

Essential that beef farmers use wormers correctly while they can

By Sara Gregson
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Worms and liver fluke pose a significant threat to animal health and performance and their negative effects must be countered. But this needs to be done sustainably, or cattle farmers will increasingly face worm populations that are resistant to the products they are using to control them.

So far, resistance in cattle worms is relatively uncommon, although producers should not be lulled into thinking it will not happen. Indeed there are cases of *Cooperia* gut worms not responding to Group 3-ML clear products, and liver fluke resistant to triclabendazole treatments.

Factors that may increase the speed of product resistance in cattle include:

- High frequency of treatments over a period of six months or more
- Under-dosing
- Continual use of wormers or flukicides from the same wormer group

Helping hand

The Control of Worms Sustainably (COWS) initiative is an industry-led group which came together in 2010 to provide the best up-to-date, evidence-based information for the sustainable control of gut worms, lung worms, flukes and ecto-parasites of cattle. The group delivers messages at differing technical levels to farmers, vets, advisers, Suitably Qualified Persons (SQPs), veterinary pharmacists and animal health advisers.

COWS works independently, but closely with the Sustainable Control of Parasites in Sheep (SCOPS) programme, which encourages farmers to maintain good worm control in their flocks, while preserving the activity of wormers for future use. The sheep industry has relied more heavily on chemical treatments and faces more resistance to products than the cattle industry does.

The worms

Cattle generally acquire immunity to gut worms and lungworms through exposure to infection as young animals. However, immunity is incomplete and older cattle can suffer from disease too, though generally less severely. This means that young cattle in their first and second grazing season are normally the focus for worm control. There

is, however, no immunity to liver fluke and cattle of all ages are at risk.

There are four species of worm and fluke that need to be considered in cattle. Different species of gut and lungworm affect cattle and sheep, but the same liver fluke species affect both cattle and sheep. Table 1

Parasitic worms undergo a life cycle that typically includes a reproductive egg-producing adult stage and a series of developmental larval stages, some of which take place in the environment/the field or in an

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(Table 1) The four main parasites, the diseases they cause and signs in affected animals. From AHDB Beef & Lamb BRP Manual 9 Controlling worms and liver fluke in cattle for Better Returns.

Parasite	Ostertagia ostertagia (Stomach worm)	Cooperia oncophora (Intestinal worm)	Dictyocaulus viviparus (Lungworm)	Fasciola hepatica (Liver fluke)
Disease	Parasitic gastroenteritis		Bronchitis and pneumonia (Husk/hoose)	Fasciolosis. Damage to liver and bile ducts seen as slaughter
Signs in animals	Loss of appetite, watery green scour, rapid weight loss, poor growth rates		Persistent coughing. Laboured breathing	Poor weight gain. Loss of body condition. Reduced fertility



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intermediate host – such as the mud snail for liver fluke.

The risk of infection and disease varies according to the type of parasite. Generally there is a seasonal pattern, depending on weather conditions.

Typically, disease caused by gut and lungworms is seen in the summer and autumn, while liver fluke damage occurs mainly in autumn and winter

The worm challenge on every farm is different and changes every year. Treatment plans should take into account factors such as farm location, disease history, current season/weather and the type and age of the stock.

For gut worms, target treatments at youngstock in their first and second grazing seasons. Use in conjunction with grazing management that minimises the risk of infection, eg cattle that have grazed a silage aftermath are likely to have a low worm burden.

Calves can be dosed at the onset of disease or wormed preventatively early in the season to limit pasture contamination. This will reduce the animals' exposure to infective larvae later in the year.

Lungworm is controlled by most wormers active against gut worms. In high-risk situations, vaccination of calves offers the most reliable protection.

In liver fluke prone areas,

yearling and adult cattle should be treated at housing. Products vary in their ability to kill juvenile fluke and the timing of administration may need to be adjusted accordingly. Animals kept outdoors may need additional treatments, depending on the liver fluke risk, as no flukicide has persistent activity.

Given the resistance issues emerging with triclabendazole flukicides, it is important to use it at specific times of year when immature flukes are present in the animal. An alternative product can be used for treating adult liver fluke in cattle later in winter.

In autumn, keeping stock off wet areas, which could harbour the mud snail intermediate host, will help reduce the incidence of disease.

Following the COWS 5 'R's principles is a good place to base sustainable wormer use. Choose the **Right product** for the type of worm being treated and give it to the **Right animals** – usually youngstock for gut worms and all stock for liver fluke.

Treat cattle at the **Right time**, early or late in the grazing season or at housing, and dose to the **Right rate**. Most wormers are given at a specific dose rate according to the animals' liveweight. Always weigh animals, or if scales are not available, use a weigh band. Never guess the weight. Finally administer any treatment in the **Right way**, as outlined on the product label.

Keep an eye on the parasite forecasts at the NADIS website, www.nadis.org.uk ■

Mark Jelley and his cattle



Young beef cattle at grass



Having a worming plan

Beef and arable farmer Mark Jelley admits that worming is rarely at the top of his priority list, but it is something he takes seriously.

Farming 204 hectares (500 acres) in Northamptonshire, Mark is one of the AHDB Beef & Lamb Strategic Farms and is also a member of COWS group, representing farmers' interests.

He runs a suckler herd of dairy-cross cows, which are mated to a continental beef bull such as a Blonde Aquitaine. Numbers were reduced last year due to TB and Mark was unable to buy in replacement bulling heifers as normal, but the aim is to get the herd back up to 100 cows.

Until now, the progeny has been finished as bull beef on ad-lib cereal co-product feeds at between 14 and 16 months of age. Last year, Mark castrated some bulls and finished them as steers, losing 50kg of liveweight but less feed was used and the animals were easier to handle.

Forty-five heifers are also finished at 14 to 26 months of age, 20 going to a local catering

butcher at regular intervals throughout the year, and the rest going to ABP for slaughter with the males.

Herd health plan

Mark discusses worming with his vet at the Towcester Farm Vets and it is part of a comprehensive herd health plan. Wormer products are ordered from online suppliers.

Last year at housing, the youngstock and cows were treated with a dose of Paramectin Pour-on, a Group 3 ML clear product with ivermectin as its active ingredient. This controls roundworms and lungworm, and ecto-parasites such as mites and lice.

"Pour-on products are quick and easy to apply," says Mark. "However, we are looking to broaden our product use in future to include other active ingredients and other application methods. We might also test for the effectiveness of ivermectin.

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product leaflet.”

In spring, half the young heifers go out to finish at remote pastures where cattle handling is more difficult. This year they were given an injectable Group 3 ML clear product, which controls round worms, lungworm, mites and lice.

The other heifers are kept at the home

farm and have not been treated. They are being monitored through weighing and having their growth rates checked regularly. In future, faecal egg counts will help determine the need to treat them.

Historically, the farm has not had a liver fluke problem, although two out of 45 animals showed up with active liver fluke damage in the latest slaughter reports.

“We have taken on some land on a Farm Business Tenancy, which has a stream running by it, so it could have been home to some infected mud snails.” explains Mark. “We have now fenced the stream and have piped drinking water into the field.”

During the hot weather this summer Mark has applied a fly product to his heifers and cows.

“Using this fly product makes a real difference and we are definitely seeing less eye infections than when we didn’t treat.” ■

New COWS website

The COWS group has launched a brand new website to support the work it does to encourage responsible use of wormers in beef and dairy cattle. The new site can be accessed at www.cattleparasites.org.uk

“It has never been so important for cattle farmers to consider carefully how and when they use anthelmintics,” says Mary Vickers, Senior Beef Scientist for AHDB Beef & Lamb.

“They can no longer be complacent about worm resistance and must take steps to stop it occurring or reduce its spread onto their farms.

“The new, easy to view website is clearly divided into the different parasite categories and offers an extensive library of internal and external resources to learn about tackling infestations in a sustainable way.

“The website features an invaluable ‘Things to do now’ section for beef and dairy farmers – highlighting the things to watch out for at key seasons in the year, in particular before turnout, during summer grazing and at housing.”

The new website has been paid for by the funding members of COWS: AgriSearch,

The screenshot shows the COWS website interface. At the top, there is a search bar and a 'Go!' button. Below that is a navigation menu with categories: HOME, THE LATEST, GUT AND LUNG WORMS, LIVER AND RUMEN FLUKE, LICE, MITES & INSECT PESTS, EFFECTIVE CONTROL OF PARASITES, RESOURCES, PRESS, and GET IN TOUCH. A 'Things to do now' section features a cow in a field and the text: 'Always weigh cattle or use a weigh band to calculate the correct dose for each animal'. Below this is a 'What is COWS?' section explaining the initiative. To the right, there is a 'Things to do now' sidebar with a 'Beef' section containing three bullet points about anthelmintic treatments.

AHDA, AHDB, AHDB Beef & Lamb, AHDB Dairy, AMTRA, HCC, NFU, NOAH and QMS. It has been further developed by information supplied by members of the Veterinary Medicines Directorate (VMD), Moredun Research Institute and the University of Liverpool. ■

The new website