

**December 2007**

## **Recent Heifer Reproductive Failings**

A couple of recent episodes on cattle properties around the district have highlighted the fragility of herd reproductive performance and the need for vigilance to ensure problems are identified early and measures put in place to minimize the impact.

Tasmania is free of many reproductive diseases including Vibrio and Brucellosis but other diseases are still present that can seriously impact on reproduction. Two particular diseases that are present endemically (ie always present at variable levels) in herds in the district have recently shown how devastating they can be when naive groups of animals are exposed at the wrong time during the reproductive cycle.

The first is Mucosal Disease otherwise known as Pestivirus or Bovine Viral Diarrhea (BVD). This disease is very complex but in summary the main problem occurs when animals with no immunity are exposed to the disease for the first time when they are pregnant. If this occurs a range of outcomes can occur depending on the stage of pregnancy. These include early embryonic loss, abortions, deformed calves, weak calves or calves born with the virus incorporated into their own DNA. We have seen a few recent outbreaks of this disease causing substantial losses to the farms especially in the heifer groups.

Smithton Veterinary Service has also performed some recent surveillance blood sampling of herds in our district, which has shown all herds sampled to have the virus present. Along with reproductive losses this virus has also been shown to affect weaning weights of calves and feedlot growth rates and loss rates showing that it may be impacting on our herds more than previously thought. Some countries have taken the step of eradicating the disease totally due to the costs to the cattle industry. SVS plans to hold an information night in the near future to bring farmers up to date with the latest Australian research into this disease.

The other disease recently impacting on reproduction in the district is Infectious Bovine Rhinotracheitis (IBR). This virus is also endemic in our district and normally causes mild respiratory problems although it may have been involved in some serious pneumonia outbreaks in dairy herds. The reproductive effects occur when naive herds are exposed for the first time during mating. Being a venereal disease, transmission is usually via the bulls and infection causes a severe pustular vaginal infection which impacts on conception and hence fertility of the animals. The problem in this herd was only discovered as the owner keeps a very close eye on his heifers and noticed a couple of animals with their tails in the air shortly after mating commenced. On investigation the whole mob of 80 were found to be affected. The positive was that the problem was detected early so measures were put in place to extend the mating and use AI to minimize the impact. Some of these problems in herds with less supervision would have only been identified at the preg test or worse still at calving by which time it is too late to manage the problem.

This shows the importance of monitoring heifer groups during mating not just to ensure feeding levels but also to identify bull breakdown and other reproductive issues. The other point that these cases highlight is that the heifers are often a naive group of animals so it is important that they are not exposed to new diseases for the first time during mating. Bulls are one way new diseases can be introduced to this group. This suggests it may be good practice to test all bulls before they are mixed with the heifers to ensure they are not carriers of these diseases.

## **Lame Cow Workshop**

Another successful lame cow workshop was held on 24<sup>th</sup> November at James and Phillipa Langley's property at Scopus. Thanks to Phillipa and her daughters for preparing a great lunch. Feedback from the 15 participants (including 3 from King Island) was very positive and with

this in mind we are keen to hold another workshop as soon as we have sufficient interest.

With the cost of each lameness case being \$600-\$700 (loss of production, reproduction losses, treatment costs, culling etc etc) it is in all dairy farmers' best interests to hopefully prevent and certainly successfully treat and manage lame cows. This is apart from the animal welfare implications.

Smithton Vet Service envisage holding as many workshops as are required to meet the needs of our clients so if anyone is interested please let us know. We would like 10-15 people to justify the time and effort involved in running a workshop. The cost will be reviewed but at this stage will probably be \$90-\$100 (+ GST) per participant.

## **Pregnancy Testing**

A reminder to everyone to book in early for their first pregnancy tests next year to ensure your herd is tested at the appropriate time to maximise the benefits. The benefits of early pregnancy testing at 12 to 15 weeks after mating start date include:

- A higher accuracy of pregnancy ageing - this enables cows in calf to AI to be identified and dried off earlier and the identification of late cows allowing for planned early inductions.
- Empty cows can also be identified earlier ensuring early and effective management decision making i.e. culling while chopper prices are up.
- Identification of problems in reproduction earlier so changes can be made eg to leave the bulls in longer.

Cows that are not detectably pregnant at the first test should be rechecked 8 weeks after the bulls are removed. Veterinarians at Smithton Veterinary Service have been accredited under the National Cattle Pregnancy Diagnosis (NCPD) Scheme in both manual and ultrasound pregnancy testing.

## **Piliguard® Vaccine**

We have mentioned the new pinkeye vaccine in each of the previous few newsletters, but we take this opportunity again to remind all those interested in using the vaccine to contact us and order your requirements.

The supply of vaccine may be limited this season and it is advisable that cattle receive their immunization 3-6 weeks prior to the expected challenge period. This can vary from year to year so it is better to vaccinate slightly early rather than too late after pinkeye cases are already occurring in your stock.

If you require more information please speak to one of our vets.

## **Polio**

Polio has started appearing in the Circular Head area again. Polioencephalomalacia (Polio or PEM) is an important neurological disease of ruminants that is seen worldwide. It usually occurs as a herd outbreak with younger animals more frequently affected than adults. Animals on high concentrate diets are at higher risk, but pastured animals also develop PEM.

### **Causes**

PEM has been associated with two dietary hazards including altered thiamine status (or Vit B1) and high sulfur intake. Thiamine status can be altered by an acute dietary deficiency of thiamine or the ingestion of plants containing enzymes that break down thiamine. A plant with such activity is bracken fern.

High sulfur intake is the other means by which animals can develop the Polio syndrome. A variety of sulfur sources can result in excessive sulfur intake, including water, feed ingredients and forage, especially if combined with low copper levels. Many geographical areas have surface and deep waters high in sulfate. When water evaporation

occurs, water sulfate concentrations increase. Water consumption by cattle increases greatly with increased temperature, thereby leading to a concurrent increase in the consumption of sulfate. This may provide an explanation for the seasonality associated with the cases of Polio in the Circular Head region, ie case incidence markedly increases in the dryer and warmer months of the year. Certain plants including turnips and rape produce sulfur rich compounds, which may also act as an important source of sulfur.

### **Clinical Signs**

PEM can be acute or subacute. The acute form manifests as blindness, recumbancy, seizures and coma. The longer the duration of the acute signs the poorer response to therapy and the higher the mortality. Animals with the subacute form initially separate from the group, stop eating and display twitching of the ears and face. The head is held in an elevated position and there is a staggered gait. Grinding of the teeth may also be observed. Treatment of stock with the subacute form usually results in rapid recovery. Animals that survive the acute form or subacute form following treatment may have variable residual neurological impairment, sometimes necessitating culling.

### **Treatment and Prevention**

The treatment of choice regardless of the cause is thiamine or Vitamin B1 injection. Therapy must be started early in the disease course because if delayed, the brain lesions become particularly severe and full clinical recovery may not be possible. Beneficial effects are usually observed within 24hrs and sometimes sooner, however if there is no initial improvement, treatment should be continued for 3 days.

Dietary supplementation of thiamine has been recommended for prevention, but the efficacy and practicalities of this approach have not been carefully evaluated. During an outbreak sufficient roughage should also be provided. When the problem is most likely associated with high sulfur intake all possible sources of sulfur including water should be tested.

## **Staffing for 2008**

Clients are thanked for their patience and understanding over the last 6 months whilst we have been 1½-2 vets down. Next year we should be back on track. Angelique is returning from overseas in March and we are happy to welcome her back to the team. We have also employed a vet, Melanie Colville, who spent time with us as a student in 2006. She then travelled overseas for a few months and has been working in a mixed practice in NSW since her return. We hope to have Mel starting in early March.

You have probably also noticed Robyn Buckby has returned to the fold. Robyn works 2 days a week in the office and will often be your first point of contact on those days.

Whilst on staff it may be of interest to some to hear how some of our previous staff are getting on.

### **“Where are they now?”**

As most know, **Graeme and Sherryl** retired a few months ago and have relocated to Hobart. Graeme is doing a couple of days a week for a multi person small animal practice. He is currently recovering from surgery to a severed tendon in his finger after being attacked by a Rottweiler at one of his new workplaces!

**Neale Ward** – was here before the current Neil arrived. Neale is actually a partner in the practice where Graeme is now working. They are an entirely small animal practice with 3 branches in and around Hobart.

**Chris Allfree** – after several years overseas, Chris is also a partner in Neale’s practice and is now a small animal surgery specialist.

**David Beggs** – returned to Warrnambool where he is a partner in a 13 vet mixed practice. David has entered the computer and academic side of veterinary practice. He presents research and trial results to conferences on a regular basis.

**Mike Teed & Emma Reid** – now married and living in Launceston after a few jobs on the way. Mike is a pilot for TasAir and Emma is studying to become a doctor.

**Sherrie Keel** – has entered the academic world and is doing further study at the University of Melbourne vet school.

**Peter Gray** – after spending several years in Uganda on mission work, Peter is now a public servant and advisor in the foreign affairs department. He was involved in the recent APEC meeting.

**Mitch Crawford** – married with 2 children. Mitch is a partner in a mixed practice at Rochester, Vic.

**Andrew Morris** – works in a horse practice. He teaches Uni of Qld vet students and is heavily involved in horse reproduction work.

**Gemma Calle** – after spending quite a while overseas Gemma returned and tried a few different vet jobs. Now doing locums in NSW and Qld including work for Qld uni vet school. She thinks she misses the large animals.

**Stuart Skirving** – married and working in South Australia, we think.

**Georgina Thompson** – still overseas mixing locums with holidaying.

**Amy and Angelique** – still overseas also mixing work with leisure.