

# Parasitic Peril

## *An extract from the popular 'Practical Poultry' magazine*

*Coccidiosis is a potentially serious condition about which all poultry keepers should be aware. Zanthia Hmlyn explains how to recognise, treat and combat this unpleasant problem.*

Coccidiosis (*Eimeria* spp.), is a debilitating disease found frequently in poultry flocks throughout the world, and it's estimated that it costs the UK poultry industry in excess of £40 million a year. But don't imagine that it's something that's restricted to commercial flocks only; it poses a very real threat to domestic keepers as well.

The disease is caused by coccidian; single-celled parasites that live in the gut wall of the infected bird. From a total of seven different varieties of coccidia, six are responsible for causing intestinal coccidiosis, and one is to be blamed for caeca (blind gut) coccidiosis. However, these unpleasant parasites are hostspecific, which means that those that affect chickens cannot be transferred to turkeys, nor can turkey coccidia infect fowls. But it's worth noting that coccidiosis can also affect dogs, cats, cows and other animals.

### **Spotting trouble**

Coccidiosis can affect birds in almost any age group, but chicks that are less than three weeks old tend to be least prone to it because the parasites need to gather in numbers before they start to cause problems. Effective identification of the condition is obviously important, but it can be complicated by the fact that this disease can be mistaken for other conditions, including salmonellosis, Marek's, necrotic enteritis, blackhead or vitamin and/or mineral deficiencies.

A widespread symptom of coccidiosis is severe diarrhoea, both with and without blood in the droppings. The severity of the diarrhoea will vary with the intensity of the infestation, gradually becoming worse with time. Blood may be present in the droppings, and this too increases as the disease progresses.

Another pointer to look for is white smearing found matted around the vent, sticking to the feathers and skin. This matting may become so severe that it blocks the passing of fresh droppings, in which case the sensible thing is to trim it away carefully.

Fowls that are infected become lethargic and depressed, and can often be found cowering unresponsively in a corner. The general appearance of the bird will suggest illness, and the sufferer will often come across as unkempt and 'ruffled'. You will also notice that their inclination to feed is lost, and males will refrain from mating. Hens can stop producing eggs due to poor health.



Giving birds plenty of space and fresh greens to enjoy will help in managing the coccidiosis threat



Chicks under the age of 3 weeks are not as susceptible to contracting coccidiosis as older birds

Other useful indicators are that the tips of a bird's wings may become dirty and torn, from being dragged along on the ground, and the vent feathers covered in droppings. Poor growth and development, loss of feathers and closed eyes are also strong symptoms of more advanced coccidiosis. Once infested, condition is lost, and this commonly shows itself as a pale comb and wattles plus dry, colourless shanks. The trouble is, it's not unusual for a number of the flock to die suddenly, or begin to lose condition, before any of the aforementioned symptoms become noticeable.

An absolute and exact diagnosis can only be determined with laboratory inspection, in which swabs are taken from the gut lining and analysed under a microscope.

The coccidia are recognised by size, form and position in the gut. It's not necessary, however, to get an inspection before treatment if you are convinced coccidiosis is the problem.

### **Easily spread**

The primary way in which coccidiosis is spread is via consumption of infected faecal matter (droppings). The contaminated droppings have the infective stage coccidia

(oval bodies, named oocysts) spread throughout. These oocysts must mature before infecting another bird; something that can happen in as little as 24 hours. Alternatively, they can remain alive in the hen house for over a year.

The consumption of oocysts can be direct or indirect. Scratching birds can flick droppings into the water, spreading the oocysts to other birds that way. The problem can also be picked up at shows, if the pens haven't been properly cleaned. Also remember that nearly all wild birds carry coccidia in their droppings (they're not necessarily affected), so can present another potential source of trouble for your flock.

The parasites responsible for coccidiosis need moisture to become infective, therefore wet bedding in housing that offers little or no ventilation provides just about the ideal conditions for their development. Also, birds in stressful situations – including being harassed by dogs or cats, moved frequently, having a lack of food or water, placed in a new environment or getting different bedding – are more susceptible to contracting this unfortunate condition. Overcrowding also invites problems, as birds have little choice but to inadvertently consume faecal matter with their food and water. Under these unfortunate conditions the consequence is that the inevitable heat generated by the birds actually helps the parasites to mature more quickly.

Inappropriately low levels of coccidiostat (an aid in the control of coccidiosis) in the feed can also be responsible for outbreaks of the condition. The same thing can happen if a bird reduces its feed intake for some reason – its protection is lost – as is the case if a bird is withdrawn from a coccidiosis preventative too early, before immunity has been established.

Deficiencies in vitamins A (a fat-soluble vitamin) and K (promotes clotting of the blood) are likely to mean that the results of any outbreak will tend to be far more ruthless. Finally, the presence of other diseases or parasites (including CRD, coryza, canker, mites, lice and fleas), will inevitably work to weaken a bird's immune system with knock-on detrimental effects to overall health.



Wood shavings are a good dry litter for chickens - particularly in the early stages of life.

### Successful prevention

It's a risky business to rely solely on good hygiene as your main weapon in the fight against coccidiosis; the infective parasite is very resistant to most commonly-used sanitisers. For overall success you need to mount a more widespread campaign, concentrating not only on bird welfare, but also on breaking the lifecycle of the coccidia. Minimising the birds' stress levels can play a vital role in keeping this problem at bay. Birds which face any sort of health challenge will automatically become more prone to contracting other problems. Always remember that coccidiosis can be lurking just around the corner, simply waiting for an opportunity created by weakness. Low doses of a coccidiostat can be used to prevent outbreaks, while letting resistance build as the bird grows. This approach is generally taken automatically by commercial feed manufacturers - the treatment is included in the feed formulation, unless you specify otherwise. Vaccination represents a further preventative option, and works by exposing the birds early in life, and helping them to develop immunity to most types of coccidia. For successful vaccination, it's important to follow the manufacturer's recommendations, and it should be noted that these products are only available on prescription from a vet. After treatments for coccidiosis have been completed, administering multivitamin tablets will help those affected to regain lost energy much faster. This is particularly important with male birds, as their fertility tends to fall as a consequence of coccidiosis. It may take months for a male to fully regain his previous level of fertility, and the same applies to the quality of hens' eggs.

Always remember that coccidiosis can easily get out of hand and devastate an entire flock but, if the right precautions and treatments are implemented, then it's certainly possible to manage it very effectively. Supplying birds with fresh food and water on a regular basis, clean, dry litter and the appropriate coccidiostats will reduce the parasite's ability to breed and live in your pens. This will not only allow your birds to reach their full potential — maximising egg production and body condition — but will ensure that they lead as happy and healthy a life as possible.

*More details on treatment issues are available in Practical Poultry magazine Issue 53 August 2008*

**For more details on poultry raising visit the 'Practical Poultry' magazine website at [www.practicalpoultry.co.uk](http://www.practicalpoultry.co.uk)**