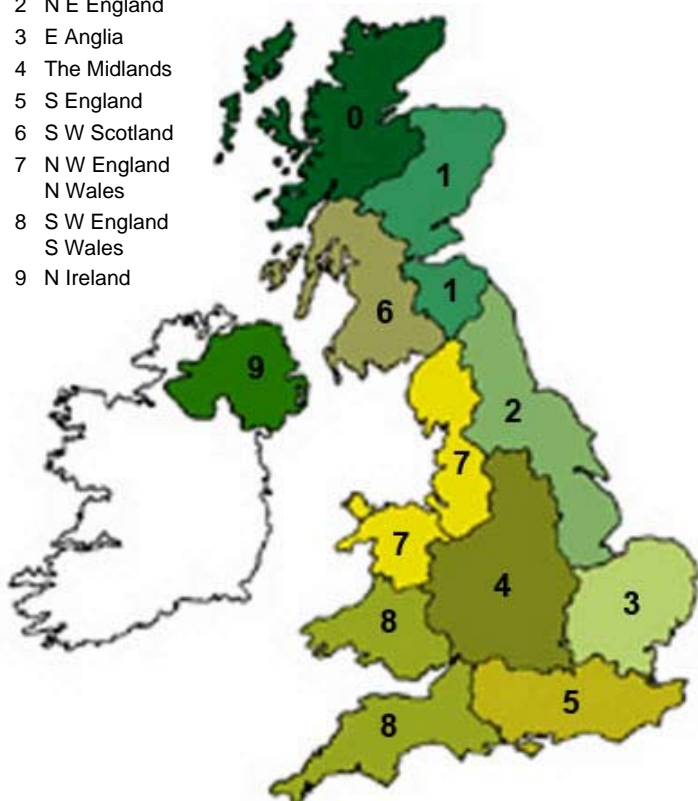


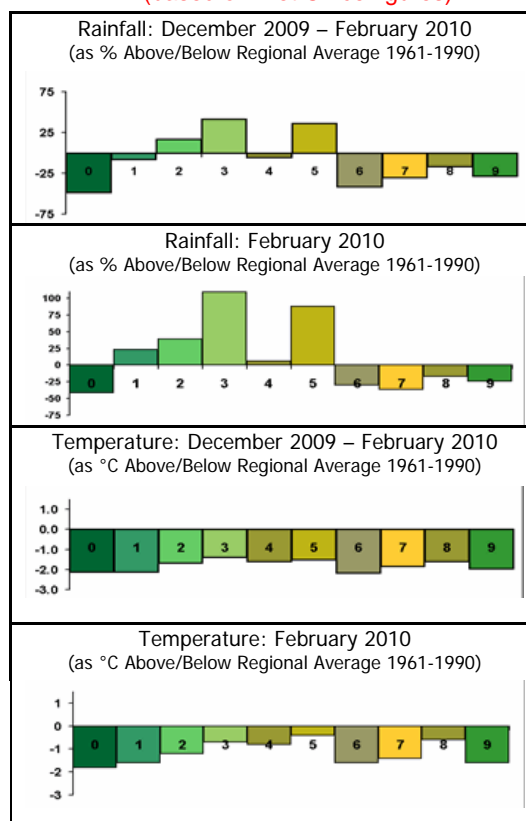
Parasite Forecast – April 2010

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



Regional Weather (based on Met Office figures)



February 2010

February was generally a cold month across the UK. Mean temperatures were close to the 1961-90 average in southern England, around 1 °C below long-term regional averages over much of England and around 2 °C below over much of Scotland and Northern Ireland. Mean 3-month temperatures are around 1-2 °C below average in all regions.

Rainfall was close to the 1961-90 average for the UK as a whole, with England wetter than expected, while Scotland, Wales and Northern Ireland were drier. In general, the west of the UK was drier than expected, while the east was wetter. Parts of western Scotland received less than a third of their long-term average February rainfall, while much of East Anglia and south-east England received more than twice their expected figures. Three-month rainfall figures show a similar

pattern, with East Anglia and the south-east of England about 40 per cent wetter than normal, while northern and western Scotland, north-west England and Northern Ireland were around 30 to 50 per cent drier than expected.

March began cold and dry, becoming milder after the first 10 days or so. Forecasts for the rest of the month predict fine weather in the south, but cloudier conditions with some patchy rain in the north. Temperatures are expected to be around average for the second half of the month.

April often sees cold showery spells, with historical data suggesting these are most common between the 10th and 20th of the month, and in the last week, going into May. The changing climate may affect this, however.

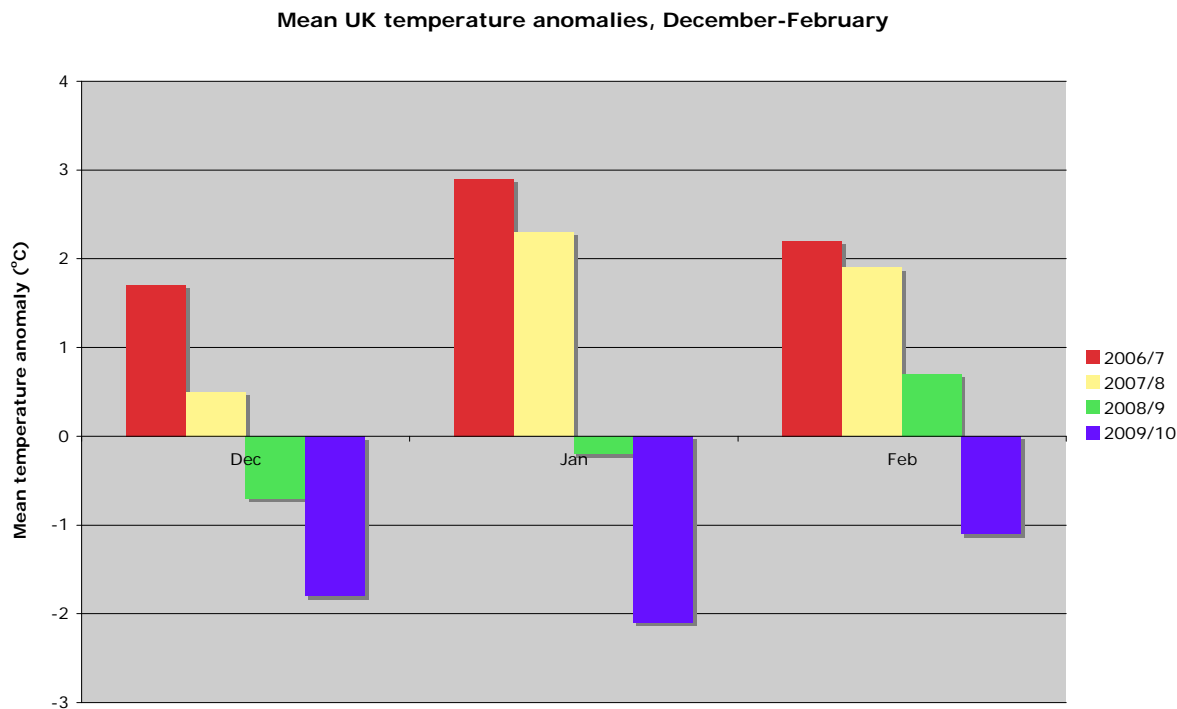
April Parasite Update and Forecast

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

SHEEP NEMATODES

Nematodirus

Figure 1



Last year, the mild February and March resulted in a forecast for a moderately early hatch of *Nematodirus*, associated with a below-average overall incidence of spring disease. This prediction proved to be correct, with the number of nematodirus diagnoses in April-June 2009 well below the levels seen in 2008 and 2006, although not as low as in 2007 (VLA and SAC, GB Small Ruminant Disease Surveillance Quarterly Report, 13:2). For the UK as a whole, over the last 7 years, only 2007 saw fewer nematodirus diagnoses than 2009.

Mean UK temperatures for December to February have been particularly low this season (Figure 1). This suggests a higher incidence of *Nematodirus* disease this spring; however, March and April temperatures can alter this picture. A forecast for overall incidence and peak hatch will be made in early April and included in the next parasite forecast.

May and June usually see by far the largest number of nematodirus cases, however significant numbers can also occur in April. The best control method is to avoid grazing lambs on pasture used for young lambs the previous year, or ideally the previous two years. If this is not possible, and March and April are mild allowing early hatching, then February and early March born lambs may need a prophylactic anthelmintic drench before the end of April. Colder (or very dry) weather over this period may make this early drench unnecessary, although prophylaxis will be needed in the following couple of months, when greater numbers of lambs will be grazing, and therefore at risk.

Using faecal egg count monitoring to time *Nematodirus* treatments is risky, as the disease is primarily caused by worm larvae, and significant damage can occur before eggs appear in the faeces.

Parasitic Gastroenteritis (PGE)

Although pre-infective larvae of parasitic nematodes may be susceptible to sub-freezing temperatures, infective third-stage larvae (L_3) on pasture may survive quite well through cold winters (particularly *Teladorsagia*) as long as they do not dry out. The prolonged freeze this winter cannot therefore be relied upon to significantly reduce overwintering larval populations. If temperatures remain cool this spring, this may in fact aid the survival of these overwintered larvae by preserving their energy reserves until larger numbers of susceptible grazing animals are present.

Last year's wet summer created favourable conditions for a high incidence of PGE. September and October were significantly drier, and dry late summer/autumn

conditions have previously been correlated with larger overwintering larval populations and a greater risk of PGE the following year. Therefore, early lambs grazing in April may be at increased risk of spring teladorsagiosis this year, particularly on pastures heavily contaminated last season.

Overwintered larvae will be picked up by late pregnant or lactating ewes in significant numbers, unless conditions are extremely dry or they are grazing safe pastures. Little development of any eggs passed by these peri-parturient ewes will have occurred in early March due to the low temperatures, but development will get quicker as conditions warm up through March and April. These eggs passed by the ewes will maintain

the infectivity of the pasture, which would otherwise fall to low levels as larvae become active in the spring and use up their energy reserves.

The aim of dosing ewes around lambing time is to reduce this contamination, as discussed in the March forecast, although any treatment will increase selection for wormer resistance in the parasites. In order to avoid undue selection for anthelmintic resistance, SCOPS

recommend that this dose be targeted; for example, on thinner, younger and/or multiple bearing ewes, so that not all ewes are dosed and some anthelmintic-susceptible parasites survive. In summary, ewes on contaminated pastures may need a persistent anthelmintic to prevent immediate re-infection; ewes turned out onto clean pasture only require a short acting anthelmintic before turnout.

Coccidiosis

Coccidiosis is a significant risk in April, in February/March born lambs, or in older lambs when the feeding of medicated creep is stopped. It is a disease of intensive husbandry, and adverse weather conditions

leading to poor colostrum supply, poor grass growth, wet muddy paddocks and/or extended housing periods can increase incidence.

FLUKE

Maximum temperatures at the time of writing (mid-March) are above 10 °C across much of the UK. Snail and fluke development on the pasture will be beginning – ground conditions remain wet in many areas despite the recent lower rainfall figures. This will continue through April, although most significant development occurs after mean temperatures reach the 10 °C level, and that usually occurs in May, although the warm April last year meant that it occurred earlier in southern regions.

The incidence of acute and sub-acute fascioliasis has been high in the 2009-10 season following the forecast of a high level of fluke infection last autumn, and levels of chronic fascioliasis are expected to be correspondingly high.

Chronic fascioliasis is the predominant form in the spring, and cases of ill thrift should be investigated. Fluke eggs passed onto pastures now will develop over the summer and lead to infective metacercariae from August, usually causing acute disease from September. This is the major risk period for acute fluke in sheep, and an initial forecast for disease incidence will be published after July meteorological data are available.

Fluke populations should be starting from an even higher level this year, and another wet summer could lead to even more significant problems.

Occasional cases of acute fluke disease from overwintered metacercariae are seen in April, however metacercariae from the winter infection of snails do not usually appear on pasture until May/June with acute disease usually seen from July. The effect of the large fluke populations seen last year on the size of the overwintering infected snail population may be balanced by the effect of the drier autumn. Although most infected snails are expected to die by the end of June, a wet May and June this year would allow the infection to pass onto the pasture and may create some early risk to stock. A forecast for this will be produced in early July.

Stock on premises with a known fluke population will already have been dosed in the autumn/winter and should not need dosing again until next month. Newly diagnosed cases of chronic fluke disease can be treated with any available flukicide, although triclabendazole should not be used as a high level of activity against immature fluke is not required.

CATTLE NEMATODES

Worm control for the grazing season needs to be arranged, as part of a veterinary health plan taking into account the type and age of stock, and the history of the available pasture.

To control ostertagiasis, dairy calves and autumn-born suckled calves will require preventative treatment in their first grazing season unless they are on safe grazing. If pasture contamination is suppressed until at least mid-summer, most pasture larvae should have died off by that time and the pasture should remain safe for the rest of the season. Alternatively, calves can be dosed and moved to aftermath at mid-summer, although a proportion should be left undosed to carry some anthelmintic-susceptible worm larvae onto the new pasture.

Spring-born suckled calves will not need preventative treatment in their first grazing season (apart from a

housing dose) but they will probably need some control in their second grazing season.

Vaccination (Huskvac) is often the best way to control lungworm in dairy replacements and in suckler herds with a history of disease, as disease can occur during the late grazing season even if the above control methods for ostertagiasis have been followed.

Worm problems will generally be greater in wet summers, although significant autumn problems can occur following a dry summer - larvae can survive longer locked in faecal pats, and when rain or storms appear later in the season, disease can occur in calves after their bolus or depot injection treatment has run out, leading to potentially large overwintering larval populations on pasture.

To try a quiz based on this article and have it immediately electronically marked, click [QUIZ](#)

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NADIS Parasite Forecasts are produced by leading parasitologists based on parasite profiling, detailed monthly Met Office weather data and reports from NADIS sentinel practices. The comments are general; veterinary advice should be taken for individual farm circumstances as part of a veterinary health plan.

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