

Avoiding Anthelmintic Resistance in Sheep



The development of anthelmintic resistant endoparasites in sheep, plus the increase in organically farmed flocks, has sparked research which has revolutionised the approach to routine parasite control.

The focus now is firmly on promoting natural immunity to endoparasitism using flock and pasture management strategies and maintaining a susceptible worm population by decreasing anthelmintic usage, thus reducing selection pressure.

Targeted use of anthelmintics is based on risk assessment, using faecal worm egg counts, flock history and post mortem examinations (if appropriate) to identify the species and weight of endoparasite burden present within a flock.

Developing a Strategic Worming Plan

- ◆ Carry out frequent faecal worm egg counts on samples from at least 6 animals within the flock. Continue into the winter months as *Trichostrongylus spp.* can be a problem in mild winters.
- ◆ Assess risk of *Haemonchus contortus* on the farm. Affected flocks require more frequent worming. Consider using closantel to reduce risk of resistance to other anthelmintics developing.
- ◆ Assess risk of *Nematodirus battus* on the farm with regard to lamb crops. Use pasture rotation to avoid land grazed by lambs in the previous year.
- ◆ **DO NOT worm healthy, well fed ewes prior to tugging.** These sheep have good immunity to endoparasites and treating them will quickly select for resistant strains.
- ◆ Worm only young or thin ewes pre-lambing, unless there is a history of *Haemonchus contortus* on the farm.
- ◆ Base decisions about when to worm lambs on frequent faecal worm egg counts, pasture history and risk from *Nematodirus battus*. Young lambs require exposure to parasites before 6 months of age to develop immunity.
- ◆ Rotate where appropriate on annual basis between the benzimidazole (BZ), levamisole (LM) and macrocyclic lactone (ML) anthelmintic groups. Weigh some sheep in the group to ensure adequate dosing.
- ◆ Monitor efficacy of wormer by faecal worm egg counts on 10 faecal samples taken 7 days post LM, 10—14 days post BZ, or 14—16 days post ML treatment.
- ◆ Treat bought in sheep sequentially with ML and LM products then quarantine off pasture (with careful disposal of faeces) for 48 hours to avoid introduction of resistant strains. Turn sheep out onto “dirty” pasture.

For more information

See the most up to date advice in the technical manual published by the SCOPS (*Sustainable Control of Parasites in Sheep*) group, obtained by logging on to:

www.nationalsheep.org.uk