

Feathered Facts

Volume 3, Issue 4

April 2016

UF/IFAS Extension Baker County

- Please send comments or questions to baker@ifas.ufl.edu
- Archives of past issues can be found [here](#).
- Email announcements of official UF | IFAS poultry programs to baker@ifas.ufl.edu
- [UF/IFAS Small Farms Poultry Web Page](#)

Inside this issue:

Avoiding Heat Stress in Your Flock	1
Avoiding Heat Stress in Your Flock	2
Pest Control for the Small Poultry Operation	3
Pest Control for the Small Poultry Operation	4
Contact Information	4

Extension Friends,

Now that warmer weather has come to Florida for 2016, there are certain things that you, as a poultry owner, need to think about. One of the main issues is keeping heat stress out of your flock. Warm weather also brings out common pests that may infest your flock. This issue of *Feathered Facts* will speak to both of these subjects and, as always, if we can be of further assistance, please do not hesitate to contact us.



Avoiding Heat Stress in Your Flock

Like most other animals, chickens are prone to heat stress during periods of high temperature and high humidity, which are both prevalent for a large part of the year in Florida. It is important to be able to recognize the signs of heat stress in your flock and know how to avoid placing them in danger from the heat.



Normal body temperature for chickens is around 105°F. However, unlike humans and other animals, chickens do not possess sweat glands. They cool themselves by panting. The panting will evaporate moisture from the throat allowing the bird to lower its body temperature. It is important to note that older birds are more susceptible to heat stress when compared to younger birds because of their larger size and the insulation that is provided by fully formed feathers.

Signs of heat stress in the flock

include: gasping, lethargy, pale combs and wattles, increased thirst, decreased appetite, decrease in body weight, and a potential increase in cannibalism. While these signs are not exclusive to heat stress, they can certainly indicate that heat stress is a problem during prolonged periods of hot, humid weather.

As a flock manager, you should keep in mind that that stress can cause various issues within the flock, including: drops in production, increased mortality, decreased egg size, thin egg shells, poor egg quality, and poor egg functionality.

Additional information about heat stress can be found [here](#).



A scientific journal article on electrolytes and heat stress in broilers can be found [here](#).

Avoiding Heat Stress in Your Flock

There are many proactive measures that you can take as a flock owner to decrease the chance of heat stress in your birds. Good management of the flock and an understanding of how the flock is reacting to temperature changes will help to avoid the risk of heat stress in your birds.

WATER

- Always provide plenty of cool, fresh drinking water in many, easily accessible locations for your flock during periods of hot weather.
- Add electrolytes to the drinking water;
 - The act of panting will change the electrolyte balance within the bird. Adding electrolytes will help to maintain the needed balance within the bird and will help to increase water intake. However, you must be vigilant in adding electrolytes to the water as adding too much can also upset the balance within the bird and cause problems as well.

FEED

- Feed intake will naturally decrease during hot weather. To counteract this, provide feed during the cool parts of the day such as early morning and late evening. The digestive process produces extra heat which can cause stress within the flock during the hottest parts of the day. You may also need to increase the protein component of the feed in response to hot weather for hens that are in lay. Consult your poultry professional for recommendations.

ENVIRONMENT & MANAGEMENT

- Adequate ventilation is a must. Install fans, if necessary.
- Consider installing an evaporative cooling system. These systems provide a mist or fog that moves water through the air. Water on the bodies of the birds will help to cool them somewhat, but make sure not to soak the birds.
- Avoid overcrowding. Overcrowding in the flock increases the ambient heat in the area and reduces the effectiveness of ventilation and evaporative cooling.
- Birds may tend to rest during the hottest part of the day. Don't disturb them.
- Remove accumulated litter from the confinement area. Decomposition of the litter produces heat which can increase the ambient temperature of the area.
- Radiant heat from direct sunlight can also be an issue for the confinement area or for nest boxes. Help to reduce radiant heat by installing insulation in the ceiling area or by having the confinement area in a shaded area.
- If you let your birds out to forage, remember that tall grass and weeds in the foraging area will reduce the natural air flow. Bare ground can also cause issues with radiant heat. Keep the grass in the forage area cut low enough to allow good natural air flow, but don't let the birds forage on bare ground.

Pest Control for the Small Poultry Operation

Control of pests such as rodents, flies, beetles, and mites is important for flock health and management. Pests are not only a nuisance, but they can also carry diseases. Additionally, pests such as rodents can pilfer food that is meant for the flock. Proper pest management is one of the keys to a successful poultry operation, no matter the size of the flock.

BEETLE CONTROL

There are two species of beetle that typically inhabit poultry manure and litter: 1) the darkling beetle (lesser mealworm) and 2) the hide beetle. While these beetles actually compete with flies, they are potential vectors for diseases such as infectious laryngotracheitis (ILT), infectious bursal disease (IBD), Newcastle Disease, fowl pox, avian influenza, *Clostridium* spp., *Salmonella* spp., *Campylobacter*, and *E. coli*.

The common control method is to apply insecticidal sprays or dusts to the litter. However, this may cause a decrease in beneficial insect populations. A thorough cleanout, followed by a chemical treatment before new litter is placed will help to control beetle populations.

Additional resources for organic beetle control can be found on the [eXtension website](#). Additional information on traditional control methods can be found [here](#) and [here](#).

FLY CONTROL

Flies are more than just a nuisance. They are suspected of carrying many different diseases. There are a number of different types of flies that can be associated with a poultry flock, including: the house fly, the little house fly, the black garage fly, the blow fly, and the small dung fly.

MONITORING—Monitoring to determine if there is a fly problem is accomplished via a fly speck count. A set number of 3x5 index cards (usually 4 to 10) are placed throughout the housing area where flies are likely to land. The cards are monitored each week for specks, replacing old cards with new ones. An average fly speck count of 100 or more indicates a need for control.

CHEMICAL CONTROL—Control of flies by chemicals should be in conjunction with Cultural/Physical Control. There are many products commercially available including: area sprays, mists, foggers, residual sprays, baits, and larvicides.

CULTURAL/PHYSICAL CONTROL—Manure management is one of the easiest ways to control fly populations. Fresh poultry manure is 60% to 80% water and provides a perfect environment for fly reproduction. Have a good cleanout plan for your housing area and keep the manure level low to disrupt the reproductive cycle. Screens and traps can also be useful, but are not considered stand-alone solutions.

EXTERNAL PARASITES

There are several species of external parasites that may infest the poultry flock. These pests will often result in lower egg production and/or reduced weight gain.

POULTRY LICE—Many species of chewing lice may infest the flock. Infested flocks will have a poor appearance and exhibit skin irritation and damaged feathers. Lice rarely leave the bird, so treatment of the area alone will not provide sufficient control. There are many commercially available products for controlling lice. Many of these will have active ingredients such as permethrin, carbaryl, and tetrachlorvinphos + dichlorovos.



Northern Fowl Mite—causes anemia, lowered egg production, reduced weight gain, and potential bird death. Photo Credit: J. F. Butler, University of Florida.



Common Red Chicken Mite—causes anemia, lowered egg production, reduced weight gain, and potential bird death. This mite is also the vector for avian spirochetes. Photo Credit: J. F. Butler, University of Florida.

Pest Control for the Small Poultry Operation

EXTERNAL PARASITES, cont'd

POULTRY MITES—Several species of mites can infest a poultry flock. These pests suck blood from the host and can be transferred from poultry to humans.

Northern Fowl Mite—This mite is parasitic on many types of domestic fowl and wild birds. Infestation typically causes anemia, decreased egg production, decreased weight gain, and general unthriftiness. Typical active ingredients for chemical control include permethrin, malathion, carbaryl, and tetrachlorvinphos + dichlorvos.

Common Red Chicken Mite—This mite is also parasitic on many types of domestic fowl and wild birds. This mite can also be spread to humans. Infestation with the Common Red Chicken Mite exhibits the same characteristics as infestation with the Northern Fowl Mite. However, young birds that become infested will usually die. This mite is also the vector for avian spirochetes. Red mites may be visible on the birds during the day as they prefer to hide in dark places. Feeding on the birds is usually performed during the nighttime hours. Treatment for these mites should be on the birds and on the premise. Common active ingredients for red chicken mite control include permethrin, malathion, carbaryl, and tetrachlorvinphos + dichlorvos.

FOWL TICK—The fowl tick is also referred to as the blue bug. Symptoms of infestation include weight loss and decreased egg production. This pest will hide during the daylight hours, so it is difficult to control. Typical active ingredients for control include permethrin and tetrachlorvinphos + dichlorvos.

STICKTIGHT FLEA—This pest can be a severe problem in Florida. Symptoms of infestation include dark brown spots on the face, wattles, and comb. Young poultry may die from a severe infestation. Older birds will exhibit decreased egg production. The Sticktight Flea tends to be prevalent during the cooler parts of the year. Common active ingredients for control include permethrin, deltamethrin, lambda-cyhalothrin, and pyriproxifen.

LOCATING AN APPROVED PESTICIDE

There is an online system for obtaining the names of registered pesticides approved for use with livestock and pests. This is a state-specific list and Florida is included. To use the system, please visit: http://veterinaryentomology.ucr.edu/vet_pesticides.html.

Please remember that while the creators of this website strive to keep it current, it is the responsibility of the applicator to make sure that they follow the label and the law.



Fowl Tick—feeds on the blood of the host. Causes weight loss and decreased egg production. Photo Credit: J. F. Butler, University of Florida.



Sticktight Flea—A severe poultry pest in Florida. Photo Credit: J. F. Butler, University of Florida.

UF | **IFAS Extension**
UNIVERSITY of FLORIDA

UF/IFAS Extension Baker County
1025 W. Macclenny Ave.
Macclenny, FL 32063

Phone: (904) 259-3520
Email: baker@ifas.ufl.edu
Website: <http://baker.ifas.ufl.edu>
Hours: M—F 8:30am to 5:00pm
(Closed Noon to 1:00pm for Lunch)