

KSU Poultry Newsletter

No. 5

July, 2022

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Ideas to Help Your Flock When It's Hot

Summer has finally arrived and it's important to remember what happens to poultry when heat stressed. Do this at the first sign of heat stress: provide shade, lots of air flow, and clean, cool water.

When a bird is hot, its mouth is open, and the throat moves rapidly. These are signs the birds are close to suffering from heat stress. The next thing to look for is drooping wings. When birds allow their wings to droop lower and away from their bodies, they are too hot.

Pay attention to the effect of heat on different breeds. Meat-type Cornish-rock broilers are the most susceptible to heat stress, and these and similar heavy breeds should be processed before it's too hot. The Mediterranean breeds (like Leghorns) tend to be lighter and will suffer less during hot weather. The heavy-bodied birds, with deep, dark-colored feathers, will not do as well in heat waves (Black Cochins). Hot weather will cause thin eggshells and reduced production.

Poultry do not sweat but instead cool themselves by fluttering their throat to move air and expel moisture. The surrounding air needs to move away the stale air and accumulating moisture. Use a fan to move air to whisk away heat and humidity. Poultry don't just need an open window or vent; they need moving air when it's hot. You can point the air directly on them.

Make sure they have good, deep shade, preferably over a cool surface. If the morning or afternoon sun warms the ground below the shade, that's not good. Make sure there is enough shade for all the birds to have space beneath it. During hot weather, don't handle them. Don't chase them or cage them. Let them rest.

During the day, the birds will avoid a hot coop and if there is no shade in the yard, they could die. Check the coop temperature at the hottest part of the day. The biggest weakness I see in coop designs is uninsulated roofs. Rigid, reflective insulation installed under the roofing material is most effective in summer because it keeps the heat of the afternoon sun out of the top portions of the coop.

There should be a side vent in the poultry house to allow warm summer air to leak out at the highest portion of the roof. Check how warm it is just after dark where the birds are roosting. Many flock owners forget that the birds will roost as high as possible and it's not good for them to be too warm at night.

The latest trend in coop design is to install external nesting boxes to easily reach eggs in the nests. Be sure that these nests are oriented away from direct sunlight. These nests are really a small room with a low ceiling, and with the sun hitting on 3 sides, the heat could be very high inside. You could turn the coop, so the nest is out of the sun, insulate and add reflective paint, or choose a design that is internal, but has a flap for you to open and reach the eggs inside the main house.

When hot, poultry will not eat as often. In fact, many producers don't provide food during the hottest part of the day to help reduce body heat. But never allow your birds to go without water, even for the shortest period. Poultry can survive, if necessary, without feed, but they will die quickly under heat stress without water. Their water should be clean and as cool as possible.

Most of all, watch your birds. Look for signs of heat stress. Watch where they are standing in the heat of the day. Observe where they roost at night. - Record temperatures in the coops. The birds' behaviors will often give hints on what to do.

Currently, Poultry Shows and Exhibitions are OK to Proceed

My fingers are crossed that avian influenza will continue to diminish now that warm summer temperatures are here. A few states temporarily suspended shows and trading for small flocks, but some have reopened these activities. Of course, this could change at any minute if there is an influenza outbreak that must be controlled. Other states may still have restrictions on bird movements, so if you planned to enter an out-of-state event, be sure to check with the show superintendent and the respective state animal health division.

Certainly, the data shows that this avian virus has not completely disappeared. The recommendation is not to let your guard down, keep an eye on your birds, practice good biosecurity, and stay informed by visiting the avian influenza page at <https://agriculture.ks.gov>

Speaking of Poultry Shows....WE STILL NEED JUDGES!

The pandemic break was long enough that many of our poultry judges have drifted to new adventures, leaving us short of judges for events. Worse, the system that trains new judges slowed significantly, with fewer completing training and internships to become certified for competitive shows. Even my KSU poultry judging team, from which many Kansas students have learned to help with shows, was on temporary hiatus, so we had fewer trainees available. Many of the smaller competitions may not need a certified judge, so if you are a poultry enthusiast who knows a lot of poultry, give me a shout and let's talk. You can email me at sbeyer@ksu.edu. If you have a contact who is a judge, please let us know!

Question of the Month #1: Which Grit is Better, Limestone or Oyster Shell?

In poultry production, "grit" describes very small hard rocks or stones that are provided as free choice to poultry along with their normal feed. Some of the more common forms of grit are crushed limestone, ground granite, and ground oyster shells.

Since chickens don't have teeth, the gizzard is the organ that grinds down larger grain particles. The gizzard is a strong muscle, with a tough, sandpaper-like lining that helps shave off the surface of hard particles until they are small enough to be absorbed during digestion. Some people believe the value of grit is to add calcium to the diet while helping to break up food particles in the digestive tract.

Grit is not absolutely required for birds to digest food. The gizzard is amazingly strong, and it can easily grind common cereal grains. Complete feeds have all the nutrients necessary for the bird to grow and produce. If you don't provide grit all the time, you probably won't see much effect on your birds.

About the only place you see grit used on a large scale is by egg producers. They often provide limestone for eggshell formation in the form of several particle sizes. The smaller sizes are used to form shell immediately, while the larger sizes remain in the gizzard longer and provide a steady stream of calcium later in the day and night as the gizzard slowly grinds the small stones. The grit is formulated as part of the calcium requirement and is not fed separately but is incorporated in the feed.

For home flocks on a range, we are lucky in most areas of Kansas to have a lot of limestone in our soil, and many other free-ranging poultry will have access to driveway rock. In these cases, you probably don't need to add more grit to their diet.

But which is better, limestone or oyster shell? Well, in a nutshell, oyster shell may be a tiny bit better for eggshells, but limestone is more cost effective! At home, you won't notice a difference when using either. Biologists have discovered that it is important to return empty oyster shells to oyster beds because the old shells are where new oysters attach to grow the next generation, so there will be fewer oyster shell products available. It's certainly more sustainable to use local Kansas limestone than to use oyster shells shipped here from around the world.

There are a couple of other reasons to give our birds grit that are worth mentioning. Grit may be useful as an enrichment tool to give the birds something to focus on rather than picking on each other. And, in Cornish-Rock broilers, grit may give more mass and better texture to the gizzard, and this stronger gizzard may enhance nutrient utilization. However, within a small flock, these small differences would probably not be noticeable.

Question of the Month #2: Is It OK to Feed Unharvested Vegetables I Grow in my Kansas Garden to my Laying Flock?

Absolutely! I throw almost anything in my garden into the chicken yard. Leafy greens and tomatoes add yolk color and other good nutrients to eggs. Chickens will devour cucumbers. Anything with a seed is toast in a chicken yard, so unused melons, strawberries, squash, pumpkins, etc. will be enjoyed. They prefer items with a lot of moisture like old tomatoes, watermelons, and cukes.

And why not throw in common weeds as well? I find it particularly satisfying to toss garden weeds over the fence and see them torn to shreds. Sure, you can throw all these things on the compost pile too. but consider the sustainability of first cycling these items through your bird, then adding the manure to your compost pile.

I have seen exhaustive lists of why certain vegetables cannot be fed to birds. Many of these items are not grown in Kansas gardens! Let's also not forget that "in moderation" is key. A few tomatoes for your flock can good, but an entire bushel could "ruin their supper." A little of almost anything during the season isn't going to cause many problems. Almost any seeds, tubers, flowers, and fruit may contain very minor compounds that, when fed for very long periods or are concentrated and given in large doses, could cause harm to birds. However, if a leaf or seed containing upsetting compounds makes it over the fence by accident, its unlikely to be much to worry over.

It would be best to avoid feeding rhubarb greens that you cut off the stems. Green potatoes and green potato skins should go to composting. Some raw bean-type seeds contain anti-digestive elements, so it's best to limit intake, although cooked beans should be ok. It would be best to treat most vegetable scraps as a snack or supplement and not a sole source of nutrients. Some items like onions and herbs could cause some off odors in eggs, but birds would need to eat a lot of them to be detected by most people, and even then the eggs are still ok to consume.

Do You Know What This Is?



This is part of a set of antique poultry items that were used at KSU or donated over the years. Any ideas from the first picture? Notice the soda can for size reference.

The egg in the next picture probably gives it away. Yes, it's the biggest egg candler you have probably ever seen! It's about 24" long, and 12 by 12", H x W. Look at the size of

those bulbs. The heat off those old bulbs was probably enough to hard boil the eggs! Today, the official USDA single-egg candler uses LED bulbs – but costs \$350! I tell people that a candler is just a light in a can with a hole for the egg and you can build one for almost free. Or, you could use a small, very bright LED flashlight and hold it against the egg, and you can easily see 99% of what you need to see. Things have really changed!

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