Wool Biosecurity:

Australian case study on outbreak preparedness and risk assessment

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Incursion response and management

Biosecurity is an Australian Government priority

Clearly defined emergency disease response programs, and governance arrangements

E.g. Australian Wool Industry Emergency Animal Disease Response Plan (WoolProducers Australia)

To be 'worlds-best' implies constant refinement

Trade continuity?

Prevention & eradication are the primary challenge

Yet trade continuity is also a major challenge

Australia supplies:

- 24% of all wool

- 63% of apparel wool

- 90% of fine apparel wool

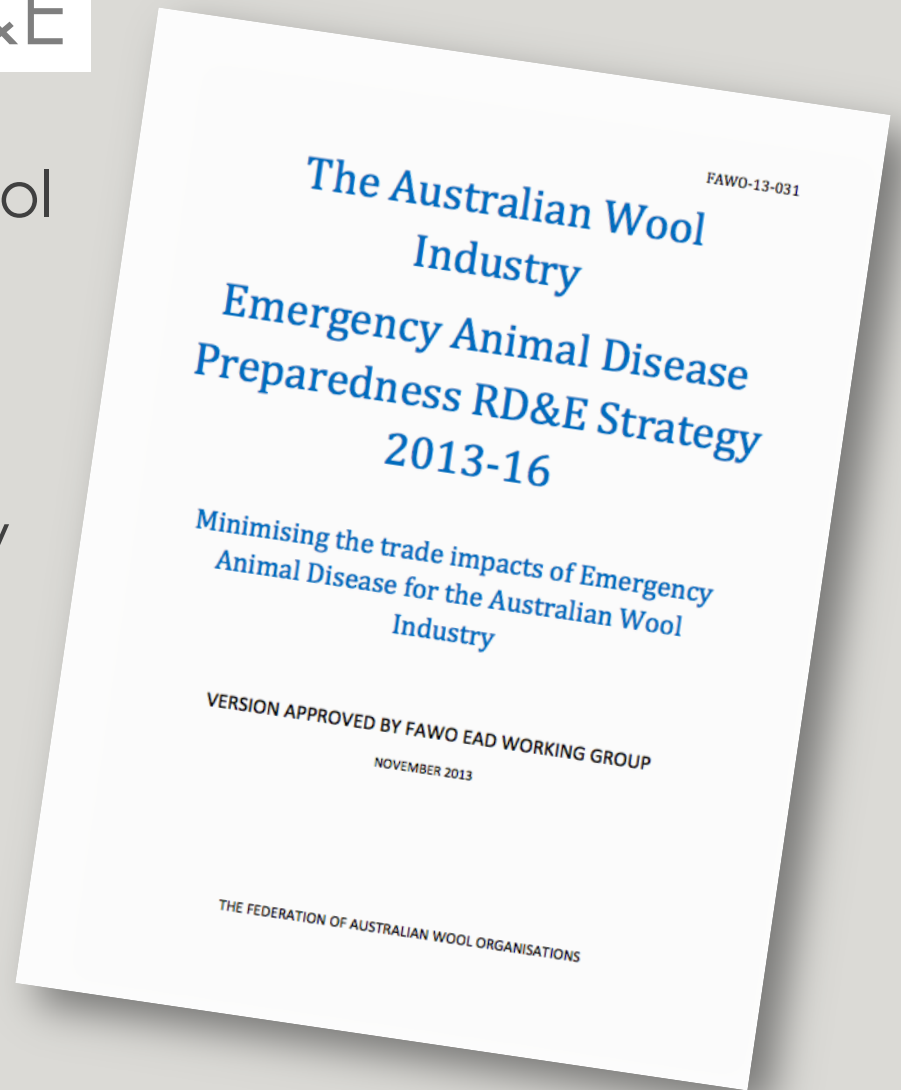Consequences of trade shut-down for 4 months?

Trade Continuity RD&E

Federation of Australian Wool Organisations (FAWO) led

Intent to:

- maximise trade continuity

- support where possible rapid & effective disease response efforts

Review conducted in 2011

Identified key RD&E targets

FAWO-13-031

The Australian Wool Industry Emergency Animal Disease Preparedness RD&E Strategy 2013-16

Minimising the trade impacts of Emergency Animal Disease for the Australian Wool Industry

VERSION APPROVED BY FAWO EAD WORKING GROUP

NOVEMBER 2013

THE FEDERATION OF AUSTRALIAN WOOL ORGANISATIONS

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Logistical system poses challenges

The logistical unit is the bale

Eradication occurs at the farm

Consequences post-border

Source: museumvictoria.com.au

Source: shanghaimetalcorporation.wordpress.com

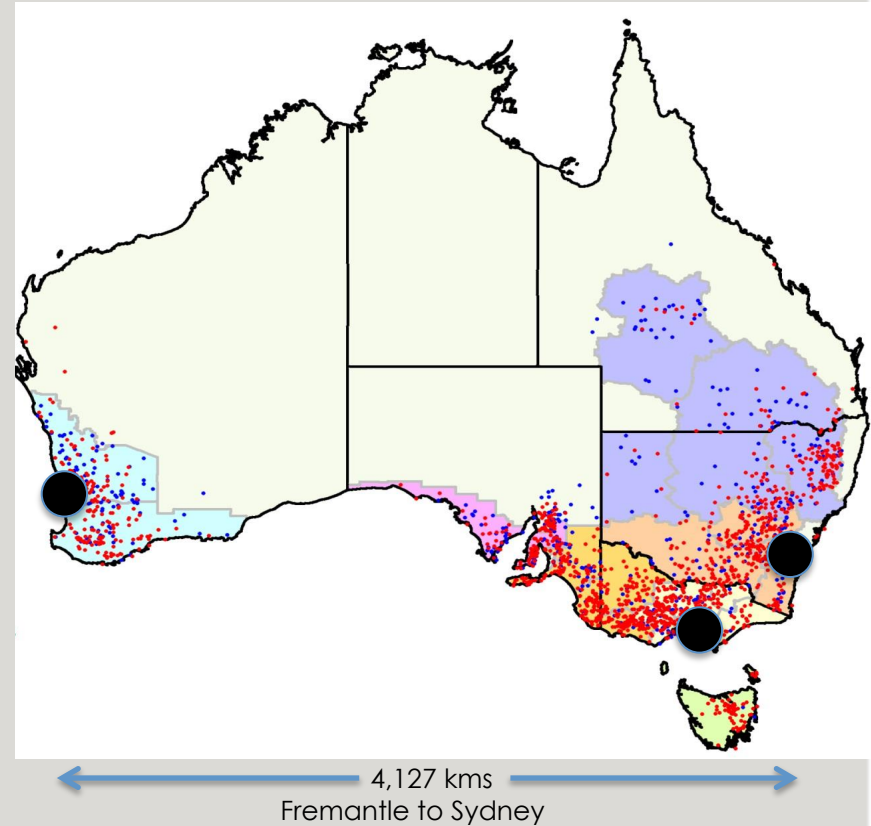Source: pack-tainers.com

Dealing with millions of bales, and kms

1.9 m individual bales filled each year

6 states x 3 selling centres x large distances

Key targets:

1. <u>Traceability</u> - rapidly localise to farm of origin

2. <u>Bale disinfection & decontamination</u>

4,127 kms
Fremantle to Sydney

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Bale Decontamination

Wool bale itself needs to be decontaminated

High throughput process being developed (AWTA)

Suited to wool logistical centres

Subject of on-going trialing.

International evaluation?

Images source:
AWTA Limited (2014)

Dis-infection

Limited data on FMD virus survival.

Highly dependent on time & temperature

These 3 points underpin OIE procedures for wool bale storage, post FMD

Absent of verifiability, default to 4 months?

Trade-flow impacts?

Temp °C

38 — 8

18 — 28

4 — 120

0   50   100   150

FMD survival (days)

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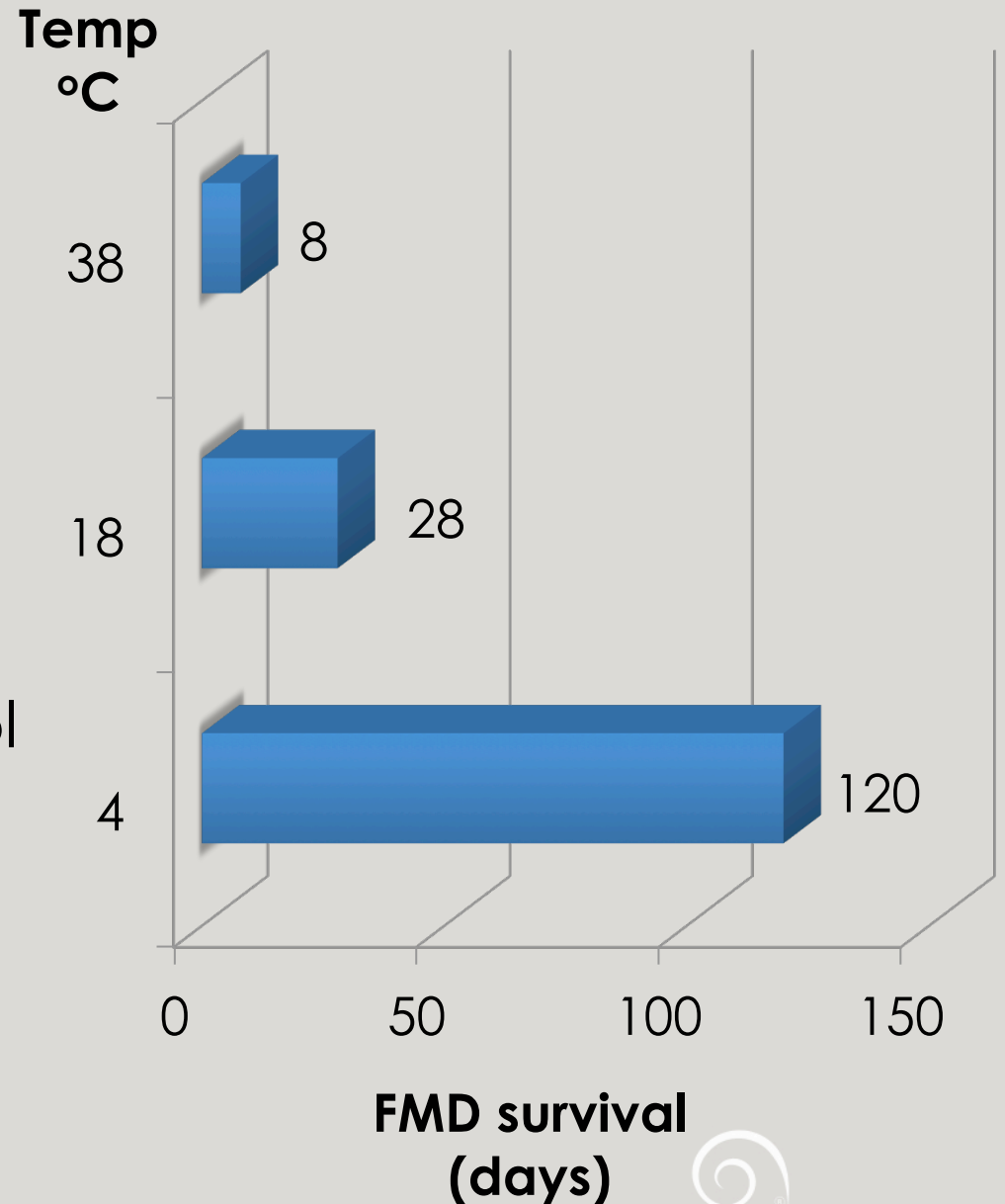
Dis-infection – alternate approaches

Rapid:

- Heat bales with **μ**-waves

- Irradiate with γ-rays

  Cost and efficiency?

Ambient conditions:

Systems for monitoring time:temp accumulation?

500 °C.days required?

$$y = -12.48\ln(x) + 62.417$$
$$R^2 = 0.97921$$

Temp (°C) — Time of storage
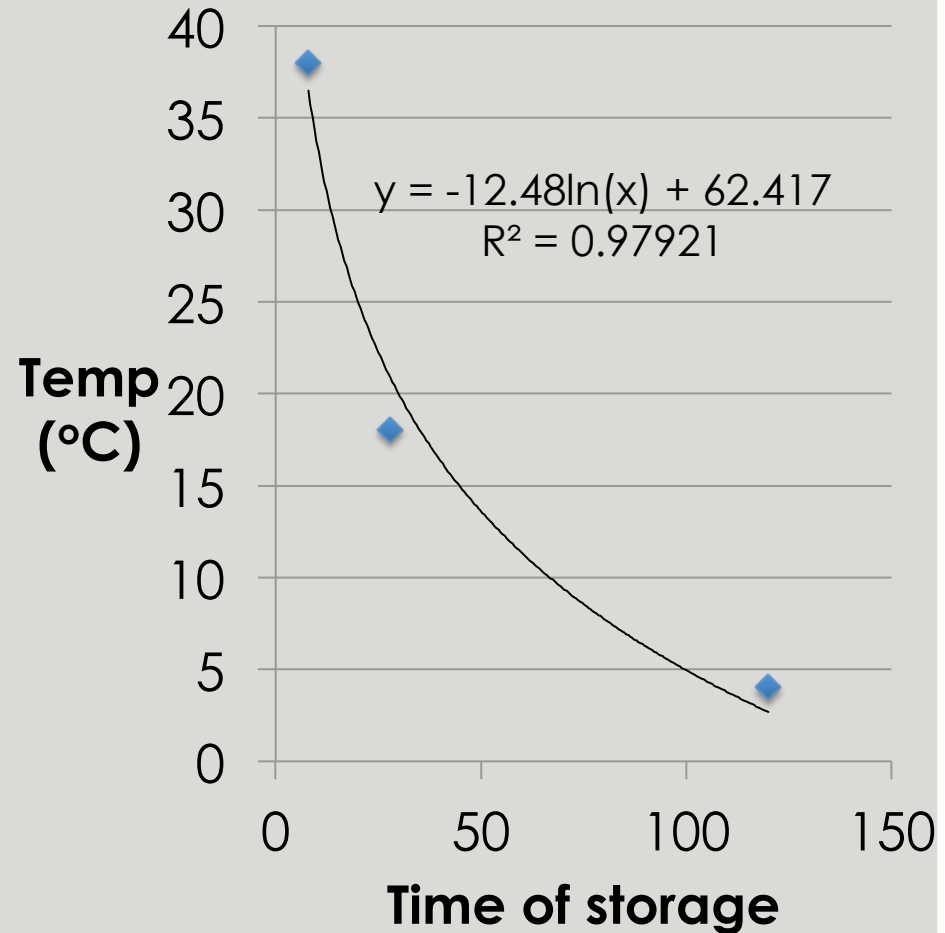
Smart solutions?

Bluetooth-based bale 'tag'

Bale ID, time, temperature

Survives dumping

May enable:

- Logistical cost savings

- Verification of time:temp

- Traceability to geo-location of bale origin

Image source: AWI (2014)

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International cooperation

International wool trade biosecurity working group process established, through IWTO (Brussels)

Its purpose:

 - share

 - coordinate

 - engage key stakeholders such as OIE

IWTO Multi Stakeholder Meeting, Brussels, 1/12/14 – Frank Berthe (OIE) chairing the Biosecurity Session

Thank you