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

Farm Animal Practice

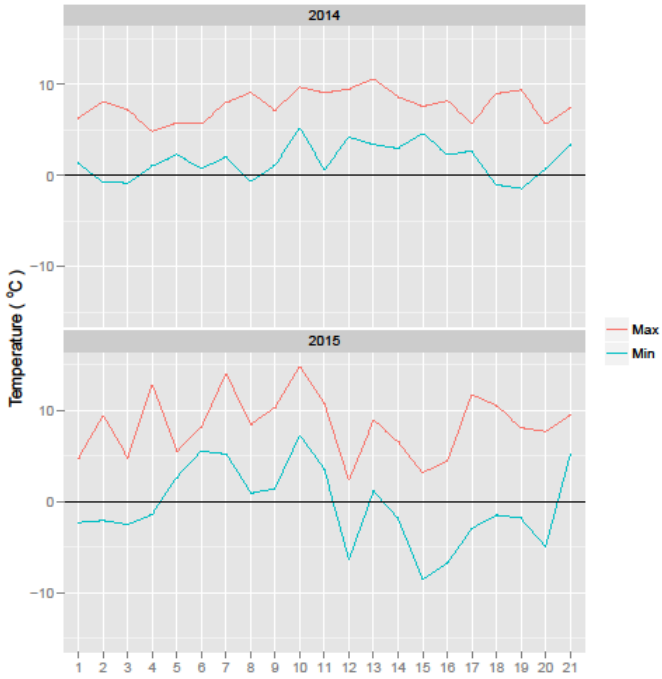
March 2015

Just to remind you about our FAP Farmers Meeting on Lameness in Cattle and Sheep which will start at 7.00pm Tuesday 3rd of March at the Farm Animal Hospital. We hope to see you all there and will welcome you with a nibble and a drink.

In our March newsletter Alex explains one of the factors that may have triggered recent pneumonia outbreaks in the practice, Izzy briefly touches on the importance of preventing calving difficulties, James discusses fractures in calves and lambs and Martin writes about the nutritional management of heifers around calving.

Recent Calf Pneumonia Outbreaks

Pneumonia in calves is always a concern, especially over the winter months. Anecdotally, this year appears to have been particularly bad, raising the question as to why. There are many factors that can contribute to an outbreak of respiratory disease in calves, including the disease status of the farm, wind chill from draughts, building ventilation and drainage, stocking density, nutrition, age of the animals and 'stress' such as weaning and group changes. One factor that has been particularly noticeable this year is the variation in temperature. Plotting the minimum and maximum daily temperatures for February this year and last, it is immediately evident that temperature swings have been substantial, ranging from -8.5°C to nearly +15°C.



Calves that are dry and protected from draughts can cope with cold; however large variations in temperature are known to be physiologically 'stressful'. It is tempting to use the weather as an excuse during a pneumonia outbreak and whilst it may be the trigger for disease, it underlines the importance of ensuring that as many of the risk factors that we can control are addressed, so that factors outside of our control don't tip the balance in the disease's favour.

Vaccination is available for some, but not all, of the viruses and bacteria involved in calf pneumonia. However factors such as poor nutrition, BVD and 'overwhelming challenge' can interfere with vaccine performance. Despite this, even in the face of an apparent vaccine 'failure', the vaccine will likely be reducing the severity of the outbreak and it is essential that a vaccination programme is tailored to account for differences in management and disease status of each herd.

If pneumonia has been a particular problem in your herd this housing season, it is worth contacting us to discuss the options for modifying management and vaccination practices to reduce the chances and severity of disease in the future.

Difficult calving impacts on dam and calf health, welfare and performance.

Calving is a critical time for the health and welfare of the cow and a normal calving is essential to optimise a cow's future fertility and production. Dystocia (abnormal or difficult birth) can negatively impact on these and also increases culling rates in the herd. Additionally dystocia is painful. Therefore providing pain relief by injecting non-steroidal anti-inflammatory drugs (NSAIDs), such as Metacam or Flunixin, in the period immediately following calving is likely to improve cow well-being and perhaps productivity. In cows that are down after calving, NSAIDs are also shown to result in rapid, significant improvement.

Birth is not only a challenging process and a high-risk time for the cow but also for her calf. Dystocia is associated with higher calf mortality, not only in the period immediately after birth but up until weaning! When the calf survives a difficult birth it is certainly not out of the woods yet; its growth, health and welfare may still be adversely affected. Therefore trying to minimise some of the risks associated with calving difficulties such as high calf birth weights, small pelvic size of heifers and cows, and over- and underconditioning of dams are crucial in optimising your herd's productivity.

Limb Fractures in Calves and Lambs

With peak lambing season just around the corner and the spring calving season looming on the horizon we unfortunately expect to see fractures in young lambs and calves in the coming months. Young animals are more prone to fractures both because the outer layer of the bone (the cortex), which is the major load-bearing part of the bone, is thinner and because the growth plates (found at either end of the limb bones) are still open.

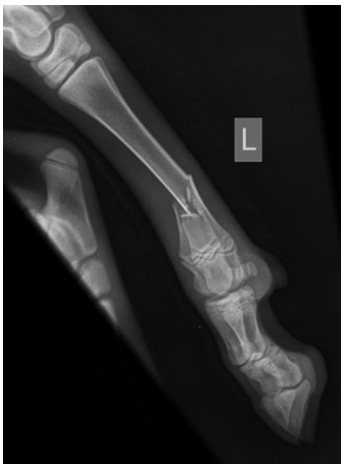
Avoiding fractures

Many fractures we see in young lambs are due to being trodden on by the ewe. Providing a large enough pen (e.g. 2-2.2 square metres) can reduce this risk. Fractures in calf legs often occur at the time of calving due to inappropriate placement of the ropes (the rope should run in line with leg, should not pull across the leg and should never be placed along the outside of the limb). Both lambs and calves present with fractured legs following getting them stuck in fences, gates, pens; thus choose these structures wisely!

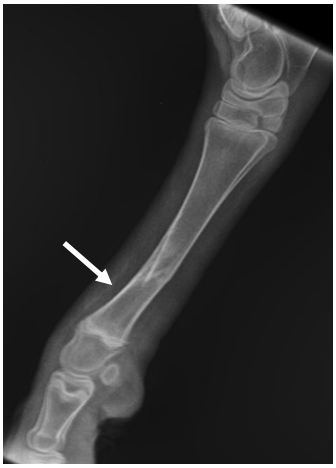
Fracture repair

Young animals' fractures usually heal well providing the limb can be immobilised properly (e.g. by a cast). Fractures above the hock and above the elbow are very difficult to immobilise and so are often unfixable. Complex fractures and fractures of growth plates heal less well than simple shaft fractures. Partial fractures of bones do occur in young animals; the animal is acutely lame but the limb seems intact. These may require an X-ray for definitive diagnosis but usually carry a very good prognosis

We are happy to see both lambs and calves at the surgery/hospital or on farm for casting. Casts usually require splitting after 2 weeks (due to the rapid growth rate of the young animal) and are then reapplied as a split cast for a further 2 weeks.



X-ray of a lamb's leg with a low shaft fracture. The open growth plates and thin cortex can be clearly seen.



X-ray of a lamb's leg following cast removal after 2.5 weeks. Healing has begun as can be seen from the line of bone overlying the fracture site (arrow). The split cast was reapplied for 2 more weeks.

Nutritional Management of First Calvers

Lactation has a greater energy requirement than pregnancy and after calving a heifer must maintain body condition, nurse a calf, recover from calving, cycle, rebreed and continue to grow. If adequate nutrition is not provided at this time she may fail to rebreed, her calf may have a poor daily liveweight gain and her own growth may be stunted. This can have a large economic impact on a suckler herd and therefore, where possible, first calvers should be managed separately to the rest of the adult herd.

Both energy and protein supply (and intake) must be maximized to meet the heifers' needs. Better grazing should ideally be reserved for this management group or forage/concentrate supplementation at pasture considered. Forage quality and palatability is vital in housed animals as intakes are low relative to the energy demand after calving. Optimal stocking density and feed face management will be important to maximise intakes as social hierarchy affects feeding behaviour amongst first calvers. A good supply of Effective Rumen Degradable Protein (ERDP) is needed in the ration for both growth and milk quality. Good grazing should provide adequate daily levels of ERDP. However housed animals on poor quality forage may be deficient so supplementing with sources of ERDP such as soya or rape meal should be considered.

Ensuring an appropriate BCS before calving (2.5-3 BCS) and supplying ample energy and palatable forage should increase dry mater intakes 3-4 weeks before calving. This will help prepare heifers to transition into the adult herd with improved intakes and ration utilisation after calving and further into lactation.

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