WYNNSTAY HUMPHREY
FEEDS & PULLETS

How to prevent and treat worms in free range flocks

Advancing Poultry Performance

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Contents

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GET IN TOUCH

Advancing Poultry Performance

1. Introduction

Parasitic worm infections

The growth of free range egg farming over the last 20 years has meant that laying hens are on litter and in free range systems.

Birds that are not separated from their droppings are more susceptible to parasitic worm infections which in turn can have a significant negative impact on laying performance.

We have put this ebook together to help identify the types of worm of concern, the damage they can cause and how to best diagnose and treat them in order that they are removed from the flock.

We hope you find it useful and if you require any help with any aspect of your flock husbandry please do contact myself or one of our specialist poultry advisors.

Martin Humphrey
Wynnstay Humphrey Feeds & Pullets

WYNNSTAY HUMPHREY FEEDS & PULLETS

"I would like to thank you for your assistance over the past year, and in particular your attention to detail giving me a first class flock."

— Mark Saunders, East Combe Farm.

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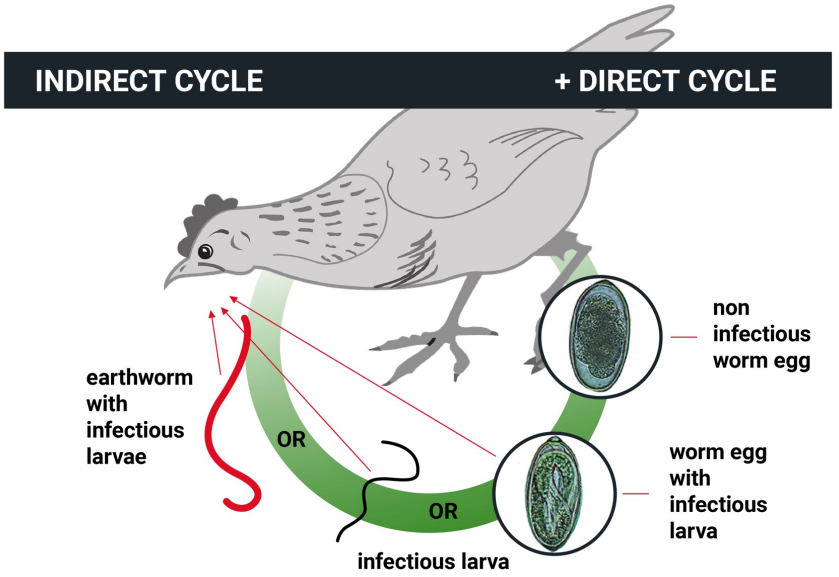
2. Why do worm infections occur?

In order to survive worms have to lay vast quantities of eggs

Birds become infected with worms when they ingest worm eggs either *directly* from their environment or *indirectly* by eating intermediate hosts such as earthworms or snails.

Once inside the bird, the worm egg hatches, matures and eventually lays eggs which are then excreted into the litter or onto the range.

Therefore, once worms have established themselves it can become very hard to break the cycle of continuous re-infection.



3. The impact on laying performance

The damage worms can cause

All poultry, regardless of the system they are kept in, are susceptible to worm infestations.

Worm eggs can survive in the environment for over a year.

Without effective management, worms that infect poultry can lead to significant production losses. Shell strength and colour, as well as yolk colour, can be affected, along with reduced egg size, poor weight gain, feed conversion and an increased risk of egg peritonitis.

High infestations can lead to increases in mortality.

Things to look out for:

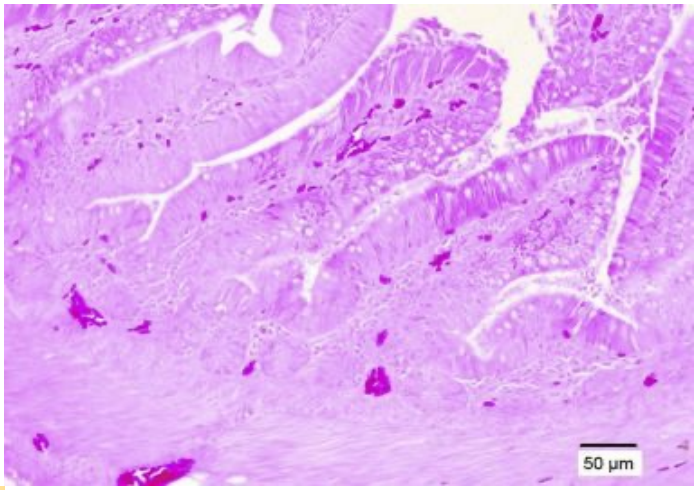
- ✓ Production drops
- ✓ Pale shells and increased seconds
- ✓ Reduced egg weights
- ✓ Increased mortality
- ✓ Variations in bodyweights
- ✓ Poor feed conversion
- ✓ Anaemia shown with pale combs

4. The main species of poultry worms

Hairworms

Capillaria
Min pre-patent period = 21 days*

Very small and barely visible to the naked eye. Can cause significant commercial damage even in moderate infestations as they burrow into the villi of the intestine. Produce severe inflammation and sometimes cause haemorrhage.



Roundworms

Ascaridia galli
Min pre-patent period = 28 days*

Can be abundant in numbers and very common. White in colour, live in the intestine and can be up to 3 inches long. Easy to see with the naked eye and in heavy infestations these worms may be visible in fresh droppings.

Caecalworms

Heterakis gallinarum
Min pre-patent period = 14 days

Small white worms up to 0.5 inches in length, found in the caeca a pouch connected to the junction of the small and large intestines. Can transmit Blackhead, a disease in chickens that causes diarrhoea, anorexia, egg drop and sudden death.

The pre-patient period is the time from when a worm egg is ingested by the bird, to when it transforms into an adult worm and lays eggs, which are then excreted by the bird into its droppings. Depending on the species and environment this can take up to 4 weeks.

5. How to diagnose worms

Regular testing is recommended

You may initially notice pale shells, or a few extra seconds, which can lead onto a slight production drop and some pale combs. You may also spot some adult round worms in the droppings and believe that your flock is not quite right.

We recommend having the birds' droppings checked for worm eggs and species, by having a worm egg count done (WEC) by your vet or poultry specialist.

Sometimes WECs do not show any worm eggs but this does not mean there are no worms, as the worms may not be shedding eggs at that time (pre-patient period). You can then act on the findings, or check again in a few weeks, depending on the situation.

If you are seeing some mortality, then we would recommend that your vet post mortems the birds to advise if they found any worms.

6. How to prevent worms

Managing the range and hygiene

Worm eggs are excreted by the flock onto the range. If the vegetation is kept short, sunlight can penetrate and destroy the worm eggs.

In wet weather, or where the soil is waterlogged, worm eggs will thrive. Having a well-drained range is advantageous and keeping vegetation topped to enable sunlight to penetrate where the droppings are will reduce worm egg numbers.

Careful consideration of biosecurity regarding the movement of equipment, people and pets onto and within the unit will reduce the number of worm eggs entering the flock areas.

Your terminal hygiene policy can include a disinfectant which destroys worm eggs. Using these in foot dips will also aid with reducing the spread once the flock comes in.

Finally, as at Wynnstay Humphrey Feeds & Pullets, pullets should always be wormed in rear so they arrive on farm worm free.

7. Treatment options

Devising tailored worming routine programmes*

If the presence of worms is diagnosed early, the flock's productivity can be maintained before the effects of worms and other diseases take hold.

Worming programmes need to be designed to accommodate the specific worm burden of the flock, the types of birds involved and the on-going management of the flock.

An important thing to remember is that even if only a small percentage of worms or larvae remain in the birds after treatment, they will continue to produce large numbers of eggs and quickly re-contaminate the flock.

Programmed:

This is regular treatment with the interval between treatments being shorter than the pre-patent period of the worm species in question.

This would range from 4 to 6 weeks.

Occasional:

Birds are wormed as and when needed based on regular faecal worm egg counts.

All worming treatments are by prescription only, through your poultry vet. Treatments can be mixed into the feed or administered via the drinking water. Your vet can advise you on the most suitable product for your system.

8. In summary

Once a flock is infected, worm burdens can multiply rapidly, affecting the performance and health of your flock.

If worms are present it is paramount to establish a flock worming programme that reduces re-contamination.

We hope this ebook has demonstrated the importance of preventative measures and tightly controlled biosecurity procedures, backed up by regular monitoring and worm egg count testing to optimise your flock health and production.

If you would like any further information on any of the issues raised in this ebook or any aspect of free range layer production please do get in touch by calling 01962 764 555 or 01691 828512, emailing enquiries@feedsandpullets.co.uk or contacting your local poultry feed specialist.

Thank you to our colleagues at Elanco who have contributed to the production of this ebook.

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