June 2005 News

LEPTO UPDATE: By now many of you have heard of and are managing your herds for Leptospira hardjo-bovis. As a review, this bacterial infection causes reproductive problems for cattle; failure to get pregnant or loss of pregnancy. Cows are the carrier species for this type of bacteria. Lepto lives in the kidney of carrier animals and is shed in their urine. It will periodically gain access to the cow's circulation. Through this means it can reach and infect the uterus, affecting reproduction. Since resistance will vary between individual animals, many infected animals suffer from reproductive failure. However it is also possible for some infected animals to become and remain pregnant.

Transmission of the disease between animals is easy. Exposure of cows and calves to infected urine is the main means of spread. Bulls can spread lepto mechanically through breeding, or via urine contamination during breeding. I suspect it is possible for calves to be infected during the pregnancy, though this remains to be proven. We know that animals can become infected at a very young age and become shedding carriers by four months of age!

Control of this disease is achieved through vaccination and treating of individual animals. Spirovac® is a vaccine specifically for Lepto hardjo-bovis. Proper use of this vaccine will protect animals against new infection at a very high level. Carrier animals are treated for the disease with a proper antibiotic, observing appropriate withholds as needed. Treatment is also very effective. However this is the cause for the 'update'.

We have herds whom have been working on lepto control now for over 20 months. Breeding performance has improved greatly in almost all control herds. However in the subsequent lactation, after a cow was vaccinated, treated, and became pregnant, we still have some stubborn problem-breeding cows. We re-tested cows for lepto, and found they can still be shedding. Here's the logical conclusion. It is likely that some cows are 'chronically infected'. By this we mean that they have carried the infection for a long period of time; it is deeply rooted in that cow's kidney. In the previous lactation we cleared out the uterus enabling the cow to get pregnant, but we didn't manage to clear her kidney and the infection is affecting her reproduction again a year later. Cows such as these will be retreated with antibiotics in this lactation and rebred 1 or 2 more times. If these cows are chronic problems in the future they will cull themselves out. Bulls are even more of a problem. To date bulls have been found to be nearly impossible to cure as carriers of Lepto hardjo-bovis. Bulls are a liability!

Our long-term hope is in the heifer herd. Along with adult cow treatment and control, we initiated heifer treatment and vaccination. It stands to reason that calves haven't carried the infection as long, and are more likely to clear with antibiotic treatment. We believe that with long-term diligence on young stock, we can cull most of the problems and have a more manageable herd reproductively. This will take perseverance for 5-6 years (how long to turn over your herd?). With time we can get

down to a problem we primarily vaccinate for and reduce the need for antibiotic treatment.

One warning for those of you using CIDR's in cows. Re-use of these is NOT recommended, regardless of how you handle them. It is unknown if there is enough progesterone in them to work adequately a second time. Additionally, it is possible to transmit lepto between animal reproductive tracts with the CIDR. Washing them isn't the answer. How much hormone do you wash out in the process? Will a disinfectant used for washing damage the hormone? They are single use. I'd follow that advice.