



California Poultry Letter

University of California • Cooperative Extension

January - March 2003

Establishing Effective Disease Security

In December of 1971, there were five cases of Exotic Newcastle Disease diagnosed in commercial poultry flocks in California. The following month, January 1972, the epidemic expanded to include 20 new commercial flocks and the following month included an additional 30 commercial flocks. The spread of exotic Newcastle Disease to new flocks in 1971 was both from infected commercial poultry flocks and also from backyard chickens. This historical experience stresses the need for every poultry producer to place each farm on a separate biosecure island. There must be steps taken to block the spread of disease to new flocks both from other commercial poultry flocks and from backyard poultry flocks.

Commercial flock links that can spread disease include:

- Egg processing materials and traffic
- Feed delivery trucks and drivers
- Manure haulers
- Rendering trucks
- Vendors and inspectors

Every ranch is different and the creation of a biosecure island requires detailed examination of all interactions between your ranch and other commercial flocks. To protect your farm from infection these links must be eliminated or the equipment must be effectively cleaned and disinfected. Effective programs must include, but are not limited to, the cleaning and disinfection of all trucks and equipment entering and exiting poultry facilities, the complete isolation of manure and rendering traffic from clean areas of the farm, and arranging meetings off site whenever possible.

Steps must also be taken to prevent the spread of disease from backyard poultry. These efforts should include:

- Ongoing employee education about biosecurity and the dangers of contact with outside poultry
- Employee uniforms with on farm or commercial laundry service
- A strict visitor policy that excludes anyone that has been near chickens within the previous 24 hours
- Protective clothing for all visitors
- Perimeter fencing that keeps people and poultry
- Establishment of a buffer zone around the ranch

Elimination of neighboring poultry is not easy and producers may want to consider offering their neighbors eggs, or assistance with their own biosecurity plans. Biosecurity plans are not static and must be adjusted as local conditions change and threats of disease change regionally. High-risk disease agents that easily travel on people and equipment require high level biosecurity efforts. It is critically important that all producers regularly review their biosecurity plans and seek the input of both employees who see the plan in action every day and also outside experts who may never have previously visited your facility.

Biosecurity is the producer's responsibility. It may seem like a daunting process but it **can** prevent the introduction of disease agents. It puts the producer in control of biosecurity. Fix the breaks now, before infections occur.

Carol Cardona, Extension Veterinarian
Ralph Ernst, Extension Poultry Specialist

Egg Processing Plant Biosecurity Reviews

Cooperative Extension and PePa have been leading an effort to complete voluntary biosecurity reviews for interested egg processing facilities. A team of two or three people is used for each review. The two documents that follow are the general outlines we used for these reviews. Remember that every facility is different and requires a unique plan. Response to these reviews from industry has been very positive. Over 40 plant reviews have been completed. If you are interested contact Ralph Ernst 530-752-3513 or Debbie Murdock 916-441-0801.

Egg Processing Biosecurity Plan

Statement of purpose: *Egg processing can play a role in the distribution of disease agents to commercial egg-laying chicken flocks. This plan seeks to prevent disease spread to production facilities from the processing plant through the incorporation of simple, straightforward policies that address biosecurity.*

I. Visitor policy: Every processing plant should have a clear visitor policy.

A. Visitors to the processing plant should be limited

1. The general public should not be permitted access to the plant
 - a. The perimeter of the plant should be controlled by:
 - Perimeter fencing
 - Locked or monitored doors
 - b. A logbook of visitors should be maintained
 - This necessitates that visitors come into the plant via a specific route, i.e. through the office
 - c. Question processing plant visitors
 - See model visitor questionnaire from UC Extension
 - d. Retail stores with public access must be specifically addressed
 - Traffic patterns must be kept separate from the processing plant *and* from production
2. Service personnel
 - a. Their access to various areas of plant should be clearly defined
 - b. Access rules should be communicated to service personnel
 - c. A company contact for all service personnel should be designated to communicate changes

3. USDA/CDFA inspectors
 - a. They should receive biosecurity training
 - b. A company contact for all inspectors should be designated to communicate changes
 - c. Equipment transported by inspectors should be kept to a minimum
 - Provide space for inspectors to store their supplies

B. Truck drivers

1. Drivers bringing eggs from the farms can carry disease agents between the farm and processing plant. Each plant should have a plan to address this issue. Some possible solutions are:
 - a. On farm egg packing areas should be separated from egg production areas
 - One way traffic only
 - b. Eggs from the ranch (unprocessed) should be unloaded by processing plant personnel and truck drivers should not enter the processing plant
 - c. Trucks should be loaded at the farm by production personnel or appropriate protective clothing used by drivers

C. Parking

1. Each plant should have designated visitor parking
 - a. Separate from production parking
 - b. Plan should include designated parking areas
 - Clearly marked to direct visitor parking
 - Hard surface preferred
 - Good drainage preferred

II. Equipment sanitation: Each processing plant should have a specific plan that addresses egg flat, egg rack, egg pallet, and/or trolley sanitation and separation.

A. Egg flats

1. Flat washers
 - a. All processing and breaking plants must have flat washers that adequately clean flats
 - b. Critical parameters for disease agent killing must be monitored
 - Wash water temperature
 - Type of chemical disinfectant used; frequency of additions/changes; concentration
 - Contact time with disinfectant
 - Wash water changes

2. One way paper flats
 - a. At times when egg processing plants are transmitting diseases or are suspected of transmitting diseases, one way paper flats should be used for all production
 - This status will be determined by the panel of experts described in section V
 - b. Paper flats arriving at the processing plant should be *condemned and destroyed and never reused.
 - c. Records on the number of flats purchased must be maintained and will be used to validate that flats are only going one way
3. Processing plant retail stores
 - a. One-way paper should be used
 - b. In times of high risk, on-site retail stores should be closed
4. Separate flats by color for each farm/owner
 - a. One color for each location;
 - may not be practical for some plants due to processing load
 - b. Good idea if it can be done
 - c. Cannot substitute for a flat washing plan

B. Racks or Pallets

1. Dedicated for each farm/owner;
 - a. One color or other type of identification for each location
2. Sanitation
 - a. Many designs for rack and pallet sanitation systems have been developed
 - b. Inexpensive to build
3. Dedicated to clean and dirty areas of the plant
 - a. Each plant should have a plan to keep clean and dirty equipment separate
 - b. Defined clean and dirty functions in the plant
 - Clean: processed eggs, outgoing cooler, washed flats, racks or pallets
 - Dirty: unprocessed eggs, unwashed flats, incoming cooler

III. Traffic flow: Each plant must have a plan that addresses:

A. Separation of clean and dirty areas of the plant

1. Inclusion of physical barriers to direct traffic
2. Floor painting to designate areas
3. Signage to direct traffic
4. Employee knowledge of traffic flow via education

5. Visitor education about traffic flow
 - a. Education of frequent visitors (service personnel, inspectors, etc.)
 - b. Chaperone infrequent visitors to the plant (University personnel, company owner, etc.)
- B. The plan should address how any resident flocks will be protected
1. Fencing and gates that separate traffic
 2. Traffic flow
 - a. Processing and production personnel separation
 - Break rooms
 - Parking
 - All traffic
 3. Timing of processing (e.g., process eggs from the resident flock first, before outside eggs)
- IV. Employee training:** Each processing plant should address employee biosecurity training.
- A. Communicate biosecurity goals to processing plant employees
1. Develop an education program for each plant (use sample plan developed by UC Extension as a model)
 2. Redo training at regular intervals, in periods of high risk, training should be refreshed
 3. Document employee training
- V. Committee of experts**
- A. Each processing plant plan will be reviewed by a panel of experts
1. Panel composition: Processing plant expert, egg production expert, veterinarian
- B. Visitation to each plant
1. Purpose: Validate traffic flow patterns
 - a. Each plant will require an individualized plan
 - b. Annual visit and review of traffic patterns, etc.
 2. Scheduling
 - a. Regularly scheduled reviews should occur annually during times of normal risk
 - b. High risk periods may require more frequent visits

UC Extension Model for Processing Plant Visitor Questionnaire

Visitors to egg processing plants

1. *Who are you here to see?* The person requested must be contacted. If the visit is ok, proceed to question 2. If the visit is not ok, then the person must be politely turned away.
2. *Ask all visitors to sign logbook.* Include name, date, purpose of visit, and time of entry and when they leave, they must log the time they exit.
3. *The visitor must wait for a company representative to escort him/her beyond the front desk area.* This representative is responsible for the visitor's compliance with established clean and dirty areas in the plant, traffic flow, plant security, and use of protective clothing as needed (depending on the purpose of the visit). Visitors must visit in order: clean areas, dirty areas, then exit and return to office without passing through the clean side of the plant.

Visitors to the clean side of the processing plant

1. *Have you been to visit chickens or other processing plants in the past 24 hours?* If the answer is yes, then the visit to clean areas must be denied. If the answer is no, proceed with 1a-1d.
 - a. *The visitor must be provided with disinfectable foot covering, hair covering, and protective clothing.* Washable laboratory coats, disposable hair-nets, and disposable plastic boots are adequate. It may be advisable to use colored garments to indicate visitor status.
 - b. *The visitor must be asked to clean and sanitize his/her hands before entry into the clean areas of the plant.*
 - c. *The visitor must be escorted or provided with a map of plant clean and dirty areas and traffic patterns.* This will help the visitor understand where he/she can and cannot go in the plant.
 - d. *A plant employee must escort the visitor through the clean area.* If visitors are regular visitors, this could be waived if they are familiar with plant procedures and are compliant.
 - e. *The plant chaperone of the visitor must educate the visitor on the importance of adhering to plant traffic patterns.* Biosecurity is behavior and visitors must understand how their actions fit into the biosecurity of the plant.
 - f. *Any equipment carried by the visitor must be clean or be cleaned and sanitized* If possible, ask regular visitors to leave equipment and materials at the plant so that they carry nothing in and out of the plant.

Visitors to the dirty side of the plant

1. *The visitor must be escorted or provided with a map of plant clean and dirty areas and traffic patterns.* This will help the visitor understand where he/she can and cannot go in the plant.
2. *A plant employee must escort the visitor to the dirty area.* If visitors are regular visitors, this could be waived if they are familiar with plant procedures and are compliant.
3. *The plant chaperone of the visitor must educate the visitor on the importance of adhering to plant traffic patterns.* Biosecurity is behavior and visitors must understand how their actions fit into the biosecurity of the plant.

Visitors to secure areas of the plant

1. *Visitors to the secure areas of the plant must be cleared by a plant employee.*
2. *Visitors must be provided with identification.* Colored coveralls or laboratory coats should be considered as well as badge identification. This simple system will make these visitors easily identified.
3. *Visitors to secure areas must be escorted by a plant employee at all times.* Inspectors are an exception to this standard.
4. *Visitors to secure areas are also visitors to clean or dirty areas and all procedures must be followed as indicated above.*

Refrigerated Trailer Transport of Perishable Products

The second in a series of publications on proper transportation of perishables, this is an indispensable guide for shippers, transport company personnel, inspectors, surveyors, insurers and receiving company employees. Inside you'll find comprehensive information on how to select the proper boxes for shipment, how to plan a load, product temperature at loading, carrying temperatures, product compatibility, trailer operating condition, loading, and how to monitor and record temperature during transit.

Also included is an appendix that discusses heat transfer in trucks and tables that address the long-term storage of perishable products. Includes two 22" x 34" color posters, one in English and one in Spanish, that summarize the major steps for successful loading.

\$18.00
21614
28 pp. and 2 posters

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2003 Calendar

May 5-9 - Poultry Health Management Schools, West Lafayette, IN. The following schools will be offered: Broiler and Turkey Schools (May 5-6), Food Safety and Waste Management (May 7) and Layer School (May 8-9). Contact Dr. Teresa Morishita, Conference Director, The Ohio State University; Tel: 614-292-9453, Fax: 614-292-4142, or E-mail: morishita.1@osu.edu

May 7-8 - California Animal Nutrition Conference, Radisson Hotel, Fresno, CA.

May 19-22 - National Egg Quality School, San Antonio, TX.

June 17-19 - Northwest Poultry Council Annual Convention, The Resort at the Mountain, Welches, OR.

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