

The Poultry Engineering, Economics & Management NEWSLETTER

***Critical information for Improved Bird Performance Through Better House
and Ventilation System Design, Operation and Management***

Auburn University, in cooperation with the U.S. Poultry & Egg Association

Issue No 25, September 2003

Feature article

Bio-Security: Your Defense Against Catastrophe

Catastrophic diseases such as avian influenza and exotic Newcastle disease can severely damage poultry production locally, regionally, and nationally. Both are contagious viral infections that can be spread by wild bird populations, people, materials, equipment, vehicles, and even prevailing winds. These diseases can cause growers to lose entire flocks and suffer extended downtime, along with high clean-up and sanitation expenses. Spread of these diseases can cause blocked trade due to quarantines and monetary losses in supporting and satellite industries. All this combines to exact a heavy burden on commercial industries afflicted with either of these potentially devastating diseases. Recent outbreaks of exotic Newcastle disease in California and Texas, and avian influenza in North Carolina, Pennsylvania, West Virginia and Connecticut resulted in economic losses that exceeded 250 million dollars. In Holland, the poultry industry has recently been devastated by an avian influenza outbreak that may endanger its survival as a viable agribusiness.

Disease Prevention Best

By far the most prudent way to combat the threat of either of these viral diseases is through prevention. In this newsletter you will find a catastrophic disease bio-security worksheet designed to enable poultry growers and poultry industry personnel to assess the risks of infectious disease associated with their operations. This is not a survey, but rather a worksheet that has been developed as a risk management tool. Using the worksheet enables you to identify, review and assess your own unique set of circumstances, and then to develop an effective disease prevention bio-security plan tailored to your operation.

You Need a Bio-Security Plan

An effective bio-security plan will be written out in detail and include consideration of each and every risk factor in terms of the frequency with which it occurs and the level of risk presented. The plan will include specific procedures that must be complied with to minimize or eliminate the risks identified. The plan will also include documentation of everything that is done, including logbooks and written policies to be followed. The steps in using the worksheet and developing a bio-security plan are explained on page 2. A listing of the most important basic catastrophic disease bio-security recommendations is given on page 4.

The Bio-Security Risk Analysis Worksheet and Catastrophic Disease Bio-Security Recommendations were developed by the Bio-Security Task Force Committee of the Alabama Poultry and Egg Association (AP&EA). The plan has been reviewed by the Grower Committee of the AP&EA and by Alabama poultry integrators. We hope you find the exercise both useful and enlightening. The long-term future and viability of the poultry industry in Alabama, the southern region and the United States will rely heavily on bio-security programs and procedures that prevent the entry of catastrophic disease organisms in our commercial flocks. It will be a team effort for all involved in this dynamic agribusiness.

How to Use the Bio-Security Risk Analysis Worksheet

The worksheet is designed to help a grower identify and deal with all the many ways that disease-causing organisms can gain entry to the farm and infect birds. The major known risk factors common to almost all poultry farms are listed in the first column. Extra lines are provided for you to enter any specific risk factors that occur on your farm and are not listed in the printed worksheet.

Compliance Procedures – In this column you simply answer Yes or No, that you have or do not have written procedures that will minimize the risk, along with whatever equipment or installation is required. For example, a basic bio-security recommendation is to have a disinfectant tire washing station and that every vehicle that enters the farm has its tires and undercarriage washed. Compliance procedures should include the following:

Access control – The farm should be clearly identified with a sign visible from the road, and with notification that the property is private and no unauthorized visitors are allowed. Permission must be required for access, and advance notice provided for deliveries, routine maintenance, visitors, etc. There should be a locked gate, and separate gates and road access provided for the farm buildings and the grower's home, if it is on the property.

Visitation list – The grower should have a list of all persons that will be authorized to enter the farm, and the compliance procedures should detail the requirements for such visits. Note: The compliance procedure for unauthorized visitors – trespassers – includes the physical means (such as locked gates) preventing access, signs forbidding unauthorized access, and the legal consequences of unauthorized entry.

Sanitation methods/equipment – Compliance includes use of equipment such as plastic boots, coveralls, gloves, footbaths and disinfecting chemicals, and their application to people and vehicles. Procedures should also include proper disposal of used equipment and materials.

Frequency – This column aids in determining the degree of seriousness of any particular risk factor. Some events that we would consider involving high risk, such as wild birds getting into a house, or supply trucks coming to the farm directly from another poultry farm, may not occur with high frequency, but can still be judged to have a high priority/risk level (4th column). On the other hand, events such as daily mail deliveries may have in themselves low risk, but because they happen with high frequency they might be considered at medium or even high priority/risk level.

Priority/Risk Level – The prime sources of infection are other poultry and wild birds, so any risk factor that involves contact with such birds must be considered a high level, high priority risk factor. A service man or delivery man coming directly from another farm, for example, must be considered a high level risk factor. A grower who visits the local farm supply store could pick up disease agents there, since other growers also visit the store. But since there is no direct contact with birds, the risk level usually is slightly lower. Assigning priorities does not mean that risk factors given a "low" rating can be ignored; it only means that you identify the risk factors that must be addressed first.

Documentation – This is the written who/what/when/where/how of bio-security. It includes logbooks, where for example, utility meter-readers are recorded to have made a visit on a given date, and check-boxes are marked to indicate the proper bio-security procedures were followed. Documentation also includes the written procedures themselves, copies of which are provided to all relevant personnel.

IMPORTANT: Some factors that can significantly affect the risk of disease but are not easily or at all controllable include:

Presence of other poultry houses (broilers, breeders, or layers) in the near area;

Prevailing winds; and

Travel routes taken by delivery or service people, especially those of an integrator company.

The worst case would be being located downwind of other nearby poultry farms and last on the visitation list. (Ideally, integrator delivery and service personnel should not travel from one poultry farm to another without thorough disinfectant sanitizing before arrival at the second farm.) A bio-security plan should note risk factors such as these, and in such a case all related risk factors identified in the worksheet should be considered as even higher priority than they would otherwise be.

Bio-Security Risk Analysis Worksheet

Potential Risk Factors	Compliance Procedure – Yes or No	Frequency High/Med/Low	Priority/Risk Level High/Med/Low	Documentation Log books, written policies, rules, etc
Authorized Visitors				
Servicing				
Chick Bus				
Feed Delivery				
Live Haul				
Shavings				
Hired Labor				
Gas Company				
Water Company				
Power Company				
Mortalities Pickup				
Used Litter				
Repair				
Vendors				
Neighbors				
Guests				
Home Delivery				
UPS, FedEx, etc				
Mail				
School Bus				
Unauthorized Visitors				
Equipment				
Borrowed				
Loaned				
Animals				
Backyard flocks				
Rodents				
Insects				
Wild Birds				
Waterfowl				
Livestock				
Pets				
Off-Farm Visits				
Farm Supply				
Complex Offices				
Hatchery				
Feed Mill				
Processing Plant				
Seminars				
County Fairs				
Other Farms				

Basic Bio-Security Recommendations for Avoiding Catastrophic Disease

1. Control visitor access (install signs, lock doors, etc.) and limit visitors to those who have a need to enter your facilities.
2. Insure sanitation procedures for those visiting your facilities (plastic boots, foot baths, tire washes). Make it clear what is expected of employees, repairmen, vendors and others in this regard.
3. Expect and demand a disease bio-security plan of those supplying goods to your operation.
4. Insure sanitation of equipment borrowed from or lent to others (whether it is used directly in the poultry portion of the operation or not). Clean and sanitize used equipment bought for the operation.
5. Document visits and movement of supplies and products to and from your facility in a log. Documentation not only allows you to determine what happened if a problem occurs, it reminds everyone regularly of the importance of the program.
6. Routinely determine whether documentation procedures are used as planned and not filled out ahead of time to save work.
7. Insure that employees do not have commercial poultry, backyard flocks or pet birds at home.
8. Develop a written disease security plan and make sure that all involved in the operation are aware of the steps necessary to avoid the introduction of potential catastrophic diseases.

The Bottom Line

In most cases, good poultry house management decisions can make or save a grower a few dollars per flock, sometimes quite a few dollars. Bio-security decisions in regard to diseases such as avian influenza and exotic Newcastle disease are another matter altogether. If a gap in your bio-security allows one of these diseases to enter, you can lose every bird on your farm, with all the uncompensated expenses that follow. That's what we mean by "catastrophe." The bottom line is that without good bio-security you can be put out of business entirely.

Mike Eckman, Extension Poultry Scientist, Auburn University

Joe Hess, Extension Poultry Scientist, Auburn University



U.S. Poultry & Egg
ASSOCIATION

The Poultry Engineering, Economics and Management Newsletter is now being produced in cooperation with the U.S. Poultry & Egg Association, as part of their commitment to poultry industry education. We are proud of this new association, and know it will help to improve our continuing efforts to bring you the critical information you need to know about poultry engineering, economics and management.

Thanks to the following for their support of Extension poultry engineering programs at Auburn University:

Diamond

Aerotech/Munters	888-335-0100
CANARM Ltd.	800-267-4427
EXPERT CONTROLS	877-926-2777
Hired Hand, Inc.	800-642-0123
Agrifan	800-236-7080
Poultry Guard	312-706-3294
Poultry Litter Treatment-PLT	800-379-2243
VALCO	888-345-8956

Platinum

Diversified Imports/ROTEM ...	800-348-6663
Pro-Tech, Inc.	www.pro-techinc.com

Gold

ACME Engineering	800-382-2263
Big Dutchman	616-392-5981
Chore-Time	219-658-4101
Reeves Supply	888-854-5221

Silver

Aviagen	800-826-9685
BioSentry	800-788-4246
CoolAir	904-389-1469
Cumberland	217-226-4401
Dandy	800-222-4166
Ellison and Ellison	770-427-8929
Federal Land Bank Assoc. of North Alabama	888-305-0074
First South Farm Credit	800-955-1722
Lewis Brothers	912-367-4651
Monitor Co.	800-537-3201
Motomco	800-237-6843
Multifan/Vostermans Ventilation, Inc.	800-458-5532
Porter Insulation Products ...	800-999-0430
Space Ray	704-372-3485
WYNCO	800-643-3064



The Poultry Engineering, Economics and Management newsletter provides up-to-date information on topics of interest to poultry production personnel, focusing on most effective and efficient uses of modern technology and equipment, with a special emphasis on economic implications. The Newsletter is published six times a year, or as needed to address emerging or special issues. Contact: Jim Donald, Extension Biosystems Engineering, 228 Corley Bldg., Auburn University, AL 36849-5626, (334) 844-4181, fax (334)-844-3548, jimdonald@aces.edu. Published by:

Jim Donald
Jim Donald, Extension Engineer
Auburn University

Mike Eckman
Mike Eckman, Extension Poultry Scientist
Auburn University

Gene Simpson
Gene Simpson, Extension Economist
Auburn University

Issued in furtherance of Cooperative Extension work in agriculture and home economics, Acts of May 8 and June 30, 1914, and other related acts, in cooperation with the U.S. Department of Agriculture. The Alabama Cooperative Extension System (Alabama A&M University and Auburn University) offers educational programs, materials, and equal opportunity employment to all people without regard to race, color, national origin, religion, sex, age, veteran status, or disability.