

# Johne's disease (JD)

## Impact

- Wasting of sheep for three to four months, leading to death.
- Mortality rates of up to 20%, generally in sheep over two years old.
- JD is incurable, but vaccination will mitigate its impact on your flock.
- JD is notifiable to a government veterinary authority in all states.
- JD must be declared on a National Sheep Health Declaration (NSHD).

## Likelihood

Poor biosecurity increases the likelihood of JD infection. It only takes one infected sheep for the disease to be spread. As pasture contamination increases, so does the impact of the disease.

Likely triggers for JD outbreaks:

- sheep purchased without an JD declaration on a National Sheep Health Declaration.
- purchasing unvaccinated sheep.
- sheep that have been on agistment, have strayed or have been in contact with stray sheep, have poor immunity, are young and are ill thrifty.
- shared, contaminated facilities, bacteria in runoff or wind-blown, high rainfall, low temperature, low solar radiation and high pasture cover (research is underway on soil factors).

## Strategic prevention

Seek professional advice on a management plan for biosecurity, vaccination, grazing and monitor testing. To avoid or reduce risk of contamination:

- minimise all sheep introductions and reintroductions to your property.
- insist on National Sheep Health Declarations when buying or selling (location of origin, tests or vaccine don't guarantee that there is no contamination).
- minimise shared facilities and manage the risk of stray stock with good fencing and agreements with neighbours.
- create barriers to local runoff or wind-blown soil and dung, particularly at shared water points and truck and equipment wash down.
- adopt some of the response strategies such as vaccination, grazing management and monitoring tests; this may delay the impact if JD is present but undetected.
- tests (on-farm or abattoir tests) allow early diagnosis and management.

**Caution:** Biosecurity won't protect every flock from JD because the disease takes a long time to develop, bacteria can survive in the environment and sheep are easily infected.

### Tactical response

Seek professional advice on your responsibilities after diagnosis and implement a management plan. The plan needs to cover:

- **Vaccination:** the vaccine does not prevent infection entirely, however it does significantly reduce the number of sheep that die (by 90%) and wasting in most sheep, and decreases the amount of bacteria passed in the dung. This reduces environmental contamination and provides less opportunity for disease transmission.
- **Grazing:** it is best to limit the risk of exposure to JD by young stock for as long as possible. This usually relies on the following grazing principles:
  - as a first priority, prepare low-contamination pastures for early weaning and graze weaners as long as possible on those pastures while managing the worm risk.
  - prepare low contamination lambing pastures and cull ill thrifty ewes before lambing and again at marking, then wean early.
  - pasture preparation takes 12 weeks in summer and up to six months in winter. Techniques include grazing adult cattle, cropping, pasture sowing or spelling.
- **Contamination:** targeted culling of any ill thrifty sheep is one way to reduce contamination as these sheep shed high amounts of bacteria in their urine and faeces.
- **Monitoring:** tests (on-farm or additional to random abattoir tests) track the impact of management after diagnosis.



#### TIPS AND INFORMATION

- Limit exposure of sheep to possible sources of bacteria at all times, both to avoid JD and reduce its impact.

### Resource links

National Johne’s Disease Program

#### New South Wales

Ovine Johne’s disease

#### Queensland

Johne’s disease

#### Tasmania

Ovine Johne’s disease

#### South Australia

Johne’s disease in sheep

#### Victoria

Ovine Johne’s disease

#### Western Australia

Johne’s disease (JD) in sheep