

“Birds of a Feather”

**APHIS-FSIS
H5N1 AVIAN INFLUENZA
OUTBREAK EXERCISE**

SEPTEMBER 13, 2006

SUMMARY REPORT

OCTOBER 16, 2006

Background

The U.S. Department of Agriculture (USDA) is the federal agency charged with the control and eradication of an outbreak of Highly Pathogenic Avian Influenza (HPAI) in poultry. USDA's responsibilities include initiatives to support efforts overseas to slow the spread of the disease in poultry; expand domestic testing and early warning systems; and ensure government agencies have strong plans in place to rapidly and decisively respond to a detection of HPAI in U.S. poultry.

As part of these efforts, the USDA is actively addressing the need to coordinate response actions in the event of an outbreak of HPAI in the United States. During a crisis, it is critical that the Department be able to efficiently and effectively coordinate with its counterparts at the state and local level, as well as within other federal agencies and the private sector. On September 13, 2006, USDA's Food Safety and Inspection Service (FSIS) and Animal and Plant Health Inspection Service (APHIS) conducted a tabletop exercise simulating an outbreak of H5N1 avian influenza in commercial poultry, backyard flocks, live bird markets, and wild bird populations. The exercise was held at USDA's Emergency Operations Center in Washington, DC. The exercise focused on the roles of federal, state, and local government agencies, industry, and consumer groups in collectively responding to an outbreak of this animal disease. This report provides a high level summary of some of the issues discussed at the exercise.

Goals of the Exercise

The exercise was focused on the following objectives:

1. Testing the coordination among different levels of federal, state and local governments, industry, and consumer groups in response to an outbreak of HPAI.
2. Testing the plans for coordinated control and eradication response actions by APHIS and FSIS in the event of an outbreak, including:
 - testing of the functionality of the Memorandum of Understanding (MOU) between FSIS and APHIS; and
 - testing the application of the voluntary hold (by industry) and test (by FSIS) procedures for poultry products derived from birds originating from an infected zone/premise within 24 hours of case positive findings.

Participants

The exercise involved the participation by a total of 56 players from the following stakeholder groups:

- Department - USDA – including the Under Secretary and Deputy Under Secretary of the Office of Food Safety, and representatives from the Office of Communications, Office of Homeland Security, and Office of the Inspector General.
- Food Safety and Inspection Service – including the Administrator and representatives from the Office of Food Defense and Emergency Response (OFDER); Office of Public Affairs, Education and Outreach (OPAEO); Office of International Affairs (OIA); Office of Program Evaluation, Enforcement and Review (OPEER); Office of Field Operations (OFO); Office of Policy, Program & Employee Development (OPPED); Office of Public Health Science (OPHS); and Office of Management (OM).
- Animal and Plant Health Inspection Service - including the Administrator and representatives from Veterinary Services National Center for Animal Health Emergency Management (NCAHEM).
- Other Federal Agencies – including the Agricultural Marketing Service (AMS), Food and Drug Administration (FDA), Department of Homeland Security (DHS), and Centers for Disease Control and Prevention (CDC).
- State governments from Virginia, Ohio, North Carolina, Minnesota including representatives from the Office of the Chief Veterinary Medical Officer, the Dairy and Food Inspection Division, the Department of Agriculture and Consumer Services, the Department of Public Health, the Office of Meat and Poultry Services, and the Office of the State Veterinarian.
- Representatives of the National Association of County and City Health Officials (NACCHO), National Association of State Departments of Agriculture (NASDA), and the Association of State and Territorial Health Officials (ASTHO).
- Consumer Groups – including representatives from Safe Tables Our Priority and Center for Science in the Public Interest (note: the Consumer Federation of America also was invited to participate but could not attend).
- Industry – including representatives from the National Turkey Federation, National Chicken Council, United Egg Producers, National Restaurant Association, Cargill, Tyson Foods, and Mountaire Corporation
- Canadian government – representatives from the Canadian Food Inspection Agency

Issues Discussed

1. Testing

Discussion Points

Surveillance - Industry is conducting both passive (antibody testing) and active (antigen testing) disease surveillance in commercial poultry. Industry proposes to adopt widespread mandatory testing of birds 24 hours prior to shipment for slaughter if certain triggers are met. These triggers *could* include detection of HPAI in North America in any one of the following: (1) backyard flocks; (2) live bird markets; (3) wild bird populations; or (4) commercial flocks. Receipt of evidence of an agroterrorism incident involving HPAI viruses could be another trigger. Industry agreed to consider the need for mandatory testing once triggers were reached. A second quick antigen test could be conducted on dead-on-arrival birds at the plant overseen by FSIS.

APHIS stated that in cooperation with the affected State Agriculture officials, they could begin depopulation in commercial flocks with evidence of increased mortality indicative of HPAI. Industry would likewise begin depopulation if they see an abnormal increase in mortality in flocks in conjunction with a presumptive positive. Reaction to an outbreak also depends on the animal densities in the region. For example, in the Delmarva Peninsula, the density of poultry establishments would necessitate more extensive depopulation, whereas, the same would not be true for areas in the Midwest.

APHIS and FSIS have a MOU in place that serves as a guide for planned collaborative response actions in the event of an HPAI outbreak. The agencies demonstrated a strong willingness to support and consult with one another during the simulated outbreak (early notification, tracebacks, providing data, discussion of sanitation procedures, disposal, etc.). APHIS discussed establishment and implementation of quarantine zones, depopulation of flocks, and disease surveillance actions based on compartmentalization of the outbreak among different populations of birds. Both agencies have plans in place for responding to an event (e.g., APHIS' *Draft Avian Influenza Response Plan*, August 2006; FSIS' *Draft H5N1 Highly Pathogenic Avian Influenza (AI) Interim Response Strategy*, September 2006). FSIS will be represented at the incident command post or area command level as well as the national incident command level.

Consumer groups stated a preference for the mandatory testing of live birds within 12-24 hours before shipment to slaughter establishments over product testing at slaughter establishments.

Product Testing - Industry is concerned that product testing may be of limited value, given the expected low incidence of infection and the need to process a large number of samples (i.e., the needle in the haystack – testing both healthy and potentially unhealthy birds). FSIS refuted the concern on the number of samples that must be taken. In addition, industry is concerned about the mixed message that might be sent to consumers

by product testing. Consumers do not want any reason to believe that they should be concerned about the safety of food products. Industry views testing in general as a validation for a control program rather than a control point.

Consumer groups are concerned about keeping the virus from entering FSIS-inspected or state-inspected establishments. Therefore, they favor mandatory testing of birds prior to shipment for slaughter. Although they consider product testing of lesser importance, they acknowledged that product testing might be a useful tool in the arsenal of techniques available to government agencies to help understand the spread and control of the disease. Consumer groups suggested that adoption of any type of testing be mandatory to ensure that all flocks destined for slaughter are not infected with the HPAI virus.

FSIS stated that the available real time polymerase chain reaction test methods (RT-PCR) may require testing of fewer samples than suggested by industry. Using the above method, FSIS can test poultry products for the presence of the HPAI virus. APHIS has the authority to hold products pending completion of product testing and may invoke such authority to ensure control and eradication of HPAI. A great majority of the members of the poultry industry has agreed to hold products, upon request, pending testing results.

APHIS agreed that testing product could provide valuable epidemiological information about the health status of the slaughtered flock and help validate or re-define control areas and surveillance zones.

FSIS and FDA should consider the development of a joint plan of response actions on food issues. Several participants noted concerns about the potential risks of shell eggs and egg products.

Summary of Discussion Points

Surveillance

- Consumer groups expressed concern that the National Poultry Improvement Plan is voluntary for industry. Industry initiatives to keep the virus from reaching slaughter establishments, to include active surveillance testing of 100% of commercial broiler flocks 24 hours prior to slaughter, should be mandatory.
- Industry is willing to conduct 100% mandatory testing of flocks prior to slaughter with certain “triggers”.
- APHIS will review regulatory authorities to mandate the surveillance testing proposed by the industry.

Product Testing

- Consumer groups prefer the mandatory implementation of testing birds 24 hours prior to slaughter instead of product testing.

- Industry is amenable to the 100% mandatory testing of flocks prior to slaughter subject to triggers to include detection of HPAI in commercial flocks, backyard flocks, live bird markets, and wild bird populations in the United States, and evidence of agroterrorism involving HPAI viruses.
- APHIS agreed that product testing could provide valuable epidemiological data to assess their definition of control areas and surveillance zones.
- FSIS can conduct product testing at poultry slaughter establishments to detect the presence of the HPAI virus.

2. Communication and Messaging

Discussion Points

In the discussions about notification protocols, differences were noted in the reporting of presumptive positive test results. Minnesota stated that their state diagnostic laboratory would notify a range of industry representatives in the case of a presumptive positive, not just the establishment in question. However, North Carolina reported that their state laboratory staff does not have the authority to release results to industry, so the laboratory must communicate with the State Veterinarian and APHIS. APHIS would then “go public” with the information and notify other federal agencies and put an Incident Command System (ICS) in place.

At the Department level, USDA has already developed messages for communicating information to the public. APHIS and FSIS draft response plans address communication and outreach actions.

Industry has developed a crisis plan and messages for public outreach.

Different viewpoints were expressed about the messages that would be communicated to the public during an HPAI outbreak. Consumer groups want FSIS and industry to be able to say that “poultry products are 100% safe to consume”. They stated that “The first message (to the public during an outbreak of HPAI) should not be about cooking.” FSIS’ messages during an outbreak will assure consumers that poultry products are 100% safe. FSIS will also use the heightened awareness and concern about the safety of eating poultry to remind the public that safe handling and cooking to 165 degrees is always important to kill all food borne pathogens that might be present.

Consumer groups also expressed confusion regarding who was in charge of responding to the simulated outbreak as it unfolded. Discussions indicated that at the federal level, APHIS, FSIS, FDA, and AMS all had some responsibility regarding birds and products. Consumer groups commented that it appeared that no one organization appeared to be clearly in control. However, APHIS commented that if this is an animal health event, APHIS and Agriculture officials in the affected state will form a unified command and at the federal level, USDA (APHIS) will lead and manage the outbreak using ICS principles.

USDA is striving to increase communication with public health officials. Associations stressed that USDA needs to be working with both state public health as well as state agriculture representatives to ensure that a consistent message is being communicated to the public.

Summary of Discussion Points

- A uniform protocol for reporting presumptive positive results should be developed by the states.
- Consumer groups prefer that the first messages to the public during an outbreak be clear to say that poultry products are 100% safe to consume.
- USDA and industry have developed messages for the public to be issued during an outbreak.
- USDA (APHIS) will lead the coordination of response actions to an animal health outbreak using ICS principles.
- Associations stressed the need for USDA to work with state public health officials as well to ensure consistent message to the public.

3. Public Health

Discussion Points

Although the exercise focused on an animal disease outbreak, there were a number of discussions about the concern for occupational exposure and the potential for human health effects.

Several participants commented that the exercise raised a number of questions about public health that still need to be answered or that were not answered adequately, including notification, testing, and communication.

Industry pointed out that growers are independent contractors. Therefore, any occupational health issues associated with an HPAI outbreak would need to be handled by local and state public health officials and not by industry.

Occupational health concerns were expressed by public health agencies for growers, outbreak responders, industry product processing establishments, and government regulatory personnel. Surveillance may need to be conducted on the above groups of personnel on any consequential public health impact of their response actions.

The exercise assumed that the sentinel case occurs in commercial poultry, but how do things change if the sentinel case is human? Transmission from humans to birds should also be considered.

In the event of an HPAI outbreak, APHIS, FSIS, CDC and local and state public health officials should work together to gather data and disseminate information. This coordination should be established now rather than at the onset of a crisis.

Summary of Discussion Points

- Occupational exposure and potential human health effects were expressed as a concern that must be addressed in the response to an animal disease outbreak. Data on this issue need to be collected.
- Industry pointed out that occupational and health concerns among growers (independent contractors) are best handled by local and state public health officials
- Transmission from human to birds should also be considered.
- Studies on potential risks from food borne exposure and from other sources should be conducted.
- APHIS, FSIS, CDC and local and state public health officials should establish a coordination framework now for data gathering and dissemination of information.

Next Steps

Many participants noted that this exercise was a good first step, but that additional exercises and regular meetings of participants were needed. Suggestions included conducting:

- regional exercises across the country to address local/regional issues associated with an outbreak;
- separate and/or parallel exercises for public health issues, or a follow-up week long federal, state/local, and industry practical simulation involving consideration of the transition from an animal disease outbreak to pandemic flu. Animal disease and human health epidemiology and laboratory testing should be considered.
- another exercise where different injects are given to different stakeholder groups as the scenario unfolds in order to more thoroughly observe potential responses in an ICS structure; and
- an exercise including international trade issues. Several participants suggested that the issue of the impact of an outbreak on international trade was discussed but not addressed, particularly with respect to how trade implications would influence the actions that would be taken. Another area for further examination includes consideration of the potential introduction of HPAI into the United States in smuggled products.

Appendix A

Comments from the Exercise Evaluation Forms

Forty-three of the 56 players (77% of participants) completed an exercise evaluation form. The comments of the participants about some of the strengths and weaknesses of the exercise are summarized below.

Strengths of the Exercise

Strong Participation - Participants were actively engaged in the exercise. There was open dialogue and a high level of interaction among the stakeholder groups.

Stakeholder Communication and Coordination - Most respondents reported that they thought the exercise helped to foster communication and coordination among stakeholders. Several commented that the good mix of stakeholders, the range of issues that were addressed, and the diversity of viewpoints on the issues discussed made the exercise very informative.

Areas for Improvement

Facility and Room Layout – A few participants commented that mixing people from the various organizations would have encouraged a greater exchange of ideas, improved communication, and helped to foster understanding of other stakeholder groups' obstacles or needs. Other participants indicated that the stakeholder groupings facilitated internal communications prior to discussion in the room at large.

More microphones were needed.

Exercise Scenario – A few participants commented that the exercise scenario could have been more realistic. Other participants suggested:

- the use of fewer injects to allow issues raised to be more fully discussed and related issues to be raised;
- that more details should be added to the injects; and
- that issues addressed in the scenario should be outlined to help keep participants from jumping ahead to different phases of the scenario.

Some participants suggested that in future exercises, general information about each inject should be provided in advance to facilitate improved discussions and provide an opportunity to review the plausibility of scenarios prior to the session. However, others felt that it was important to keep the details of the exercise close in order to maintain spontaneity.

A few individuals suggested that the time for comment and discussion be limited to keep the momentum of the exercise going.

A few participants suggested consideration of a breakout session that would include participants with the same responsibilities from different groups – e.g., communications staff from industry, consumer groups, and government meeting together.

Several participants suggested adding a communication component to the exercise – it was mentioned several times but not fully addressed during discussions and interactions. Consider adding opportunities to practice making statements or messaging.

A comment was made that participation was deep at the Federal level, but shallow at the local level and to some degree at the state level, where many of the response actions would occur and the authorities for those actions (e.g., quarantine, destruction orders, and embargo orders) currently reside.

A few participants suggested less debate on current policies and future direction and more discussion of procedures.

Exercise Focus - Some participants commented on the fact that discussion sometimes digressed into human health issues and the potential for pandemic flu although the focus of the scenario was on an outbreak of animal disease.

Lack of Hot Wash Discussion - Provide more time for hot wash summary discussion at the end of the day.

Stakeholder Groups Not Represented - Future exercises should include public health front line staff, occupational health experts, elected officials, and workers at the greatest risk of exposure.