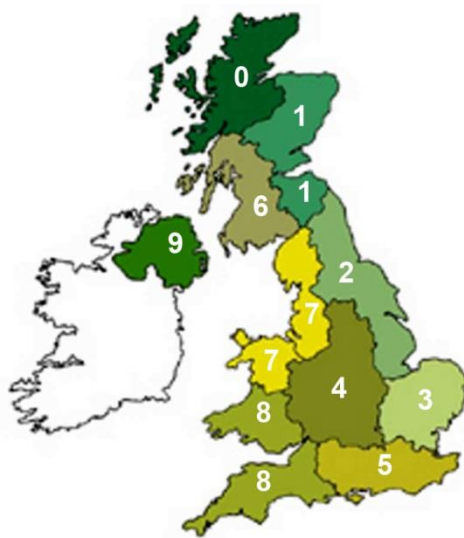


As part of AMTRA’s online CPD Programme for livestock RAMAs (SQPs), each month AMTRA will send you the Parasite Forecast which will highlight the parasitic challenge facing livestock in your area for that month. At the end of the Parasite Forecast you will find a series of multiple choice questions (quiz button) based on its contents. Answer the quiz online and you will be emailed a certificate with your score. This will form part of your RAMA (SQP) CPD requirement. The Parasite Forecast has been developed by NADIS (National Animal Disease Information Service) and is written by leading veterinary parasitologists and based on detailed data from the Met Office

NADIS Parasite Forecast – NOVEMBER 2020

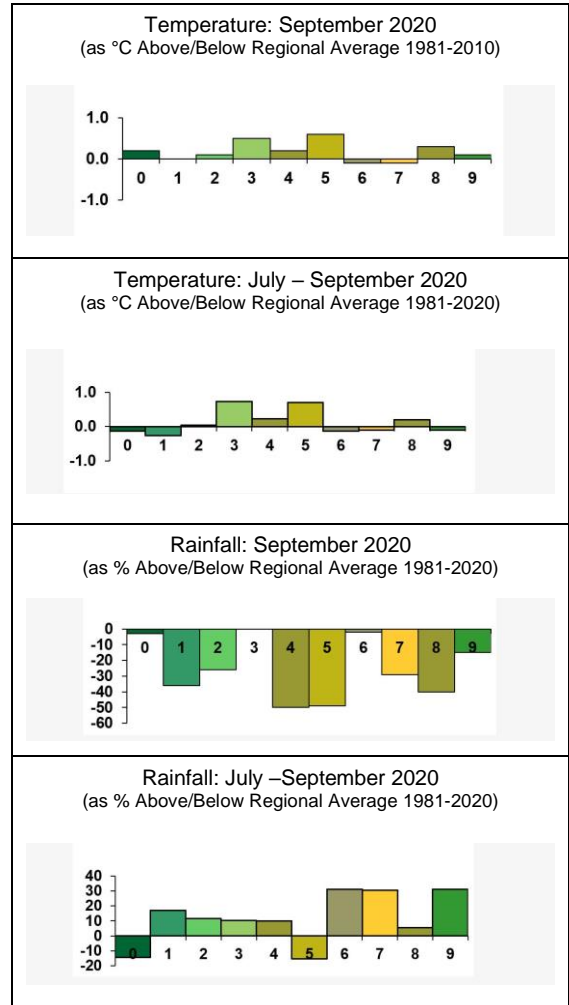
Use of meteorological data to predict the prevalence of parasitic diseases

Regional Weather (based on Met Office figures)

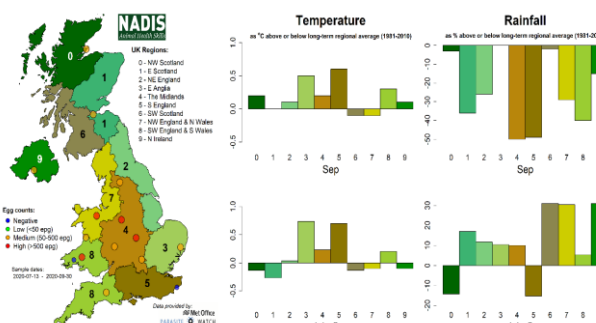


REGIONS

- | | |
|----------------|-------------------------|
| 0 N W Scotland | 6 S W Scotland |
| 1 E Scotland | 7 N W England & N Wales |
| 2 N E England | 8 S W England & S Wales |
| 3 E Anglia | 9 N Ireland |
| 4 The Midlands | |
| 5 S England | |



The most recent version of this monthly parasite forecast may be accessed at www.nadis.org.uk



WEATHER REPORT

September had mixed weather, starting with showery weather in most areas, before turning hot and dry in the middle of the month.

September ended with cooler, more unsettled weather, and frost overnight in some places.

The provisional UK mean temperature was 12.9 °C, which is 0.2 °C above the 1981-2010 long-term average. Mean maximum temperatures were mostly up to 1 °C above average, but nearer 1.5 °C above average in parts of south-east England. Mean minimum temperatures were mostly up to 0.5 °C below average. For most of the UK it was a dry sunny month, with 77% of average rainfall and 117% of average sunshine, but rainfall was above average in Norfolk and in parts of western Scotland.

LIVER FLUKE : PROVISIONAL AUTUMN FORECAST

The provisional Autumn fluke forecast for November 2020 is based on temperature and rainfall data for the months of May-September. Due to a relatively dry September, fluke risk has decreased in many areas compared to last month's forecast. Currently there is a high risk of fluke in south west Scotland and Northern Ireland. There is a medium risk in the rest of Scotland, north west England and north Wales. The risk is low in the rest of England and in south wales (Figure 2).

Fluke risk varies widely even between farms in the same region. Risk is increased by previous history of fluke, wet pastures, and presence of sheep on farm. If in doubt, please seek veterinary advice.

Where treatment is given, accurate timing is essential. Treating too early is a waste of money as animals can get re-infected immediately (unless dry pastures are available for them to move onto). This year's slightly unusual weather means that the peak risk period may be later than usual, but this is impossible to predict with certainty. Blood testing of a few of this season's lambs every month is a useful way to find out whether and when treatment is necessary. Although all ages are susceptible to liver fluke, first season grazing animals are the most useful for detecting the first signs of infection. Faecal egg count testing is not useful to detect acute fluke. This recent [SCOPS and COWS group press release](#) gives more information.

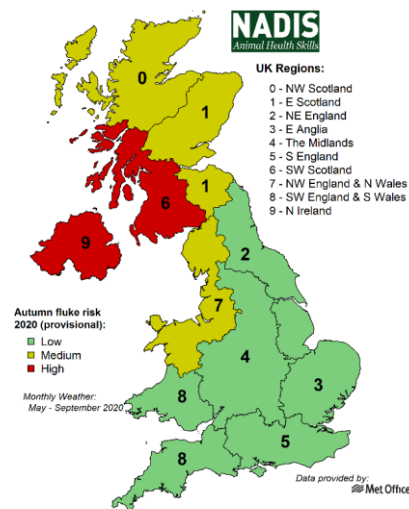


Figure 2: Current regional risk for liver fluke in Autumn 2020. Local conditions should be taken into consideration when evaluating on farm risk

Farmers with livestock grazing in high and medium risk regions are advised to consider the following

- Both sheep and cattle are susceptible to fluke infection. Acute fluke is common in sheep but rare in cattle.
- Signs of disease:
 - Sudden death in heavy infections
 - Dullness, anaemia and shortness of breath
 - Rapid weight loss, fluid accumulation (e.g. bottle jaw), abdominal pain
- Flukey pastures are those with damp muddy areas, perhaps rushes or the banks of streams or ponds (Figure 3). If you can avoid grazing wet and muddy areas between July and November, you will hugely reduce the risk of fluke.
- The only way to find out what is going on is by diagnostic testing:
 - Test to find out if animals need treating and when, using regular blood tests in first season grazing stock
 - Bulk milk testing is useful for dairy herds
 - Faecal egg or copro antigen tests are not useful for detecting acute fluke – these are useful at other times of year, as are abattoir returns –

- be sure to ask for this information if you can
 - Post mortem examination allows diagnosis in an acute outbreak
 - If in any doubt over whether treatment has worked, ask the vet about doing a drug efficacy test. Triclabendazole resistance in sheep is now widespread.
- For treatment of sheep in the autumn, and cattle if acute disease is suspected, triclabendazole is recommended as this is the only product effective against both adult and immature stages of the parasite.
 - Where drug failure is present and resistance suspected, please seek veterinary advice.
 - Closantel is another option for those farms with triclabendazole resistance – however it only kills fluke from 5 weeks and older, so timing of treatment needs to be carefully considered



Figure 3: Areas of wet pasture, whether permanent or temporary, can provide optimal conditions for mud snails, and by extension liver fluke. Large numbers of mud snails were recovered from the wet boggy areas pictured above, which were created by a constant supply of flowing surface water and poaching by cattle.

QUARANTINE TREATMENTS

When bringing new stock onto the farm, including over wintering sheep, bulls, rams and others, be aware that they may be

infected with drug resistant liver fluke and other parasites such as scab and roundworms. Where possible it is best to only obtain animals from trusted sources and avoid buying from farms with a known fluke problem. See last month's parasite forecast for detailed advice on how to safely bring new stock onto the farm.

SHEEP PGE

[Parasite Watch](#) showed moderate to high worm egg counts on farms across the UK between July and September (Figure 1). This is due to the warm, wet weather seen during the late summer and early autumn, which may lengthen the risk period for roundworms this year. Lambs are particularly at risk, and outbreaks can occur throughout the winter. Rams may also suffer heavy infections if they become run down during the breeding season (Figure 4).

Teladorsagia larvae can encyst in the stomach wall. These occasionally cause problems when they emerge in spring. Affected sheep will be egg count negative. *Nematodirus* can be a problem again at this time of year due to an autumn egg hatch.

Advised actions include:

- Monitoring for signs of disease.
 - Diarrhoea and ill thrift in lambs. Also be aware of roundworms as a cause of weight loss in rams.
- Consider worm egg counts if infection status is unknown.
- If treatment is required, do so in a way that reduces the risk of resistance developing:
 - Don't "dose and move" – instead, dose and wait for a few days before moving
 - Leave at least 10% of the flock untreated
 - Ensure adequate dosing for body weight, using accurate dosing equipment.
 - Check that treatment has worked by doing worm egg counts on about 1- sheep at 7-14 days post treatment



Figure 4: Rams are generally more susceptible to roundworm infections than ewes. High parasite burdens in combination with the high workload during tugging can have a profound impact on health and body condition ahead of the winter months.

HAEMONCHUS

This parasite can present very similar to liver fluke, with anaemia and sudden death, although it lives in the stomach. It does not cause diarrhoea. All ages of sheep can be affected. The eggs look the same as those of the other roundworms, but infected animals typically have very high egg counts.

SCAB

Scab is caused by mites and makes sheep extremely itchy. They will be seen rubbing themselves on fences, biting or scratching themselves, and the fleece will come away in clumps, sometimes with damaged red skin visible underneath. The mites are very easily passed between sheep and can be introduced by sheep coming from markets or shows, coming back from over wintering, and from neighbouring sheep. The mites can survive off sheep for up to 16 days, for example on fences, trees, shearing equipment and contaminated clothing. If unsure whether lice or scab is the problem, ask the vet to take a skin and wool sample to find out.

There are only two options for treatment: injectables and organophosphate dips. These both have pros and cons. Injectables also treat against roundworms so should be integrated into a parasite control plan. Some are used only for treatment whereas others give protection between 28 days and 60 days protection. Some products have long meat withdrawal periods – check the packaging.

OP dips are effective against scab, but these must be used according to legislation controlling how and by whom the dip is used. A recent campaign by SCOPS, “Take the Plunge”, reminds those who work in the sheep industry that OP dips must not be used in sprayers or jetters, as this is illegal and likely to result in resistance (Figure 5). Dipping kills scab, lice and other external parasites and gives 4 weeks protection. There are no pour on products currently available that are suitable to treat scab.

There have been reports of scab resistant to both dips and injectables – to minimise the risk of this occurring on your farm, dose for the correct weight if using injectables and ensure dips are used according to instructions. See SCOPS for further information.

<https://www.scops.org.uk/workspace/pdfs/scab-product-options-table.pdf>



Figure 5. A campaign by SCOPS reminds us that OP dips are only effective if used as dips – this means immersing sheep for 1 minute with 2 full submersions.

CATTLE LUNGWORM

Lungworm infection can continue to be a risk into November. Unvaccinated first season calves, or older animals that have come from non-lungworm farms are potentially at risk. Outbreaks often follow periods of heavy rain. If coughing or breathing difficulties are observed, be alert to the possibility of this parasite.

Advised actions include:

- Monitoring for signs of disease
- If diagnosis is needed:
 - Worms can be seen in the lungs at post mortem (Fig. 6)
 - Faecal samples can detect lungworm larvae
 - Blood tests are another option
- In the event of an outbreak of clinical disease:
 - Treat all animals within the affected group
 - Remove affected animals from contaminated pasture to safe grazing (e.g. silage aftermath),

or house in a well-ventilated building.

- In severe cases affected animals may require additional treatments (e.g. anti-inflammatories and antibiotics).
- For more information, discuss this with your vet or SQP, see the [COWS group guidelines](#) and [NADIS lungworm webinar](#).



Figure 6: Adult lungworm are easily identifiable at post-mortem. Here, they can be seen blocking the airways of a 4-6 month-old calf from Cheshire, September 2019 (Photo credit: Ann Courtenay, University of Liverpool).

DOSING AT HOUSING

An advantage of giving parasite treatment during the housed period is that animals won't be able to get re-infected if they are not grazing, so should remain worm free over the winter, maximising feed conversion efficiency. Using appropriate products on the right animals at the right time will help avoid wasting money on unnecessary or inefficient treatments, and delay the risk of resistance developing.

- Combination worm and fluke treatments, although convenient, are not necessarily the best choice. It is better to treat separately for each parasite at the correct time and match treatments to the groups of cattle that need it. Where round worm treatment is needed, it is generally most efficient to treat at housing, but treatment for liver fluke should generally be delayed for a number of weeks depending on the product used. This is because worming doses kill all immature stages of the parasite, whereas liver fluke treatments do not. It is therefore better to wait until all of the fluke have matured a certain amount, enough to be killed by the chosen product, so that cattle can remain fluke free over the winter. If cattle are treated for fluke at housing, the young fluke will be unaffected and will

survive over winter in the animal, potentially reducing growth rates. The exception to this advice is in situations of very high liver fluke challenge, where cattle are at risk of acute fluke disease. In this case, treatment at housing with a triclabendazole containing drench may be needed. However in this situation a further fluke treatment after a few weeks would be advisable.

- Triclabendazole drenches kill immature fluke from 2 weeks of age. Other formulations of triclabendazole only kill later stages – check the packaging.
 - If it is safe to do so, delay fluke treatment for several weeks after housing and use a non-triclabendazole product. For example, for closantel, delay for 6 weeks. This will ensure all fluke are killed by treatment, resulting in a long period of cattle being fluke free before they are exposed again next season.
 - For dairy cattle, liver fluke treatment options are limited, but for animals being dried off during autumn shortly after being housed, it is advisable to use triclabendazole. For treatments more than 6 weeks after housing, try to use a different product. Always check packaging as milk withhold times can change.
- *Ostertagia* larvae can encyst in the stomach wall over winter, causing disease when they emerge together in early spring. To avoid this, treat first or second grazing season growing cattle with either a Group 3-ML or Group 1-BZ anthelmintic. Encysted worm burdens cannot be detected by worm egg count.
 - Adult cattle should not require any treatment for gut worms, but may benefit from treatment if in poor condition. Conversely, all ages are equally susceptible to liver fluke infection
 - Risk of louse and mite infestations are higher in housed animals due to close contact and warmer conditions. Some injectable, spot-on and pour-on group 3-ML preparations are also effective against lice.
 - For more information please speak to your vet, or visit the [COWS website](#).

. [Don't forget to try the interactive quiz](#)

Local farm conditions may vary so consult your veterinary surgeon. Parasite control should be part of your veterinary health plan.

*To watch a webinar (video) based on this article and take an electronic quiz worth 3 CPD points, click **WEBINAR***

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