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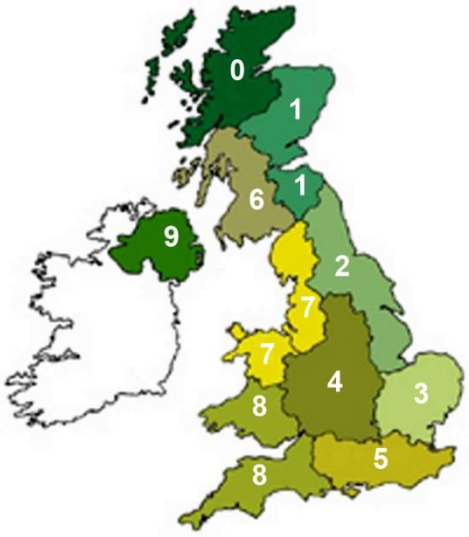
NADIS Parasite Forecast – February

Use of meteorological data to predict the prevalence of parasitic diseases

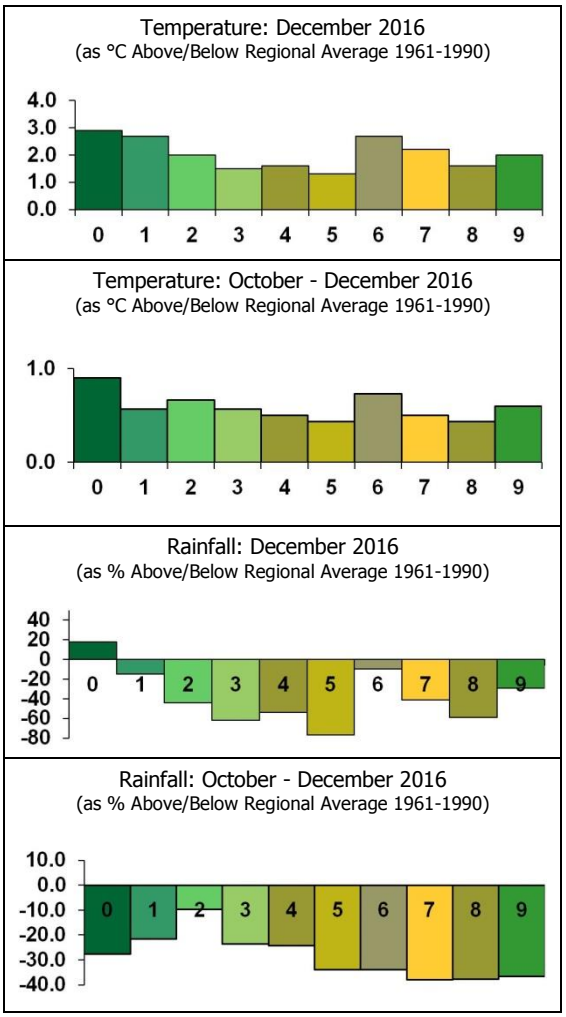
Regional Weather

(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		



At the start of December the weather was settled with high pressure in charge, and it was often cold and frosty with fog patches, especially in the south. The anticyclone pulled away to the east, and between the 6th and 20th southerly winds prevailed and often brought very mild conditions. Although these brought some rain at times, for much of the time it remained quiet, with fog in places. There was an unsettled spell from the 21st to 26th, which was stormy at times in central and northern Britain, associated with the passage of Storm Barbara on the 23rd and Storm Conor on the 25th and 26th. It generally stayed mild during this spell, but wintry showers affected Scotland at times, especially on the 26th. Settled conditions returned from the 27th, and it turned cold and frosty for a time, especially in the south. The provisional UK mean temperature was 5.9 °C, which was 2.0 °C above the 1981-2010 long-term average, and the eighth warmest December in a series from 1910. It was mildest relative to average in the north, where anomalies exceeded 3°C in parts of Scotland, but mean minimum temperatures were only slightly above normal in the south-east. It was a dry month except in north-west Scotland, with 69% of average rainfall overall, and it was particularly dry in south-east England.

February Parasite Forecast/Update

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

REVIEW OF HEALTH PLANS

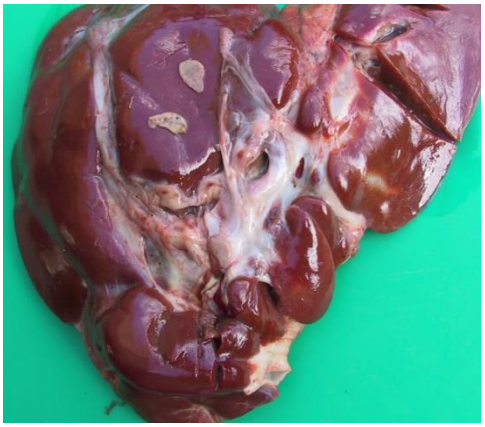
- February is a good time for farmers to review parasite control plans for the forthcoming grazing season with their veterinary advisers.
- Identify parasite risk by mapping the farm to determine both previous and future use of pastures, particularly use of aftermaths and which classes of stock will be moved there.
- Safe grazing for ewes and lambs available at turnout (e.g. last year's pastures grazed by cattle or re-seeded pastures) will avoid the risk of disease due to *Nematodirus battus* infections in young lambs in spring.
- In midsummer, silage aftermaths can be utilised to reduce reliance on anthelmintics used to control internal parasites in weaned lambs.
- With first year grazing calves, decide if the parasite control plan will be strategic (e.g. grazing management, vaccination for lungworm) or therapeutic with regular monitoring and plan well ahead prior to turnout.

Liver Fluke

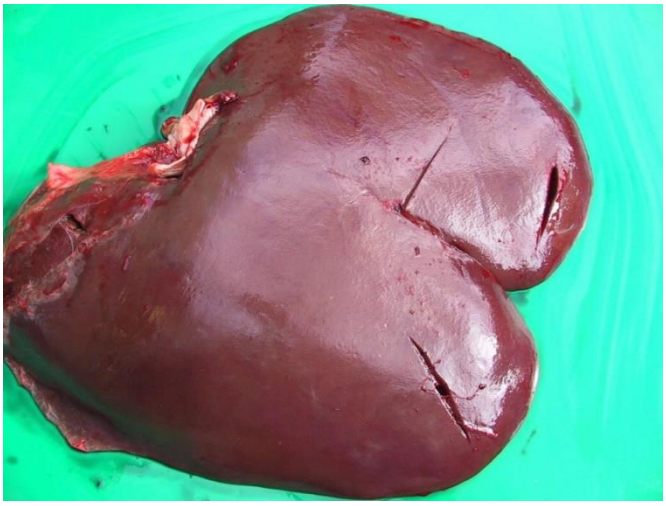
Continue to check for chronic liver fluke in sheep and outwintered beef cattle.

- This winter has seen a moderate to high risk for liver fluke disease in parts of the UK, with Scotland, North Wales and NW England predicted to have the highest risk.
- Chronic liver fluke will be encountered in sheep flocks during late winter/early spring unless action is taken now.
- Poor scanning results may be the first indication that there is a liver fluke problem on the farm and may be limited to only one group of sheep depending upon its autumn/winter grazing.
- Be aware that not all sheep with fluke infestation develop “bottle-jaw”.
- Fluke infections can be confirmed by checking for the presence of fluke eggs in faeces or by using the coproantigen ELISA test which detects digestive enzymes that are released into the bile by migrating (late immature) and adult flukes in the faeces.
- Care must be taken to ensure that all sheep are drenched correctly especially when working with sheep in a pen rather than a race.
- All efforts must be taken to reduce reliance on triclabendazole by husbandry measures, and by the use of other flukicides as appropriate.
- Closantel, nitroxinil, oxyclozanide and albendazole (at the fluke dose rate) are all effective against adult flukes, which are present at this time of year.
- Take care not to overdose with some flukicides, which can have lower safety margins than other anthelmintics. Weigh a representative number of sheep to gauge the correct bodyweight range within the group/flock. If there is a significant difference between breeds, weights or ages, separate and drench as several groups.
- Sheep should always be moved to clean pastures after treatment; supplementary feeding may be necessary to maintain condition.
- Limiting pasture contamination with fluke eggs now from patent infections will reduce subsequent fluke challenge later in the year.

Poor scanning results (image shows resorption of lower foetus) may be the first indication that there is a liver fluke problem on the farm.



Sheep affected by chronic liver fluke show significant weight loss. The mature flukes live in the bile ducts but are shown here on the surface of the liver. Compare with a normal sheep’s liver below.



Normal sheep’s liver

Liver Fluke in Beef Cattle

- Undosed beef cattle grazing potentially fluke infected pastures, should be checked for the presence of fluke eggs in faeces and if positive, treated and moved to fluke-free pastures.
- Fluke infections increase the time taken to reach slaughter weight by several weeks and result in over 25% liver condemnation at slaughter.
- Farmers should be encouraged to discuss positive slaughterhouse results with their veterinary surgeons.

Out-wintered cattle should be checked for the presence of fluke eggs in faeces

This bovine liver at the slaughterhouse shows extensive liver fluke damage.

Worm Control in Sheep

- Mild weather seen in December, if repeated in January, may lead to the continued risk of PGE in store lambs and yearlings.
- The need to dose out-wintered store or replacement lambs can be reliably assessed by monitoring pooled faecal egg counts.
- As lambing time approaches, of impending consideration is what to advise on choice of wormer, and when and how frequently to treat ewes during, or after lambing. Such treatments are aimed at controlling pasture contamination from the so called “periparturient rise” (PPR) in worm egg output.
- With the emergence of anthelmintic resistance (AR) in sheep nematodes, the continued effectiveness of dosing ewes at lambing time may influence recommendations on both product choice and application particularly when it come to the use of long, or short, acting wormers.
- The current recommended strategy for ewe treatments is therefore a compromise between reduction in pasture contamination for the subsequent grazing lambs, and avoiding high selection pressure for AR.
- SCOPS currently recommend two possible options:
    - Leave a proportion of the ewes untreated or;
    - Treat early, in the post-lambing phase, especially with long-acting formulations of moxidectin, to ensure that ewes become re-infected with unselected parasites before their immunity is fully restored.
- There are no hard and fast guidelines as to how many ewes to leave untreated. It has been suggested that leaving about 10% of the flock untreated will be sufficient to provide a large enough dilution effect to delay selection for AR strains. This can be achieved be leaving single-bearing ewes and/or a proportion of ewes in good body condition untreated.
- Further details can be found on the SCOPS website at www.scops.org.uk.

Worm Control in Cattle

- Housed yearling cattle, previously at grass, should have been dosed on housing in the autumn with a wormer effective against inhibited larvae.
- Any cattle not dosed may be at risk from type II ostertagiosis towards the end of the housing period. Type II ostertagiosis presents as intermittent diarrhoea with loss of appetite and rapid loss of body weight.
- Farmers should be encouraged to start planning now with their veterinary adviser on lungworm prevention, particularly of farms with a previous history of lungworm.
- On these farms, vaccination should be considered as an integral part of their overall worm control strategy.
- Vaccination of calves over two months-old requires two doses of lungworm vaccine four weeks apart with a second dose at least two weeks before turnout
- As the lungworm vaccine is a live attenuated vaccine with a short shelf-life, ordering and administration needs to be planned well in advance of turnout.

Sheep Scab

- Sheep scab is typically encountered during the autumn/winter months from September to April.
- Sheep have disturbed grazing patterns and are observed kicking at their chest with their hind feet and/or rubbing themselves against fence posts.
- The fleece is wet, sticky, yellow, and frequently contaminated with dirt from the hind feet.
- Early disease is often confined to the back and withers, but as the disease progresses wool loss extends down the flanks and the lesion is surrounded by an area of inflammation and serum exudation, with the skin often thrown into thickened corrugations.
- Sheep scab can also be controlled by administration of an injectable macrocyclic lactone (ML). Treatment requires either a single, or repeat injection 7-10 days apart, depending of the product and active ingredient.
- Because of the growing concern over selection of ML-resistance in roundworms, it is important to ensure scab treatments are given correctly following current SCOPS guidelines.

Advanced sheep scab – there is extensive fleece loss over the chest which is wet, sticky and yellow at the edges due to serum leaking form the skin

Lice

- Like sheep scab, louse populations are highest in sheep during late winter.
- Spread occurs by close contact with other sheep.
- As the symptoms of lice infestations are similar to sheep scab, correct diagnosis is important before advising on treatment.
- Infestations of chewing lice are widespread in most sheep flocks. Sucking lice are not a problem on sheep in the UK.
- Louse infestations can be controlled with topical application of high *cis* cypermethrin or deltamethrin.
- Plunge dipping in diazinon is an effective control for most ectoparasitic infestations of sheep including sheep scab.
- For more information on ectoparasite treatments consult the product literature, or the SCOPS website (www.scops.org.uk) for specific product recommendations.

Heavy louse infection affecting a ewe in poor condition

Lice in Cattle

- Like sheep, cattle can be infested with lice particularly during the winter months and early spring.
- Both chewing and sucking lice are found on cattle in the UK.
- Low burdens of lice are very common in the coats of cattle during the winter months and should not necessarily be considered of significance. However, populations can increase rapidly causing intense itching, or anaemia if sucking lice are present.
- Heavy louse infestation may be a sign of other underlying conditions and an indicator of ill-thrift.
- A range of pour-on or spot-on synthetic pyrethroid products (containing alpha-cypermethrin, deltamethrin or permethrin) and macrocyclic lactones are commonly used.
- Injectable macrocyclic lactones are effective against sucking lice but may have only limited activity against chewing lice.
- It is advisable to use the product most suitable for the time of year and management of the cattle involved. See the COWS website at www.cattleparasites.org.uk for details of products available.

Heavy louse infestations in cattle may be a result of ill-thrift or other underlying causes

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

NADIS hopes that you have found the information in this forecast useful. Now test your knowledge by attempting the quiz below. You will be emailed an animal health certificate for this subject if you attain the required standard.

Click here Health Quiz

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