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

Farm Animal Practice

Newsletter May 2022

Hopefully spring work is well under way and that lambs and calves are thriving away in the field. This month Alberto discusses mastitis in sheep flocks and introduces a project he will be working on over the next few years, which we hope many of you will get involved in, and David discusses Lungworm control through vaccination.

Mastitis in commercial sheep flocks

Mastitis is an inflammation of the mammary gland, generally caused by bacterial infection. The most common pathogens are *Staphylococcus aureus and Manhaemia haemolytica* but other bacteria or viruses such as Maedi-Visna can cause it. Some of the risk factors are teat conformation, big litter size, old ewes, deficient nutrition or poor environment and lambing hygiene.

Acute clinical cases are detected by the ewe's clinical signs. These may include changes in milk (color, smell, clotting), changes in the udder (hardiness, color, warmth), changes in ewe demenaour (dullness, recumbency, anorexia, etc), hungry lambs or stiffness in hind legs, amongst other clinical signs. Depending on the severity of the infection, ewe health can quickly deteriorate and die.

Early diagnosis and treatment with systemic antibiosis and non-steroidal anti-inflammatory drugs is required in acute cases. If the ewe doesn't fully recover, either one or both halves may be lost or may develop chronic mastitis, compromising the productivity for future seasons. To avoid this happening, it is strongly recommended to examine the udders after weaning and pre-breeding, so any ewe with lumps/abscess, bad udder/teat conformation, or lost half can be removed from the flock.

The economic and production impact of diseases such as gastrointestinal parasites, lameness and OPA are well understood in UK Flocks. Even though mastitis is a disease deeply investigated in dairy cattle and at certain degree in dairy small ruminants, there are plenty of aspects still to be unraveled in suckler ewes. It is known that mastitis is a health and welfare concern for the ewe, reduces lamb performance, increases culling and replacement rates and veterinary and treatment costs, but its repercussions, specially chronic and subclinical mastitis, may be greater than we consider.

Due to this lack of knowledge, Alberto, our sheep resident, has an interest in mastitis and his research will be about it. The project will be divided in two parts. Firstly, an online questionnaire with mastitis-specific questions will be created and distributed to as many UK sheep farmers, and ideally, to some European farmers. Its purpose will be to characterize the problem and identify new risk factors. Secondly, a field and laboratory study will take place in farms with high incidence of mastitis. Taking milk samples and analyzing them will help on clarifying some unknowns of this complex disease and potentially provide some useful prevention and control measures.

Encapsulated abscesses in udder tissue (Sheep medicine, Phil Scott)

All our Farm Clients will be very welcome to participate in the project.

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Lungworm Vaccination

Lungworm (Husk) is widespread across the UK with outbreaks on farm mainly occurring during late summer and autumn. Dictycaulus viviparus is the parasitic worm involved in cattle that can cause infection at any age.

Once a pasture is infected with lungworm, the Pilobolus fungi can aid with its spread across a pasture. Lungworm larvae attach to the spores of the Pilobolus fungi which when dispersed, carry the lungworm larvae with them to a distance of 3 metres.

Lungworm infections can have major economic impacts on farm, with estimated costs ranging from £50-£140 per clinically affected animal (MSD). Morbidity rates can be high during outbreaks, with deaths occurring in severe cases. Some of the key clinical signs to look out for are coughing, respiratory distress, increased salivation, nasal discharge, inappetence and reduced milk yield.

Suspect cases should be discussed with your vet, where faecal sampling may be advised to aid in diagnosis of a lungworm infection. This can be done in our in-house Farm Animal Practice lab using the Baermann technique.

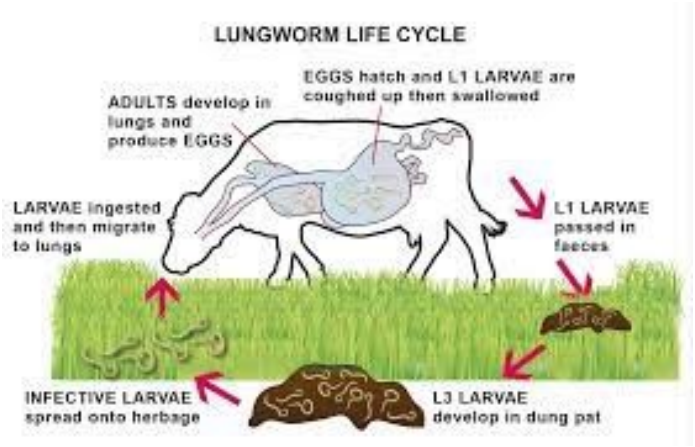

Diagram from www.cattleparasites.org.uk

Lungworm vaccination can be used to help build a more consistent level of immunity within the herd, focussing on animals that are naïve or have had little exposure to lungworm (for example animals before their first grazing season).

The vaccine is given orally and contains irradiated lungworm larvae, administered as two doses four weeks apart, with the second dose given a minimum of two weeks before turnout onto at risk pasture. Cattle that are grazing and **are being exposed** to lungworm on the pasture should have a good level of immunity towards lungworm, and in such cases annual revaccination is not generally required. A single dose of Huskvac can be used for annual revaccination if exposure to lungworm larvae has not occurred during grazing.

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