Treatment / Anthelmintics

Wormers can be used to remove gutworm infections, which will also help to reduce pasture contamination. To ensure the most effective approach is taken, it is essential to understand both the parasite life cycle and the properties of the anthelmintic selected for treatment.

In recent years targeted approaches to treatment, based on farm level risk factors have been increasingly adopted. These approaches aim to reduce unnecessary treatments whilst still achieving effective parasite control.

Strategic early season worm control using timed treatments of cattle during their first grazing season can provide an effective approach to controlling gutworm burden whilst still allowing natural immunity to build. In order to achieve season long control using this method, cattle must remain set-stocked, or only be moved to ‘safe’ pasture such as aftermath.

Housing is also a key time for treatment: removing the worm burden, including encysted larvae, will help to maximise productivity and growth over the winter period and reduce the risk of disease due to type 2 ostertagiosis.

The choice of anthelmintic product will depend on farm history, animal and pasture management strategies and whether there is a risk from other parasites such as liver fluke.

As with the use of all medicines, the most appropriate anthelmintic should be determined following discussion with a vet or animal health advisor.

IVOMEC® Classic Injection and IVOMEC® Classic Pour-On contain ivermectin for the treatment of a wide variety of gastrointestinal roundworms, lungworm and external parasites in cattle.

IVOMEC® Super Injection contains ivermectin and clorsulon in a single injection for the control of gastrointestinal roundworms, liver fluke and external parasites in beef cattle.
**What's the problem?**

“Gutworm” refers to roundworm species that can cause disease in cattle by infesting the abomasum and small intestine. Youngstock are particularly at risk, but develop immunity following exposure.

**Gutworm species**

A number of worm species affect cattle, and management differs according to season in youngstock, but the two main species most commonly associated with disease and impaired productivity are:

- **Ostertagia ostertagi**, which lives in the abomasum. The most common form of disease caused by Ostertagia is known as type 1 ostertagiosis or parasitic gastroenteritis (PGE). These worms decrease appetite, impair nutrient breakdown and absorption, impacting on growth and weight gain.

- **Cooperia**, which affects the small intestine. Signs of infection may be less obvious. Adult worms damage the intestinal wall, reducing nutrient absorption and causing scouring, loss of condition and reduced feed intake.

**Why does it matter?**

Slower growth rates increase production costs. Infected animals take longer to reach slaughter weight, consume more feed, and produce lower grade carcases.

The Moredun Research Institute estimates that untreated calves with low levels of gutworm infection lose 30-60 kg of growth in the first year of life, with a financial cost of some £40/head.

Gutworms can also have an effect on fertility. Replacement heifers can take longer to reach first service weight and develop fertility. Autumn-born calves, once weaned and turned to grass, develop immunity with grass. Spring-born suckled calves are exposed to infections derived from their dams’ milk until later in their first grazing season. Turning calves onto co-grazing youngstock can help to reduce the risk.

**How to control gutworm**

A parasite control strategy is an integral part of a herd health plan.

Control strategies should utilise both grazing management to reduce the pasture challenge and anthelmintic treatments when appropriate, to remove worm burdens. A low level of parasite exposure is required to promote the development of immunity, but excessive challenge will affect productivity and may cause disease.

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Pasture grazed by cattle during the previous season will be contaminated with overwintered larvae at turnout. Warmer temperatures from late spring into summer increase the speed at which hatched L1 larvae develop to the infective L3 stage. At the same time, young infected cattle shed high numbers of eggs onto the pasture, which will contribute to the challenge faced by grazing animals. An effective immunity protects against clinical disease, but animals will continue to carry small numbers of adult worms, and shed low levels of eggs onto pasture, which will contribute to the challenge faced by co-grazing youngstock.

Co-grazing with cattle that had been on pasture, ready to infect grazing animals. Once eaten, infective Cooperia larvae develop into adults within a week. Cooperia larvae complete their development to adults within the wall of the abomasum, and can remain in this encysted state for prolonged periods of time. This means that whilst they typically complete their development from infective larvae to adult worms in three weeks, it can take longer. Youngstock between 6-18 months of age are most susceptible to infection, either developing clinical signs or suffering reduced growth rates. Effective immunity can take up to two grazing seasons to develop. This immunity protects against clinical disease, but animals will continue to carry small numbers of adult worms, and shed low levels of eggs onto pasture, which will contribute to the challenge faced by co-grazing youngstock.

**Lifecyle of the gutworm**

Both Ostertagia and Cooperia have a direct life cycle, with no intermediate host. Adult worms living in the gut lay eggs which are passed out in the dung. Eggs hatch within the dung and develop into infective larvae. Larvae can exist for several months on pasture, ready to infect grazing animals. Once eaten, infective Cooperia larvae develop into adults within a week. Cooperia larvae complete their development to adults within the wall of the abomasum, and can remain in this encysted state for prolonged periods of time. This means that whilst they typically complete their development from infective larvae to adult worms in three weeks, it can take longer. Youngstock between 6-18 months of age are most susceptible to infection, either developing clinical signs or suffering reduced growth rates. Effective immunity can take up to two grazing seasons to develop. This immunity protects against clinical disease, but animals will continue to carry small numbers of adult worms, and shed low levels of eggs onto pasture, which will contribute to the challenge faced by co-grazing youngstock.

**Pasture management**

Spring-born suckled calves are exposed to lower levels of gutworm challenge in their first grazing season as the bulk of their nutrition is derived from their dams’ milk until later in the grazing season. Autumn-born calves, once weaned and turned out the following spring, are at risk of PGE in their first grazing season. Turning calves onto ‘rested’ pasture (i.e. not grazed by cattle for at least one year) during their first year at grass can help to reduce the risk.

**Bought-in stock**

Purchased cattle with an unknown treatment history could be carrying significant worm and other disease burdens, and may introduce resistant parasites and other diseases. A quarantine protocol, developed with a vet, should be consistently implemented.