Mean UK temperatures in February were close to their 1961-1990 long-term averages, with Scotland and Northern Ireland slightly above their expected figures, while England and Wales were slightly below theirs, particularly in the more southerly regions.

Three-month mean temperatures are also close to long-term average figures, with Scotland, Northern Ireland and the south-west slightly milder than expected, and other regions slightly colder.

England, Wales and Scotland only received around three quarters of their 1961-1990 long-term average rainfall for the month, with Northern Ireland receiving almost 90 per cent of expected rainfall.

The last three months have however still been wetter than average in all regions except northern Scotland.

Across most of the UK, the first half of March has continued to be colder and drier than average, although with some snow. Northern Scotland and the west of the UK have been somewhat milder than average, while south-east England has seen more rainfall than is usual. The rest of March is forecast to be cold with widespread freezing conditions and snow across the country.

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 Forecast/Update**

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The most recent version of this monthly parasite forecast may be accessed at [www.nadis.org.uk](http://www.nadis.org.uk).

**SHEEP NEMATODES**

*Nematodirus*

Mean UK temperature anomalies for December to February have all been close to average this season (Figure 1). Combined with the forecast for a cold March, this suggests we may see a late hatch and an above-average incidence of nematodiosis this spring; however, subsequent temperatures and rainfall can alter this picture. A forecast for overall incidence and peak hatch will be made in early April and will be included in the next parasite forecast.

The only recent year with colder February conditions was 2010, and this resulted in one of the highest incidence of nematodiosis in recent years in spring 2010 (VIDA 2011).
Nematodirosis is a problem when egg hatching in a late cold spring coincides with lambs beginning to graze. Adult sheep are not affected. May and June usually see by far the greatest amount of disease caused by *Nematodirus*. Disease can also occur in April, although there is likely to be less early disease in a cold year. 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 an anthelmintic drench before the end of April. Colder (or very dry) weather over this period may make this early drench unnecessary, although anthelmintic cover may be needed in the following weeks, when greater numbers of lambs will be grazing, and therefore at risk.

Benzimidazole (Group 1) wormers are usually recommended for *Nematodirus* prophylaxis, although a case of benzimidazole resistance in a UK *Nematodirus battus* population has been reported. Using faecal egg-count monitoring to time *Nematodirus* treatments is risky, as the disease is mainly caused by worm larvae, and significant damage can occur before eggs appear in the faeces.

**Parasitic Gastroenteritis (PGE)**

Last year’s wet summer was associated with high levels of PGE disease, although the colder winter is likely to have resulted in fewer problems with winter PGE than the previous year. Also, most areas experienced wet late summer/autumn conditions, and these have previously been associated with lower overwintering larval numbers than when conditions are dry over that period. Nevertheless, a wet spring/summer could lead to high levels of PGE again this year.

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. Development of these eggs, initially slow, will occur more quickly as temperatures increase through March and April. The eggs passed by the ewes will maintain the infectivity of the pasture, which would
otherwise fall to low levels as overwintered larvae 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, the need for a dose can be assessed taking into account the likely level of infection. If ewes are treated, SCOPS recommends that this dose is targeted; for example, on thinner or multiple bearing ewes, leaving at least 10 per cent undosed. This means that some anthelmintic-susceptible parasites survive.

**LIVER FLUKE IN CATTLE AND SHEEP**

Maximum temperatures at the time of writing (mid-March) are still below 10 °C in most parts of the UK. Significant snail and fluke development on the pasture will not yet have begun. In fact, most significant development occurs after mean temperatures reach the 10 °C level, and that usually occurs towards the end of April or in May.

Chronic fasciolosis is the predominant form of the disease in the spring, and cases of ill-thrift should be investigated. Levels of disease are expected to be high following the very high levels of infection seen during the autumn and winter months.

Blanket treatment of all ewes at turnout may well carry an unacceptable risk of selecting for anthelmintic resistance. For example, ewes in good condition or with singles may not need dosing, particularly if pastures are not heavily contaminated.

The ewes should be treated around lambing time and not later into lactation. For those ewes that are treated, those on contaminated pastures may need a persistent anthelmintic to prevent immediate re-infection; those turned out onto clean pasture may only require a short-acting one.

**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.

Coccidiosis affecting 6 week-old lamb.

Occasional cases of acute fluke disease from overwintered metacercariae are seen in sheep during April, however metacercariae from the winter infection of snails do not usually appear on pasture until May/June. Large numbers of overwintered infected snails are to be expected this year. 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 an 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 are often not dosed again until next month. Monitoring for undiagnosed infection or treatment failure is important and should be discussed with your vet.

Newly diagnosed cases of chronic fluke disease can be treated with any available flukicide; triclabendazole should not be used in such cases as a high level of activity against early immature fluke is not required. Triclabendazole should be conserved for use in sheep when the risk of acute disease is high in the autumn/winter months.

**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 ostertagiosis, dairy calves and autumn-born suckled calves will require strategic early season treatment in their first grazing season unless they are on safe grazing. If pasture contamination is suppressed until at least mid-summer, most worm larvae on the pasture should have died off by that time and the pasture should remain safe for the rest of the season if set stocked.

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 usually need preventative treatment for gut worms 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 ostertagiosis 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.

**ECTOPARASITES**

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**Ticks**

The important tick-transmitted diseases include tick-borne fever (*Anaplasma phagocytophilum* also known as *Ehrlichia phagocytophilia*), tick pyaemia, louping ill and Lyme disease.

Tick-borne fever can be a serious problem when susceptible (non-immune) pregnant sheep are grazed on tick-infested pastures causing high rates of abortion. In lambs, tick-borne fever seriously affects the lamb’s immune system with the frequent development of secondary bacterial infections referred to as tick pyaemia. Large abscesses develop under the skin associated with tick feeding sites, in the joints (joint ill), and affecting the spinal cord causing paralysis.

![Paralysis caused by tick pyaemia with the abscess affecting the spinal cord in the neck.](image)

Tick bite pyaemia causing polyarthritis (swollen right carpus).

For most sheep flocks in tick areas, tick control depends on the use of acaricides to prevent infestation. The acaricides currently authorised for the control of ticks in UK sheep include diazinon plunge dips (3 - 6 weeks), and deltamethrin, high-cis cypermethrin (6 – 8 weeks) or alphacypermethrin (8-12 weeks) pour-ons. Pour-on preparations are used prior to lambs being introduced onto contaminated pastures.
Local farm conditions may vary so consult your veterinary surgeon. Parasite control should be part of your veterinary health plan

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