



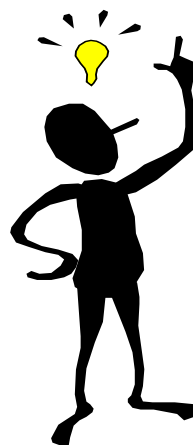
NEWSLETTER

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Seasonal reminders:

- Do not let cattle graze country with significant amounts of heliotrope. Heliotrope damages the liver and cattle are affected months and even years later.
- Monitor feed/silage bunks for spoilage and avoid feeding mouldy feed to cattle.
- Monitor summer calving cows closely for milk fever.



New Vet Dr Katie

Dr Katie will join our team in late January. Dr Katie graduated from the University of Melbourne Doctor of Veterinary Medicine in December 2024. Dr Katie also has a Bachelor of Science degree. Dr Katie has an interest in cattle medicine and small animal orthopaedic surgery. Outside of vet, Dr Katie enjoys crocheting, painting, traveling and spending time with friends, family and Tux the cat!

Early Onset Muscle Weakness (MW) Syndrome in Holstein Calves – First Calf Diagnosed!

In the March 2024 newsletter, we included details on a relatively new genetic disorder of Holstein cattle – Early-onset muscle weakness syndrome (MW) is a recessive genetic disorder.

It is unclear what the population frequency of the MW gene is, however, it is thought likely to be present in all Holstein AI breeding programs to some degree. A gene haplotype test has been developed to identify carrier animals.

The causative mutation is in the CACNA1S gene on chromosome 16. It appears to be a recent mutation within a very common Holstein haplotype. The CACNA1S gene provides instructions for making the main piece (subunit) of a structure called a calcium channel. Channels containing the CACNA1S protein are found in muscles used for movement (skeletal muscles). These skeletal muscle calcium channels play a key role in muscle contraction. The defect results in weakness and/or paralysis. The affected calves must be homozygous for the condition to be present. It should be noted that there has been a small number (<10) of known animals, that were MW homozygous (considered affected), that lived normal lives and completed 4-5 lactations in herds.



Two, now known, MW carrier sires Roylane Socra Robust-ET (Robust) and Seagull-Bay Supersire-ET (Supersire) semen, were widely used in the past. These bulls have passed the genetic defect on to their offspring and when two carrier animals are mated, there is a 25% chance that calf will be homozygous for the haplotype, meaning it will be affected. Fifty percent will be carriers.

It is estimated that herds may have up to 10% MW carrier animals.

We confirmed the first case in December 2024, we however suspect that the disease may be underreported as affected calves could be misdiagnosed as having a traumatic injury at birth or as a young calf, leading to their premature culling from herds.

The calf that diagnosed with MW was unable to stand without assistance for the first 3 days of life. Over the next 4 months, it was noticed that the calf would often have difficulty rising to her feet, was easily knocked over by her herd mates and did not grow as well as her herd mates. A tissue sample was obtained from the calf's ear using a Tissue Sampling Unit (TSU) and sent to STgenetics laboratories for testing. The results found that the calf was homozygous for MW (affected).

What can be done to reduce the likelihood of producing MW affected calves in your herd? Ideally, testing the entire herd to identify carrier cows and heifers would provide the most accurate information on herd incidence. However, for many producers, this approach may be neither practical or cost-effective. Instead, it is recommended to evaluate herd lineage for evidence of use of carrier bull's semen and strategically select bulls that have been tested negative for MW and use semen from them.



Mastitis Culturing at the Practice

Our practice offers in-house mastitis culturing, and we can provide most results to farmers in approximately 24 hours.

Recent research has shown that by delaying treatment of cows with mild to moderate mastitis (those cows that are not obviously unwell from mastitis, does not affect the outcome for that cow. Cows that are systemically unwell should be treated immediately.

Milk samples from mastitic cows need to be collected in a sterile manner and refrigerated or frozen if there is a delay between sampling the cow and dropping it off at the practice. It should be noted that between 10-40% of samples will have no growth.

No growth results may be due to no bacteria present, not enough bacteria present to allow growth on culture plates (need 100cfu/ml), antibiotics present in the milk sample, or a Gram-negative bacterium may have been the cause of mastitis ('hit-and-runs').

Mastitis cultures carried out at the practice;

- Will allow results to be provided in a timely manner.
- Treatment can be based on the mastitis pathogen identified.
- Reduce the use of antibiotics for cases that do not require them.

We are unable to provide sensitivities to common antibiotics used to treat mastitis. If you require antibiotic sensitivities, we can send the sample to an external laboratory.

Mastitis Culture Results

The most common mastitis causing bacteria in our region was thought to have been *Strep uberis*, an environmental bacterium. The mastitis cultures results carried out at our practice supports this belief.

Below is a table of 2023 and 2024 mastitis culture results.

2023 Mastitis Culture Results:

Mastitis Culture Result	%
No growth	17.4%
<i>Strep uberis</i>	45.5%
<i>Staph aureus</i>	4.1%
Coagulase Negative Staph	13.2%
E. coli	5.8%
Yeast	0
Mixed	5.8%
Serratia	0
Pseudomonas	0.8%
Klebsiella spp	5.8%
<i>Bacillus</i> spp	0.8%
<i>Strep dysgalactiae</i>	0.8%
<i>Strep agalactiae</i>	0
Total	(100%)

2024 Mastitis Culture Results:

Mastitis Culture Result	Number %
No growth	23.4%
<i>Strep uberis</i>	42.2%
<i>Staph aureus</i>	7.0%
Coagulase Negative Staph	7.8%
E. coli	4.7%
Yeast	0.8%
Mixed	6.3%
Serratia	0.8%
Pseudomonas	0.8%
Klebsiella spp	6.3%
<i>Bacillus</i> spp	0
<i>Strep dysgalactiae</i>	0
<i>Strep agalactiae</i>	0
Total	100%

