BIOSECURITY IN PASTURE FLOCKS

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BIOSECURITY CONCEPTS

- **Why should we re-visit the topic of biosecurity?**

- Biosecurity is not just for AI and END
  - Cholera (outdoor access / pastured raised),
  - Coryza, ILT, Mycoplasma, External parasites,
  - Salmonella (SE, ST, SH)
  - Erysipelas, Histomoniasis (Black Head)
  - **Break-ins by two legged non-feathered "TURKEYS"**

BIOSECURITY CONCEPTS

- **ITS NOT IF …….**
  - you break with a devastating poultry disease …

- **IT'S WHEN ….**
  - you break with a disease

- **What is the goal of Biosecurity?**
  - Limit a disease outbreak to the smallest possible biosecurity unit / geographic area
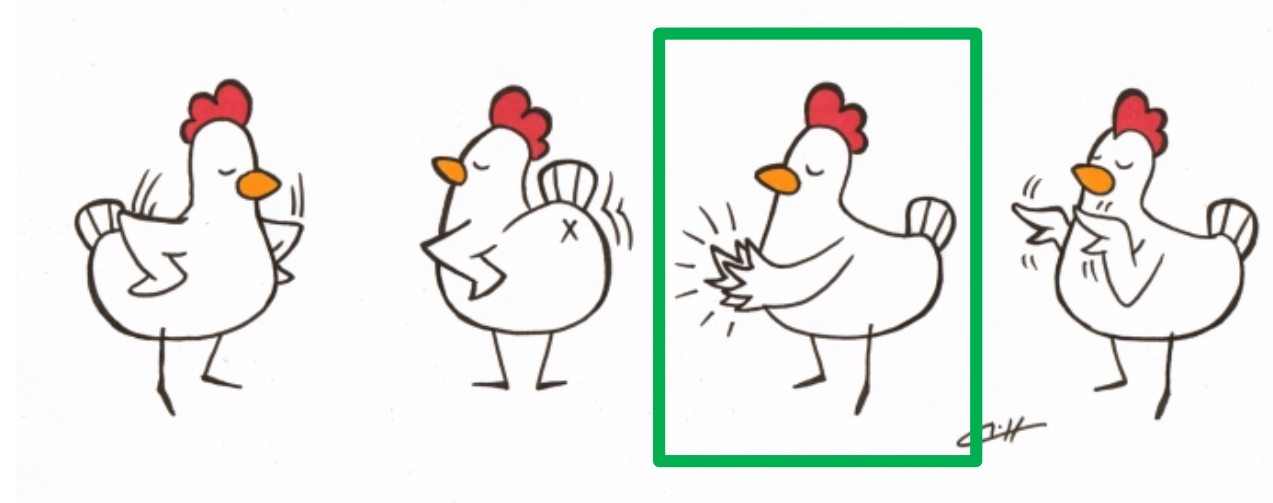

BIOSECURITY FOR BIRDS

NPIP / USDA BIOSECURITY PRINCILPES

- **Must be "reasonable and practical"**
  - One Biosecurity program does not fit all farms
    - Specific to the farm!
  - Black vs White vs Gray
    - Goal: To reduce the "Gray areas" of the farm's plan
    - No such thing as "perfect" biosecurity on a poultry operation

UNDERSTANDING BIOSECURITY CONCEPTS
A QUICK REVIEW

- ATTITUDE / FRAME OF MIND
  - Common sense
  - Everyone must buy into it
- DEVELOPING WORKING RELATIONSHIPS
  - Good communications
- ACCOUNTABILITY
  - Owners, farm employees, government
  - Accountability It's **everyone's** responsibility

GETTING STARTED

- WRITTEN FARM PLAN / COMPANY

  - Detailed protocols covering visitors, C & D of buildings & equipment, live haul, hatchery, chick/poult delivery, feed mill ect.

  - Documentation is important!

    - The Bio-security Plan is a living Document

    - Don't resist change– embrace it!

- Develop a written plan for "Self Quarantine" for the farm

  - For a **management** associated cause for the problem

  - For a *disease* associated cause for the problem

BIOSECURITY AUDITS/ASSESSMENTS

- SES Plan Biosecurity Checklist E1.1

- Avian Influenza HPAI (APHIS)

- Poultry Facility Biosecurity Assessment Guide*

- BC Poultry Biosecurity Reference Guide*

- Biosecurity Inspection Checklist (CDFA)*

- HPAI SOP - #9: Biosecurity (USDA)

- Internal Monthly Biosecurity Self Audit Checklist (MCB)

- National Standards For Avian Biosecurity (CFIA)

- **Checklist for Self – Assessment of Enhanced Poultry Biosecurity (USDA)**

- **NPIP Biosecurity Standards (proposal)**

NPIP PROGRAM STANDARDS: 14 POINTS

- **(1) Biosecurity responsibility**
  - Need to have a coordinator

- **(2) Training**
  - Every year & new workers trained at hire

- **(3) Line of Separation**
  - Separation between inside & outside housing

14 POINTS CONTINUED

- **(4) Perimeter Buffer Area (PBA)**
  - Functional zone surrounding poultry raising area

- **(5) Personnel**
  - PPE for employees

- **(6) Wild Birds, Rodents and Insects**
  - On farm control measures in place

14 POINTS CONTINUED

- **(7) Equipment and Vehicles**.
  - Include provision for C&D equipment & vehicles

- **(8) Mortality Disposal**
  - Disposed in a manner that does not attract pests
  - Avoids cross contamination between facilities

- **(9) Manure and Litter Management**
  - Handled in manner to prevent exposure to DZ
  - Avoid attracting pests
  - Aviary systems

14 POINTS CONTINUED

- **(10) Replacement Poultry**

    - Sourced from NPIP participating breeders / hatcheries

- **(11) Water Supplies**

    - Water comes from a contained supply (well or city)

- **(12) Feed and Replacement Litter**

    - Delivered, stored in manner to limit exposure & contamination from pests

    - Spilled feed cleaned up & disposed in timely fashion

14 POINTS CONTINUED

- **(13) Reporting of Elevated Morbidity and Mortality**
  - Elevated mortality / morbidity is reported with appropriate actions

- **(14) Auditing**
  - Conducted at least once every two years or a sufficient number of times during that period by the Official State Agency to ensure the participant is in compliance.

NPIP/USDA #1: BIOSECURITY RESPONSIBILITY

- Designated person (Biosecurity Officer)
    - Develops written biosecurity protocols
    - Includes the minimal principles of Biosecurity
    - Responsible for implementation
    - Reviewed annually

BIOSECURITY RESPONSIBILITY: POULTRY INDUSTRY

- Quality Assurance Plans (Meat & Egg)
  - Written biosecurity protocol
  - QA assigned supervisor
- Avian Influenza Response Plan (Secure Food Supply)
  - Initially dealt with low path AI – now coined **"Enhanced Biosecurity Plan"**
  - Written biosecurity protocols
    - Now includes
      - Euthanasia protocols for an entire flock / farm
      - Bird disposal for an entire flock / farm

USDA "ENHANCED" BIOSECURITY

- "Intensify, heighten, enhance" already existing on farm "day-to-day" biosecurity protocols

    - (2014-2015 AI outbreak)

    - In control / quarantine zone (USDA)

        - Some companies put in play if AI / END is in the state

        - Protocols above the "day to day" biosecurity.

            - Could combine this with LP AI Response plan

NPIP/USDA #2: TRAINING

- Biosecurity Coordinator Involvement
  - Develops training material
  - Responsible for training & documenting
  - All production personnel / suppliers that enter live production facilities
  - Training
    - **When hired** & at least once a year
    - Reminders several times a year / Monthly safety meetings

TRAINING: POULTRY INDUSTRY

- Quality Assurance requirement
  - Training component
    - For all employees, this includes….. owners!
    - All must "buy into it"
  - Visitor protocol
    - PPE available
      - Large / XXXL

TRAINING: POULTRY INDUSTRY

- ## USDA Biosecurity DVD
  - ### Review with all employees
    - Farm, office, plant, hatchery, feed mill
  - ### **Important**
    - Need to know what to do before coming to work after coming in contact with "feathers" outside of work
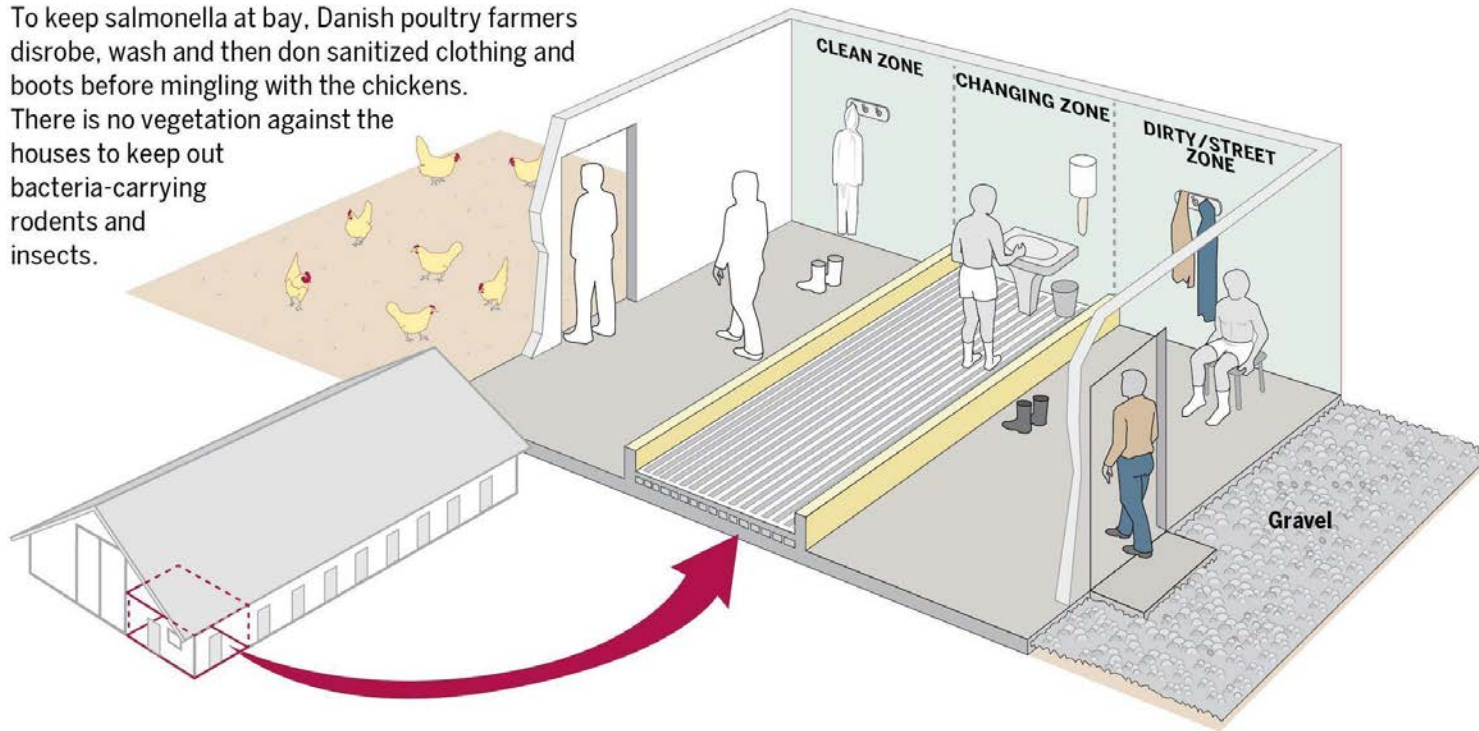   - Hunting, fishing, city park with kids, ETC

NPIP/USDA #3: LINE OF SEPARATION

- Quality Assurance plan
  - Inside barn/ outside barn designation
- Enclosed Poultry
  - Separate poultry from potential disease sources
    - The walls of the barn itself
- Non-enclosed poultry
  - Recommended but not required???

DANISH SYSTEM

To keep salmonella at bay, Danish poultry farmers disrobe, wash and then don sanitized clothing and boots before mingling with the chickens. There is no vegetation against the houses to keep out bacteria-carrying rodents and insects.

CLEAN ZONE   CHANGING ZONE   DIRTY/STREET ZONE

Gravel

FACILITY ENTRY PREP

HMMM….

LINE OF SEPARATION: POULTRY INDUSTRY

- Disease state (NPIP) – Keep indoors
  - How does this work with pastured raise / free range poultry?
  - Retailors, state regulatory and organic board **($)**
  - Rodent & wild bird access (not a level playing field)

NPIP/USDA #4: PERIMETER BUFFER

- Biosecurity plan should include a perimeter buffer

  - Entrance clearly identified (gate)

  - Perimeter clearly identified (fence)

  - What is on farm / off farm

VISITORS
PLEASE RESPECT
FARM BIOSECURITY
Vehicles, machinery, people and animals can carry weed seeds, pests and diseases.
Please call at the house or phone: _____

PERIMETER BUFFER: POULTRY INDUSTRY

- See your Quality Assurance Plan
  - Environmental controlled to curtain sided barns
  - Are your doors locked?

NPIP/USDA #5: PERSONNEL

- Minimum
  - Employees change into designated clothing, footwear, hairnet or
  - Shower & change into clean clothes before arriving to the farm
  - Employees should not come in contact with other poultry or poultry premises, comply with protocol.

PERSONNEL: POULTRY INDUSTRY

- ALL EMPLOYEES!

  - Farm, office, plant, maintenance, feed mill, hatchery, management,…….. OWNERS

  - Must have firm understanding of what 'Biosecurity" is.

    - Flock health & Job security

  - Need to know what to do when they come in contact with other "feathers"

PERSONNEL: POULTRY INDUSTRY

- Outside Crews / Temporary Workers

    - Catching, vaccination, beak trimming

- Major biosecurity risk

- Protective clothing, footwear & hand sanitation be provided

- Crew vehicles must be clean

NPIP/USDA #6: WILD BIRDS, RODENTS, INSECTS

- Control measures in place to protect poultry from wild birds, their feces and feathers.

- Rodents & insect control programs should be in place

WILD BIRDS, RODENTS, INSECTS: POULTRY INDUSTRY

- QA Programs require a written "Pest Control" program

  - Exclusion, keep wild birds, animals & rodents out

  - Knock down nests (spring time)

  - Clean up spilled feed (ASAP)

  - Cover brooder stoves when not in use

NPIP/USDA #7: EQUIPMENT & VEHICLES

- Equipment should be effectively sanitized between uses

- Sharing equipment should be minimized

  - If shared… plan to Clean, disinfect & inspect equipment between farms

  - A plan as to how equipment and vehicle will enter the farm

EQUIPMENT & VEHICLES: POULTRY INDUSTRY

- Written plan on how equipment and vehicles are to enter the farm (QA Plan)

  - Inspect the cleanliness of incoming equipment / initial check list

  - Minimize sharing of equipment

  - Includes hand tools as well as large pieces of equipment

  - Understand some equipment can not be properly C&D in a timely fashion (skid loader), therefore make adjustments on scheduling or buy additional units designate to a specific farm

NPIP/USDA #8: DEAD BIRD DISPOSAL

- Dead birds should be disposed of in a manner that does not attract wild birds, rodents and other wild animals.

- To avoid the potential for uncontrolled cross-contamination with dead birds from another company owned farm or other poultry facility.

DEAD BIRD DISPOSAL: POULTRY INDUSTRY

- Dispose birds / eggs as not to attract pests
  - Keep storage area clean / prevent scavenging by wild animals
- Avoid cross contamination between sites (put some though into it)!
- Set structure on fence line (half on and half off)

DEAD BIRD DISPOSAL: POULTRY INDUSTRY

- Remove mortality daily from the barn

- How is mortality disposed?

  - Dead bird pit , composted, incinerator or off site renderer

NPIP/USDA #9: MANURE

- Manure / old litter should be removed & disposed of in a manner to prevent exposure of susceptible poultry (either on or off the farm of origin) to disease agents.

MANURE / LITTER: POULTRY INDUSTRY

- Remove and dispose according to local and state regulations.

- Tarp vehicles transporting manure / litter on the highway.

- Check route to make sure there are no poultry facilities in close proximity of the road or where the manure / litter is to be stored / handled.
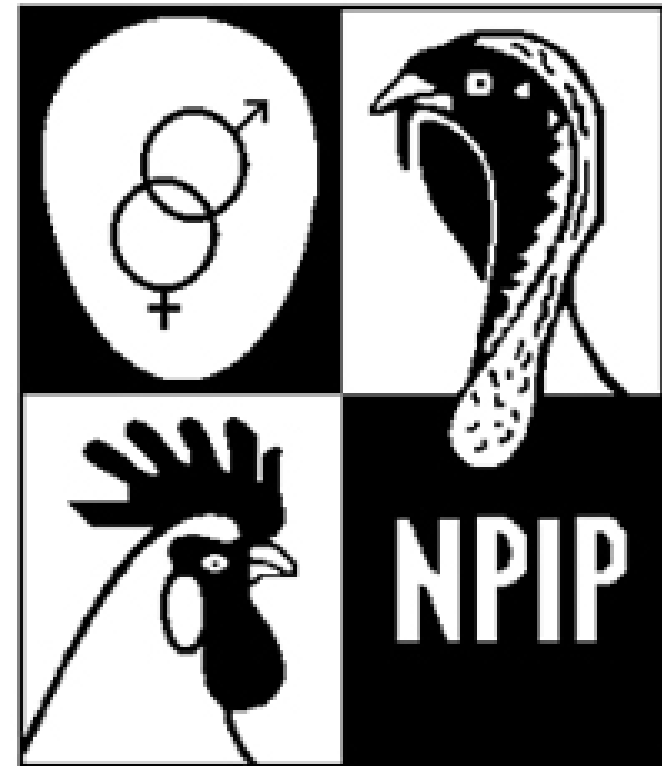
NPIP/USDA #10: REPLACEMENT POULTRY

- Replacement poultry should come from
    - Sources with documented biosecurity practices
    - Flock health is monitored
- Transport vehicles are C & D
    - Activity is documented, written protocol on file

REPLACEMENT POULTRY: POULTRY INDUSTRY

- Quality Assurance Plan (layers)
  - NPIP participating hatchery or equivalent program
- Test pullets / birds not on a QA plan
  - Salmonella (SE, ST, SH), AI, Mycoplasma
  - Check vaccination program
  - Not always done

NATIONAL POULTRY IMPROVEMENT PLAN

NPIP/USDA #11: WATER

- Water should come from sources that have been treated (drinking water / cooling pads)

  - Eliminate potential contamination with DZ agents

- Surface water

  - Program in place to continuously treat the water to eliminate disease agents

- Surface water for cleaning or flushing

  - Subsequent disinfection should be completed to prevent disease transmission

WATER: POULTRY INDUSTRY

- Rain water fills in holes created by dusting
- Fecal soup!
- Evaporated coolers: Cover, prevent wild birds from drinking the water.
- (Mites & lice…why not AI) Just a thought

NPIP/USDA #12: FEED & LITTER

- Feed, feed ingredients & litter should be stored & maintained in a manner that limits exposure & contamination by wild waterfowl or other birds / rodents.

FEED & LITTER: POULTRY INDUSTRY

- Meat birds:
  - Litter storage, most is not tarped
  - Commercial turkeys: litter, grit exposed
- Layers / Meat Birds
  - Pastured raise, outdoor feeders

NPIP/USDA #13 & 14

- **(13) Reporting of Elevated Morbidity and Mortality**
  - Elevated mortality / morbidity is reported with appropriate actions

- **(14) Auditing**
  - Conducted at least once every two years or a sufficient number of times during that period by the Official State Agency to ensure the participant is in compliance.

QUESTIONS AT THIS POINT?

NPIP Program Standards

Biosecurity Principles Audit Form

NPIP

1. **Biosecurity responsibility**

	Y or N	COMMENTS
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?		

2. **Training**

	Y or N	COMMENTS
Does the biosecurity program include training materials that cover both farm site-specific procedures as well as or company and/or complex-wide site-specific procedures as applicable?		

ABC Farms NPIP Biosecurity Protocol

1. **Biosecurity Responsibility**
   a. The Biosecurity Coordinator for ABC Farms is _____.
      i. Signature _____.
   b. The biosecurity coordinator will review the overall biosecurity program at minimum once a year and/or anytime a new revision is needed.
   c. The biosecurity coordinator will be responsible for implementing all biosecurity practices at all live production ranches.

2. **Training**
   a. Every employee on the live production team will be trained and refreshed every year.
   b. Biosecurity policy and exam will be given as training material and updated as needed.
   c. All new hires will be trained immediately before beginning to work with the live production team.

3. **Line of Separation**
   a. Blue (Broiler Ranch)
      i. 2 Houses
      ii. 1st Line of Separation is the 4 walls of each individual poultry house located on the premises.
      iii. 2nd Line of Separation is the fence line on the East, South, and West side of the property.
      iv. The North side of the property is separated by a tree line but no physical line of separation such as a fence.
   b. Green (Broiler Ranch)
      i. 4 Houses
      ii. 1st Line of Separation is the 4 walls of each individual poultry house located on the premises.
      iii. 2nd Line of Separation is the fence line on the West, North, and East side of the property.

WHAT DOES THIS MEAN

- **In order to ship, haul, and/or receive animals and animal products during a FAD/NAD outbreak, premises must possess a valid Product Movement Permit for each shipment. Product Movement Permits will <u>ONLY</u> be issued to Pre-Certified premises <u>AFTER</u> their SFS Biosecurity Plan has been fully implemented and verified as active by the Incident Management Team (IMT) staff or their designee.**

OUR ~~SUGGESTION~~/RECOMENDATION

- Have one "day – to – day biosecurity plan
  - UEQAP, FDA and NPIP requirements
    - Combine, but use the UEQAP as the foundation of plan
    - Keep it simple and practical
    - Include only what you are doing day-to-day
- Have a written AI response plan
  - Include your "**enhanced**" biosecurity protocols in the event your operational area is placed under quarantine
    - Again, especially due to the on-going vNDV scares

OUR SUGGESTION

- Have one " Secure Food Supply"
  - Technically, include most or all of what was written in your enhanced plan
  - Making maps difficult,
    - Google Earth is good

BUT…..

- Outdoor access

- Not enough support from county, state or federal officials when it comes to animal right protesters who think they have the legal right to enter a poultry farm on behalf of poultry welfare.

  - This is counter productive to our "required" biosecurity protocols, welfare and flock health.

ACKNOWLEDGMENTS

- Mark Bland, DVM, CDFA

- NPIP, https://www.poultryimprovement.org/documents/StandardE-BiosecurityPrinciples.pdf

THANK YOU!

LOOK for Signs. **REPORT** Sick Birds. **PRACTICE** Backyard Biosecurity.