Parasitic Worm Control in Cattle

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What animals should I treat?
Bucket reared calves have very little resistance to worms and have a higher grass intake from an earlier age. These animals need close attention. Suckler reared calves will develop a parasitic worm burden as they start to graze and grass becomes a significant proportion of the diet. The main concerns in the coming weeks will be Lungworm or 'Hoose' which is characterised by coughing often with the tongue protruding. Lungworm impacts on performance and heavy infections can lead to secondary pneumonia. Gut worms will also impact on performance and severe infections will cause weight loss and scour. Typically parasites are controlled through routine treatment. Faecal egg count sampling is now recommended to be used in a strategic treatment approach where animals are sampled and treated when higher egg counts are found. This can reduce the amount of treatments required.

Which active ingredient should I choose?
Currently three Anthelmintic classes are available for parasitic worm control in cattle. If you are looking to switch wormer this year it is important to understand the difference in ingredient classes as two different brand names can have the same active ingredient. The three types can be explained as follows:

- 'White' drenches are classed as 'Benzimidazole' and will have an active ingredient ending in 'zole' on the label. Examples include 'Albendazole', 'Triclabendazole' and 'Fenbendazole'.
- 'Yellow' are classed as 'Levamisole' which will also appear on the label.
- 'Clear' are the 'Avermectins' which will for example appear as 'Ivermectin' or 'Moxidectin'.

Each of these ingredient types are effective. The main differences are application type with the 'clear' commonly used in pour-ons or injections and the 'white' used in dosing products. Withdrawal dates and persistency also vary.

So what if a farmer has been using a 'Clear' pour-on for a number of years and wishes to change? The farmer would have to select a product containing an ingredient from the 'White' class or 'Yellow' class.

Is there internal parasite resistance to treatments?
A research study was carried out on a sample of 17 dairy calves to beef farms which found significant resistance to classes of Anthelmintic. 'White' drench resistance was found on 12 out of 17 (71%) farms. 'Yellow' drench resistance on 3 out of 12 (25%) farms used. 'Clear' Ivermectin resistance on 17 out of 17 (100%) farms tested and Moxidectin resistance on 9 out of 12 (75%) farms tested.

The likely cause of this resistance is continuous use of the same active ingredients over a number of years. It is important to remember that there is no treatment which will produce 100% clearance of internal parasites. With continuous use the parasites which

can survive the active ingredient are multiplying and becoming a greater proportion of the population. This will show itself in decreased effectiveness of treatments.

I am worried there might be resistance on my farm?
The best way to establish if there is resistance would be to faecal sample before and after administering a parasitic worm dose provided the first sample shows a parasite load. Comparison of the two results will indicate the effectiveness of the active ingredient used. If considering this route ensure you get advice and an interpretation of the results from your vet.

How do I faecal sample?
Your vet will provide you with a sampling container and advice on sampling. Take samples of fresh dung from a number of animals of the same type. Return to your vet who will send it to the veterinary laboratory for analysis. Avoid putting samples in the fridge, freezer or direct sunlight or holding onto them for over 24 hours. Alternatively you can deal directly with a veterinary laboratory which can provide a sampling kit and testing services. It is the worm eggs or 'faecal egg count' which is used to determine the level of infection. While worm eggs are to be expected in most samples a recommendation is given to treat once the reading is above a certain level (usually 200 eggs per gram). Indicative costs per sample are €16-18.

Take homes

- Watch out for signs of gut worm and lung worm in calves
- Every product is based on any one of three active ingredient classes
- Be wary of resistance to ingredients with continued use
- Faecal sampling now recommended for a strategic approach to worm control due to resistance concerns.

Resistance on Dairy Calf to Beef Farms (n=24)

Anthelmintic class	No. farms tested	No. farms with resistance	Prevalence of resistance
Benzimidazole (1-BZ)	17	12	71%
Levamisole (2-LV)	12	3	25%
Macrocyclic lactone (3-ML; Ivermectin)	17	17	100%
Macrocyclic lactone (3-ML; Moxidectin)	12	9	75%

Table: Showing results of research on Anthelmintic (Parasite treatment) resistance conducted on a number of Dairy Calf to Beef farms.