READY FOR THE NEXT 100 YEARS
Recommended Biosecurity Practices
TPA Grower Educational Seminar
Martin, TN

Jim Jones, Tech Service Western Division
Presentation Outline

- Cost of a disease break
- Education in biosecurity
- Management practices
- Cleaning and disinfection
Cost Of Disease Breaks?
Cost Of Disease Breaks?

- **Avian Influenza outbreak in PA (1983-1984)**
  - over $260 million
  - companies went out of business
- **Mycoplasma**
  - MG / MS in the US cost over $200 million/year
- **Newcastle outbreak in Australia (1999)**
  - Over $5.5 million
- **LT** - Hundreds of thousands of dollars per company
HPAI in US and Canada 2014 / 2015
(Updated from APHIS / USDA 5-26-15)

- **200 confirmed** cases reported (Backyard, Turkey, Layer and Broiler Breeder.
- **OVER 47 MILLION** Birds affected!!!
- Commercial egg LAYER flocks hit the hardest in USA – Lost over 10% of total production – HIGHER PRICES for eggs!

- Breaks in major fly ways……… Minnesota, Iowa, Wisconsin, Iowa, Kansas, Arkansas, Missouri, South Dakota, North Dakota and other states.

- 2.6 Billion in sales $$ 400 Million in taxes $$ 16,000 jobs
Avian Influenza
Biosecurity is considered a good investment

– May be the only alternative in controlling a disease when treatment and/or vaccination are not options.
Education In Biosecurity
Biosecurity

There is no definition in the dictionary, but…..

BIO = Life   Security = Protection

✓ Biosecurity Goal – To protect our flocks and livelihood from any disease threat and infection that may harm our birds, our customers, or our people.

✓ It’s our defined procedures and programs designed to lower the risk of disease infection.

✓ Biosecurity means doing everything you can to protect our birds from disease.

✓ It’s a way of Thinking – It’s a way of Life.
What are we being biosecure from?

Diseases Challenges
Each and Every Day

✓ Mycoplasma – MS & MG
✓ Salmonella
✓ Avian Influenza – AI
✓ Laryngotracheitis - LT
✓ Exotic Newcastle – END
✓ Infectious Bronchitis – IB

MG HPAI Positive Bird
How Far do we go with Biosecurity???
Biosecurity at Cobb

• All employees shall avoid contact with poultry outside of work and sign the biosecurity agreement before being hired. Our livelihood at Cobb depends on our commitment to uphold quality biosecurity practices.

• Breaking biosecurity can lead to dismissal. (Refer to CVI policy manual.) Look on the Intranet >>>Cobb Home Web Page
Biosecurity – restricted area
Shower in – Shower out
On Farm clothes and vehicles
Education In Biosecurity

- Levels of Biosecurity
  - Varies between companies
  - Varies within a company
    - set-up as a preventative program
    - set-up as a response to a disease outbreak
  - Based on a balance between **cost of a program** and the **risk level** and economic consequence of a disease outbreak.

- Biosecurity and Management
  - Have a program in place and make sure people are following it.
  - *Do you know that you know what you think you know?*
Breaking the Chain

Vaccination

Strategic Medication

Genetic Resistance

Bird Susceptible

Entry Door

Agent Infectious

Reservoir

Exit Door

Transmission

Biosecurity

Erradication

Desinfection

Pest Control
Survival MG

Feed: 4 hrs

Skin: <4 hrs
Ears: 4 hrs
Nose: 1 day
Hair: 3 days

Feathers: 4 days

Cotton: 4 days

Bedding: 8 hrs
Shavings: 1 day
Hay: 2 days

Rubber: 2 days
Feed: 4 hrs

Christensen et al, 1994
How Do you Control AI and MS

- There is No “Silver Bullet”
  - No one thing that will get rid of it
  - ISMP- Integrated Management Plan
    - Series of things that need to be done

- Commitment
  - Takes Work
  - Conscientious effort

- Execution
  - Have to put the plan to work
Where is it Found… Sources

- Environment
  - Soil
  - Vegetation

- Other Animals
  - Domestic livestock
  - Wild animals
  - Pests

- People

- It’s Everywhere!
Sources: Insects and Mice

- Keep bacterial harbors under control!!!
Sources

- Flys
- Beetles
Sources:
Reservoirs
Wild birds

WHY THE INTEREST IN WILD BIRDS?

Natural reservoirs of low-pathogenicity strains:
- Waterfowl (ducks, geese, swans)
- Shorebirds (waders and gulls)
From 2005-2014:

- Over 50,000 birds have been tested for avian influenza in Canada
  - Live birds ~ 16% test positive
  - Dead birds ~ 1% test positive
- All AI viruses detected in wild birds to the end of 2014 were low pathogenicity and North American lineage
Flyway Map

- Atlantic Flyway
- Mississippi Flyway
- Central Flyway
- Pacific Flyway
Reservoirs

- Birds recovered from a disease, are carriers and can shed the disease.
- Microbes that cause little or no harm to one type of animal or fowl, can be devastating to another
  - END in pet birds vs. chickens
  - Mycoplasma in wild birds, rodents vs. chickens
  - AI in waterfowl vs. chickens
- Beware of backyard flocks and fairs
  - reservoirs of infection – DUCK HUNTING? Pheasant Hunting?
How is Bio-Security on this Facility??
How is Bio-Security on this Facility??
So What Can You Do?

- Simple Steps
- Practical Guidelines
- Proven Techniques
- It’s not Rocket Science
Management Practices

BEST PRACTICES

COMPLEXITY

COMMUNICATIONS

OPTIONS
Foot Disinfection

- Locate footbaths at all entrances
- Change frequently (daily) and when dirty
Foot Pans

Covered Foot Pans with Handle:
Make it easy.
Alcohol hand sanitizers only work well on clean hands!

Keep hands and nails clean at all times and wash on a regular basis, especially after the following:

- Visiting the toilet
- Before & after eating
- After handling mortality/floor eggs
- After rodent control
- After outside work

✓ Sanitize hands at every station
Disinfecting Equipment & Supplies

• Be sure to disinfect equipment & supplies!
• Especially before entering the chicken house!
Equipment sanitation

• Clean and disinfect any equipment before entering the house.
Biosecurity – Cleaning and Disinfection
Be smart!
Mortality & Litter Disposal

- Keep it Clean
- Treat it “Dirty”
- Be careful reentering houses
Animals

- Keep all pets and livestock out!
- Reduce entry possibilities for wild animals too!
Management Practices

Animal/Insect Control
- rodents, predators, pets, birds, insects, live stock
- carriers within a flock and between flocks
  - rodents – (bacteria, mites)
  - free flying birds – (bacteria, viruses)
  - darkling beetles – (viruses, bacteria, tapeworms)
  - flies – (NCV, botulism, tapeworms)

Man is the single most important culprit in introducing disease to a farm
Always Think About **BIOSECURITY**!

Boot Changing: Designated boots

Footwear change is recommended when entering houses
Management Practices

- Traffic Control - Between farms and between houses
  - **ALWAYS KEEP A LOG OF WHO HAS ENTERED FARM**
    - visit a sick flock/house last
    - all visitors should wear shoe coverings
      - dispose of items properly before leaving farm
    - wear clean garments and clean shoes daily
      - takes 7-14 days for a disease to break
- Coffee shop/diner, livestock auction barn, farm store
- Ask Questions?? Where have you been before my farm?
Management Practices

If in doubt, shower and change clothes before going back to the farm.
Management Practices

- Routine culling
- Dead bird removal and disposal
- Down time of a **clean** farm
  
  – quicker you clean a farm after flock is removed the better the job of insect control, rodent control, “longer” **clean/down** time
Management Practices

Clean and disinfect!
Cleaning and Disinfection

- **Remove debris**
  - disinfectants are not affective when dirt or other filth is present
  - organic material coats organism / prevents disinfectant access
  - organic material de-activates some disinfectants

- Use disinfectants for the final knock-out punch
Management Practices

Drinking Water

- bacterial multiplies every 30-60 minutes
  - within 10 hours in ideal conditions have enough bacteria to equal raw sewage
- clean/disinfect water lines routinely
WHO IS RESPONSIBLE
??????????????????
YOU ARE!!!
Be Responsible!

Do you ever step over things that need done???
A Successful Program

- Nothing about biosecurity is difficult to master
  - Repeated and consistent actions

- 3 General Principles:
  - Go onto a Farm Clean
  - Leave the Farm Clean
  - If in doubt - **CLEAN AND DISINFECT**
If You Ate Today...

THANK A FARMER
Thank You!!