

# LEPTOSPIROSIS

## Facts for Beef Farmers

**YOUR BEEF HERD MAY BE INFECTED WITH leptospirosis.**

Leptospirosis is a zoonosis, that is a disease of animals that can infect humans. You may know it as “dairy farm fever” because many of the known victims have been dairy farmers or their workers.

But leptospirosis can be carried, and passed on to humans, by all farm animals — beef and dairy cattle, sheep, pigs, goats and deer. Rats can also spread the disease.

### What is leptospirosis?

Leptospirosis is caused by bacteria known as leptospire. These multiply in the kidneys of animals and are shed in the urine.

Reproductive tissues can also be infected.

Usually, an animal carrying leptospirosis shows no clinical signs, though cows may abort.

### How are animals infected with leptospirosis?

By grazing pasture or drinking water contaminated with the urine of infected animals. The infection enters through the membranes of the eyes, nose and mouth.

Leptospirosis spreads easily. An infected animal sheds millions of leptospire in its urine. The bacteria can live for months in moist conditions.

Any animals sharing pasture can be infected. Introduced animals such as dairy heifers or a new stud bull may bring infection.

### Is my herd likely to be infected?

There's very little hard data. But consider:

- Earlier studies showed over 60% of dairy cattle were infected with leptospirosis.
- One recent (and limited) study of beef cattle shows a similar level of infection.
- Farm practices such as cross-grazing with dairy cattle and with sheep are increasing.
- Sheep also carry the infection, as do deer.
- Contaminated pasture is one of the main means of infection of animals.

### Can my herd be tested for leptospirosis?

Your vet can take a blood test which will show (within 48 hours) whether your cattle have

antibodies to leptospirosis.

This indicates that the stock either have been exposed to leptospirosis, or have been vaccinated against it. More research is needed on a more specific test which would show if the animal is currently shedding leptospire.

### How do you control leptospirosis?

The aim is to stop animals from shedding infectious urine, and so stop the cycle of infection and reinfection.

Antibiotics can be used to stop the shedding short-term. Vaccination provides a longer-term protection.

- A vaccination programme should be maintained for at least 3 years, and cover all stock on the farm.
- Quarantine all new stock until its vaccination status is verified.

Combination vaccines are available for the main types of leptospirosis known to infect cattle and calves: *hardjo*, *pomona* and *copenhageni*.

There is no vaccine against *ballum*, which is passed on by rats. Control is by eradicating the rodents and keeping feed supplies sealed.

### What if my herd has got leptospirosis?

The animals will still grow, and they won't look ill. But you may lose calves to abortion or they may die from red water disease.

There's a high risk that you, your family and workers may catch the disease.

Beef and other drystock farmers have a one in 38 chance of contracting leptospirosis over a 30-year working lifetime.

Service workers, contractors, and people like stock truck drivers who come on your property, will risk exposure.

Meat plant workers who process your stock will have a very high risk of exposure.

They have a one in 20 chance of being infected with leptospirosis over a working lifetime.



*Regular hand washing is important to avoid catching leptospirosis.*

## Leptospirosis can be a “cruel disease”

If you catch leptospirosis, it may just feel like a bad case of flu, with headaches and fever.

But it can cause death, and some people become seriously ill and need hospital intensive care. Sufferers and their families say it is a “cruel disease.” It can also be very costly.

People may be unable to work for months and have lasting kidney or liver damage. In the worst cases, they are unable to go back to running their farm, and the disease keeps coming back.

## Who is at risk on a beef farm?

Beef farmers are not exposed to animal urine daily, as dairy farmers are, e.g. when milking. But there is still some risk for anyone working on a beef farm with unvaccinated stock.

Some tasks bring you in contact with animal urine, and a splash or spray is enough to spread the disease. Leptospirosis may also be present in reproductive tissues or an aborted foetus.

The chance of exposure increases for people working close to the rear end of the animal, e.g.

- Vets and anyone assisting with calving
- AI technicians
- Marking calves
- Truck drivers loading stock.

Children can also be at risk if they run about barefoot or paddle in contaminated water.

Gardening is a risk when soil may be infected.

The chance of infection is higher when it's wet.

## How can you protect against infection?

Humans are usually infected by the urine of an infected animal, or water contaminated with urine. The most common routes of infection are through the eyes, nose and mouth, or through cracks or cuts in the skin.

If your stock is not vaccinated, your main protection is personal hygiene and personal protective equipment (PPE) such as:

- Overalls, gloves, waterproof footwear.
- Veterinary gloves if assisting with calving.
- Goggles, or ideally a face mask, if working with very unsettled animals.
- Wash hands regularly, and dry them using disposable towels.
- Always clean hands before eating or smoking. Wash your face as well if you have a beard or moustache.
- Change gloves or boots immediately if they split or leak.



*Wear all the protective gear needed.*

## Why vaccinate?

- You are in a high-risk group for infection.
- You may have already been exposed, but felt no

ill effects. But you could be unlucky, and be unable to carry on your business.

- Almost all the cases of leptospirosis still occurring in the dairy industry are coming from unvaccinated stock.
- About 90% of dairy cattle are now vaccinated, but less than 10% of beef cattle.
- Under the Health and Safety in Employment Act, vaccination could be considered a practicable step that should be taken to protect employees against leptospirosis. One dairy farmer was prosecuted and fined \$15,000 for failing to vaccinate after his employee became infected with leptospirosis.
- The disease does not affect meat or milk quality. However, vaccination against leptospirosis is already included as part of the overall quality measures required by some dairy companies.
- The meat processing industry may in future be asked to identify the vaccination status of cattle as a protection for their workers.

## First aid if you have been exposed to urine

- Wash face well, flush out mouth and eyes with lots of running water.
- “Bleed” cuts, flush fresh or old cuts and grazes with water.
- See a doctor within 24 hours to get a blood sample and get treatment with antibiotics.
- IMPORTANT: The sample must be taken BEFORE you take any pills.
- Another sample will be needed in about 3 weeks' time.



*To avoid infection, always cover cuts.*

Tell the doctor that you work with animals and may have been exposed to leptospirosis.

## Watch your health

Go to the doctor if you feel:

- Headaches;
- Aching muscles;
- The light hurts your eyes;
- Fever or chills
- Nausea or vomiting.

Do this if you feel ill, even if you don't think you have been exposed to animal urine. The sooner treatment starts, the better.

## Find out more

See *Guidelines for the Control of Occupationally Acquired Leptospirosis*, available from your local OSH branch. You can download a copy of this and other information from the OSH Safety Net web site: [www.osh.dol.govt.nz](http://www.osh.dol.govt.nz)