



# Victorian Farmers Federation Livestock Group

## Livestock Factsheet

### » Ovine Brucellosis

#### What is Ovine Brucellosis?

Ovine Brucellosis (OB) is an infectious disease restricted to sheep. It is caused by the bacterium, *Brucella ovis*, which affects the reproductive performance of sheep flocks. OB is a disease typically distinguished by infertility in rams and increased percentages of abortions in ewes.

Although the incidence of OB has been greatly reduced with the introduction of the voluntary OB-free accreditation program throughout Australia, only 477 Victorian flocks have acquired OB-free accreditation as of June 2012. In Victoria, 15-60% of untested flocks are infected with OB with its prevalence being influenced by locality, farm management and producer awareness. OB can often go undetected in a flock as conception rates and lambing rates can be influenced by seasonal variation, ewe nutrition and predation with OB often not being recognised as the primary cause.

Ovine Brucellosis is a notifiable disease in Victoria and Tasmania. Ovine Brucellosis caused by the species, *Brucella ovis*, is not transmittable to humans.

#### How is it spread?

- Ram to ram through sodomy which is common among young rams
- Via Ewe; rams can be exposed to infection when serving or sniffing a ewe that has recently aborted due to OB. A ewe that has been served by an OB infected ram may have semen residue from infected ram exposing a clean ram to the disease at time of mating

#### How does it impact your flock?

Symptoms of OB:

- Scrotal lesions causing swelling and inflammation
- Irregularities in the testicles including shrinking, change in shape and hardening (normal testes should feel firm and be uniform in size)
- Lower semen quality
- Lower conception rates with an increase of ewes returning to service after 17 days
- Increase of abortions in ewes

It is important to note that OB can exist in ram flocks without displaying obvious scrotal lesions. Infected rams may possess microscopic lesions in the testes, epididymis and accessory sex glands. Blood testing or semen

examination carried out by a veterinarian is the option to identify if OB is present if there are no visible scrotal lesions. Rams that have been exposed to infection may incubate the disease for weeks before testing positive. Blood testing should be repeated 7 weeks after initial test.

OB infected flocks have the potential to cause damaging economic losses by:

- Reducing semen quality producing rams that sub fertile or sterile, therefore increasing ram turnover and replacement costs
- Poorer conception rates with an increase of ewes returning to service 17 days later
- Abortions in infected ewes
- Reduction in lamb marking percentage
- Extended lambing period resulting in:
  - ◇ Unproductive feed utilisation due to varying stages of pregnancy and lactation cycles among ewes
  - ◇ Higher ewe and lamb death rates as a consequence of increased metabolic disorders and mismothering
  - ◇ Decline in wool value due to increased variability in length and quality
  - ◇ Variable lamb weights and condition scores causing insufficient marketing of prime lambs
  - ◇ Economic losses can be reduced significantly and prevented with the implementation of strategic OB management practices.

#### Management of Ovine Brucellosis

Once a ram has been infected with OB, treatment is very limited. Treatment is considered unviable as impairment is generally permanent in most cases with rams remaining sub fertile or sterile after treatment. The most effective treatment of OB is culling of rams displaying clinical signs or rams that have tested OB positive through blood testing or semen examination.

Best-practice management strategies for the prevention and control of OB:

- Cull all infected rams
- Physical scrotal examination upon ram selection and purchase
- Purchase rams and ewes from OB-free accredited breeders and ensure they have a current accreditation certificate
- Avoid purchasing rams out of the saleyard or isolate new stock from existing flock until OB status of new rams is established
- Rams should be run in small mobs with young rams and old rams separated
- Rams should be tested for OB at least one month prior to joining
- Reduce the potential of infection from stray rams by ensuring boundary fences are in good order
- Avoid running rams with ewes during lambing periods; if a ewe aborts due to OB the ram may contract the disease from serving the ewe that has aborted
- Be attentive to any abnormalities in scrotal appearance and texture, conception rates and abortions in ewes as well as a lower lamb marking percentage or extended lambing period
- Quarantine potentially infected stock and seek veterinary consultation if rams present any abnormalities
- Ovine Brucellosis Accreditation Scheme

The OB accreditation scheme is a voluntary scheme managed by the Victorian Department of Primary Industries. OB accreditation ensures that rams are OB free for interstate movement, ram sales, attendance at shows and export. A property assessment is required to achieve OB free accreditation.



Rams entering the Mallee Ovine Brucellosis Control Area require a completed Ovine Brucellosis Vendor Declaration in addition to a completed National Sheep Health Statement.

#### **Mallee Ovine Brucellosis Control Area**

[http://www.dpi.vic.gov.au/\\_\\_data/assets/image/0011/56855/MOBCA-map.jpg](http://www.dpi.vic.gov.au/__data/assets/image/0011/56855/MOBCA-map.jpg)

**For further information, please contact the VFF Livestock Group on 1300 882 833 or by email to Jacinta Pretty at [jpretty@vff.org.au](mailto:jpretty@vff.org.au)**

#### **Further links**

##### **Department of Primary Industries Victoria**

<http://www.dpi.vic.gov.au/agriculture/pests-diseases-and-weeds/animal-diseases/sheep/ovine-brucellosis>

##### **Department of Primary Industries Victoria- Notifiable Diseases**

<http://www.dpi.vic.gov.au/agriculture/pests-diseases-and-weeds/animal-diseases/notifiable-diseases2>

##### **Department of Primary Industries New South Wales**

[http://www.dpi.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0006/145824/ovine-brucellosis.pdf](http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0006/145824/ovine-brucellosis.pdf)

##### **NSW Ovine Brucellosis Accredited Flock Scheme**

<http://www.dpi.nsw.gov.au/agriculture/livestock/sheep/health/ovine-brucellosis-scheme>

##### **Meat and Livestock Australia**

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

#### **Take home messages:**

- Ovine Brucellosis is a notifiable infectious disease restricted to sheep
- Outbreak in a flock has the potential to cause damaging economic losses through reproductive inefficiencies
- Be attentive to any abnormalities in scrotal appearance and texture, conception rates and abortions in ewes as well as a lower lamb marking percentage or extended lambing periods
- Quarantine potentially infected stock and seek veterinary consultation if rams present any abnormalities

Original Author, Jacinta Pretty (VFF Livestock Project Officer), Original Version Published in October 2012.

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**Victorian Farmers**  
Federation

#### **Victorian Farmers Federation**

Farrer House, Level 5, 24 Collins St  
Melbourne, Victoria, 3000

Telephone: 1300 882 833

Fax: 03 9207 5500

[VFF@VFF.org.au](mailto:VFF@VFF.org.au)

[www.VFF.org.au](http://www.VFF.org.au)