

N fluxes, balances & use efficiencies in Australia. - a focus on grazing-based dairy production



Cameron Gourley
Senior Research Scientist, Soils and Land Management
Agriculture Research Division

Agriculture in Australia



Agriculture ~4% of GDP

500 M ha of farming land (~60% of total area)

- 50 M ha cropping, 1 M ha intensive pasture
- EU-28 ~176 million ha (~ 40 % of the total area)

Agriculture ~12% of export earnings (was 66% in 1980s)

Beef and sheep meat = AUD \$9 billion (Euro \$7b)

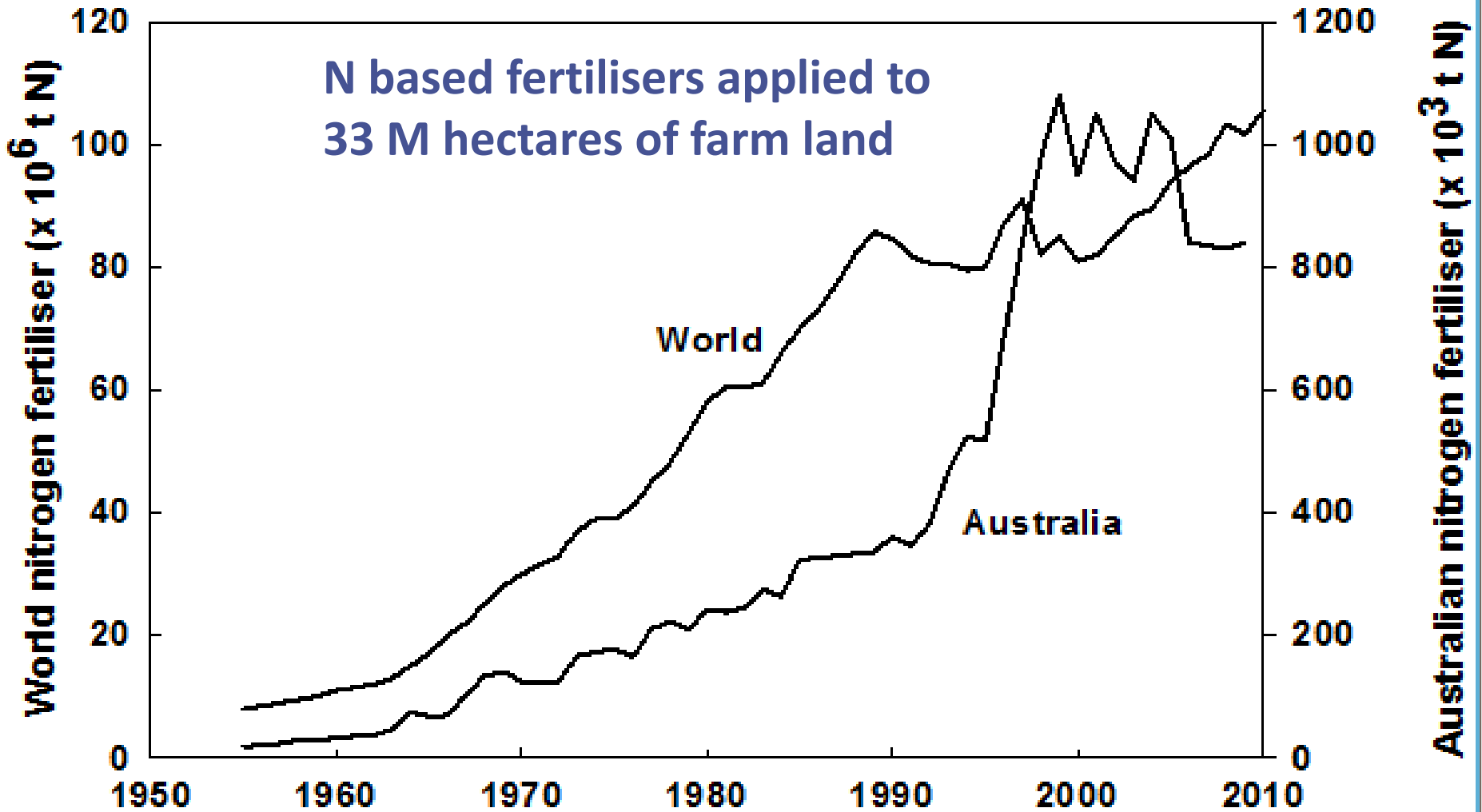
Grains Industry = AUD \$7 billion

Dairy Industry = AUD \$2.5 billion

Sugar Industry = AUD \$1.3 billion

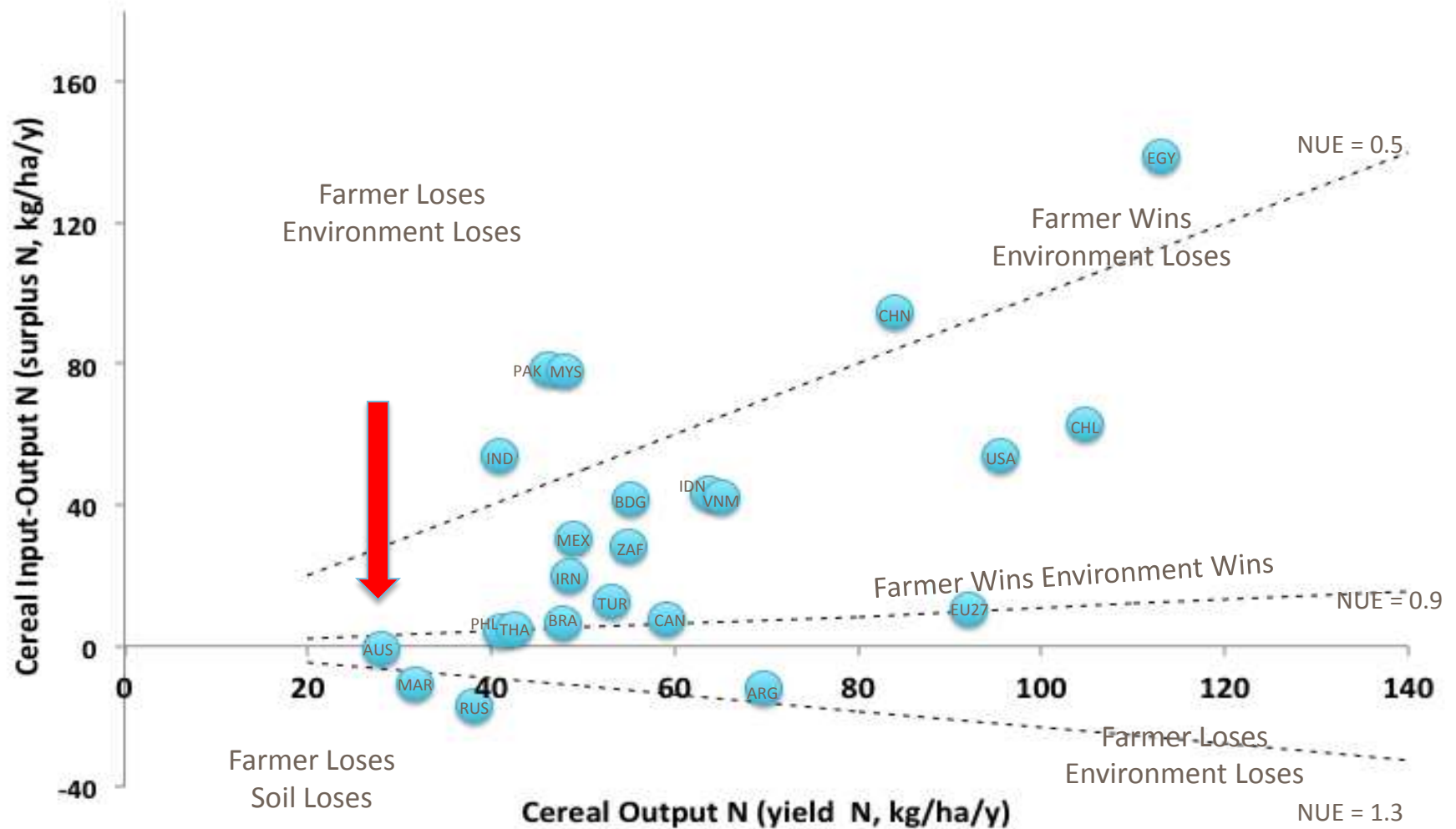


World and Australian use of nitrogen fertiliser.



Cereal Production N balance - (inputs minus outputs) and efficiency

Source: FAO STAT, IFA and IPNI.
BNF and manure not included.
UN Country 3 letter code.



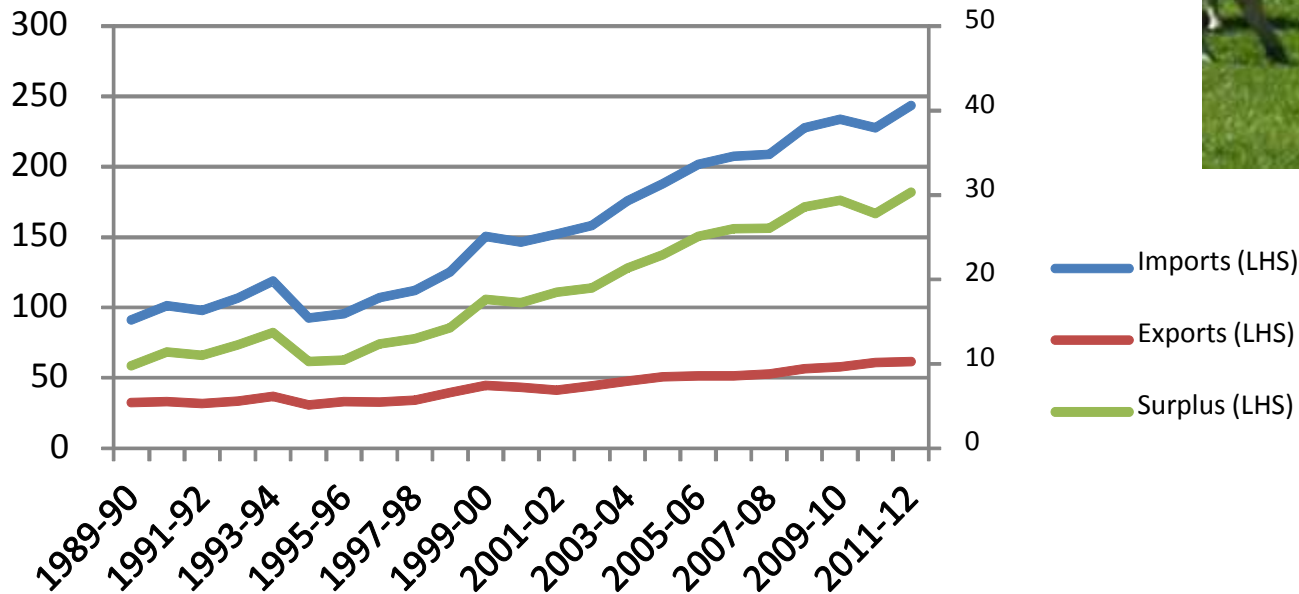
Specific Regional Concerns



Reef Plan

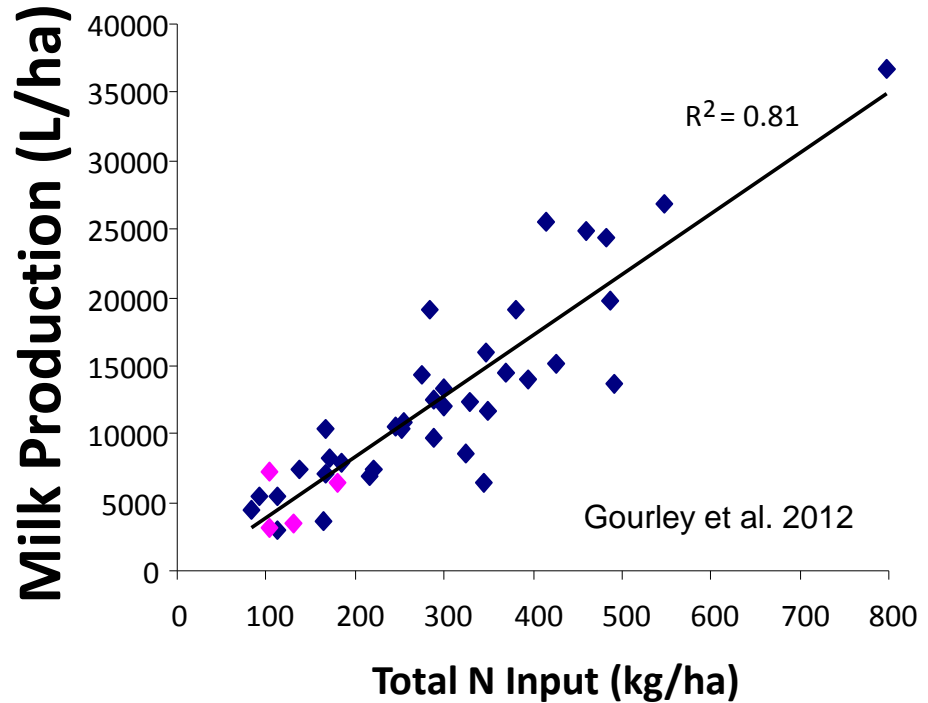
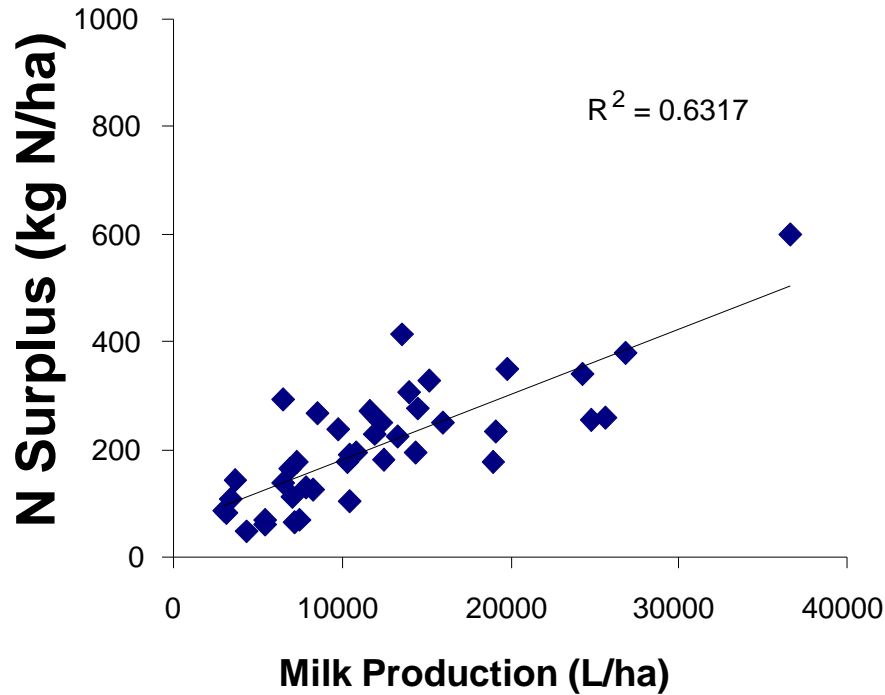
- GBR Protection Act(2009)
- \$250 M over 5 years Qld and Federal Govt.
- Targets broad-scale grazing in the dry tropics, sugarcane in the wet tropics.

Nitrogen imports, exports, and surplus (kg N/ha) for an average Australian dairy farm between 1990 - 2012



Nitrogen inputs and milk production

Strong link between nitrogen inputs and productivity





Victorian dairy farm

- 167 cows
- 67 ha
- 2.9 cows/ha
- 29% reliant imported feed

The Accounting for Markets Project is supported by:

