

Coccidiosis

Scientific name: Eimeria spp

Distribution

Coccidiosis is common in poultry throughout the world, including in Australia.

Cause

The different species of coccidia cause either intestinal coccidiosis (the majority) or caecal coccidiosis (1 species). More than 1 species of coccidia can infect the same bird at the same time. Birds of almost any age may be affected. Problems are less likely in birds under 3 weeks of age because the parasites take time to build up in sufficient numbers to cause problems.

Life cycle

Infected birds excrete the infective stage of coccidia in their droppings (small egg-like bodies called oocysts). In the right conditions (warm and moist) the oocysts will quickly replicate and grow. Oocysts are consumed by birds from contaminated litter and soil. Once swallowed, the parasites will invade the gut wall where they will continue to grow and multiply. Coccidia can complete their life cycle in 2-5 days, so numbers can build up quite fast.

Symptoms

Common signs of infection include:

- droopiness and depression
- pale comb
- water, mucous and blood in the droppings (blood may be an indication of caecal coccidiosis)
- loss of appetite
- loss of condition
- ruffled feathers
- whitish soiling around the vent (more common in intestinal coccidiosis).

Definite diagnosis can only be confirmed by post-mortem examination of the gut.

Impacts

Coccidiosis can reduce the performance of both meat and laying flocks. For example:

- reduced growth rates
- poor feed conversions
- reduced egg production
- poor egg shell quality.

Birds gradually become immune if they are exposed to a low level of infection, but clinical disease occurs if the coccidiosis challenge is too great. Immunity to 1 species of coccidia does not protect poultry against other coccidial species.

As coccidia infect and damage the gut, infected poultry are more likely to develop secondary gut infections.

Caecal coccidiosis

This is the most severe form of coccidiosis and can result in up to 50% mortality of the flock.

Intestinal coccidiosis

The onset of intestinal coccidiosis is often slower to develop, with a lower but steadier mortality rate. Outbreaks are more likely to occur in flocks between 6–20 weeks of age.

Control

Prevention

Practicing good farm hygiene and biosecurity, such as rodent control and cleaning boots before entering sheds and ranges, will help to reduce the spread of oocysts. Because coccidia require moisture to become infective, avoid wet litter by managing drinkers, ventilation systems and working litter as necessary.

Hygiene practices alone may not always be sufficient and other methods may be required.

Vaccination

Vaccination programs can help to reduce the incidence of coccidiosis in flocks. Effective live vaccines are now available in Australia. These ensure the birds are exposed early in life and develop immunity to the most virulent species of coccidia. Closely follow the manufacturer's recommendations for effective vaccination.

Medication

Medication programs may be used as an alternative to vaccination. A wide selection of anti-coccidial drugs (coccidiostats) are available for prevention and treatment.

The ionophore coccidiostats lasalocid and monensin are routinely used in turkey growers, typically to 12 weeks of age. Dosage levels of ionophores may be critical to efficacy and safety. Exposure of previously unmedicated birds to these compounds can cause toxicity. Salinomycin is toxic for turkeys even at very low doses. Avoid use of tiamulin in ionophore treated birds.

As a preventative measure, low dose rates of coccidiostat may be used to slow down a major build-up of coccidia, reducing the challenge to the bird, and thus preventing outbreaks while allowing immunity to develop. Minimising the build-up of oocysts using other management strategies will greatly assist the efficiency of a coccidiostat program since coccidiostats can be overwhelmed by heavy infections.

Outbreaks of coccidiosis may occur if the:

- level of coccidiostat in the feed is too low
- birds are not eating enough
- coccidiostat is withdrawn too early (before immunity has developed).

Coccidiostats are available that can be added to the feed or water e.g. Toltrazuril, Sulphonamides (e.g. Sulphaquinoxaline), Amprolium.

Most have withholding periods and medication programs must take this into account. If used in backyard flocks, it is important that any withholding periods are adhered to and any eggs produced during this period are discarded.

Once coccidiosis has been diagnosed, treatment should start immediately. Consult a veterinarian and always check the label and any withholding periods that may apply.

References

<https://www.business.qld.gov.au/industries/farms-fishing-forestry/agriculture/livestock/animal-welfare/pests-diseases-disorders/coccidiosis>

<https://thepoultrysite.com/disease-guide/coccidiosis-of-turkeys>