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Parasite control in cattle around housing time

On farms where cattle are housed over winter, there are several steps that can be taken that can help control parasites, not only over the winter, but at the start of the next grazing season too. Most of the major helminth (worm) and permanent external parasites of cattle can be targeted at or during housing. The main target parasites are:

- **Worms**

- o Stomach worms
- o Lungworms
- o Liver fluke

- **External parasites**

- o Lice
- o Mange mites

Worms

All these parasitic worm infections are acquired while cattle are grazing at pasture, where they ingest immature worms that are found on the herbage. So once cattle are housed and being fed conserved forages and grains, the risk of acquiring new worm infections is extremely low and this means that effective treatments, applied after housing, can keep animals free of the harmful effects of parasites throughout the winter. The benefits of effective treatments do not stop there as any cattle that are retained on the farm can be turned out the following spring without any worms, so they will not contaminate the fields straight away with eggs or larvae in their dung. This can be particularly important in the control of liver fluke and lungworm.

So what are the risks if cattle are not treated properly?

Stomach worms damage the lining of the fourth stomach (the abomasum) and in doing so cause a reduction in appetite and feed intake, but they also interfere with food utilisation for production. There is also a strange phenomenon, seen particularly in younger cattle that have grazed heavily infected pasture in the autumn, in which, instead of developing normally into adult worms within three weeks, the larvae lie dormant in the lining of the stomach for several months. These larvae do very little harm in this inhibited state, but in late winter they resume development into adult worms and if this happens simultaneously, then the stomach can suffer catastrophic damage that leads to severe clinical disease and sometimes death. This disease does not have a common name, but is known scientifically as ostertagiosis Type II; (Type I is the typical worm scour seen in calves at grass in the summer and autumn).

If cattle have acquired lungworm (husk) infections, particularly late in the grazing season, then they will enter housing with damaged lungs that may not only make them ill, but which also can make cattle more susceptible to other bacterial and viral pneumonias, which are common in youngstock after housing. With lungworm too, some of the larvae undergo inhibition in the lungs over-winter, however in this case, there seems to be little damage to the animal itself when these larvae resume development in the spring. The adult worms which develop from these larvae reproduce and the next generation of lungworm larvae is passed in the dung onto the pasture. In this way, the cycle continues from year-to-year and young calves will be at risk of husk if they graze pastures where older, infected stock have grazed after they have been turned out.

The damage caused by adult liver fluke in cattle is well recognised and includes loss of blood (anaemia), interference with several vital functions, such as immunity, and general ill-thrift. There is no immunity to liver fluke and they are long-lived parasites in cattle – at least a couple of years if animals remain untreated, so housing provides a golden opportunity to control the disease on farm. As mentioned previously, there can be twin benefits from effective treatment: one is to help the animals thrive over-winter and the other is to make sure that cattle that are kept and turned out the following year do not contaminate the fields with fluke eggs.

External parasites

Lice can only survive on an animal and so are present all year round on cattle; they seldom cause any problems in animals kept outside as they hide away and have small populations over the summer. However, once housed, cattle grow longer coats that provide warmth and humidity, conditions that lice need to thrive. Furthermore, the close contact between cattle in yards ensures that lice can spread easily from one animal to another. The damage lice do can be fairly mild and may be confined to hair-loss through rubbing, rough coats and generally poor condition. However some lice suck blood and in heavy infestations can cause severe anaemia and even occasional deaths. An aspect that may not be obvious to a farmer is that lice are responsible for significant hide damage, which causes a down-grading of leather, which impacts the tanning and processing industry.

Mange mites must also live on an animal in order to survive and they share some of the characteristics of lice, as mentioned above. The damage to the skin is normally more severe than that seen in lice though and there can be inflammation, bleeding and thickening of the skin in heavy infestations. Housing provides ideal conditions for reproduction of the mites and their transmission amongst animals. It should be noted that both lice and mites are species-specific; that is to say the species that infect cattle cannot infect sheep, say, nor vice-versa.

Parasite control through housing treatments

Good levels of parasite control can be achieved through effective treatments given at housing, though in some cases, notably liver fluke, it may be best to either treat twice over winter or to delay treatment for a few weeks after housing to achieve optimal control. Assuming that a broad spectrum of parasites, including liver fluke, is to be controlled, it is normally necessary to administer more than one product or a combination at housing. Examples of treatment options are given below:

- **Stomach worms, including inhibited larvae**
 - o MLs (eg doramectin, eprinomectin, ivermectin & moxidectin) are best
 - o Benzimidazoles (white drenches) are OK, but variable
 - o Levamisole is only effective against adult worms, not against larvae
- **Lungworms**
 - o All products above (including combinations containing these actives) are equally effective
- **Liver fluke**
 - o Products are differentiated according to the stages of liver fluke that are killed. Some kill adult fluke only; some adults and sub-adults and there is only one compound that kills very young juvenile liver fluke. Check labels and get advice
- **Lice and mange mites**
 - o Pyrethroids are effective against lice and some are effective against some mange mites
 - o MLs are effective against lice and mange mites, but the efficacy differs somewhat according to whether they are given by injection or pour-on; generally the latter is more effective. Again, get advice if you are unsure

Conclusion

Housing treatments are a simple and convenient way of controlling many important parasites of cattle. It is important to target the parasites present with the appropriate treatments, applied at the right time and in the correct way and to monitor performance throughout the winter. Advice from a vet or suitably qualified person (SQP) regarding control options is recommended.

