Liver Fluke in Cattle

Fluke infection has been recognised for generations, but over the past few 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. Increased pressure on maximising herd productivity has meant that liver fluke and its impact has become an emerging area of interest.

SIGNS OF LIVER FLUKE INFECTION

The main clinical signs of fluke infection are reduced growth rates, a gradual depression of milk yield, and stock that are generally not thriving.

Sheep are particularly susceptible to fluke. Infection can cause serious illness and even death. However, fluke is often over-looked in cattle because the signs are very subtle and clinical disease is rare. An absence of fluke symptoms and a lack of farm history is no reason to leave fluke risks unmonitored. A fluke control strategy is still recommended.

Consequences

- A low grade infection of just 100 fluke has been shown to reduce milk yield by 400 litres/cow/lactation.
- Fluke has a detrimental effect on milk fat content. Research has shown untreated animals can produce 10% less milk solids.
- Heavily pregnant dry cows in poor body condition can experience a fluke-associated nutritional challenge in late pregnancy.
- Calf birth weights for fluke-infected cows can be up to 10% lower.
- Young stock will experience poorer growth rates giving reduced efficiency for the rearing of replacement heifers.
- Fluke infection (fasciolosis) can reduce feed conversion and depress appetite (dry matter intakes can be reduced by as much as 11%). This nutritional stress depresses fertility and compromises the cow's immune status.
- Fluke infection can also precipitate other infectious disease such as the Clostridial infection 'Black disease' or it can compound outbreaks of Salmonella.
- In essence fluke infection can reduce lifetime performance.

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

Liverfluke eggs under a microscope.

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° C) - the eggs 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 around pools of water. The larvae multiply in the snails and emerge to attach to the grass as cysts.

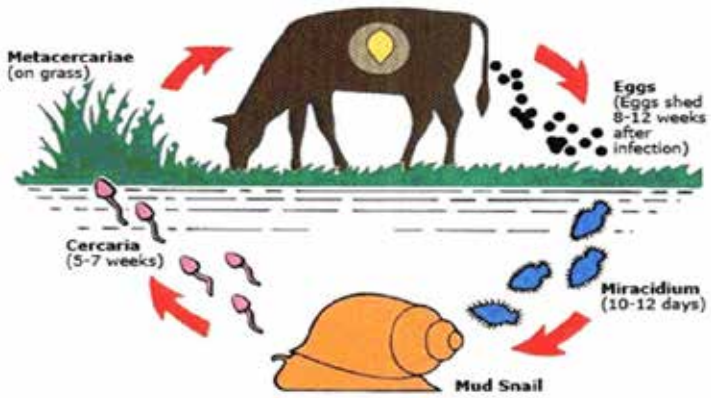
The grazing animal ingests the cyst when it breaks out as an immature fluke to make its way to the liver. The fluke tunnel through the liver and if conditions favour, a massive hatch and infection can cause severe and permanent damage. The adult fluke live in the bile ducts of the liver where they feed 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 straight forward 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 (young homebred stock would be a good indicator) can reveal the evidence of fluke infection. Post mortem/meatworks feedback provides a direct report of fluke level in condemned livers. Many abattoirs are doing this now.

Bulk Milk ELISA testing is available and can be used to monitor the herd through the season. Your vet can organise this for you.



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). The milk withhold of various products must be also 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 worm treatments. 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 losses that can be associated with liver fluke infection.

For more information contact your local XLVets practice:

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www.lhvc.co.nz
contact@lhvc.co.nz