gateway vets

Gateway Gazette

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Welcome

If ever we needed reminding that no two springs are ever the same, this would be the one. From worrying about when the next shower might come, our attention switched to managing pasture surplus and worrying about some fine weather to make silage!

This year has presented plenty of challenges for animal health. Additional moisture produces good pasture growth but also depresses livestock while a damp environment is conducive for disease. All these factors have definitely kept Gateway Vets on her toes!

Overall though, I think we will look back on this spring as a good one, with plenty of feed around, demand returning for milk and continuing demand for the beef and deer industries.

Gateway Vets has only one change for its line-up for 2017. James and Shantelle look forward to a new baby next year. We wish them all the best for this exciting time in their lives. Megan Kerse has started at Gateway Vets and some of you will meet her soon as Shantelle helps her settle in.

We wish you all the very best for Christmas and New Year and hope you find some time for a well deserved break over the summer period.

Herd Lameness - Prevention through Nutrition

In the last few months there have been a number of discussions with our farmers about the recent increase in the number of lame cows treated. After two very dry springs we've had a wetter one this year, therefore it's no surprise that the incidence of lameness has increased.

True Incidence and Impact of Lameness

A study by Lincoln University showed that South Island dairy farms had an annual incidence of over **26%**. This means that on average **26%** of the herd would require a treatment for lameness during a lactation. With an average herd size of 650 in the South Island, that equates to a **170 lameness treatments** throughout the year.

The peak number of lame cows occurs in the first 120d after the start of calving. This is multifactorial and is associated with the transition from winter grazing to milking (wettest part of the year). Contributing factors include calving hormones that relax the tissues surrounding the claw, the increase in walking distances, collecting yard standing times, mating and flow through the milking shed.

The approximate proportion of lesions in South Island pasture based dairy cattle are; white line disease (57.7%), sole bruising/ulcer (11%), interdigital lesions (9.2%), sole penetration (8.7%), hoof cracks (3.7%) and lesions above the hoof (3.5%).

Herd Lameness - Continued

By far the most common diagnosis is white line disease. Large walking distances have been thought to be the most influential factor, although there is no existing research to prove this. However, there has been some data to show that hoof wear is increased in pasture based herds.

Dairy NZ estimates that each lame cow costs on average **$400**. This includes the cost of the treatment, labour and hidden costs, such as discarded milk, reduced milk yield, reduced fertility performance and increased culling rate. If using the incidence rate described above, the cost of herd lameness equates to just under **$70,000 per annum**.

Prevention Strategies

Herd lameness does not only have financial implications, it is also a welfare issue. Lame cows eat less, move less and produce less due to pain. Here we discuss nutrition as a prevention measure of non-infectious causes of lameness.

Nutrition

Research has identified that nutrition is a major player in hoof health and function. At one time it was thought that laminitis was caused by ruminal acidosis, or large quantities of grain could disrupt blood flow to the hoof and pre-dispose to lameness. This theory has been discounted. The current theory is that the quality of the hoof wall and supporting structures is key to prevention of lameness. The key elements involved in hoof wall quality are trace minerals and vitamins; Zinc, Copper and Biotin.

Trace Minerals

Zinc and copper are important in the formation of the hoof wall. It has been shown that supplementing these elements improves hoof health and reduces the incidence of lameness. I'm sure most of you are supplementing this through the dosatron. However, the sulphated forms (copper sulphate, zinc sulphate) are much less effective than the complex forms of the elements, such as zinc glycinate and copper glycinate. These complex forms are more available to the body and do not interfere with other minerals supplemented through the dosatron.

Vitamins

Biotin (also known as vitamin H) is extremely important in the formation of structures in the hoof wall. Biotin is naturally produced by the rumen. Recent studies have shown biotin production to be inconsistent and insufficient on certain feed regimes. Significant research into the supplementation of biotin in the diet of pasture based dairy cattle has consistently reduced the incidence of lameness, specifically white line disease by **more than 50%**.

Body Condition Score (BCS)

We all know that lameness is a disease of high producing cows, and lame cows tend to become thin, especially if they are a high producer. However, the most recent studies in the UK show that it is also true the other way round. Thin cows become lame. Why is this?

The digital cushion is a set of cylindrical fat pads that sit between the horn and bone of the toe. This tissue acts like a shock absorber and reduces the load that the bone presses on the horn/sole. There is a genuine link between the body condition of the cow and the thickness of the digital cushion. Lower body condition cows have smaller digital cushions. It is also true that as cows lose condition to peak yield, the cushion also reduces in size. This is because fat is being mobilised from the cushion to produce energy for milk production.

A very recent study showed a direct link between a thin digital cushion and an increase incidence in lameness associated with claw horn (sole ulcer/haemorrhage/bruising and white line disease). The study showed that cows had a low BCS 2-4 months prior to becoming lame, proving that it is thin cows that become lame.

Cows with a BCS <4.5 at calving had a significantly increased incidence of lameness during that lactation. It was also true that cows that lost >0.5 BCS during the season were also at increased risk of lameness. Amazingly, it was also shown that an increase in BCS increased the chance of cure from lameness.

The main point from this is that cows that are light in condition or that lose condition are much more likely to become lame!!!! Therefore there is an easy prevention strategy;

- Minimise BCS loss to peak yield (0.5 or less)
- A true BCS of 5 at calving for cows and 5.5 for heifers

*Remember it is important to get the body condition scoring done by a certified scorer.

Conclusion

The three key prevention measures that could significantly increase the welfare standards and profitability of your farm are;

1. Complex forms of zinc and copper
2. Biotin supplementation
3. Adequate body condition of stock (thin cows become lame cows!!!!!!)

Non-Return Rate

One of the most interesting aspects of early pregnancy testing is determining the conception rate. In fact the only way to determine conception rate is by pregnancy testing. Until cows are pregnancy tested we can make an estimation of conception rate using non-return rate.

If all cows after being inseminated did one of two things the conception rate would be the same as the non- return rate.

- Became pregnant and did not come back on heat. Hopefully 60%!!
- Not become pregnant and return 18-24 days later.

So for 100 cows the non-return rate is 60% and the conception rate is 60%.

However, as we know, the absence of heat is only an absence of observed heat. The absence of heat doesn't always mean a cow is pregnant.

So cows may have:

- A silent heat which is missed
- A normal heat which is still missed
- Not become pregnant but become anoestrous (phantom cows)
- Become pregnant but lose the pregnancy later.

So the conception rate will invariably be lower than the non-return rate. If the non-return rate is very low than conception rate can't be good. Very high non-return rates should also be viewed with suspicion – it is unusual to have an excellent conception rate alongside a moderate incidence of phantom cows. It is more likely to have a high incidence of phantom cows/silent heats along with a lower conception rate.

If your non-return rate is 70% hopefully your conception rate will be 60%. It is possible given the weather conditions over mating that more cows may have had a heat, not held and then gone silent. If this is the case the conception rate could be as low as 55% with a non-return rate of 70%

If you are concerned about how your mating has gone, early scanning could be useful. Cows served during the first week which haven't returned can be pregnancy tested six weeks from the period required ie 7-8 weeks from the start of AI. This will identify phantom cows early, which can then be entered into a non-cycling program. It is essential to record bull matings to ensure phantom cows are actually anoestrous.

An aged pregnancy test can also be used to calculate conception rate and an estimate of final empty rate made. To achieve a lower empty rate with a short mating requires a good six week in-calf rate. Early identification of a possible higher empty rate allows for extra time to plan for replacements to achieve target stocking rates for Spring 2017.

Introducing Megan

Hi, my name is Megan and I'm really excited to be joining the Gateway team in December.

I grew up on a farm in the Geraldine area and, after moving away to study and doing the obligatory Kiwi OE, my fiancé Nick and I moved back around 3 years ago.

After working with Phil and Robyn at a vet clinic while at school, I graduated as a registered nurse and have been nursing for the past 6 years.

I have always had a passion for animals so I jumped at the chance of a career change and look forward to bringing some of my human nursing skills and rural background to my new role at Gateway Vets Ltd.

I look forward to meeting you all.

Dental Care for your pet

Brushing your teeth twice daily, as tedious as it may be, is a necessary part of your personal health care. While it may not be practical or possible to provide the same level of care for your pet's teeth it is important to incorporate dental care into your pet's health care programme.

Preventative dental care: Royal Canin provides a dental care diets for cats and for dogs. They are especially formulated to reduce tartar deposits and also provide benefits for the urogentital and gastrointestinal systems.

Brushing your pet's teeth may be more achievable than you first think. You could use a regular toothbrush or a special finger brush with enzymatic toothpaste (poultry flavoured). It will take some training, but with the palatable pet's toothpaste and some gentle perseverance with a cooperative pet it is quite achievable. There are special dental treats and toothbrush toys that can be used as an adjunctive therapy.

Dental scale and polish: This is a service provided by Gateway Vets that is of great benefit to your pet's oral health. The dog or cat is put under general anaesthesia and the tartar and plaque is scaled off. This is an excellent opportunity to examine the molar teeth right at the back of the mouth that are otherwise very difficult, if not impossible, to assess in the awake patient. It may be that some teeth are beyond saving and need to be removed for your pet's health and welfare. The teeth are then polished with a flavoured polishing paste. This makes the teeth smooth and therefore more difficult for bacteria to attach to.

A few signs your pet may need a dental include: Reduced food intake, reddened gums (gingivitis), tartar build up, broken teeth, rotting or loose teeth, a tender mouth and smelly breath. If you are unsure or suspect your pet may need a dental book in for a quick dental check at the clinic.

Yersiniosis

The Yersinia species is a gram negative bacteria which has been causing problems for a very long time. The most notorious species is Yersinia Pestis which is carried by the flea of the brown rat. This bacteria is passed on by the bite of the flea resulting in the Black Plague which killed between 25-60% of the population of Europe during the Middle Ages.

Fortunately for our livestock industry the relative of Yersinia Pestis can be destructive but not nearly so cataclysmic. This relative is Yersinia Pseudotuberculosis and clinical disease is known as Yersiniosis.

Yersinia species are normal inhabitants of the gut. When pre-disposing factors are present bacterial numbers can multiply quickly causing clinical disease. Subsequently healthy animals can contract the disease because of massive exposure through the faecal-oral route.

Yersiniosis presents as acute diarrhoea, reduced appetite, fever and weight loss.

We normally see Yersiniosis outbreaks during the autumn in rising 1 year old cattle. There are often pre-disposing factors present. These may be low trace element levels reducing immunity, parasitism, concurrent BVD infection and stress from inclement weather. Sometimes we see outbreaks where there are no identifiable pre-disposing factors.

The incidence of Yersiniosis increases after the first cold, wet southerly of the autumn. This causes immuno-suppression of stock from stress. It also increases the survival of the Yersinia bacteria on pasture because of reduced drying and exposure to sunshine.

Unusually this spring, we have seen outbreaks of Yersiniosis in yearling cattle. This is possibly because of the cool, wet spring we are experiencing. The lush feed present in also not the best diet for maintaining a healthy gut for ruminants.

Prevention involves reducing pre-disposing factors present. Early identification is important to isolate and treat affected animal. If cattle appear really loose be careful to not attribute this only to feed conditions and miss the early stages of a Yersinia outbreak.

Fortunately for the deer industry, there is a good Yersinia vaccine, Yersiniavax (not for use in cattle). This vaccine works well, preventing, or at least mitigating against, major outbreaks. The vaccine requires two vaccinations 3-6 weeks apart. It is important to plan the timing of the vaccine to achieve immunity at critical time points. Please contact the clinic to discuss a vaccination protocol for your deer farm.

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