Q fever survey

Many thanks to those who have returned the form and bulk milk tank sample for the Q fever survey. It is not too late to send any more samples in – please get in touch with the office if you want a sampling pack sent out. The current plan is to analyse all of the samples in one batch in December, and the results should be available soon afterwards.

Assessing energy balance in dairy cows – what to measure?

There have been a number of conversations in the past month with vets and advisors about how to measure energy balance in dairy cows around calving. Some advocate NEFAs precalving and BOHBs postcalving, others think that hand-held ketone testers work best, the DHHPS measures BOHB, NEFA and glucose as part of our metabolic profiles. So who is right? As always, there are no simple answers……

However some recent research work from Cornell in the States is of interest in this debate (JDS 2010, 93: pp546-554). This study looked at 100 TMR-fed herds in the Northeastern USA, with blood samples taken from 2,758 apparently healthy cows and heifers both before and immediately after calving. The blood samples were analysed for BOHB and NEFA levels, and the animals were followed through for the first month of lactation to see if the cows developed disease conditions including LDAs, clinical ketosis, metritis or RFM (hung cleansings).

The study looked to see what the critical thresholds were for NEFA and BOHB levels, and it is of interest that cows with NEFAs over 0.29 mmol/l precalving (ie. lower than the current cutoffs used by the DHHPS and others) and NEFAs over 0.57 mmol/l after calving (ie. about the same as the DHHPS cutoff) were at an increased risk for developing LDAs, clinical ketosis and hung cleansings/metritis in the first month of lactation. A follow-up study also showed that these cows with raised NEFAs took longer to get back in calf.

What was of interest is that the study concluded that cows with high NEFAs after calving had the greatest risk of disease. For example cows with NEFAs over 0.57 mmol/l post-calving were 10 times more likely to develop an LDA within the first month of lactation. Their conclusion was that although precalving NEFAs and BOHBs in early lactation were associated with more disease problems, measuring NEFAs in early lactation was of most value in predicting potential disease problems.

So does this help the arguments, or make the situation even more confusing?! It would suggest that measuring only NEFAs before calving and BOHBs after calving is likely to be too simplistic, and backs up DHHPS findings that measuring both BOHB and NEFA levels is important to get the full picture of energy balance around calving.

Congratulations!

Many thanks to all of you who completed the survey on the services supplied by the DHHPS – it was much appreciated and gives us some good ideas how we can improve. The lucky winner of the prize draw was Charley Verity, head of the dairy unit at RVC Boltons Park Farm. Tim Potter from RVC picked up her prize from Liz at the Dairy Event, and we hope the prize made it back to Charley intact…….
The Cost of Sole Ulcers.

Sole ulcers represent a major cost to the dairy industry in terms of economics and welfare. Cows that are affected by sole ulcers produce less milk, take longer to get back in-calf and are more likely to be culled from the dairy herd. Repeat cases of solar ulcers can result in chronic cases of lameness which is a major welfare concern. Recent costings from Jim Willshire and Nick Bell estimated that the average sole ulcer case costs over £500, mainly as a result of reduced fertility and milk yields.

The causes........
Pressure damage occurs in the horn-producing tissue of the foot due to the sinking of the back of the pedal bone into the quick. This causes inflammation and haemorrhage in this area, which in turn results in poor quality horn growth. This most commonly occurs in the outer claw of the hind foot. In the front feet, the inside claw is most likely to be affected.

There are a number of predisposing factors:
• At calving, ligaments within the hoof can slacken and can increase the likelihood of the pedal bone pinching the horn-producing tissue of the sole.
• Claw overgrowth/poor foot balance
• Under-developed digital cushions
• Increased standing times on hard surface and poor cow comfort
• Poor slurry management
• Nutrition (eg. subclinical rumen acidosis)

Treatment
 Restoration of correct foot balance using the 5 step Dutch trimming technique. The main principle is to relieve the pinching of the quick over the ulcer site. Often a block can be applied to the sound claw to take the weight off the painful claw and aid healing. The use of NSAIDS for pain relief should be considered.

Prevention
• Cow comfort - Cows should be lying for 12-14 hours a day. Any measures that can be taken to increase lying times and ensure the cows are using the cubicles correctly will help to reduce the likelihood of sole ulcers. Questions to ask: How long are your cows standing before getting milked? Are there more cubicles than cows? How many cows are standing or perching (half-in half-out) in the cubicles?
• Heifer training to get heifers using the cubicles prior to entry into the milking herd, and so increase lying times.
• If practical and environmental mastitis is not an issue, consider keeping cows in straw yards from 3-4 weeks pre- and post-calving. This practice helps to minimize stress.
• Try to avoid sudden changes in diet, which may give rise to subclinical rumen acidosis and the development of sole ulcers.
• Routine examination of all cows’ feet once or twice a year should be undertaken by trained staff, with corrective trimming if necessary to restore correct foot balance.

Agriscot 2010
As usual, we are part of the Royal (Dick) School of Veterinary Studies stand at Agriscot 2010 on Wednesday the 17th November. Please stop for a chat if you are coming to the event.