

## **Drought Breaking Rains?**

Well many parts of our practice area have received welcome rains and strangely the timing seemed to coincide with a declaration that *El Nino* was over at last. However, as one of my clients aptly pointed out, there was no declaration that a *La Nina* pattern had emerged. Nonetheless for most producers the break will enable lots of diesel work to generate some higher-grade fodder crops or pastures. From our practice perspective we've been busy sorting herds with pregnancy testing and there is considerable variation in body condition scores depending upon the whim of the patchy rains and the supplementary feeding programme implemented. I recently sorted out some old files that included a cattle reproductive survey conducted by us in the 1980's, some old practice newsletters and a couple of papers we delivered to veterinary conferences. Herd fertility was a constant theme and remains so today, since if we are in the business of cattle breeding, then one calf per cow per year is the ultimate goal. Of course this is unachievable and at some point the extra inputs to raise pregnancy rates may outweigh the increased returns generated. However, good herd management, and accurate pregnancy testing and culling of non-productive cows can still achieve the principle of one calf/cow/year. In fact cow culling is an integral part of enterprise profitability, provided the empty cow is culled at optimal value. One commonly encountered waste is the rising 3 yo heifers raising their first calf, still cutting teeth and failing to re-conceive due to body condition score 2 or less = poor cull value but also of little value to the enterprise if retained for another year. But I digress. Herd fertility is as simple as healthy bulls joined to healthy females but as our records suggest, herd fertility has actually been declining in our practice area since the 1980's. i.e. not all herds but a series of identified hazards and some as yet unidentified issues have seen some whole herds and some part herds endure far less than optimal weaning rates. Factors involved include nutrition, disease, management and bull power.

## **Nutrition**

Many producers have now moved to better assessment and recording of herd performance, including cow body condition scoring. With the push for more production/hectare or per \$capital invested, herds are being pushed harder to increase enterprise productivity. Cows carrying surplus fat year-round are underperforming (until we hit a drought), yet cows < 3 CS will reduce lactation and may either not conceive or be slower to conceive. As we push to this CS 3 line as a target, even a short feed pinch may cause problems, and nutritional factors other than energy and protein may become limiting. During the past 2 years we have detected widespread selenium deficiency, which can impact on animal growth but also on fertility, and many clients have witnessed the benefits of selenium supplementation. Other elements that can cause problems include copper and cobalt, and despite only limited testing, we have not seen either test results or symptoms consistent with deficiencies of these elements, but I recognise there are plenty of Vitamin B12 advocates out there. Vitamin ADE is also a commonly used supplement and in severe droughts we have occasionally seen symptoms, but for breeding cows, energy is almost always going to be the limiting nutritional element, followed by reasonable sources of nitrogen. Parasites are another nutrition-robber and although a dry season will see fewer worms, if you are in a fluke affected area you may need to assess this one – blood tests are more reliable than faecal tests.

## **Bull Power**

Much has been studied with regard to bull fertility in northern Australia with the release of the MLA/QDPI Bull Power project findings a few years back in a publication “Selection and Use of Bulls in Northern Australia”. Producers and researchers alike were of the view that bull fertility was a serious limiting factor with regard to overall northern herd performance, largely offset by over joining bull ratios of 5-10%, but the use of such high bull numbers meant accepting a slower genetic gain. The research showed that sperm morphology (examination of individual sperm under very high-powered microscopy at a laboratory) was the best single predictor of bulls achieving calves on the ground when joined in multiple sired herds. This was a vast research project with a similar price tag. In our practice area most sale bulls are examined physically and semen tested, but few are serving tested or examined for sperm morphology. As yet we remain unclear as to how many bulls that we have declared fit on semen and physical exam actually perform poorly, but go undetected as they are masked by multiple sired herds. Our investigations of poor pregnancy rates show that when bulls are implicated as a problem, injuries account for more failures than semen problems.

## **Disease**

Many diseases are known to impact on fertility, too many to cover here and many of which I have covered in past notes. . Good records such as pregnancy rate, calving rate and branding rate help to determine when the effect occurs eg cyclicity, conception, embryonic or foetal health, peri-natal health.

## **Management**

Management of course impacts on nutrition, bulls and disease, but one strategy used effectively during this last dry spell on a couple of properties was the 48-hour wean. Of course a full early wean will help conserve cow body condition and, if done correctly, will mean less total feed consumption, since feed to make milk to feed calves is not as efficient as calves eating their own feed direct, provided the calves are equipped to do so and the feed is a suitable ration. But the 48-hour wean is just that, the yarding of young calves with good water and straw/hay for 48 hours, with lots of accompanying bellowing from both Mums and calves with the aim of tricking the pituitary gland to recommence reproductive cycles. This occurs due to the signals from the unsucked udder feeding information to the pituitary gland. Calves are then reunited with Mums and life continues with more pregnancies. On one property the lighter of two cow groups were subjected to this process, and out-performed their fatter sisters at pregnancy rate.

## **Staff changes again!**

James fled in January after 2 very busy years with us and is currently trying to decipher descriptions of ailing animals in Welsh! Sadly we now say goodbye to Margot after 3 years with the practice as she too flies out to the UK to meet up with hundreds of other Aussie vets there already! I will certainly miss their dedication and also their pleasant approach to daily team life.

Trish Pullos jumped into her new role with us in mid-January; a bright-faced honours grad from U Qld with energy to burn. Accompanied by her faithful Labrador and grey mare, Trish has settled in swiftly both socially and professionally.

I am also pleased to introduce Kym Hagon.

After graduating in 2001 from Sydney University, Kym joined Macleay Valley Veterinary Services, Kempsey. MVVS is a rural mixed practice dealing mainly with small animals, cattle and horses. A

keen horse rider Kym is involved in the Australian Endurance Riding Association as a vet and rider. His veterinary special interests include all aspects of horses, small animal surgery, and cattle health and production. Kym is married to Kim (nee Bonham of Manilla) and they eagerly anticipate the move to be closer to family and to be part of the Nandewar Animal Health Services.