Treatment of ewes pre-mating

Historically, it has been common practice to deworm ewes in the run up to mating in the autumn. This is linked to the strategies of the 1970's and 80's where clean grazing systems advocated treatment of ewes at this time to prevent contamination of pasture for the following spring. There is no evidence, however, that such treatments have any tangible benefit for fit ewes in terms of their subsequent performance.

A recently published paper (Leathwick, *et al.*, 2020) demonstrates that while lean ewes responded in terms of an improvement in BCS, the overall effect was not significant. In contrast, we now know that such 'dose and move' strategies are highly selective for anthelmintic resistance (AR).

As previously discussed in the development of immunity section, healthy adult ewes in good body condition have a very low worm burden because their strong acquired immunity to worms allows very few adult worms to remain in the gut. This can be confirmed using Faecal Egg Counts (FECs) and is a useful way to demonstrate the fact to sheep farmers. Anthelmintic treatment at this time of year selects heavily for AR because of the small population of worms the ewe is carrying. Any that survive will enjoy a prolonged period or reproductive advantage, during which they dominate worm egg production. In addition, there is concern that removal of the ewes' worm burden may temporarily reduce the strength of her acquired immunity, thus being counterproductive.

Therefore, there is a strong case for withholding any blanket anthelmintic treatment from ewes around tupping. Only those ewes in low body condition or immature sheep tupped for the first time may benefit, though a FEC on these is also ideal if practical. In practice many more flocks are now adopting this policy without any detrimental effect on performance.

SCOPS recommends that only lean, immature or clinically affected ewes, are treated at this time.

Flocks where *H. contortus* is a known risk are the exception, and preventative treatment may be required. However, any treatment of ewes during the autumn and winter months may exert a powerful selection pressure, because most of the *H. contortus* population that survives over winter does so as hypobiotic L4 in the sheep, rather than as L3 on pasture, resulting in a relatively small *'in refugia'* population. FEC monitoring and a knowledge of each farm's *H. contortus* status will assist with the decision-making process and the use of body condition and/or FAMACHA scores to determine which ewes should be treated.

Sheep scab control

It is also important to consider sheep scab control where farmers are using an endectocide in autumn/winter because this will expose the worm population in those sheep to a 3-ML. The use of testing (e.g. the sheep scab ELISA) to determine the need for scab treatment is vital to avoid unnecessary use of these products. Plunge dipping in an OP is the option of choice where moxidectin has been used for ewes at lambing (see Chapter 2. SCOPS Principles, 2.7 Use anthelmintics only when necessary, 2.7.5 Treatment of ewes around lambing).