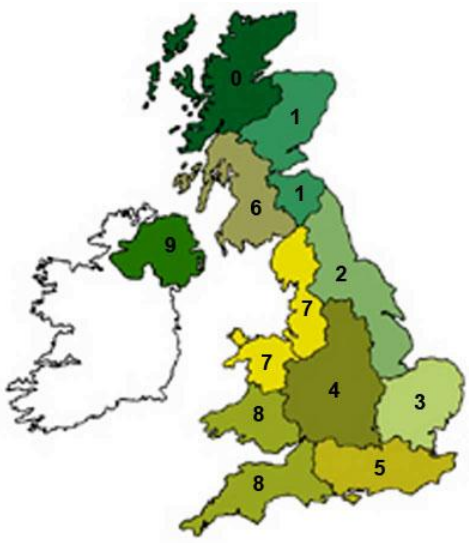
NADIS Parasite Forecast – February 2012

Use of meteorological data to predict the prevalence of parasitic diseases

Regional Weather

(based on Met Office figures)



REGIONS

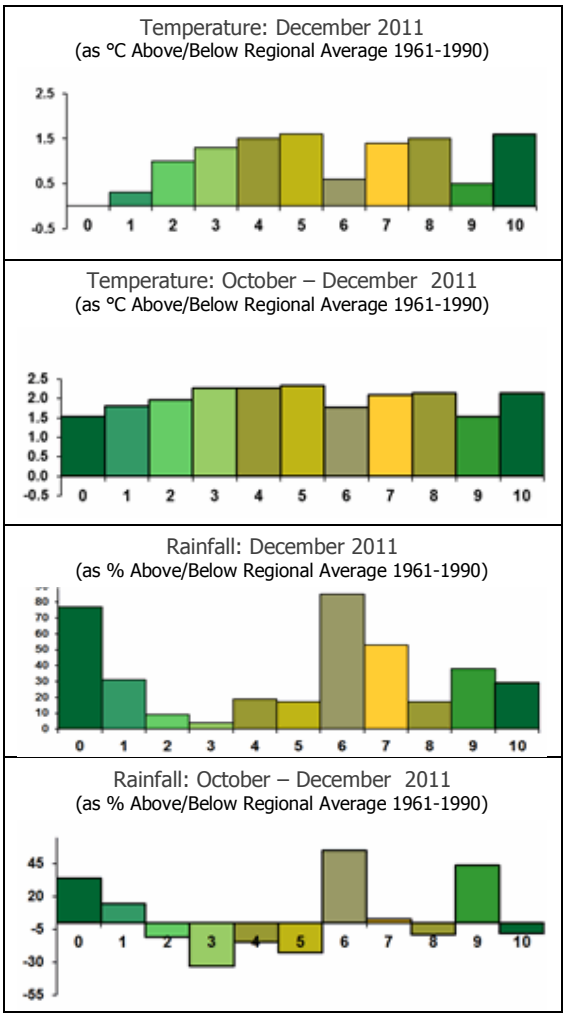
0 N W Scotland
1 E Scotland
2 N E England
3 E Anglia
4 The Midlands
5 S England
6 S W Scotland
7 N W England & N Wales
8 S W England & S Wales
9 N Ireland
10 Wales

December was much milder than last year, and although temperatures were not as far above expected levels as they were in November, it was still the mildest December for five years. Mean temperatures for England and Wales were around 1.5 °C above their 1961-90 long-term averages, while those in Scotland and Northern Ireland were 0.5 °C or less above theirs.

Mean three-month temperatures for October to December were 1.5 to 2.5 °C above expected levels in all UK regions.

December rainfall was above average in all regions, particularly in the north and west of the UK, with northern and western Scotland receiving about 80 per cent more rain than would normally be expected

However, all of England and Wales apart from the north-west region has still been drier than average over the October to December three-month period.



The first week of **January** has seen mild temperatures but stormy and very windy conditions in many areas.

The rest of the month is expected to remain unsettled, with some brighter spells. Temperatures will start above average but fall towards the end of the month with some overnight frost and wintry showers especially on higher ground.

Any late January gales and snow often cease during **early February** and the second week usually sees high pressure and cold temperatures. Northerly conditions with low pressure and snow are often seen during the last week of February.

February Parasite Update and Forecast

David Wilson MA BVMS DSHP Dip.ECSRHM EVS MRCVS
R(D)SVS Farm Animal Practice

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

FLUKE

Numbers of infective metacercariae decline through the winter, and by February any stock that have been excluded from high-risk pastures for the autumn and winter are often allowed access again.

Pastures in those areas that experienced a wet summer may have been heavily contaminated in the summer and autumn. Some infectivity may still survive into February, and this may be a greater risk if recent mild and wet conditions continue, as metacercariae are

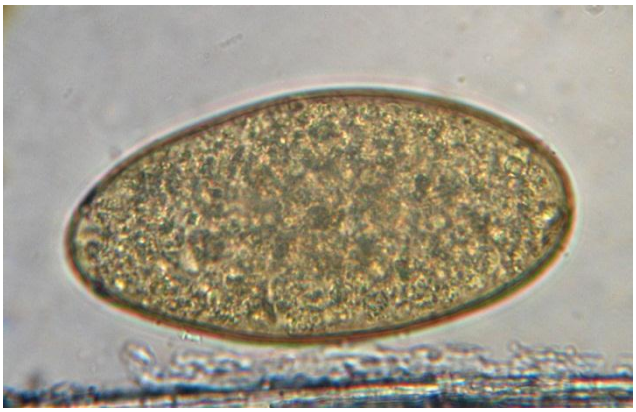
Cronfa Amaethyddol Ewrop ar gyfer Datblygu Gwledig: Ewrop yn Buddsoddi mewn Ardaloedd Gwledig
The European Agricultural Fund for Rural Development: Europe Investing in Rural Areas
Llywodraeth Cynulliad Cymru
Welsh Assembly Government

susceptible to desiccation and prolonged freezing. Risk will be much lower in those areas that experienced a dry summer, where dry field habitats will not have supported the fluke lifecycle, which will have been limited to those areas that did remain wet over the summer such as around ditches etc.

Sheep on infected premises will have picked up infection over the late summer, autumn and winter. Even if infective burdens were not high enough to produce acute or subacute disease, many infected animals will suffer from chronic fluke, causing ill thrift and poor production if not effectively treated. Chronic cases are seen in every month of the year but usually peak in the late winter/spring.

Submandibular oedema (bottle-jaw) is often seen associated with chronic fascioliasis

Sheep on farms with a history of fluke will probably have been dosed with a flukicide effective against immature fluke in January. If history suggests continuing exposure to risky pasture, then a follow-up treatment four to six weeks later may be a good idea. If animals have not been treated, then faecal samples from around 10 ewes should identify any surviving infection acquired during the peak of pasture infectivity in the autumn and indicate the need to treat the group. Undosed cattle, or cattle dosed in October then re-exposed to infective pastures, could now be treated or checked for the presence of fluke eggs in faeces. Serology can indicate previous exposure but does not indicate current status.



Fasciola hepatica eggs are large (130-150µm long), operculate and yellow brown. Their presence in sheep faeces indicates the presence of live adult fluke in the animal within the last 3 weeks. This can be important in the diagnosis of chronic fascioliasis along with history, clinical signs, post mortem examination and/or biochemical evidence of chronic liver damage (e.g. raised serum GGT levels, hypoalbuminaemia).

SHEEP NEMATODES

Parasitic Gastroenteritis (PGE)

Although PGE is often diagnosed in every month of the year, infectivity is relatively low when temperatures are below 5 °C and larval movement and metabolism are minimal. Infectivity may be further reduced by the presence of snow. These inactive larvae can actually survive the winter well, and they may contribute heavily to the infective pasture larval population in the spring.

Milder spells may lead to a continuing risk of PGE in store lambs and hoggs through the winter, particularly on paddocks heavily contaminated earlier in the season; for example, by an outbreak of clinical PGE. This can continue into February given suitable conditions. The need to dose outwintered store or replacement lambs during the winter can be assessed using mean or pooled faecal egg counts. Adult sheep may also develop PGE during the winter, often concurrently with diseases such as fascioliasis or Johne's disease, nutritional stress and/or late pregnancy.

Contaminated pastures can only be considered "safe" after the majority of larvae have died. Rising spring temperatures cause the larvae to become more active and, if they are not ingested by a potential host, they use up their energy reserves and die. This often begins to occur around April, with pastures classed as low-risk from late June if no sheep have grazed them in the spring, or medium risk if grazed in the spring by adult non-lactating sheep.

A veterinary parasite control plan for the forthcoming grazing season should be formulated on an individual farm basis including identifying any safe grazing available at turnout in spring (e.g. last year's cattle pastures) or in midsummer (e.g. aftermath for weaned lambs). Following the guidelines in the Sustainable Control of Parasites in Sheep (SCOPS) manual should reduce selection for anthelmintic resistance.

Nematodirus

Autumn *Nematodirus* disease was been identified again in Scotland in 2011. It has previously been associated with wet conditions. In most areas, the major impact of nematodirosis remains as an acute disease of young lambs in spring/early summer. Forecasts for this will be produced when the March 2012 meteorological data are available. December 2011 temperatures were above average, and if this continues, an early spring could indicate a lower risk year for nematodirosis in 2012.

Coccidiosis

Coccidiosis may appear in February, in intensively reared January-born lambs, particularly in heavily stocked sheds. Lambs show scour, dullness and abdominal pain. The early-born lambs tend to pick up infection passed by the ewes and increase the environmental contamination, often without becoming ill. Disease is then more common when later-born lambs are exposed to this increased level of infection.

To try a quiz based on this article and have it immediately electronically marked, click **QUIZ**