



# Biosecurity for Poultry Flocks



**2020 University of Hawaii at Manoa  
College of Tropical Agriculture and Human Resources  
Virtual Livestock Industry Field Day**

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# Purpose of Biosecurity

- Management practices intended to prevent the introduction and spread of infectious disease agents to poultry
- To minimize the incidence and spread of diseases of public health significance.





# Routes of disease spread

- Poultry (new birds)
- Other animals (wild birds, vermin, insects)
- People (personnel, visitors, international travel)
- Equipment (used equipment)
- Vehicles (trucks, cars)
- Air (aerosol or dust)
- Water supply (contamination)
- Feed (contaminated raw materials, during transportation, pests)
- Litter & waste





# 2016 HPAI Preparedness & Response Plan

1. Preventing or reducing future outbreaks:
  - **Biosecurity**
2. Enhancing wild bird surveillance
3. Enhanced preparedness
4. Improved response capabilities
5. Preparing for potential use of AI vaccines





# Biosecurity Procedures:

- **Develop a biosecurity plan**
- **Develop a flock management plan**
- **Develop facility Standard Operating Procedures**
- **Train personnel**



Download Customizable  
Templates for Writing a  
Biosecurity Plan

 [WRITE your Biosecurity Plan](#)

 [TYPE your Biosecurity Plan](#)

[www.poultrybiosecurity.org](http://www.poultrybiosecurity.org)





# Need to consider the following factors:

- Location & layout of the farm
- Feed and water source
- Disease status of the area
- Other livestock in the area
- Types of wildlife in the area
- Types of interactions between the farm and the public





# 1. Biosecurity Responsibility

- Biosecurity coordinator is responsible for development, implementation, maintenance and ongoing effectiveness of the biosecurity program.
- Be knowledgeable in the principles of biosecurity.
- The biosecurity coordinator and all farm personnel are responsible for implementation of the program.
- The biosecurity coordinator should review the program once a year and make revisions as necessary.





## 2. Training

- The program should include training materials that cover farm-specific, premises-wide and company-wide procedures (if applicable). Training should be done once per year and documented.
- All poultry owners and caretakers that regularly enter the Perimeter Buffered Area (PBA) must complete this training.
- New workers should be trained at hire.
- Biosecurity manual should be made accessible to staff.

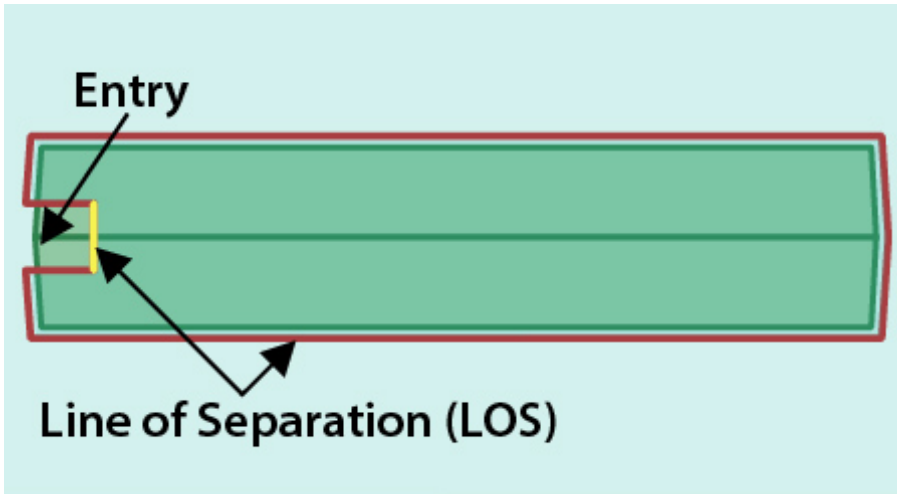






### 3. Line of Separation (LOS)

- **Functional line** separating the poultry houses and birds inside from exposure to potential diseases sources. Generally, it is defined by the walls of the poultry building.
  - Provide footbaths at entrances to the houses.
  - Footbaths must be inspected daily for excessive organic matter and replenished.
- The program should describe the boundaries of the LOS.





# Personal Items Crossing the LOS

- All personal items must be cleaned and disinfected
- Cell-phones, jewelry, electronics

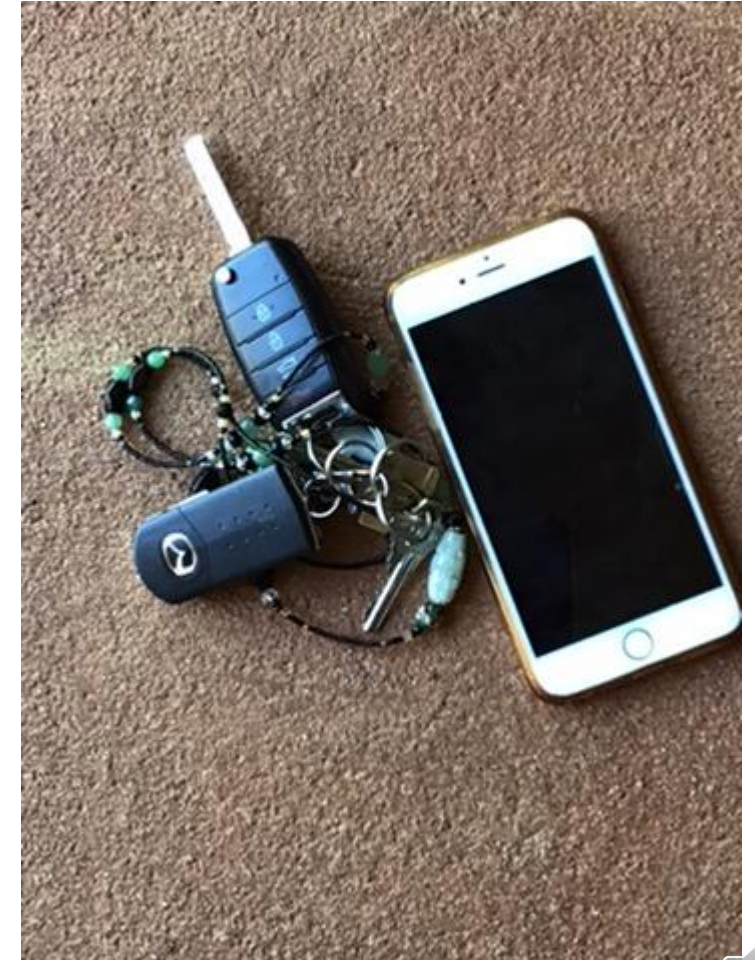
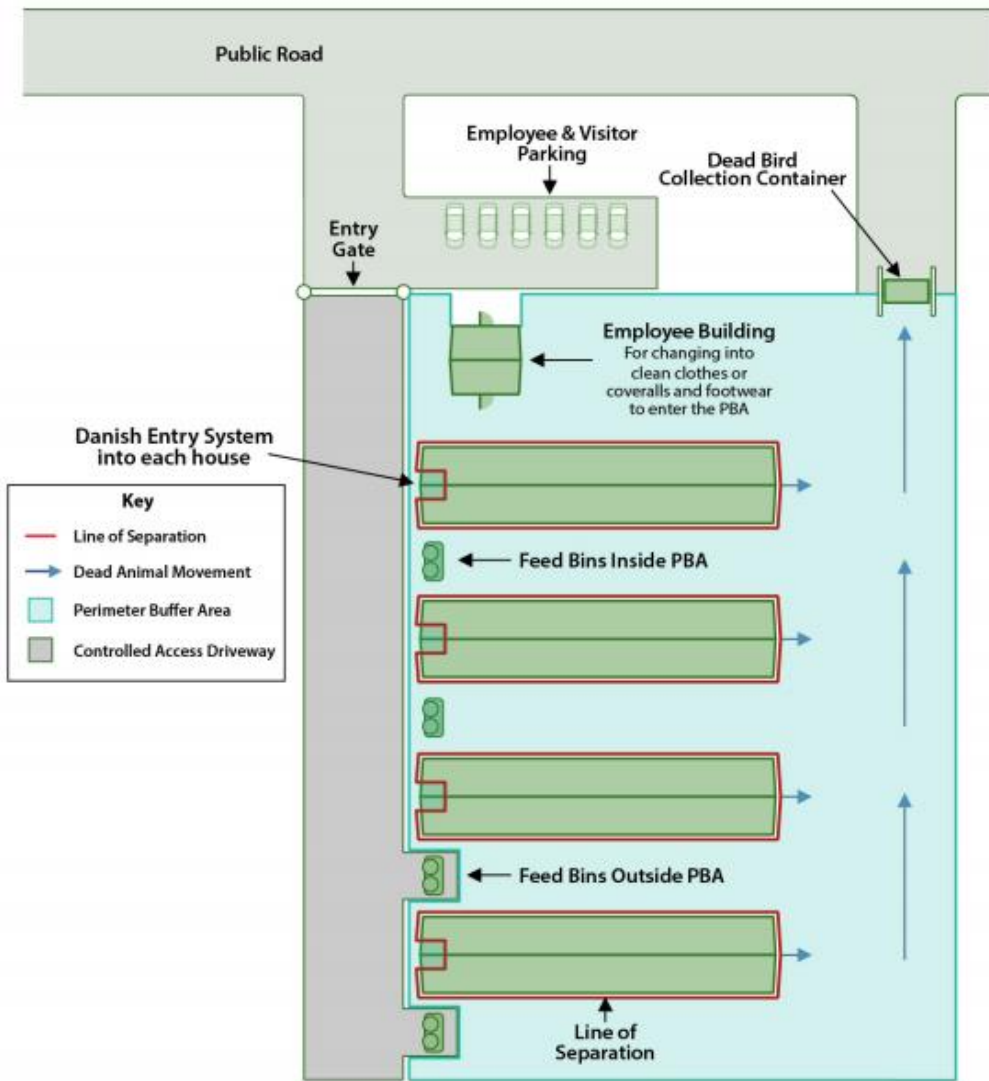




Figure 1:



## 4. Perimeter Buffer Area (PBA)

- Functional zone surrounding the poultry houses that separates them from areas unrelated to poultry production on that site.
- Entry should be gated, and biosecurity signs should be posted.
- Signs should direct visitors to stop and contact the producer before entering.





## 5. Personnel

- **Procedures and biosecurity PPE for personnel and non-farm personnel (e.g. visitors, suppliers)**
  - Hands must be washed/sanitized before entering and exiting the house.
  - Keep a visitor's log.
  - Before entering production areas, visitors must wash/sanitize hands, wear clean clothing, and should either thoroughly clean and disinfect their footwear or wear on-farm boots.





## 5. Personnel

- Personnel should work from cleanest (i.e. lowest risk) to highest-risk areas.
- Sick people should not have contact with poultry. Should have a sick leave policy for employees with flu-like symptoms.
- Recommend staff be vaccinated for influenza yearly.



<https://www.cdc.gov/flu/faq/flu-vaccine-types.htm>





## 5. Personnel

- **Should also have procedures in place for all personnel who have had recent contact with other poultry or avian species before re-entering the PBA.**
  - Recommend that personnel not own any poultry or other birds.
  - During outbreaks, limit exposure to wild birds.
- **When travelling, avoid contact with livestock, poultry and other birds.**

Keep visitors  
to a minimum





## 6. Wild Birds, Rodents, Insects

- **Prevent contact with other birds, their feces and their feathers.**
  - Houses must prevent entry of wild birds, rodents, and other animals.
  - Feed should be inspected when received for evidence of contamination.
- **Control programs for rodents, insects, and other animals.**
  - Farm should be adequately drained to avoid standing water.
  - Keep the surrounding areas clean and select landscaping to minimize attracting wild birds, vermin & insects.





## 7. Equipment and Vehicles

- Procedures for cleaning, disinfection and restrictions of sharing of equipment and vehicles where applicable.
- Equipment entering the houses should be cleaned and disinfected prior to use.







## 7. Equipment and Vehicles

- **Plan for movement of equipment and vehicles across the LOS and entering/departing the PBA.**
  - Drivers must not enter any poultry houses or other “clean” areas unless they have complied with the on-farm biosecurity requirements.
  - Vehicles are not allowed to enter “clean” areas unless prior permission is obtained.
- **Vehicle access and traffic patterns should be defined.**
  - Provide a parking area for vehicles that is not in the production area.





## 8. Mortality Disposal

- **Dead birds should be collected daily, stored, and disposed in a manner that does not attract birds, rodents, insects, and other animals and avoids cross-contamination from other facilities.**
- **On-site disposal is recommended.**





## 9. Manure and Litter Management

- Manure and dirty litter should be removed, stored and disposed of in a manner to prevent exposure of poultry to disease agents.
  - If composting manure/litter, avoid areas near poultry, and personnel/vehicle traffic.
- On-site storage should limit attraction of birds, rodents, insects, and other animals.



Compost organic matter such as animal manure to feed your garden.  
(Photo by Tiffany Woods.)





# 10. Replacement Poultry

- **Should be sourced from health-monitored flocks in compliance with NPIP guidelines.**
- **Should be transported in equipment and vehicles that are regularly cleaned, disinfected, and inspected.**
  - **Inspect all newly arrived birds for signs of disease.**
  - **Isolate new birds for 30 days. If unusual signs of disease or trends are observed, contact your local veterinarian, extension agent/veterinarian or State Veterinary Medical Officer.**





# 11. Water Supplies

- **Drinking water should be sourced from a contained supply such as a well or municipal system.**
  - **Should meet appropriate water standards. Some diseases can be transmitted via contaminated water.**
  - **If drinking water comes from a surface water source, water treatment must be used to reduce the level of disease agents.**





## 12. Feed and Replacement Litter

- **Store and maintain in a manner that limits exposure to and contamination by or birds, rodents, insects or other animals.**
- **Feed spills should be cleaned up and disposed in a timely manner. Spilled feed attracts wild birds, rodents, and insects.**
- **Fresh litter should be brought onto the farm in a manner that reduces the likelihood of the introduction of disease agents.**





# 13. Reporting of Elevated Morbidity & Mortality

- Increased morbidity or mortality above expected levels (should be defined) should be reported as required by the biosecurity plan and appropriate actions should be taken to rule out reportable disease agents.
- Morbidity, mortality, feed/water consumption and production data should be recorded daily in order to detect unusual trends.
- Bird movement for traceability.
- Treatments and vaccinations



*USDA file photo*

*Swelling of the tissue around the eyes and neck*





# 14. Auditing

- Perform a self-audit to review your biosecurity plan every year
- NPIP requires auditing every two years by the Official State Agency.







# Other good resources

- [www.poultrybiosecurity.org](http://www.poultrybiosecurity.org)
- [www.cfsph.iastate.edu](http://www.cfsph.iastate.edu)
- [www.poultryimprovement.org](http://www.poultryimprovement.org)
- [www.uspoultry.org](http://www.uspoultry.org)

