Teagasc
Agriculture and Food Development Authority

DairyBeef 500 Factsheet

DAIRYBEEF 500
Sustainable Dairy Beef Production

Combating internal parasite infection on dairy-beef farms

Stomach and lungworms are two of the main internal parasites that can significantly reduce animal performance of dairy-beef calves during their first grazing season. Animals in their second grazing season generally develop immunity to these parasites.

What is anthelmintic resistance?

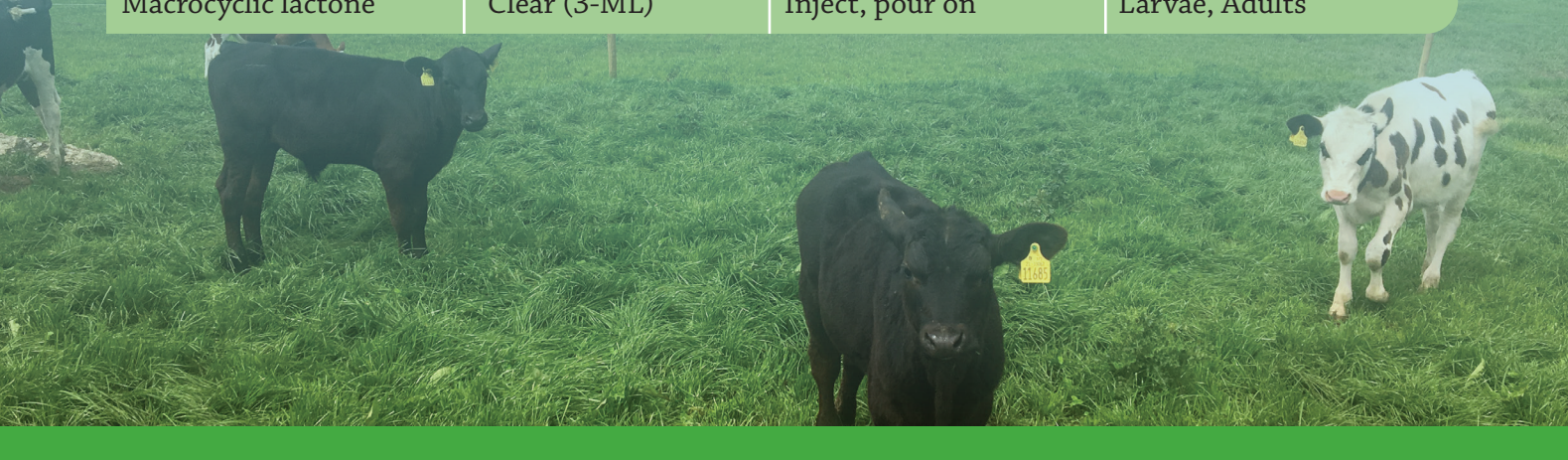
- Anthelmintic resistance is a term used to describe the ability of a parasite to survive doses of drugs that would normally kill it.
- Teagasc Grange trials have found that anthelmintic resistance levels among stomach worms on Irish dairy calf-to-beef farms are far higher than was previously thought.
- Care should be taken to avoid inappropriate dosing practices which increase the incidence of anthelmintic resistance occurring amongst stomach worm populations.
- As yet, anthelmintic resistance has not been detected in lungworm populations.

Dosing products

There are three classes of anthelmintic licensed for the treatment of stomach and lungworm in Ireland: benzimidazoles (white); levamisole (yellow); and macrocyclic lactones (clear). Although there are many different brands of doses on the market for the treatment of stomach and lungworm, they all contain one of or a combination of these three drug classes

Table 1. Anthelmintic classes for the control of gut worms in cattle.

Anthelmintic Class	Common Name	Route	Stages affected
Benzimidazole	White (1-BZ)	Oral	Eggs, Larvae, Adults
Levamisole	Yellow (2-LV)	Oral, inject, pour on	Adults
Macrocyclic lactone	Clear (3-ML)	Inject, pour on	Larvae, Adults



Practices to reduce anthelmintic resistance

Do:

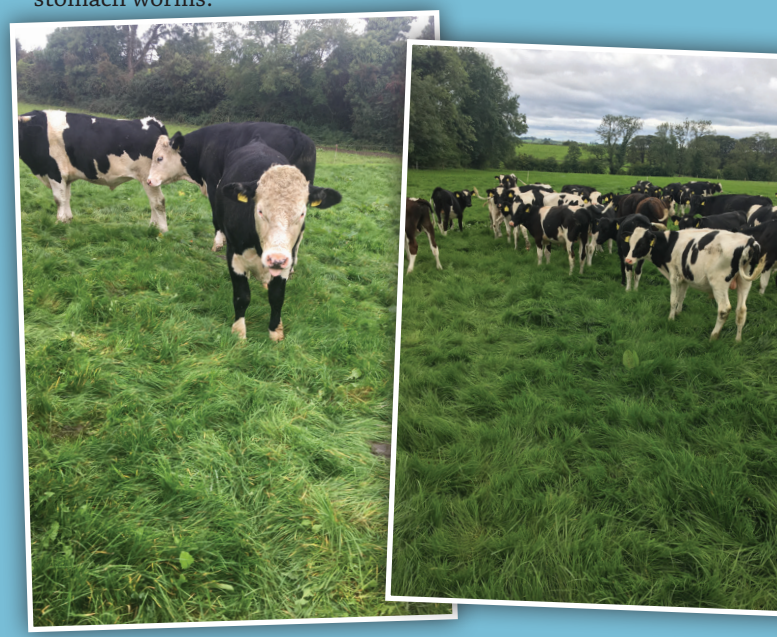
- Take stock performance and faecal egg count (FEC) results into account when deciding on whether or not there is a need to dose.
- Pay attention to dose-to-weight calculations so animals receive a full dose.
- Dose based on the weight of the heaviest animal in the bunch (don't under-dose).
- If a large degree of weight variation exists, splitting the group into a heavier and lighter group and then dosing based on the heaviest in each group is advisable.
- Read the label and instructions carefully to ensure that you know exactly what the dose can and cannot treat.
- Dose for lungworm in calves based on first signs of hoose cough.
- Complete a drench test to verify whether or not there is resistance on farm to the drugs used (consult your local advisor/vet for more information on this measure).
- Only use wormers that work on the farm. If all work then alternate the drug used to dose cattle between the three classes listed above

Don't:

- Don't use flukicide/wormer combination products unless intended for control of both stomach worms and fluke.
- Don't dose and turn out to clean pasture. It is best to dose and return to contaminated to reduce anthelmintic resistance.
- Don't dose based on calendar dates or anticipated worm burdens.
- Don't turn calves out to the same paddocks as previous bunches of calves in the same/previous year. Try to alternate the ground calves graze during the first months post weaning/turnout.
- Don't use long-acting moxidectin products unless you are sure there is no resistance on farm to them and do not use more than once a year.

Best practice dosing programme for calves in the first year

- Controlling both stomach and lungworm is critical to achieving good animal performance over the first grazing season.
- The majority of spring-born calves are weaned off milk and turned out to pasture in April/May.
- The targeted average daily gain (ADG) for these animals over the rearing period and through the summer is 0.7-0.8 kg.
- ADG falling below this level suggests that a worm burden could be affecting calf thrive, but only once nutrition and herd health are satisfactory.
- Faecal samples should be taken monthly from early June onwards to quantify the level of stomach worm burden the calves are experiencing.
- The results of the FEC test will be the main indicator of when to dose. Subsequent doses should again be based on the results of FEC tests.
- For treatment of and protection against lungworms, the calves should be dosed when the first signs of coughing appear.
- With no known resistance to anthelmintic drugs in lungworm, there is an opportunity to use an alternative drug class to the ones normally used on your farm to treat stomach worms.



Interpreting FEC results

The results of FEC are given as 'eggs per gram' (epg) of faeces. The number of eggs is an indication of the number of adult worms in the gut of the animal. Animals should be treated for stomach worms when the FEC goes above 200 epg. Different types of tests are carried out for stomach worms, lungworm and fluke and so a stomach worm FEC test will not provide an indication of lungworm or fluke burden and vice versa. Treatment for lungworm is commonly based on clinical signs, while it should be noted that rumen fluke is very common and often causes no problem to the animal. It is not necessary to treat every time a positive result for rumen fluke is seen in a fluke FEC test and instead treatment should be based on veterinary advice or clinical signs of disease.

More information on the Teagasc DairyBeef 500 Programme can be found at Teagasc.ie

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