

# NEPHRITIS

## KEY MESSAGES

1. Nephritis will lead to condemnation of the kidneys but may also have other effects on production.
2. The cause of the nephritis should be identified and prevented, if possible.

## What is nephritis?

Nephritis is an inflammatory, degenerative disease of the kidney that is often referred to as 'white spotted kidney.' This is commonly found in clinically healthy cattle at slaughter in Australia. Leptospirosis, a bacterial disease, is thought to be the most predominant cause of the nephritis in beef cattle, but ascending infections from the bladder may also cause it.

Nephritis is characterized by scattered, greyish-white foci in cattle kidneys measuring between 1-5 mm. This disease is predominately found in beef cattle under extensive management, i.e. on pasture.

## How is it caused?

The most common cause of white spotted kidney is thought to be leptospirosis. The causal bacteria can be spread through contaminated urine entering cuts, abrasions or mucus membranes of cattle from contaminated water, soil or mud. Exposure to flood water can spread the bacteria quickly and over a vast area. Bacteria can enter through abrasions in the mouth when eating or drinking water contaminated with them. Bacteria can also travel up from the bladder into the kidneys. Animals that recover can develop a carrier condition where the bacteria continue to develop in renal tubules for periods of days to years.

## Disease on farm

Nephritis likely has effects on cattle health on the farm that may not be obvious (sub-clinical). It can lead to a potential loss of production, trouble passing urine, excessive urination and can lead to further infection and loss of appetite, leading to decreased weight. Leptospirosis is a serious disease of pregnant cattle, potentially leading to abortion. It is also a serious zoonosis (i.e. it can be passed to humans) and people should always take precautions when handling animals to minimise any risk of infection.

## At the abattoir

Kidneys will be condemned.

## Treatment

The cause of the nephritis first needs to be determined and this will require testing by a veterinarian. If an infectious cause is found, then antibiotics may be prescribed. Treatment involves the removal of infected cattle from the rest of herd, often moving them to an area where bacteria do not thrive, including dry soils or increased soil acidity.

Protective clothing and gloves should be worn if leptospirosis is suspected as it is a zoonotic infection.

## Prevention

Providing clean water and feed sources to cattle. Undertaking biosecurity measures such as changing clothing, cleaning shoes and not cross contaminating equipment often can ensure prevention of the disease spreading.

If leptospirosis is diagnosed, introducing an effective vaccination program offers the best protection against it. Consult with your veterinarian before commencing a vaccination program.



Nephritis

Source: MINTRAC