THE UNIVERSITY of EDINBURGH
The Royal (Dick) School of Veterinary Studies

Farm Animal Practice

Newsletter November 2021

Autumn is well underway now with the nights drawing in and things are getting pretty wet out and about. This month a final year student working with Rob is looking for assistance with a research project, David gives us some things to think about as we house our cattle for the winter and Alberto talks about a potential growing problem of Nematodirus worms in the autumn.

How do you control worms in your sheep flock?

As the days are slowly growing shorter, it is a time of year when many of you are reviewing health plans and considering which animals to retain or replace to produce next year's lamb crop. Undoubtedly these activities involve reviewing the sustainability of approaches to parasite control. Use of wormers/ anthelmintics are of course key to their control but require targeted use to avoid the impact of drug/ anthelmintic resistance. For example, at this time of year, it is useful to start thinking about fluke testing at risk groups in your flock to target flukicide treatments. Also, to avoid introduction of anthelmintic resistant worms and sheep scab SCOPS have recently developed simplified recommendations for risk-based quarantine anthelmintic treatments for replacement gimmers or tups:
If you would like further advice on controlling parasites in your flock, or have any concerns about your animals, please get in touch with the Farm Animal Practice who will be happy to help

Research project:
With anthelmintic resistance continuing to be a significant problem, affecting both production and welfare, we are hoping to gain a better understanding of the anthelmintic products used throughout UK sheep farms and establish the reasons behind the choice of protocols used in flocks. My name is Emily Horbury (a final year vet student) undertaking a research project to investigate the anthelmintic / worming protocols currently used in UK lowland sheep flocks, specifically to control of gut worms. The aim of this project is to provide an an insight into anthelmintic use across the UK, to help vets better understand how best to support farmers.
How can you get involved in this exciting research?
If you are responsible for the care of a flock of lowland breeding sheep located within the UK, and you are over 18, please scan the QR code which will take you directly to the short survey. Alternatively, you can access the survey by copying this address into your web browser:
https://edinburgh.onlinesurveys.ac.uk/src-project-title-a-survey-of-anthelmintic-protocols

The results from the survey may be used in future scientific, veterinary, and farming publications, and anonymity will be ensured throughout.

Pneumonia Prevention

Bovine Respiratory Disease(BRD) is a major cause of financial loss on both beef and dairy herds across the UK particularly affecting growing cattle causing lasting damage to lung tissue. This can cause significant reductions in growth rates, delays in reaching target weights to slaughter, reductions in lifetime milk yields and is one of the most common causes of calf mortalities. The estimated cost of pneumonia per calf is £82 (msd, 2021) rising further when chronic pneumonia cases develop.

BRD is known as a multifactorial disease and it is important whenever possible on farm to keep stress factors to a minimum to prevent BRD from being triggered. This is why it is important to have a plan in place on your farm to help reduce stress factors that

may affect your stock and reduce the likelihood of a pneumonia outbreak occurring.

Key questions to ask on farm are:

Are the cattle overstocked? **This will vary depending on the weight, age and type of housing used**

Is there exposure to draughts? **An animal's energy loss doubles when wind speed increases from 0 to 6.8m/s (15mph), causing the stress on an animal to rise.**

Is there good ventilation? **Fresh air is important for removing harmful bacteria and viruses from the housing environment. However when stale air is present, pathogen survival times are significantly increased.**

Is there mixing of different age groups? **Mixing of age groups can increase stress and competition for food and water, as well as bullying by older animals**

Are sick animals being isolated to prevent further spread of the disease? **Isolating sick animals will help reduce the spread of pneumonia within the group, with transmission commonly through close contact and inhalation of the pathogen.**

Is the colostrum management satisfactory? **Give four litres in the first 6 hours after birth, followed by another four litres within 12 hours of birth.**

Is there a vaccination protocol in place to help prevent and reduce the severity of a pneumonia outbreak? **This can be tailored towards the individual farm with the help of your vet.**

Having a well thought out prevention and treatment plan against BRD can help improve the welfare and profitability of your farm. On farm visits and post-mortems can be useful tools to both investigate and help prevent future pneumonia outbreaks on your farm.

Nematodirus:

It is well known that *Nematodirus battus* is a gastrointestinal parasite which has a huge impact in UK flocks due to the reduction in lamb growth rates and the increase of mortality. Therefore, sheep farmers and vets need to be prepared to control it and decrease the effects of this parasite in our livestock.

Nematodirus battus is a common cause of parasitic gastroenteritis in spring and early summer, mostly seen in young lambs between 6 and 12 weeks old. Although a rising amount of late summer-autumn infections are being found. This phenomenon is still not completely understood and different hypothesis are under further investigation.

In Spring, the main clinical signs are an acute profuse watery diarrhoea with lethargy, loss of condition, dehydration and, in worst cases, death. This acute onset of the disease is caused by the ingestion of large numbers of the infective third-stage larvae (L3). The massive presence of juvenile and adult worms in the small intestine induces an inflammatory process responsible for the clinical presentation mentioned above. In case of Spring Nematodirosis, the infection is maintained on the fields by passing from one season's lamb crop to the next. The diagnosis is based in the appearance of the classic clinical signs and the finding of the eggs in the faeces. Although eggs may not be present in the faeces until the adult stages developed. By then, the lambs will be already showing signs of disease. To avoid this, preventive strategic anthelmintic treatment with Benzimidazole or white drenches are required. The decision on when to treat will be based in weather forecast (hatching occurs after a period of chilling followed by a period of temperatures above 10C) and previous history of the fields. FWEC and regular weighting of the lambs are good tools to monitor infection after treatments.

On the other hand, in autumn, lambs don't tend to develop clinical disease if they have previously been exposed, but the performance of the flock is compromised. It is believed that the infection may be caused by the ingestion of eggs that were shed during the spring and hatched later in the year. It is unclear if free third larval stages that have survived on summer are implicated. In this case, we will need to keep monitoring the group throughout late summer and autumn with FWEC and weighing and treat when necessary. It is essential to implement a field and grass management system to reduce contamination and spreading of the parasite to clean fields.

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