

END OF PROJECT REVIEW



Australian Centre
for International
Agricultural Research



IndoDairy
Industri Susu Tangguh 2025

ISSUES, TRENDS, AND OPPORTUNITIES IN TROPICAL DAIRY FARMING

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Presentation Outline

1. Dairy market opportunities
2. Branding policies
3. Product safety and bacterial contamination
4. Carbon footprints of value chains
5. Farm profitability and productivity

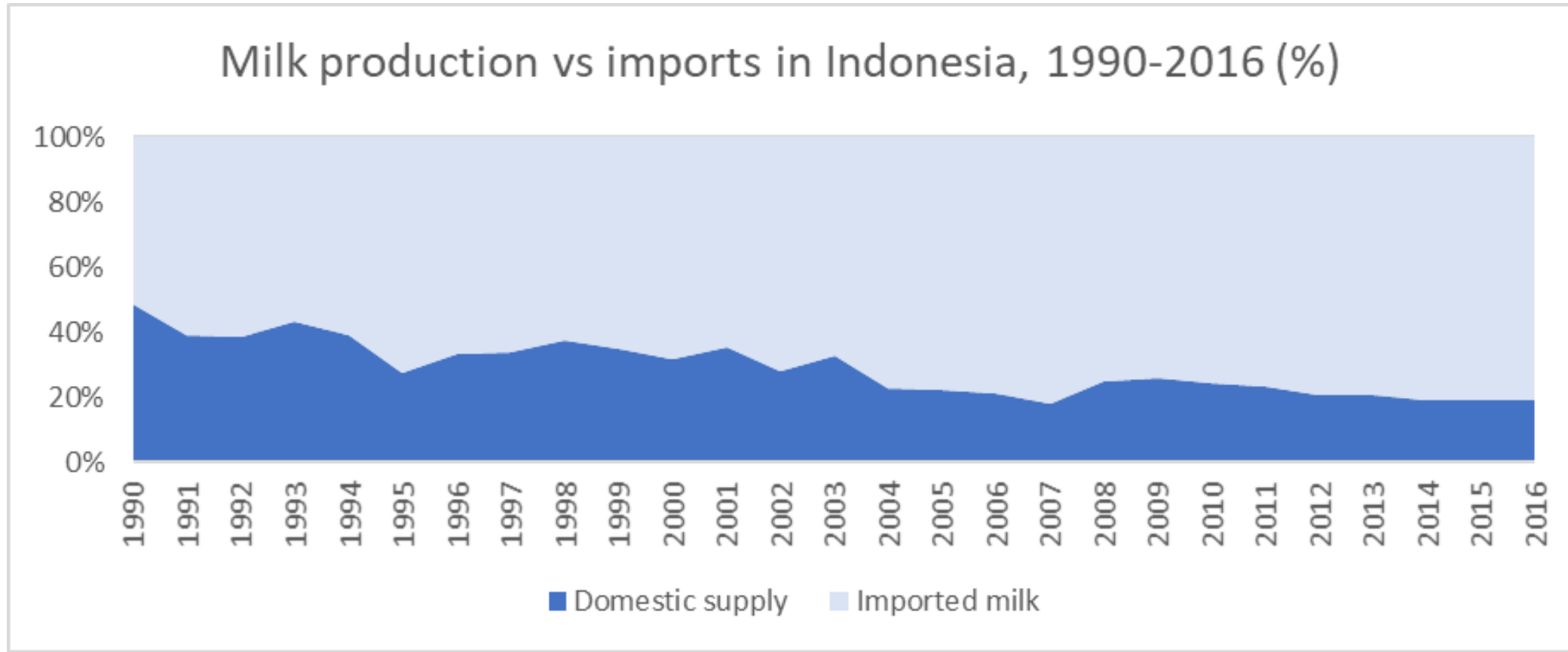


Growing markets in short shelf life dairy

- The emerging middle classes in growing Asian economies (and Covid-19 lifestyle changes) are driving the demand for dairy
- Many tropical countries are not self sufficient in dairy:
 - Indonesia : ~ 25%
 - Philippines : <1%
 - Queensland (northern Australia) : 54% of drinking milk requirements
- Markets for short shelf life dairy products such as pasteurised milk are growing
 - Very difficult to trade in chilled dairy products (water content, shelf life erosion)
- Opportunities for local milk supply to service these emerging value chains



The demand gap is being filled by imports



Branding policies and regulations – a barrier to developing local supply chains

- Branding UHT and reconstituted products as “fresh” is problematic
- Calling products “milk” when they are re-constituted – illegal in Australia
- The marketing strategies of supermarkets – milk is used to attract customers and is devalued



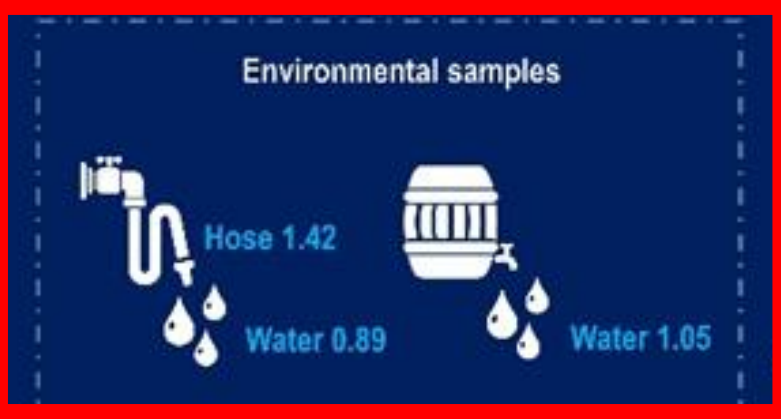
Product safety and bacterial contamination

- Shelf life of fresh milk from Asian small holders: 4 to 10 days
- Developed countries: 15 to 21 days
- Cause:
- Bacterial contamination is less than **50,000** per ml in milk developed countries.
- Often in excess of **1 million** per ml in developing countries





TPC Contamination at the Farm Level (million cfu/ml)



Start milking
6:18 AM

Non-mastitic cows



Milk in bucket 0.87



Milk in can 0.64

Milk tipped in
delivery can
6:53 AM

Mastitic cows



Milk in bucket 0.83



Milk in can 0.73

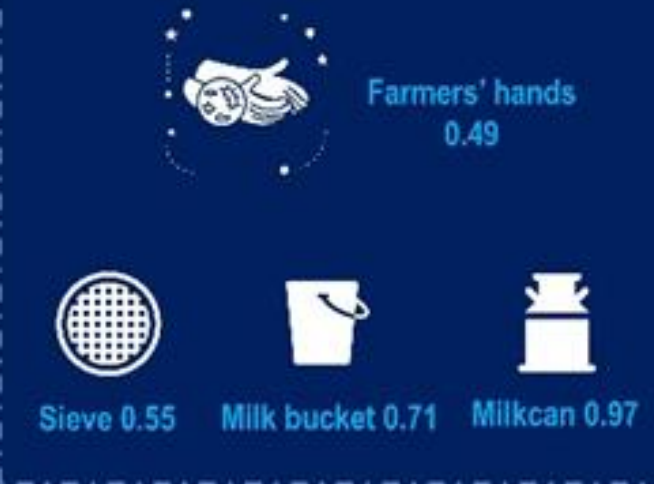
Milk tipped in
delivery can
6:53 AM



Departing
farm
7:19 AM



Farmers arriving,
before tipping milk
at collection point
7:32 AM



Swab sample
Liquid sample
*Average TPC of milk from mastitic and non-mastitic cows



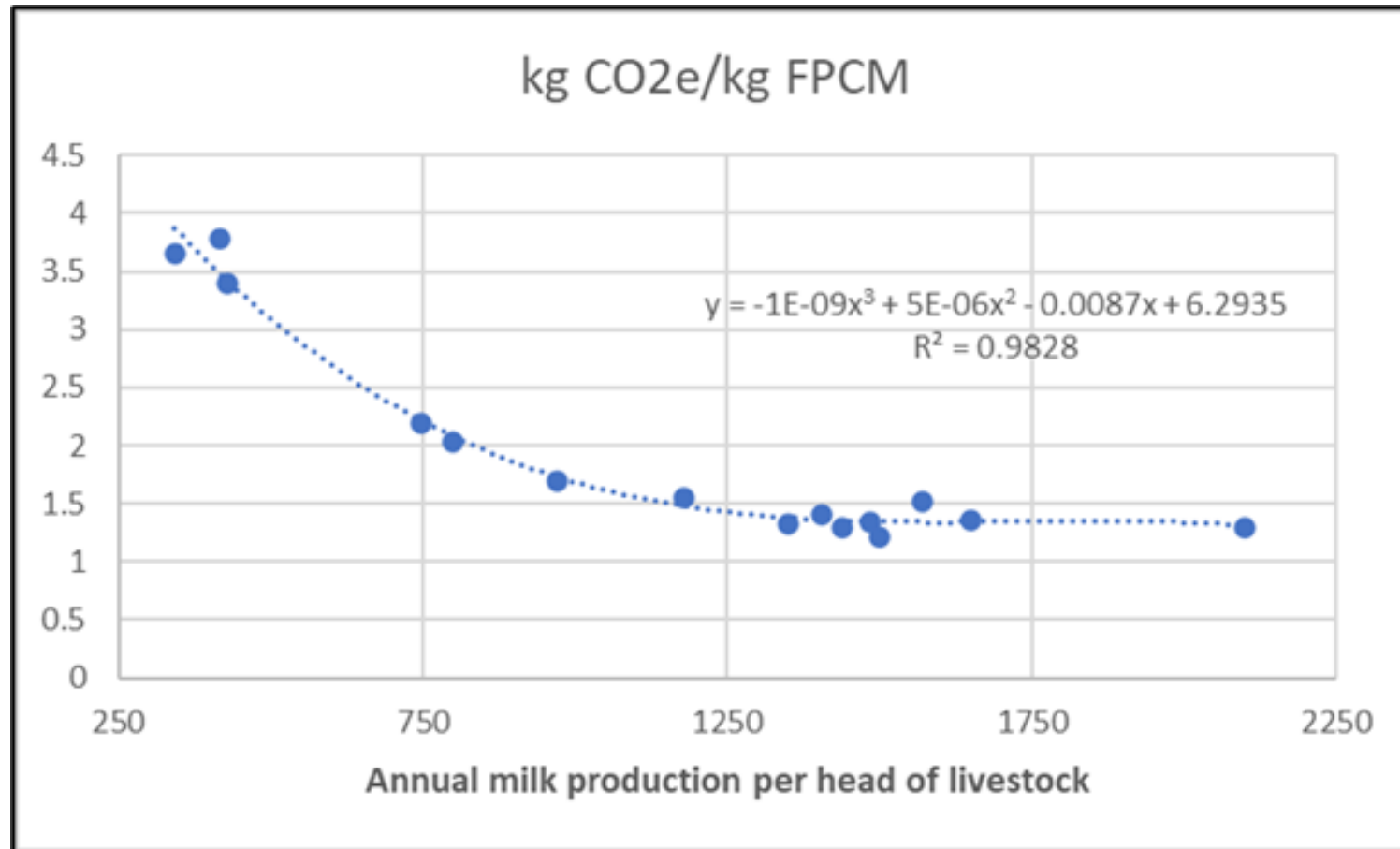


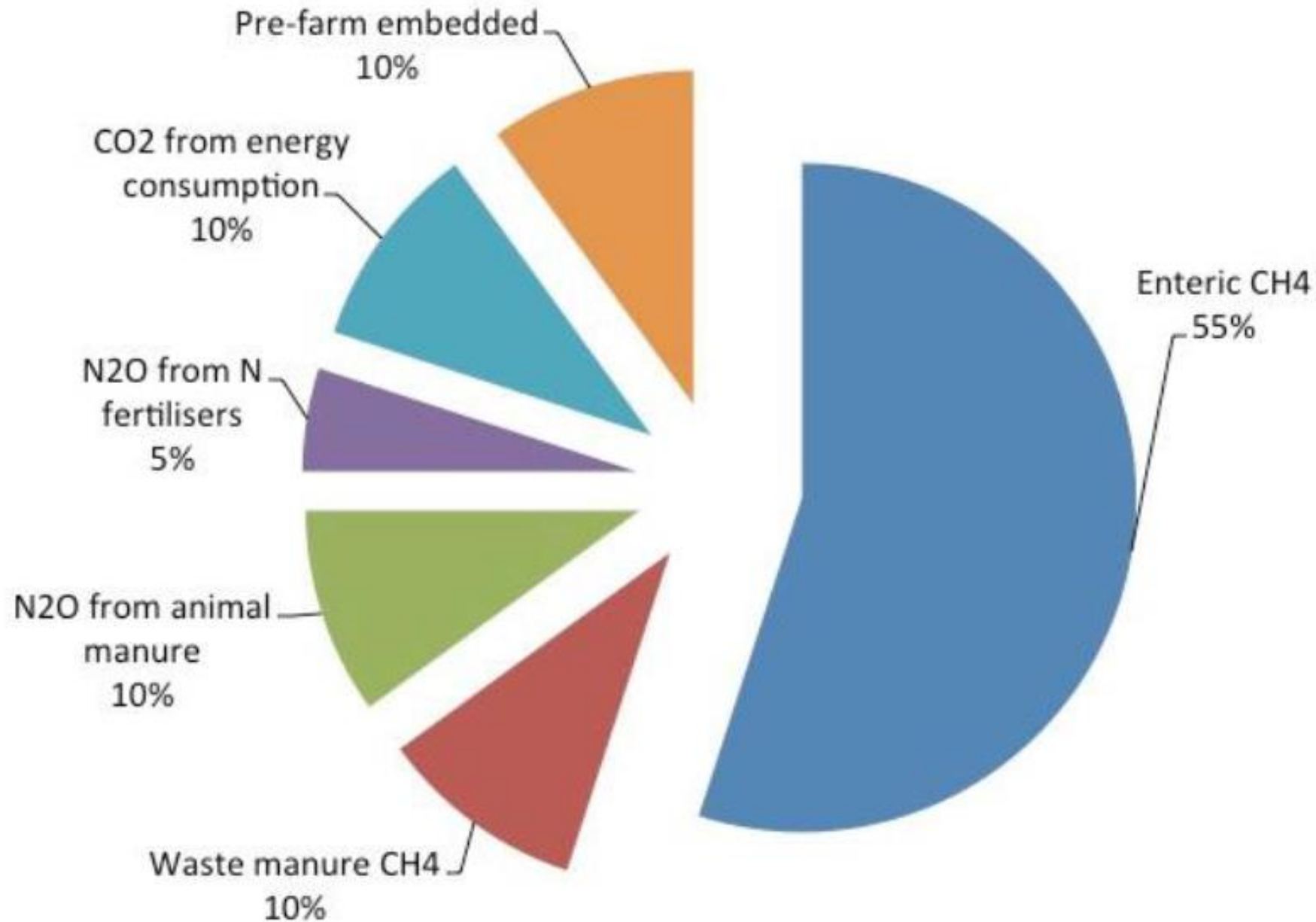


U.S. Dairy Industry Aims to Be Carbon Neutral by 2050



Carbon dioxide emissions per litre of milk is high in tropical dairy systems



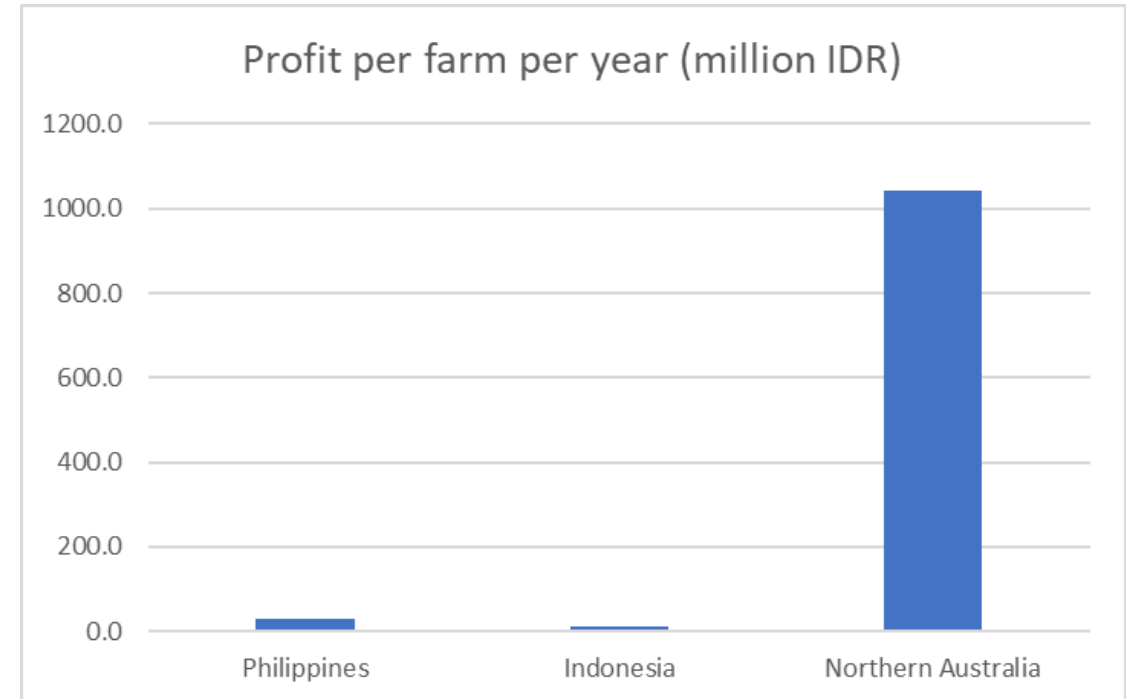
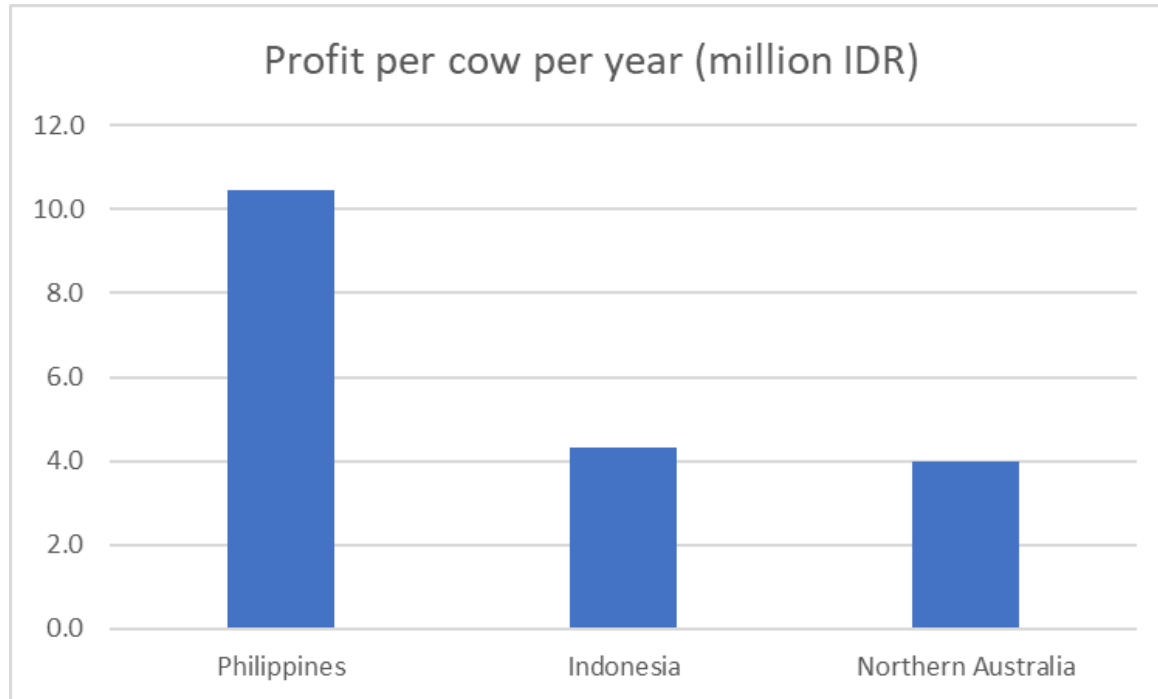


Sources of emission – Australian Dairy Farms

Farm profitability and productivity in tropical systems?



Growing the size of tropical smallholder farms?



- Number of milking cows per farm: Philippines - 2.7; Indonesia - 2.9; Northern Australia - 286; South Island NZ - 610
- Milk production per cow (litres per day): Philippines - 8.4, Indonesia - 14.7, N Australia - 20.5, NZ - 18
- Barriers to farm growth for SHDs: Land availability and policy environment.
- **Opportunities for growth:**
 - **Growing more high productive forages – moving from tropical grasses to grain-based silage**
 - **Addressing herd genetics and reproduction**

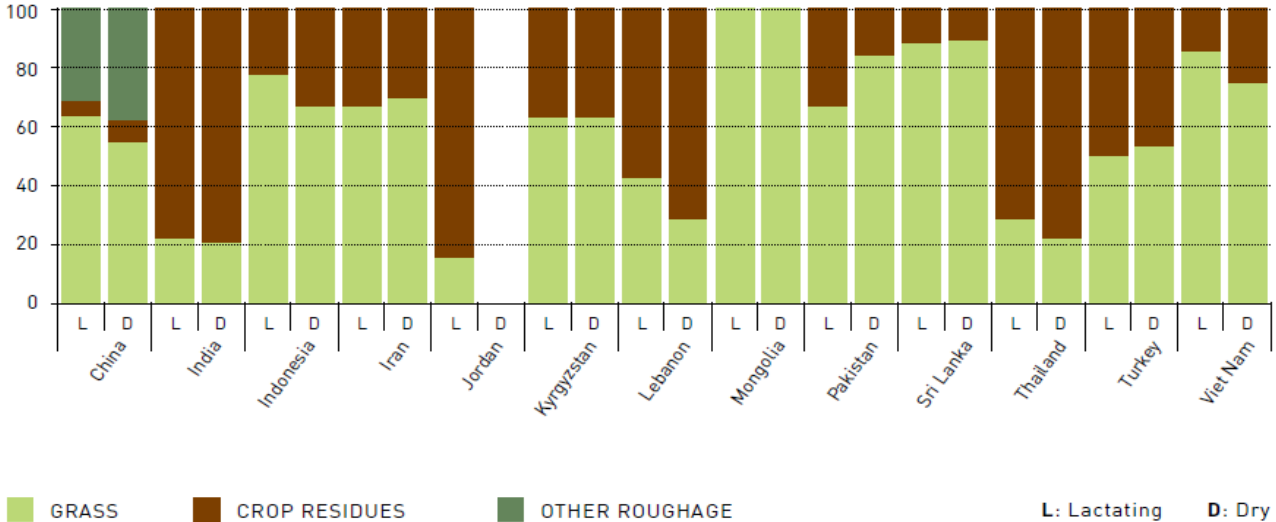


Tropical grasses play a key role in subtropical and tropical dairy systems globally

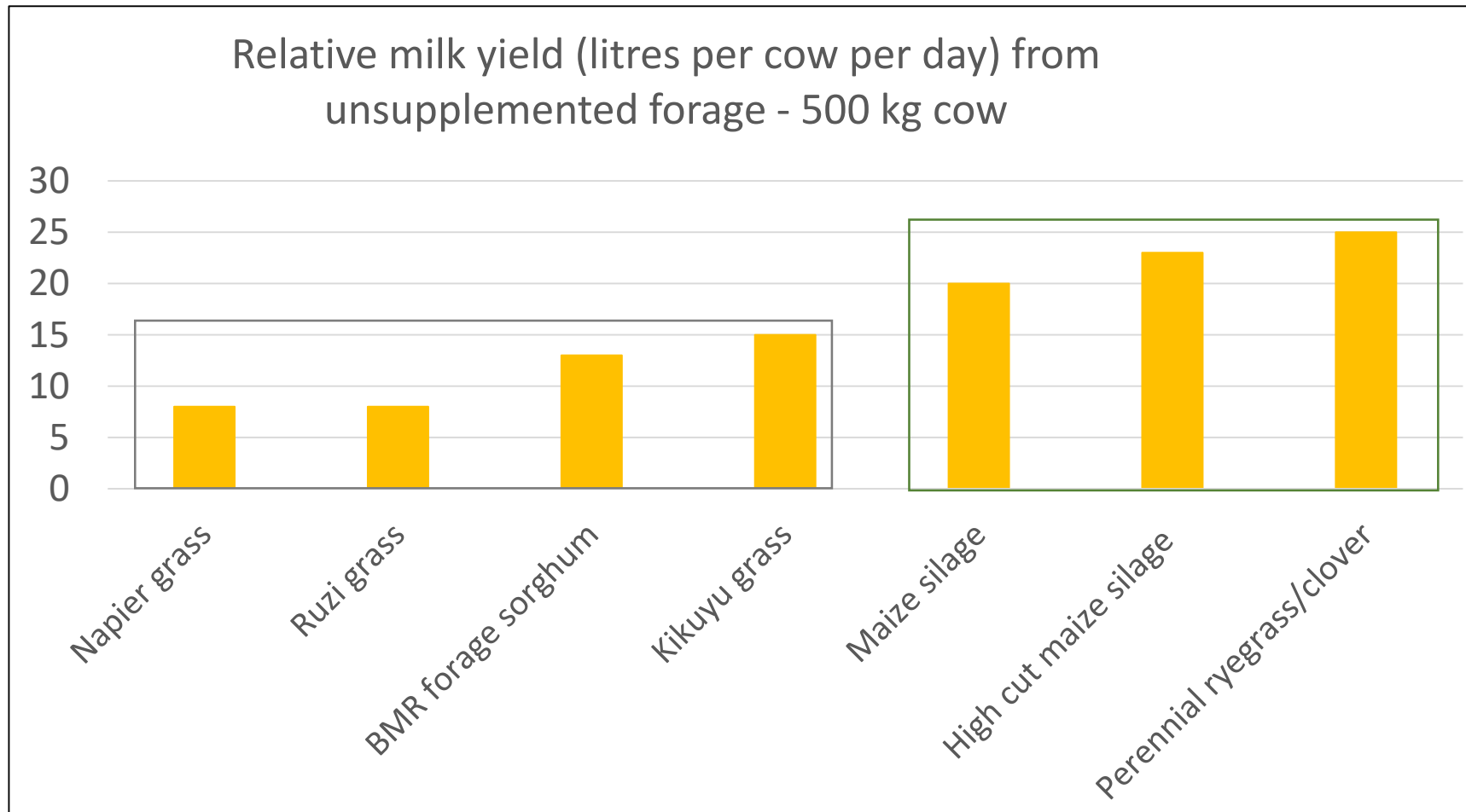
- High yielding
- Persistent
- Cheap source of feed
- Avg 60% of roughage intake



COUNTRY-WISE FOR LOCAL DAIRY COWS IN ASIA



In comparison to temperate or starch containing forages, milk production per cow is low when fed diets based on tropical grasses





Intermediate farms – the step between small holders and large commercial farms



Thank You!

<http://www.adelaide.edu.au/global-food>

<https://www.indodairy.net/>



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Subtropical Dairy



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