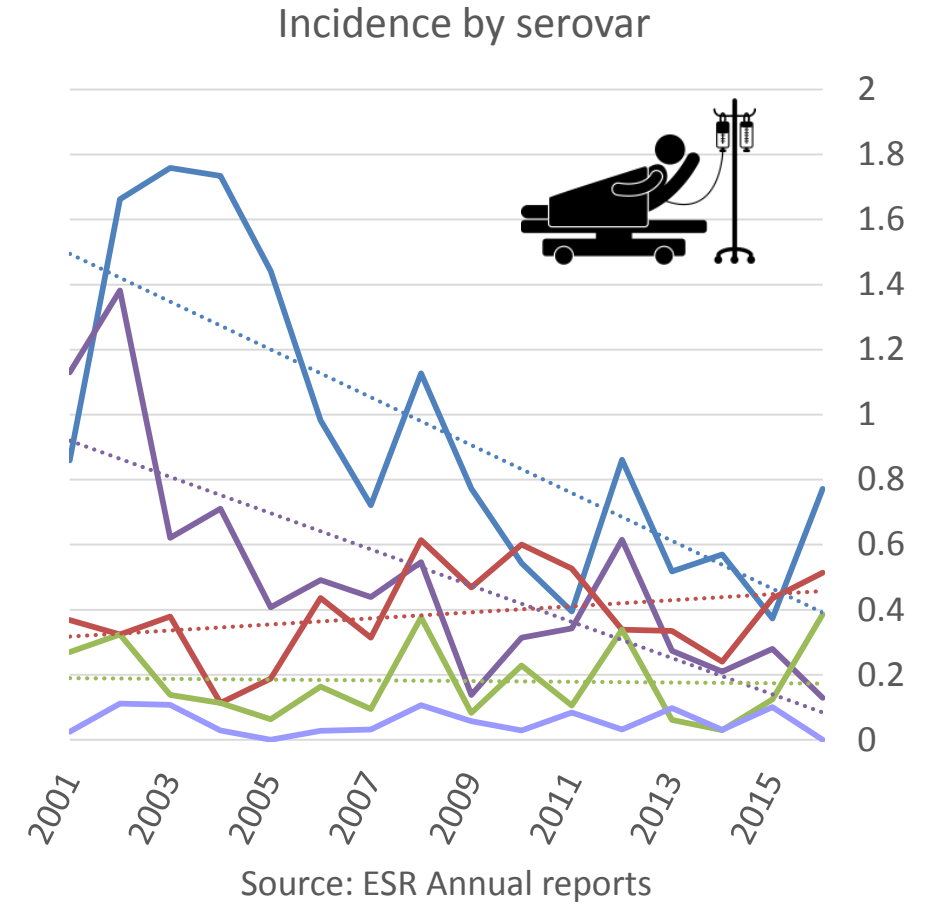
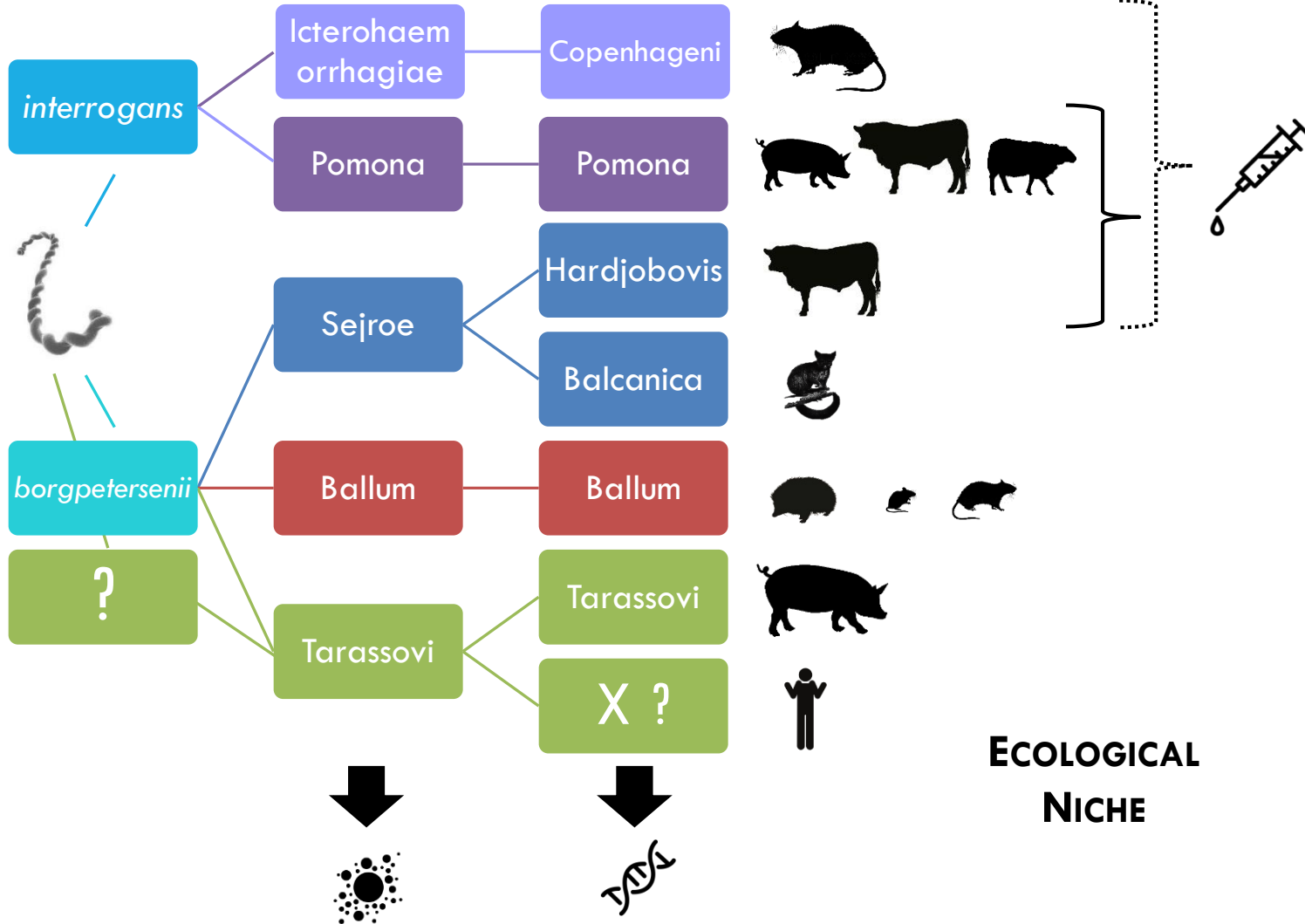


***LEPTOSPIRA* INFECTION AT THE WILDLIFE/LIVESTOCK INTERFACE IN NEW ZEALAND**



Marie Moinet, DVM, MSc VEPH
PhD candidate

CONTEXT IN



CROSS SECTIONAL STUDY : AUTUMN 2017



Dairy Farm

130 Ha - Coastal Manawatu

228 Milking cows (n=83)



150 R1 (n=60)



150 R2 (n=60)



Beef & Sheep Farm

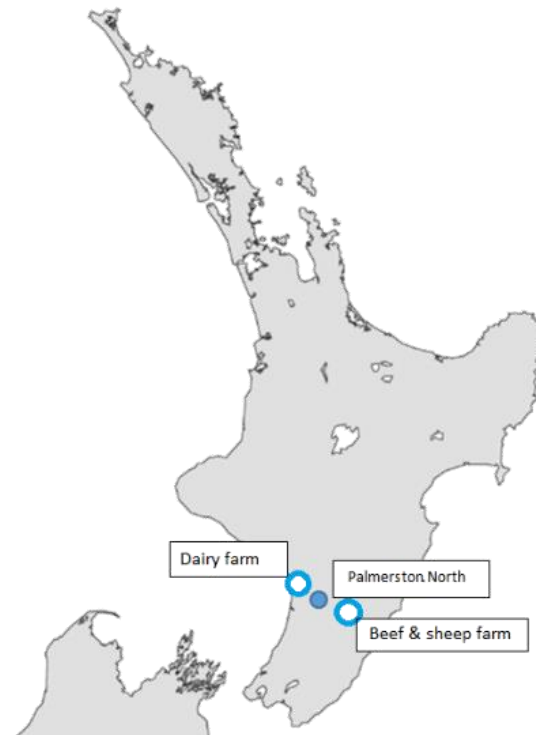
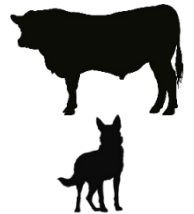
2065 Ha - Tararua

~8900 Sheep (n=180)



~560 Beef (n=45)

~20 working dogs (n=14)



Dairy

Beef & Sheep

TRAPS



In both

Wildlife trapping

- 3 types of traps
- 10 trap-nights
- Around pastures

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Image © 2017 CNES / Airbus

Image © 2017 DigitalGlobe

ANALYSES



 **Leptospira
Culture**

On field
EMJH
14 weeks

 **PCR**

Real time
LipL32 (screening)
glmU + sequencing

 **MAT
≥ 1:48**

Hardjobovis (str. 180)
Pomona (str. 68)
Ballum (Mus 127)
Tarassovi (Tar/12)
Copenhageni (M20)



CROSS SECTIONAL STUDY: RESULTS



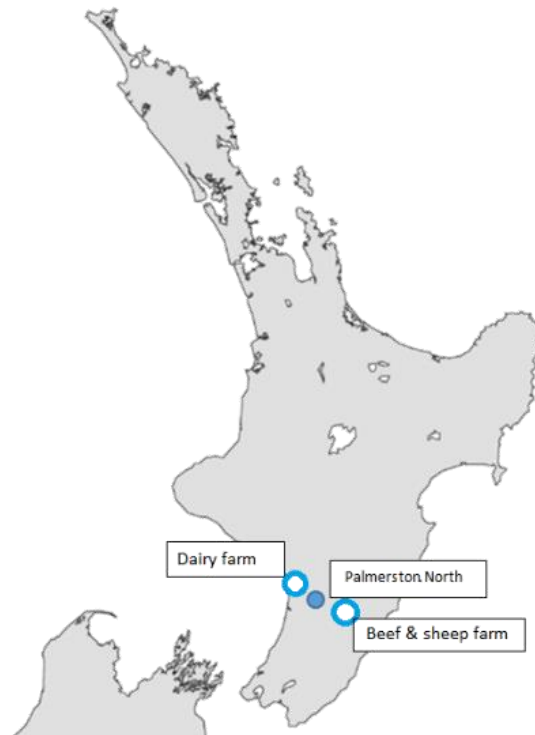
Dairy Farm

130 Ha - Coastal Manawatu

228 Milking cows (n=83) 

150 R1 (n=60) 

150 R2 (n=60) 





N=60



60



83



73



3



8



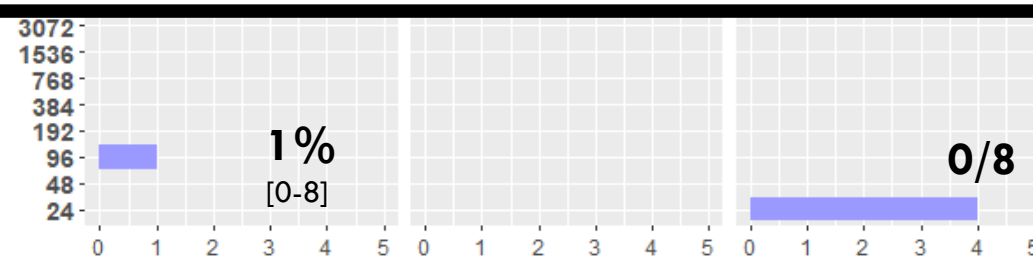
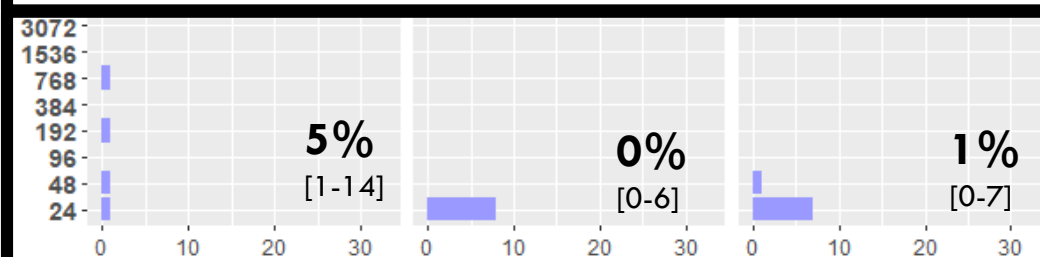
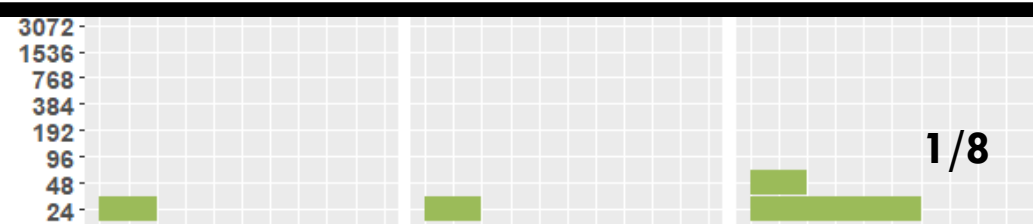
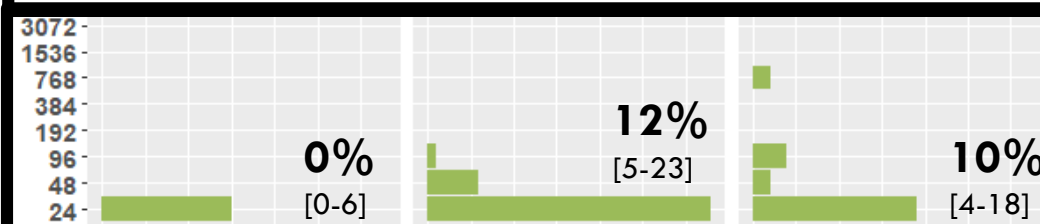
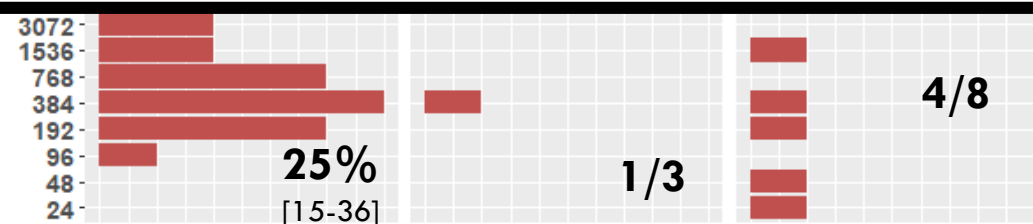
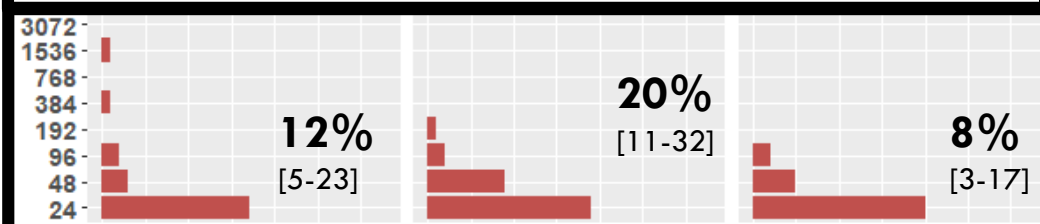
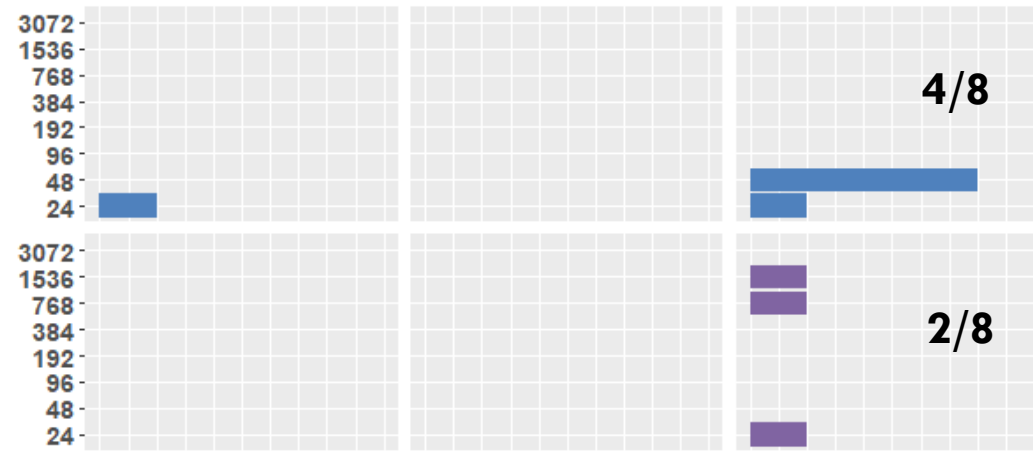
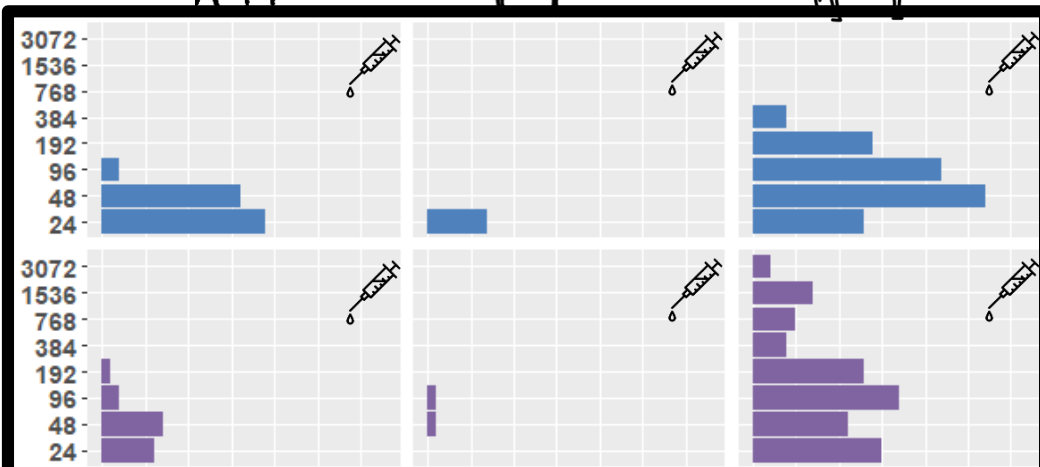
H

P

B

T

C



31%
[21-43]



1/3

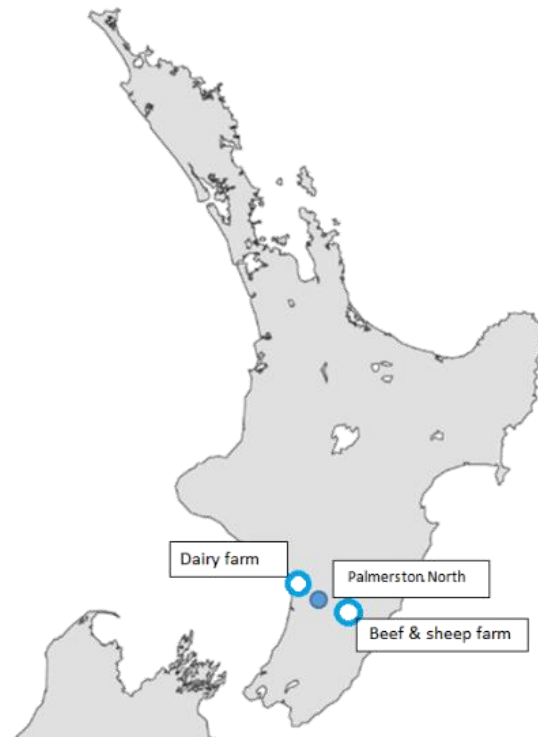


1 + 2/8

CROSS SECTIONAL STUDY : RESULTS



Beef & Sheep Farm

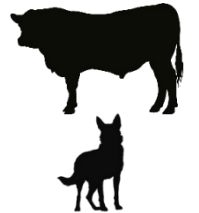


2065 Ha - Tararua

~8900 Sheep (n=180)



~560 Beef (n=45)



~20 working dogs (n=14)



N=45  58  61  61  14  32  11  1  18 

 **1+3/10**

 **18%**
[7-35]

 **9%**
[0-41]

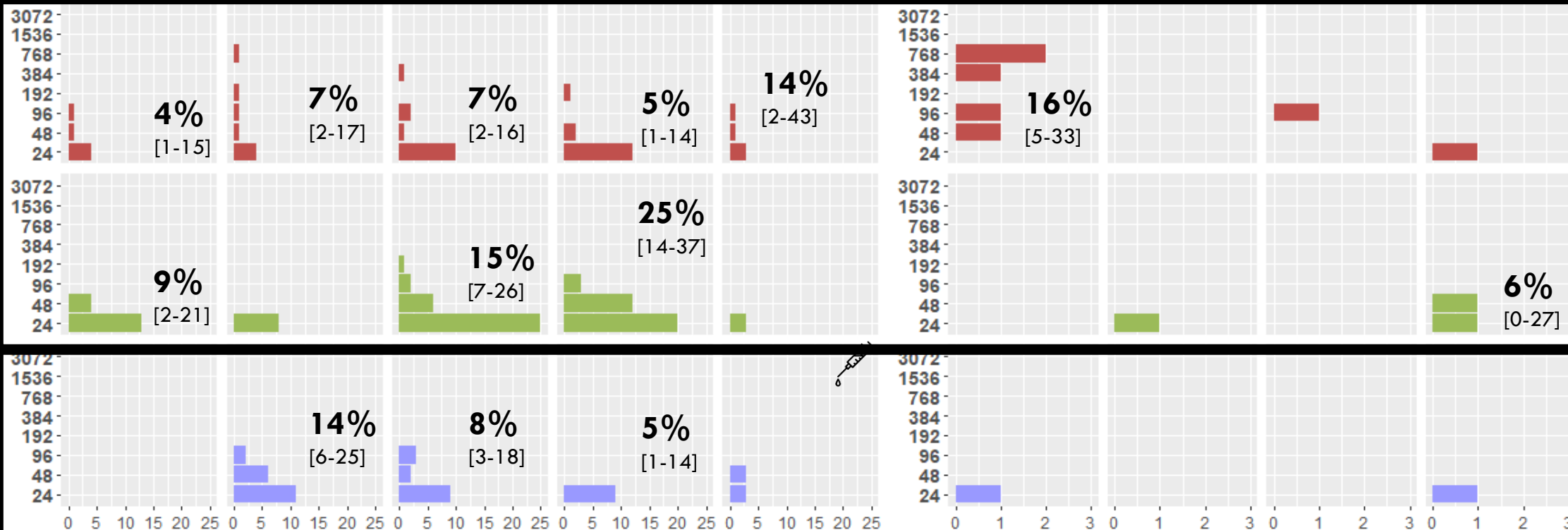
 **0/1**

 **0%**
[0-26]

B

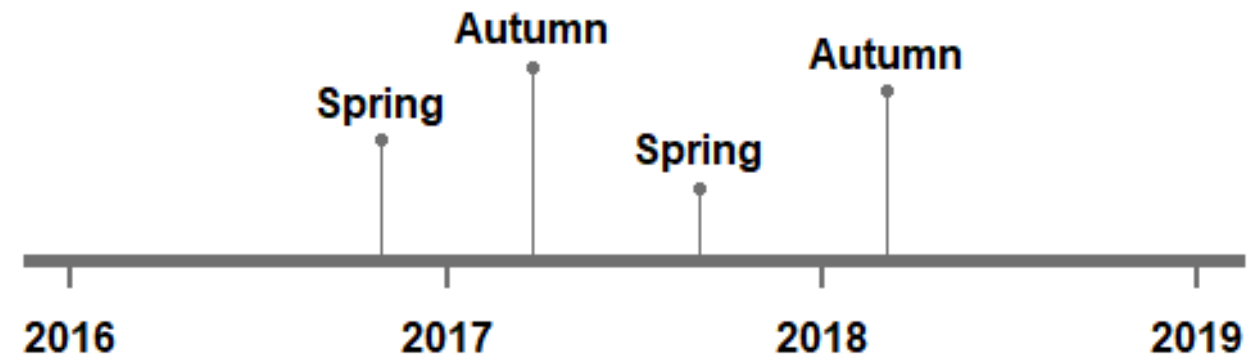
T

C

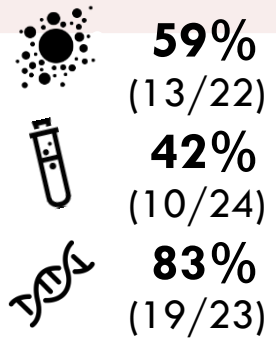


TEMPORAL EVOLUTION

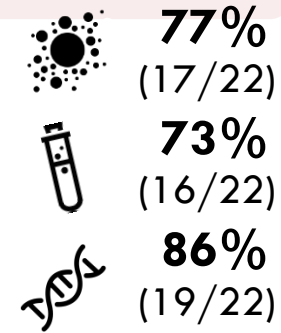
Dairy farm



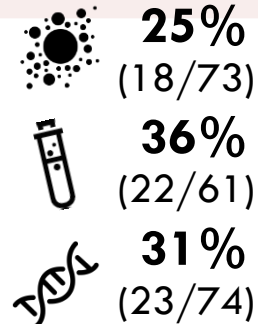
Spring 2016



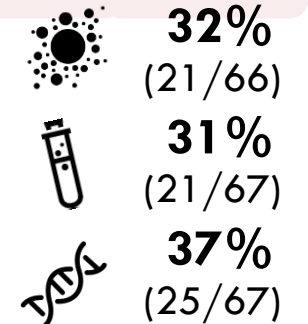
Spring 2017



Fall 2017



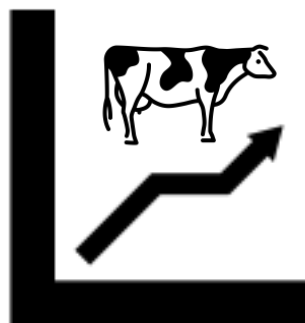
Fall 2018



WORRISOME TREND FOR SPILLOVER?



Desperate straits (detail), Acrylic on canvas



TAKE HOME MESSAGE

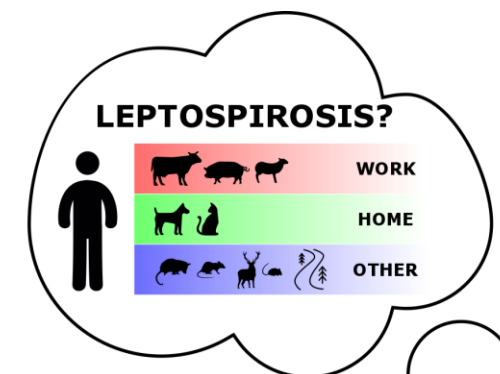
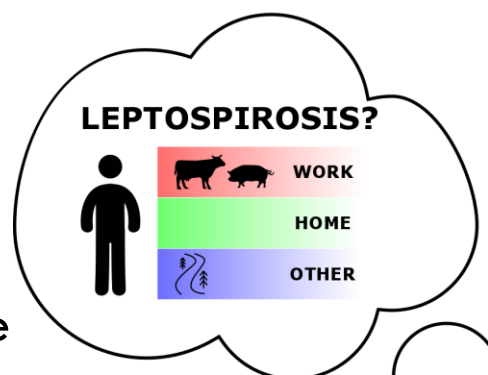
We cannot overlook other strains anymore

Strains found in wildlife commonly found in livestock in same habitat



Important, not sufficient

Ecological niche = not fixed in stone





A STRAIN CAN HIDE ANOTHER

THANK YOU !



The Leptospirosis Research Group



M. Vogel, G. LeRoux, D. Wilkinson, Me
Icons: thenounproject.com
Desperate straits: MarcelWitte.com

Wairarapa
Veterinary
Association

