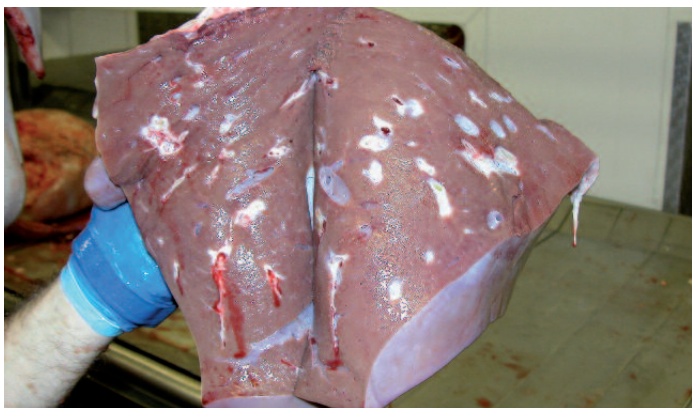


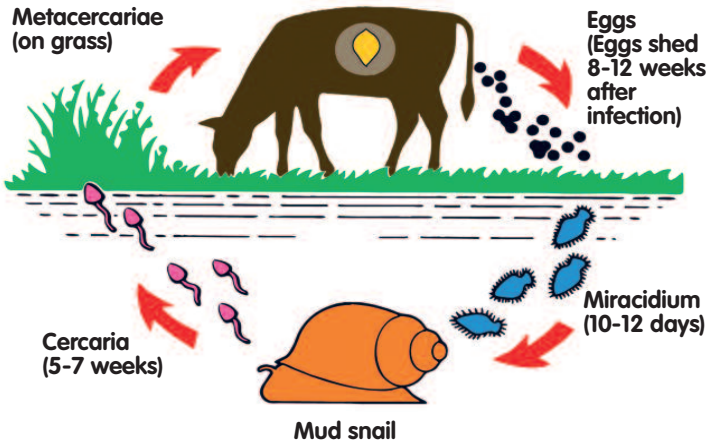
Better Returns from Controlling Liver Fluke



- Liver fluke infection can cause deaths and significant losses due to reduced growth and fertility
- The parasite (*Fasciola hepatica*) is not host specific. It affects both cattle and sheep
- The damage is caused by animals ingesting large numbers of infective fluke stages which then migrate to the liver and bile ducts

Lifecycle

Liver fluke disease is caused by the parasite *Fasciola hepatica*, which can infect a wide range of hosts, but is a particular risk to sheep and cattle. Immature fluke migrate from the gut through the liver to the bile ducts where they mature. The intermediate host in the UK is the mud snail found in wet muddy conditions and areas with poor drainage. The incidence of fluke disease has been increasing over the past ten years, due to wetter summers which increase snail population.



Source: Merial Animal Health

The three main risk factors are:

1. Previous history of fluke on the farm and in particular if there was a significant challenge last season
2. Environments where the mud snail will thrive such as around streams and ponds, leaky water troughs and wet poached areas
3. Weather conditions which favour the snails. A mild, wet autumn and winter followed by a wet summer will lead to very high risk

The Disease

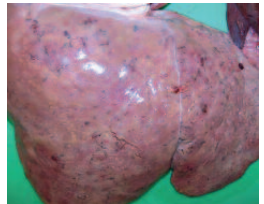
Acute

- Results in sudden deaths and a rapid loss of condition. More common in sheep than cattle
- Occurs 1-3 weeks after infection in sheep; 1-5 weeks in cattle and is the result of damage caused by the migration of large numbers of immature parasites through the liver
- Normally seen late summer and autumn but occasionally into winter due to animals ingesting large numbers of immature fluke off pastures



Sub-acute

- Fewer mortalities than acute disease, usually results in loss of condition and performance during the autumn and early winter
- Caused by immature fluke damaging the liver as they migrate
- Sheep normally affected 4-7 weeks post-infection and cattle after 6-9 weeks



Chronic

- Chronic disease is caused by adult fluke feeding and egg laying in the bile ducts and often occurs later in the autumn and winter
- Results in anaemia (each adult liver fluke can take up to 0.5ml of blood a day). Loss of condition and bottle jaw are also common symptoms
- Because of the damage it also predisposes the animals to other diseases such as:
 - Black disease (make sure clostridial vaccinations are up to date)
 - Metabolic disease such as twin lamb or hypocalcaemia
 - Parasitic gastroenteritis (PGE) cause by worms



Treating Liver fluke and Choosing Products

- You need to take care when choosing products to control liver fluke infections. There are a number of different chemicals available differing activities against the various stages of liver fluke.

For details of products see the Parasite Control Guide

www.eblex.org.uk/returns/literature.aspx



- Use the right product for the right stage(s) of liver fluke. Check the details of the product you intend to use and ask for advice if you are not sure
- Where the risk of infection is high and you need to kill immature fluke, triclabendazole (TCBZ) is the drug of choice, unless it has been established that there are fluke resistant to TCBZ on the farm*

- Be aware of the risk of re-infection if animals are put back on high risk grazing areas. Use management tactics such as moving to low risk areas, fencing off risky areas or housing. If they remain in risky areas then monitoring for infection is essential and further treatments may be needed



- In spring treat to remove adult liver fluke to reduce egg output on to pastures. Use a product that will only kill adult fluke saving those which kill immatures for the autumn
- Avoid using combination fluke and worm products unless they are necessary
- Check that treatments have worked effectively using a post treatment faecal egg test. Ask your vet for details

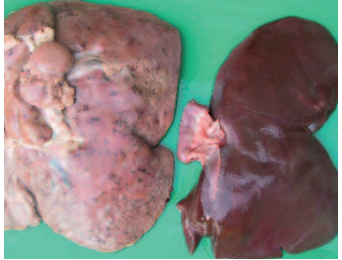
** If resistance is established then get professional advice on the alternatives available and how they should be used*

Losses

Recent data generated by ADAS suggests that liver fluke disease can cost £3-£5/ewe and £30-£200 per beef animal.

These figures are based on losses due to:

- Weight loss (anaemia)
- Poor performance
- Depressed appetite
- Reduced weight gain
- Increased barren rate
- Death
- Livers condemned at slaughter
- Sheep reduce daily live weight gain by 30%
- Cattle can take an extra 80 days to reach market weight if affected by fluke



Diagnosis

There are a number of ways that liver fluke disease can be diagnosed by your vet:

- Investigate deaths. A post-mortem examination will usually give a very clear indication of the presence of liver fluke
- Clinical signs which include weight loss and ill-thrift, sudden death, oedema under the chin (bottle jaw), anaemia, abdominal pain and respiratory distress
- Faecal samples to detect the presence of fluke eggs (only useful when adult egg laying fluke are present)
- Blood samples for certain liver enzyme activity

Monitoring

The presence of liver fluke can be monitored using:

- Abattoir feedback on livers
- Faecal samples to detect the presence of fluke eggs (only useful when adult egg laying fluke are present)
- Blood tests for antibodies (serology)
- Bulk milk tests in dairy herds
- Use performance indicators such as body condition score (BCS), liveweight gains in lambs and young cattle, milk yields and scanning results

Management Options

- Avoid flukey pastures and/or wet, boggy areas within fields at peak risk periods to reduce the exposure of sheep and cattle. This may mean using temporary fencing around risky areas or in some cases avoiding whole fields or grazing areas
- Housing may be a practical option particularly for cattle to avoid re-infection post treatment
- Provide water troughs as an alternative to muddy watering holes.



SCOPS principles for liver fluke

- 1) Reduce dependence on chemical treatments by adopting management options
- 2) Plan ahead to avoid high risk areas and reduce levels of infection on the farm in the future
- 3) Assess the risks every year and use the monitoring tools available and abattoir feedback
- 4) Choose the right product. TCBZ should be used when killing immature liver fluke is a priority. Alternatives should be considered at other times
- 5) Dose correctly to the weight of animal and use the correct technique. Take particular care with pour-on products on cattle
- 6) Check for resistance - take faecal samples as directed by your vet
- 7) Quarantine and treat if required
- 8) Discuss your control strategy with your vet or adviser

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Visit www.eblex.org.uk/www.scops.org.uk

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