

# LEPTOSPIROSIS IN DOGS



# Leptospirosis in dogs

- Common features include fever, anorexia, depression, liver disease, jaundice, and kidney failure.
- Presentation may mimic many other diseases.
- Difficulty with diagnostic tests.
- Underdiagnosed.
- These dogs may be asymptomatic, yet be a source of infection for humans and other animals.



# Canine Lepto in New Zealand

- Antibodies to Copenhageni, Pomona, Hardjo and Ballum have been identified in New Zealand dogs.
- Infections of dogs with Copenhageni reported more commonly in the North Island.
- Practitioner reports attributing disease to Pomona.
- Copenhageni is maintained in the rodent population (urban and rural dogs potentially at risk).
- Licensed vaccines for dogs in New Zealand provide protection against Copenhageni only.



# Canine Lepto in New Zealand

- No recent studies on urinary shedding of leptospires by dogs in NZ.
- Information is needed on the association between exposure in NZ dogs with that of livestock.



# 2005 survey

- 606 North Island dogs, 49 South Island dogs.
- 10% of dogs tested had antibodies to Copenhageni.
- 3.5% had significant concentrations of antibodies to Hardjo, including working breeds.
- Evidence of exposure in South Island dogs.
- Further information required.



# South Island study

- Preliminary results.
- 117 dogs from 28 farms.
- Antibodies generally low or negative.
- Some evidence of exposure to Hardjo in 29 dogs.
- 16% of dogs had leptospiral DNA in their urine (PCR).
- Positive urine PCR can occur with negative antibody tests.
- Culture/serovar identification not yet performed.



# Vaccination Trial

- Current dog vaccine provides protection against Copenhageni only.
- Investigation of response to a non-licensed (off label) three way livestock vaccine in dogs.
- Evidence that the vaccines raise antibody concentrations to Hardjo and Pomona, and to a lesser degree, Copenhageni.
- Increased antibody levels doesn't guarantee protection.
- Adjuvanted livestock vaccines may cause side effects.
- Administration only after veterinary consultation.



# Samoa

- Voluntary Vet Student externships.
- Spay/neuter clinics, medical supplies, welfare, education.
- Lepto is a significant cause of human non-malarial fever in tropical climates.
- Little is known about Lepto in Samoa
- Proposed project to investigate the prevalence of Lepto exposure in dogs.
- Collaboration with other researchers to assess impact on human health and livestock.





# Thank you!

