Beef & Sheep Newsletter

Autumn 2023

CVC CLINIC NEWS

Welcome to the first Beef & Sheep Newsletter for 2023! At CVC we are very excited for the year ahead and look forward to servicing both old and new clients. Watch this space for some very exciting news regarding our Northern satellite clinic.

The beef calving season is well underway with our vets hitting the road as midwives! A timely reminder to check your calving heifers and cows frequently to avoid missing anyone needing help. Pink eye cases are on the rise, so if you are having trouble give us a call - we are here to help! With the longest harvest ever done and dusted, the majority of our sheep farmers are busy refocussing on joining and shearing. We have included some crucial information in this newsletter to help make your joining a success.

Camperdown Veterinary Centre

1 Leura St, Camperdown VIC 3260

Ph: (03) 5593 1077

Opening hours:

Monday—Friday 8:30am—5:30pm

Saturday 9:00– 12:00 PM
(Food and drug collections ONLY, on call vet available for emergencies)

Our 24 hour emergency/afterhours service is always available.

Email: team@camperdownvet.com.au

Joining heifers

Critical mating weights are the key driver of heifer fertility. Weight has an extremely large influence on the age at which heifers go through puberty and begin to cycle. Larger heifers have higher milk production, greater longevity and better fertility in the long term. Critical mating weight is the weight at which 85% or more of heifers joined will fall pregnant in 6 weeks, and is the minimum weight a heifer should be at the start of mating. The actual weight varies between breeds, and is based on the mature weight of the herd. Heifers usually begin cycling around 55% of their mature body weight, and are sexually mature at 65%. Once they have reached sexual maturity, the chance of each heifer becoming pregnant during joining is maximised. This means that for a **500 kg mature weight cow, heifers need to be a minimum of 320 kg at joining.**

One of the most crucial determinants of heifers reaching critical mating weight is ensuring they are a good weight at weaning.

At CVC, we have a set of digital scales available for use throughout the year. Additionally we can assist you with weighing and assessing heifers suitability for joining. We are also available for assisting in AI breeding programs for heifers. We can tailor and start programs specifically for you and your herd. A veterinary inspection is always recommended prior to starting an AI program to identify any freemartin animals or any heifers that may have been mis-mated.

All heifers should be up to date with their **7in1 vaccinations prior to joining.** Depending on your system, vaccination with Pestiguard, Scourshield and Piliguard may also be appropriate. We recommend giving us a call if you have any questions about non-core vaccination in cattle.

Abortion storms in sheep

During lambing time, it is not unexpected for some ewes to lose their lambs or give birth to weak or stillborn lambs. It is generally accepted that 1.5-2% of ewes may abort, however if the level of abortion is above 5%, we recommend consulting your vet for advice.

The most common infectious causes of abortion in ewes in this region are:

- Campylobacteriosis
- Listeriosis
- Toxoplasmosis

Some characteristics of the common causes of abortions in sheep are outlined below:

Disease	Characteristics	Prevention
Campylobacteriosis	Ewes become infected after consuming contaminated pasture and water. Sources of contamination include aborted material and faeces of sheep and other animals. Causes late term abortions **Risk factors:** • Cool, moist environment. • Maiden ewes (due to lack of prior exposure).	Once infected, good immunity develops – outbreaks tend to cycle every 5 years on average. Ewes and ewe lambs not exposed are at high risk Antibiotics may be needed in ewes that have aborted. Isolate aborting ewes. Dispose of (burn) aborted material. Provide alternate source of water i.e. troughs (instead of dams). A commercial vaccine is available (**Coopers Campyvax).**
Listeriosis	Ewes become infected after consuming contaminated pasture and water. Sources of contamination include aborted material and faeces of sheep. **Risk factors:** • Rotting vegetation. • All ages can be affected. • Stress and husbandry changes. ***A neurological syndrome can occur in any age and sex.***	Antibiotics during an abortion outbreak may (or may not) reduce abortions. Avoid over-crowding. Avoid feeding silage with pH above 5.5. Remove or avoid rotting vegetation. Provide alternate source of water i.e. troughs (instead of dams).
Toxoplasmosis	Ewes become infected after consuming contaminated pasture and water. Sources of contamination include faeces of infected cats. **Risk factors:** • Feral cat population. • Maiden ewes (due to lack of prior exposure).	Once infected, good immunity develops. No vaccine is available in Australia. Provide alternate source of water i.e. troughs (instead of dams). Reduce feral cat population. Under-cooked sheep meat is a potential cause of human infection

Other infectious diseases include Q-Fever and Leptospirosis.

Most diseases require further testing to determine the causative agent. **Aborted material (lambs and placenta) should be handled carefully as humans can become infected if immunocompromised, pregnant or have any skin wounds that are not protected by protective clothing**. Anyone working on farms and with animals should be vaccinated for Q-Fever.

It is important to distinguish lower lamb marking percentages that are due to pregnancy loss versus poor conception during mating. Scanning ewes for pregnancy and the number of foetuses can help provide data for retrospective analysis. Low pregnancy rates at scanning (i.e. poor conception) can be a result of poor ewe condition, ram factors (infection, inflammation, nutrition), out-of-season joining and inadequate ram power.

What should I do if I find an aborted foetus or identify poor lambing/pregnancy percentages?

- Wearing gloves, place the foetus in a plastic bag and keep cool until the vet is contacted
- Call the clinic and we can advise on testing options avaliable
- If possible the ewe should be presented with the aborted materials for blood testing

Stagger conditions in livestock

Over the summer months and into autumn, there are three staggers syndromes caused by plants that can affect livestock and horses. Sheep are most susceptible. Animals typically fall over and show muscle tremors.

Affected animals should be carefully moved to alternative safe pasture. Diagnosis is often a combination of clinical signs, history of grazing specific pastures, and post-mortem that either suggests the cause or rules out all other causes.

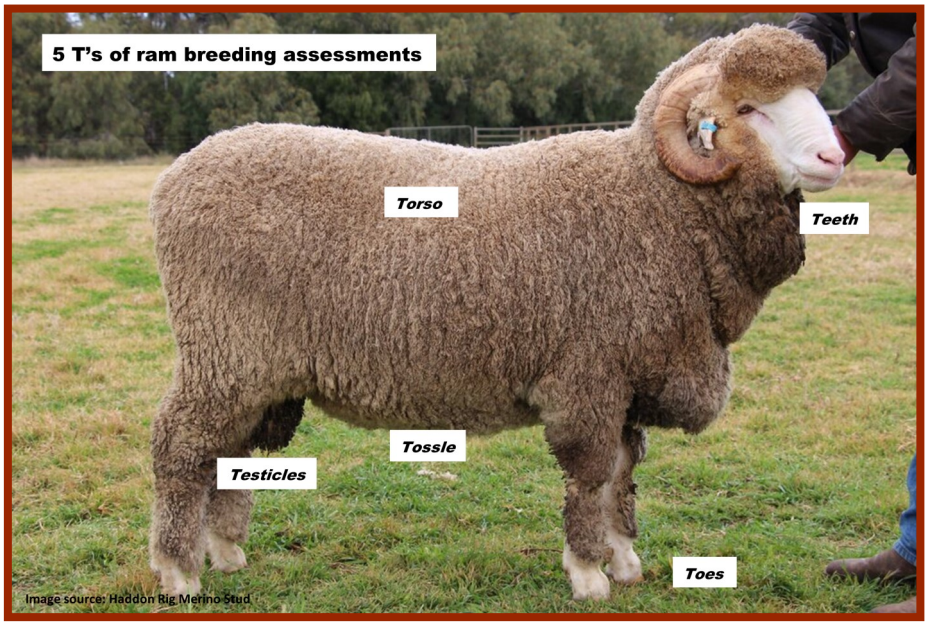
Characteristics of the stagger conditions we see are outlined below:

Condition	Characteristics	Management
Ryegrass Staggers	Tremors, nodding, swaying. Stiff, high-stepping gait. Brief collapse, rapid recovery if left alone. ***Low mortality.*** **Reversible after 1-2 weeks off toxic pasture without stress applied.**	**Risk factors:** • Greater-than-normal summer rainfall. • Toxin persists in hay. Caused by a fungal toxin which concentrates in the leaf sheath and seed. Avoid grazing lower part of sward during summer-autumn period.
Phalaris toxicity	Tremors. Kneeling or walking on knees, knuckling. Wide-based stance, 'bunny hopping' hindlimb movement. Recumbency – vigorous struggling to get up (not convulsions), remains conscious. Delayed onset possible – days, weeks, months later after grazing **Usually minimum of 10 days of grazing for toxicity to occur.** Separate sudden-death syndrome possible (usually autumn-early winter, within 48 hours of grazing toxic pasture).	**Risk factors:** • Lush new growth (more toxic). • High nitrates (fertiliser + similar conditions to Nitrate e.g. overcast, early morning) Toxin is in the plant itself. Cobalt supplements may help prevent staggers – although need to give double the amount required for treating Vitamin B12 deficiency. → Increase the legume content in pastures (legumes have higher levels of cobalt) → Cobalt foliar spraying of pasture (timing important) → Cobalt rumen bullets
Annual ryegrass toxicity	Tremors, nodding, swaying. High-stepping or 'rocking horse' gait. Convulsions, limb paddling, death (although animals can appear to return to normal if left undisturbed). ***High morbidity and mortality (lots of animals affected and lots may die).*** Sub-lethal doses depress wool growth and fibre diameter. Toxin is caused by bacteria, in association with seedhead galls (induced by pasture worms).	**Risk factors:** • Toxin accumulates in animals with repeated grazing. • Toxin persists in hay and grain. • Forced exercise. • High temperatures. Destroy toxic pasture and seedheads (mowing, burning). Graze annual ryegrass before it matures. Frequent inspection of at-risk flocks. Avoid increasing stocking rates that may force consumption of infected seedheads.

If you have stock staggering or presenting with neurological disease we encourage you to seek veterinary advice immediately. Depending on the class and number of stock affected you may be eligible for compensation from an investigation into neurological disease.

Ram pre-breeding assessments

As most producers are getting ready for joining we want to remind you of the importance of ensuring your rams are ready for work. Ram pre-breeding assessments should be considered as you insurance policy that joining can go well. You don't know if you don't look! Below we have outlined the **5 T's** used to assess rams prior to joining. We highly recommend you have these breeding assessment performed by a vet as we can provide treatment and advice if required. Breeding assessments should be **done 10-12 weeks prior to joining** to allow any substitutions if needed.



***Toes*—**Sound feet and limb conformation is crucial to longevity of rams. Feet should be trimmed, the interdigital space inspected for any lesions and hindlimb conformation assessed as pain in the hindlimbs may limit his ability to serve ewes.

Teeth **-** Mouth should be assess for the bite, any missing teeth and the jaw palpated to feel for any abnormalities. Head wounds are also common in rams and should be inspected and treated at needed.

***Tossle*—**The prepuce and penis of the rams should be inspected by tipping the ram on his rump and exteriorising the penis. Abnormalities such as pizzle rot and hematomas are common findings.

***Testicles*—**Testes should be palpated to assess for consistency, lumps, size and wool coverage. Testicular size is directly correlated to sperm production, larger testicles = greater number of sperm produced. Rams should have two symmetrically sized testicles. Testicles should be firm, similar in consistency to a flexed bicep muscle.

Torso

Rams should be body conditioned score to ensure they are in good condition for working. Ideally rams should be BCS 3-4/5 prior to joining. Obese and underweight rams are unlikely to be productive. Increases in body condition scores through feeding, increases the size of rams testicles and hence sperm production.

Mature, healthy, fit rams with scrotal circumferences > 32cm are able to be joined at 1%.

Joining at higher percentages may be indicated in circumstances such as:

- Poorly conditioned rams
- Poorly fertile rams
- Maiden ewes
- The ram team containing a high percentage of young (18 month old) or old rams
- A joining period < 5weeks duration
- Joining takes place in scrubby terrain
- Large mob sizes

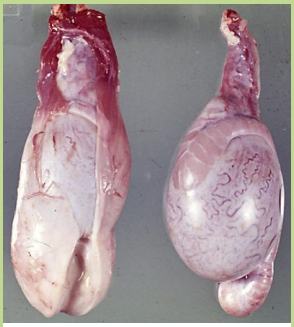
Scrotal circumference - Scrotal circumference is an indication of sperm production and hence fertility. Most mature rams should have a scrotal circumference > 32cm. A special tape is used to measure the testicles at the widest point.

Semen evaluation—Semen evaluation can be included in a veterinary breeding soundness evaluation although it is usually only warranted in infertility investigations (when ewes have failed to get pregnant), single sire matings or when ewes are synchronized for joining.

Blood testing - Rams should be sourced from studs with brucellosis accreditations or be tested for Ovine Brucellosis prior to joining, especially if any testicular abnormalities are identified. More information on brucellosis is included on the following page.

Vaccinations and drenching—Rams should be given their 6in1 vaccination boosters prior to joining. Its is good practice to perform a faecal egg count on the ram flock prior to inspection so it can be determined if drenching is required.

Ovine Brucellosis



Testicles from a ram infected with brucellosis, the left testicle shows an enlarged epididymis, due to fibrosis.

Ovine brucellosis is a reproductive disease of sheep caused by the bacteria *Brucella ovis*. Brucellosis primarily causes infertility in rams and most commonly results in poor scanning and lambing percentages. It is estimated that nearly 50% of rams with testicular lesions are infected with *B.ovis*. Infection is spread from **ram to ram through homosexual behaviour**. Ewes rarely become infected with brucellosis but they spread the disease from ram to ram through multiple matings.

Brucellosis is most commonly identified at pre-joining ram inspections through palpation of testes identifying firm lumps in the tail of the epididymis. Blood testing can be used to confirm the diagnosis and is a crucial part of brucellosis eradication programs. Brucellosis cannot be treated and the main process of eradication is blood testing and culling positive rams.

Ram breeders can chose to become ovine brucellosis accredited where they undertake a series of inspections and blood tests to prove they are free of the disease.

There are a number of practices that can be used to limit the risk of introducing brucellosis onto your property, including:

- Only purchase replacement rams from ovine brucellosis free-accredited producers
- Have good boundary fences to prevent stray rams entering your property
- Quarantine and inspect any new introductions
- Always request a National Sheep Health Statement from vendors

If you have any concerns regarding brucellosis in your rams, please do not hesitate to call the clinic. We would be happy to help!

Joining maiden ewes

There can be significant financial and genetic gain from joining maiden ewes however they require special attention to achieve the best outcomes. Good animal health and nutritional management are critical for successful maiden joinings.

The age at which maidens should be joined depends greatly on their breed and mature ewe weight. Ewes can reach puberty anywhere between 5-12 months of age. Body condition is a big factor to control to ensure your maiden ewes have the best chance of getting pregnant during your joining period. **If ewes are joined at 75-80% of their mature weight, you can expect to achieve a conception rate of approximately 80%.**

- An averagely fertile **maiden Merino ewe** should be approximately 80% of its adult weight at joining. For an average sized Merino ewe, this should be **40-45kg bodyweight**.
- **Composite ewes** can be joined successfully at **45kg body weight.** If grown appropriately this can be achieved by **7-9 months of age**. Some larger breeds may benefit from later joining to allow them to mature.

All maiden ewes should be have received 2 doses of 6in1 vaccination prior to joining, as well as the Ovine Johne's vaccine (Gudair) if used. Vaccinating for campylobacteriosis is also recommended or blood testing prior to joining to determine whether they have already been exposed to the bacteria.

Factors to consider when joining maiden ewes:

- Maiden ewes are on heat for a shorter period than mature ewes, therefore their window for mating is smaller
- Maiden ewes are less active when seeking out a ram in oestrus compared to mature ewes, they do not show signs of heat as strongly. If joining mixed age mobs, where mature ewes and maidens are all in together, maidens may compete with the mature ewes for the rams making her less likely to be mated than an older more experienced ewe.

For these reasons it is recommended that a higher joining percentage be used for maiden ewes and that experienced rams are used. A minimum 2% joining percentage is often recommended for maidens. Assessing ram size compared to ewe size is crucial for maiden joining so that large rams with the potential to cause injury are not used on maiden ewes.

Remember that maiden ewes will continue to grow throughout their gestation and lambing so ensure they have adequate nutritional supply to meet these demands.

Expected lamb marking percentages should be reduced for maidens as they have a high risk of lamb loses due to mismothering.

Joining length

How long to leave the bull or ram in for can be contentious question depending on who you ask. When it comes to the optimum joining length there a myriad of factors that should be considered before deciding including feed availability, stock condition, stock fertility, seasonality as well as labour availability. Some guidelines on joining length for sheep and cattle are outlined below:

Sheep

- ♥ If joining **in the natural breeding period** when ewes are already cycling, a **5-week joining period** is usually adequate.
- ♥ For **out of season joining,** ewes will often not conceive from heats in the first two weeks when the rams are introduced therefore a **7-week joining period** is recommended.

Teaser rams (vasectomised rams or testosterone treated wethers) can be introduced **14 days pri**or to the introduction of the rams to encourage cycling. The novel introduction of teaser rams out of season induces a **"ram effect"** in which the ewes will commence cycling, increasing the probability the ewes are all cycling by the time fertile rams are introduced.

There is limited advantage in joining ewes longer than 5-7 weeks. Less than 5% of the ewe flock will get in lamb from a third opportunity. Therefore the advantage of a small number of extra lambs needs to be considered against the husbandry challenges associated with a prolonged lambing period.

Cattle

There are many different joining options for beef production depending on your system.

Most beef production systems should aim to produce one weaner calf per breeder joined each year.

The most common joining used in our region is a ***controlled joining***, where a specific joining period is set depending on the ideal time of year to calve and grow cattle.

Under favourable conditions (good joining environment, feed availability and fertile cows) the following joining periods are recommended:

- **six weeks (two cycles) for heifers**
- **nine weeks (63 days) for mature cows**

In unfavourable conditions, a 16 week joining may be more appropriate. This needs to be weighed up against the husbandry and management challenges of a long calving period.

Pregnancy diagnosis in beef herds

Part of planning your calving and joining is arranging when to pregnancy test your cows and heifers to gain the most information about the upcoming calving season.

Pregnancy diagnosis is a crucial part of a production system as it allows planning for the season ahead. At CVC we offer bovine pregnancy diagnosis with both manual palpation and ultrasound.

- ***Manual pregnancy diagnosis*** is performed by rectal palpation and can be performed at **anytime of pregnancy over 6 weeks.**
- ***Ultrasound pregnancy diagnosis*** is used in most herds these days due to increased accuracy and speed (pictured right). All negative results are checked manually to ensure no pregnancies are missed. **Scanners can be used to detect pregnancies from 35 days.** *Pregnancy diagnosis using the ultrasound is most accurate when performed between 6-20 weeks gestation.*

The benefits of early pregnancy diagnosis in dairy herds include:

- Knowing when cows will calve can help **plan husbandry procedures such as calf marking, and weaning.**
- **Empty cows** can be identified early and decisions can be made about culling or re-joining. A cow has no place in a producers breeding herd unless she can wean a viable calf.
- Formulating **feed budgets—**feeding an empty cow for 9 months for her not to produce a calf, can be an expensive practice.

The further in-calf a cow is at pregnancy diagnosis, the harder it is to be accurate with foetal aging. Between 6 and 16 weeks gestation, pregnancy diagnosis is very accurate and gives the best results.