

Pastured Poultry Nutrition & Management

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The Basics

The three MOST IMPORTANT aspects of raising pastured poultry are:

1. Air Quality
2. Water Quality
3. Feed Quality

Air Quality

- Rule of Thumb: If you think it smells bad, it's much worse for the chickens.
 - Poultry's threshold for ammonia cannot be detected by the human nose (10 versus 25 ppm)
- Freshness: Air in confined spaces should be exchanged 4-6 times daily, regardless of temp.
- Humidity: Excess humidity in confined spaces will promote infectious respiratory diseases

Water Quality

- **3 Critical Factors:**

- **Clean:** Water needs to be potable; not from ponds and puddles. Watering devices need to be cleaned daily or as necessary to remove bacteria & algae.
- **Cool:** Water should be no hotter than the birds body temperature of 105° F. Optimum temp. for mature birds is between 70° - 80° F.
- **In the Shade:** Water left in the sun is less likely to be consumed. Always place it in a commonly used shaded area.

Feed Quality

- **4 Critical Factors:**
 - **Fresh:** Feed is best used within 14 days of processing. Should not exceed 30 days old.
 - **Balanced:** The feed being fed needs to align with the birds age and level of production
 - **Texture:** Grind size is critical for proper digestion and depends on the age of the birds
 - **Mold & Toxin Free:** Molds & toxins will decrease overall health of your flock

GRIT!

- Feeding grit to all poultry is extremely important!
 - Helps birds break down and digest pasture and forages
 - Varying sizes available depending on age of birds
 - Soluble vs. Insoluble forms
 - Oyster Shells vs. Granite Grit
 - Should be available Free Choice, even if mixed into feed

Mycotoxins in Feed

- 2 ppm of mycotoxins can cause a 10% decrease in feed efficiency
- **You can't see them or smell them**
 - 2 ppm is the equivalent of 2 grains of sand in a 2 quart mason jar! Figuring out which 2 grains is impossible.
- Numerous kinds of mycotoxins, generally brought about by varying climate conditions (esp. rain)
- DON-Vomitoxin of most widespread prevalence

In-house testing of all grains for
DON-Vomitoxin available.

Management

- **Bedding:**
 - Needs to be fresh and clean. Add more daily and make sure to disinfect between batches.
 - Peat moss is recommended for brooder bedding
- **Feeder & Waterer Heights:**
 - Should be level with the average height of a birds back
 - Reduces spillage and decreases amount of feed consumed off the ground
- **Observation:**
 - Flip over a 5-gallon bucket and take your morning coffee outside. Observation is the key to finding problems before they become problems!

Feed Related Health Problems

- **Riboflavin:** Deficiency causes curly toes at 7-10 days of life
- **Manganese:** Deficiency causes slipped joint tendon, also known as spraddle leg
- **Rickets:** Calcium deficiency tied to lack of Vitamin D



Brooder-Related Health Problems

- **Coccidiosis:**
 - A common infection caused by a single-cell parasite belonging to the protozoa family
- **Necrotic Enteritis:**
 - A bacterial infection of the digestive tract. Generally caused by *Clostridium perfringens*, infecting the mid-small intestine
- Both infections are commonly caused by poor litter management and poultry eating from the contaminated ground or litter. (Importance of Proper feeder/waterer heights!!)

Brooder-Related Health Problems

- **What to look for:**
 - Blood in the manure, or manure that looks 'off' in color or texture
 - Listless birds or a decrease in energy
 - Decreased feed/water consumption
 - Droopy feathers

 - Usually around the 14-21 day mark when symptoms appear

Brooder-Related Health Problems

- Both coccidiosis and necrotic enteritis may be controlled with:
 - Raw milk: What the birds will consume in 1 hour
 - Copper Sulfate: 1 oz/5 gallons for 3 days as the sole source of drinking water
 - Remove and replace bedding material
 - Lime the chicken yard area frequently

Other Common Illnesses

- **Ascites:**

- Aka Water Belly. Plasma builds up in the abdomen from blood flow back pressure from the liver to the heart.
- Usually associated with a hyperthermia-like condition from exposure to cold and damp conditions

- **Infectious Coryza:**

- A bacterial infection that can easily spread
- Symptoms similar to the common cold in humans. Sneezing, snitting, watery or pasty eyes, swollen wattles.

Improving air quality and increasing vitamins, particularly vitamin E, normally helps

Other Common Illnesses

- **Viral Arthritis:**
 - Mycoplasma synoviae arthritis
 - A viral infection entering the body from poorly managed litter or ground space
 - The virus erodes the metatarsal tendon, rendering the chicken immobile. In severe cases the tendon will rupture
 - **Live birds will rest on their hocks or sit all the way back on their butts.
 - Easily spread between flocks
 - No treatment available- Vitamin E may help

Water Additives

- **Apple Cider Vinegar:**
 - 100:1 to start, then 200:1
 - OR 1 oz/gal, then ½ oz/gal
 - Has shown benefits against heart attacks, ascites, and flip-overs (sudden death syndrome)
- **Hydrogen Peroxide:**
 - Peroxide is a caustic substance which will raise pH
 - Performs many of the same functions as the vinegar
- **Garlic Water:**
 - Mince 1 clove/5 gal drinking water. Let soak for 24 hours before giving it to the birds. Works like a natural antibiotic.
- **Vitamin E Oil:**
 - 2-3 drops per bird. Acts as a health boost. Floats on top of water so it's easiest to give in a separate pan of water if you use a water line.

Remembering Why We Do This



Raising poultry can be a lot of work... But its also one of the most rewarding experiences there is!

Questions?

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