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

Newsletter February 2025

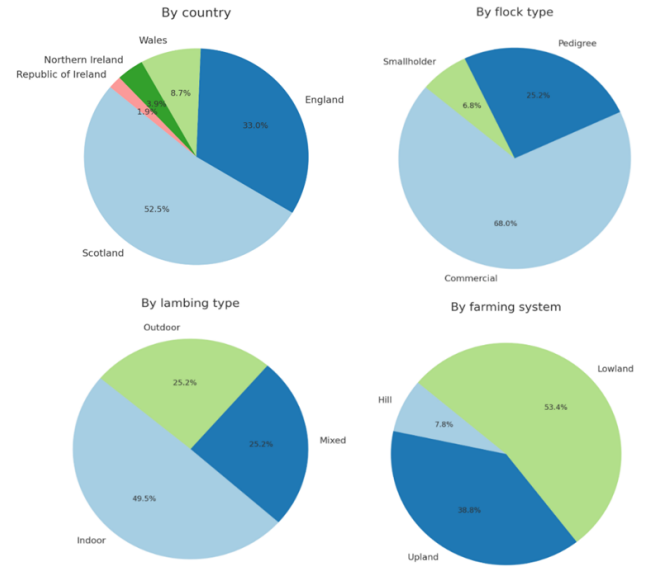
This month Alberto gives a summary of some of his research work into mastitis in sheep which some of you will have contributed to. Tony talks about effects of low Magnesium in cows and some information about a new test that has been launched for Liver Fluke in cattle and sheep.

Mastitis in Sheep

In 2022 and 2023, Alberto and the FAP team ran a research project to understand mastitis in meat sheep flocks in the United Kingdom and Ireland. The aim was to find out:
1.How common clinical mastitis is (or incidence).
2.How mastitis rates vary between different farming systems, countries, and management practices.
3.What farmers do to diagnose, treat, and manage mastitis.
The research involved a questionnaire shared through vets, the National Sheep Association, the Sheep Veterinary Society, and other industry groups via email, social media, and newsletters.

Who Responded?

The questionnaire was viewed 1,612 times, and 114 farmers completed it. Of the
se, 103 were from the UK and Ireland, representing a wide range of farm types (see graph).



Key Findings

1.Incidence of Mastitis:

- Farmers reported 3.7 cases of mastitis per 100 ewes each year (ranging from 0 to 22.9).
- Larger flocks tended to have fewer cases, but country, farming system, lambing and flock type didn't seem to affect the mastitis rate.

2.When It Happens:

- Acute mastitis (sudden and severe) was most common in early and late lactation.
- Chronic mastitis was most common at lambing, weaning and post-weaning.

3. Treatment Practices:

- Acute cases were treated more aggressively than chronic ones. This means that the use of drugs was significantly different for acute and chronic cases.
- Farmers used antibiotics (injectable and intramammary) and other treatments similarly for both types.

4. Impact on Flocks:

- Mastitis was the top reason for culling ewes (78%) and the second most common cause of death (43.8%).

5. Risk Factors:

- The weather (especially cold) was the most mentioned risk factor (43.8%).
- Farmers also highlighted hygiene at lambing, nutrition, genetics and the number of lambs as other possible contributors.

What Does This Mean for Farmers?

This was the first study to estimate mastitis rates in meat sheep across different farm types in the UK and Ireland. It showed that mastitis happens differently on different farms, and we need to understand more about the risk factors.
Farm-specific plans for mastitis prevention and control could help reduce cases. Working with your vet is key—this includes using tests to diagnose mastitis and treating cases responsibly to avoid medicine misuse.
Next Steps
Better understanding and tailored advice will help farmers manage mastitis more effectively, improving both animal health and farm productivity.
If you are interested in reading the full article, feel free to request a copy to Alberto. The paper will be soon published in the Vet Record with DOI 10.1002/vetr.5164.

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Magnesium and suckler cows

When we discuss Magnesium and suckler cows we think of the classic "staggers" case – very low blood magnesium levels leading to the nervous cow that goes down and fits in Spring or Autumn. But marginal magnesium levels can impact performance as well. Blood sampling cows 1 month pre-calving can give a good measure of how the diet is supplying magnesium.

With suckler cows housed pre-calving we see marginal magnesium blood levels that can impact calving performance – known as Slow Calving Syndrome. This is due to the synergy between calcium and magnesium – low magnesium levels impact calcium metabolism and this means blood calcium levels are reduced. This leads to reduced muscle contractions – cows will move less and the uterine contractions are reduced. I have seen cases of this – cows are lying down, quite comfortable, but not getting on with calving. The outcome is a higher level of interventions and a higher stillbirth rate.

Magnesium is an outlier within the ruminant mineral family – there are bone reserves but they are not readily accessible – unlike calcium which can be released quickly from bone. So, cows require a daily magnesium intake to maintain required levels.

A 600kg beef cow will require 20-30g magnesium per day. Lactation increases requirements – 0.14g/litre. 10kg DM from forage may supply 15g magnesium – this clearly leaves us short. And if a diet is straw based the supplied figure will be even lower. Thus, suckler cows require additional supplementation. If we are aiming for total 30g supply then we need 15 g from supplements – 100 grams of a 15% supplement or 75g of a 20% supplement.

Check the supplement you are using. If we are looking to guarantee 30g/cow/day we are looking at powdered mineral on diet or water supplementation. Lick buckets can help but there no guarantee of individual intake. When I have seen slow calving syndrome – once we correct the magnesium levels the cows respond very quickly – like night and day as one farmer told me. But prevention better as always.

There are other factors to consider if magnesium is an issue – high forage potassium levels can reduce magnesium absorption from the rumen. Lower rumen pH – as occurs on good pasture – reduces magnesium availability in the rumen.

New lateral flow test for liver fluke launched!

A new on-farm lateral flow test for liver fluke, developed by the University of Liverpool and commercialized by Norbrook, allows farmers to quickly and accurately determine whether treatment is necessary.

Similar to COVID-19 tests, it detects host antibodies from a pinprick of blood, providing results within ten minutes without the need for lab testing or a vet visit.

The test is more sensitive than faecal tests, enabling earlier detection of infection, and requires samples from ten animals (must be first grazing season) per group for valid results.

Kits are available for cattle and sheep, and correct interpretation of results is critical, with vets encouraged to guide treatment decisions.

We encourage our farmers to ask and discuss the implementation of this new tool into your flock/herd.

Final Year Teaching

It is coming up to the time of year again where our final year students start their selected rotations where they choose seven rotations that they want to repeat at a higher level. Every **Tuesday** morning as part of the farm rotation, we have the students carry out a herd or flock health investigation on a farm. This is often taking blood samples for metabolic profiles to assess the nutritional status of animals pre-calving/lambing, but can be anything from abortion investigations to housing assessments. These visits are student-led and as such, the visits and work will be free of charge. **If you would be interested in having us carry out one of these visits on your farm, please get in touch Ali on reception to book or with one of the vets if you wish to discuss further.**

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