

Biosecurity Principles for Backyard Poultry



**A Simple Guide to
Protecting Your Flock**

What is meant by the term BIOSECURITY?

Biosecurity includes all the management steps taken to prevent the introduction of infectious agents into your flock.

Why do I need to create a biosecurity plan?

Every poultry operation is unique. Having a customized biosecurity plan in place is an important first step toward guaranteeing the health of your birds. Your biosecurity plan is also a major component of your NPIP certification. Writing your plan down will facilitate the biosecurity audit process and allow you to re-assess and make changes as needed.



What are the key features of an effective biosecurity plan?

Disease-causing agents are most often introduced to a flock by people, new birds, wildlife, pests, and contaminated equipment. An effective biosecurity plan considers each of these factors. Answering the questions below will allow you to identify opportunities for improvement in your biosecurity practices.

1. Flock health

- Is the flock in generally good health?
- Are you adhering to NPIP testing requirements for infectious disease?
- When a bird tests positive for an infectious disease, is it removed from the flock?
- How do you dispose of dead birds?
- What insect or parasite control measures are in place?
- When new birds are purchased, are they quarantined appropriately (housed separately away from your existing flock for at least 14 days)?

2. Human factors

- How is visitor access limited?
- What are the responsibilities of caretakers, visitors, or others who are passing into or out of the birds' area?
- What training will be necessary to get everyone on the same page about biosecurity?
- What supplies (coveralls, boots, gloves, etc.) do you have on hand to protect people and prevent the spread of disease between groups of birds?
- What hand-washing expectations and facilities are available?

3. Equipment

- Where is equipment located?
- Is all equipment in good condition?

4. Egg Handling

- Are the nests in good condition?
- Are egg containers satisfactory?
- How often are eggs collected?
- Are hatching eggs clean?
- Are dirty eggs kept separate from clean eggs?
- Are eggs graded?
- Is the temperature and humidity of the egg room appropriate?
- Is the egg room sanitary?

5. Housing considerations

- Does the housing prevent contact with all other animals including rodents, wild birds, and other fowl (including feces and feathers)?
- What additional rodent control measures are in place?
- Is the area surrounding the poultry enclosure kept clean?
- Is the litter inside the poultry enclosure clean and dry?
- How is soiled litter managed?
- Is there adequate ventilation to prevent the buildup of ammonia?
- Are windows screened?
- How are bird facilities cleaned and disinfected between flocks?

6. Feed and water

- How is feed stored?
- What type of water source is available?

Sample Biosecurity Overview

Flock health

- ❖ Bird health is assessed visually at least once per day and any time a person enters the bird enclosure. Any bird that is displaying signs of illness or injury (unusual behavior, visible wound, ocular discharge, pasty vent, etc.) is more closely evaluated, by a veterinarian if necessary.
- ❖ All birds are tested for Avian Influenza and Salmonella Pullorum according to NPIP requirements. The appropriate authorities are promptly notified when a bird tests positive, so that it can be removed from the flock and additional testing can be performed.
- ❖ Should a dead bird be discovered, it is immediately removed from the enclosure and taken to the Virginia Department of Agriculture and Consumer Services Regional Animal Health Laboratory for necropsy. If the mortality is found outside of regular business hours, the bird is removed from the enclosure and stored on-site in a designated refrigerator so that it does not attract wild birds, rodents, insects, or other pests.
- ❖ Birds are monitored for signs of external parasites including mites and fleas. Should external parasitism be suspected, the veterinarian is contacted to prescribe an appropriate treatment and control plan.
- ❖ A small number of internal parasites are expected for birds that have some outdoor access. Should illness or death result from internal parasitism, the veterinarian is contacted to prescribe an appropriate treatment and control plan. Routine fecal samples can also be collected routinely to monitor for internal parasites should the flock veterinarian deem it appropriate.
- ❖ New birds are quarantined for a period of at least 21 days before joining the existing flock. During the quarantine period, new birds are monitored daily for signs of infectious disease including snicks, diarrhea, and ill thrift. New birds are cared for by separate personnel whenever possible. Otherwise new birds are cared for last, and dedicated boots and coveralls are worn to reduce the risk of spreading infectious organisms between groups.

Human factors

- ❖ Visitors are not permitted to enter the poultry enclosure without express permission from the owner. The coop is kept locked at night to prevent trespassing.
- ❖ Anyone passing into the birds' area is responsible for wearing clean boots. Coveralls must be worn if a person will be interacting with birds. No soiled boots, clothing, hats, etc. that have been exposed to other birds are to be worn onto this property. A clean pair of coveralls, boot covers, and gloves will be made available to every person who has reason to be interacting with the flock. A portable sink furnished with the necessary supplies for hand-washing is utilized by all persons between groups of birds and before leaving the farm.
- ❖ Anyone with responsibility for bird care is trained on these biosecurity measures, including the appropriate order of care when some birds are quarantined and specific procedures to be followed when infectious disease is present on the farm.
- ❖ Upon leaving the quarantine area, it is expected that all persons perform a thorough boot-wash, remove coveralls, wash hands, and then leave the property promptly.

Equipment

- ❖ The only heavy equipment maintained on this farm is the pickup truck used to relocate the portable poultry enclosure. This truck is kept under the carport when not in use. It undergoes routine maintenance. This truck is not routinely taken to other facilities or private property where live poultry are present. If such a trip is necessary, the truck will be disinfected in a similar manner to the coop (detergent, then dilute bleach) before use.

Egg Handling

- ❖ Eggs are collected daily and stored in plastic cartons prior to grading. Nest boxes are refreshed weekly with clean straw.
- ❖ Dirty eggs are kept in separate containers from clean eggs.
- ❖ Hatching eggs are not routinely kept on-farm.

Housing considerations

- ❖ Birds are allowed outside during the day but are contained under a portable enclosure to protect them from predation and preclude contact with wild birds and other animals. The portable enclosure is moved at least every 72 hours to allow the birds to graze different parts of the pasture. Every night, the birds are shut in the coop which is attached to the portable enclosure.
- ❖ Adequate ventilation is maintained in the coop by use of two timer-controlled fans which cycle fresh air into the structure. The fans are also programmed to turn ON when interior temperatures are above optimal. One screened window is installed on each of the 4 walls; these are opened during the day to allow the coop to “air out” and may be left open overnight if outdoor temperature is suitable.
- ❖ The pasture is maintained in such a way that it is free of brush and debris to reduce the likelihood of pest-control issues. If necessary, an insecticide is sprayed around the exterior walls of the coop twice yearly, once in the Spring and once in the Fall. One rodent bait trap is maintained on the back side of the permanent coop and is checked biweekly to be cleaned or replenished with bait as needed.
- ❖ Fresh litter is top-dressed in the coop each day. Once every two weeks, or sooner if needed, all soiled litter is removed from the coop and composted on-site.
- ❖ Once every three months (or more often if a new group of birds is acquired), the walls, floors, and perches inside the coop are cleaned using a detergent-based product and then disinfected with dilute bleach (1:32). This task is to be performed in the morning, so that there is adequate time for the coop to dry out before birds are shut in for the night.

Feed and water

- ❖ A commercial poultry diet will be used to supplement the flock’s grazing. Feed is stored in upright Rubbermaid-style 50-gallon trash bins with lids, and is provided to the birds via hanging feeders inside the coop.
- ❖ Nipple-drinkers will be utilized inside the coop to provide water for the flock. The water will be sourced from the same well that supplies the other structures on the property.



Test birds for Avian Influenza and Salmonella Pullorum according to NPIP requirements.



Quarantine new birds for a period of at least 21 days before joining the existing flock.



Personnel and visitors should change into **clean boots and coveralls** when entering the bird area.



Implement a pest control program of wild birds, rodents, and insects. Avoid contact with different species of birds and outside birds.

Regularly monitor flock health and report any suspicion of disease to your veterinarian.



Remove dead birds upon discovery and **bring to VDACS** for necropsy if warranted.



Restrict entry to essential personnel. Minimize entry of **vehicles, supplies, and equipment** to your farm.



Ensure that all personnel responsible for bird care are **trained on biosecurity protocols**.



Store dirty eggs in a separate location **away from clean eggs**.



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