



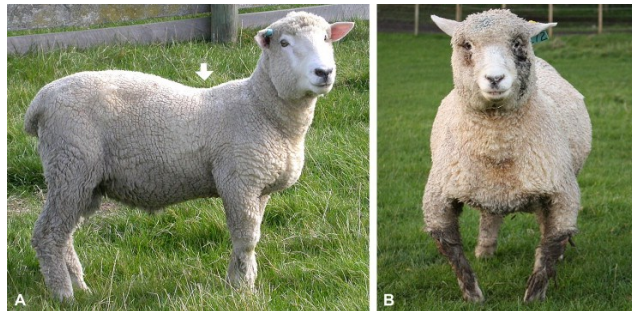
The magazine of Cambridge Vets *treating all animals large and small*

February 2017

Nutritional Rickets in Lambs

A Southland sheep farm in 2015 had a mob of lambs born with rickets. 45/750 were born with short legs, legs bowed out, bowed in and bowed forward, and other skeletal deformities. It was determined that they had been born with rickets as a result of the pregnant ewes grazing fodder beet during pregnancy which had low levels of phosphorous. In addition, 60 out of 460 rising 2 year old ewes that had been grazed on the fodder beet as 1 year olds had twisted, small and brown incisor teeth, presumably from the same cause.

Rickets is seen when Vitamin D or phosphorous deficiency affects the development and mineralization of the bones. In this case the fodder beet was not always low in phosphorous, but in May the leaves were borderline and the bulbs were low. If a ewe is on a long-term phosphorous deficient diet, it is likely the foetus would also be low in phosphorous. This may have been worsened by the low sunlight hours of Southland yielding the lowest Vitamin D levels in sheep over winter.



Source: (NZVJ Jan 2017, K Dittmer)

Foetal Loss in Ewe Lambs and liveweight changes

The International Sheep Research Centre at Massey followed nearly 1000 ewe lambs, scanning them 3 times (at 56, 80 and 110 days after start of mating), weighing and condition scoring them prior to breeding and throughout pregnancy, and taking blood samples for progesterone between days 45-54 and 73-84 of pregnancy.

The findings were that ewe lambs with foetal loss (8%) had a marked reduction on liveweight in the 24-30 days before foetal loss. There was no association in this study (in contrast to a previous NZ study) with poor weight gain between breeding and mid gestation, and foetal loss. It is an open question as to whether the foetal loss caused the reduced weight gain, or the factor causing the poor weight gain resulted in foetal loss. Progesterone is essential for maintenance of pregnancy, but no drop in progesterone was seen in the ewes that suffered foetal loss.

Source: (Ridley, NZVJ Jan 2015)



FPT and Colostrum Management

A recent study by Massey University looked at the passive transfer of protective antibodies in colostrum to the calf.

They blood sampled 230 calves <1 week old and measured the protein (which corresponds to the amount of colostrum antibodies absorbed).

25% of calves had levels <50g/l, which demonstrated Failure of Passive Transfer (FPT).

It is critical for the health of a calf to receive adequate colostrum (4 litres) in the first 12 hours; after 24 hours the intestines do not absorb the maternal antibodies in the colostrum, which protect against disease.

Two factors were identified as having an impact on FPT:

1. Feeding colostrum for 4 days after birth increased the protein levels in the blood, decreasing the risk of FPT. This may provide an additional safety net with some absorption of antibodies after the first day.
2. The busy-ness of peak calving numbers was associated with FPT. This suggests that work overload may have resulted in calves not getting such diligent colostrum management. Having extra staff to help over peak calving may decrease the risk of FPT and improve calf health.
3. As the calving season progressed, the protein levels rose. In America, the calf IgG levels were highest in summer and lowest in winter. There may then be a mechanism whereby spring calvers have better colostrum quality than winter...perhaps stress or nutrition.

SHEEP - MATING VAX

Androvax is a vaccine that increases fecundity in breeding ewes, increasing lambing percentage by an average 20%. It contains an androstenedione-protein complex which raises antibody levels, causing a change in hormone production which temporarily blocks the release of eggs from the ovaries. More eggs mature and when antibody levels fall these extra eggs are released, thus increasing the number of lambs born.

In the first year two doses are administered. The first dose is given 8 - 10 weeks before ewes are mated and the second dose at 4 - 6 weeks prior to mating. In subsequent years, previously vaccinated ewes only need a single booster injection 4 - 6 weeks prior to mating.

Toxovax

Toxoplasmosis never goes away and is very common on farms in New Zealand. One shot of Toxovax (at least 4 weeks before tupping) gives your ewes a lifetime of protection against the devastating abortion storms Toxoplasmosis can cause. Vaccination can increase lamb numbers by an average of 3% as well as decreasing the number of dry ewes. Please order this in before you need it as it has a short shelf life. The majority of ewes have had exposure to both toxoplasmosis and campylobacter, indicating that they are present and circulating on virtually every farm in the country. The risk of disease is highest in hoggets and two toothed and the results of infection can be devastating. Abortion storms result in the loss of between 20% and 30% of lambs but can be as high as 70%. Such losses can be both emotionally and financially crippling. Even when no abortions are seen, losses can still be significant, with increases in the number of both dry and late lambing ewes. Both diseases have also been implicated in the births of stillborn or weak lambs that fail to thrive. Vaccination has been shown to prevent losses from both abortion storms and the reproductive effects of both diseases. Increases in lambing percentage of 3-9% have also been shown to be a benefit from the use of vaccination. You cannot control the weather or the lamb schedule, but you can certainly avoid the devastating effects of abortion storms whilst improving lambing percentages.

Campyvax – requires a booster pre-tupping and a sensitizer 4-8 weeks earlier for ewe lambs.

Redgut in lambs

I recently saw a couple of cases of redgut in ewe lambs.....

Red gut is a disease of weaned lambs grazing lucerne (and other highly digestible / lush forage) characterized by sudden death. Post-mortem findings are reddened small and large intestines, which are usually displaced and twisted. This obstructs the blood vessels, causing death by shock. It has been shown that there is increased large intestinal fermentation in lucerne-fed lambs compared with those given ryegrass pastures, which may predispose lambs to the disease red gut. It is thought that this causes the intestines to move and, with a relatively small stomach that does not stabilize gut position, allows it to twist.

The condition can be prevented by careful attention to feeding regimes that prevent development of the predisposing feature of small forestomachs and an oversized large intestine. This is achieved by intermittent grazing of "dangerous" pastures.

Red gut and visceral displacement do not occur when lambs graze ryegrass pastures. The incidence of the disease was reduced when lambs grazed very weedy stands, when lambs were supplemented with good quality meadow hay, and when lambs were suckled.

DRY COW CONSULTATIONS AND PAR

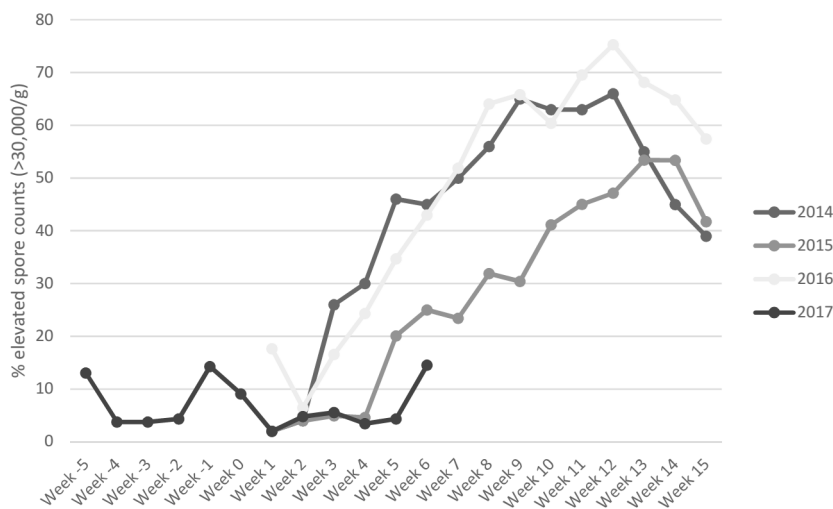
Drying off will soon be upon us! Just a reminder that for the prescription of dry cow therapy, there is both an opportunity and a legal requirement to go over the milk quality and mastitis status of your herd with your vet. Any concerns and options can be discussed. We can prepare most of the data for our Infovets clients, otherwise please bring cell count and mastitis records to the consult. The use of DCT is coming under scrutiny to ensure we are prescribing and using it within best practice guidelines, to minimize the risk of antibiotic resistance. We are quite happy to go over the farm's annual Authorization paperwork at the same time, and discuss your PAR requirements, and the choice and use of medications.

Animal Health Plans - Do you want a wall calendar or a review of treatment protocols for herd health on your farm? Your vet will be happy to tailor an animal health plan to your requirements.

THEILERIA

We have been seeing a few calves and young stock with Theileria this summer. Often the signs are vague, with reduced weight gain and slightly pale mucous membranes. Supplementary feed and general health care have seen these individuals make a good recovery.

FACIAL ECZEMA RISK - TRENDS IN SPORE COUNT LEVELS



FACIAL ECZEMA

The Facial Eczema season has so far been later and milder than last year. But don't assume it will finish early! Keep an eye on our Facebook page for spore counts (or even better – submit some grass samples), and get some blood samples taken for zinc levels. 1 in 4 farms have zinc levels either too low or too high, and I really don't want to see more zinc poisoning! Summer crops can reduce the risk of FE e.g. Chicory has a low risk presumably because it does not yield the dead litter base for the spores to proliferate.

MAGNESIUM UPDATE

A recent article in the Vet Script compiled by Alice Fraser of SVS Labs discussed the less well known risks if getting Magnesium supplementation wrong! We have seen both of these presentations in the past:

In the first case, the cow was anaemic so a blood sample was submitted to look for Theileria. The red blood cells looked unusual under the microscope, and no Theileria were seen. The magnesium levels were then checked and shown to be significantly low. Magnesium enters the red blood cells when they are being formed in the bone marrow. If the body is deficient in magnesium, the red blood cells have a shortened life and membrane defects. This results in "**Taranaki Anaemia**" also known as "**Taranaki Leatherbag**" due to the udder oedema.

Interestingly, chronic and marginal magnesium deficiency may not result in the classic metabolic issues, whereas acute decreases in magnesium lead to a drop in the magnesium levels in the cerebrospinal fluid and the neurological signs of grass staggers.

In the second case excess magnesium was being supplemented due to a miscalculation, leading to 10x the amount of magnesium oxide being mixed into palm kernel. The cows were getting 400g each per day. Signs included recumbency, abdominal pain, gut stasis and bloat. The mild cases displayed lethargy and green scours, whereas the severe case died. The herd also experienced a significant milk drop.

Excess magnesium blocks the channels for calcium in smooth muscle, leading to the guts stopping (ileus), pooling of chloride, metabolic alkalosis and dehydration. This slows down the kidneys getting rid of the magnesium, making the situation worse! I suspect many down cows may suffer from excess magnesium blocking calcium (too many bags)... Treatment involved correcting magnesium levels and increasing calcium supplementation on forage.

BALD CALVES

Anagen Defluxion in a mob of calves

This is an interesting case in so far as it has a cool-sounding name and skin biopsies are not commonly performed in farm animals. I suspect we see this quite commonly, but it was great to get a definitive diagnosis.

Clinical Findings - A mob of 1 month old calves was losing hair and going bald. It was reported as primarily affecting white face calves (Hereford cross dairy), and seen both on the face and legs. The calves were subsequently viewed over the fence, drinking from a cafeteria; there was no diarrhea, and no history or appearance of illness. A tentative diagnosis of spring eczema was made. A follow-up visit was requested to give a definitive diagnosis. It was at this stage apparent that it was not just white skin affected; some black areas and some necks were also bald. There were no abnormalities observed other than the alopecia (complete hair loss in patches). There was no itching/scratching, nor any skin lesions. Skin scrapes and blood samples were taken. The opportunity was taken to do some punch biopsies of skin when the mob was sedated for routine disbudding.

There were several different potential diagnoses to consider:

- Spring Eczema
- Ectoparasites (Mites / Lice)
- Milk scald
- Diarrhoea
- Idiopathic alopecia over the head
- Anagen Defluxion
- Hereditary hypotrichoses
- Follicular dysplasia
- Vitamin C-responsive dermatosis

Results

- Skin scrapes – no ectoparasites seen
- Blood results – No significant abnormality, liver enzymes at normal levels. GGT range 0-36 for calves – the slight increase was probably due to residual colostrum effect.
- Biopsy Histology – The hair shafts were generally present in follicles, and both sections had the majority of hair follicles in the anagen phase of the hair growth cycle. This is unusual because in general hair growth is not synchronous.



Diagnosis - Anagen Defluxion

Discussion

Anagen Defluxion (or anagen effluvium) is an uncommon dermatosis where a stress (such as illness or fever) affects the anagen phase of hair growth, resulting in temporary growth defects in the hair shafts. Hair loss can be seen over the neck, trunk and limbs, but the skin is normal (unless secondarily inflamed) with no itching, scratching or pain. The hair normally regrows within weeks. The stress event was never determined in this instance, as the calf health generally seemed good. The reason for it affecting primarily the white face calves around the face and distal limbs is also uncertain. In retrospect, the presentation alone could be considered classic for future cases. The other differential diagnoses have characteristics which would distinguish them and allow clinical rule-out – for example they involve different areas of anatomy to that exhibited, or result in lesions / itching whereas none were seen, or they are congenital (with the calves born that way).

Small Block Seminar

Calling all small block farmers! Cambridge Vets will be hosting a Small Block Seminar in May. Our vets will be giving presentations on the health and care of calves, lambs, chickens, alpacas and more! More details to come - keep an eye open on our website, Facebook page and upcoming autumn Advisor.

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