On-Farm *Salmonella* Control Measures For Layers

Biosecurity
Basic Principles Of Biosecurity

• Goal—help control disease agents from entering barn or farm
• Biosecurity is a broad-spectrum control strategy
• Helps control both bacteria and viruses from entering premise
• Biosecurity SOP
Basic Principles Of Biosecurity

• Requires company commitment from top to bottom
• Programs must be individually tailored to each operation
• Program will only be as strong as the biosecurity chain’s weakest link
Biosecurity Chain

- Physical Barriers
- Traffic Control & Visitor Policy
- Monitoring and Record Keeping
- Education
- Sanitation
- Pest Control
- Infectious Agents
Basic Principles Of Biosecurity

- Biosecure unit—basic area from which disease is excluded
  - Entire farm for most operations
  - Some operations direct biosecurity measures at individual houses

- Biosecurity allows for disease containment
  - Biosecurity limits spread if agent is introduced
  - Entire operation does not become infected
Physical Barriers

- Most obvious is perimeter
- Fences, gates, walls and doors exclude vectors from “clean” areas
- Unauthorized people and vehicles
- Other birds and animals
- Dirty equipment
Physical Barriers

- Signs point out critical barriers
- Signs remind personnel about biosecurity procedures
- Signs clearly instruct visitors
- Signs define specific trespassing regulations
Traffic Control

- Establish perimeter as first step
- Exclude as many vehicles and visitors as possible
- Employee vehicles almost never need access to chicken area
- Traffic for on-farm residences should be routed away from chicken area
Traffic Control

- Guards, gates and other barriers serve to route traffic around farm
- The purpose of an area should determine who and what gets access
- For example, feed trucks need to go near barns, egg trucks only need access to cooler or plant
Traffic Control

• Dedicated vehicles, such as golf carts, should not be taken off premises
• Vehicles leaving farm must be cleaned and disinfected prior to returning
Visitor Policy

• Need to establish visitor protocol
• Different types of visitors carry different biosecurity risks
• Downtime requirements vary depending on risk
• Visitors should have access only to specific areas
• Sanitation procedures should be defined
  – How will visitor be informed?
  – How will these procedures be enforced?
• Casual visits should be discouraged by requiring prior appointments
Visitor Policy

- An established protocol allows visitors to perform their jobs without endangering bird health
- Visitors may include inspectors, delivery people and utility company employees
- All visitors are subject to same biosecurity procedures as employees
Sanitation

• Basic principles of cleaning and disinfection apply to equipment and vehicles entering farm
• Sign tells visitors what is expected and points them towards needed equipment
• Wash stations should be in good repair and easy to operate
Sanitation

- Many truck washes and equipment disinfection stations are designed to kill viruses
- *Salmonella* control requires higher standard of vehicle disinfection
  - Bacteria, unlike viruses, can grow outside of host
  - Washing undercarriage and wheel wells is more important than tires
Sanitation

- Apply disinfectant to clean and dry vehicles for greatest effect
- Use vehicle downtime whenever possible
- Use commercial truck washes with an undercarriage wash to remove excess grime
Sanitation: Personnel

- Goal—to help control infectious material from entering farm
- Farm is considered “clean,” while outside world is “dirty”
- Control may involve showering and changing into on-site clothing
- Other farms may require changing clothing or using disposable coveralls
- Policy on home bird ownership
Sanitation: Personnel

- Hand sanitation is important

- Protective clothing:
  - Disposable head covering
  - Coveralls
  - Disposable gloves
  - Waterless hand sanitizer
Sanitation: Personnel

- Shoes carry *Salmonella* spp.
- Plastic boots help control *Salmonella* spp. transmission
Dry Foot Baths Offer Good Disease Control

Powdered bleach products offer proper control
Dirty Footbaths May Harbor More *Salmonella* Than They Kill - Clean And Change Often
Education – Biosecurity Must Become A State Of Mind

- Employees will follow programs that they understand
- Regular training increases employee compliance
- Incentives for program improvement ideas encourage employee involvement
- One employee should be appointed to oversee company biosecurity plan

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Monitoring And Record Keeping

- Regular biosecurity audits help identify plan weaknesses
- Incentives and bonuses for good practices noticed during audits help increase compliance
- Plan should be revised based on audits and employees should be educated on updates
- Accurate records ensure proper procedures are followed and assist in detecting breaches