



# California Poultry Letter

JANUARY 1997

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**Back copies of either the California Poultry Newsletter or Egg Economics Update may be obtained from:**

*Don Be//, Poultry Specialist*  
*Phone: (909) 7874555, Fax: (909) 787-7251*

## **EMPHASIS - DISEASE PREVENTION**

### **Biosecurity Tips**

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*At the 1996 Western Poultry Disease Conference held in Cancan, Mexico, & **Kenton Kreager of Hyline International** spoke about **biosecurity** as it relates to **Avian Influenza in the commercial fable egg indus fry**. The following comments were abstracted from his **talk** which could be applied to practically **all poultry** disease prevention programs.*

**"The** best way to control AI (disease) is to avoid getting it in the first place. "Biosecurity" is the term we use to represent everything we do to avoid getting a new disease onto a farm. The specific measures may depend on the diseases we want to avoid and the characteristics of these diseases, although most diseases warrant similar preventive measures.

"The length of time these materials (disease organisms) remain infectious depends on temperature and humidity, so cleaning, drying, heating and disinfecting any potentially contaminated item should effectively inactivate any virus present. We need to think of the inside of our chicken houses as a protected environment, shielded from all potentially contaminated **external items** bringing we bring into the house needs to be clean and disinfected and free of potential contamination. There are countless items that need to be considered in this regard, but they include such things as people and their clothing, equipment for vaccinating "and (beak trimming), live haul crates and trucks, feed trucks and delivery personnel, neighbors, other poultry producers, salesmen, and even your service veterinarian.

"Another possible source of disease entry **for** a large multiple **age farm is** new flocks themselves. Often, this is how diseases like MG, MS, and LT **are** first introduced to **a** farm. It may not be known that the flock is infected when it is housed on the layer farm, then it proceeds to infect neighboring flocks and eventually the entire farm. New pullet flocks should be blood tested for these major diseases in time to have results before they are moved. If unexpected positive results are found, plans may be changed to prevent exposing all the existing birds on the farm.

"Each **farm** needs to develop its own set of biosecurity rules based on its particular procedures, risks, and needs. Common biosecurity rules that have been suggested for prevention of AI (disease) include the following:

1. Employees should have no live poultry at home - particularly ducks, chickens, or turkeys.
2. Employees may be required to **shower-** in and/or change into clothes worn only on the farm when arriving at work.
3. No unnecessary visitors should be allowed on the farm. Those that are necessary should likewise shower, change clothes, or at least put on clean disposable boots, coveralls, and hat.
4. Any live-haul trucks for delivery of new pullets or disposal of spent hens should be thoroughly cleaned and disinfected prior to entering the farm or loading new pullets.
5. Feed and egg trucks or other vehicles coming from other poultry farms should be visibly clean and perhaps **spray-** disinfected prior to entering the farm.

6. Feed delivery and egg collection personnel should not enter the house further than necessary.

7. Keep all other animals out of contact with poultry flocks. Control wild birds, rodents, and insects.

6. Thoroughly clean and disinfect any equipment brought into the house.

9. Lock the poultry house and external **gates to** prevent unauthorized entry.

10. Conduct a routine serological testing program to monitor for the presence of the AI (disease) virus. Test new pullet flocks before housing.

'It is easy to make a long list of rules, but the program's success depends entirely on the cooperation of the people on the farm. Most likely, they view the rules as an unnecessary inconvenience for themselves and are likely to disregard some of them when no one is watching. Biosecurity will work only when everyone **involved** is fully aware of what we are trying to avoid and why these rules make sense. If they understand their own economic well-being depends on the farm's well-being, and that depends on avoiding AI (disease), then maybe they will be more willing to shower-in, change clothes, or ask their friends not to enter the chicken house. Company management personnel must demonstrate an equal personal commitment to abide by the same set of rules. There can be no exceptions.

"Disease prevention is not easy. At times it is inconvenient, time consuming, and expensive. However, it needs to be viewed as an investment in the long-term well-being of the farm. When it comes to

serious diseases, disease prevention may make the difference between a farm's success or failure. Biosecurity isn't an option. It's a vital aspect of total poultry management that must not be ignored."

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### **Factors to Consider in the Design of a Biosecurity Program for Broiler and Turkey Operations**

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**Dr. Hugo Medina, veterinarian for Foster Farms Inc.** reviewed **the** many **factors** in he considered **to** be important in *designing a biosecurity program. This presentation was made at the 1996 Western Poultry Disease Conference in Mexico.*

"Biosecurity must be an integral part of any poultry production system by minimizing the exposure and introduction to any agent(s) and/or factor(s) that can be harmful to the bird's well-being or interfere with production efficiency.

"Biosecurity can be external or internal in origin. Externally from people (**workers-visitors**), litter or other materials, water, air, chicks, poultry, feed, vaccines, insects, wild animals, scavengers, livestock, people, new vaccines, bird secretions and excretions, body fluids and mortality, beetles, mosquitos, flies, mites, ants, cockroaches, earthworms, snails, parasites, feed, hatchery and **livehaul** vehicles.

"Viability of viruses, bacteria, molds **and** parasites will depend on their sensitivity to time; host present; temperatures; water (under pressure, hot and/or steam); dryness; soaps and detergents; disinfectants; insecticides; rodenticides and wild bird and animal traps.

“Farm/ranch biosecurity measures are not only influenced by wire fences and deep disinfection stations, but also by people’s movements, **farm** location, poultry concentration in the area, bird densities, cleaning and disinfection products, procedures and methods, downtime between flocks, built up litter vs. total clean out, type of housing, maintenance, cleaning and disinfection (wire mesh, structure, curtains, fans, louvers, fogger lines, water, feed systems) water source, pelleted feed, maintenance and cleaning of feed bins, and feed spills. Movement between facilities and hatcheries, live production area, gas, litter, chick and poultry, feed mill, **livehaul** and **deadhaul** trucks and manure trucks.

‘In order for any biosecurity program and preventive procedures to be effective, they need to be scientific in principal, practical and easy to implement and understand, enforceable and low cost or inexpensive.’

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### Evaluation of Cleaning and Disinfection

***At the 44th New England Poultry Health Conference held in New Hampshire in March 1995, Dr. Sheila Foster (USDA, FSIS) and Dr. Michael Opitz (University of Maine Cooperative Extension) summarized their views of what constitutes a proper cleaning and disinfection program for poultry houses and equipment.***

“Cleaning and disinfection (C&D) of poultry houses has been identified as one of the hazard analysis critical control points (HACCP) in pre-harvest egg safety programs. Persistence of Salmonella enteritidis (SE) contamination in the laying house was responsible for exposure of 66% of the production flocks found to be environmentally SE positive. Results from Pennsylvania and Maine have shown that

only **50-62%** of the C&D efforts have been successful, based on test results of the environment of the replacement production flocks.

“Modern poultry houses are large and have complex equipment. Effective decontamination of these buildings requires well trained personnel and appropriate cleaning equipment. It is a professional job. C&D also needs to be wellcoordinated with depopulation crews, pest control and building maintenance. Decontaminating poultry houses from Salmonella enteritidis cannot be successful unless rodents have been controlled beforehand.

“ Failure of decontaminating poultry houses often results from incomplete cleaning. The effectiveness of all disinfectants is reduced or lost in the presence of dirt. In many instances Salmonella enteritidis was more readily isolated after than before C&D because of bacterial ‘bloom’ during the process.

“Proper preparation of the house for disinfection is the most difficult part of the decontamination process. Good dry cleaning prepares the house for wet cleaning and includes all of the following steps: (some are often overlooked)

1. Remove all dead birds, parts, chunks of manure, feathers, eggs from cages.
2. Remove escalator belts & panels from egg conveyer equipment in front of the building. Use a screwdriver to remove dried egg material and feathers from between rollers.
3. Run feeders to remove feed from feed lines and hoppers. Use air compressor to blow out dry remaining feed. Scrape away any spilled feed from around cage leg supports.

4. Remove egg catch pans from under escalator.

5. Remove manure from pit. In deep pits be sure beams and ledges are clean. In shallow pits, hand scrape under escalator equipment in front and concentrate on shallow pit comers. Run manure scrapers to remove as much manure as possible from dropboards. Hand scrape packed and dried on manure.

6. Dust, blow or sweep cobwebs, material from air inlets, ceilings, walls, electrical panels and light fixtures.

7. Blow or scrape dust and caked on material from fan housing blowers and fan blades.

8. Flush water lines.

9. Rodent bait stations and traps need to be soaked, scrubbed and disinfected. Use stiff brushes and scouring pads.

“Once dry cleaning is completed and rodent control is established, proceed with wet cleaning. Obtain a third party visual inspection for thoroughness of dry and wet cleaning before proceeding with disinfection. Dilute disinfectant to manufacturer’s label instructions and make sure all surfaces are completely covered with disinfectant spray.

“**Verify** disinfections success by environmental sampling and culture of representative sites of the building and equipment.”

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### **Corrections in December California Poultry Newsletter**

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In the article “**Egg** Quality at Major Retail Grocery Stores” we failed to say that the Egg Quality Study presented was one part

of the National study conducted in 1996 by Ken Anderson (**N.Carolina**), Don Bell (Calif.), John Carey (Texas), Mike Darre (Conn.), Ken Koelkebeck (Illinois) and Paul Patterson (Penn.). In addition, Doug Kuney, John Voris and Gideon Zeidler assisted in the collection of data in California. The material reported was presented at the California Egg Processing and Marketing Workshops in December. The authors wish to thank the California Egg Commission for their generous support off the California. portion of the study..

### **1997 Pacific Egg and Poultry Association Annual Convention - Palm Springs**

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The date of the convention should have been stated as April 16-18. Information about registration and attending should be directed to the **PEPA** office in Sacramento Phone: (916) 441-0801

This year’s program includes educational sessions on:

- Salmonella enteritidis
- Media and the poultry industry
- Cost of egg processing
- Buyers expectations for eggs

**With** a host of Nationally known speakers.

(This program is approved for continuing education credit for the California Egg Quality Assurance Program).

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Don Bell, January Editor  
UC Riverside  
Phone: (909) **787-4555**  
E mail: **don.bell@ucr.edu**

Ralph Ernst, Technical Editor  
UC Davis  
Phone: (916) 752-3513  
E mail: **raernst@ucdavis.edu**