

2016 Biosecurity Guidelines

These updates are based on the findings and experiences of Midwestern poultry farms hardest-hit by the H5N2 strain of Highly Pathogenic Avian Influenza in spring 2015.

As available studies and observations note, the infection pathway is not limited *solely to infection* from wild migratory birds. HPAI entered farms on personnel, vehicles and blown dust. Growers should also review the APHIS Recommendations for Biosecurity as well as the APHIS Poultry Biosecurity Officer Information Manual when considering additional protection measures specific to their operations, barn structures, local geography, climate and proximity *to* migratory fowl.

NTF recommends that all members develop site specific biosecurity plans and identify an experienced poultry expert or poultry veterinarian to serve as biosecurity officer. Most importantly, companies and farms should create a culture of biosecurity for each barn and for every employee. The NTF audit tool for animal welfare, included in the Animal Care Best Management Practices, can be used to track progress and effectiveness of biosecurity efforts along with other aspects of turkey wellbeing.

Growers who have experienced HPAI stress this advice: **Immediate, early action is critical.** Observe your flocks closely for any slowing of movement, unusual quiet, craning of necks (“stargazing”) or lack of interest in feed or water. Onset of the 2015 H5N2 strain of HPAI was subtle at first, with typical symptoms not seen until several days after actual infection. Isolation and notification must be immediate, with rapid confirmatory testing and quick depopulation **essential** to control the spread of the virus to other farms.

UPDATES to Appendix A

New language is in *italics*.

CP 1. Farm Safety and Security

1. Landscaping, drainage, roads, fences, gates and posted authorized entry signs are all important in maintaining a turkey production operation safe and secure from *disease*, unwanted visitors, *wildlife*, *rodents*, vandalism or accidental damage that can put your turkeys at risk for injury, disease or stress.
 - a. Farm Site Biosecurity: Preventing the transmission of disease *into and between turkey houses*, farms and from wildlife *or their droppings outside* is essential to maintain healthy productive turkey flocks.
 - i. Management Procedures

1. Situating the farm in a location that has a buffer zone separating the farm from public roadways and wildlife areas will reduce the risk of disease spread. Lakes, wetlands and heavily wooded areas *close to poultry houses* should be avoided if possible.
2. Perimeter fencing of the farm with entryway gates can provide both wild animal and people security. *A perimeter buffer area can reduce the chance that HPAI and other viruses enter the property.*
3. “No Admittance” or similar signs and locks on the gates during off hours provide security from unauthorized visitors.
4. A clean parking area for visitors at the entry drive into the farm that is away from the turkey houses will minimize on-farm traffic. It can provide a place for visitors and service persons to put on protective clothing prior to walking onto the farm and a place to leave contaminated clothing before leaving the farm.
5. A security building at the entrance to the farm can be used to control entry and increase the biosecurity level. A sign-in log provides documentation of *essential* traffic that must enter the premises. Clean outer clothing and footwear should be worn with a clean-up area for all personnel *and equipment*, at the entrance *and exit* to each barn. Shower-in and shower-out facilities *are needed where* a high level of security is needed.
6. A decontamination area for vehicles and equipment that must enter the farm and buildings should be available. *Effective cleaning, disinfection and inspection is critical to preventing disease spread on vehicles and equipment. Sharing of equipment should be minimized and avoided if possible*
7. *Proper dead* bird disposal reduces disease transmission and prevents attraction of wild animals, rodents and other disease vectors to the farm. *Appropriately sited on farm* composting is suggested or covered secure containers for regular pick up and disposal. Consider on farm vehicle traffic *and avoid the potential for cross contamination* when determining location of pick up locations.

CP 2. Flock Scheduling

1. The schedule must be developed using historical production performance, facility capacities, and the physical capability and expertise of personnel.

2. The birds must have enough space at each stage of production to stretch, move about comfortably, preen, grow and produce normally.
3. Down time between groups must be sufficient to permit adequate maintenance and cleaning.
4. *Feed, feed ingredients and fresh/transferred litter should be stored and handled in a manner that minimizes the risk of contamination with AI virus or other diseases.*

CP 3. Biosecurity and Disease Control

1. All stages of production require both *structural and operational* biosecurity to reduce the risks of disease and provide assurance of the healthiest birds possible.
 - a. Turkey Building/House Biosecurity: Turkey buildings must be constructed and maintained *to establish a line of separation (LOS) for each house* to prevent disease agents present in wildlife, *their droppings, rodents and potentially contaminated farm personnel* from coming in contact with the turkeys. *The walls of each house should be considered a critical LOS control point for preventing virus/disease exposure to poultry.*
 - b. *Each company or independent farm should have an experienced poultry expert or poultry veterinarian responsible for designing and implementing effective biosecurity procedures.* Poultry veterinary expertise is necessary to apply appropriate disease *prevention*, diagnosis and control to each flock.
 - i. All doors and ventilation openings on each barn must be screened to prevent wild birds from entering the buildings.
 - ii. Doors and other ground level openings around the entire perimeter of the building must have tight fitting doors and coverings to prevent wildlife and other animals from coming into contact with the turkeys.
 - iii. *Water should come from deep wells or sources that have been treated to eliminate any potential contamination.*
 - iv. Beetle/fly control is needed as necessary for each flock.
 - v. Rodent protection must be built into the perimeter of the farm, and each barn. The operation should have an overall rodent control program.
 - vi. An evaluation of each building should be made periodically and repairs completed to maintain the building in a *bio secure* condition.
 - vii. “No Admittance” or similar signs on each building will help control *unnecessary human traffic on the farm and into the buildings.*

- viii. Door locks on the inside of the building to be used by workers when inside the building and door locks on the outside of the building when they are unattended will help to control *unauthorized entry*.
- ix. All persons entering the farm and turkey buildings are expected to comply with company biosecurity policy and will wear proper clothing and footwear. They will utilize the sanitation area at each barn/building every time.
- x. *Farms should consider installing a Danish or similar entry system for each turkey house.*
- xi. Persons should not enter a turkey building if they have been hunting or in contact with other birds or livestock within the past 24 hours.
- xii. Dead birds are picked up routinely and disposed of quickly to minimize disease transmission and prevent attraction of wild animals, rodents and other disease vectors to the farm. *Attention is paid to avoid cross contamination.*
- xiii. Training programs that include biosecurity procedures are required for all new employees prior to entering the farm. Training updates are required for all employees.
- xiv. A biosecurity checklist is maintained and is posted for flock caretakers and farm managers.
- xv. All farm personnel are prohibited from maintaining any home flocks of poultry, wild or pet birds, or fowl of any kind and must avoid contact with livestock and other animals, which are potential carriers of pathogens. Farm personnel do not allow personal pets (i.e. dogs) near the barn areas.
- xvi. Vaccination may be required to control specific diseases. Usually the vaccine is administered via drinking water or aerosol.
 - a. Water withholding prior to water vaccination is for no more than an hour or two to ensure all birds drink promptly before the vaccine deteriorates.
 - b. Individual injection of vaccines requires handling each bird. It is stressful to both birds and vaccinators. It is done only when absolutely necessary or in birds accustomed to handling (breeders).
 - c. Birds may be humanely depopulated when necessary to aid disease diagnosis *or disease control* (See CP 12).

M 5. Disease Incidence

1. Veterinary diagnostic evaluations of mortality and morbidity problems are routinely performed to respond to disease and improve the health of flocks. Mortality records are maintained on each flock.

- a. Diagnostics and other laboratory reports are available and utilized. *In the event of detection of a highly infectious FAD, birds are depopulated within 24 hours of confirmation.*
2. Consultation with a poultry veterinarian familiar with the area and the operation is important to devise an effective health *and biosecurity* program to prevent disease.
 - a. Health *and biosecurity* programs should be developed and updated periodically for each operation.
3. Consultation with an experienced nutritionist is important in order to remain current in growth and feed efficiency performance, as well as to prevent nutritional problems that might compromise the flocks.

M 6. Health Check Evaluation

1. **Acceptable** Animal Health Signs
 - a. Flock Inspection
 - i. Birds follow walking people, are inquisitive, stretch, preen, play, strut and have normal activities.
 - ii. Clean (white) feathers
 - iii. Round prominent eyes
 - b. Building & Environment
 - i. Fresh clean air with good air movement
 - ii. Comfortable temperature
 - iii. Appropriate CO levels
 - iv. Appropriate CO₂ levels
 - v. Appropriate NH₃ levels
 - vi. Appropriate humidity levels
 - vii. Quiet
 - viii. Good lighting
 - c. Ventilation and Heating Systems
 - i. Dust-free equipment
 - ii. All fans, shutters and curtain opening equipment 100 percent operable
 - d. Litter
 - i. Moist but does not ball easily
 - ii. Doesn't emit dust when disturbed
 - iii. Level with minimal ridges, rings or doughnuts around equipment
 - e. Droppings
 - i. Moist but firm fecal droppings
 - ii. Viscous white cap material on fecal droppings
 - iii. Few cecal droppings
 - iv. Viscous dark colored cecal droppings

2. **Unacceptable** Signs of Animal Health
 - a. Flock Inspection
 - i. *Unusual unexplained increases in mortality*
 - ii. Birds do not move easily or are lame.
 - iii. Birds sit most of the time or appear depressed.
 - iv. Dirty, discolored feathers from wet litter, lack of preening or from wiping eyes and nostrils on shoulder feathers.
 - v. Drooping wings
 - vi. Excessive broken feathers
 - vii. Slanted, dim looking eyes
 - viii. Cough, “snick,” sneeze, rubbing of eyes, swollen sinuses and foamy eyes.
 - ix. Dead birds in the litter
 - x. Cull birds in the flock
 - b. Building and Environment
 - i. Stale air or ammonia odor
 - ii. Air feels cool or hot, sticky and uncomfortable
 - iii. CO and/or CO₂ levels too high
 - iv. Loud noise from equipment, people or outside activities
 - v. Dim or uneven lighting
 - c. Ventilation and Heating Systems
 - i. Dusty or dirty equipment and vents
 - ii. Equipment in need of service
 - d. Litter
 - i. Uneven with many ridges and mounds
 - ii. Clutter of equipment, gates, garbage, clothing, footwear, extra drinkers, feed pans, wheel barrows, fork or rakes on the litter that disturbs air movement and encourages litter eating.
 - iii. Wet soggy areas
 - iv. Produces dust easily when disturbed.
 - e. Droppings
 - i. Soft, mushy, fecal droppings with undigested feed
 - ii. Fecal droppings with slimy, runny white caps
 - iii. Excessive cecal droppings
 - iv. Fluid, yellow/tan, foamy cecal droppings
3. Utilize the Health Check Evaluation Form on a routine basis to improve observation accuracy and to maintain a record of findings.