ASC-194



# Poultry Production Troubleshooting

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## When investigating a problem with a poultry flock, the following questions should be asked:

**1. What are the type, quantity, age, and source of birds on the farm?** It is important to know whether any poultry on the farm is of mixed species. Some diseases can be carried by one species showing no outward signs but can be lethal to other

poultry species. For example, turkeys and peafowl are particularly susceptible to blackhead, which is cause by a protozoan parasite. While the free-living forms of the protozoa cannot survive long, they can be transmitted in the cecal worm, a

parasite of chickens. For this reason, it is recommended that turkeys not be raised with chickens or on ground typically used for pasture-raised chickens.

| Type of Bird |                     | Quantity | Age | Source |  |
|--------------|---------------------|----------|-----|--------|--|
| Chickens:    | Laying hens         |          |     |        |  |
|              | Replacement pullets |          |     |        |  |
|              | Broilers            |          |     |        |  |
|              | Dual-purpose breeds |          |     |        |  |
| Exhibition   | Breeders            |          |     |        |  |
| poultry:     | Young stock         |          |     |        |  |
| Turkeys      |                     |          |     |        |  |
| Waterfowl    |                     |          |     |        |  |
| Game birds:  | Pheasant            |          |     |        |  |
|              | Quail               |          |     |        |  |
|              | Partridge           |          |     |        |  |
|              | Guinea fowl         |          |     |        |  |
| Other:       |                     |          |     |        |  |

### 2. What feed is being fed to the birds?

Poultry need a complete feed that contains protein, energy, vitamins, and minerals. Laying hens need diets that are 14 percent to 16 percent protein;

broilers should have diets that contain 20 percent to 22 percent protein during the first three weeks. Turkeys, game birds, and other fowl need higher protein than chickens. Cracked corn and scratch

grains do not supply needed nutrition. Ducks should not be fed medicated chicken feed. If raised on pasture or fed whole grains, grit should be provided.

| Type of Feed | Amount/Proportion |
|--------------|-------------------|
|              |                   |
|              |                   |
|              |                   |



**3. How is water supplied? What is the source of the water?** Water is the most important nutrient for poultry but is often overlooked. Birds can live for lon-

ger periods without feed than they can without water. Drinking water should be clear, tasteless, odorless, and colorless. Water from a farm well or pond could have quality problems related to hardness, bacterial contamination, pH, etc. that will affect the health of a flock.

| What is the source of the water?  |   |  |  |
|---|---|--|--|
| How is water supplied (troughs, bell drinkers, nipple drinkers,   |   |  |  |
| etc.)?  |   |  |  |
| 4. How are the birds housed? Por options: cages, floor (sometimes cage-free), free-range (i.e., outside night), floor and outside run (i.e. which they actually use), pastur kept in portable pens), and flight birds). Each housing system come disadvantages that could influence | referred to as free-roaming or<br>e with shelter only provided at<br>, with access to the outdoors,<br>re-raised (i.e., on pasture but<br>pens (typically used for game<br>es with its own advantages and | How are the birds housed? Check all that apply:  Cages Floor Floor and outside run Pastured Free-range Flight pens Other (describe): |  |

**5. What is the amount of room provided per bird?** Chickens need a minimum of 2½ square feet per bird on the floor and about 80 square inches of room in a cage. This amount can increase or decrease with the size of the birds involved. For example, a turkey needs three to four

times the space required by a chicken. Similarly, quail require considerably less space than a chicken.

Overcrowding poultry can result in feather-pecking and cannibalism. In addition to floor space, the birds must have sufficient access to waterers and feeders.

Birds should have enough feeder space so that all of the birds can eat at one time. If not, competition from other birds can result in poor nutrition for some of the flock, feather pecking, and cannibalism.

|              | Floor Size |               |                  | Space per Bird |              |  |
|--------------|------------|---------------|------------------|----------------|--------------|--|
| Type of Bird | Width (ft) | C Length (ft) | = Area (sq ft) - | + # of Birds   | = Sq ft/Bird |  |
|              |            |               |                  |                |              |  |
|              |            |               |                  |                |              |  |
|              |            |               |                  |                |              |  |
|              |            |               |                  |                |              |  |
|              |            |               |                  |                |              |  |
|              |            |               |                  |                |              |  |

# 6. What symptoms do the birds exhibit?

Areas to be evaluated include:

- Conditions of the body, feathers, skin, comb, eyes, face, nostrils, mouth, wattles, neck, legs, and feet of individual birds
- Behavior of the birds
- · The consistency of the fecal material
- Flock performance in terms of egg production, growth, or feed consumption

| What symptoms      | do   | the | birds | exhibit? |
|--------------------|------|-----|-------|----------|
| Check all that app | olv: |     |       |          |

- ☐ Emaciation
- ☐ Stunted or uneven growth
- ☐ Sudden drop in egg production
- ☐ Poor shell quality
- Listless
- ☐ Lying on breast
- ☐ Paralysis of legs, wings, or head
- ☐ Twisted neck
- Curled toes
- ☐ Swollen hocks (i.e., knee joint)
- ☐ Swollen foot pad
- ☐ Twitching or muscular spasms
- ☐ Trembling
- ☐ Loss of feathers
- ☐ Cannibalism, feather pecking
- ☐ Soiled hackle feathers

### ☐ Skin lesions

- ☐ Vent irritated
- ☐ Crusted or swollen scales on feet
- ☐ Coughing/nasal rattle
- ☐ Swollen, puffy head
- ☐ Swollen eyes
- ☐ Off-color comb
- ☐ Scabs on the comb
- Watery eyes
- ☐ Crusts over the eyes
- Nasal discharge
- ☐ Visible external parasites
- Loose/watery droppingsBlood in droppings
- ☐ Off-color droppings (green, yellow)
- ☐ Foaming droppings

Other (describe):

| <b>7. Have any birds died?</b> It is common for a few birds in a flock to die with no outward symptoms. A sudden increase in mortal-   | Type of I                                     | Bird  | Number of Deaths      | Date  |
|--|---|---|-----------------------|---|
| ity, however, can indicate a problem.  |   |   |                       |   |
|  |   |   |                       |   |
|  |   |   |                       |   |
|  |   |   |                       |   |
|  |   |   |                       |   |
| 8. Have birds been sent to a diagnostic lab? Submissions to the diagnostic labs should be done by a veterinarian.  | Lexingto                                      | tic laboratories are located in on and Hopkinsville. A fee is at the labs.  |                       |   |
| Diagnostic Lab   |   | Veterinarian  |                       | Date Submitted  |
|  |   |   |                       |   |
|  |   |   |                       |   |
|  |   |   |                       |   |
|  |   |   |                       |   |
| used on the farm? As a rule of thumb, chicks should be vaccinated at the hatchery for Marek's disease. Other vaccines should not be used unless the premise has a history of the disease. Vaccines | cine mus<br>kept for<br>should b<br>a poultry | are mixed, any remaining vac-<br>st be discarded and cannot be<br>later use. The cost of vaccines<br>e considered when developing<br>health program. Vaccines can | overall cost of vacci | should evaluate the nes on a per-bird basis ned with the number |
| Type of Bird   | Vac   | cination  |                       | Date Administered   |
|  |   |   |                       |   |
|  |   |   |                       |   |
|  |   |   |                       |   |
| How are vaccines stored?   |   |   |                       |   |
| 10. Does this farm (or area) have a history of this type of disease or symptom? Some disease-causing organisms (bacteria, virus, protozoan) can survive  | to know previous                              | nvironment, so it is important<br>whether there have been any<br>incidences. Also, many organ-<br>n be transported on clothing,                                   |                       | etc. so any incidences<br>em in the area should                 |
| Diseases or symptoms encountered:  |   |   |                       |   |
|  |   |   |                       |   |
|  |   |   |                       |   |
|  |   |   |                       |   |
|  |   |   |                       |   |

**11. What lighting programs are the birds on?** In order for hens to lay year round they need supplemental light for a day length of 14-16 hours of light. Birds on natural light typically will go out of production after the first of the year because of the short daylight and will return to production in the spring when the length of day increases. Laying hens should not be given constant light (24 hours per day) because that can also make them go out of production.

| Source of Light      |                           |                      |  |  |  |
|----------------------|---------------------------|----------------------|--|--|--|
| Natural<br>(hrs/day) | Artificial<br>+ (hrs/day) | Total<br>= (hrs/day) |  |  |  |
|                      |                           |                      |  |  |  |
| Bulb Type            | Wattage                   | No. of Bulbs         |  |  |  |
| Incandescent         |                           |                      |  |  |  |
| Fluorescent          |                           |                      |  |  |  |

| ٠  | . Management can affect the incidence or severity of a problem in the flock.  Areas where the birds are kept should be kept clean and dry. | NOTES: |
|----|--|--------|
|    | Feed should be properly stored to avoid infestation by rodents, flies, and insects.  |        |
|    | Feeders should be kept clean.  |        |
| •  | If table scraps are fed, it is important they not be left to rot. Rotten material can be a source of botulism.                             |        |
| •  | Fresh water should be supplied daily in clean waterers.  |        |
|    | Wild birds can carry disease and parasites and should be kept out of the barn.   |        |
|    | Disease and parasites can be picked up from other poultry at poultry shows,  |        |
|    | swap meets, etc. It is important to know whether the birds or the flock owner  |        |
|    | have been at such locations and whether the birds are isolated from other birds  |        |
|    | when they return to the farm. Any returning or new birds should be isolated  |        |
|    | from the other birds for at least 30 days.   |        |
| Wł | hich of the following conditions exist on the farm?  |        |
|    | Owner has attended a poultry show or swap meet or exhibited birds  |        |
|    | Birds that have been to poultry shows or swap meets are kept isolated for 30 days when returned to the farm                                |        |
|    | Birds at shows and swap meets are added immediately to the flock   |        |
|    | Different species of birds are kept separate from each other (e.g., chickens and turkeys are not mixed)                                    |        |
|    | All species of birds are raised together with no separation  |        |
|    | Clean and neat   |        |
|    | Buildup of wet litter or bedding in pens   |        |
|    | Good ground cover in outside pens or runs  |        |
|    | Muddy runs or outside pens with poor drainage  |        |
|    | Feed is properly stored and provided fresh daily   |        |
|    | Feed is stored in extreme conditions cold or hot   |        |
|    | Moldy or caked feed in feeders   |        |
|    | Table scraps are laying in pens or runs  |        |
|    | Fresh water is provided daily  |        |
|    | Water or drinkers are cleaned regularly (frequency:)   |        |
|    | Rodents or pests present   |        |
|    | (type ; severity of infestation: minor = 1, severe = 5)  |        |
|    | Wild birds have access to buildings  |        |
|    | Poultry on farm are isolated from other animals  |        |
|    | New birds have been added to the flock within the last two months  |        |
|    | (type : source: : when: )  |        |

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