of the money will be used to pay for the use of APHIS personnel, development of LPAI tests, and cleaning of LBMs. The commercial part of the program (i.e., the indemnity fund management and cleanup of LBMs) will be administered with the aid of the National Poultry Improvement Plan (NPIP). As of August, $13 million was available to begin the program. The rest of the funds will be released as the appropriations process evolves (A. L. Johnson, Washington Update, Watt PoultryUSA, August 2004).

U.S. national control program for AI proposed

At the March 2004 Midwest Poultry Federation Convention, Dr. John A. Smith gave highlights of a proposed U.S. national control program for low-pathogenic H5 and H7 avian influenza (AI) strains. Smith indicated that there is a possibility that the World Health Organization’s OIE will add H5 and H7 LPAI to its A-list of the most virulent and contagious diseases, simply because of the tendency of the viruses to become virulent. If that happens, he said, the USDA would have to regard all H5 and H7 cases or outbreaks as reportable and eradicable. If the OIE takes that stance on LPAI, a country or region would need to prove it has a transparent surveillance and monitoring program before it may be designated free of “notifiable AI.”

The proposal was put together by the Committee on Transmissible Diseases of Poultry and Other Avian Species. It indicates that any control program should have industry and local input using minimum standards set by USDA, but that federal input is needed if federal funding is to be counted on. The committee suggested that it may be wise to develop stockpiles of inactivated H5 and H7 AI vaccine to allow for the rapid production of vaccines depending on the subtype responsible for the outbreak. Programs should include LBMs and should include education, training, monitoring, periodic cleaning, disinfection, and inspections. Licensing of haulers, dealers, and markets should be included.

The decision to participate rests with the states, but if a state becomes certified, indemnity from disease outbreaks may be increased from 50 percent to 100 percent. Primary breeder flocks should be tested at four months and then at 90-day intervals, multiplier flocks are to be re-tested at 180-day intervals, and layer flocks (over 75,000) within two weeks of depopulation. Meat-type turkey plants should test 60 birds per month.

The program should also include plans for infected flock disposal and quarantine measures, methods of testing and marketing negative flocks, biosecurity, and environmental controls for carcass disposal. One thing the committee decided would remain a problem was small sales at swap meets and from pickup trucks (Canadian Poultry, July 2004).
Hot topics
at the Midwest Poultry Federation Convention

At the Midwest Poultry Federation Convention in March, speakers addressed topics of current interest and importance to the poultry and other animal industries, including animal welfare issues, use of antibiotics in food-producing animals, and dietary manipulation to reduce ammonia emissions.

- **Animal welfare issues**
  Dr. Janice Swanson of Kansas State University indicated that the definition of animal welfare is changing from the traditional meaning of providing proper nutrition, water, health maintenance, shelter, and appropriate handling to include promoting animal contentment. She indicated that these criteria may be more subjective than objective and that it is important for animal industries to understand the importance of public opinion and to try to deal promptly with issues on their own without input from activist groups.

  Swanson said that animal industries will soon need to deal with third-party audits since some retail and food service customers are asking their suppliers for them. She indicated that animal care guidelines have evolved from simple quantitative measures to reflect such criteria as social contact and environmental enrichment. She stressed that the animal care guidelines will be the standards for audits, so care should be used in their formulation.

  Animal welfare issues are also going to play a role in future world trade because the World Trade Organization (WTO) has asked the OIE to come up with international guidelines for animal welfare. A global conference to that effect was held in Paris in February 2004. OIE committees will use science-based standards aimed at space and environment, management, handling and transport, pain, fear and distress, injury and disease, food, water, and malnutrition. The OIE thinks that the three areas of social concerns (animals should function well, feel well, and live reasonably normal lives) will influence how welfare issues will be analyzed: (1) a biological functioning approach emphasizing health, growth, reproduction etc.; (2) an affective state approach looking at negative (pain and fear) and positive (pleasure and contentment) states; and (3) a natural living approach looking at normal behavior or semi-natural environments. These issues should concern the poultry industry since OIE animal welfare guidelines may affect future trade in foreign markets.

- **Antibiotic use by the poultry industry**
  Dr. Hector Cervantes of Phibro Animal Health addressed the perceived relationship between antibiotic use by the poultry industry and the increase in bacterial resistance. He indicated that of the 20 most serious bacterial infections showing antibiotic resistance, 12 of the organisms do not come from the food chain. The other eight organisms demonstrate a resistance of about 1 percent or sometimes less than 0.5 percent. He said that results from the Antimicrobial Surveillance Program, which analyzed worldwide data from man and animals, found little significant association between poultry antibiotic use and bacterial resistance.

  Cervantes also pointed to bans by the European Union (EU) of antibiotic feed additives, which resulted in increases of enteric disease outbreaks and led to increased therapeutic use of the antibiotics. He cited work by M. C. Casewell that showed no decrease in rates of resistant enterococcal infections in Europe and an increase in vancomycin resistance in certain parts of Europe since the ban. He suggested that the most likely root of the problem is overprescription of antibiotics by physicians and misuse of antibiotics by patients. He illustrated this point by citing research in a Welsh community that showed a positive correlation between antibiotic prescribing practices and the development of antibiotic resistance.

  Dr. David Pyle of Bayer Corp. discussed steps the poultry industry can take. He indicated a need to take proactive measures by adopting guidelines such as the Judicious Use Guidelines for poultry producers and veterinarians, put together by the FDA and the American Veterinary Medical Association (AVMA). The 15 use guidelines emphasize optimal use for therapeutic effectiveness while minimizing the selection for resistant bacteria. He indicated that the guidelines are easy to use and that producers should make their use part of their management plan in concert with their veterinarians and poultry company. Dr. Pyle emphasized that following the guidelines and convincing the government and the public that antibiotics are being used responsibly will go a long way to ensure that laws passed on their use may not be restrictive. The guidelines are available from the FDA online www.fda.gov/cvm/fsi/juduse.htm

- **Dietary manipulation to reduce ammonia emissions**
  Dr. Hongwei Xin of Iowa State University (ISU) gave a report about collaborative research on ammonia emissions from poultry houses. Scientists from ISU, Pennsylvania State University, and the University of Michigan have developed equipment capable of measuring ammonia concentration and airflow from poultry houses. The work conducted at ISU dealt with dietary manipulation to reduce ammonia emissions. Lower protein test diets were fed to layers in the hope that less nitrogen would be available in the manure. Two of the houses had manure belts and the other four were high-rise houses. Daily mean ammonia concentrations at exhaust levels were 47 ppm for control houses and 43 ppm for those with lower protein diets. The average ammonia emission rates per bird were 38 milligrams for the controls and 33 milligrams for those on lower protein diets. The researchers concluded that manipulation of poultry diets may be one way to effectively reduce the amount of nitrogen in fecal matter, thereby directly reducing the amount of ammonia in poultry house emissions (Watt PoultryUSA July 2004).
NCC emphasizes managing industry image and issues

At the recent 50th annual conference of the NCC held in Arlington, Va., industry leaders indicated that the poultry industry’s biggest challenge is coping with the perceptions of food safety and animal welfare. Addressing these issues was a panel including Lonnie “Bo” Pilgrim of Pilgrim’s Pride, Joe Sanders of Sanderson Farms, Greg Lee of Tyson International, and John N. Simons of Swift & Co.

Simons used data from the Centers for Disease Control (CDC) to show that over the past few years there have been reductions in cases of illnesses from Salmonella (17%), E. coli 0157:H7 (42%), and Listeria (70%). Simons indicated that even with this type of data the industry is held to a zero tolerance of 100 percent perfection and receives negative hits from the media. Mr. Lee said the industry needs to make the public aware of the difference between food safety and meat safety since many food safety concerns have nothing to do with meat or poultry.

Sanderson said industry customers are concerned about animal welfare. As a result, Lee predicted an increase in the number of customer audits but said he hoped they would be based on sound science and not emotion.

The overwhelming conclusion of the panelists was that the poultry industry has a lot to be proud of and has to find a means of conveying a positive message to consumers. Simons indicated that could be done with the help of scientists and university researchers speaking for and with the industry on these issues. Lee said the industry should take a proactive approach, since everyday things in the industry are not well understood by the public. He indicated that the industry does better than the way it is usually portrayed (Meatingplace 10/8/04).

WHO confirms USA free of AI

On Aug. 19, the USDA APHIS sent a letter to the World Health Organization indicating that six months had elapsed since the detection, eradication, cleaning, and disinfection of LBMs and a backyard flock in Texas (Gonzalez County) infected with AI. After extensive surveillance and testing, there was no further evidence that the virus was present on poultry premises (Watt PoultryUSA 8/30/04).

Japan partially lifts U.S. poultry ban

On Sept. 28, the Japanese Agriculture Ministry indicated that its country had lifted its ban on poultry imports from Delaware, Maryland, and Rhode Island since no new cases of AI have been found. Japan, however, still continues its ban on poultry from Connecticut, New Jersey, and Texas since it is not yet convinced that the disease has been eradicated from those areas (Meatingplace 9/29/04).

Avian influenza is a crisis of global importance

The Food and Agriculture Organization (FAO) and the WHO conducted a joint meeting Sept. 27 about the AI epidemic in Asia, calling it a “crisis of global importance” that will command international attention for a while. They indicated that recent outbreaks in China, Vietnam, Cambodia, Malaysia, and Thailand show that the virus is still circulating in the region, and it will probably be a while before it is eradicated. They called for more research into the role played by wildlife, domestic birds, and pigs in transmitting the virus to animals.

The organizations indicated that despite progress on early detection and reaction, countries need more proactive surveillance and control measures, including early warning, detection, reporting, and response, and need to rehabilitate and restructure the poultry sector. They indicated that although slaughter of infected birds is the best way to control and stamp out the virus, vaccination may be used at the discretion of the affected country because of social or economic reasons or when viral challenges are particularly high. Vaccines used should be produced under international guidelines and used under official veterinary services’ supervision. Surveillance strategy should be able to identify and monitor the circulating virus and monitor the vaccine response using sentinel birds and serological tests to differentiate vaccinated from infected birds.

They also cautioned that the decision to use vaccines during an outbreak should take into account the country’s ability for timely detection and reaction to the disease, as well as transparent and timely notification. Stakeholders, including the private sector, should be consulted and documents maintained about the types of poultry and specific sectors to be vaccinated. The organizations indicated that since the OIE says that only the absence of virus is needed in order for a country to be considered HPAI-free, the use of vaccines should not imply automatic loss of export markets.

Thailand has confirmed that the death of a 26-year-old woman was a result of avian influenza caught from her daughter. This is the first case of human-to-human infection. There have been 29 deaths in Asia from avian influenza (Joint OIE/FAO Press Release, September 27, 2004, Meatingplace, 9/29/04).
West Virginia DEP issues guidelines for CAFOs NPDES permits

The West Virginia Department of Environmental protection (WVDEP) has completed a series of public hearings around the state on the General WV/NPDES Water Pollution Control Permit for Concentrated Animal Feeding Operations (CAFOs), Permit No. WV01057. These hearings explained to livestock producers the designation of CAFOs and the reasons for the permits. Before the deadline of December 31, 2006, the WVDEP requires that livestock owners develop and implement best management practices (BMPs) as well as site-specific and detailed CAFO management plans for their production areas for which the permits are needed. Both BPMs and management plans should include information on the type and size of the operation, management of chemicals, dead animals, manure, waste and or process water, conservation practices, testing methods for soil, manure, and wastewater, and records of all management practices. The agency indicates that if substantial new questions are raised, the director may reopen the public comment period. For more information, contact the Division of Water and Waste Management, 414 Summers Street, Second Floor, Charleston WV 25301, Monday through Friday (except state holidays) between 8 a.m. and 4 p.m., or Anne Howell at 304-558-4253 or TDD 304-558-2751 (www.dep.state.wv.us)

Pilgrim’s Pride sells Hinton, Va, turkey complex to VPGA Co-op

Pilgrim’s Pride announced Sept. 15 that it had completed the sale of its Hinton, Va., turkey production facility and Broadway, Va., feed mill to the newly formed Virginia Poultry Growers Cooperative Inc. (VPGC). The sale of the complex is part of a restructuring effort by Pilgrim’s Pride to move away from producing whole turkeys and toward more value-added, higher margin turkey products. The VPGC is made up of turkey producers from Virginia and West Virginia (Pilgrim’s Pride News Alert, 9/15/04).

Virginia introduces safeguards against AI

In an effort to protect the state against H5 and H7 strains of AI, the Virginia Department of Agriculture has barred the shipment of day-old birds and hatching eggs into the state unless they meet requirements specified in the U.S. Avian Influenza Clean Program of the NPIP. Permits are required to ship birds and eggs into the state. Before avian species can enter the state, they should be tested and found negative for AI or proved to come from flocks tested for and found negative for AI (Egg Industry, July 2004).

Regional News

West Virginia team attends National 4-H Poultry and Egg Conference

The National 4-H Poultry and Egg Conference will be held during the Kentucky Fair and Exposition in Louisville, KY, Nov. 17-18, 2004. The Conference recognizes 4-H members who have excelled in their states in poultry learning experiences. The activities and contests are designed to introduce participants to poultry and the poultry industry. Life skills are also learned through preparation for the various contests. The conference is used to make participants aware of careers in poultry and allied industries. The West Virginia team will only participate in the Poultry and Egg Judging Contest. This year the winning team is from Hampshire County. Team members are: Jeff Whitacre, Ashley Bohrer, and Amber Lewis; and the coach is Issac Lewis. Donor support for the trip is provided by the WVDA, WVU Foundation, Inc.- 4-H, and the West Virginia Poultry Association. In addition, this year the team will receive a jacket from Carhartt (Dr. J. Woloshuk).
Upcoming Meetings

Oct.
8-17, Poultry World, Georgia National Fairgrounds, Perry, Ga. Contact Georgia Poultry Federation, 770-532-0473, or Georgia Tech Research Institute Office of Food Industry Programs, 404-894-3412
24-26, National Poultry Waste Management Symposium “Balancing Economic and Environmental Issues,” Holiday Inn Select Airport, Memphis, Tenn. Contact Wanda Linker at 334-265-2732 (F) 334-265-0008, wanda@alabamapoultry.org

Nov.
8, Poultry Management and Health Seminar, Kreider Farms Restaurant, 1461 Lancaster Rd., Manheim, Pa. Contact Dr. Paul Patterson at 814-865-3411; Fax, 814-865-5691; php1@psu.edu
17, Grain Forecast and Economic Outlook Conference, Hilton, Atlanta Airport, Atlanta, Ga. Contact U.S. Poultry & Egg Assoc. 770-493-9401; Fax, 770-493-9257; www.poultryegg.org
17-18, National 4-H Poultry and Egg Conference, Louisville, Ky.

Dec.
14, Poultry Management and Health Seminar, Kreider Farms Restaurant, 1461 Lancaster Rd., Manheim, Pa. Contact Dr. Paul Patterson at 814-865-3411; Fax, 814-865-5691; php1@psu.edu

Poultry Voice is published quarterly to provide those interested in the poultry industry with pertinent production information from industry, academia, and federal and state governments to help ensure economic production of poultry in a manner that sustains the environment. Poultry Voice is sponsored by the West Virginia Extension Service.
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