

Facing Challenges in Controlling Johne's Disease in Australia

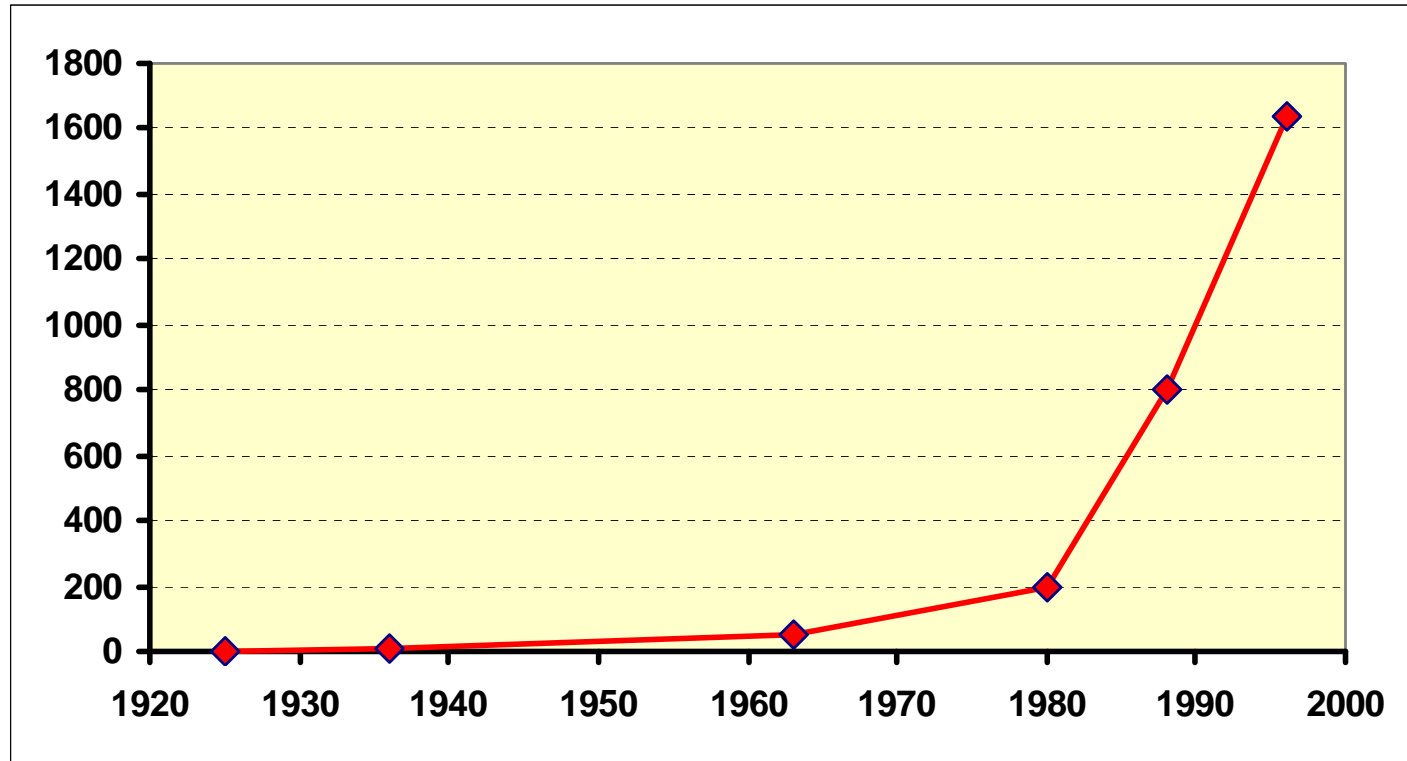
Developing and applying an
epidemiological approach

JD timelines in Australia

- 1911 – first of many imported cases
- Index cases in home-bred cattle Albiston 1965
 - Victoria 1925
 - Tasmania ~1930
 - SA ~1945
 - NSW ~1950
 - WA 2006*
- Index cases in other species
 - Goats 1977
 - Sheep 1980
 - Alpaca 1991

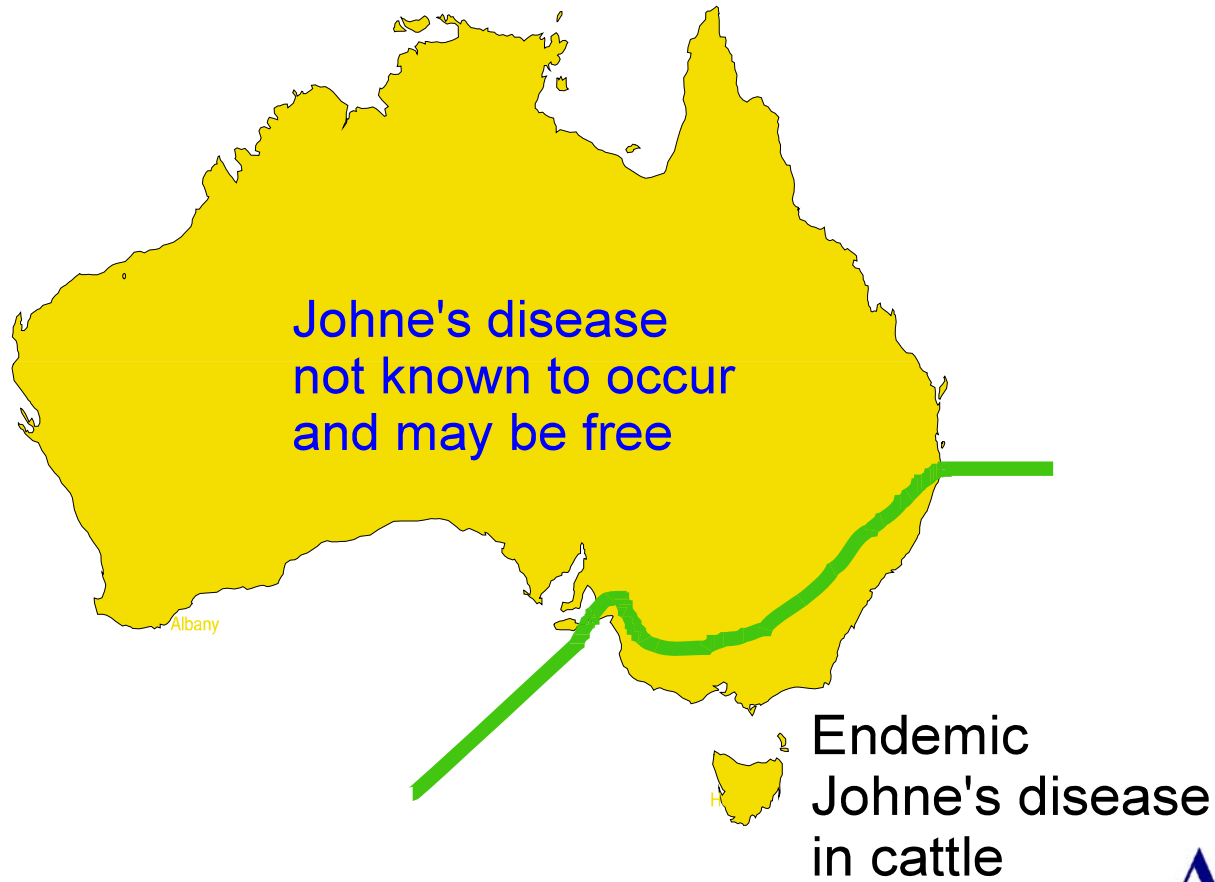
Known infected cattle herds – Vic

Albiston 1965; Stephens and Aukema 1989; NAHIS 1996



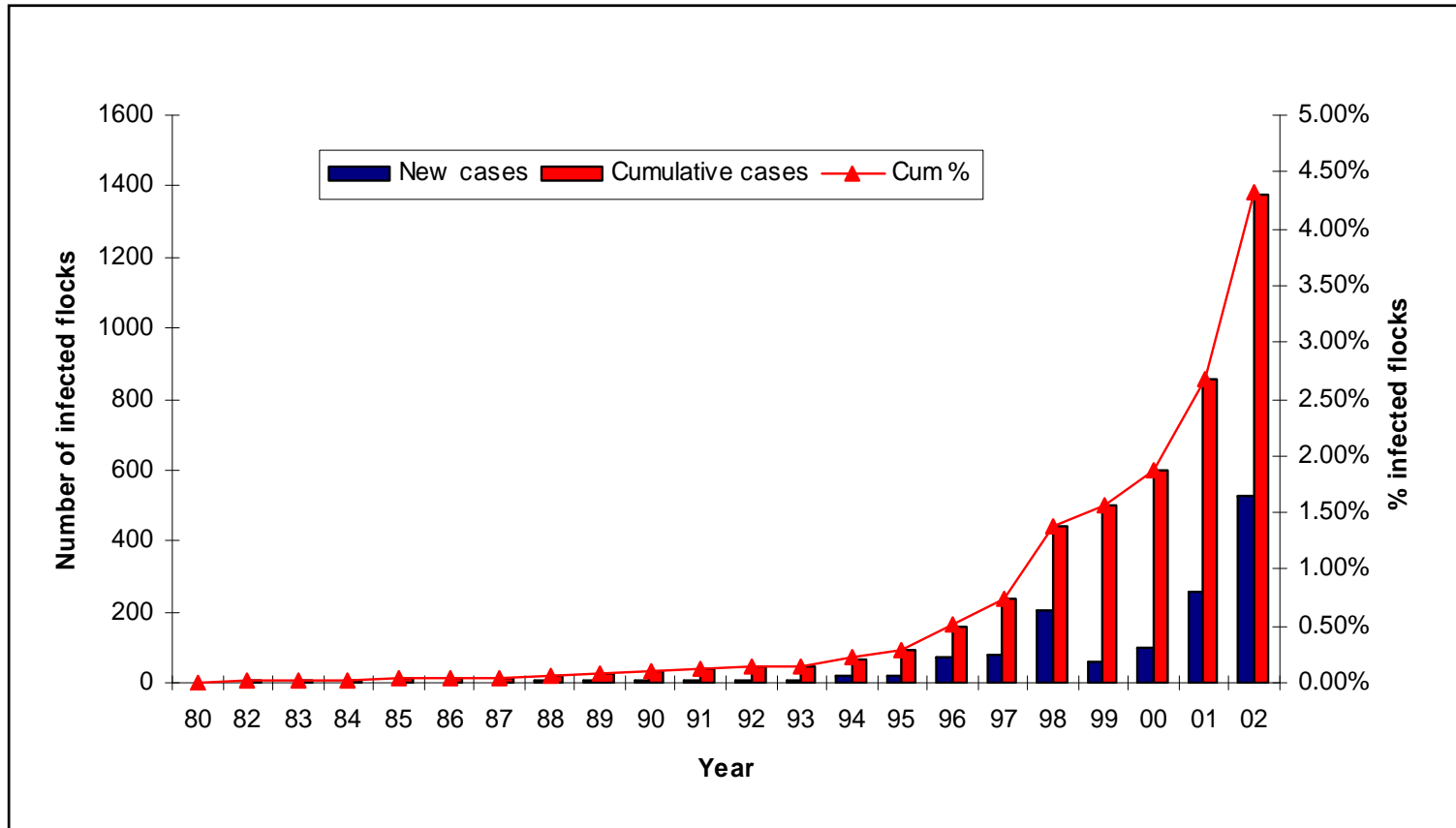
Distribution of JD in cattle mid 1990s

Science Week 1996



Known infected sheep flocks – NSW

NSWDPI



National Program 1995 – Many Reasons Why

- “Free” areas and herds want to be protected
- Known infected herds and regions want to
 - reduce losses and stigma
 - have reasonable market access for their animals and land
- Livestock industries want to
 - minimise restrictions on the trading of animals within Australia
 - protect market access for their products

Considerations for disease control programs

Thrusfield 1995

- Understanding the epidemiology of the disease
- Veterinary infrastructure
- Diagnostic feasibility
- Adequate surveillance
- Simple inexpensive tool to break transmission
- Availability of replacement stock
- Producers' and society's views
- Public health significance
- Suitable legislation and compensation
- Possible ecological consequences
- Costs and availability of program funding

Others' problems

= Epidemiologists' challenges!

Science Week 1996

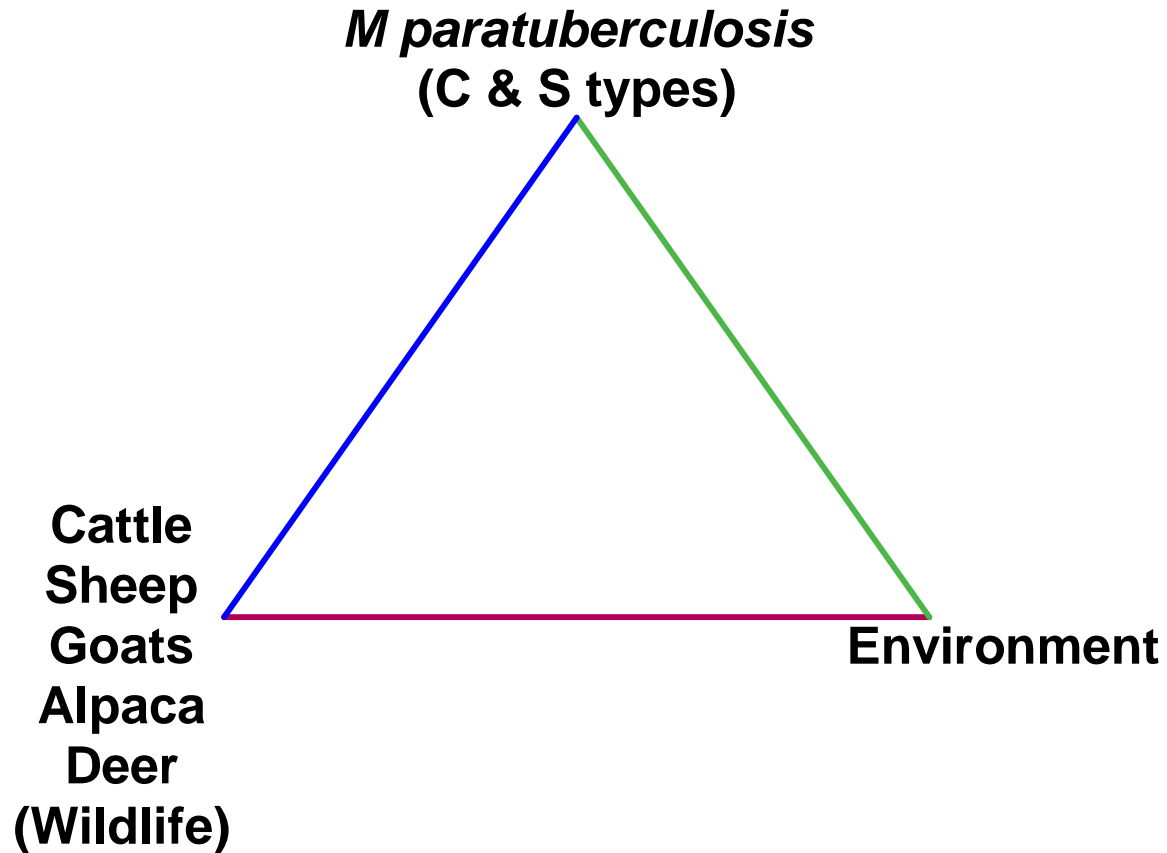
- improved understanding of the infection
- more effective use of tests
- more efficient on-farm control
- more efficient control of spread
between farms and regions
- more cheaply if possible!

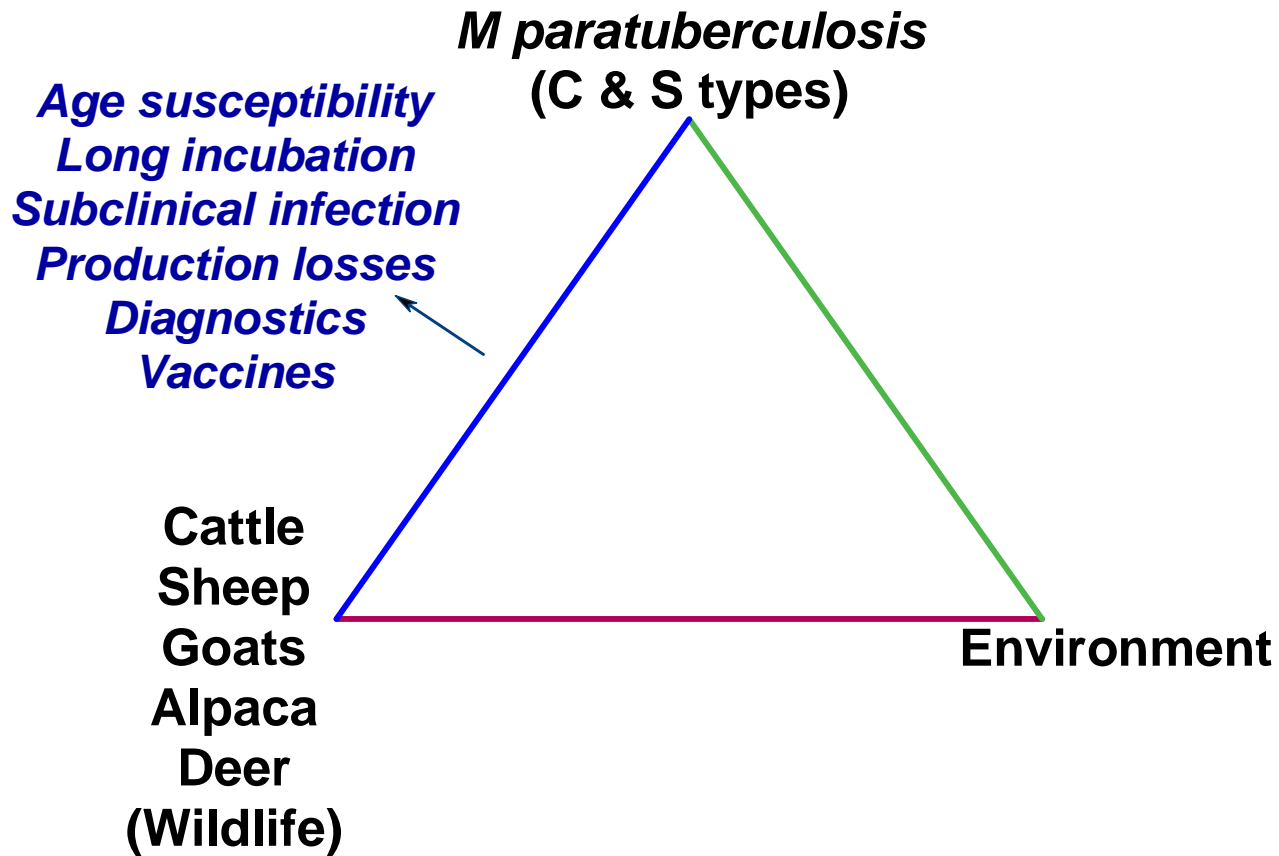
Specific challenges....

Science Week 1996

- natural history of infection
- population surveillance to support zoning
- individual and herd level testing
- risk assessment and management
- modelling control options
- communication
- information management

Biological Epidemiology





M paratuberculosis
(C & S types)

Cattle
Sheep
Goats
Alpaca
Deer
(Wildlife)

Contamination
Survival
Movement

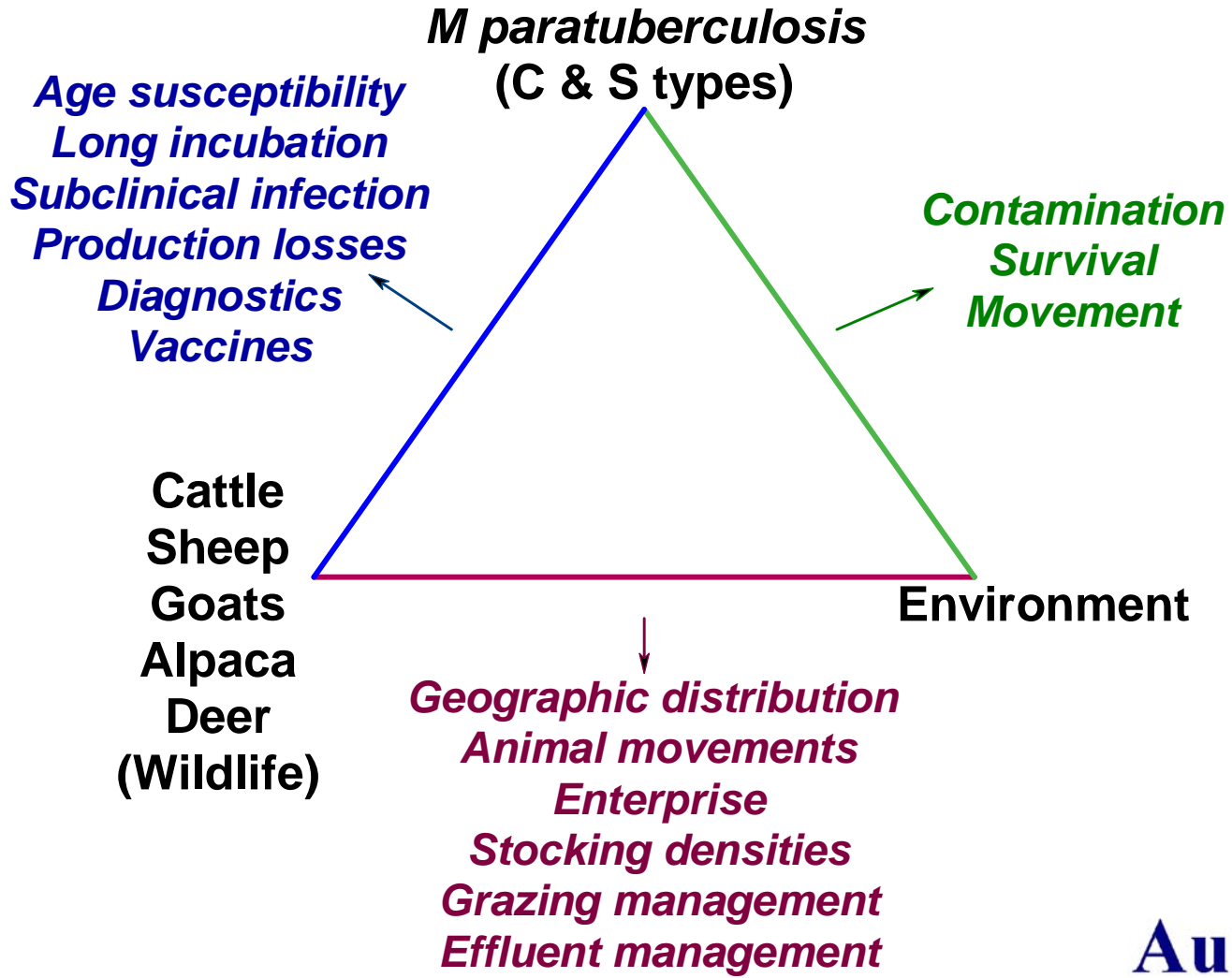
Environment

M paratuberculosis
(C & S types)

Cattle
Sheep
Goats
Alpaca
Deer
(Wildlife)

Environment

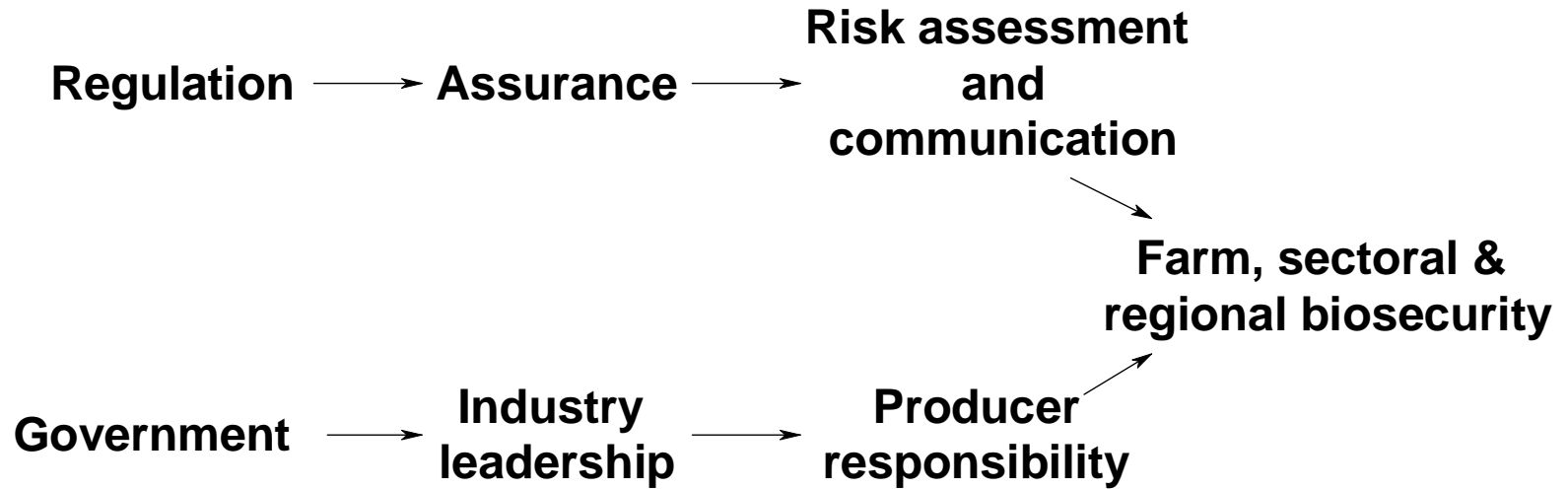
↓
Geographic distribution
Animal movements
Enterprise
Stocking densities
Grazing management
Effluent management



Socio-political Environment

- Differential distribution across Australia
- Discrimination and differential impacts
- Food safety
- Exporter of quality animal products
- Live exports
- BTEC experience
- Constitutional responsibility
- Market ideology
- Governments' role & resources
- Industry confidence

Evolution of JD Control



Underpinned by

- **Animal Health Committee's**
 - Standard Diagnostic Procedures & JD Quality Plan
 - Guidelines to assurance based trading OJD
 - Standard Definitions and Rules for BJD
- **National assurance schemes**
 - Market Assurance Programs
 - Industry specific schemes
- **Legislation**
- **Research**

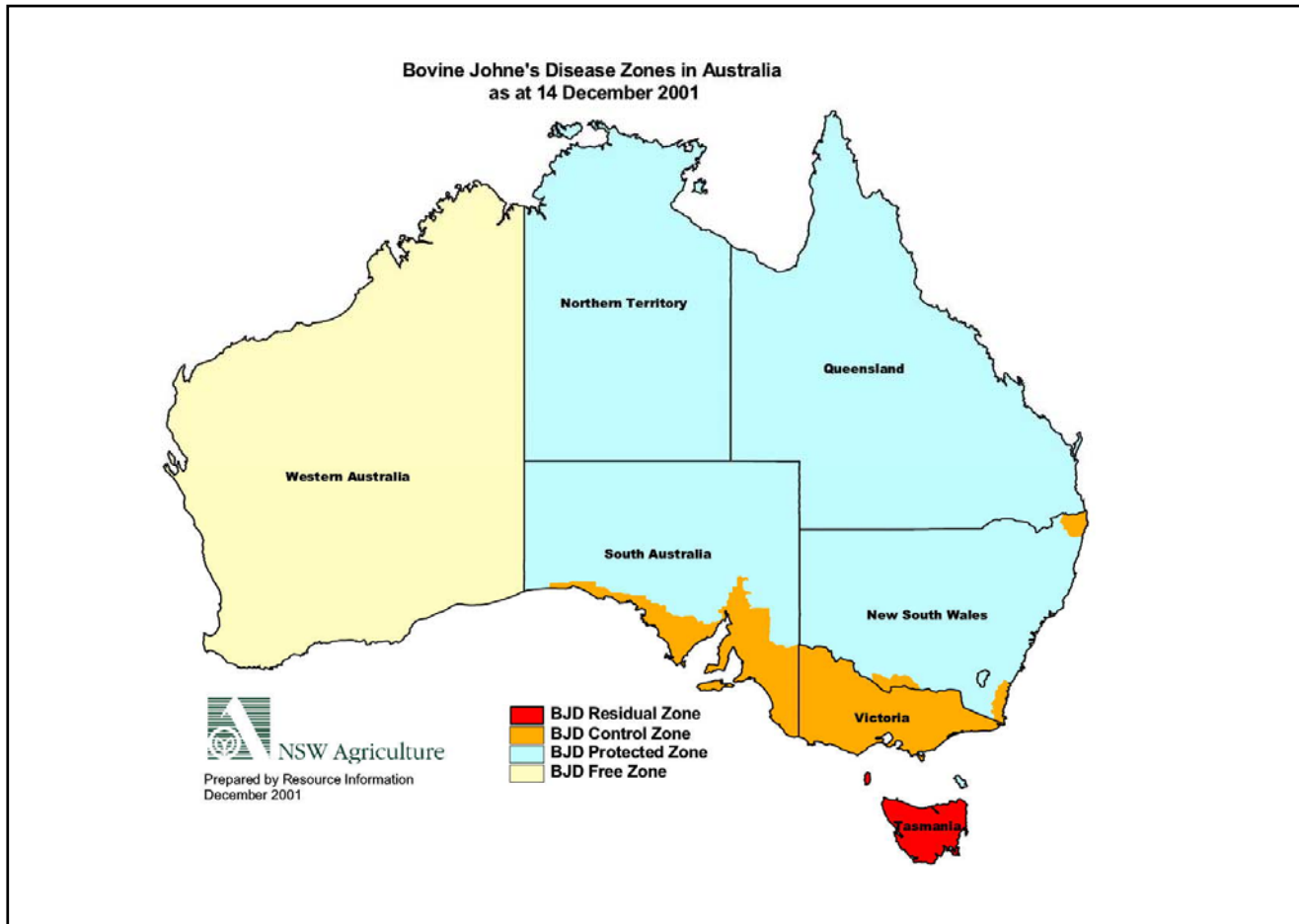
National BJD Strategic Plan 2002 -

Goals

1. Minimise contamination of farms & farm products by *M paratuberculosis*.
2. Protect non-infected herds whilst minimising disruption to trade.
3. Minimise the social, economic and trade impacts of BJD at herd, regional and national level.

Current Approaches to BJD and OJD

BJD Zones 1999 -





BEEF ONLY - ASSURING BEEF HERDS FOR BJD

Beef Only helps assure cattle buyers about the very low risk of Bovine Johne's Disease in beef herds that have had little or no contact with dairy cattle.

Why have a *Beef Only* classification?

Bovine Johne's Disease (BJD) mainly occurs in dairy cattle in southern Australia. *Beef Only* recognises that there are few pure beef herds known to be infected with BJD. Testing and other investigations have found that these types of herds have a very low risk of being infected with BJD.

What does it mean for Trading?

The beef cattle industry and state animal health authorities agreed in July 2004 that cattle from herds that qualify as *Beef Only* are now able to be traded into BJD Protected Zones (except Queensland and the NT) without the herd of origin having to be tested.

Herds that qualify as *Beef Only* not only have a history of trading with low risk sectors of the cattle industry but continue on a daily basis to manage their disease risk.

So, herds that meet the *Beef Only* standard and declare it on an animal health statement can move cattle around south-eastern Australia without having to test.

How can cattle qualify to be sold as *Beef Only*?

Cattle for sale qualify as *Beef Only* if the owner or manager declares in writing on an animal health statement that the cattle:

1. Do not include animals that have been part of a herd which is classified as Infected (I), Suspect (SU) or Restricted (R) according to the National Johne's Disease Standard Definitions and Rules (SDR) for Cattle.
2. Are from a beef herd which has not grazed with dairy cattle or dairy-cross cattle at any time during the previous five (5) years, unless those dairy cattle were from a herd enrolled in the Australian Johne's Disease Market Assurance Program for Cattle (Cattle MAP) and,
3. Are part of a herd that has not, at any time in the past, grazed on land that had been grazed by adult dairy cattle (2 years old or older) during the 12 months before the arrival of the beef herd, unless those dairy cattle were part of a CattleMAP herd.
4. If introduced into the herd or onto the property(s), have come from herds which are of the same (*Beef Only*) or higher status (BC-TAS, MNI, MN2, MN3) for Bovine Johne's Disease (BJD) and came with an Animal Health Statement or BJD vendor declaration, and
5. Are identified under the National Livestock Identification Scheme (NLIS).

What's the Score with BJD?



The National Dairy BJD Assurance Score:
the higher the Score, the lower the risk.

www.dairyaustralia.com.au/bjd
Telephone 03 9494 3777
Email bjd@dairyaustralia.com.au


DAIRY AUSTRALIA
ORGANISATION FOR THE DAIRY INDUSTRY

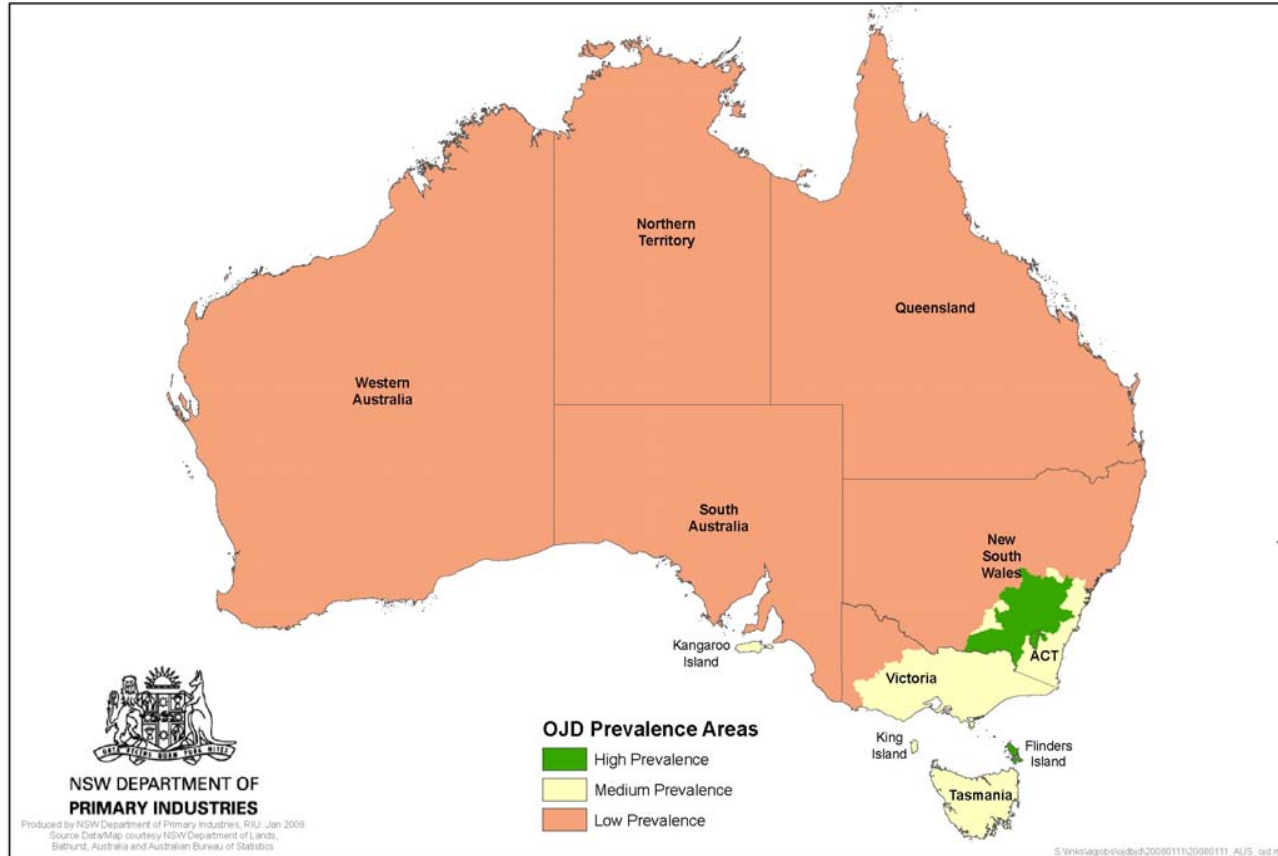
AusVet
Animal Health Services

Seven Principles for OJD Program 2004

1. Limit spread between farms and regions.
2. Minimise impact of regulations on producers.
3. Minimise effect on animal welfare, farm productivity and trade.
4. Maintain complementary and mutual recognised programs between States.
5. Engage producer support.
6. Encourage farmers to manage OJD through better trading opportunities.
7. Improve understanding through further R&D.

OJD Prevalence Areas 2008

Australian OJD Prevalence Area for Implementation from 31 March 2008



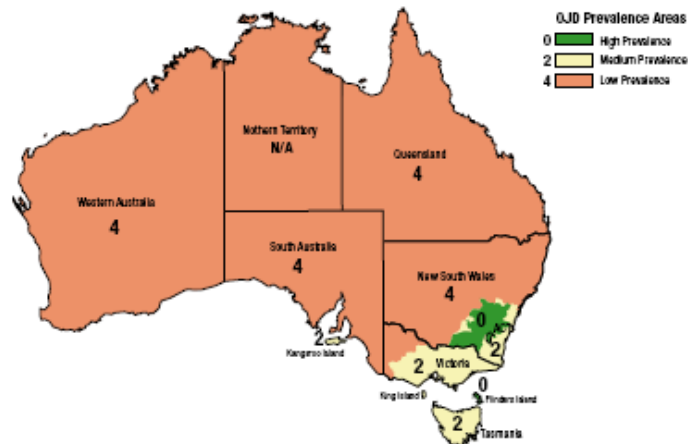
Important changes to the ABC Scheme come into place on 31 March 2008.

From 31 March 2008 buying and trading sheep while managing the risk of OJD will be even easier.

What are the changes?

New Prevalence Areas have been defined and revised points have been allocated. Most producers will find that they are in a new area with new points although the names of the Prevalence Areas have stayed the same. The following map shows the new arrangements:

OJD Prevalence Area for Implementation from 31 March 2008



the higher the score: the lower the risk



AusVet
Animal Health Services

Sheep Health Statement 2008

NATIONAL SHEEP HEALTH STATEMENT

Attached to accompanying NVD/Waybill No.

(Version 1 – March 2008)

SECTION 1 – CONSIGNMENT INFORMATION

Owner of sheep

Property/place where the journey commenced (full address)

State

Property Identification Code (PIC) of this property:

Number	Year born (month, if known)	Description (ie. Breed, sex and type)	Identification (eg. PIC/brand on ear tag if different to above)

Please attach a list if more information is required.

SECTION 2 – OVINE JOHNE'S DISEASE (OJD)

1. This consignment has an ABC score of: (refer and complete overleaf)

 Category A + Category B + Category C + Category D = TOTAL ABC SCORE
(Area/ flock credits) (Test credits) (Vaccine credits) (Cert. low risk credits)

2. Were all these sheep born on the above property? Yes No
 If no, date introduced / / ABC score at time of introduction:

3. Have sheep of a lower ABC score than the consigned sheep been introduced into the flock in the last 2 years? Yes No
 If yes, what is the lowest ABC score of introductions?

4. How many different sources of sheep have been introduced to the consignor's property in last 2 years? None 1-5 6+ Rams only

5. Are any of the sheep in this consignment terminal 'T' tag lambs? Yes No

6. Are these sheep from a SheepMAP flock? Yes No
 Status Expiry date / /

SECTION 3 – FOOTROT

7. Have the sheep in this consignment been observed for, and any suspect sheep examined for, signs of FOOTROT during the past 14 days? Yes No

8. To the best of your knowledge, are the sheep in this consignment free of VIRULENT FOOTROT? Yes No

9. To the best of your knowledge, are all sheep and goats on the consignor's property free from VIRULENT FOOTROT? Yes No

SECTION 4 - OTHER HEALTH INFORMATION

10. Is the flock OVINE BRUCELLOSIS ACCREDITED FREE? Yes No

Flock Accreditation No:

Expiry Date: / /

11. Has there been any evidence of sheep LICE at, or since, the last shearing? Yes No

Date of last shearing (if known): / /

12. Treatments Product Date of last treatment

External Parasite Treatment / /

Drench / /

Vaccination other than OJD / /

Other / /

SECTION 5 - DECLARATION

As the owner and /or person responsible for the husbandry of the sheep in this consignment, I declare that the information in this statement is true and correct.

Signed: Date: / /

Name (print):

Contact phone:

Persons making false statements may be liable under fair trading and other relevant state legislation

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Future?

- Clarification of zoonotic “cloud”
- Clarification of industry & government roles
- Continuing emphasis on risk assessment and biosecurity
- Increased understanding & application of
 - Genetic susceptibility & resistance
 - Immunology – vaccines & diagnostics