

Management of Coccidiosis in Small Flocks

Coccidiosis is a common problem in small flocks. It can lead to reduced performance and mortality. Vaccination, preventative medication, and good management practices are key control measures.



Backyard chickens. Photo credit: Natasha Volkers

Virtually every poultry flock raised on litter is affected by [coccidiosis](#), a protozoan parasite infection, to some degree. Birds love to peck the litter and in doing so, they ingest the oocysts (parasite eggs) present in the manure of infected birds. Backyard flocks are often not provided with enough bedding material in the coop. The more contact the animals have with fecal material, the greater the chance for them to develop serious coccidiosis.

How to Know if Your Birds Have Coccidiosis

Birds may appear depressed with ruffled feathers. They may have diarrhea and dehydration. Their feces may have blood (Figure 1) and/or bright orange mucus (Figures 2 and 3, respectively). The skin of affected birds may appear pale in comparison to unaffected birds. In more severe infections, body weight and feed conversion may also be affected.

For a formal diagnosis, fecal material can be taken to an [animal diagnostic laboratory](#). Oocysts are easily seen under the light microscope. Dead animals can also be taken to the laboratory. An experienced poultry veterinarian can usually diagnose coccidiosis upon visual inspection of the intestines.



Figure 1. Fecal material with fresh blood. Photo credit: Dr. Lorenzoni



Figure 2. Fecal matter mixed with abundant clear intestinal mucus. Photo credit: Dr. Lorenzoni.





Figure 3. Abundant orange mucus inside the mid-section of the small intestine of a broiler chicken. This orange material can be found mixed with fecal matter. Photo credit: Dr. Lorenzoni.

How to Control Coccidiosis

One of the easiest ways to control coccidiosis is to purchase vaccinated birds. Vaccines are given at the hatchery on the day of hatch. Once the animals have developed immunity, they will be resistant to the strains of coccidia used in the vaccine they received.

Most backyard chickens are not vaccinated. In this case, the disease can be managed by modulating the level of exposure to the parasite. Fortunately, a reduction in parasite load is normally all it takes to control coccidia in your birds. The ingestion of a few parasites is not a problem and actually helps birds to develop strong immunity against the parasite. The key is to prevent birds from consuming a large number of parasites at once, because this will result in disease.

Reducing exposure to parasites can be achieved with good management practices. Bird density and litter quality play a very important role in determining parasite load in the chicken coop. Ideal bird density depends on the type of chicken you are raising and on your particular circumstances and setup. As a rule of thumb, density is on target as long as the bedding material is kept in good condition (dry and fluffy). If the litter deteriorates too rapidly, you probably have a poor setup that does not support your current bird density. A low bird density (>5 ft² 2 bird) is preferred in non-vaccinated animals to minimize the buildup of parasites in the litter. Do your best to keep your birds on a thick, dry layer of litter. This will effectively dilute the fecal material, resulting in a reduced number of coccidia ingested during litter pecking.

Wet litter usually cakes. Caked litter will keep fecal matter undiluted and in direct contact with the animals. Every time birds peck caked litter, chances are they will consume a lot of parasites. Two places where litter needs to be monitored frequently are around the feeders and around the waterers. Birds tend to spend a long time in these areas, thus the volume of their fecal matter is higher in these places. During summer,

this problem can be challenging because birds will be actively drinking water. More water will be spilled near the waterers and fecal matter will have a high moisture content (due to the birds drinking much more water during hot days). In a small coop, one option is to move the feeders and waterers to a dry spot every day or so. Another strategy, more common in medium and large operations, is to remove the wet/caked litter material and replenish it with fresh material on a regular basis.

Treatment Options

Treatment should be reserved for sick animals. Medicating birds at the wrong time (too early or too often) will interfere with the development of protective immunity. Do not use medicated feed during the first 14 days of life. If birds appear to be sick with coccidiosis after day 14, the best option is to consult with a local veterinarian and to conduct a fecal flotation analysis. As an alternative, you can replace the regular starter feed with medicated feed. Feed that is medicated with amprolium is commercially available and can be purchased without a veterinary prescription. Read the label attached to the feed bag and make sure that the feed contains amprolium. Some of the “medicated” feeds contain products other than amprolium which are not intended to treat coccidiosis (like probiotics).

On hot days, birds tend to limit their feed consumption. For this reason, it is important that the animals receive only medicated feed. Any other feed supplementation will decrease the effective dose of amprolium.

References

- Lorenzoni, Gino. [Avian Coccidiosis](#). Penn State Extension. Diseases of Poultry, 13th ed. D. E. Swayne. Wiley-Blackwell. Avian Diseases Manual. 7th ed. The American Association of Avian Pathologists.

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