

The background features abstract, overlapping geometric shapes in various shades of blue, ranging from light sky blue to deep navy blue. These shapes are primarily located on the left and right sides of the frame, creating a modern, dynamic feel.

# Biosecurity in Commercial Poultry

# What are we trying to protect?

- A. Broilers
- B. Breeders
- C. Layers
- D. Ducks
- E. Turkeys
- F. Back Yard Poultry

# What are we protecting birds from ?

## A. Bacteria

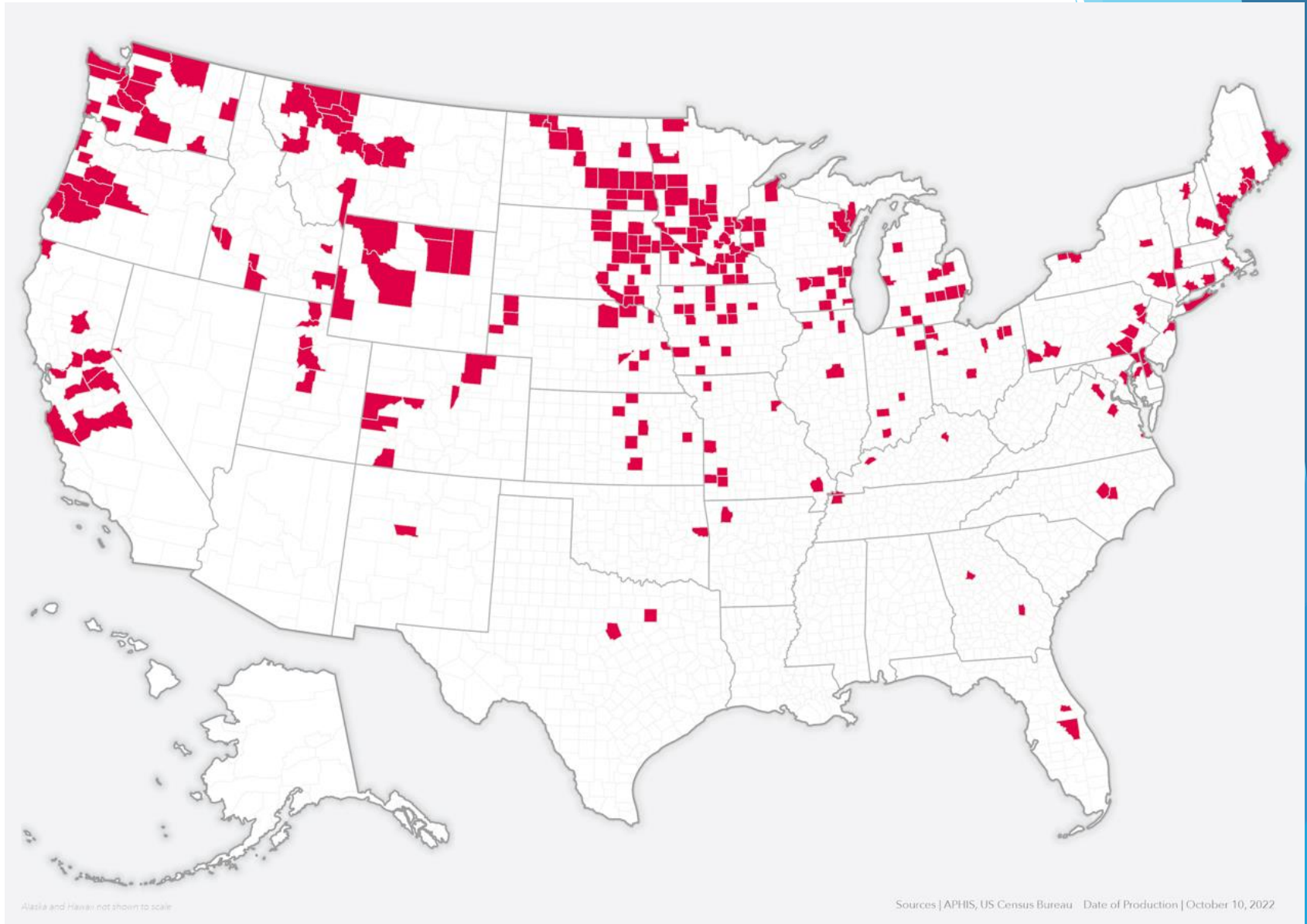
- 1) Salmonella
  - a) Current regulations
  - b) Future USDA requirements
- 2) Campylobacter
- 3) Cholera (*Pasteurella multocida*)
- 4) *Mycoplasma synovia* (MS)
- 5) *Mycoplasma gallisepticum* (MG)

# What are we protecting birds from?

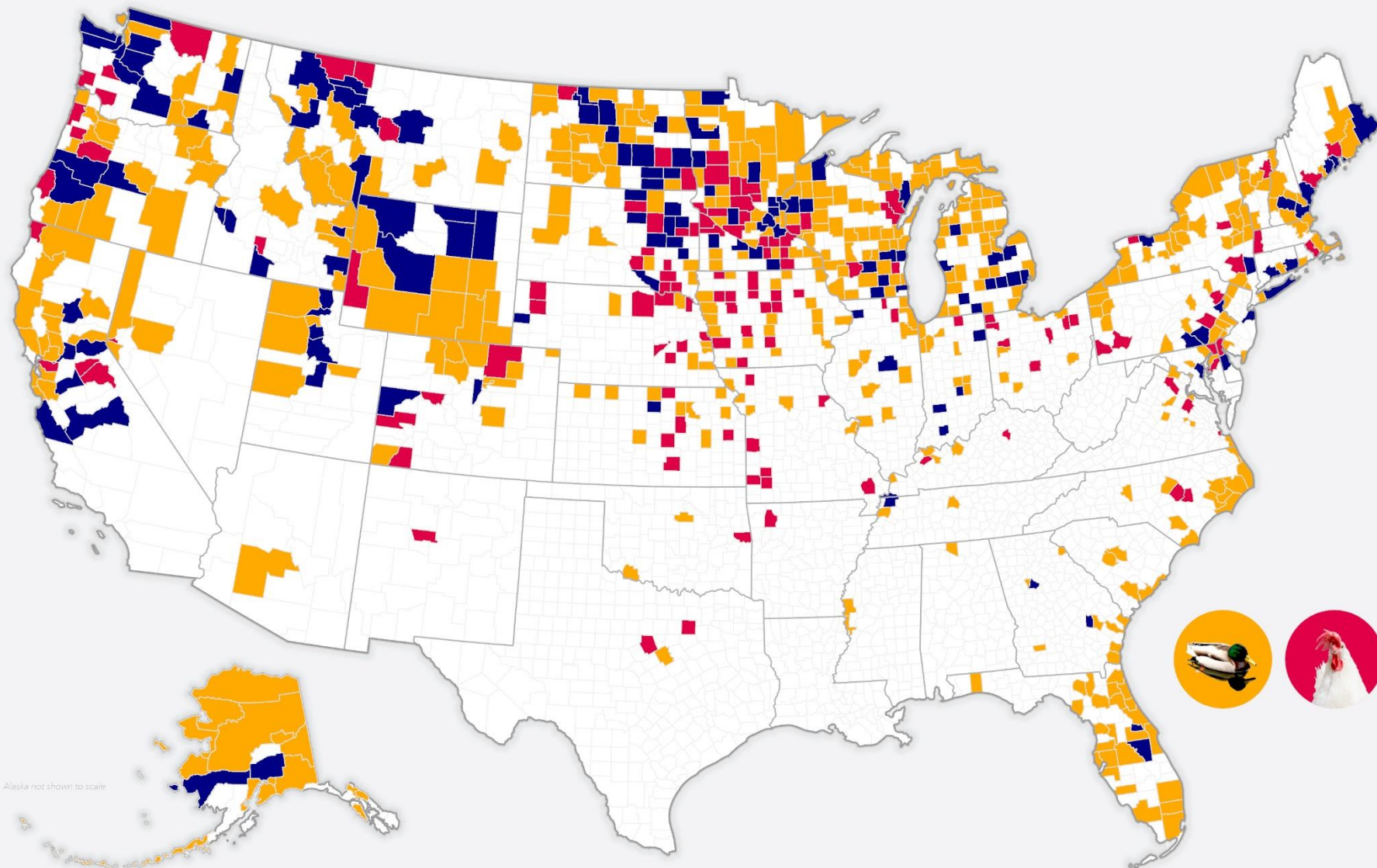
## B. Viruses

- 1) Bronchitis - (phylogenetic tree from Sarah)
- 2) Infectious Laryngotracheitis (ILT)
- 3) Infectious Coryza
- 4) Exotic Newcastle Disease (ND)
- 5) Avian Influenza (AI) - Low Path and High Path

# Comm/Non Comm detections 2022 (Feb-Oct)



## HPAI Detections in Wildlife and Commercial/Non-Commercial Flocks | 2022



Sources: APHIS, US Census Bureau  
Image Credit: unsplash.com  
Date of Production: October 10, 2022

**Keep up your biosecurity!**

- Wildlife Detections
- Commercial/Non-Commercial Detections
- Wildlife and Commercial/Non-Commercial Detections



100 Miles



# Cases of HPAI for 2022/2023

- AR - broiler breeders
- AK - backyard, comm backyard
- CA - egg, comm duck, backyard, turkey
- CO - backyard
- CT - backyard
- KY - comm backyard
- MI - comm backyard
- MT - backyard
- NE - upland game bird, backyard
- NM - backyard
- ND - backyard
- OH - backyard
- OR - backyard
- PA - backyard, turkey
- SD - upland game bird
- UT - other
- VA - other
- WI - turkey

States	Comm broiler-breeder	Comm Turkey-breeder	Comm Layer-pullet-breeder	Comm Duck-breeder	Comm Mixed	Comm Upland Game	Comm backyard	Personal use backyard	Rescue / Rehab backyard	Sentinel flock	Captive wild birds	Other not defined	Pet Zoo Exhibit	Live bird Sales/ slaughter	Total birds
47	27	214	39	14	3	13	87	334	3	1	1	4	2	1	58.2 M



# Visitors

- ▶ Who is coming?
- ▶ Why are they there?
- ▶ Is someone coming while no one is at the farm?
- ▶ Are they signing the sign in log?
- ▶ Are we using temporary help? If so are we training them?



# Animals



# USDA Biosecurity Principles

Sarah Tilley, DVM, MAM, DACPV  
Fieldale Farms  
Director of Poultry Health Services





# Why does biosecurity matter?

- ▶ Disease prevention – AI, Newcastle, LT, etc.
- ▶ 14 points – Response to HPAI outbreak
- ▶ If biosecurity plan is not in place AND being followed at time of outbreak, USDA will not pay growers or company
  - ▶ Could also use as an excuse to not pay neighbors either!





# Point 1: Biosecurity Responsibility

- ▶ **Biosecurity coordinator?**
  - ▶ **Complex specific biosecurity plan?**
- 



## Point 2: Training

- 
- ▶ **Company specific biosecurity procedures**
    - ▶ Grower meetings
    - ▶ Supervisor visits
  - ▶ **Grower training – Fieldale's Responsibility**
  - ▶ **Caretaker training – Grower's Responsibility**
  - ▶ **Documentation of training!**

## Fieldale Farms Grower Training – USDA Biosecurity Requirements

1. Biosecurity coordinator – Fieldale Farms (FDF) biosecurity coordinator is Dr. Sarah Tilley, she is responsible for keeping up a complex/company-wide biosecurity plan that will be updated annually or more frequently in times of heightened biosecurity threats.
2. Grower training will be completed annually by FDF to review biosecurity principles, contract growers will be responsible for training all farm workers, hired hands, or others regularly entering the Perimeter Buffer Area (PBA) – upon hire as well as annually. These training documents will be kept for 3 years by growers and FDF.
3. Line of Separation (LOS) – dirty/clean line within sanitation room must be used by anyone entering the house – on farm workers should utilize deep foot bath and brush to clean dedicated footwear, wear farm/house dedicated clothing, and disinfect hands/utilize gloves before entering into clean area/area with birds. Non-farm workers shall don coveralls, hairnets, cleaned boots/boot covers, as well as gloves or sanitized hands prior to entering birds.
4. Perimeter Buffer Area (PBA) – zone surrounding the poultry houses, including high traffic areas involved with daily functions of the poultry farm. Any vehicle entering the perimeter buffer area must utilize the wheel wash/disinfect at the red box at farm entrance. The red biosecurity box must be stocked at all times with: a working sprayer filled with disinfectant solution (Synergize), log in book, hand sanitizer, and at least 1 package containing coveralls, gloves, disposable boots, and hairnet. The box should be devoid of standing water, insect infestation, debris, or other non-essential items. Non-farm personnel should practice the ‘no boots hit the ground’ when exiting vehicles.
5. Personnel – farm personnel should have dedicated farm clothes and shoes that are not utilized outside the farm. Non-farm personnel should utilize full PPE (coveralls, hairnet, boot covers, gloves/hand sanitizer) prior to entering areas with birds and sign into log books. Foot baths are to be utilized by everyone (growers, farm personnel, non-farm personnel) who enters areas with birds, entry to houses should utilize the area with the LOS as well as reuse foot baths upon reentry. Anyone having exposure to other avian or poultry species shall not enter areas with birds for a minimum of 48 hours (domestic exposure/travel) or 72 hours (international exposure/travel). In times or travel to areas where high risk diseases are present, downtime may be extended up to 7 days. No personnel, entering FDF birds, shall own other birds (pet or poultry).
6. Wild bird, rodent, and insect control. Control programs for wild birds will entail destruction and removal of wild bird nests. Insect control programs shall be followed based on FDF insect control. Rodent bait stations shall be placed and maintained at least every 100ft down each side of the house as well as one on each end of the house. All stations should be kept full of bait at all times, this shall be monitored at least monthly, and rodent bait types should be rotated.
7. Equipment and vehicles – vehicle and traffic patterns should be limited to driveways and gravelled ways, it is highly recommended to have a single entrance/exit onto farm (PBA). Sharing of equipment is strongly discouraged, if utilized, equipment shall be cleaned and disinfected prior to entering FDF houses. Vehicles entering PBA shall utilize sprayers at farm entrance or utilize sprayers mounted on trucks (feed, chick, egg, live haul).
8. Mortality – mortality disposal shall be disposed of in a manner of which the individual farm is permitted (i.e. pit, incineration, composting) and shall never leave the farm premises unless permitted under extreme circumstances. Mortality shall be removed at least once daily, more frequently during times of increased mortality. All mortality disposal shall adhere to state regulations.
9. Manure and litter management – manure and spent litter should be removed and stored in a manner to prevent exposure to other poultry as well as follow all state regulations. Spent litter and manure must be covered.
10. Replacement poultry (pullets) are monitored with FDF testing in accordance with NPIP guideline.
11. Water supply – water being used for bird consumption as well as evaporative cooling should come from contained water supplies; in case of surface water sources, water treatment must be done prior to use.
12. Feed and replacement litter – should be stored and maintained in a manner that limits exposure to wild birds, rodents, insects, and other animals. Feed spills within the PBA should be cleaned up in a timely fashion.
13. Elevated mortality – excessive mortality (above expected levels) should be communicated with flock supervisor, division manager, or biosecurity coordinator in a timely fashion (within 24 hours of increased mortality).
14. These points will be audited by USDA Official State Agency (OSA) on at least a 2 year rotation to evaluate implementation in case of highly pathogenic disease eliciting potential federal reimbursement.

Farm Name \_\_\_\_\_

Grower Name \_\_\_\_\_

Supervisor \_\_\_\_\_

Date \_\_\_\_\_

## Farm Worker Biosecurity Training Document

Upon employment on this farm, as well as every 12 months, by signing this document, I have been trained on the following. Trainee should initial each box after training:

- ☐ The Biosecurity Coordinator is Dr. Sarah Tilley, she is responsible for keeping a complex specific biosecurity plan that is updated annually
- ☐ Anyone entering the Perimeter Buffer Area (PBA) – farm area, must adhere to FDF biosecurity policies (spraying of tires and wheel wells at the red biosecurity box)
- ☐ Anyone entering the Line of Separation (LOS) – dirty/clean line in sanitation room – farm individuals must clean their shoes in a clean disinfectant dip, wear farm/house specific PPE (gloves/hand sanitizer, dedicated footwear, clothes), non-farm individuals must adhere to the above requirements and add coveralls (cloth or paper) and hairnets.
- ☐ Personnel – farm personnel must follow FDF biosecurity policies, any non-farm personnel must also follow FDF biosecurity policies as well as sign the visitor log every time they enter the farm. There should be no one entering the farm that has had contact with other poultry or birds for the past 48 hours (domestic travel/exposure) or 72 hours (international travel/exposure)
- ☐ Wild bird, rodent, and insect control measures must be kept in place and in working order – filled bait stations, wild bird nests destroyed, etc.
- ☐ Any equipment entering farm/houses must be disinfected prior to entry, sharing of equipment is discouraged between growers/neighbors. Vehicle and traffic patterns should be limited to predefined driveways/pathways
- ☐ Mortality disposal should be removed at least daily in a manner that is approved for the farm specific mortality disposal plan (i.e. pit, composting, and incineration). Each location should have an emergency dead bird disposal plan with SC or GA Dept. of Ag.
- ☐ Litter and manure management – litter/manure must be covered either by stack sheds or tarps in accordance with state regulations. This is in order to limit the spread of disease
- ☐ Water supply (drinking or evaporative cooling) should be from a secure system (well, municipal), surface water should not be used, if it is, water treatment must be done and documented
- ☐ Feed and replacement litter should come from and be stored in a manner to limit exposure to wild birds, rodents, insects, and other animals
- ☐ Elevated mortality (>5 birds/1000) should be reported immediately to the flock supervisor, division manager, or biosecurity coordinator

\_\_\_\_\_  
Farm Worker Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Farm Grower/Trainer Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Farm Supervisor Signature

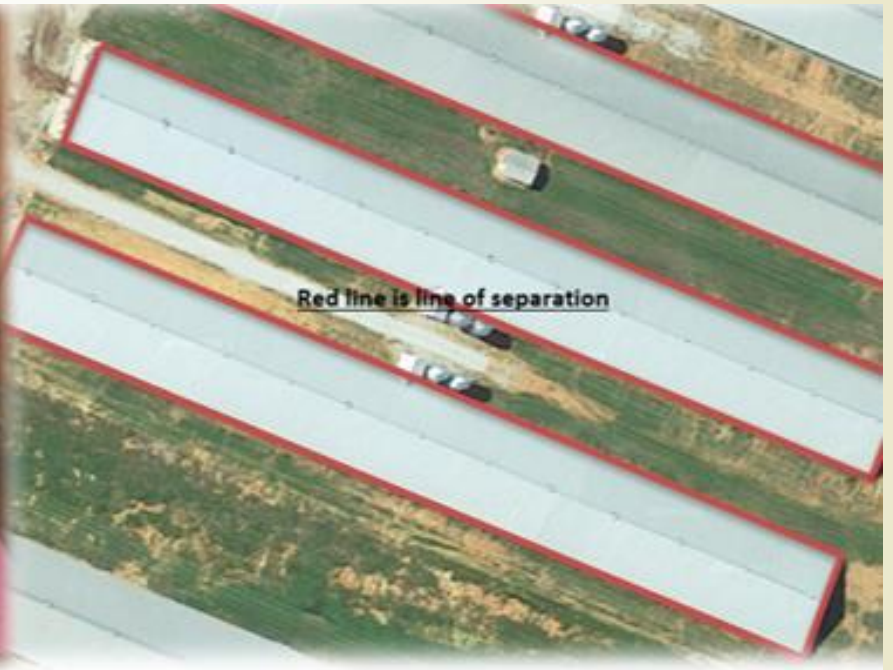
\_\_\_\_\_  
Date



## Point 3: Line of Separation (LOS)

- ▶ **Within the chicken house:**
  - ▶ Physical line (paint, spray paint, tape, etc.) separating the clean area from the dirty area
- ▶ **Around the chicken house:**
  - ▶ Area around the perimeter of the house (10+ feet around houses)





## Point 4: Perimeter Buffer Area (PBA)

- ▶ Area around the farm
- ▶ Will generally begin after the red biosecurity box – encompassing the entire farm
- ▶ Maps of every farm
- ▶ Farm entry requirements!
  - ▶ If red box is not kept up, may cause a failed audit!







## Point 5: Personnel

- ▶ Personal Protective Equipment (PPE) requirements
  - ▶ Farm personnel
  - ▶ Non-farm personnel






## Point 6: Wild Birds, Rodents, and Insects

- ▶ Wild bird nest removal
- ▶ Rodent control program and implementation!
- ▶ Insect control program





## Point 7: Equipment and Vehicles

- **Procedures and application of cleaning, disinfection, and restriction of equipment sharing**
  - **Defined vehicle access and traffic patterns**
- 



## Point 8: Mortality Disposal

- Mortality disposal plan (daily and mass mortality)
- How frequently is mortality removed? Pest control around disposal areas





# Point 9:

## Manure and Litter Management

- ▶ Is manure and litter handled in a way that limits the spread of disease?
  - ▶ GDA and SCDA requirements of litter handling/storage



## Point 10: Replacement Poultry

- ▶ Are all replacement poultry sourced from flocks in compliance with NPIP?
- ▶ Replacement poultry transportation vessels disinfected?
- ▶ Protocols for personnel and equipment cleaning and disinfection



# Point 11: Water Supply

- ▶ **Water supply sources: well or municipal systems?**
  - ▶ Drinking water
  - ▶ Evaporative cooling
  
- ▶ **Surface water is NOT recommended**
  - ▶ If used, **MUST** utilize water treatment to reduce disease introduction





## Point 12: Feed and Replacement Litter

- ▶ **Are feed and feed ingredients stored in a manner to limit disease exposure and contamination?**
  - ▶ Wild birds
  - ▶ Rodents
  - ▶ Insects
- ▶ **Documentation and application of managing feed spills**
- ▶ **Is replacement litter stored in a manner to limit disease exposure and contamination?**



## Point 13: Reporting of Elevated Mortality and Illness


- What constitutes a mortality investigation?
- If you question mortality/illness levels – CALL!



# Point 14: Auditing

- NPIP will audit biosecurity plan and training material

**NPIP Program Standards**  
**Biosecurity Principles Audit Form**



**1. Biosecurity responsibility**

	<b>Y or N</b>	<b>COMMENTS</b>
Is there a Biosecurity Coordinator? If so, please provide their name.		
Is there a site-specific biosecurity plan?		
Is the Biosecurity Coordinator knowledgeable in the principles of biosecurity?		
Does the Biosecurity Coordinator review the biosecurity program at least once during each calendar year and make revisions as necessary?		
Does the biosecurity plan indicate there will be a review by the Biosecurity Coordinator in periods of heightened risk of disease transmission?		



# No Biosecurity Plan?

Cost to growers without a plan

6 50x500 broiler houses

Infected flock income	\$80,397
-----------------------	----------

Gas/ power/shavings for flock	\$20,000
-------------------------------	----------

Flock burial / compost	\$36,000
------------------------	----------

Loss of 2 <sup>nd</sup> flock	<u>\$80,397</u>
-------------------------------	-----------------

\$216,794

6 months with no income, refinance?

Interest rates are up 5%, on a million dollar loan = \$305,168

**Total cost over \$500,000 !!**



# Insurance and Protection

PROTECTION	COST
INSURANCE	\$5,000/year
GENERATOR	\$40,000
ALARMS	\$2,000
BIOSECURITY (shoes, foot pans)	\$500?

PLEASE.  
JUST DO IT  
THIS IS THE GREATEST AI  
THREAT TO THE  
POULTRY INDUSTRY TO DATE.

