

A Guide to Parasite Control at Grazing

For Irish Farmers and their Vets

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PARASITE CONTROL PROGRAMME

THIS GUIDE IS THE THIRD IN A SERIES OF THREE MATCHED TO KEY PERIODS
OF FARM MANAGEMENT

1. Parasite Control at Housing
2. Parasite Control at Turn-out
3. Parasite Control at Grazing

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PARASITE CONTROL PROGRAMME



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INTRODUCTION

Two months into the grazing season is a good time to monitor animals and review parasite control strategies. Depending on weather conditions, stocking densities, and availability of clean pasture (see Table 2, AHI Leaflet 'Parasite Control at Turnout'), the pattern for the remainder of the grazing season can usually be determined by what happens during the first 6-8 weeks after turnout.

The reasons to monitor performance and to carry out diagnostic sampling in grazing cattle two months after turnout are as follows:

1. To confirm that any early season parasite control measures are working.
2. To assess the risks of parasite disease and/or poor performance for the remainder of the grazing season.
This is especially important if no action has been taken early in the season.

It must be remembered, because infections with all these parasites can build up over the grazing season, **the period of greatest risk of illness and production loss is during the second half of the grazing season up to housing, especially if no mid-season control measures are instigated.**

Performance may suffer at this time too through the decline in grass availability and quality, so the combined effect of parasites and under-nutrition on performance can be severe.

PARASITE GROUPS

As highlighted in the AHI leaflet *Parasite Control at Turn-out* [\[click here\]](#), the most important parasites to combat during the grazing season are the three main groups of helminths:

- Stomach and intestinal worms collectively called gutworms
- Lungworms
- Liver fluke and rumen fluke*

*The management of Rumen Fluke is covered separately in the AHI leaflet *Rumen Fluke – The Facts* [\[click here\]](#).

The emphasis in this leaflet is on monitoring and assessing what further action needs to take place. It will mainly focus on the management of dairy animals, but, where there are important differences, beef cattle management will also be discussed.

CONTROL OF GUT WORMS IN FIRST GRAZING SEASON DAIRY CALVES

Gutworms are present on every farm and in all ages of grazing cattle and if uncontrolled can cause clinical disease in first grazing season (FGS) animals and loss of performance in older animals.

Control measures include turning FGS calves out onto clean pasture i.e. pasture not grazed by young cattle since mid summer/autumn the previous year, along with regular monitoring of parasite egg excretion and strategic treatment with appropriate anthelmintics. The AHI Leaflet *Parasite Control at Turn-out* [\[click here\]](#), provides full details on anthelmintic use strategies.

MONITORING OF GUTWORM INFESTATION DEPENDS ON:

1. Regular weighing of animals

2. Regular dung sampling for parasite eggs (faecal egg counts (FEC))



Weighbands being used on calves

Weigh animals regularly

Research has shown that the rate of DLWG of calves 6-8 weeks after turnout is correlated with their level of exposure to parasitic worms (assuming that there are no other obvious causes of poor growth such as poor nutrition) and is predictive of growth performance up to housing.

Ideally use scales to monitor weight gain but alternatives such as weighbands and wither height measurement are available.

Wither height monitoring can be especially useful for out-farms

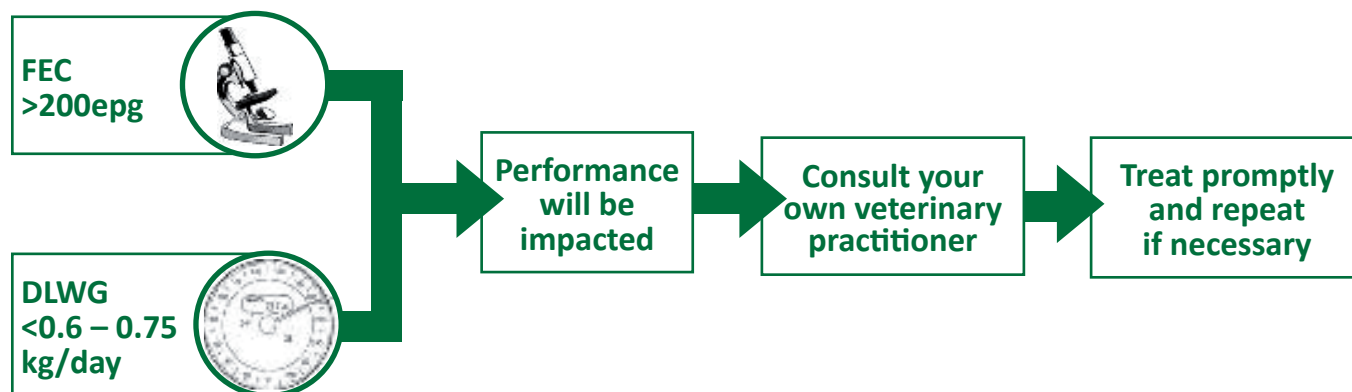
If early season strategic treatment(s) with anthelmintics have been used in FGS calves, then growth rates should be good, assuming that animals have access to adequate grass of good quality. If targets are being met then continuation of the current strategic programme may be all that is required.

If no early season anthelmintic treatments have been used, then monitoring has a greater importance because calves will have been picking up infection from the pasture since they were turned out to grass.

Monitor FEC

Fresh dung samples (from 10 – 15 calves) should be collected, approx. 8 weeks after turnout, and submitted to a laboratory to determine the number of worm eggs present. Dung samples being submitted for testing should be as fresh as possible – i.e. not picked off the ground. Ideally the lab should receive the samples as soon as possible (within 48 hours) after collection to ensure correct egg counts. There are benefits in sampling individual calves, but labs can pool the faeces and do a single count that will give a good indication of the average number of worm eggs present in the whole group of calves (the AHI leaflet *Parasite Control at Housing* [\[click here\]](#), gives more details on this option).

Tactical Management is strongly recommended nowadays – regular monitoring and only treating when appropriate:



Ideally both FEC and weighing should be carried out to gain a more complete picture of what is going on, but either one is better than nothing.

CONTROL OPTIONS AT THIS TIME

Once silage aftergrass is available, calves can be moved from their current paddocks to the cleaner grazing offered by fields that have not held cattle since the previous year. Research in sheep has now shown that treatment with an anthelmintic and immediate movement to clean pasture increases the risk of anthelmintic resistance. Therefore it is now recommended that measures are taken to reduce the potential risk of high selection for anthelmintic resistance, for example, rather than treat all animals at this time, it may be advisable to treat only those calves with high FEC and/or low DLWG.

If clean grazing is not available, then a group treatment with an anthelmintic is recommended and, depending on how long the product protects animals from re-infection with worms, further monitoring is recommended approx. 8 weeks later, but sooner if the worm challenge is high.

Control of Lungworms in FGS dairy calves

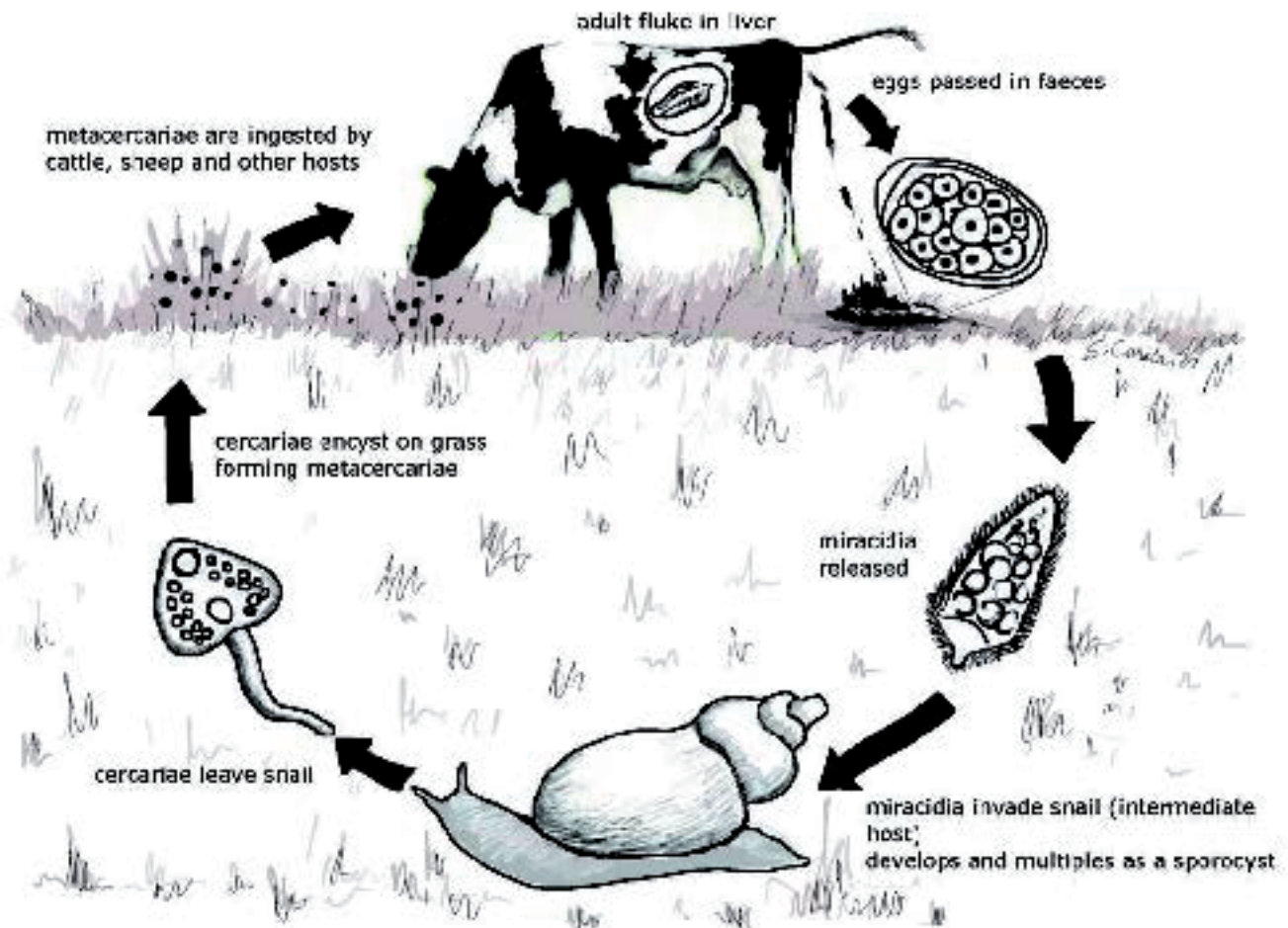
Lungworm infections are less predictable than gutworm infections and they make their main impact through clinical disease- hoose or husk. Affected calves can exhibit clinical signs from a slight cough on exercise to severe coughing and respiratory distress often leading to secondary viral and bacterial infections. There is also some evidence that subclinical infections cause poor performance. Close monitoring for early clinical signs of respiratory disease, particularly coughing, is the best approach for management of lungworm infection.

If vaccination and/or early season strategic anthelmintic programmes have been used, they normally provide good control of lungworm too, at least over the period of anthelmintic cover. If no such programmes are in place, it is worth asking the labs to also conduct an examination for lungworm larvae (Baermann Technique) if dung samples have been taken for FECs. It is critical that all dung samples get to the laboratory promptly after sampling- but it's particularly important that for lungworm testing the lab should receive the samples within 48 hours after collection.

NB Baermann is only suitable for diagnosing patent infection i.e. adult lungworm infection, prepatent lungworm infection can cause acute bronchitis and pneumonia).

Control of Liver Fluke in FGS dairy calves

Fasciolosis is a chronic disease in cattle and the clinical signs are marked by inappetance, weight loss, reduced milk production, increased susceptibility to other diseases and general ill-thrift. The life cycle of liver fluke is much longer than gut and lung worms. Even if calves are exposed to over-wintered infection soon after turnout, they will not have acquired burdens of adult liver fluke within 8 weeks of turnout.



If there is any suspicion of harmful infections at this age, blood samples can be taken to check for the levels of liver enzymes, which are raised early in infections.

Dung samples can also be tested for a coproantigen, which can detect fluke infections before the adults have developed.

Control of parasites in FGS suckler calves

Spring-born beef suckler calves are rarely affected by gut worms before weaning, and autumn is their period of highest risk. Close monitoring in autumn before housing is essential to ensure they do not get a setback prior to housing. However, Lungworm may cause problems in young stock before and after weaning. Knowledge of the history of lungworm on the farm and careful observation of calves for coughing will help manage this problem as treatment with an appropriate anthelmintic is recommended if coughing is observed in calves.

If calves are weaned while still at grass then, an anthelmintic treatment with persistent action would cover the period until housing. Consult with your vet regarding the best product. If relatively clean grazing is available at this time, recently weaned calves can benefit from the low risk of parasites.



Weaned autumn born calves and spring calves in their second grazing season are susceptible to both gut worms and lungworms and a monitoring and control programme similar to that described for FGS dairy calves should be undertaken. Furthermore late autumn-born suckler calves that have been housed over winter and then turned out with their mothers will need close monitoring in spring as they too are at risk from gut and lungworm infestation.

The approach to liver fluke is the same as for FGS dairy calves. Autumn-born suckler calves that go to grass as young calves the following spring should be considered in the same way as FGS weaned dairy calves.

Second Grazing Season cattle – Gutworms and Lungworm

Second Grazing Season (SGS) cattle will generally be immune to Cooperia worms and partially immune to Ostertagia (gutworms) – and also to lungworm if they encountered infection as FGS calves. Lungworm can be a problem in the second and subsequent grazing seasons, if insufficient immunity has been induced in the first grazing season, or if animals remain devoid of challenge for long periods, resulting in a waning of immunity.

Therefore, there is less need for close monitoring two months after turnout, as is recommended for FGS. However, if the animals are replacement heifers, they will be approaching the age of first mating early in their SGS, so it is important to ensure that they don't receive any setbacks at this time and monitoring weights is recommended.

Control of Liver Fluke in SGS cattle

SGS cattle may have been infected with liver fluke the previous summer/autumn, but if they have been treated at housing/during the winter to eliminate disease they shouldn't need to be treated until late in or at the end of the following grazing season. If there is any doubt as to their status, then dung samples are recommended to assess the infection level. (See AHI Leaflet 'Liver Fluke- The Facts' for further information).

Gutworms, lungworm and liver fluke in Adult cattle

The status of adult cows two months after turnout can be considered to be similar to SGS cattle, except that they can be considered fully immune to *Ostertagia* (Round worms).

Dung samples may be used as part of an overall diagnostic strategy for detection of parasites in adult cows to complement clinical examination, performance assessment and other diagnostic tests.

Recent research has seen the development of tests that can detect antibodies in the milk to gut worms, lungworms and liver fluke. The interpretation of results from these tests needs to be done in the context of the overall herd health and milk production pattern. It is important to note that using the results from these tests alone will not be enough to design a comprehensive parasite control plan. Ideally this should be done in consultation with the farm vet who understands the herd health and production history.

Results of bulk milk testing for gutworm, liver fluke and lungworm simply indicate the presence (or absence) of antibodies resulting from prior or current exposure to these parasites and as antibodies remain in the animals for several months, they do not necessarily indicate active infection or disease.

Dosing adult cows for liver fluke should only be undertaken where there is a body of evidence (e.g. positive ELISA plus poor performance/ scour/ eosinophilia*/ FEC) to suggest an underlying parasitic infection. (*This is a blood test detecting increased numbers of white blood cells called eosinophils.).

Milk tests are obviously not appropriate for beef cows, but FEC and / or blood samples can be taken from 10-15 animals and subject to the same antibody tests as are used in milk. Condition scoring should also be carried out at the same time in order to ensure that animals are in good condition for the next breeding season.



NOTES

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