
LIVER FLUKE IN CATTLE

Fluke infection has been recognised for generations, but evolving problems in cattle demand we look afresh at how liver fluke might be undermining herd performance.

Over the past years there has been an alarming increase in the incidence of liver fluke. This has coincided with a greater geographic distribution beyond the traditional at risk, high rainfall areas.

The main signs are: a reduced growth rate, a gradual depression of milk yield, and stock that are generally not thriving.

Sheep are particularly susceptible to fluke and infection can cause serious illness and death. However fluke is often overlooked in cattle because the signs are very subtle and clinical disease is rare. But just because there are no signs or the farm has never traditionally had fluke, it does not mean that cows and youngstock will not benefit from a fluke control strategy.

In fact, a low grade infection of just 100 fluke has been shown to reduce milk yield by 400litres/cow/lactation. For a 100-cow herd at 18ppl this equates to £7,200 p.a. Fluke also has a detrimental effect on butterfat. Research has shown untreated animals can produce 10% less milk solids.

Also, the heavily pregnant dry cow in poor body condition can experience a fluke-associated nutritional challenge in late pregnancy. Calf birth rates on fluke-infected cows can be 10% lower. Youngstock will experience poorer growth rates giving reduced efficiency for the rearing of replacement heifers.

Fluke infection can reduce feed conversion and depress appetite (DM intakes reduced by as much as 11%). This nutritional stress depresses fertility and compromises the cow's immune status. In essence fluke infection will reduce lifetime performance.

Fluke infection can also precipitate other infectious disease such as the Clostridial infection Black disease or it can compound outbreaks of Salmonella.

Many farmers see the need to treat for fluke infection in sheep where symptoms can be more graphic, yet fail to recognise the production loss in cattle.

Liver fluke life cycle

'Liver Fluke' (*Fasciola hepatica*) is a flat leaf-like (3.5cm) parasite found in the liver of grazing animals. Eggs from adult female fluke pass in the dung to contaminate pasture. When conditions are suitable - damp and warm (above 10%) - the eggs evolve and hatch to form mobile larvae that seek out mud snails to complete their life cycle.

The presence of the amphibious mud snails determines the distribution of fluke. So the highest risk grazing are wet areas and rutted pools of water.

The larvae multiply in the snails and emerge to attach to the grass as cysts. The grazing animal ingests the cyst where it breaks out as an immature fluke to make its way to the liver. The fluke tunnel through the liver which if conditions favour, then the mass hatch and infection can cause severe and permanent damage.

The adult fluke live in the bile ducts of the liver where they feed on blood. This can amount to half a millilitre per adult fluke per day explaining the anaemia exhibited by infected animals.

Diagnosis

Fluke diagnosis is not straightforward and needs careful interpretation so speak to your vet. Fluke egg counts from faecal samples indicate infection but egg production is sporadic. Blood sampling a random group (often young homebred stock are a good indicator) can reveal the foot-print of fluke infection. Post mortem/slaughterhouse feedback provides a direct report of fluke level in condemned livers. Many more abattoirs are doing this now.

Treatment

Treatment is very effective but needs to be targeted to the fluke season and to recognise the variable efficacy of product for the different stages of fluke (early immature, immature and adult). Also the milk withhold must be considered and often means treatment is targeted in the dry period.

Fluke treatments come as drenches and injections, and are also available in combination with wormers.

The recognition of fluke and a strategic approach to treatment should be a component of herd health plan reviews. A little investment in health will go a long way to alleviating the production loss which is the hidden cost of fluke infection.