# Dairy Newsletter
# May 2023

**1 Leura Street, Camperdown**

**Ph: (03) 5593 1077**

**Hours: 8am-5:30pm (Mon-Fri)**

**9am-12pm (Sat)**

## CVC CLINIC NEWS

Welcome to the May edition of the dairy news letter. We have seen a few cases of mucosal disease and been chatting about pestivirus with a lot of our farmers recently so thought this would be a good topic to explore in this news letter. If anyone has any further questions, don't hesitate to reach out for a chat. This edition will also briefly explore calf scours and non-cycling cows as our autumn calves start to get ready to re-join cows and continue to rear calves.

**We are available 24/7 for emergencies on 5593 1077**

## Bovine Viral Diarrhoea Virus (BVDV/ Pestivirus)

BVDV or as its commonly known, pestivirus, can be a complicated and confusing disease to understand. It can occur as reproductive disease and gastrointestinal disease (mucosal disease) in cattle. It is widespread throughout Australian beef and dairy cattle and often farmers may not even know it is present in their herds.

Generally infection of cattle results in transient mild disease however when naive (cattle with no prior immunity) cattle are exposed during gestation, significant disease can occur resulting in huge economic consequence.

**Infection in naive cows;**

- → **At the time of joining up to 40 days in gestation** can result in reduced conception rates and increased early embryonic deaths.
- → **Between 40-120 days in gestation** can result in a calf being born that is 'persistently infected' (PI calf). These calves are exposed to the virus during foetal development, prior to their own immune system forming and therefore once born, these calves never recognise that they have been infected with the disease allowing the disease to hide in the body and replicate in huge amounts. These calves become the main source of infection in the herd and it is these calves that later go on to develop mucosal disease (See over the page).
- → **>120 days in** gestation can result in birth of an immune calf, abortion or congenital abnormalities such as abnormal limb formation, abnormal numbers of ears or eyes or any range of foetal abnormalities/ monsters.

If persistently infected calves live long enough to reproduce, they will also produce persistently infected calves.

BVDV is generally spread through bodily fluids including respiratory secretions, uterine secretions, urine, milk, semen and faeces.

### Diagnosing BVDV

Bulk Milk Testing: this is performed on a bulk milk sample and will assess for the presence of antibodies giving an indication on whether cattle on your farm have been exposed to BVDV.

Antibody Testing through blood sample: This can assess individual cattle for antibodies to determine if they have previously been exposed to the virus.

Antigen testing through ear notch/ hair sample: an ear notch or hair sample can be taken from cattle which are suspected to be persistently infected to assess if they have active viral antigens.

## What to do if you have BVDV?


There is no specific treatment for BVDV and most infected cattle recover without intervention, however it is clearly best to prevent infection in your heard to minimise reproductive losses. Management approaches need to be tailored to your individual farming situation.

Sometimes a course of two pestigard vaccines four to six weeks apart can be given to naive cattle to reduce impacts of infection. Annual boosters are required to maintain adequate immunity. If you are interested in determining your herd's BVDV status and / or implementing a vaccination program, please do not hesitate to call– we would love to help and have a chat.

## Mucosal Disease


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Persistently infected calves are generally described as being ill thrifty, stunted, hairy and having poor growth rates however, they can also have no clinical signs in early life allowing them to live with BDVD undetected/ diagnosed in your herd.

Mucosal disease develops when the pathogen/ virus causing BVDV mutates in a persistently infected animal in to a cytopathic strain (a strain that attacks the cells of the animal).

Mucosal disease is usually seen in cattle between 6– 24 months of age. It can present in a chronic wasting form where the animal fails to thrive and then slowly deteriorates or an acute presentation with a rapid onset of clinical signs followed by death.


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**Clinical sign of acute mucosal disease**

- → Rapid onset of depression, anorexia, elevated temperature, increased heart rate and respiratory rate.
- → Profuse watery diarrhea which develops within 2 to 3 days. Diarrhea may contain mucus, bloods and fibrinous material as the gastrointestinal tract becomes severely ulcerated and the animal can no longer absorb nutrients.
- → They often have increased salivation with lesions in the mouth and on the tongue.
- → They can have profuse nasal discharge and rapid weight loss.
- → Often affected animals die within a week of clinical signs developing.


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There is no treatment for mucosal disease and all affected cattle should be culled from the property as they will be massive shedders of BVDV. If mucosal disease is suspected, our vets can test your affected animal with an ear notch to confirm diagnosis.

# CALF SCOURS

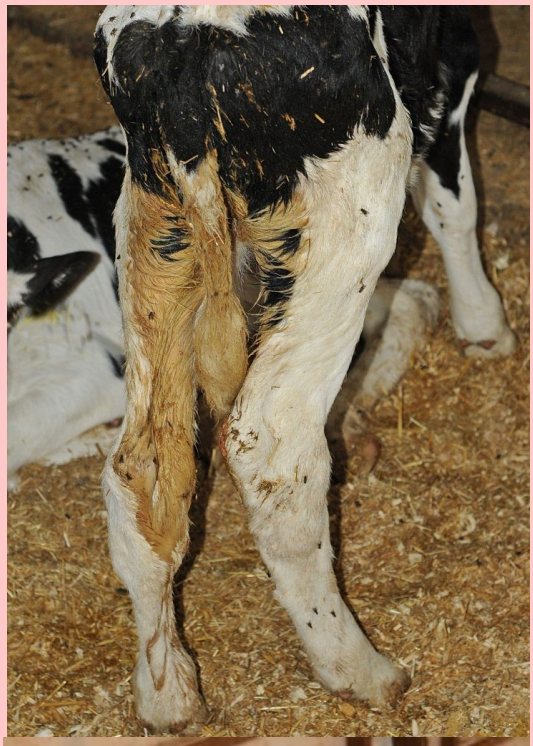
Scours in calves can cause huge production losses in your dairy enterprise as it often affects multiple calves and can have high death rates. Calves are most susceptible to infection in their first 28 days of life.

Diarrhoea generally develops in calves when there is a pathogen present and the calf's immune system has been compromised.

There are a range of pathogens which can cause scours in calves, including bacterial or viral infections as well as parasites. Generally these pathogens attack the lining of a calf's intestine resulting in diarrhoea and limiting the calf's ability to absorb nutrients. Calf scours can lead to rapid weight loss and dehydration which can result quickly in death.

| Pathogen | Common age of onset | Clinical Signs |
|---|---|---|
| Rotavirus | 1-6 days | Watery brown faeces with blood and mucus |
| E.coli | 1-7 days | Yellow to white faeces |
| Coronavirus | 7-10 days | Watery yellow faeces |
| Clostridium perfringens | 7-28 days | Sudden death, blood tinged diarrhoea |
| Cryptosporidium | 7-21 days | Watery brown to light green faeces with blood and mucus |
| coccidia | 7 days and onwards | Blood-tinged diarrhoea with straining |
| Salmonella | 1-7 days | Yellow to white faeces |

**DIAGNOSIS:** Diagnosis is difficult to make based on clinical signs alone. Often additional diagnostics are required including rainbow-6 scour tests, faecal culture, smears and/or post mortem examinations.



**TREATMENT:** Treatment will vary depending on the pathogen causing diarrhoea and the clinical state of the calf. Calves which can stand and still suckle can generally receive supportive therapy through oral electrolyte supplements.

Calves that cannot stand and have lost their suckle reflex should not be given oral fluid therapy as there is a risk of aspiration. These calves require intravenous fluid therapy administered by your veterinarian.

Scouring calves may also require antibiotics, however a vet will be able to assist you with antibiotic choice when consulted.

**ELECTROLYTE SELECTION:** Electrolyte solutions containing bicarbonate should not be fed within 2 hours of feeding milk as it can affect the casein clot formation of milk in the stomach of the calf. This can contribute to further scouring.

VetreLYTE-ZB is an electrolyte mix which can be given with or without milk as it does not disrupt milk clot formation. This electrolyte mixture can be purchased through Camperdown Veterinary Centre.

# Non-Cycling Cows/ Cows with Non-Visible Oestrus

As the joining period approaches its time to start preparing your cows for breeding. It is important that all cows which have not returned to oestrus be identified with enough time that they can be treated before joining season.

## What is a non-cycling cow?

Normally the uterus of a cow recovers and returns to normal cyclic activity within 30- 50 days post calving. In many cows their first heat post calving can be 'silent' with cows showing no signs of oestrus. However, all other oestrus periods should be detectable. Any cow that has not showed signs of oestrus prior to breeding may be considered a 'non-cycling cow' or a cow with 'non-visible' oestrus.

## Causes of Non-cycling Cows

There can be many causes of non-cycling cows including metabolic disease, lameness, metritis, endometritis, acidosis and trace element deficiencies however the single biggest cause is energy deficiency/ poor body condition.

At the start of joining , cows should have a body condition score of 4 or 5 out of 9 (3 out of 5) and where possible have a rising plane of nutrition during the joining period. Cows should not lose more than 1 body condition between calving and the subsequent joining period. If this is occurring, it could suggest there is insufficient intake of energy to meet the demands of lactation and uterus recovery.

Any condition or disease which affects a cow's ability to eat or alters her appetite can impact on body condition and subsequently impact on her fertility resulting in a non-cycling cow.

## What to do if you have cows in non-visible oestrus?

If you suspect you may have cows in 'non-visible oestrus' there are many things we can do to help bring them back into oestrus ready for breeding. With seasonal calving, it is important that these cows are detected prior to the intended joining period to avoid creating prolonged calving periods next calving season. Specific oestrus synchronisation programs can be implemented to induce cyclicity in 'non-cycling cows'. These programs require timed administration of specific drugs to mimic the natural cyclic process.

## Prevention of Non-cycling cows in your herd

Our vets can perform pre-breeding checks on individual cows or your entire herd to ensure any reproductive issues are detected prior to joining. Additionally, they can assist you with body condition scoring your cattle, reducing lameness and treating disease to help prevent the occurrence of 'non-visible oestrus' cows in your herd. If you suspect you may have non-cycling cows in your herd or would like to have a chat with one of our vets to implement strategies to prevent their occurrence, please don't hesitate to contact the clinic on 5593 1077.