AMTRA

SQP – CPD Programme

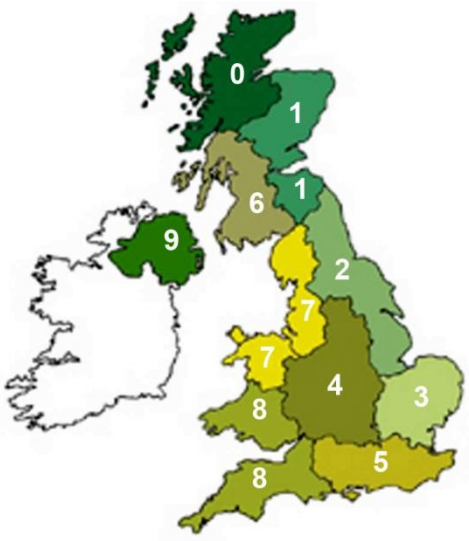
As part of AMTRA`s online CPD Programme for livestock SQPs, each month AMTRA will send you the Parasite Forecast which will highlight the parasitic challenge facing livestock in your area for that month. At the end of the Parasite Forecast you will find a series of multiple choice questions (quiz button) based on its contents. Answer the quiz online and you will be emailed a certificate with your score. This will form part of your SQP CPD requirement. The Parasite Forecast has been developed by NADIS (National Animal Disease Information Service) and is written by leading veterinary parasitologists and based on detailed data from the Met Office

NADIS Parasite Forecast – February 2019

Use of meteorological data to predict the prevalence of parasitic diseases

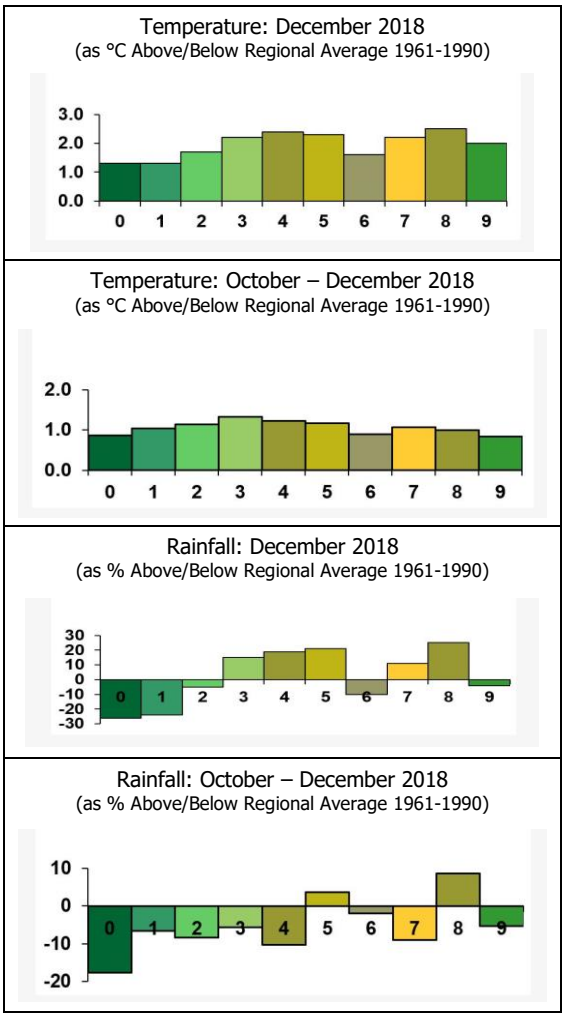
Regional Weather

(based on Met Office figures)



REGIONS

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



December 2018 saw relatively mild weather in the UK interspersed with cold spells further north and east. The provisional overall UK mean temperature was 5.8 °C, 1.9 °C above the long-term average (1981-2010), a pattern which was observed across all regions for the month of December and for the previous 3 months (October-December 2018). Overall, UK rainfall was 99% of the long-term average. Regionally, lower than expected rainfall was observed in northeast Scotland and northeast England in the month of December, with higher or expected levels of rainfall seen across all other regions. For the previous 3 months (October-December 2018), only south Wales and England experienced above average rainfall, with below average rainfall observed across all other regions, particularly further north and east.

February Parasite Forecast/Update

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

Supported by QMS *Improving sheep and cattle health*

Review of flock and herd health plan

February is a good time to review parasite control plans for the forthcoming grazing season.
Please speak to your vet or SQP about devising a parasite control plan to work for your farm. More information on sustainable parasite control in sheep and cattle can be found on the "SCOPS" and "COWS" group websites, and cattle and sheep-specific parasite control planners are available through NADIS (Figure 1). These can help you devise and visualise your plan for the coming year. Important things to bear in mind include:

- Seasonal risk and farm history. Different parasites cause problems at different times of year and under different conditions. The NADIS parasite forecast can be a useful resource to highlight specific seasonal and regional risks. It is also important to consider what specific issues you have encountered in the past and when/where these occurred on your farm.
- Identify at-risk animals. Generally, younger animals are more susceptible to parasitic disease, although other groups may also be at risk, such as adult cattle brought on to farms with a history of lungworm.
- Make sure you are familiar with the anthelmintic products available to you and the particular indications for their use. Appropriate choice of wormers and product rotation will help reduce selection for anthelmintic resistance on your farm.
- On farms with a previous history of lungworm infection in cattle, vaccination should be considered. Since the lungworm vaccine is live and has a short shelf-life, ordering and administration needs to be planned well in advance of turnout. For more information on ordering and administration please see below and plan accordingly with your vet or SQP.
- Diagnostic and performance testing. Diagnostic tests such as worm egg counts help decision making with respect to treatment and grazing management. Performance testing can also help target worm control to those animals worst affected by parasite burdens.
- Identify "safe" and "contaminated" grazing. Planning of pasture management and rotation should be done in conjunction with diagnostic testing and treatment regimes to help reduce exposure, infectious burden and disease in at risk groups of animals, and selection for anthelmintic resistance.
    - Safe pastures are those which have not been grazed previously, such as freshly seeded leys, and silage and hay aftermaths as they become available later in the season. Pastures previously grazed by sheep are generally safe for cattle and vice versa with respect to roundworms, although it is important to note this is **not** necessarily the case with liver fluke.
    - Contaminated pastures are those grazed previously by infected animals, including pastures grazed the previous season in some instances. For example, pastures grazed by last season's lambs may be a source of *Nematodirus* to lambs born this coming spring.
- Bio-security and quarantine treatments. Implementing holding and quarantine treatment of purchased animals prior to turnout on to pastures will help prevent introduction of anthelmintic resistance on to your farm.
- Other work planned through the year. Incorporating parasite control into other seasonal activities such as spring turnout, shearing, winter housing etc. can help with implementation.

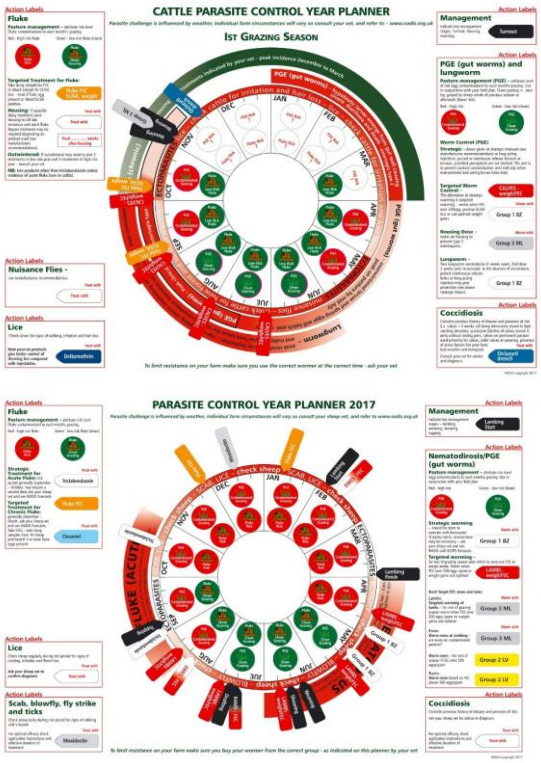


Figure 1: Cattle and sheep specific parasite control planners are available through NADIS and can help develop a sustainable, practical on-farm strategy.

Fluke – Sheep and Cattle

Despite the relatively mild weather experienced in November and December, development and emergence of liver fluke on pastures is likely to have arrested at this time, since development of the free-living stages of liver fluke and its intermediate snail host require average temperatures at or above 10°C. However, previously contaminated pastures will remain infective over winter and into the following season, meaning continued vigilance for signs of disease in animals grazing "flukey" pastures (areas of wet/boggy grazing and those adjacent to permanent water bodies) is necessary. Similarly, animals which have previously grazed high risk pastures towards the end of last

season may be affected by chronic fasciolosis caused by adult flukes residing within the bile ducts. Such infections can affect large numbers of animals, often presenting with few or no obvious signs of disease yet negatively affecting health, welfare and productivity reducing weight gain, milk yields and fertility in both sheep and cattle. Furthermore, chronically infected sheep and cattle can remain infected for months or even years if untreated, making them an important source of pasture contamination for the coming season.

Advised actions include:

- Monitoring for signs disease:
  - General dullness, anaemia and shortness of breath
  - Rapid weight loss, fluid accumulation (bottle jaw)
  - Sudden death in heavy acute infections
- In the absence of obvious signs, as is often the case with chronic infection, consider diagnostic testing.
  - Fluke egg counts can be used to diagnose chronic infection using faecal samples from either individual animals, or to determine infection status in groups of animals a pooled sample from ten animals representative of the overall group.
  - Where available, abattoir feedback can provide useful information with respect to fluke infection status (Figure 2)
  - For more information on diagnostic options and sampling, please speak to your vet.
- Routine clostridial vaccination to prevent Black disease and should be considered if not already in place.

Figure 2: Getting abattoir feedback can be a useful way of identifying and monitoring fluke infection on your farm (Photo credit: Jose Del Puerto DVM OV)

Where fluke infection is identified:

- Treatment with triclabendazole is recommended for acute disease, as this is the only product effective against both adult and immature stages of the parasite.
- For chronic infection, particularly in housed animals, consider use of a product other than triclabendazole.
  - Closantel, nitroxynil, oxyclozanide and albendazole (at the higher dose rate for liver fluke) are all effective against adult flukes, the cause of chronic fasciolosis.
- Due to concerns over emerging drug resistance, ensure correct dosing is based on bodyweight, and consider testing for treatment efficacy through pre- and post-treatment diagnostics.
- For more information about how best to implement the various treatment and control options and conduct efficacy testing on your farm, please speak to your vet.

SHEEP

PGE

Store lambs and yearlings at grazing may continue to be at risk from worm infections through the continued survival of infective larvae on pastures over winter.In pregnant ewes, as lambing approaches the so called “periparturient rise” (PPR) in worm egg count will begin to take effect (Figure 3). If such animals are not treated ahead of turnout this can lead to heavy pasture contamination and higher risk of disease in lambs in the coming grazing season. It is important to consider both timing and choice of wormers when treating PPR in ewes around lambing, as treatments strategies must be effective in reducing pasture contamination whilst minimising selection for anthelmintic resistance. It is also important to consider encysted or “hypobiotic” larvae, which upon resuming development in the spring can also be an important source of pasture contamination. In lambs, mass larval emergence can also cause scours similar to type-2 ostertagiosis in cattle. Such infections can be worm egg count negative, so it is important to consider grazing history and previous management when considering treatment.

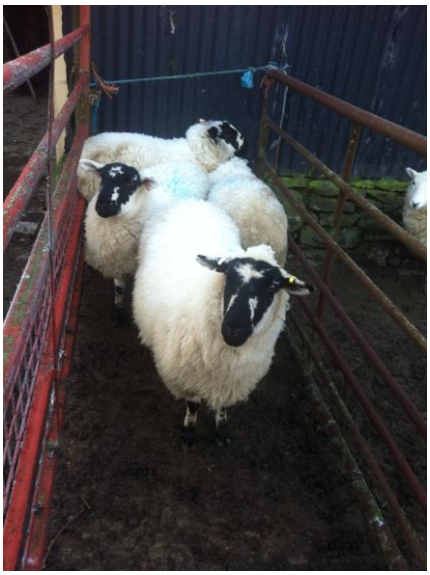


Figure 3: Whilst the “periparturient rise” has little to no impact on the health of ewes themselves, the increased egg output can be an important source of pasture contamination and subsequent risk to lambs. It is therefore an important consideration when planning worm control in your flock.

Advised actions include:

- When deciding whether to treat overwintered store or replacement lambs, pooled faecal egg counts can provide reliable information.
- When treating PPR in ewes, SCOPS currently recommend one of the following options as a way of reducing pasture contamination and risk to lambs whilst also minimising risk of selecting for anthelmintic resistance:
    - Leave a proportion of the ewes untreated. Targeted selected treatments based on WEC or body condition can be useful when taking this approach. Leaving around 10% of the flock untreated to dilute any selection effects for anthelmintic resistance is suggested as a rough guide.
    - Treat early in the post-lambing phase so that ewes can become re-infected with unselected parasites through grazing before their immunity is fully restored.
- Hypobiotic larval infections can be targeted with products available in most major worming groups.
- For more information, please speak to your vet or SQP and see the "SCOPS" group guidelines.

Ectoparasites

Scab (mite) and louse infestations can become a significant problem in sheep flocks over the autumn and winter months, typically September-April. Scab infestations cause loss of condition, secondary skin infections and eventually death if untreated, whilst louse infestations may indicate an underlying issue with flock health or management.

It is important to remember sheep scab is a notifiable disease in Scotland.

Advised actions include:

- Monitoring for signs of disease:
    - Affected sheep may show disturbed grazing patterns, kicking at their chest with their hind feet and/or rubbing themselves against fence posts.
    - Severe itching, wool loss, restlessness, biting and scratching of affected areas are all common signs, along with weight loss or reduced weight gain.
    - In the early stages, affected areas are the back and withers, but as the disease progresses wool loss extends down the flanks
    - When examined, the fleece may be wet, sticky and yellow due to serum discharge and the skin may become thickened, corrugated and contaminated with dirt from the hind feet (Figure 4).
- Scab and louse infestations can present with similar signs. Distinction can be made through microscopic examination of skin scrapings and fleece samples.
    - A serum antibody ELISA test is also available to aid diagnosis of scab.
- Studies have shown how scab mites can remain infective in the environment for up to 17 days. Fields, sheds and pens where infected sheep have been kept and handled should therefore be considered a potential source of infection to other sheep during this period.

Figure 4: Severe case of sheep scab characterised by wool loss, serous exudate and thickening of the skin.

Where treatment is required:

- Injectable macrocytic lactone (3-ML) products are effective against sheep scab with varying periods of protection. For more information concerning treatment with 3-MLs please speak to your vet or SQP.
    - It is important to remember that group 3-MLs are an important class of anthelmintics and, if used, should be factored into your roundworm control strategy.
    - There is evidence suggesting emergence of resistance in scab mite populations to treatment with 3-MLs in the UK. It is therefore vitally important to ensure correct diagnosis and treatment protocols are adhered to, and that veterinary advice sought if treatment failure is suspected.
- Plunge dipping with diazinon is effective against both scab and louse infestations.

CATTLE

PGE

Growing cattle not dosed appropriately at housing following their first or second grazing season may be at risk from type-2 ostertagiosis. This condition results from the triggered mass emergence of encysted larval infections in late winter/ early spring. Such infections cannot be assessed accurately by worm egg count.

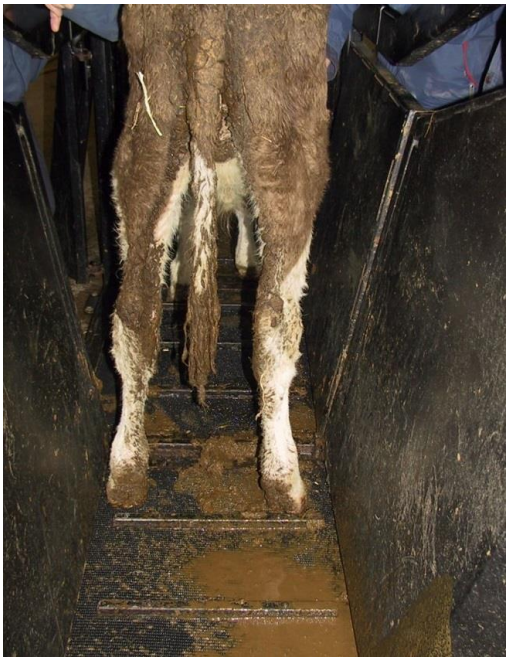


Figure 5: Young stock not dosed on housing in the autumn may be at risk from type-2 ostertagiosis towards the end of the housing period.

Advised actions include:

- Identify at risk animals based on age and grazing history
- Treatment with a product containing either a 3-ML or 1-BZ anthelmintic, as these are effective against encysted larval stages of *Ostertagia*.
- Be vigilant for signs of type-2 disease in youngstock:
    - Sudden onset profuse, sometimes intermittent, diarrhoea (Figure 5)
    - Loss of weight and body condition
    - Blood testing (plasma pepsinogen levels) can also be useful in aiding diagnosis.
- For more information, please speak to your vet or SQP and see the "COWS" group guidelines.

Lungworm

On farms with a history of lungworm infection, vaccination offers a valuable tool for protection against disease in calves (Figure 6). Since the lungworm vaccine is live, it must be purchased fresh ahead of each grazing season. Planning and ordering the number of doses required for your farm well in advance is therefore advisable.

- All calves over 8 weeks old entering their first grazing season should be given two doses of lungworm vaccine four weeks apart, with the second dose being given at least two weeks before turnout.
- In some instances, such as where anthelmintic regimes may have prevented full immunity being acquired over the previous grazing season, a further one off vaccination may be recommended.
- For more information please speak to your vet or SQP and see "COWS" group guidelines.

Figure 6: Lungworm infection can be a very serious problem for youngstock. On farms with a history of disease vaccination can be hugely valuable in reducing disease incidence and severity, but must be ordered and planned well in advance.

Ectoparasites

Louse and mite infestations in cattle are not uncommon during winter housing. A range of pour-on or spot-on synthetic pyrethroid and some group 3-ML pour-on products are available with efficacy against lice. Injectable group 3 ML preparations are also effective against sucking lice.

A relatively small number of injectable and pour-on group 3-ML based products are available for cattle against mange mites along with some pour-on synthetic pyrethroids preparations. For more information on ectoparasite control in cattle please speak to your vet or SQP, and see the "COWS" guidelines.

Don't forget to try the interactive quiz

Local farm conditions may vary so consult your veterinary surgeon. Parasite control should be part of your veterinary health plan.

To watch a webinar (video) based on this article and take an electronic quiz worth 3 CPD points, click **WEBINAR**