

**USDA- Natural Resources Conservation Service**

**Science & Technology Deputy Area**

Lawrence Clark, Deputy Chief

**Soil Science & Resource Assessment Deputy Area**

Bill Puckett, Deputy Chief

14th & Independence Av., SW  
Washington, D.C. 20013

[www.nrcs.usda.gov](http://www.nrcs.usda.gov)



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## Avian Influenza & What it Means to NRCS

NRCS employees must be wondering about all the press coverage of the avian influenza (flu) outbreak in Asia, and now Europe, and what it means to them and their colleagues and clientele. Avian flu is a viral disease much like flu that affects humans. In the flu that is currently under scrutiny the viral family common to birds (H5) has developed into a strain (N1) that is especially hard on the poultry that it infects. Mortality rates well over 50 percent are common in flocks affected by this influenza.

Many of you will recall a significant outbreak of avian flu (H5N2) that struck the U.S. poultry industry in the Mid-Atlantic States in the 1980's. This flu was deadly to poultry and caused millions of dollars worth of damage to the poultry industry. NRCS would have been involved during this epidemic, mainly in facilitating the disposal of dead birds—either natural mortality from the epidemic, or infected flocks that were sacrificed before the infection ran its course.

In many cases, avian flu is spread to commercial poultry by vectors including wild birds, migratory fowl, rodents, insects, and humans. The avian influenza epidemic in the Mid-Atlantic States in the 1980's was initiated by contact with migratory fowl along the Atlantic flyway. This flu was then spread by human interaction, chiefly small handlers who move from farm to farm, purchasing a few birds at each, which they then sell at the ethnic live bird markets in the large Northeastern

cities. A similar type of transmittal could be the case with the avian flu that is of current concern.

This flu made its appearance in Southeast Asia a couple of years ago. It has spread from country to country, and made its first appearance in Europe (Turkey, then Romania) in October. Within two weeks of its appearance in Romania, it had appeared in Russia and Germany. Since that time many additional countries have confirmed cases of H5N1. This flu is very contagious and spreads from bird to bird, and flock to flock with a great deal of ease.

Some experts expect this flu to appear in the U.S. at least within the next year. One likely scenario would be that migratory fowl would carry the virus up the East coast of Asia and the West coast of Europe to Arctic breeding grounds, in the spring. These birds would intermingle with birds that will then fly down the East and West coasts of the U.S. during next autumn's Southern migration.

Should an outbreak of avian flu occur, it could have a major effect on the agricultural economy of the United States. California, for instance produces eggs and poultry meat worth nearly a half billion dollars per year, while just three Eastern states – Georgia, North Carolina, and Alabama – produce nearly 8.5 billion dollars worth of poultry product.

A real concern of many experts is that this flu will mutate into a form that is easily transmitted from birds to hu-

## Avian Influenza & What it Means to NRCS (continued)

mans, then from human to human. In Southeast Asia, nearly 200 people have contracted avian influenza through contact with poultry. Over 50 percent of these cases have resulted in mortality. The fear is that a full blown “pandemic” could develop, and that a repeat of the Spanish Flu pandemic of 1918, which killed as many as 80 million people world-wide, could occur. It is, therefore, essential that we take this disease seriously, even though it has not yet made an appearance in the United States.

NRCS has created conservation practice standards to help facilitate the handling of animal mortality. Conservation practice standard 316—Animal Mortality Facility, and 317—Composting Facility, both deal with mortality disposal. Standard 316 outlines, in detail, composting or burial procedures associated with catastrophic mortality as described in the National Engineering Handbook Part 637, Chapter 2—Composting (NEH 637.0210 and NEH 637.0211).

An excellent article written by an industry economist that looks at the “big picture” of the entire avian influenza situation can be found at: <http://www.bmones-bittburns.com/economics/reports/20060313/report.pdf>, and might be of interest.

The National Soil Survey Center (NSSC) has developed and is testing a suite of Homeland Security soil survey interpretations. The suite includes soil interpretations for disposal of animal carcasses, disposal of rubble and debris, composting facilities, soil suitability for pit and trench liners, and soil suitability for composting media and cover. States are completing soil data population this year and the interpretations will be uploaded onto the Soil Data Mart by the end of 2006. These interpretations are important tools for pre- and post event planning.

The University of Maryland Extension Service has released two fact sheets on handling large scale poultry mortality that may be of interest, (FS-723) titled Composting Catastrophic Event Poultry Mortalities, which can be found at <http://www.agnr.umd.edu/>

MCE/Publications/Publication.cfm?ID=fs-723, and (FS 801) titled Guidelines for In-house Composting of Catastrophic Poultry Mortality, which can be found at: <http://www.agnr.umd.edu/MCE/Publications/Publication.cfm?ID=fs-801>.

NRCS personnel always need to be aware of the possibility of transfer of disease as they go about their day to day work on client’s many varied farming operations. Something as simple as contact with migratory fowl (stepping in feces) at a stream or pond, then a visit to a poultry farm could be a mode of transfer. A number of biosecurity practices can be observed that can decrease the possibility that such a transfer can occur. These include such “common sense” things as:

- Avoid livestock areas, pens, barns, etc., unless it is necessary to complete the goal of the visit.
- Park your vehicle on paved or concrete areas, away from production sites, to avoid contact with dirt, mud or manure.
- Wash hands with soap and water or antibacterial gel before entering or after leaving a livestock operation.
- Change coveralls and boots between visits to farming operations.
- Clean and disinfect equipment and vehicles between farm visits.

In the event of an outbreak of avian influenza or other infectious animal disease, do not enter affected areas unless requested to provide assistance by the State Veterinarian or other responsible official. All employees should review and follow NRCS biosecurity policy found in GM 130 Part 403, Subpart H.

Whereas these biosecurity measures are important to observe at all times, they will be even more important should an outbreak of avian influenza occur in the U.S. in the near future.

For more information contact: Glenn Carpenter, Ph.D. National Leader Animal Husbandry, Animal Husbandry and Clean Water Division, Ph: 301.504.2208, Email: [glenn.carpenter@wdc.usda.gov](mailto:glenn.carpenter@wdc.usda.gov).