



LEPTOSPIROSIS: FACTS FOR BEEF FARMERS

Your beef herd may be infected with Leptospirosis. Leptospirosis is an animal disease that can infect humans and is also known as a zoonosis. 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 tissue can also be infected. Often, an animal carrying Leptospirosis shows no clinical signs, though you may lose calves to abortion or they may die from red water disease.

How does Leptospirosis affect people?

If you catch Leptospirosis, it may just feel like a bad case of flu, with headaches and fever. But some people become seriously ill and need hospital intensive care and it can cause death. 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. Pregnant women who catch Leptospirosis can miscarry.

How are cattle infected with Leptospirosis?

Animals are infected 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 thrive in moist or wet conditions and can survive for months. Any animals sharing pasture can be infected. Introduced animals such as dairy heifers or a new stud bull may bring infection.

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.

How do you control Leptospirosis?

The aim is to stop animals from shedding infectious urine, and to prevent urine contamination, e.g. by fencing off waterways and keeping rodents out of feeds such as hay.



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

There is no vaccine yet for the leptospire type *ballum*, which is passed on by rats, mice and hedgehogs. The main control is to eradicate the rodents and keep feed supplies sealed.

Other strategies to reduce risk are also important.

- 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.
- Do not cross-graze deer with sheep or other animals — this is a common cause of infection.

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

Why should I get a vaccination?

- You are in a high-risk group for infection.
- You may have already been exposed, but felt no ill effects.
- 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 1992, 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.

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
- Artificial Insemination 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. There is also a risk of infection from rat or mouse urine when handling hay or feed grains.

Farm owners have a responsibility under the Health and Safety in Employment Act 1992 to ensure the safety of these people, as well as the people they employ.

How can you protect against infection?

Anyone whose hands are split or grazed should wear gloves when working closely with cattle. Use leather gardening gloves or similar when handling hay. Skin cuts should be covered with waterproof dressing, regularly changed.

Use personal protective equipment (PPE) e.g.

- 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.

Have clean toilet and hand-washing facilities with running water and disposable towels.

Display first aid advice

- Have a kit with waterproof coverings for any skin cuts.
- Remind people (e.g. with a poster notice) that Leptospirosis may be a risk, to avoid urine splash and spray, and to wash and dry hands before smoking or eating.

First aid if you have been exposed to urine

- Wash face well and 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 medication.
- Another sample will be needed in about 3 weeks' time. Tell the doctor that you work with animals and may have been exposed to Leptospirosis.

Watch your health

Go to the doctor if you have:

- 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. Remind your doctor that you work with cattle and that Leptospirosis may be a cause of your symptoms. Ask for the appropriate tests. The sooner treatment starts, the better.

Find out more:

You can download a copy of Guidelines for the Control of Occupationally Acquired Leptospirosis and other information from www.dol.govt.nz. See also the other bulletins in this series, e.g. for deer, sheep, and wool farmers, and meat industry workers.

