Rochester Veterinary Practice February 2025

NEWSLETTER

In this issue:

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.
- Watch out for heat stress in early autumn calving cows. Cows with milk fever are not able to regulate their temperature and will overheat on a hot day. Throw buckets of water on these cows to help them cool down.

- Calves born in hot weather are especially susceptible to dehydration. Sick or scouring calves need extra attention in hot weather.

High Cell Count Cows (Subclinical Mastitis)

Over the past few months, we have been working with several farms experiencing issues with high cell count cows (subclinical mastitis).

High cell count cows are those with a high somatic cell count but no visible signs of clinical mastitis. While these cows have mastitis (an infection of the udder), their milk typically appears normal. Despite this, they can significantly contribute to the bulk milk somatic cell count, impacting overall milk quality.

These cows are often identified during herd tests or spot tests. Ideally, milk from these animals should be cultured to determine the specific bacteria causing the mastitis. Identifying the infected quarter(s) can be done using the California Rapid Mastitis Test (CMT) at the cow's side, which helps guide sampling for culture.
Once a high cell count cow is identified and, ideally, cultured, the next challenge is deciding how to manage them. Should they be treated, dried off, or culled?

Treatment During Lactation
Treatment during lactation is often unrewarding due to a poor response rate. On average, 8 to 10 high cell count cows would need to be treated to achieve one additional cure. If treatment is considered, the primary goals are to improve milk quality and production. However, careful candidate selection is critical.

Good Candidates for Treatment:

- Younger cows (< 4 years old)
- Early lactation cows (< 100 days in milk, or DIM)
- Recent infections (no history of chronic mastitis)
- Infections caused by non-invasive pathogens (e.g., not Staphylococcus aureus)

Poor Candidates for Treatment:

- Cows with chronic mastitis (evident through palpable changes in the quarter)

- Cows with repeat clinical cases of mastitis
- Late lactation cows (> 100 DIM)
- Cows yielding a “no growth” result on culture

If treatment is undertaken, combining an injectable antibiotic with an intramammary preparation is recommended for the best chance of success.

Management During the Dry Period

The dry period offers the best chance for a cure. Late lactation, pregnant cows with high cell counts can be dried off using antibiotic dry cow therapy. This approach allows the udder to rest and recover, reducing the risk of persistent infection in the next lactation.

Each farm’s situation is unique, so a tailored approach is key to improving milk quality and udder health.

Vagal indigestion- Hardware ‘Wire’ Disease

Hardware disease (traumatic reticuloperitonitis, TRP) is a serious condition in cattle caused by ingestion of sharp foreign objects like wire, which can puncture the reticulum and lead to peritonitis. Prevention and treatment strategies are crucial to managing this condition in dairy farming.

Causes and Risk Factors:

1. **Feed sourcing issues**: Unusual feed suppliers may contribute to the presence of metal debris in hay or crops.
2. **Mixer wagon without a magnet**: Can chop wires into smaller pieces that cows can then ingest more easily.
3. **Fencing remnants**: Old fences on land converted to grazing or hay fields can contribute to contamination.

Clinical signs of Hardware Disease:

- **Early signs**: Reduced milk production, loss of appetite, slight fever, reluctance to move, and an arched back.
- **Progression**: Peritonitis (abdominal infection), bloating, and vagal indigestion (impaired rumen function).
- **Severe cases**: Migration of the wire to the heart, causing fatal infections around the heart.

Treatment:

- **Magnet therapy**: Rumen magnets may help some cows by pulling the wire back into the rumen (45% success rate).
- **Antibiotics**: To treat infection and prevent peritonitis.
- **Anti-inflammatories**: To reduce inflammation associated with the condition.
- **Severe cases**: May require euthanasia if the wire causes heart infections or widespread infection in the abdomen.

Prevention:

1. **Rumen magnets**: Some farmers use magnets as a preventative measure, placing them in ***ALL*** cows or heifers of breeding age. This can be a standard practice to reduce the risk of hardware disease.
2. **Magnetic mixers**: Use mixers with magnets to prevent metal contamination in feed.

Challenges:

- Routinely administering magnets to every cow maybe logistically difficult, but it could help mitigate the risks of hardware disease.

Prevention:

Preventive measures, including sourcing feed carefully and using magnets (in animals and on feed out equipment), are crucial for reducing the occurrence of hardware disease in dairy herds.

Heat Stress in Dairy Cattle

Heat stress occurs when cattle are exposed to high temperatures (above 25°C) coupled with high humidity or direct sunlight, leading to discomfort and various physiological problems. Heat stress can have both immediate and long-term consequences on dairy cattle health, performance, and productivity.

Signs of Heat Stress:

Behavioural signs:

- Seeking shade and wet areas.
- Open-mouthed breathing as the cow tries to cool its body down.

Severe heat stress (core temperature > 41°C):

- Frothing from nostrils and mouth (indicative of pulmonary oedema).
- Wobbly gait and collapse.
- Convulsions, potentially leading to death.

Risk Factors:

- Over-conditioned cows, sick cows, and cows with milk fever are more susceptible to heat stress.

Long-term Effects of Heat Stress:

1. **Reduced milk production**: Milk yield can decrease by 10-20% during periods of heat stress.
2. **Elevated Somatic Cell Count (SCC)**: This can indicate subclinical mastitis, which is more likely during heat stress.
3. **Reduced feed intake**: Cows eat less to avoid further metabolic stress, leading to nutritional imbalances.
4. **Higher mastitis risk**: Muddy and wet conditions, especially from

wallowing, increase the likelihood of udder and teat contamination.

5. **Impaired reproductive performance**:
   - Reduced oestrus expression.
   - Lower oocyte quality, which can affect conception rates.
   - Increased embryonic deaths (especially up to day 90 of gestation).
6. **Lameness risk**: Heat stress can lead to laminitis due to SARA and changes in hoof health, resulting in poor hoof horn growth.
7. **Higher risk of acidosis and sub-acute ruminal acidosis (SARA):** As cows often reduce overall feed intake (particularly pasture/ TMR offered) but often continue to eat the gain offered in the bale in combination of loosing bicarb in their saliva.
8. **Lower-quality colostrum**: The ability of cows to produce high-quality colostrum can be compromised.
9. **Reduced birth weight of calves**: Heat stress during late gestation can result in lower birth weight in calves.

Immediate Treatment for Heat Stress:

Cooling down:

- Fans and cold-water sprays over the body can significantly help.
- Stomach tubing with cool water can also help hydrate and cool the animal.

Preventive Measures for Heat Stress:

1. **Adequate water supply**: Ensure cows have access to plenty of fresh, cool water to prevent dehydration.
2. **Provide shade**: Natural (trees) or artificial (sheds) shade is vital during hot periods.
3. **Cooling systems**: Use water sprinklers and/or fans during milking to keep cow's cool. Having fans and misters in barn system.
4. **Strategic herd placement**: Move cows to shaded paddocks or put them under sprinklers during the hottest part of the day.
5. **Adjust milking times**: Shift milking times to cooler periods, such as early morning and late evening.
6. **Feeding strategies**:
   - If using mixed rations, feed these under shade during the day to minimize heat exposure.
   - Allow pasture grazing at night when temperatures are lower.
7. **Offer salt:** Cows loose a lot of sodium from sweating and from salivating. Having salt as an *ad lib* lick can promote water intake and maintain sodium levels.

"Inside Out Calves" - Scihostoshomus Reflexus

Schistoshomus reflexus is a foetal deformity that occurs in cattle as well as other species.

The condition occurs early during embryogenesis (as early as post-gastrulation embryo), resulting in malformation of the foetus.

It has been suggested that the condition of schistosomus reflexus may be inherited in an autosomal recessive manner, as there has been some cow family-line associations. However, current research seems to be insufficient to provide a definitive genetic connection.

Australian research suggests, by proxy of calving difficulties due to schistosomus reflexus, that the foetal condition is uncommon (1.3% (90) of 6901 cases of dystocia).

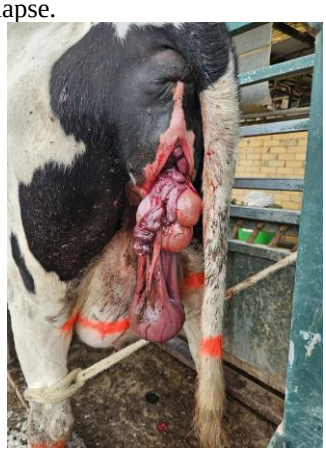
The condition appears to be more common in dairy cows but may occur in any breed.

These calves present as inside out calves – the head is positioned near the backside and all 4 legs face once direction. There is exposure of the abdominal organs, sometimes exposure of the thoracic organs.

Clinically the condition present as a cow having difficulty to calve.

If the calf is presenting with the head and all 4 feet, it can be easily confused as twins.

It the calf presents with organs first it can be very challenging to figure out what is going on (picture below). It is often confused with RFM's or uterine prolapse.



We manage these calves by either cutting them up to get them out (foetotomy) or by doing a caesarean.

A few years ago, one of our vets went out to calving and a live heifer was delivered alongside an 'inside-out' twin (pictured below).