

Poultry HEALTH REPORT

A National Institute for Animal Agriculture Publication

Spring/Summer 2006

U.S. Readies for Highly Pathogenic H5N1 Avian Influenza

APHIS Releases Draft AI Response Plan

The U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) has released a summary of its National Avian Influenza Response Plan. The plan will guide the steps taken by USDA, state officials and the



Dr. Ron DeHaven

industry following a detection of highly pathogenic H5N1 avian influenza in domestic poultry or wild birds.

"USDA remains acutely aware of the threat the highly pathogenic H5N1 avian influenza viruses pose to our Nation's public health, agriculture industries, and economy," said APHIS Administrator Dr. Ron DeHaven.

DeHaven said he intends for the response plan to be an evolving document that takes into account the latest scientific information and approaches to emergency pre-preparedness and response.

The draft plan includes standard operating procedures after a finding of HPAI. Field operations guidelines for emergency responders address roles and responsibilities, quarantine and movement controls, appraisal and compensation, euthanasia, disposal, cleaning and disinfection, biosecurity, and wildlife management. The plan also provides for the stockpiling and use of personal protective equipment for AI responders.



USDA has also developed a comprehensive communications response plan in order to coordinate media and public response to any possible HPAI detection.

DeHaven said the response plan reflects USDA's scientific expertise on H5N1 avian influenza viruses and

"our real world experience in planning for and responding to incursions of significant animal diseases into the United States."

A summary of the draft response plan is available for stakeholder review on the Internet at www.aphis.usda.gov (click on the Avian Influenza link). ●

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Iowa State, USDA Train Foreign Scientists on Avian Influenza Testing

A group of 75 scientists from 50 countries have been in the U.S. so far this year training in diagnostic testing for highly pathogenic avian influenza (HPAI).

The "train-the-trainer" workshops, a joint effort of Iowa State University and USDA's Agricultural Research Service, Animal and Plant Health Inspection Service (APHIS) and Foreign Agricultural Service have been taking place at the agency's National Veterinary Services Laboratories in Ames, Iowa.

"The goal is to assist senior-level veterinarians and poultry disease experts from countries that either have discovered HPAI,

or are at high risk for the disease," explained APHIS Administrator Dr. Ron DeHaven. "When they return to their countries, they are better equipped to train their colleagues in lab procedures and protocols."

DeHaven said the workshops demonstrate "just one example of how we are working to prevent or slow the spread" of HPAI. ●

Scientists participating in U.S.-led train-the-trainer workshops on diagnostic testing for highly pathogenic avian influenza (HPAI) were from the following countries:

Algeria, Argentina, Armenia, Bangladesh, Brazil, Bulgaria, Burkina Faso, Burma, Cambodia, Cameroon, China, Cote d'Ivoire, Democratic Republic of Congo, Dominican Republic, Georgia, Ghana, India, Indonesia, Iraq, Kenya, Korea, Kuwait, Laos, Lebanon, Libya, Malaysia, Mexico, Mongolia, Morocco, Mozambique, Nepal, Nigeria, Oman, Pakistan, Philippines, Romania, Senegal, Serbia-Montenegro, Singapore, Sri Lanka, Sudan, Taiwan, Uganda, Uruguay, and Vietnam.



Poultry Health Report

Spring/Summer 2006

Poultry Health Report provides the latest information on issues pertinent to cattle health initiatives, strategies, research and regulatory action. It is a communications initiative of the NIAA Poultry Health Committee and is produced in cooperation with USDA-APHIS.

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Additional U.S. Efforts in Global AI Battle

- The National Veterinary Stockpile is strategically storing "strike packs" containing personal protective equipment supplies designed to protect response personnel from influenza viruses. These strike packs can be deployed within 24 hours to the site of an outbreak in the United States.
- Increasing intelligence gathering and other activities, in conjunction with the Department of Homeland Security, to target illegal shipments of birds and bird products.
- Providing expertise and funding to assist the United Nation's Food and Agriculture Organization (FAO) with a new Crisis Management Center, to improve response to avian influenza outbreaks worldwide. USDA training has been provided on "incident command system" structures, and deployment procedures.

www.usda.gov/birdflu

OIE Praised for Efforts in Global AI Fight

CDC Recognized as OIE Collaborating Center at General Session

The World Organization for Animal Health (OIE) held its 74th Annual General Session, May 21-26, in Paris, France. Approximately 600 participants representing member countries, intergovernmental organizations (FAO, WHO, World Bank, WTO, etc.) took part in the session which notably brings together representatives appointed by the governments of the 167 OIE member countries.

Member countries praised the role played by the OIE in the global fight against avian influenza. They particularly saluted the agreement reached with the World Bank and key donors to support developing and in transition countries to invest in programs aimed at bringing their Veterinary Services in line with OIE standards.

The main issues addressed during the session were:

- The session accredited the



application of a new Collaborating Center – the Center for Disease Control and Prevention

(CDC) in Atlanta, Ga. – with the aim of better preventing and controlling animal diseases transmittable to human beings. It also recognized the crucial role played by the OIE network of 170 reference laboratories and collaborating centers in reaching the organization's objectives.



- Member countries welcomed the new World Animal Health Information System that will strengthen OIE's actions in terms of transparency on state of animal diseases worldwide.

- Consistent with the framework of its usual standard-setting activities, the International Committee adopted new and updated international standards

aimed at providing better safeguards for the sanitary safety of world trade in terrestrial and aquatic animals and their products as well as guidelines to better implement surveillance of animal diseases and zoonoses on their territory.

- Member countries also voted new improvements to chapters about animal welfare and food safety in the production phase.

- They adopted policy lines on identification and traceability.

- Member countries also decided that notification to the OIE of any detection of highly pathogenic avian influenza (HPAI) in wildlife was to be mandatory.

Dr. Barry O'Neil of New Zealand was elected OIE president for a three-year term. O'Neil heads the Ministry of Agriculture and Forestry's biosecurity group, Biosecurity New Zealand. More information about OIE actions is on the Internet at www.oie.int. ●

USPOULTRY's Beth Krushinskie Selected to Head Worldwide AI Effort

Dr. Beth Krushinskie, vice president of food safety and production programs for the U.S. Poultry & Egg Association, has been named to head up the efforts of



Dr. Beth Krushinskie

ACDI/VOCA's programs to address the worldwide challenge of avian influenza. Krushinskie assumed her new duties May 1. She will be assigned to USAID's Avian Influenza Core Team to help coordinate delivery of the U.S. govern-

ment's contribution to the worldwide relief effort on Highly Pathogenic Avian Influenza.

Association President Don Dalton cites her accomplishments at USPOULTRY stating, "Dr. Krushinskie has been one of the industry's leaders in the areas of food safety and, most recently, avian influenza. For the last several months she has visited several countries to help develop H5N1 highly pathogenic avian influenza preparedness and response plans in those counties at risk of experiencing the disease. By doing so she has helped raise the awareness worldwide of the need for biosecu-

urity, as well as surveillance, testing and response planning. We are proud to have helped in this global effort to protect our industry. We will miss her at USPOULTRY, but expect to continue to assist in this important effort."

ACDI/VOCA is a private, non-profit organization that promotes broad-based economic growth and the development of civil society in emerging democracies and developing countries. Offering a comprehensive range of technical assistance services, ACDI/VOCA creates sustainable wealth by supporting increased agribusiness productivity, growth and competitiveness. ●

FDA, States Considering Changes to Feed Regulation that Could Affect On-Farm Feed Manufacturing

Two major initiatives are underway that could eventually extend regulatory oversight of feed manufacturing to the farm level.

One of those initiatives, launched in 2003 by the U.S. Food and Drug Administration (FDA), has been dubbed the "Animal Feed Safety System" (AFSS). The FDA describes this program as an effort to create a more comprehensive and risk-based feed safety system applicable to animal feed manufacturing, including feed for food-producing and companion animals.

During the fall of 2006, FDA plans to conduct a public meeting to review the status of its method for ranking various "risks" that may be present in animal feed and feed ingredients, according to Randy Gordon, vice president of communications and government relations for the National Grain and Feed Association, whose organization is one of several industry groups that serve as advisers to the Association of American Feed Control Officials (AAFCO).

"FDA's assessment is to include an identification of potential biological, chemical and physical contaminants, and the levels at which they may pose a safety concern for animal and human health," Gordon explains.

Estimates are, according to Gordon, that FDA is at least a year or more away from finalizing its animal feed safety system, which could consist of additional regulations – including on animal feed ingredients – and/or guidance or other strategies for further enhancing U.S. animal feed safety.

On a second front, AAFCO

continues to develop a draft of model feed safety regulations that are an outgrowth of its 1999 strategic plan. As the professional organization of state and federal feed regulatory officials, AAFCO's intent is to: 1) identify and control risks in raw materials, manufacturing and distribution of feed and feed ingredients, and 2) prevent hazards that could negatively impact animal and human health.

While the FDA and AAFCO efforts are separate and distinct, AAFCO representatives do serve as representatives on FDA's AFFS team – so there is some coordination of the two efforts, Gordon relates

"Knowledgeable feed industry officials believe that the AAFCO model regulations could form the foundation for FDA's AFFS initiative, and it could eventually be considered as the starting point for a federal regulation by FDA," Gordon says.

The efforts to extend feed safety regulation were initiated some 15 years ago, according to Steve Traylor, feed coordinator for the Division of Regulatory Services at the University of Kentucky and chair of AAFCO's Feed Manufacturing Committee.

"Several issues inspired this effort initially," Traylor says, "including dioxin and mycotoxin contamination of feed. Since 1997, concerns about BSE have also contributed to increased interest in additional feed regulations."

Priorities in the European Union have become a major driver, Traylor adds. "If a U.S. feed or livestock producer wants to be considered a global company, they

have to comply with E.U. regulations in order to compete," he emphasizes.

"However, enhanced feed regulation has been slow to take off, because everyone involved wants to do it right."



Randy Gordon

HACCP emphasis rejected

A draft prepared by AAFCO's Feed Manufacturing Committee and proposed in August 2005 would have imposed regulatory standards based upon hazard analysis and critical control points (HACCP), with extensive record keeping and documentation requirements. Viewed as too rigid, burdensome and costly by a wide array of industry groups, AAFCO subsequently reconsidered and dropped the HACCP standards approach.

Now, a three-person task force from the AAFCO Feed Manufacturing Committee is developing the next in a series of drafts that embraces a current good manufacturing practices (CGMPs) approach modeled after FDA's CGMPs that currently apply to medicated feed manufacturing establishments. Livestock and poultry integrators that utilize medicated feed already are subject to these regulations.

But under the approach being considered by AAFCO, a CGMP-based set of regulations also would eventually apply to feed ingredient manufacturers and manufacturers of non-medicated feed, Gordon says.

The AAFCO draft regulations currently address design and construction of commercial feed manufacturing and mixing facilities, facility maintenance and house-keeping, equipment maintenance and calibration, and training of personnel. Relative to the actual manufacturing and mixing of feed and feed ingredients, the draft addresses receiving and storage of ingredients and techniques to minimize contamination and foster product safety, plus packaging, labeling and storage of finished products. The draft also takes into account inspection, sampling and testing of finished products, as well as transport and distribution, record keeping, product tracing and recall protocols.

"The model feed program is intended to apply to all commercial feed manufacturers, ingredient manufacturers, transporting and on-farm mixing," Gordon says.

The next step

In August 2006 the next iteration of the draft regulations will be presented to AAFCO's Feed Manufacturing Committee at its meeting during AAFCO's annual meeting in Oklahoma City, Oklahoma.

Gordon is quick to point out that developing a model feed regulation is a long and deliberative process. "Any regulations must be workable, effective and able to be administered, so progress will be made in incremental steps," he says. "We're not aware of any firm and fast date that AAFCO expects to complete the process."

An outreach effort is in place to get more input from livestock and poultry producers into the model regulation process, Gordon reports.

"AAFCO likes to hear the point of view of as wide an array

of feed industry stakeholders as possible, particularly representatives of livestock and poultry organizations who could be affected," Gordon emphasizes. "The organization encourages all interested parties to be at the table as advisors to the Feed Manufacturing Committee as strategies are developed."

Regulating non-commercial feed

Another issue on AAFCO's agenda is possible development of a separate model feed law that would apply to materials used in manufacturing feed on-farm. At this time, Gordon says, the AAFCO Board of Directors has chosen to confine the draft model feed law to manufacturing, but not the use (feeding) of materials on-farm.

Once AAFCO develops model legislation, it is up to each state and its legislature to decide whether to adopt such a bill or a variation of it. If such a non-commercial feed law is eventually adopted by AAFCO and subsequently by states, state feed regulatory officials would have the authority to sample feed manufactured on-farm, as well as to inspect equipment used in on-farm feed manufacturing, to determine compliance with any regulations that the state might adopt.

"Advocates of this broader approach believe such authority is prudent to provide oversight of the safety of grains and other feed ingredients used in the manufacturing of feed on farm, particularly at integrated livestock and poultry operations," Gordon says.

Opponents view such oversight as unnecessary given the safety of U.S. food products of animal origin, and believe it would present an overwhelming and infeasible inspection challenge."

Poultry and swine integrators

would experience the greatest impact from any new on-farm feeding regulations, Traylor says. "That's because the larger operations produce a lot of feed on farm, so they will be the ones impacted by enhanced regulations," he points out. "However, ruminant feeders that maintain large herds and do a lot of on-farm feed mixing will also be impacted. That's why it's so important to engage stakeholders in the beef, dairy, swine and poultry industries in discussions before any new regulations are implemented."

Traylor believes that the overall AAFCO feed safety program being developed should be emphasized. "This program encompasses more than just a change in the law and regulations," he says. "The on-farm use and feeding component of the program would be best incorporated through an educational section developed with the cooperation and assistance of the affected industry and producer groups."

To voice your opinion about AAFCO's commercial and non-commercial feed regulations, contact: Steve Traylor, feed coordinator for the Division of Regulatory Services at the University of Kentucky, chair of AAFCO's Feed Manufacturing Committee. Phone: 859.257.6528, Email: straylor@uky.edu.

To voice your opinion about AAFCO's model on-farm feed legislation, contact: Doug Lueders, supervisor, Commercial Feed Program, Dairy and Food Inspection Division, Minnesota Department of Agriculture, chair of AAFCO's Model Bill Committee. Phone: 651.201.6176, Email: doug.lueders@state.mn.us.



By Linda L. Leake
Contributing Editor

Progress Made in Reducing *Campylobacter* in Poultry

Agricultural Research Service (ARS) scientists have identified and investigated two "hot spots" in poultry production where contamination with *Campylobacter* bacteria may occur.

Microbiologist Mark Berrang and food technologist Julie Northcutt evaluated the role of transport coops and carcass defeathering as critical points at which *Campylobacter* contamination of broilers and broiler carcasses occur.

The Athens, Ga.-based research team found that feces from *Campylobacter*-positive birds can contaminate the feathers and

skin of *Campylobacter*-negative birds later placed in the same soiled transport coop. Allowing the coops to dry for 48 hours before reuse dramatically lowered *Campylobacter* numbers.

But since this approach is economically and logistically impractical, the scientists plan to explore ways to redesign the coops to make them easier to clean. According to Berrang, washing coops with water and disinfectant can reduce the *Campylobacter* levels, but isn't reliable and doesn't eliminate the microbes.

The second critical contami-

nation point occurs during an early step in processing – feather removal. While, overall, processing decreases *Campylobacter* numbers on carcasses, this step increases them. To control the microbes, processors much work against this jump in numbers throughout the rest of processing.

Berrang and Northcutt have shown that the *Campylobacter* increase is caused by the escape of highly contaminated fecal matter from the birds' lower gut during feather removal. The researchers are now investigating methods to minimize this source of contamination. ●

ID/INFO EXPO 2006 to Highlight Practical Animal ID Solutions

The National Institute for Animal Agriculture (NIAA) is coordinating ID/INFO EXPO 2006, a national conference and trade show devoted to animal identification and information systems technology. This year's event is being held August 22-24 at the Westin Crown Center in Kansas City, Mo.

"We are expecting a great meeting for the latest information in animal identification," said R. Scott Stuart, NIAA Chairman of the Board and CEO of the National Livestock Producers Association. "Our planning committee has worked diligently to finalize what looks to be an excellent program."

A trade show, showcasing a variety of animal identification and information systems technology, will take place on August 22 & 23. In addition to the trade show, ID/INFO EXPO 2006 will feature:

August 22:

- Pre-Conference seminar outlining the basics of NAIS with exclu-

ID • INFO EXPO 2006

sive species working group reports and a review of pending revisions to ISO standards.

- An in-depth seminar looking at key elements of USDA's IT Infrastructure, specifically the AIN Management System and the recently announced Animal Trace Processing System (ATPS).
- A half-day of technology seminars from the leading developers, suppliers, and information managers engaged in animal identification and traceability.

August 23:

- Agriculture Secretary Mike Johanns will provide the keynote address.
- A review of state legislative efforts to implement the National Animal Identification System (NAIS), including legal authority

and FOIA (Freedom of Information Act) issues.

- A review and discussion on ongoing NAIS education and outreach efforts.
- A panel discussion featuring NAIS proponents and opponents discussing the merits of a national animal identification system.

The third and final day will go beyond NAIS with a complete focus on the practical application of animal ID solutions. Presentations and discussion will highlight current services and value-added programs that have already been implemented and are working for producers.

Information, including registration, lodging, and schedule of events, is available on the Internet at animalagriculture.org/id/IDINFO-EXPO2006/Default.htm, or by calling 270-782-9798. Proceedings and highlights of the meeting will also be posted on this site following the meeting. ●

News Briefs News Briefs News Briefs News Briefs News Briefs

Changes Proposed to Veterinary Accreditation Program

The U.S. Department of Agriculture's Animal and Plant Health



Inspection Service is proposing to amend the regulations regarding the National Veterinary Accreditation Program to establish two accreditation categories in place of the current category, add requirements for supplemental training and renewal of accreditation, and offer accreditation specializations.

Under the proposed rule, Category I would authorize veterinarians to perform accredited duties on companion animals only. Veterinarians would be authorized to perform accredited duties on all species to include poultry, equines and livestock under Category II. The new two-tiered system would replace the current structure under which an accredited veterinarian is authorized to perform accredited duties on all species.

APHIS is proposing these changes in order to support its animal health safeguarding initiatives, to involve accredited veterinarians in integrated surveillance activities and to make the provisions governing the National Veterinary Accreditation Program more uniform and consistent.

These proposed changes would increase the level of training and skill of accredited veterinarians in the areas of disease prevention and preparedness for animal health emergencies in the United States.

Notice of this proposed rule was published in the June 1 *Federal*

Register.

Consideration will be given to comments received on or before July 31. If you wish to submit a comment using the Internet, go to the Federal eRulemaking portal at www.regulations.gov and, in the "Search Regulations and Federal Actions" box, select "Animal and Plant Health Inspection Service" from the agency drop-down menu; then click on "Submit." In the Docket ID column, select APHIS-2006-0093 to submit or view public comments and to view supporting and related materials available electronically.

New Director of NADC Named

Animal reproductive physiologist Kurt A. Zuelke is the new director of the U.S. Department of Agriculture's National Animal Disease Center (NADC) in Ames, Iowa, effective May 28.

ARS Administrator Edward B. Knipping said Zuelke, who for the past five years has served as research leader at the agency's Biotechnology and Germplasm Laboratory in Beltsville, Md., was officially appointed in April after a yearlong international recruitment process.

Among his accomplishments at the Beltsville laboratory, Zuelke ushered in a new era of functional genomics research by pioneering the application of serial analysis of gene expression and proteomics—known as SAGE—to improve the genetic, reproductive and productive efficiency of livestock and poultry.

Prior to serving with ARS, Zuelke was with the Victorian Institute of Animal Science in

Attwood, Australia.

Zuelke, a native of Wisconsin, earned a B.S. in animal science from the University of Wisconsin-River Falls in 1984, and a Doctorate of Veterinary Medicine from the University of Minnesota in 1988. Additionally, he earned a Ph.D. in physiology from the University of Georgia-Athens in 1992.

Beth Lautner Selected as NVSL Director

Saying that the new director of APHIS' National Veterinary Services Laboratories (NVSL) "brings an impressive wealth of knowledge and experience to this position," USDA APHIS Deputy Administrator Dr. John Clifford recently announced the selection of Dr. Elizabeth Lautner to the position.



Dr. Beth Lautner

Most recently, Lautner served as Center Director, Plum Island Animal Disease Center (PIADC) within the Science and Technology Directorate of the Department of Homeland Security (DHS). She was the first DHS Center Director and served in that capacity from January 2004 until March 2006.

Prior to joining DHS, Lautner served as Vice President for Science and Technology at the National Pork Board and was a practicing veterinarian for more than 12 years in LeMars, Iowa.

Lautner began her duties on May 9. ●

NIAA Advocates Use of Foam for Mass Depopulation of Poultry

The National Institute for Animal Agriculture (NIAA) has requested the American Veterinary Medical Association (AVMA) to move promptly in issuing policy on the use of fire fighting foam in mass depopulation of poultry.

In a resolution promulgated by the NIAA Poultry Health Committee and adopted by the association's board of directors in April, use of fire fighting foam is said to be consistent with AVMA approved methods for large-scale emergency depopulation of commercial poultry. The method, used most recently by the U.S. poultry industry, is referred to as the polyethylene CO2 method.

"Mass depopulation of birds must be performed in a humane



Dr. Andrea Miles

manner while minimizing human health and biosecurity risks," said Dr. Andrea Miles with the North Carolina Department of Agriculture and Consumer Services' Emergency Programs division. "Reports indicate that this technology has shorter kill times, requires fewer workers, less health and safety

concerns, and improves biosecurity compared to existing mass depopulation methods."

Miles, who chairs the NIAA Poultry Health Committee, said research and field applications have shown that the method has many advantages over existing technologies, including decreased bird stress, decreased human exposure to diseased animals and dangerous gases, as well as decreased risk of disease spread.

Researchers at the University of Delaware and elsewhere have tested the fire fighting foaming agents as a means of emergency mass depopulation of meat type poultry. The university conducted six scientific experiments to compare foam to the CO2 polyethylenetent procedure.

Necropsy and histological examination indicated that blood was present to some degree in the trachea, syrinx, and bronchial tree in chickens subjected to foam with CO2, foam without CO2, and the CO2 polyethylene tent method of depopulation. There was no evidence of drowning in any of the foam birds sampled.

Foam causes an airway occlusion. In both foam and CO2 euthanized birds (broilers and turkeys), lesions were consistent with anoxia/hypoxia. This suggests that foam acts by physically induced hypoxia while CO2 causes chemically induced hypoxia.

Miles said that in North Carolina, during a trial with sick turkeys, there was no crowding of birds as foam was applied and time to death of 8,000 birds was less than three minutes – compared to eight to 15 minutes with the polyethylene tent CO2 method.

"Given the current situation with highly pathogenic H5N1 avian influenza, this new technology needs prompt review and approval by the AVMA so that it can be added to the technologies available to states and the USDA for mass depopulation of poultry," said Miles. ●

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NPIP Amendments Proposed

Amendments to the National Poultry Improvement Plan and its auxiliary provisions have been proposed by USDA's Animal and Plant Health Inspection Service in the June 19 *Federal Register*.

The provisions provide new or modified sampling and testing procedures for NPIP participants and participating flocks. The proposed changes were voted on and

approved by the voting delegates at the 2004 NPIP conference.

Comments will be considered if received on or before Aug. 18. To view the proposed changes and obtain instructions for submitting comments, access the Federal eRulemaking Portal at www.regulations.gov – June 19, 2006 *Federal Register* (Volume 71, Number 117), Pages 35203-35220.