

Biosecurity Your Herd Your Country

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Overview

- What is biosecurity? Do you practice it?
- What is your herd at risk to?
- What is your role in protecting the national herd?



What is biosecurity?

Risk of Disease =
Contacts

How Many Partners



- Your risk multiplies with every sexual encounter.

This chart calculates your sexual exposure. For a complete risk assessment, contact us.

NUMBER OF PARTNERS	HOW MANY PEOPLE HAVE YOU REALLY HAD SEX WITH?	NUMBER OF PEOPLE EXPOSED TO
1	1	1
2	2	3
3	3	7
4	4	15
5	5	31
6	6	63
7	7	127
8	8	255
9	9	511
10	10	1023
11	11	2047
12	12	4095

(If every person has only the same number of partners as you)

Biosecurity



Deliberate preventive action
to ↓ risk
of introducing disease

• INTRODUCTIONS

- Agistment (returning)
- Neighbours – strays, environmental flow
- Shows
- Contract labour, “visitors”

CONTACTS

Is biosecurity important?

- It depends!!
- What diseases is your herd at risk to?
- What is the status of your herd?
- What is the impact of disease in your herd?
 - No impact
 - Decreased production +/- deaths
 - Market access
 - Increased costs (vaccination / management)

Work it out for your herd



Where do I buy replacement cattle/ bulls?

- Free/low risk herd in free /low risk area/ **Free country**
- Free/low risk herd in **free /low risk area**
- **Free / low risk herd**

- **Single source** – increasing risk with more sources

- Test – herd of origin
- Test- individual animal(s) – before entry / after entry
- Vaccinate
- Inspect
- Isolate (quarantine)



Southern Australia

- Free of many nasty cattle diseases
- Consider:
 - Pestivirus
 - Leptospirosis
 - Bovine Johne's Disease
 - Vibriosis
 - Theileriosis
 - Drench Resistant worms
 - Liver Fluke



“New Disease”

Pestivirus

- ? 80% of herds with it
- Rapid spread within herd?
- Persistently infected carriers – Pis
- Transient infections- do they spread it?
- Decreased reproduction
- ?costs? \$4-\$19/head
- **Prevention**
 - PI negative bulls
 - Quarantine 4-6 weeks



Vibriosis

- Common but not prevalent
- Venereal transmission
- Embryo loss
- **Prevention**
 - Vaccinate bulls



Bovine Johne's Disease (BJD)

- Rare in beef herds
- Chronic, long incubation
- Poor tests- only useful in end stage, or herd testing

Prevention

- Establish status of source herd
- Quarantine unlikely to help
- Individual tests poor

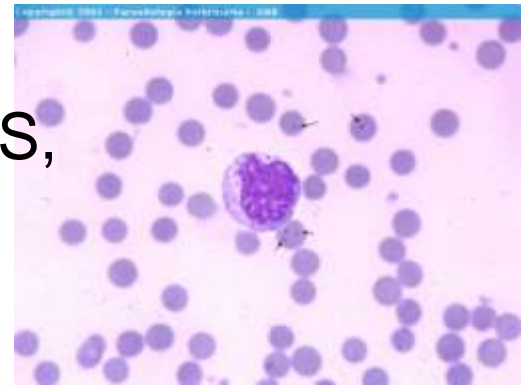


Theileriosis

- Tick borne infection *Theileria orientalis* (**Ikeda**)
- Anaemia
- No known prevention
- Treatment expensive, not always rewarding
- In endemic areas, usually only young naive cattle, adults immune
- RISKS: moving adult cattle into a high risk area
 moving adult cattle from high into low risk
 areas then spread within herd



- MOVEMENT OF ANIMALS,
- spread of vectors?



	Herd status	Movement	Individual Test	Treat	Quarantine
Pestivirus	?	✓	Antigen for bulls	X	4-6 weeks
BJD	?✓	✓	X (herd only)	X	?X
Vibriosis	?✓	✓	?X	Vaccinate bulls	?
Theileriosis	✓	✓	X	?	??
Drench Resistance	? X	✓	X	✓	✓
New Disease	?	?	?	?	?

Biosecurity and the National Herd

- I dont import cattle so it is not an issue!
- True, strict rules esp Mad Cow, FMD+ many others
- But every beef producer is part of the plan!

Early Detection
is key





If FMD comes into Australia, it will MOST
LIKELY be detected in:

- (a) Sheep
- (b) Cattle
- (c) Pigs
- (d) Horses

Would you detect FMD if it turned up in
your herd?



EuFMD 10th Training Program (KTC10)

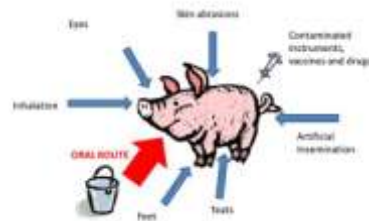
Kathmandu Valley

5-9 May 2014

Bruce Allworth,
CCEAD representative
for WoolProducers



FMD key facts



7 different types – **O**, **A**, **C**, **Asia 1**, SAT-1
SAT-2, SAT-3

Affects cloven footed animals (>70 species!)

Pigs spread, cattle show, minor in sheep

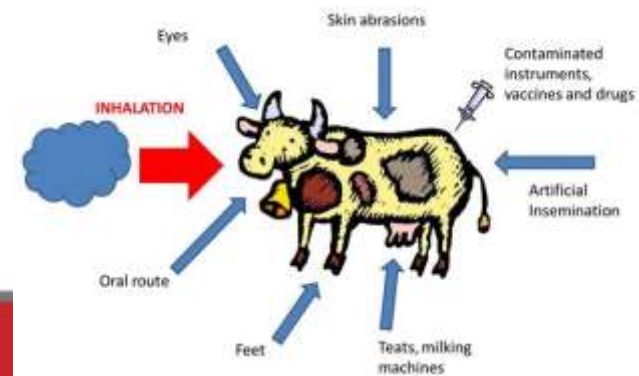
Incubation period 1-14 days, **2-5 days**

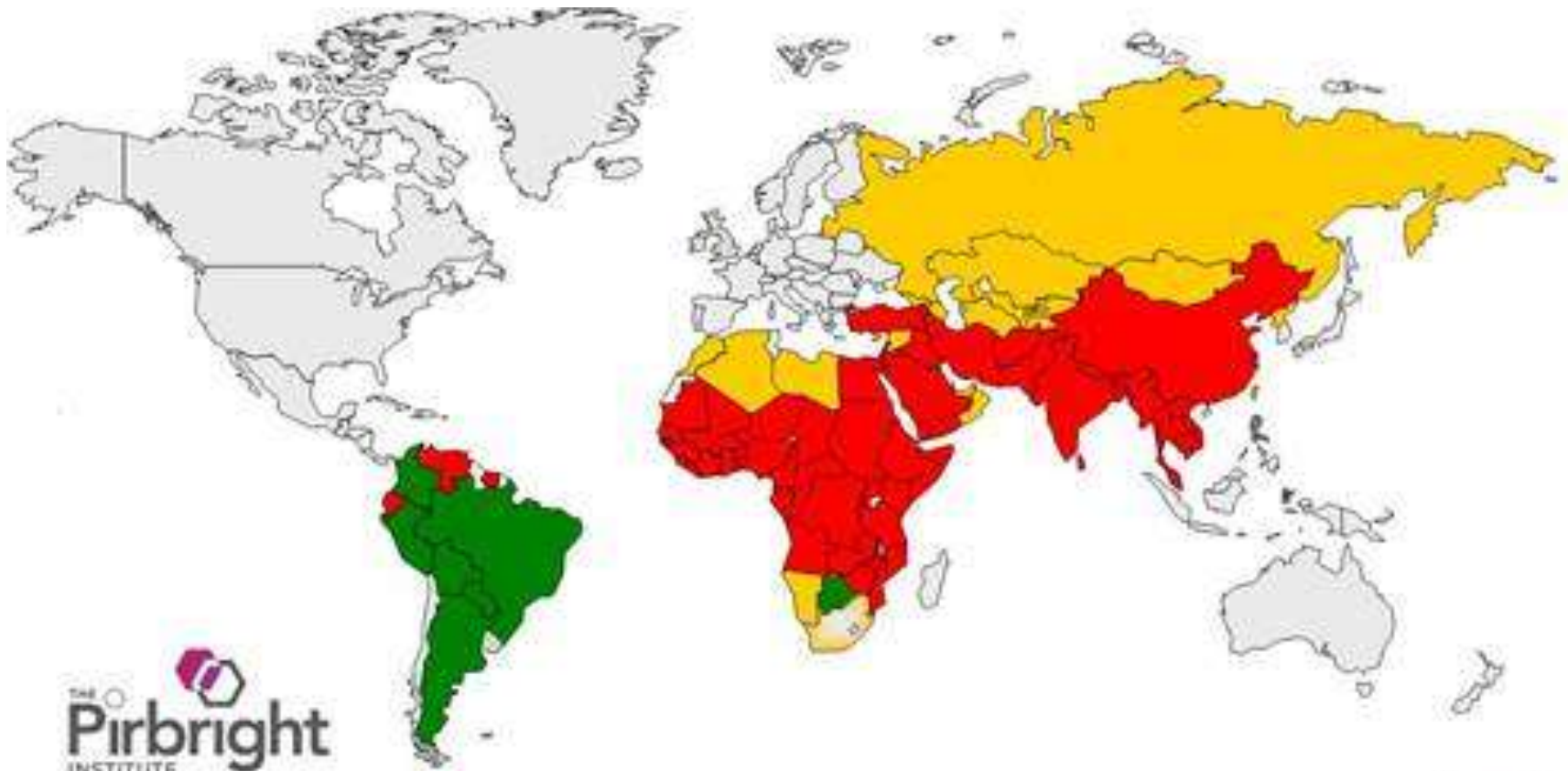
Can age lesions accurately to about 7 days

Ruminants – respiratory

Pigs – oral


Non-structural NSP+ SP protein








THE
Pirbright
INSTITUTE


 FMD-Free

 Free. Virus present in game parks

 Endemic

 Intermediate, sporadic

 Free with vaccination

 Countries with multiples zones:
FMD-free, free with vaccination or not free



Key clinical signs in cattle

Lameness

Salivation

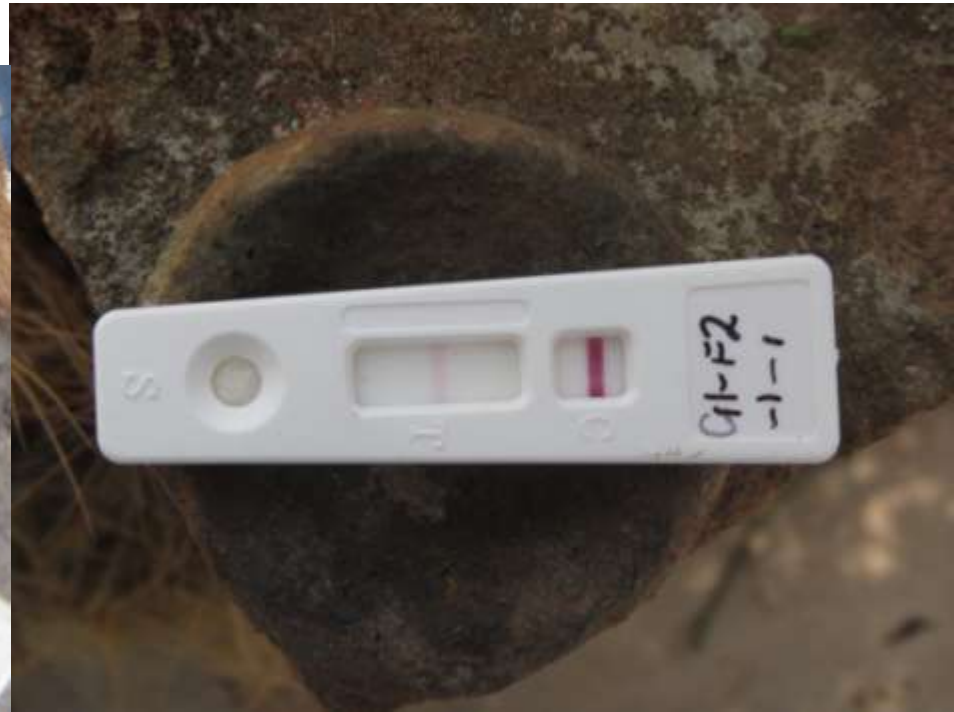
Lesions on mouth - vesicles

Lesions on teats – vesicles

Lesions on feet- top of coronary band- vesicles











Conclusions

- Contacts = RISK
- Introducing animals is biggest risk
- Design a biosecurity plan that suits your enterprise
- Know what you are buying – the “extras” may not be worth it
- Be observant for your country!