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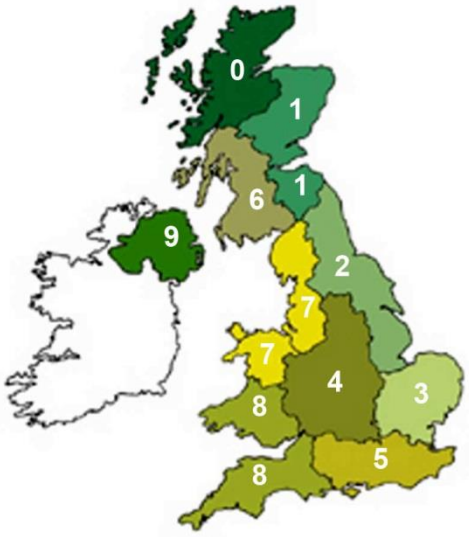
NADIS Parasite Forecast – March

Use of meteorological data to predict the prevalence of parasitic diseases

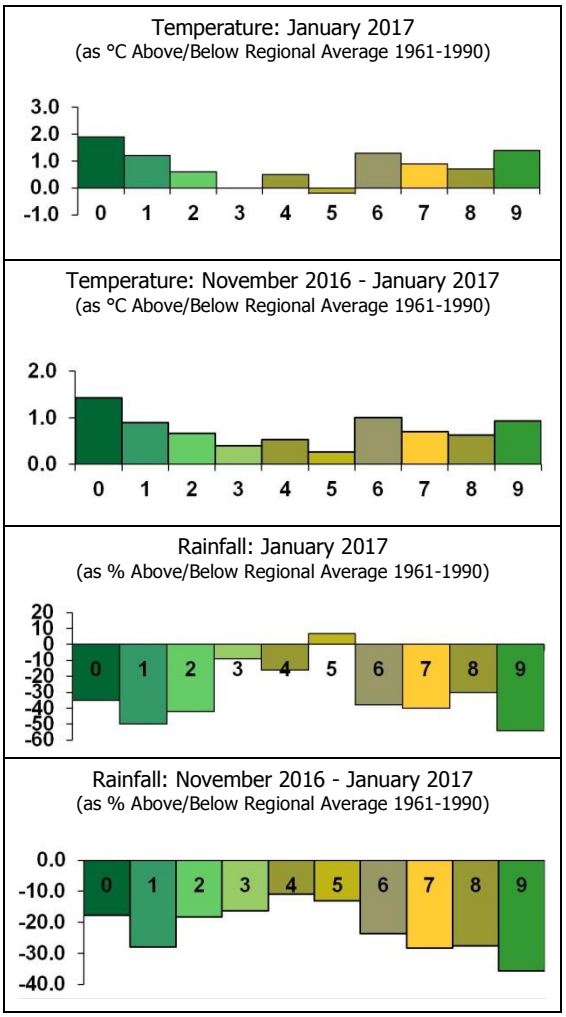
Regional Weather

(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 start of January, was mostly dry, settled and fairly cold with some overnight frost before turning mild, followed by a short cold snap mid month, with snow in most places. There was a prolonged settled spell during the second half of the month, which brought mild temperatures to the north and west of Scotland, but cold frosty weather to the south-east. It turned mild, cloudy and changeable towards the end of the month.
The provisional UK mean temperature was 3.9 °C, which is 0.2 °C above the 1981-2010 long-term average. It was a cold month in the south-east (1.5 - 2.0 °C below average) but generally milder than average elsewhere. The month was dry except in central southern and SE| England, with 62 % of average rainfall overall.

March Parasite Forecast/Update

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

SHEEP

Parasitic Gastroenteritis (PGE)

- With lambing time approaching, parasite control for this year's grazing season should be planned now.
- Control measures must be formulated on an individual farm basis.
- Forward planning should maximise the use of safe grazing.
- Provision of 'safe grazing' for ewes and lambs available at turnout (e.g. last year's pastures grazed by cattle or re-seeded pastures) will help avoid the risk of disease due to PGE and nematodirosis in lambs later in the season.
- Risk of infection can be determined by identifying both previous and future use of pastures, particularly use of aftermaths, and areas that will be grazed by ewes and lambs, especially those rearing twin lambs.
- The principle aim of parasite control around lambing time is to minimise the future contamination of pastures by eggs passed from adult parasites in the gut of the ewes.

- When deposited on pasture, the eggs hatch and develop into infective larvae causing disease in lambs.
- Worm faecal egg output is much reduced in well fed ewes in good condition.
- If safe grazing is not available for all ewes, ewes with single lambs should graze contaminated pastures with safe grazing reserved for ewes with twins.

Control Measures

- The 'peri-parturient rise (PPR)' in faecal egg production by ewes, and future contamination of pastures, can be controlled by dosing ewes around lambing time.
- With, the emergence of anthelmintic resistance (AR) the continued effectiveness of dosing ewes at lambing time may influence the choice of wormer, and when and how frequently to treat ewes during, or after lambing.
- The current treatment options should therefore be a compromise between reduction in pasture contamination, and avoiding high selection pressure for AR.
- SCOPS currently recommend two possible options:
    - Leave a proportion of the ewes untreated and;
    - When using long-acting formulations, particularly with moxidectin, treat early in the post-lambing phase 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 around 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 by targeting treatments to include:
    - Gimmers and young ewes
    - Ewes nursing twins and triplets
    - Ewes in low body condition

- Further details can be found on the SCOPS website at www.scops.org.uk.

Leave a proportion of ewes in good condition and those nursing singles undosed at turnout to avoid high selection pressure for anthelmintic resistance.

Nematodirosis/Coccidiosis

- The life cycle of *Nematodirus battus* differs to other worm species that cause PGE in that free-living development to the infective larval stage takes place in the egg.
- Infection passes from one lamb crop to next year's crop.
- Cold weather delays hatching so any sudden changes in temperature can trigger a mass hatch.
- If this coincides with lambs between 6-12 weeks of age eating grass for the first time, severe production losses and even deaths may follow in lambs grazing contaminated pastures in spring/early summer.
- Plan ahead and use safe grazing wherever possible to remove the risk from both nematodirosis and coccidiosis.
- Follow disease forecasts from March onwards on the NADIS (www.nadis.org.uk) and SCOPS (www.scops.org.uk) websites to determine the *Nematodirus* risk.

Nematodirosis affecting lambs grazing contaminated pasture – note only the lambs are scouring, the ewes are unaffected

Production loses from nematodirosis can be considerable yet are easily avoided

- Outbreaks of nematodirosis may have to be differentiated from coccidiosis, which may occur in lambs between 4-8 weeks of age at grass.
- Coccidiosis is a disease of intensive husbandry with stress a major factor in triggering outbreaks of disease.
- Adverse weather conditions, poor colostrum supply, overcrowding, wet muddy paddocks

- previously grazed by sheep, and/or extended housing periods all predispose.
- Reduction of stocking densities, batch rearing of lambs, creep feeding and avoidance of heavily contaminated pastures/premises are measures that can be taken to reduce the risk of disease outbreaks.
- Disease prevention can also include strategic dosing with an anticoccidial, or administration of medicated creep feed.

Coccidiosis is a significant risk in lambs managed intensively indoors but can also occur at pasture where it can present as an important differential diagnosis for nematodirosis

- 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 may still be encountered in sheep flocks and can be confirmed by checking for the presence of fluke eggs in faeces, or by using the coproantigen ELISA test.
- All efforts must be taken to reduce reliance on triclabendazole by the use of other flukicides such as closantel, nitroxynil, oxyclozanide or albendazole (at the fluke dose rate), which are all effective against adult flukes that are present at this time of year.
- Sheep should always be moved to clean pastures after treatment; and supplementary feeding may be necessary to maintain condition.
- Limiting pasture contamination with fluke eggs from patent infections now will help reduce subsequent fluke challenge later in the year.

CATTLE

Parasitic gastroenteritis (PGE)

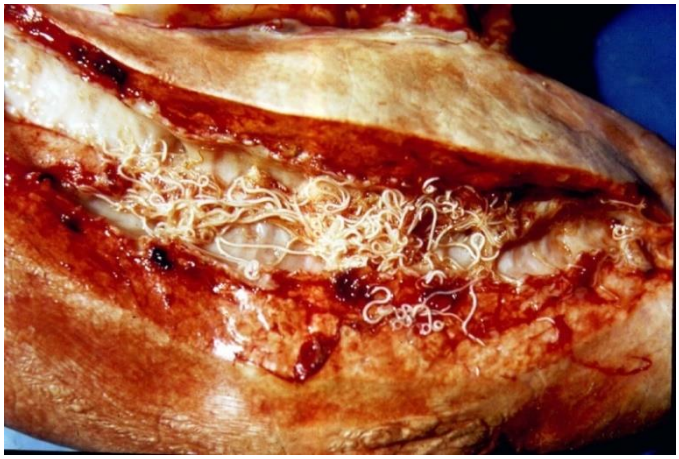
- Housed, yearling cattle not dosed in the autumn, may be at risk from type II ostertagiosis towards the end of the housing period.
- The disease presents as intermittent diarrhoea with loss of appetite and rapid loss of body weight.
- Farmers should be encouraged to plan the use of pastures, particularly in terms of parasite risk, when aftermaths will become available, and decide which classes of stock will be grazed where.
- Decide whether the parasite control plan will be strategic (strategic dosing in spring, and/or grazing management) or "*wait-see*" (monitor/treat).
- COWS recommend that for each farm, it is important to consider:
    - production objectives for the types of cattle present;
    - farm infrastructure, particularly in relation to pastures, grazing management and handling facilities;
    - the presence of other helminth parasites, such as lungworm and liver fluke;
    - efficacy of available wormers.
- To be effective, strategic anthelmintic treatments need to be initiated early in the grazing season, at or around turnout, to ensure worm eggs do not add to pasture contamination.
- Thereafter, the aim is to minimise pasture contamination up to mid-July, by which time the over-wintered larval population should have declined to insignificant levels.
- Strategic treatments include administration of a bolus at turnout. or administration of pour-on, or injectable macrocyclic lactones (MLs) at defined intervals.
- Cattle treated strategically should remain set-stocked, or moved to safe pastures (aftermaths) when these become available.
- For "*wait and see*", ensure that effective, regular monitoring and diagnostic procedures are in place in order to act quickly if required.
- For more information see the COWS (www.cattleparasites.org.uk) website.

Lungworm

- Farmers should be encouraged to start planning their lungworm prevention with their veterinary adviser now, particularly on farms with a previous history of lungworm.
- Lungworm disease is typically seen in grazing cattle from July onwards.

- On farms where the disease is endemic, vaccination should be considered as an integral part of the 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.

Lungworm disease is typically seen in grazing cattle from July onwards



Severe lungworm infestation with large numbers of worms in the airways

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.
- Farmers should be encouraged to discuss positive slaughterhouse results with their veterinary surgeons.

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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