

# Facts for Poultry Growers

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## Order of Presentation

- Federal
- State
- Regional
- Farm

## Federal – National Poultry Improvement Plan

- Objective is to provide a Industry-State-Federal program through which new technology can be effectively applied to the improvement of poultry and poultry products
- Establish standards for evaluation of poultry breeding stock and hatchery products for disease status so that flocks can be certified for interstate and international shipment.

## State

- NCDA&CS administers NPIP in this state.
- State labs are validated to test samples collected by field technicians
- NPIP is voluntary

## NPIP - subtypes

- Egg-type chickens
- Meat-type chickens
- Turkeys
- Waterfowl, exhibition, game, backyard flock (WEGBY)
- Ostrich

## NPIP Participants (Hatcheries)

|                              |     |
|------------------------------|-----|
| • Egg and Meat-type chickens | 311 |
| • Turkeys                    | 54  |
| • Waterfowl                  | 764 |

### NPIP Certification

- Salmonella pullorum
- Salmonella typhoid
- Salmonella enteritidis
- Avian influenza
- Mycoplasmas

### Disease Program Classification (WEGBY)

- Pullorum-Typhoid clean
  - Blood tested at 4 months of age
  - Blood tested within past 12 months
  - Primary breeding flock – 300 birds
- Mycoplasma
  - 30-200 birds tested at 4 months of age
  - 2% of flock or 30 birds tested every 90 days

### State – Transporting poultry

- Reuse of coops requires cleaning and disinfection
- Trucks hauling poultry must be cleaned and disinfected
- Disinfectants acceptable for use are limited to chemicals approved in 9 CFR 71.10, 71.11, and 71.12
- Provision does not apply to people handling their own poultry

### State - Transportation

- Poultry moving into out of or within the state ( or sold or offered for sale) must meet the requirements for pullorum, typhoid, and MG as expressed by NPIP
- Bird enroute to or from a show or exhibition that complies with state regulations are exempt.

### State- Health Regulations for Poultry Exhibitions

- All birds NPIP compliant
- No live virus vaccines within last 30 days
- Each bird must have a tamper-proof band at the time of pull-typh test. A copy of the test must accompany the bird.
- Birds are subject to examination by NCDA&CS personnel.

### State - Transportation

- Birds moving across state lines (either way) must be accompanied by legible health certificate written within the last 30 days
- Health certificates must be written by an accredited veterinarian.

### Vaccine strategies

- Ask yourself if you are or have had a problem with an infectious disease.
- Ask yourself if poultry around you are having disease problems?
- Ask yourself if the risk is moderate or high that these two populations with intersect?
  
- If the answer to these questions is no...don't vaccinate.

### Vaccine strategies

- EXCEPTION – Mareks disease – get vaccine at hatchery
  
- If health issues arise...use the NCDA&CS website to locate the lab nearest you and let them necropsy a few birds and tell you what disease is currently on your farm.
  
- Then consider vaccination.

### Vaccine strategies

- Can you get the vaccine?
  
- If the vaccine is a live or modified-live vaccine you will be seeding your farm with that virus.
  
- Is eradication possible (cleaning and disinfection)?
  
- Once you start vaccinating it is difficult to stop.

### Biosecurity for your farms

Keeping your birds safe from microorganisms that are infectious and pathogenic.

How do we know which ones are dangerous?

We don't...so we try to prevent all microorganisms.

### Who are these microorganism?

- Any disease that is transmissible or contagious
- Bacteria
- Viruses
- Fungi
- Mycoplasmas
- Protozoa
- Parasites

### Bacteria

- Have both DNA and RNA so are capable of reproducing outside of the host
- Can be fairly resistant to harsh environmental conditions
- Some can form spores which are very resistant to harsh environmental conditions
- Like moist temperate conditions
- Grow well on artificial media
- CAN BE TREATED WITH ANTIBIOTICS

### Viruses

- Very small organisms
- Have either RNA or DNA, not both
- Cannot reproduce outside of host
- Like cool moist conditions
- Generally VERY species specific
- Do not grow well on artificial media
- CANNOT be treated with antibiotics

### Fungi

- Parasitic plants that lack chlorophyll
- Most species either beneficial or harmless
- Disease caused by yeast-like and mold-like fungi
- Most common in stressed birds and birds over-treated with antibiotics
- Commonly associated with moldy shavings or moldy feed
- Can be treated with fungicides but antibiotics can make situation worse

### Mycoplasmas

- Similar to bacteria but lack cell wall
- Does not readily grow on artificial media
- Is reportable (MG) in North Carolina
- CAN be treated with antibiotics

### Protozoa

- Single-celled organism that can be a parasite
- Cause tissue damage as the "eggs" rupture out of the host cell
- Can cause severe disease and death
- Coccidia and Cryptosporidia are example
- No real treatment
- Prevention is key
- Once on your farm very difficult to eradicate

### Parasites

- Organisms that live on other organisms (hosts) without providing any benefit in return.
- External parasites
- Internal parasites

### External parasites

- Parasites that live on the skin, shanks, feathers
- Fleas, Bed bugs, lice, mites, flies, mosquitoes, ticks
- Primarily cause mechanical damage
- Cause long-term decline in health
- Tissue/feather damage is visible, nits and bugs can also be visible

### Internal parasites

Live inside birds  
Some can be seen with unaided eye  
Two main types of life cycles

**Direct Life-cycle**  
Bird eats parasite egg  
Parasite lives inside bird  
Bird excretes parasite eggs

**Indirect Life-cycle**  
Earthworm eats parasite egg  
Bird eats earthworm  
Parasite lives inside bird  
Bird excretes parasite eggs

### Reservoirs of disease

- Disease-causing organisms are generally found in live birds, in secretions of live birds, and freshly dead birds.
- Rodents and insects can be reservoirs.
- Most diseases are spread by humans.
- Avoid sick birds, secretions from birds, and manage mortality to prevent infecting your birds

### Disease Transmission

• **Vertical**

**Horizontal**

Direct

Indirect

### Carrier Birds

- Birds that have recovered from a disease but can still shed the organism.
- Quarantine can sometimes help you identify these birds (Salmonella, Laryngotracheitis)

### Conditions you cannot share but can prevent

- Nutritional
- Chemical toxins
- Other toxins
- Traumatic injury
- Excessive stress
- Predators

### Biosecurity

- What is within your realm of control?
- Common denominators
  - Cannot survive in UV light
  - Do not tolerate drying
  - Do not tolerate high temperatures
- Let mother nature work for you
- If possible keep a closed flock
- Provide a healthy environment
- Medicate only when necessary

### Biosecurity

- Comfortable birds are not stressed
- Provide clean dry housing
- Provide enough space for birds
- Provide roosts
- Sanitation is important
- Low levels of ammonia don't damage the respiratory tract

### Biosecurity

- Whenever you visit premises that have birds be sure to change clothes and boots before returning to your birds.
- Keep wild birds away from your birds
- When indicated clean and disinfect feeders, waterers, and coops.
- Use common sense.

### Disinfecting

- cide - Kill
- static – slows growth
- sanitizers – reduce numbers of bacteria
  
- Hot water
- Down time
- Sunlight drying
  
- Chemical disinfectants – READ THE LABEL

### If your birds get sick...

- NCDA Veterinary Diagnostic Laboratory System
- <http://www.ncvdl.com/>