



Animal Health & Welfare NI

Sheep Health

February Sheep Health

AHWNl Liver Fluke Reminder: Now is the Time to Check Treatment Outcomes in Your Flock

Liver fluke is a serious parasitic disease of ruminants (sheep and cattle), with sheep tending to see the worst effects of this disease, as it causes sudden death in some cases. It is essential that farmers are able to identify fluke risk within their flock and treat appropriately when necessary.

Current Fluke Challenge

As warned by experts at Sustainable Control of Parasites in Sheep (SCOPs) at the beginning of October 2025, fluke challenge may be seen later on in the year than it traditionally has been seen. This is due to a drier than usual summer, leading into a mild autumn last year. Due to the excessive rainfall we have seen in Northern Ireland this winter, with few very cold spells, it is likely that the risk of fluke infection is still high now. However, for those who treated for fluke in early autumn, perhaps as a routine tupping time procedure, this may have been too early and your flock could now be at risk of chronic infection.

Testing

Testing at this stage of the winter can give insight into whether your treatments have been effective or not, and can inform fluke management practices over the coming year. There are three main testing options available for liver fluke, these are: serology (blood samples), Faecal Egg Counts (FEC) and coproantigen (faecal samples). Deciding which test you are going to use depends on the time of year.

Post mortem findings may also be useful, whether following diagnostic testing or from abattoir feedback.

Serology (Blood Sampling)

Blood samples can test for antibodies produced against fluke infection. This is the earliest indicator of fluke infection, with detection possible as early as 2 weeks post-infection. This test is recommended for use earlier in the year to detect initial, acute infection. By serology testing roughly every 3 weeks from July/August onwards this could be used to detect when fluke challenge is occurring on your farm, avoiding treating animals too early.

While this is a very useful test, it is most effectively used on lambs in their first grazing season that have not yet been exposed to fluke. This is because following fluke infection, antibodies can persist in the blood for a long period of time despite treatment, therefore older ewes may still have antibodies from last season's fluke infection.

A lateral flow antibody test has recently been developed for liver fluke, which gives much quicker results in the field (within 10 minutes) and allows farmers to perform the test themselves. Only a 'pin prick' of blood is required for these tests, and only a small sample size of 10 animals is required to get results representative of the whole flock's infection status.

Despite its benefits, serology in most cases is not an appropriate test for this time of year, as it is likely that most animals have been exposed to liver fluke infection by now, and therefore a positive result may indicate historical exposure.

Faecal Egg Counts (FEC)

FEC is a more appropriate test for this time of year. This test does not detect fluke infection for up to 10-12 weeks post infection, as fluke only begins laying eggs in its adult form. This is not ideal due to the delay in detection, as by this stage infection is now chronic and damage can already be done to the liver, hence the importance of serology testing earlier in the season.

Despite this, FEC can be used to ensure that fluke treatments have been effective. It cannot determine whether there is resistance to flukicide products, as a lack of efficacy (effectiveness) could be due to incorrect dosing measures, or if initial dosing was too early (and fluke were at juvenile stages).

Testing pooled dung samples every 4-8 weeks for fluke from now (late winter) into early spring and summer can ensure that there is no risk of chronic infection. If negative for at least three months into the Spring, it is likely there is no infection present and the risk period is over.

In the case of positive results, closantel, albendazole or oxclozanide products are recommended for use against chronic infection.

Coproantigen (cELISA) Test (Faecal)

The coproantigen test is a faecal test that can detect fluke infection a few weeks before eggs appear. It is therefore an earlier indicator of infection than FEC (as it detects it at 6-7 weeks post-infection compared to 10-12 weeks).

This test does not work with pooled samples like FEC does, instead individual samples must be taken (10 samples should be sufficient). Furthermore, a specialist laboratory is required to perform this test, so a discussion with your vet before taking samples to see what is available could be worthwhile.

Similarly to FEC, this test is most useful from winter onwards to determine treatment outcomes and ensure there is no underlying chronic infection. These two tests could be used simultaneously to determine the stage of infection (e.g. positive coproantigen but negative FEC indicates infection is between 6-9 weeks).

Hidden Costs of Not Testing

Testing for liver fluke does carry a cost, but failing to test can cost far more. Chronic fluke infection reduces weight gain, body condition and fertility in ewes. A 2011 study estimated productivity losses of £8.73 per infected ewe- a figure likely higher today- without accounting for deaths. Treating poor-doing sheep without testing also risks wasting treatments if fluke is not the cause, and allows losses to continue. Using targeted testing to guide treatment helps you to protect productivity, avoid unnecessary dosing and slow the development of flukicide resistance.

Other Considerations

It's important to remember that sheep do not develop resistance to liver fluke as they do to most stomach worms. Therefore every season is of equal risk to them.

When deciding what and when to test, always consider your own farm conditions. 'SCOPs' is a very useful resource giving a general idea of trends of liver fluke during the year, but every farm is different. Sheep that have been grazing dry, well drained ground will be at a much lower risk of infection compared to those on wet ground where stagnant water may be lying. Therefore, sheep that have only recently been moved onto wetter ground may require FEC/coproantigen testing longer into the spring and summer.

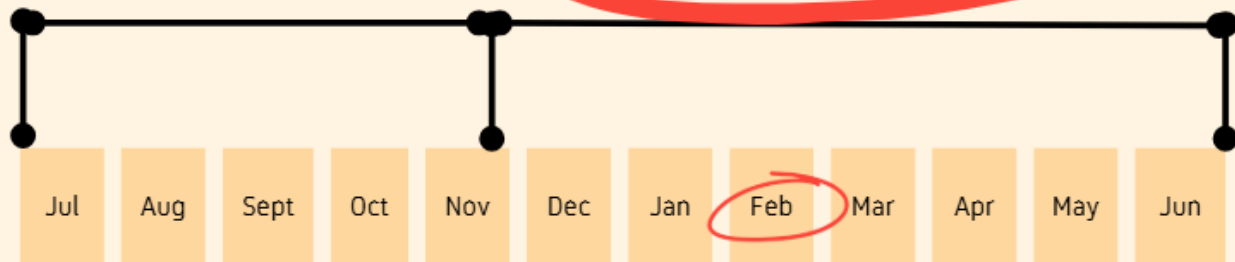
Remember to consider rotating your flukicides where possible, to reduce the risk of resistance on your farm.

Note flukicides vary in whether they are effective against juvenile, intermediate or adult fluke. Therefore AHWNI recommends discussing your liver fluke risk with your vet, and coming up with a control plan that is specific to your flock's needs.

Liver Fluke Testing

Serology testing of first grazers to detect initial infection (every 3-4 weeks)

FEC tests or coproantigen testing to detect chronic/subacute infection



Detecting fluke from as early as 2 weeks after infection

Detecting fluke from 7-10 weeks: have treatments worked? Were they too early?

Note: this is a general timeline for testing, every farm is different. Use this as a guide along with assessing your own conditions and the weather each year. Once serology is positive, move to coproantigen or FEC tests.



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