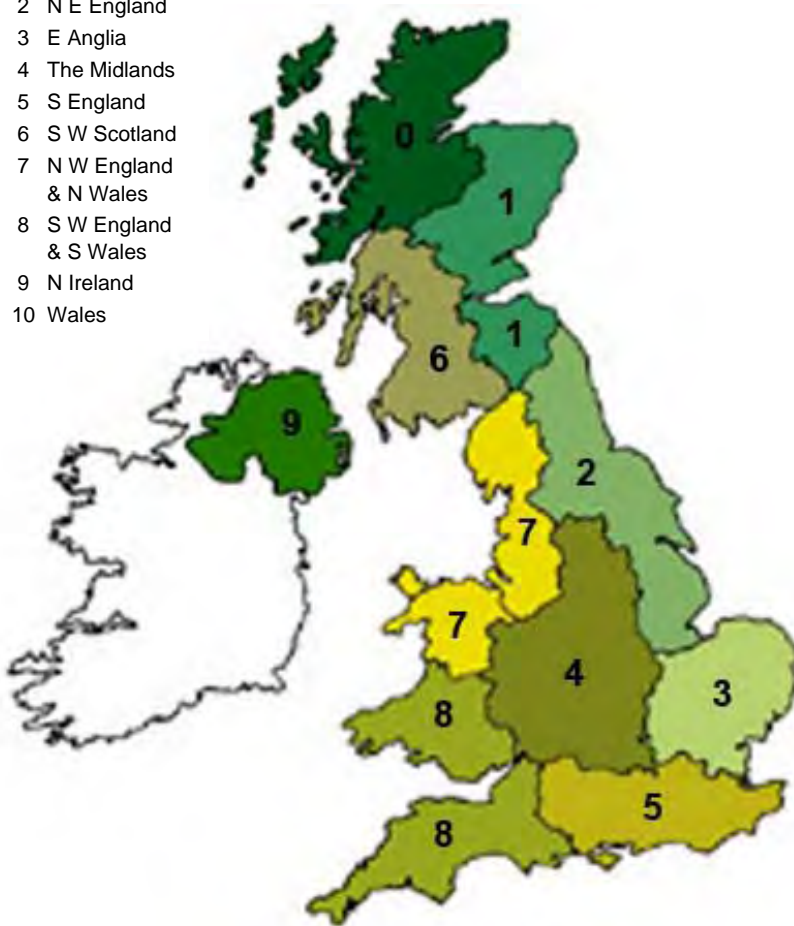


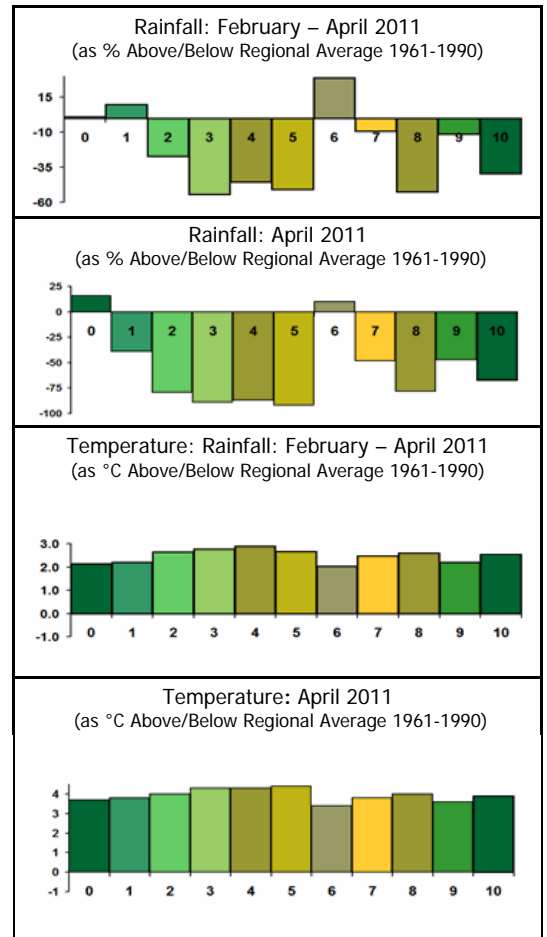
NADIS Parasite Forecast – June 2011

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



Regional Weather (based on Met Office figures)



April 2011

April mean temperatures for the UK as a whole were almost 4 °C above the 1961-1990 average. This makes it the warmest April since the relevant Met Office series of temperature records began in 1910. Only relatively small areas were below this level, at about 3 °C above expected temperatures, mainly on the west coast of Scotland and parts of Northern Ireland. Maximum daily temperatures in southern England were particularly high.

Three-month mean temperatures for February-April were 2 to 3 °C above expected levels in all regions.

Much of the UK was very dry in April, with most of England, other than the north-west, receiving less than 20 per cent of the 1961-1990 average amount of rain for the month. This contrasts with northern and western Scotland; both regions experienced more rainfall than expected in the month, with small areas receiving around double the long-term average amount.

Three-month rainfall figures for February-April across southern England and East Anglia were below 50 per

cent of the long-term average for that period, while Scottish figures were above average, particularly in the west.

The first 10 days of **May** have seen continued warm conditions, but with greater-than-average amounts of rainfall in Scotland and the north, but lower-than-average amounts in the Midlands and the south.

The rest of the month is expected to become a little cooler and remain wet in the north of the UK, while warmer and drier in the south, perhaps with thunder showers.

The first few days of **June** often bring the first wave of the 'European Summer Monsoon' as low pressure moves in from the west bringing cooler weather and heavy showers. Historical climate data indicate the second and third waves most often appear around the 10th-14th June and the 18th-22nd June respectively, with better weather between these periods, although climatic change may alter these patterns.



June Parasite Update and Forecast

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

SHEEP NEMATODES

Nematodirus battus

Pasture larval counts typically begin to rise when daily maximum temperatures exceed 10 °C, and rise significantly after average temperatures consistently reach this level, as they did in late March in the south, and during April further north. Generally warm conditions suggest an early hatch and have led to a nematodiosis forecast this year for an **average** risk.

However, many areas have experienced dry ground conditions during April, and this may have meant that there was a delay in the pastures becoming infective. The onset of wet conditions in May in the north of the UK may increase the risk to grazing lambs. When significant rain falls in the south, lambs may be too old to be at high risk, in addition hatching may be inhibited by higher temperatures.

The length of time the larvae survive on the pasture, and therefore the length of the potential risk period, may be affected by the local weather conditions, with cooler, wetter conditions allowing more prolonged survival of infective larvae. Risks should be assessed on a farm-by-farm basis, taking into account farm histories, management practices and local weather. Further prophylactic treatments for lambs on at-risk pastures should be considered following the May treatments advised last month, perhaps early June and even late June/early July particularly further north and if lambs are still young enough to be at high risk at that time.

White wormers (Class 1-BZ) are often recommended for prophylactic *Nematodirus* drenches. Post-treatment faecal egg counts (FECs) at 7-10 days should be considered as BZ-resistance is suspected in at least one population of *N. battus* in the UK. If lambs are scoured, pre-treatment FECs can confirm whether or not *Teladorsagia* is also involved, as worms of this genus are much more likely to be BZ resistant.

Even though *Nematodirus* eggs are relatively resistant to environmental extremes, if there is persistent dry weather through the summer months, an increased proportion may die off on the pasture, leading to a lower disease risk next spring.



Scour in lambs during June, often attributed to nutritional causes, may in fact be caused by internal parasites, principally Nematodirus and Teladorsagia. If the problem is not addressed, this may lead to losses and long-term poor growth

Parasitic gastroenteritis (PGE)

As larval activity is resumed in the spring, overwintered larvae will exhaust their energy stores as temperatures increase, and die off before mid-summer. Pasture that will not be grazed by susceptible stock until that time (e.g. silage aftermath) may then be regarded as “safe pasture”.

The helminth control procedures adopted during June will depend on the control plans formulated before the lambing period.

- Ewes and lambs turned out onto safe spring pastures should still be experiencing low levels of larval challenge, although the resumption in development of inhibited *Haemonchus* infections carried by the ewes may cause disease in these circumstances.
- If safer pastures (such as aftermath) are not available for lambs at weaning, some suppression of pasture larval infection will be required. The lambs still may not need dosing until weaning if the periparturient rise in ewe faecal egg count was adequately controlled, for example by targeted anthelmintic treatment at turnout. Mean worm egg counts of lambs from around June onwards can help to time these treatments.
- Remember that pre-weaning anthelmintic treatment for *Nematodirus* prophylaxis may still be required, see above.

Pasture infectivity depends on larval numbers, but also on there being adequate moisture for the larvae to migrate onto the herbage; prolonged local dry spells can reduce the larval challenge to stock on contaminated pastures, with a return to infectivity when wet weather returns.



Finishing lambs off the ewes before midsummer means that they are not exposed to the heavily worm-contaminated pastures that can build up in the second half of the grazing season.

CATTLE NEMATODES

Incidents of PGE in cattle seem to have been increasing for several years (VIDA 2009), with a peak in cases usually seen in August/September.

During June, susceptible calves (e.g. autumn born suckled calves or dairy calves at grass for the first time) on contaminated grazing will be passing eggs of the gastrointestinal nematode species from infections picked up in the spring, unless suppressive anthelmintic regimes are in place. Suppressing regimes based on products with prolonged persistence against *Ostertagia ostertagi* may allow the build up of pasture populations of those species of worms against which they have poorer efficacy or little persistent effect, for example *Cooperia* species and *Nematodirus helvetianus*, which may cause problems later in the year.

As the weather warms up, given that there is sufficient moisture, eggs passed by the calves will develop increasingly rapidly, contributing to the midsummer peak in pasture larval numbers. However, dry weather may reduce the availability of these larvae and delay peak infectivity. Spring-born suckled calves will not be building up the pasture infection in this way, so most overwintered larvae will die off by midsummer leading to a low risk of summer (type 1) ostertagiasis in these animals.

Lungworm disease may start to appear from June onwards in unvaccinated calves and naïve adults. Any wetter weather conditions will favour the spread of the parasite, although across the country the recent wet summers have not been associated with an increased annual incidence.

LIVER FLUKE

Significant development seems to occur as average daily temperatures consistently reach the 10 °C figure, and this mostly occurred during later March and April across the UK.

The dry ground conditions in many areas during April will have reduced the habitats available to snails and fluke, limiting the early start to development this year despite above-average April temperatures. Wet conditions in parts of Scotland will potentially increase fluke and snail numbers.

The risk of acute fluke disease in the late summer/autumn (and subsequent sub-acute and chronic disease) depends to a large extent on the rainfall over the preceding summer. Another wet summer could lead to a high risk of disease. Although overall rainfall last summer was around average, that followed three wetter-than-average summers. When the rainfall patterns in June are known, the likely severity of fluke disease across the country should start to become clearer. The risk will vary across the country; at present,

long-range forecasts suggest a dry summer for the south of the UK, but wetter conditions in the north.

On a local level, permanently wet habitats can lead to a risk of fluke disease in these specific areas even in generally dry years.

Animals grazing fluke habitat now may be picking up metacercariae from the winter infection of snails, with disease often seen from July. Rainfall across the UK in August, September and October last year was around average, so the overwintering population of infected snails may not be too large. In general, a wet May or June is also required to allow the winter infection to become a risk. A forecast for the impact of the winter infection of snails will be produced once the May and June climate data are known, and should be available at www.nadis.org.uk from early July.

Specific treatment for this wave of fluke is not generally required in most years, although the possibility of early acute fluke should be borne in mind when investigating any stock losses through the summer.

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