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

Farm Animal Practice

Newsletter November 2019

This month we introduce our current locum, Mike and Rob remind us of their study looking into sheep mastitis and Rob and one of his Masters students, Emily Freeman, give us an autumnal reminder about parasite control.

As the Farm Animal Practice says goodbye to Jaz, our recent locum Farm vet, we welcome Eleanor Legg to the team. Eleanor will be providing clinical cover for the practice until the middle of December. Eleanor graduated from the Royal Dick in 2005 and has worked in a range of veterinary practices but with her focus always being production animal. Eleanor has a keen interest in cattle fertility but has a wide range of experience in all aspects of farm practice. We look forward to working with Eleanor and hope you will make her feel welcome when she visits your farms.

Mannheimia haemolytica infection in flocks: are you selecting the right treatment?

Selecting which ewes to cull is integral to the preparations for the next breeding cycle. In the farm animal hospital, many of you donate cull ewes for teaching purposes due to chronic ill thrift and disease. We frequently receive ewes being culled due to previous bouts of mastitis, as these animals are unlikely to respond to treatment at this stage in disease.

Ovine mastitis accounts for over £120 million per year in direct and indirect costs to the UK sheep industry. At farm level this accounts for reduced milk yield, leading to poor lamb growth, occasional deaths and on average 4-6% of ewes being culled per annum. One common cause of ovine mastitis is the bacteria *Mannheimia haemolytica*. This bacteria is also the main cause for acute pneumonia in growing lambs, and can lead to acute deaths or chronic pneumonia. *Mannheimia haemolytica* can be treated with a variety of antibiotics, however over half of post-mortem cases show evidence of antibiotic resistance. Other reasons for treatment failure include the severity of damage caused by the time signs are seen, the treatment course being too short, or the presence of different bacterial species.

We aim to provide you with feedback about donated cull ewes through post-mortem investigations to improve the health of your flock. However, at post-mortem we can confirm that mastitis was present yet we cannot determine if initial treatments were not successful as the initial infection is long gone. To address this, we are conducting a small study to identify the common causes of ovine mastitis, their susceptibility to commonly used antibiotics and the outcome of treated cases. This may also provide information about the best antibiotic choice for acute pneumonia.

We are looking for volunteer farmers to be involved in this study, if you are interested in being involved we will provide packs for collecting milk from ewes with mastitis during the upcoming lambing season. Milk samples can be frozen and collected at the end of lambing. These samples will then be tested free of charge to identify the bacteria present and if they are resistant to antibiotics. All results from your farm will be fed back to you, but this data will then be anonymised for the research study. If you are interested in being involved, please feel free to speak to Ali or one of the vets for more information.

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Autumnal opportunities for parasite control

As the days get shorter and the weather gets colder, housing cattle and gathering sheep provides a great opportunity to consider the control of both internal and external parasites. Parasites can cause significant economic losses. In cattle, presence of gut worms has been reported to decrease growth rates by 30%; heavy lice infestations can indicate ill thrift and underlying disease; and fluke infestations alone cost the UK industry £300 million per year! With these apparent implications of all parasitic infections, strategizing a plan to control for parasites is of benefit to both you and your stock.

For your first grazing season store cattle, treating for gut worms is especially important at housing since re-infection from grazing can be avoided. Worms picked up during grazing encyst during the winter and can re-emerge in large numbers during spring which will cause significant impact if not treated at housing. Faecal worm eggs counts can also be difficult to interpret at this time of year as worms do not produce any eggs whilst encysted. Also the risk of lice and mites, may increase at housing due to the closer quarters housed stock experience.

To target these encysted worms (*O. ostertagi*), other nematodes, mites and liceconsider using a pour on macrocytic lactone, it is essential to protect all housed stock as we move into the housing period. Using the worming treatments isn't the only tool to consider when managing parasites in your herd. Using weigh scales once during grazing or at housing time can be used to identify animals which are likely to be affected by worms through assessments of live weight gains. Such techniques reduce anthelmintic use and allows accurate dosing, thus potentially saving you money and minimises the risk of anthelmintic resistance.

The warm and wet summer we've experienced has generated a high risk for fluke infections for sheep and cattle throughout Scotland as we move through autumn. As most farms have wet or boggy fields there is a chance your stock have been exposed to fluke this grazing season. Due to this high risk, it is vital to consider submitting samples to the practice for diagnostics in order to develop a targeted treatment plan. In sheep monitor for acute disease, such as sudden deaths and contact the practice to investigate. To avoid the impacts of chronic fluke infection in sheep and cattle, monitoring for infection is key to target treatments appropriately. 10 individual faecal samples can be submitted for a pooled sedimentation to test for fluke eggs indicating potential infection with adult worms. Alternatively for first grazing season animals, blood samples from 10 individual animals can be taken for *F. hepatica* serology that will test if your stock have been exposed to fluke over their first grazing season. These diagnostics allow for targeted use of wormers to treat the different stages of fluke and avoid contributing to the growing resistance to Triclabendazole, the only wormer suitable to treat acute disease. To avoid the production impacts of chronic infections, treat with a fluke drench, such as Closantel or Nitroxynil which both work well against later stages of fluke. However, it is important to repeat this dose 6-8 weeks after the first dose to target any younger flukes that may have been initially missed. Repeating a faecal sedimentation two weeks after treatment can also aid in repeating treatment only for animals that need it. Take the time to phone the practice to discuss specific treatment regimes with one of our vets and don't forget to discuss parasite control at your annual health plan review.

In addition, submitting samples to the practice not only provides the apparent benefits to your herd, but it also provides opportunity for Dick Vet students to learn about parasite control. As a veterinary student completing an intercalated Masters by Research (MScR) degree, assisting with the evaluation of client samples has enabled me to gain the necessary skills to conduct my MScR project. My project, supervised by Rob and Neil, will focus on understanding the populations of gut worms in co-grazing cattle and wild buffalo populations in rural Kenya. With my project I hope to work toward adequate parasite control measures that will benefit not only local Kenyan farming systems, but also apply to farms back home in Scotland.

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