Information Notes

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SAC

Reduce Dependence on Sheep Wormers

The Sustainable Control of Parasites in Sheep (SCOPS) recommends the regular use of faecal worm egg counting in order to: -

- Reduce your flock's dependence on wormers
- Help to maintain effective wormers for the future
- Improve flock performance.
- Reduce costs of worming.

The first question is how do you get faecal worm egg counts done?

Veterinary Practices offer worm egg counting. They either undertake the tests themselves or send the samples to a VLA or SAC Veterinary Laboratory where trained scientists examine the samples. The examination of faecal samples in bulk offers a very cost-effective way to monitor parasite burdens to make the best use of wormers. It can also be used to check the wormer was effective. Collect 10 fresh samples into individual pots or bags. The samples can be readily collected from the ground after gathering the sheep in to a corner of the field and then collecting freshly dropped, warm faeces. The bulk examination gives a better estimate of parasite burden of the whole group compared with individual counts on a few animals. The 10 individual faecal samples from each group of sheep can be submitted to your vet or your local Veterinary Investigation Centre for examination. SAC markets its bulk worm egg counting service as "WormScan" and charges about £16.00 (+VAT) for a single bulk examination. Your vet may add a consultancy fee. Special pre-paid kits including postage are available directly for £20.00(+VAT) from SAC Veterinary Services, Aberdeen on 01224 711177. With the WormScan kit, you simply collect the samples as above, put them in the box and envelope provided and pop the package in the post box. The results are reported to you and your vet. WormScan can also be used for bulk faecal examinations for evidence of liver fluke eggs.

Some farmers find it worthwhile investing in a FECPAK system in order to carry out the worm egg counts themselves. The kit comprises a microscope, and all the sampling materials and equipment required to carry out a faecal egg count test on farm. The advantages of carrying out your own tests is that results are instant and it allows for many more tests to be carried out. This in turn means that different groups of animals can be regularly monitored throughout a season. For example it may be possible to do counts on lean ewes, young ewes and fit ewes pre tupping to see if any, or all, of these groups merit worming at that time. The ability to monitor the worm burdens on the farm means that the cost of the FECPAK can be recouped in a short space of time. The FECPAK is not yet validated for fluke examinations. For further information on FECPAK, contact Innovis Ltd. on 01970 828236 or Email: enquiries@innovis.org.uk.

How to check for wormer failure

The investigation of possible wormer failure (wormer resistance) requires more testing than just a screen to tell whether worming is required. There are 3 options that can be used to indicate the success of a wormer treatment. These can be considered as the Bronze, Silver and Gold approaches to detecting wormer resistance by checking faecal egg counts. The three approaches are detailed in table 1. They vary in complexity and cost. You are best to discuss which option to adopt with your own veterinary surgeon who knows the circumstances on your farm. He will interpret the results.

Call in your vet if your flock suffers losses from ill thrift or scour. Submission of carcases to your local veterinary laboratory offers a very cost-effective means of investigating the problem.

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Success through Knowledge

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Table 1	Bronze, Silver and Gold Approaches to Detect Wormer Resistance
Bronze	*Quick check that the wormer worked.* Collect 10 dung samples from sheep soon after treatment for a bulk worm egg count in the laboratory. The time after treatment depends on the wormer used: 5-7days after a Group 2 product (LEV) (Levamisole), 10-14 days after a Group 1 (BZ) (benzimidazole) and 14-16 days after a Group 3 (ML) macrocyclic lactone. The presence of worm eggs in faecal samples collected after dosing may be due to wormer failure, poor dosing technique, equipment failure, or underdosing. Cost of test is approximately £16 (or about £25 with special packaging and prepaid postage) or use FECPAK.
Silver	*More scientific than the bronze approach. Gives a rough estimate of the reduction in worm egg count achieved*. Collect 10 dung samples from sheep in the treated group on the day of dosing and send to lab. Collect 10 dung samples from sheep soon after treatment for a bulk worm egg count (as in Bronze above). When the results of both tests are available, calculate the reduction in worm egg count achieved. Resistance is diagnosed when more than 5% (1 in 20) of the worms survive treatment. The cost of 2 bulk (or pooled) worm egg counts is £32 - £50 or use FECPAK. A specific test for BZ resistance could be carried out on the second group of samples (Egg Hatch Assay) at a cost of £85.
Gold	*A structured on-farm trial to test the efficacy of all three different wormer groups*. Select a group of 60+ sheep that have not received a dose of wormer. Collect 10 dung samples from sheep in the group a few days before dosing and send to lab. The trial can only proceed if at least 600 eggs per gram faeces is being produced, Allocate 12 – 15 sheep randomly to each of the treatment groups and the untreated control group (D). Treat the 3 treatment groups (A, B and C) with a wormer in Group 1 (BZ) benzimidazole, Group 2 (LEV) Levamisole, or Group 3 (ML) macrocyclic lactone groups respectively. Dose according to the bodyweight of the heaviest animal in the group. Ensure that each group is clearly identified by a different coloured spray mark. Individual worm egg counts are then carried out on dung samples collected from each of 10 of the control sheep and the treated sheep as follows. Group A (LEV) day of treatment (Day 0) and 5 to 7 days post treatment Group B (BZ) day of treatment (Day 0) and 10 to 14 days post treatment Group C (ML) day of treatment (Day 0) and 14 to 16 days post treatment Group D (no treatment) day of treatment (Day 0) and Day 14-16 The lab will calculate the reduction in worm egg count achieved by each wormer. Cost - about £160 to £200 but the results give a detailed picture of the wormer drug's value in the flock.