SAC CONSULTING

SRDP Farm Advisory Service

NE Organic Discussion Group

Newsletter

August 2021

Welcome to the August edition of the Newsletter.

Harvest is well underway. Fingers crossed for sufficient good harvest days.

This month the Newsletter contains an article on faecal egg counts and how it can now be included in EBV's. There is no other news at present, this is always a quiet time of year for meetings etc.

As ever, get in touch if you have any questions or want more information.

Faecal Egg Counting for flock sustainability

Studies carried out by Moredun Research Institute since 2000 have found anthelmintic resistance to benzimidazole (1-BZ, white) drench on more than 80% of lowland and 55% of upland and hill farms in Scotland[1]. The Wales Worm Watch project found similar in Wales for 1-BZ and with 47% of lowland farms having resistance to both 1BZ and levamisole (2-LV, yellow)[1]. If treatment isn't effective, we cannot maintain animal welfare or performance, putting the sustainability of some flocks in question.

Whist we cannot stop the development of resistance, we can slow its development by more strategic use of wormers. We need to utilise the tools available to limit anthelmintic use to when it is needed and going to be effective so to minimise use and extend the time period between treatments.

Faecal Egg Counting is one of those tools, allowing us to assess whether a group of sheep should be treated. Collect dung samples from at least 10 individuals from each group at random. Dung samples should be fresh when collected (less than 1 hr), kept cool and delivered to the laboratory within 48hrs for reliable results. Samples can be taken in handling yards, by gathering sheep into a corner of a field for a few minutes or by picking up samples as animals get up from lying in the field.

Interpretation of FEC results, shown in eggs per gram (epg), and how often to test is quite complex taking into account results and risk factors such weather conditions so discuss with your vet or adviser. As a guide for lambs without issue of barber's pole worm:

- <250 epg = Low
- 250-750 epg = Medium
- >750 epg = High

FEC can also be used to assess treatment efficacy of the different anthelmintics to highlight anthelmintic resistance on farm. For FEC Reduction Tests, anthelmintic resistance is suspected if the percentage reduction in FEC of a test group compared with the control groups is less than 95%. This can then be used to better plan worm control. See: SCOPS Testing for Resistance

There is variation in the strength of acquired resistance to worms between individual sheep. Part of this variation is genetic (h^2 0.07-0.21) meaning it is possible to selectively breed sheep for resistance to worms, using individual FEC. Stud breeders take individual FEC samples of lambs at 21 weeks of age from a minimum of 5 offspring per sire. Results are then sent to Signet to produce FEC Estimated Breeding Values (EBVs).

In flocks that have selected for low FEC, lambs are found to develop stronger acquired resistance, which only kicks in around 4-5 months of age, expressing lower FEC and less requirements for dosing. This continues as adults, with ewes found to have a smaller rise in FEC during PPRI and shedding fewer eggs onto pasture resulting in a reduced worm challenge to their lambs. Therefore, the greatest benefit is realised in selecting breeding stock for worm resistance and not in using terminal sires with low FEC.

Commercial flocks can now benefit from the hard work and investment of progressive breeders recording the trait through purchasing tups with FEC EBVs. The EBV is available for several of the major breeds and is calculated for two different worm species – Strongyles and Nematodirus. The genetic correlation between the two egg counts is found to be 0.49 meaning a combined FEC EBV can be used for ease of selection. In all cases a negative EBV score is desirable. Think: Lower score = less eggs = more resistant to worms.

[1] SCOPS Sustainable Worm Control Strategies for Sheep 4th Edition

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