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The Australian system for managing non-replacement dairy calves

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Economic Development,
Jobs, Transport
and Resources





Overview of presentation

- ◆ Background - Australian and New Zealand dairy industries, comparison to Irish industry
- ◆ Description of dairy calf management in Australia and NZ
- ◆ Animal welfare and public perception risks of calf industry
- ◆ Dairy calf legislation
- ◆ Dairy calf welfare
- ◆ Recent calf research
- ◆ Future directions for non-replacement calves





Key points

- ◆ Australia and New Zealand have a system for slaughtering non-replacement calves at a young age
- ◆ This system has inherent animal welfare and public perception risks
- ◆ Regulations/legislation can help to reduce these risks, but some calves will still face significant welfare challenges
- ◆ Alternatives to early slaughter could help to reduce the welfare risk to calves, as well as the reputational risk to the industry

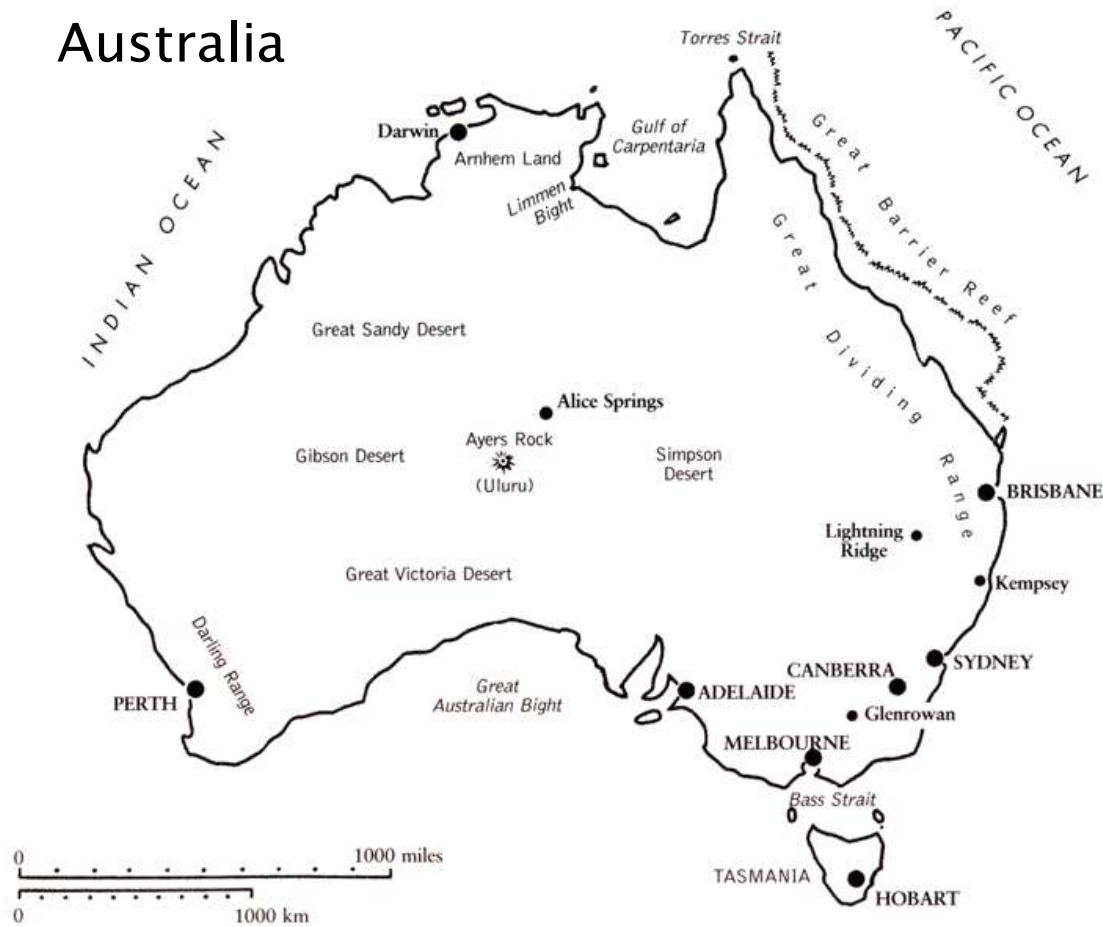


Photo: <https://www.snopes.com/fact-check/veal-crates/>



Some context

Australia



Ireland and the UK

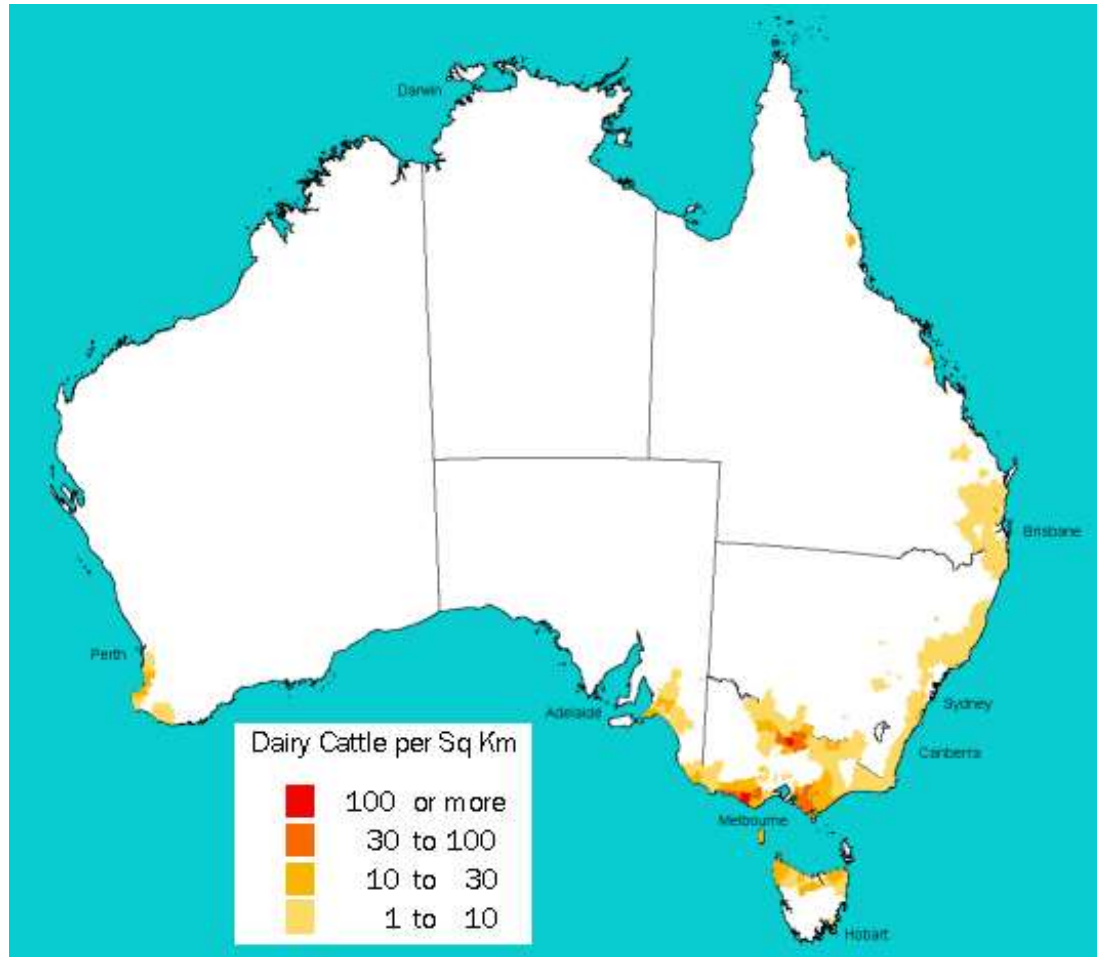


New Zealand





Australian dairy regions





Irish vs. Australian and NZ dairy industries

	Ireland	Australia	NZ
Number of dairy cows	1.4 million	1.5 million	4.8 million
Number of dairy farms	18,000	5789	11,748
Average herd size	80 cows	261 cows	414 cows
Litres milk produced/year	7 billion	9 billion	21 billion
% milk product exported	>90%	37%	95%



Australian and NZ bobby calf industry

- ◆ Bobby calf = a bovine calf < 30 days old and not accompanied by its mother
- ◆ Most bobby calves are male dairy or dairy cross calves
- ◆ Typically
 - separated from dam during first day of life
 - fed from a bucket, bottle or calf feeder once or twice daily
 - Kept in small groups in bedded calf sheds
 - transported to abattoir at **5-10 days** old for slaughter



Calf sheds



Picture from <http://www.ngahiwifarms.co.nz/shelter-for-the-calf/>



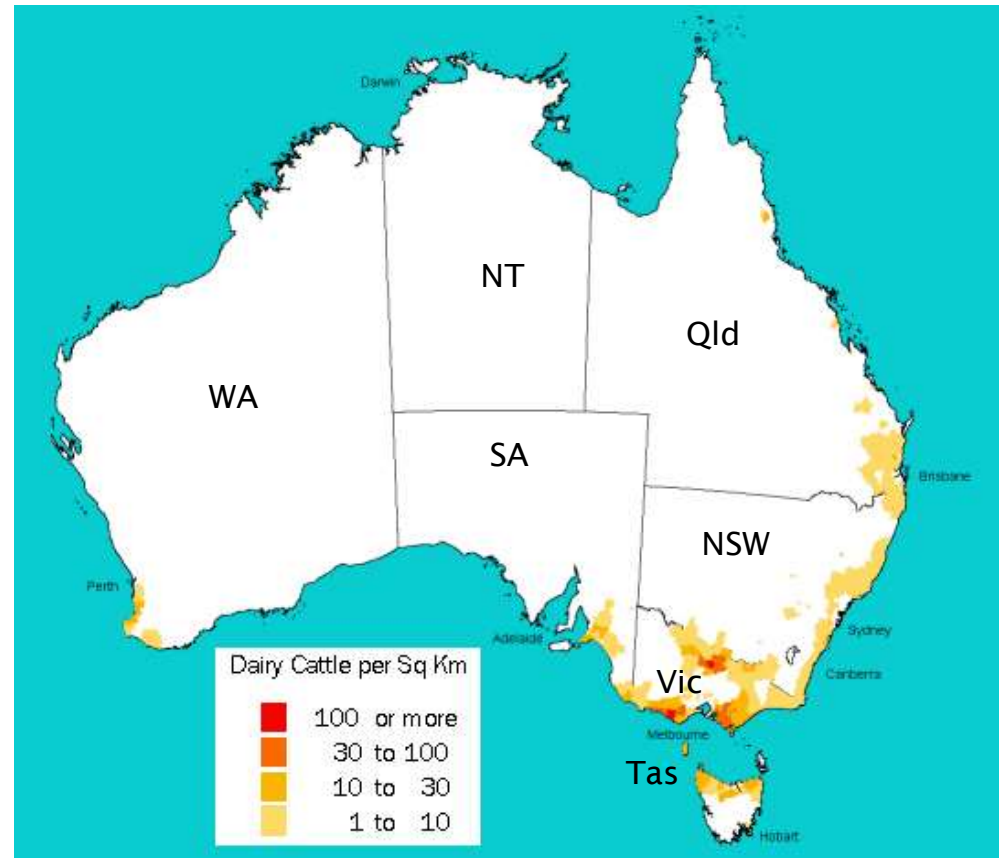
Calf sheds





Australian bobby calf industry

- Main calf processing abattoirs are in Victoria
- Some calves from New South Wales and South Australia are processed in Vic
- All Tasmanian calves are processed in Tasmania





Australian and NZ bobby calf industry

Australia:

- ◆ 400,000-700,000 bobby calves killed in Australian abattoirs per year
- ◆ 50,000 + bobby calves do not go through the abattoir
 - some are raised for beef
 - little public information available in Australia

NZ:

- ◆ 2 million bobby calves killed/year in NZ abattoirs
- ◆ Approx. 2/3 of NZ's beef kill is from the dairy industry
- ◆ This includes cull cows, bobby calves and bull beef



Increased welfare risks for young calves

- ◆ Increased risk of poor welfare outcomes due to young age
 - Low body fat reserves
 - Poor herding behaviour
 - Immature immune system
 - Less able to adapt to stressors





Bobby calf legislative requirements

Bobby calves transported to an abattoir must be:

- At least 5 days old
- Fed within 6 hours prior to transport
- Alert, able to stand, and not ill
- Transported for a maximum of 12 hours



- ◆ Australian Animal Welfare Standards and Guidelines - Land Transport of Livestock



Bobby calf legislative requirements

- ◆ Australia - industry guidelines recommend that calves are fasted for a maximum of 30 hours prior to slaughter (not legislated)
- ◆ Max. 24 hours off feed is the upper limit suggested by research



Picture from <http://www.dairyspares.co.uk/set-rear-young-calves-milk-bar/>



NZ regulations

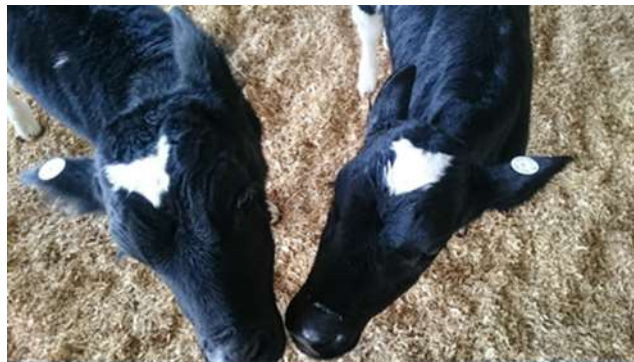
- ◆ NZ regulations similar, though a little stricter than Australia
- ◆ NZ tightened bobby calf regulations in 2016 in response to the release of video footage of calf mistreatment
- ◆ Maximum time off feed is 24 hours
- ◆ Calves must be provided with shelter while waiting for pick up on farm
- ◆ Some offences can lead to fines without prosecution e.g. exceeding max transport time, transporting unwell or underage calves





EU regulations

- ◆ Calves <10 days old can only be transported for <100km
- ◆ Must be provided with bedding during transport
- ◆ Unweaned calves must be fed and rested for 1 hour after 9 hours of transport
- ◆ Can then be transported a further 9 hours until they require at least 24 hours rest
- ◆ Must be fed twice daily on farm





The Australian/NZ experience

- ◆ Monitoring and regulations decrease welfare risk
- ◆ However, individual calves and groups of calves still face significant welfare challenges, especially in relation to transport, fasting and handling
- ◆ Social licence = public acceptance of agricultural practices – an ongoing challenge in Australia and NZ
- ◆ Scrutiny of the industry likely to increase as consumers become more interested in animal welfare and farming practices





Social licence risks to the dairy industry



Picture from <https://www.weeklytimesnow.com.au/news/national/be-fair-be-vegan-campaign-vegans-ramp-up-their-cause/news-story/7ab077f86f62e107e678b59abcf3cc03>



Current bobby calf research

- ◆ Aim: to establish the welfare status of Australian bobby calves at the point of slaughter
- ◆ Blood collected from >4500 bobby calves at 3 Australian abattoirs
- ◆ Blood tests measured indicators of:
 - Energy status
 - Hydration
 - Colostral immunity
 - Muscle fatigue/damage





Preliminary results

5-10 day old bobby calves at 3 Australian abattoirs

Indicator of?	Blood parameter	% within reference range	Reference range	Mean
Hydration	Packed cell volume (%)	99 %	17-47	29.5



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Hydration	Packed cell volume (%)	99 %	17-47	29.5
Energy	Glucose (mmol/L)	98 %	2.8-7.5	5.0
Colostrum immunity	Total protein (g/L)	67 %	>52	58.7



Results - summary

- ◆ Results suggest that most calves had adequate hydration and energy
- ◆ Poor colostral immunity in around 33% of calves; similar proportion to a recent on farm study in Australian heifer calves
- ◆ No measurements of stress or behaviour taken
- ◆ Further analysis will assess the effects of
 - distance travelled
 - time in the supply chain, and
 - weather conditionson blood parameters



Alternatives to bobby calves, future trends

- ◆ Likely a combination of strategies
- ◆ Solutions may include
 - Sexed semen
 - Dual purpose breeds or dairy-beef crosses
 - Premium meat products e.g. rosé veal, Wagyu x dairy beef
 - High welfare/natural dairy products with premium price e.g. calf at foot dairies



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Questions?





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