NADIS Parasite Forecast

EBLEX THE BEEF & LAMB SECTOR COMPANY

QMS QUALITY MEAT SCOTLAND

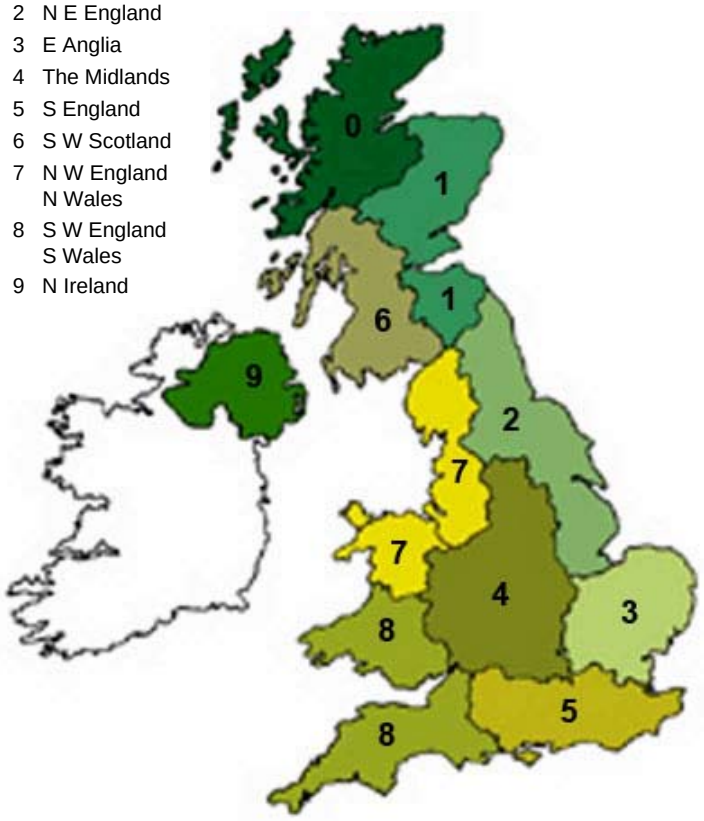
HYBU CIG CYMRU

Knowledge transfer to farmers

July 2009

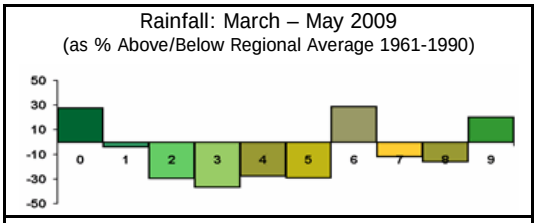
REGIONS

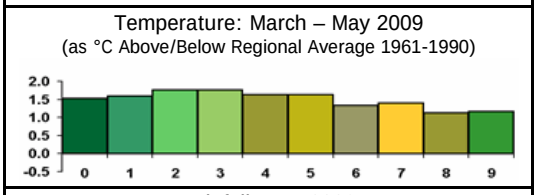
0 N W Scotland
1 E Scotland
2 N E England
3 E Anglia
4 The Midlands
5 S England
6 S W Scotland
7 N W England
N Wales
8 S W England
S Wales
9 N Ireland

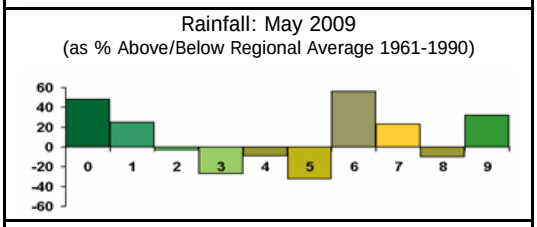


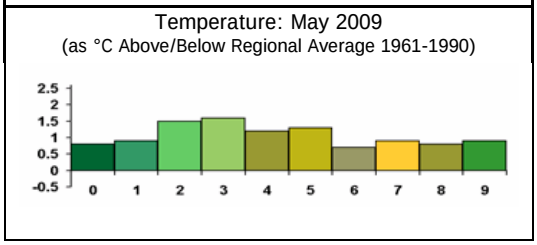
Regional Weather

(based on Met Office figures)









May 2009

Most of the UK experienced mean temperatures between 0.5 and 1.5 °C above the 1961-1990 average in May. The exception was the eastern coast of England, which was a degree or so warmer. The three-month mean temperatures were between 1 and 2 °C above the long-term average for all regions. Rainfall was relatively higher in the north-west and lower in the south-east of the UK. Some areas of western Scotland received more than twice the expected level of rainfall, while some small areas of southern England received less than half their expected rainfall. Over the last three months, rainfall has been well above average in the typically wet regions of northern and western Scotland, and Northern Ireland. Other regions have been average or below, particularly central and eastern England.

Forecasts for June predict cloudy conditions in western and northern areas with outbreaks of rain, while eastern and southern areas will be drier and brighter. Temperatures are expected to be near normal, but may be very warm in the southeast, with thundershowers.

The middle two weeks of July are often warm and sunny, under the influence of the Azores high. Thunderstorms and low pressure often feature in the last week of the month.

Summer 2009 is likely to have above average temperatures, with near- or below-average rainfall.

July Parasite Update and Forecast

SHEEP NEMATODES

Peak pasture larval availability usually occurs in July or August. This peak primarily consists of larvae developing from eggs passed by lambs, which became infected by larvae originating from the ewes during the peri-parturient rise (PPR) or by overwintered larvae. The magnitude of the peak will therefore be lower where ewes and lambs were turned out onto pastures with a very low larval population, or where the PPR was controlled by repeated or persistent anthelmintic treatment of the ewes. Prolonged cool conditions may delay this peak, although this is not expected this year. Extended dry spells may also delay the pasture larval peak, which may occur anywhere depending on local weather conditions. Forecasts suggest these conditions may occur in places this year.

Ewes on contaminated pasture, which were treated with persistent anthelmintic (moxidectin) at lambing, may themselves be contributing to pasture larval contamination now as the effective period of the anthelmintic ends, and a post-treatment rise in faecal egg count occurs.

High worm populations are associated with wet summers, and therefore a higher than usual incidence may be seen in areas that experience such conditions. This has been the most likely reason for the high levels of summer parasitic gastroenteritis seen in the last couple of years. Prolonged dry conditions are associated with a reduced summer disease incidence as larvae are unable to migrate onto the herbage and become infective. Significant outbreaks may however occur when a dry period of around 10 days or more, which allows the build up of infective larvae on the pasture, is followed by wet weather allowing the migration of the larvae onto the herbage. Decisions about when to dose lambs should take into account any such recent weather patterns.

The temperature-based *Nematodirus* forecast this year suggested a below-average incidence this spring, and high April temperatures would also suggest a low incidence. However, many regions have experienced prolonged dry spells this spring, which may have delayed hatching and led to increases in incidence as older grazing lambs were exposed to the major flush of pasture larval infection.

Parasitic gastroenteritis control programs need to be worked out on an individual farm basis as part of a veterinary flock health plan taking into account animal history, farm and paddock history, disease history, environment and husbandry system etc, and must be adapted according to climatic conditions.

Even frequent dosing with anthelmintic may not control scour and poor growth if lambs are grazing pastures heavily contaminated with worm larvae. It is often the constant challenge from these larvae, rather than the worm burden carried by the lambs, which causes the lambs most problems.

In general, if lambs are to be dosed and moved to safe pasture (e.g. silage aftermath) at weaning, they should be allowed to carry some anthelmintic-susceptible worms over onto the new pasture to avoid heavy selection for anthelmintic resistance. For example, a proportion of the lambs (perhaps around 10 per cent) could be left untreated, or the lambs allowed to graze the contaminated paddock for up to a week after treatment before moving to safe grazing (unless a persistent anthelmintic is used), in line with SCOPS guidelines. If lambs are to remain on contaminated pasture after weaning, efforts should be made to reduce the July/August peak on that pasture. Starting to dose for this purpose at weaning may be sufficient if the PPR

was well controlled, initial pasture contamination not too high, and weaning not too late. Otherwise, suppressive dosing may have to begin pre-weaning; lamb faecal worm egg counts can be used to help determine this.

At least once a year, faecal egg counts should be performed on some 10-14 day post-treatment faecal samples as an initial screening test for anthelmintic resistance. This should be done even if there is no evidence of poor anthelmintic efficacy on the farm in order to identify resistance at an early stage.

CATTLE NEMATODES

Lungworm disease typically occurs from June/July onward. An increased incidence of lungworm disease has been associated with wet summers. However, thundershowers following a dry spell can break down faecal pats and make larvae available to grazing stock, leading to a local increase in disease incidence.

Dose and move strategies or suppressive regimes that do not last the whole grazing season can still allow lungworm disease to occur late in the season, especially if conditions are wet, and prompt treatment is needed. Animals destined to be breeding replacements, and perhaps suckled calves from farms with a history of lungworm disease, are best protected by vaccination.

Suppressive regimes for the control of ostertagiasis (e.g. in set-stocked calves vaccinated against lungworm) can end around mid-July when pasture larval infectivity will have substantially died off.

LIVER FLUKE

- Winter infection of snails

High levels of fluke infection last year combined with the wet autumn mean that relatively large numbers of fluke-infected snails may have overwintered. Wet May conditions in Scotland, Northern Ireland and north-west England, combined with mean monthly temperatures of around 10 ^{o}C or more, may have allowed some of this infection onto the pasture. Other areas have generally been dry, although contamination of the pasture with metacercariae can occur in any region in locally wet areas, such as around ditches etc. A July triclabendazole treatment to address this wave of infection may be indicated in high-risk areas, or at least increased vigilance in monitoring for the occurrence of acute fluke cases. This will be clearer after the regional Mt figures for June are known, and the fluke forecast for the winter infection of snails will be available with the August forecast at www.nadis.org.uk from early July.

- Summer infection of snails

Similarly, May temperatures will have allowed the development of fluke eggs and the start of mud snail activity given suitable ground moisture. Dry conditions across the south and east mean that habitats in which this can occur may not be extensive. A high level of environmental contamination with metacercariae is expected to be present in many areas this year due increased egg deposition, which is itself the effect of two consecutive wet summers. Rainfall patterns in June, July and August will be important in determining the incidence of fluke this year. A forecast will be produced at the end of August.