

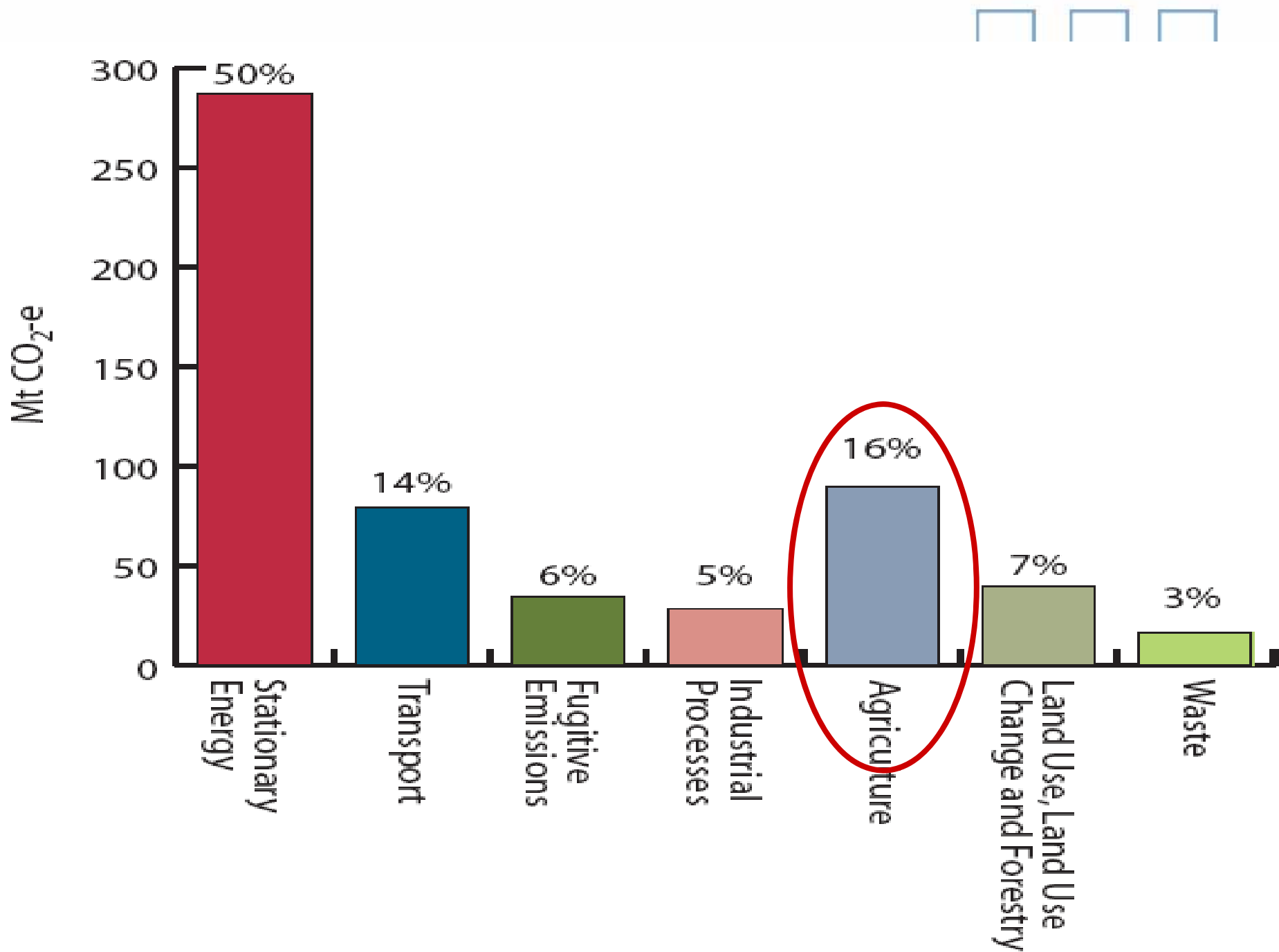


Dairy: An industry perspective on tackling Climate Change

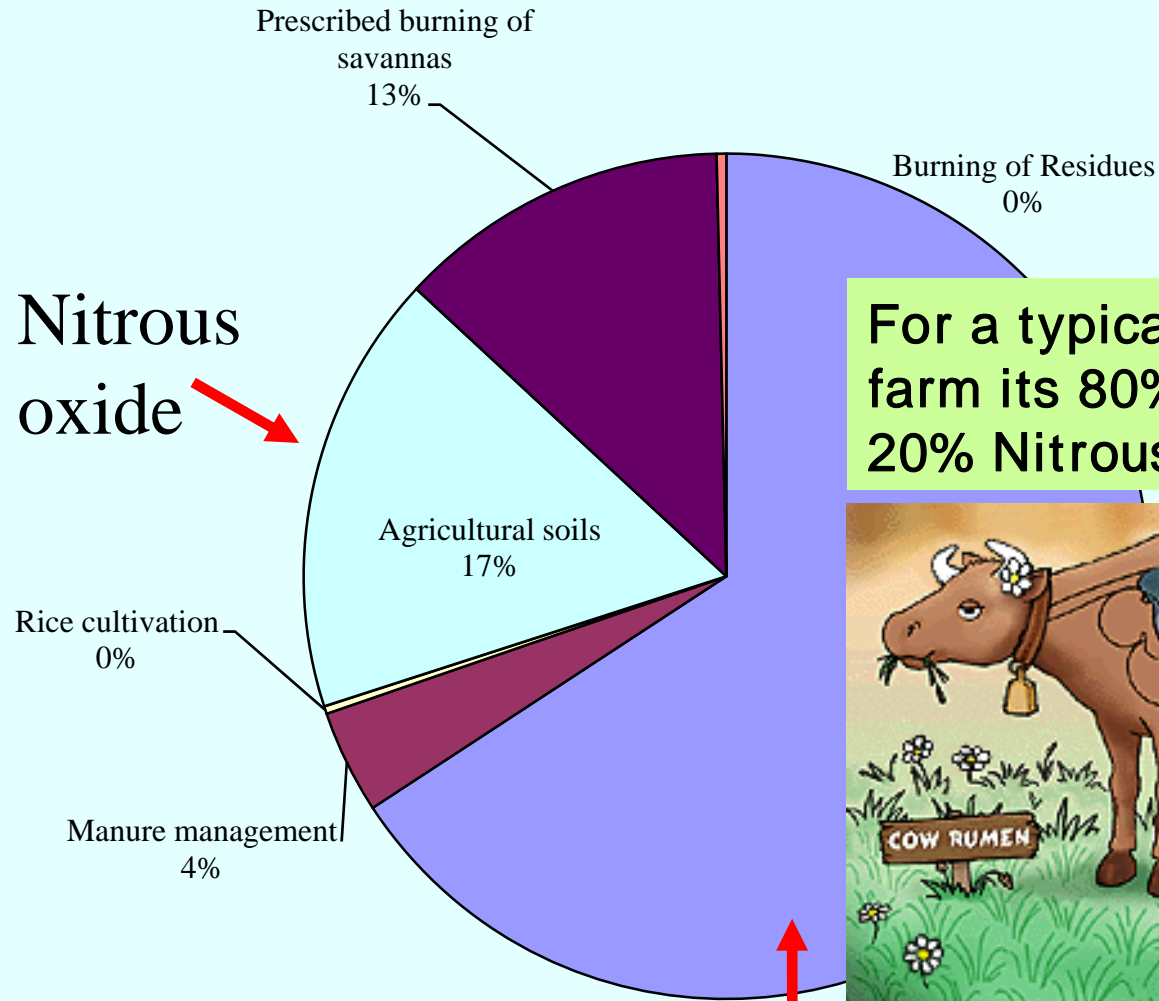
Warren Mason and Cathy Phelps

Dairy Australia

March 2009



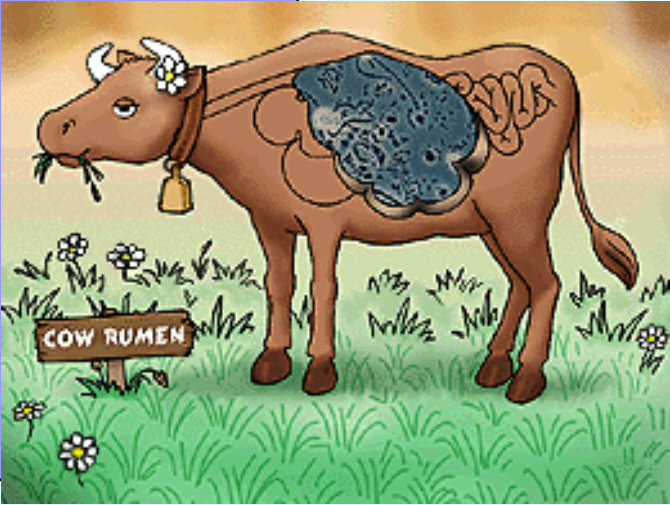
Agricultural Greenhouse Gas Emissions 2006



Nitrous oxide



For a typical dairy farm its 80% methane, 20% Nitrous oxide

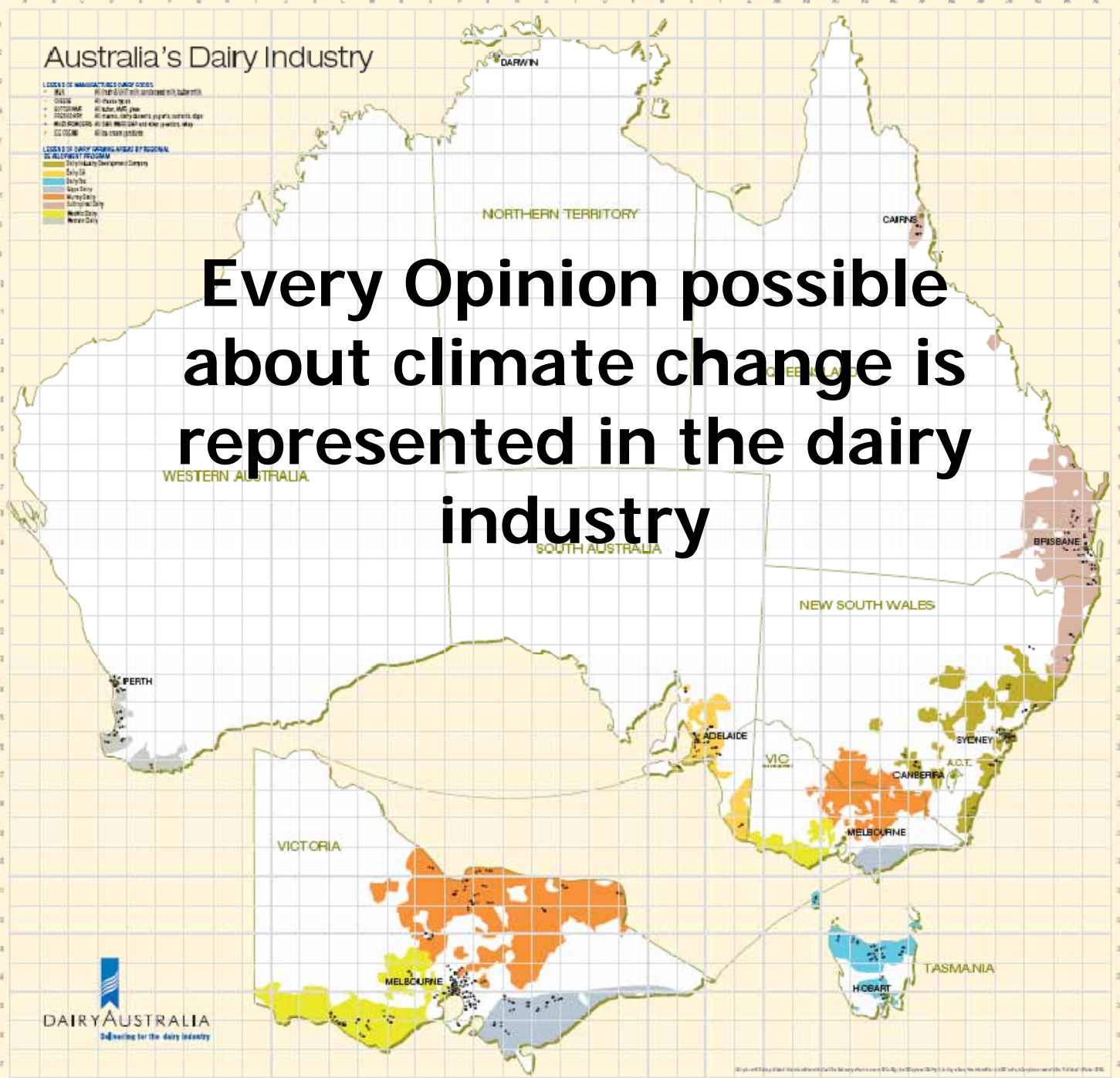


Methane

Australia's Dairy Industry

- LEGEND OF MANUFACTURER'S DAIRY CODES
- WGL All types milk (condensed milk, evaporated)
 - CGM All types milk
 - STC All types milk
 - STC/STC/STC All types milk (condensed milk, evaporated, ultra high temperature)
 - STC/STC/STC All types milk (condensed milk, evaporated, ultra high temperature)
 - STC/STC/STC All types milk (condensed milk, evaporated, ultra high temperature)

- LEGEND OF DAIRY OPERATIONS BY REGIONAL DEVELOPMENT PROGRAM
- DAIRY Development Company
 - DAIRY DA
 - DAIRY DA
 - DAIRY DA
 - DAIRY DA
 - DAIRY DA
 - DAIRY DA



Every Opinion possible
about climate change is
represented in the dairy
industry

Dairy Industry Conclusions

There's no point arguing about the reality

Dairy has major emission challenges

Dairy will be at the forefront of agricultural industries with respect to Climate Change preparedness

Maximise the opportunity to work with Government to encourage adaptation and to plot a lower carbon future

But what can we tell dairy farmers, and with what level of certainty??

Climate Change Summary For Dairy Farmers

We **know** its getting hotter

we're **reasonably sure** its getting drier

W

W

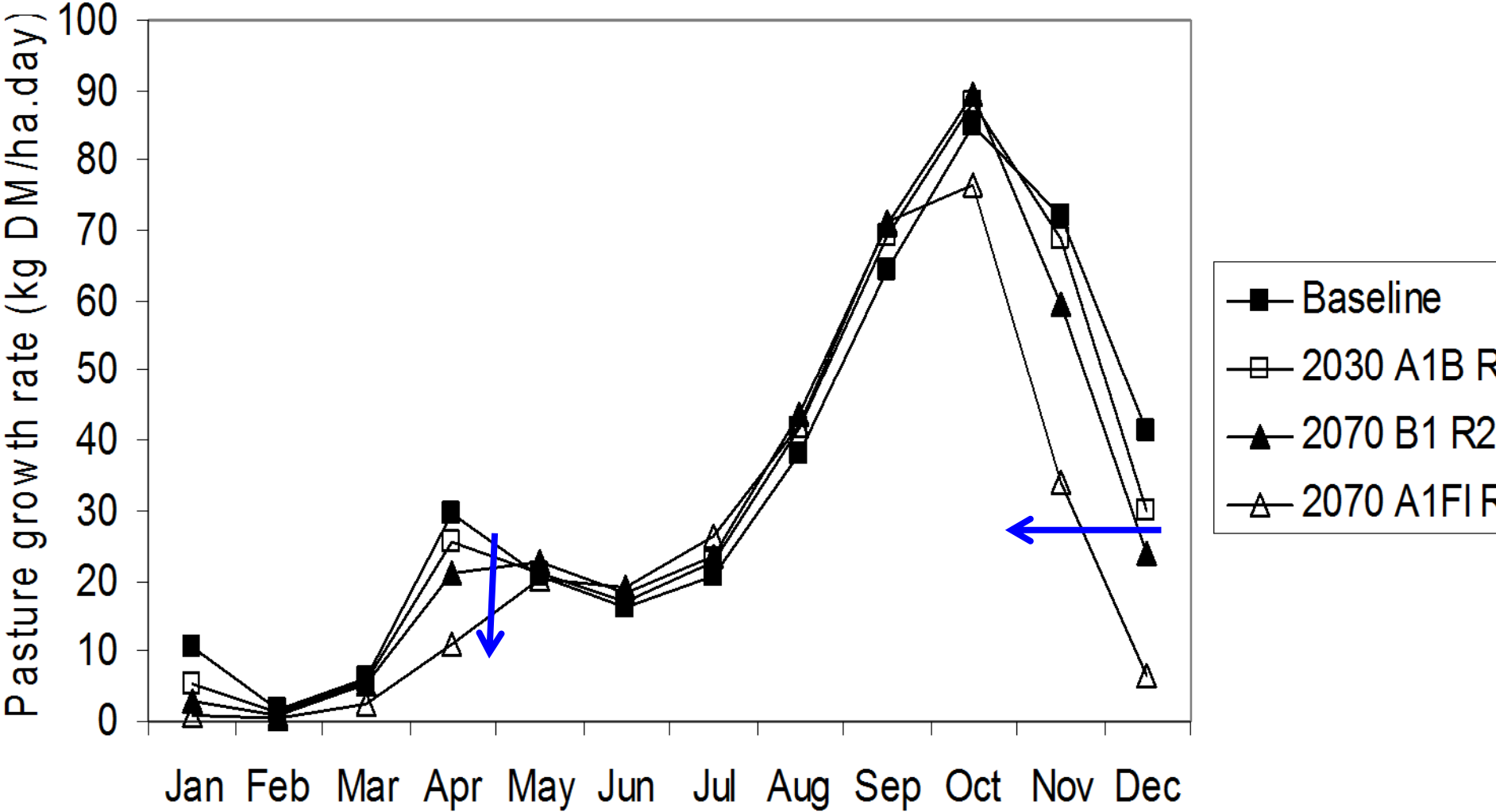
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So, how Resilient are our production systems?

we are **certain** that the Government is going to act to reduce emissions – 60% by 2050

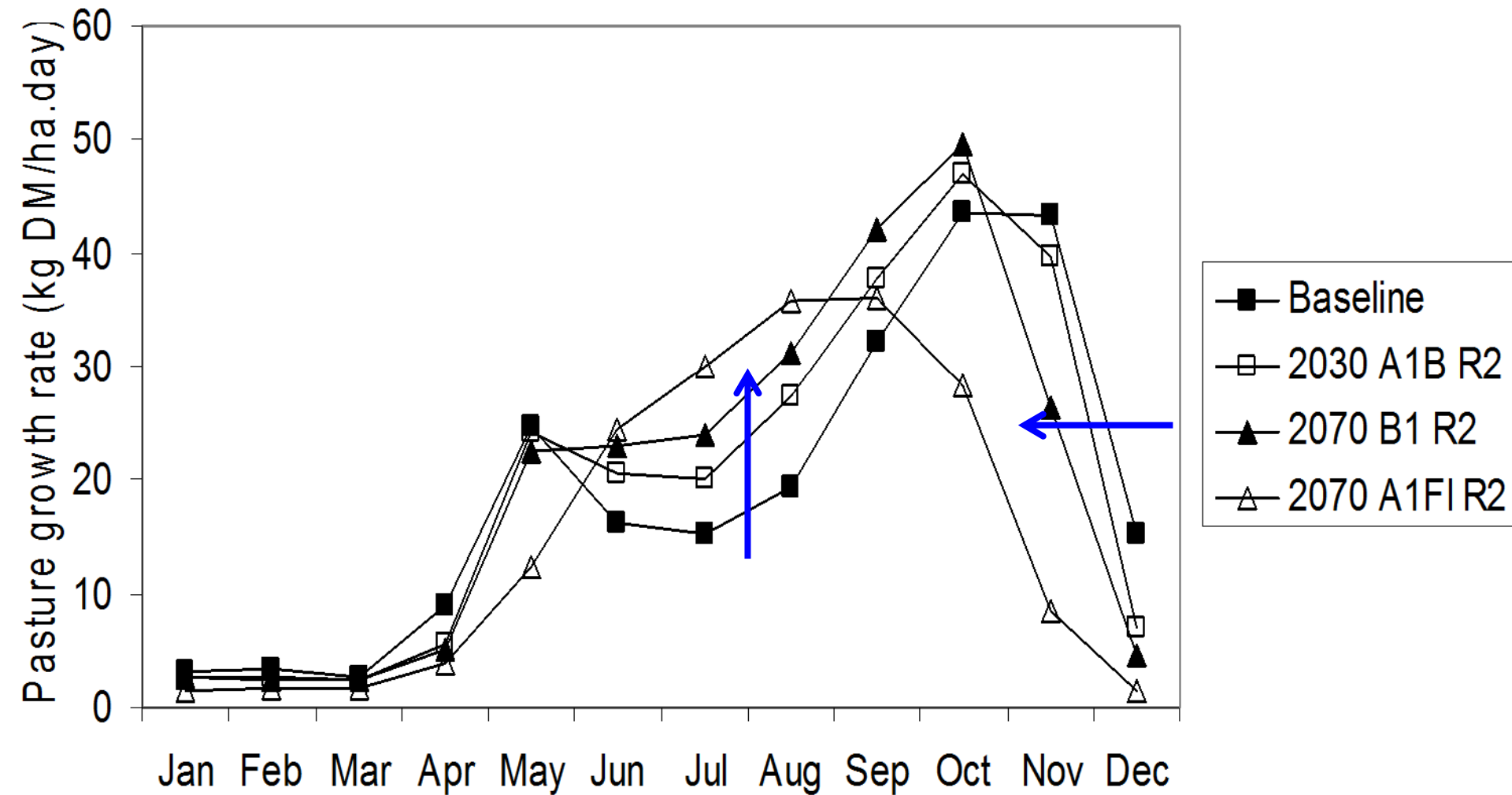
Pasture production in 2030 and 2070

Gippsland

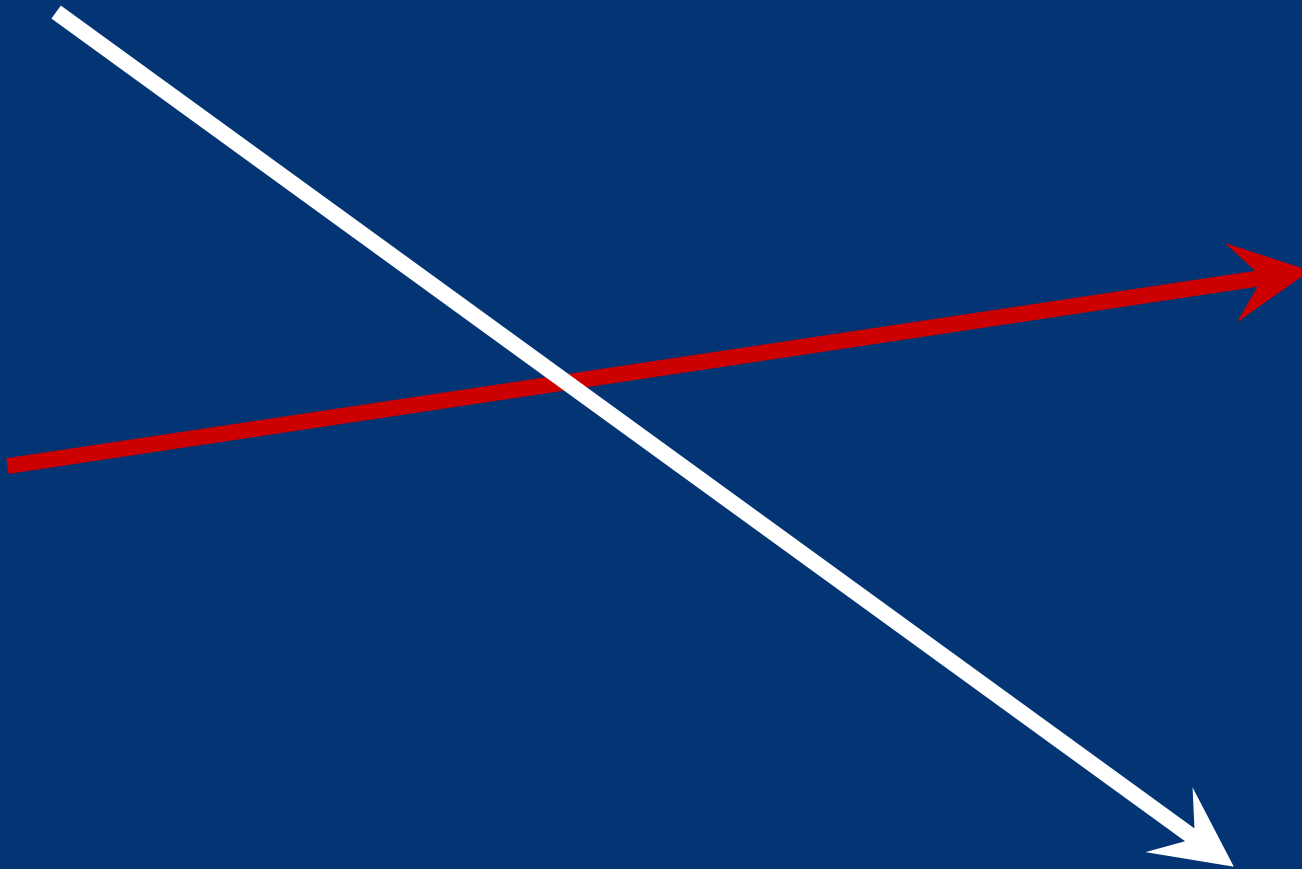


Pasture production in 2030 and 2070

South West WA



Irrigated Dairy Farms



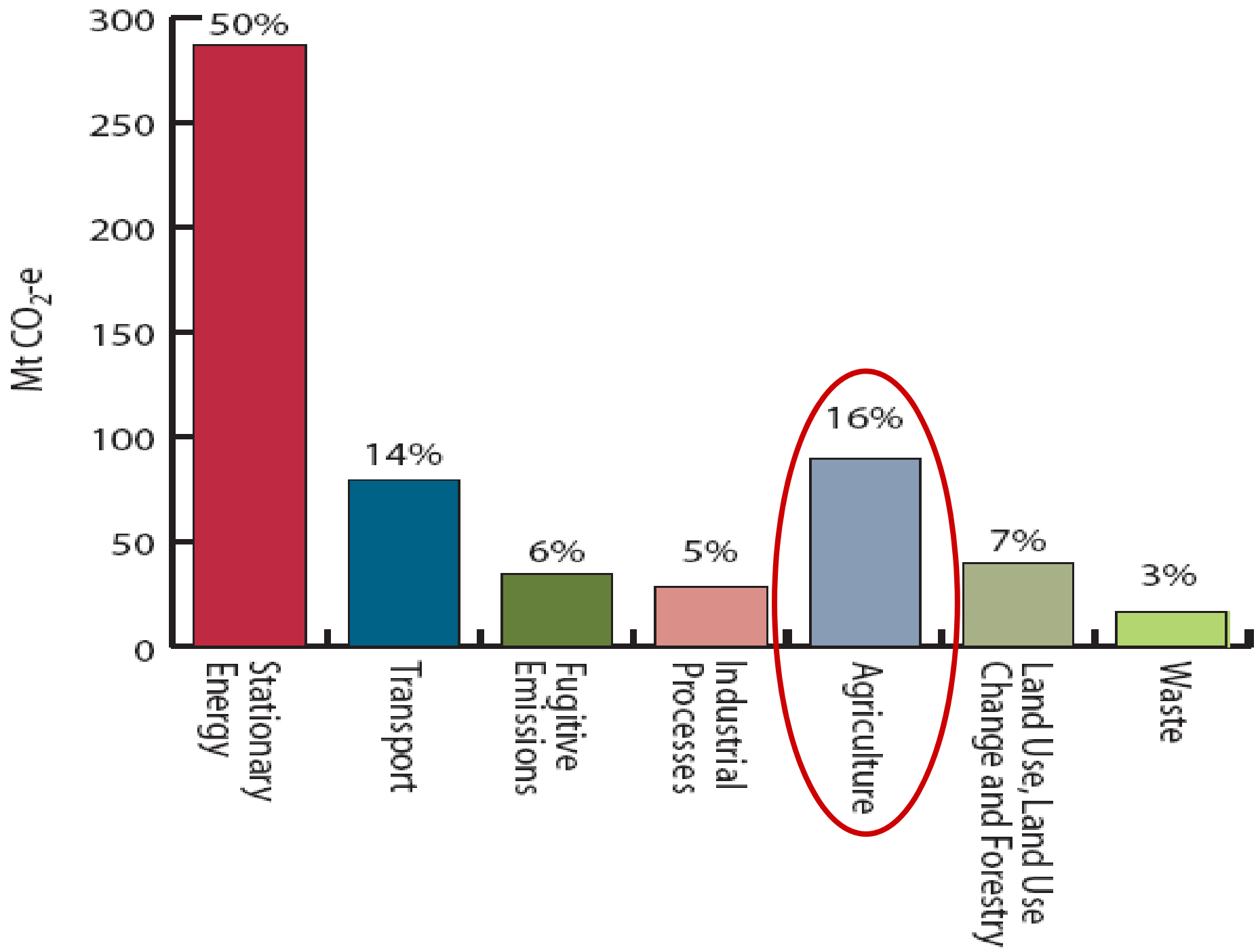
Conclusion about Adaptation

With normal RD&E assistance, Australian dairy farmers can adapt to the predicted climate changes for quite a while. Biggest challenge is likely to be irrigated dairy farms in the MDB >25%

Climate predictions are inherently unreliable

Increased Volatility challenges individual businesses

Uncertainty about the future undermines investment decisions



Some Numbers



**Roughly 1 kg of CO₂ e
equivalent per litre of milk**

**1.5 million litres (average
farm) emits 1,500 tonnes
of CO₂ e**

**Or \$37k if carbon is \$25
per tonne – more to
account for pre and post
farm CO₂ production**

Conclusions about the CPRS

The dairy industry is internationally exposed and is unable to pass on increased costs without comprehensive international agreements

A breakthrough to dramatically reduce rumen methane production must be made and shared internationally

Nearly Final Thoughts

There are lots of management actions to reduce methane and nitrous oxide but its hard to send the signal to farmers

Grazing pastures is the international competitive advantage for Australian dairy

Final Thoughts

Should dairy be arguing against emission reduction targets for the industry?

2100

5 degrees hotter

20% less rainfall

Sea levels are 1m higher

Extreme = Normal

World Chaos??

Milk on your
cereals???

Mitigation is the
only strategic
option

Adaptation is a vital activity but can't save
the day in the long run