



# Victorian Farmers Federation Livestock Group

## Livestock Factsheet

### » Reproductive Diseases in Cattle

Reproductive diseases can have significant economic impacts on your livestock businesses. They can have severe consequences on production systems (i.e. infertility and abortions) and have the capacity to go unnoticed in your herd for long periods of time.

Reproductive losses can be caused by infectious agents (bacteria, virus, and parasites) or can be caused by other factors such as stress, or nutritional deficiencies, excesses or imbalances. It is important to establish what is causing these losses in your herd before you can effectively and efficiently manage the problem. Good individual animal health and reproduction record keeping is vital to assist determining that a problem exists or not. If you are experiencing reproductive losses in your herd, contact your local vet to establish a strategic diagnostic and management plan.

This resource outlines common infectious reproductive diseases including;

- Vibriosis
- Leptospirosis
- Trichomoniasis
- Pestivirus
- Neosporosis
- Balanitis
- Bovine Ephemeral Fever

### Common infectious reproductive diseases

#### Vibriosis

Vibriosis (or bovine genital campylobacteriosis) is a common venereal disease spread by mating infected bulls to susceptible cows or vice versa.

Vibriosis is most likely to occur:

- in heifers
- older bulls
- by introducing new breeding animals into a herd
- when moving infected sires or dams between herds

Signs of vibriosis in cattle include:

- low calving rates
- early-term abortion or embryonic loss
- extended breeding season

Diagnosis requires veterinary assistance and includes the examination of an aborted foetus or by testing samples of vaginal mucus for the presence of antibodies. Scrapings from the prepuce of bulls may also be cultured to detect the organism.

Vibriosis can be controlled by regular vaccination of bulls.

Prevention is the best management strategy and can be achieved by:

- vaccination
- culling empty breeders which may be carriers (although pregnant animals can still be infected)
- reduce the age of bulls used in your herd
- seasonal mating and bull control
- use of artificial insemination

#### Leptospirosis

Leptospirosis is a contagious bacterial disease (*Leptospira* spp.) affecting humans and animals, and occurs in cattle, sheep and goats.

Leptospirosis is a notifiable disease – if you suspect your livestock have the disease, you are legally obliged to notify the Victorian Department of Primary Industries (DPI).

It occurs mainly in humid climates and is considered a workplace hazard for those who work with susceptible animals.

Leptospirosis is spread through the urine of infected animals. Infection can pass unnoticed, however severe abortion storms can occur when an infected animal is introduced into an unexposed or unvaccinated herd.

Clinical signs may develop quickly and can include:

- red-coloured urine (red water)
- decreased activity
- anaemia and pale/slightly yellow membranes lining the mouth and vagina
- abortion and still births
- fever and death in young animals

Several diseases can present similar signs to Leptospirosis. Veterinary examination is required for accurate diagnosis of Leptospirosis and often would include testing of blood samples from animals that have recovered from infection.

Prevention strategies include:

- vaccination – available for cattle, sheep and goats
- control of vermin and prevention of access to urine contaminated ponds and streams
- only purchase stock with an Animal Health Statement to limit the risk of introducing infection

#### Trichomoniasis

Trichomoniasis is a venereal disease caused by a parasite (*Trichomonas foetus*), causing embryonic loss (seen as repeat breeding) and abortions in cows, and sometimes uterine infection and vaginal discharge.

Trichomoniasis is uncommon in southern Australia. It is a notifiable disease in Victoria - if you suspect the disease, you must notify the DPI.

Bulls maintain the infection in their genital tract and transmit the disease during mating. Similarly, infected females can infect bulls.

Clinical signs may include:

- early term abortion (seen as repeat breeding)
- vaginal discharge
- low calving rates

Veterinary assistance is required to diagnose Trichomoniasis. Samples are taken for culture from an infected bull's prepuce or from the uterine discharge of infected cows.

Prevention strategies include:

- culling infected bulls with or without testing
- reducing the age of bulls used over your herd
- controlling mating - short mating periods (i.e. 3-6 months) provides



- sexual rest for females and helps with disease control
- segregate heifers and join to young bulls

## Pestivirus

Pestivirus, otherwise known as Bovine Viral Diarrhoea Virus (BVDV) is a common virus in cattle.

Pestivirus has been widespread in Australia for a long time, with estimations that up to 90% of herds either are, or have been affected at some stage.

Pestivirus can present in a number of ways including:

- poor reproductive rates
- abortions
- deformed calves
- ill-thrift
- weight loss
- fever
- cough
- diarrhoea
- lesions (in animals with Mucosal Disease)

There are two main management tools for providing immunity to at-risk animals:

- vaccination
- “auto-immunisation”

For detailed information about Pestivirus and how to manage the disease, see the VFF Pestivirus resource.

## Neosporosis

The parasite *Neospora caninum*, commonly known as Neospora, can be transmitted from dogs to cattle grazing on pastures or from feeders that have been contaminated with the dog faeces containing the parasite.

Like Pestivirus (BVDV), pregnant females that have ingested this parasite can pass it onto calves in utero and then run the risk of either:

- aborting their foetus (typically late term)
- producing a calf that is a Neospora carrier. If these carrier calves are female, they can then infect or abort their own foetus when they in turn reproduce, potentially causing losses through several generations

Having a methodical approach will assist producers in managing this disease, and minimise losses as much as possible. This includes:

- being aware that Neospora can cause abortions in cattle
- being observant and monitoring abortion losses
- if losses are being incurred, establish what is actually causing them

For detailed information regarding Neospora, see the VFF Neospora resource.

## Balanitis

Balanitis is inflammation of the glans of the penis in cattle. The condition can present signs including:

- bleeding, swelling and ulcerations on the penis, which can become infected (by secondary bacteria) and cause scarring and disfigurement
- the condition is painful and prevents mating (mounting without service)
- in cows, it can present as sores and erosions on the vulva. Experience has shown conception rates can reduce 5-10% over a 6-8 week joining period and calving is likely to be drawn out

Balanitis is not a new disease, however there seems to have been more reports of the disease, mainly in the Upper Murray region of Victoria and southern New South Wales.

Further research is needed to better understand the condition. There is speculation balanitis may be a strain of Herpesvirus, (which also causes Infectious Bovine Rhinotracheitis (IBR) and Infectious Pustular Vulvovaginitis (IPV), although this has not been proven.

It is thought sudden exposure of new sires to unfamiliar microbial populations could play a role in infection.

Best practice management can help reduce the likelihood of the disease occurring, including;

- not introducing animals from infected herds
- buying bulls that have had a recent Bull Breeding Soundness Examination (BBSE) done by a vet
- introducing bulls several months prior to joining
- running sires with a small group of females, or with steers several months prior to joining. This allows sires time to become accustomed to the microbial population within your herd.

The best course of action for infected herds is sexual rest.



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Long acting oxytetracycline combined with iodine spray has shown rapid healing of penis lesions in bulls.

Remember, it is important to consider the use and record treatment for drugs, drenches and vaccines as some have significant withholding periods and/or export slaughter intervals.

## Bovine Ephemeral Fever

Bovine Ephemeral Fever (BEF), commonly known as three day sickness, is an insect borne viral disease of cattle and buffalo, widespread in northern Australia but rare in Victoria. However, a few outbreaks have been reported in recent years.

Cattle affected by BEF may show signs of:

- sudden fever
- shivering
- lameness
- muscular stiffness
- off-feed and water
- commonly drool and develop stringy nasal discharge

Vaccines are available to prevent BEF. In cattle with no previous immunity (from vaccination or previous infection) diagnosis can usually be made based on clinical signs.

Contact your veterinarian if you suspect BEF.

## Other management and prevention tips:

### Vaccination

Many of these vaccines rely on ensuring you are diligent about following the prescribed vaccination program; initial dose and follow-ups and/or yearly boosters. Be sure to follow the program to guarantee your livestock are inoculated.

Remember, it is important to record treatment for drugs, drenches and vaccines as some have significant withholding periods and/or export slaughter intervals. Consult your veterinarian on the best course of action for your specific business.

### Management

Best practice management strategies can help reduce the prevalence of these diseases.

Strategies include:

- always ask for a Cattle Health Statement/the history of animals when purchasing stock
- plan a vaccination program and adhere to it (including boosters) quarantine introduced stock on arrival so you can observe them for any clinical signs of infection prior to introduction to the rest of your stock
- introduce bulls to your herd several months prior to joining
- consider running bulls with a small group of females or with a group of steers for several months prior to joining. This allows time for

## Take home messages:

- Reproductive diseases can have significant impacts on your business.
- Vaccines are available for some conditions. Remember to follow vaccination programs and use best practice vaccination techniques to ensure your livestock are fully immunised.
- Best practice management and biosecurity can help prevent introducing and spreading reproductive diseases.

them to become accustomed to the microbial population within your herd

- controlled mating - short mating periods (i.e. 3-6months) which provides sexual rest and helps with disease control

## Links

### Meat & Livestock Australia – reproductive diseases

<http://www.mla.com.au/Livestock-production/Animal-health-welfare-and-biosecurity/Diseases/Reproductive>

### NSW DPI - Diseases causing reproductive losses in breeding cattle

[http://www.dpi.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0006/160368/cattle-reproductive-disease.pdf](http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0006/160368/cattle-reproductive-disease.pdf)

### NSW DPI - Leptospirosis Primefacts

[http://www.dpi.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0014/110084/leptospirosis-in-cattle-herds.pdf](http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0014/110084/leptospirosis-in-cattle-herds.pdf)

### NSW DPI – Bovine Trichomoniasis

[http://www.dpi.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0011/409880/Bovine-trichomoniasis.pdf](http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0011/409880/Bovine-trichomoniasis.pdf)

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