Mild, wet weather leads to increase in liver fluke

VETERINARY ADVICE

John Jones, BVSc, MRCVS, of Millcroft Veterinary Group, Cumbria, looks at how to deal with liver fluke

FLUKE was a nightmare last year. What about this winter? In both sheep and cattle, liver fluke is caused by the flatworm Fasciola hepatica. This parasite requires the presence of the mud snail *Galba truncu-lata* to complete its life cycle, with development optimal in warm and wet conditions.

What is the level of challenge to grazing stock this autumn?

The combination of last year's wet summer and the subsequent mild winter favoured the overwintering of large numbers of the infective stages of liver fluke (metacercaria). Consequently, the risk to grazing stock this autumn is high despite a reasonable summer.

NADIS (National Animal Disease Information Service) has had reports of large numbers of adult sheep and lambs carrying adult fluke in September, an unusual phenomenon for this time of year, thought to be due to animals becoming infected early in the grazing season, as a result of conditions favouring overwintering of liver fluke stages in snails. This correlates well with post-mortem findings in the practice over the past few months.

Which drugs should be used and when?

While numerous different flukicide products exist, all contain one of only five or so active ingredients (*see table*).

The greatest risk to grazing sheep during late summer to early winter is still acute facscioliasis (infection with large numbers of immature fluke). So during this period, dosing with a product effective against immature fluke should be carried out.

The frequency of dosing required will vary with local conditions and is hard to predict, since the first clinical sign noted is often sudden death. Any deaths should be promptly investigated by post-mortem.

Early in the new year, when sheep are often at risk of subacute fascioliasis (concurrent infection with immature and adult fluke), dosing with closantel or nitroxynil is often appropriate, while after lambing, a product with action against mature fluke only should remove any remaining adult fluke present.

ADVICE: John Jones

Drug name	Activity
Triclabendazole	Immature stages down to two days old and adult fluke
Closantel	Fluke more than six weeks old
Nitroxynil	Fluke more than eight weeks old
Albendazole and Ricobendazole	Adult liver fluke
Oxyclozanide	Adult liver fluke

What are the possible causes of treatment failures?

Since the duration of activity of the above flukicides is very short, there is the possibility of reinfection due to continued grazing of contaminated pasture.

Careful weight estimation, good dosing technique and well maintained, regularly calibrated equipment are essential for ensuring each animal receives an appropriate dose of drug.

Product choice must be appropriate to the age of fluke likely to be present. The presence of fluke resistant to the product should also be considered and veterinary advice should be sought in the event of any losses or suspected treatment failure.

What else can be done to reduce the risk of fascioliasis?

Since infection with liver fluke is acquired at pasture, it follows that grazing management will have an important role in fluke management strategy on-farm.

Cattle are able to withstand higher challenges than sheep and so grazing higher-risk pastures with cattle and reserving lower-risk pastures for sheep during the autumn period can reduce the risk of losses due to acute fluke infection.

Fencing off very high-risk areas or improving field drainage should also be considered. Where levels of challenge at pasture are very high, housing sheep may play a useful role in preventing losses due to re-infection and, given the long meat withdrawal on all products effective against immature fluke, may be particularly useful for finishing store lambs in the autumn period.

When should cattle be treated in relation to housing?

Only adult fluke tend to cause clinical disease in cattle. Treatment should be carried out after housing and is aimed at eliminating mature fluke accumulated throughout the grazing season.

Timing dosing to take account of the age of fluke targeted by the drug will then ensure that all fluke ingested before housing will be killed. For example, nitroxynil should not be given until six to eight weeks after housing, while oxyclozanidine should be given 12 weeks after housing.

INFECTED: adult liver fluke – Picture: Rod Welford BVM&S MRCVS

Ensure farm dogs are wormed

FARMERS should correctly worm farm dogs to help sheep reach target specifications and reduce the number of carcase rejections from processors.

In 2012, almost £5m was lost in the industry due to sheep measles (Cysticercus ovis) being found in 66,500 sheep and more than £1m lost as 742,000 livers were rejected because of bladder worms (Cysticercus tenuicollis).

Sheep measles result from an adult canine tapeworm and is spread when infected dogs shed eggs via their faeces onto pasture.

Within weeks of sheep ingesting the eggs, they start to develop infective cysts, typically in the heart, and potentially in the diaphragm and cheek muscles.

Infection cannot be identified before slaughter but often results in rejection of the entire carcase.

Bladder worms are from another canine tapeworm. Eggs hatch in the intestine of the sheep, before spreading to tissues surrounding the abdominal organs and liver.

In addition to liver rejections, infrequent moderate to heavy infections can lead to longer-finishing periods, increased feed costs and loss of value due to sheep not reaching target specification.

Eblex has urged producers to ensure all dogs are prevented from scavenging carcases and are not fed raw meat. Dead stock should, therefore, be removed promptly.

Dogs should be routinely wormed with the correct dose and product specific for tapeworms.

Dr Phil Hadley, from Eblex, said: "The processing sector is becoming increasingly concerned about the impact of dog parasites on carcases and offals and the figures speak for themselves."