

# Manage pasture to optimise parasite control

Practicing good pasture management, alongside targeted worm treatments, can reduce the parasite load, both in cattle and on pasture, and optimise productivity.

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**I**t is almost impossible to completely eliminate parasites from a grazing system and grazed cattle will inevitably be exposed to production-limiting parasites at some point in their life.

“Parasites are present on pastures nearly all year round and their life cycles are dependent on their hosts, including cattle and other species, being present on that pasture,” says Boehringer Ingelheim Animal Health’s Sioned Timothy. “But it is not the presence of parasites that is the main cause for concern. Not all cattle exposed to parasites will suffer from clinical disease, but a parasite burden can significantly reduce an animal’s productivity and profitability throughout her lifetime.”

Gutworm species, particularly *Ostertagia ostertagi* and *Cooperia*, are a major cause of production loss, with many studies demonstrating their broad impact on productivity. Cattle with a gutworm burden have been shown to spend less time grazing and consume less forage than those that have been treated with anthelmintics.

“Gutworms have also been shown to slow growth in heifers and reduce milk yield and fertility performance in adult cows. And one of the most effective methods to reduce parasite load in cattle is to practice good pasture management,” she says.

## Preserve refugia

Refugia is a term used to describe a sub-population of worms that are not exposed to an anthelmintic when a treatment takes place. Refugia can be present on pasture as eggs and larvae, but also in untreated cattle.

“Refugia is a vital part of anthelmintic-resistance management because it helps to maintain a diverse worm population and ensures that anthelmintic-susceptible worms are present on the farm, to re-infect cattle after treatment, and dilute any resistant worms that have survived. Ultimately, this helps to ensure the prevalence of resistant genes is maintained at a low level, and treatments remain effective,” explains Ms Timothy. She adds that pasture is an important source of refugia, because parasites can exist here without being affected by worm treatments given to cattle.

Refugia can also be preserved within cattle. “For example, if a targeted selective approach to worm treatment is implemented and a proportion of the group are left untreated. This allows them to return the eggs or larvae of untreated parasites back to the pasture and maintain the mix of genetics.

“One of the most effective methods to preserve refugia is to keep cattle on the same grazing for a period after treatment. ‘Dose and move’ strategy is highly likely to result in a loss of refugia on the pasture.”

Another method is to leave a proportion of the best performing animals untreated. “Growth monitoring of individual animals can be a useful indicator of potential parasite burden and the need for treatment. Where young stock are failing to meet their growth targets during the grazing season, despite adequate nutrition, a worm burden is the likely cause.”



Assessing growth rates on a regular basis will allow producers to identify the animals that are achieving growth targets and may not require treatment.

### **Paddock management**

Thinking ahead and planning paddock use across the grazing period can reduce the risk of productivity loss, particularly in young stock that are at the highest risk of parasitic disease. “Map grazing use by paddock and cattle group, grazing history and parasite risk, when aftermaths will become available, and when groups of cattle can be moved there,” says Ms Timothy.

“Low-risk pasture, such as paddocks not grazed by cattle the previous season, or current season silage aftermath, is a good option for first- and second-season grazing heifers. These animals are, generally, naïve to parasite infection and more likely to suffer from clinical disease when faced with a high parasite burden.”

Ms Timothy says that preventing over-grazing is also important to reduce parasite infection, since 80% of parasites are concentrated in the first 5cm of grass.

“Moving cattle from pasture before it is eaten down to an extreme by strip grazing, as well as rotating pastures, will help to reduce the parasite burden in grazing cattle. And timing of pasture use plays a role in parasite infectivity.

“The mid-summer rise in gutworms can generate significant burdens in susceptible cattle from June onwards. The risk of infection can be lessened by

moving these cattle to cleaner pasture, such as silage aftermaths, at this time.”

Parasite load in individual animals can be reduced by lowering the stocking density, where sufficient grazing allows. Fewer animals per hectare reduces the need for cattle to graze close to dung pats, where there will be a higher proportion of infective parasite larvae.

### **Climate control**

Gutworm development is influenced by climatic conditions, with warm and wet weather typically increasing the risk to cattle. Lungworm is also more prevalent later in the summer, from July onwards, where heavy rain can increase the likelihood of larvae dispersal from dung pats.

“Liver fluke is found in higher numbers near to slow-moving and standing water, such as that around water troughs, gateways, and in fields with low-lying areas. Its intermediate host, the mud snail, requires these conditions,” explains Ms Timothy.

“Preventing cattle from accessing rivers or streams, restricting access to high-risk pasture during the winter, and improving the surfaces around water troughs and gateways can help to disrupt the life cycle of liver fluke and reduce potential infection at grass,” she says.

“Producers should speak to their vet or animal health advisor for more information about integrating grazing management techniques with appropriate anthelmintic treatments, to reduce productivity losses from parasites.” |



*Pasture management: carefully rotating grazing paddocks is key to a successful cattle parasite control plan*