

RISK IN A CHANGING CLIMATE

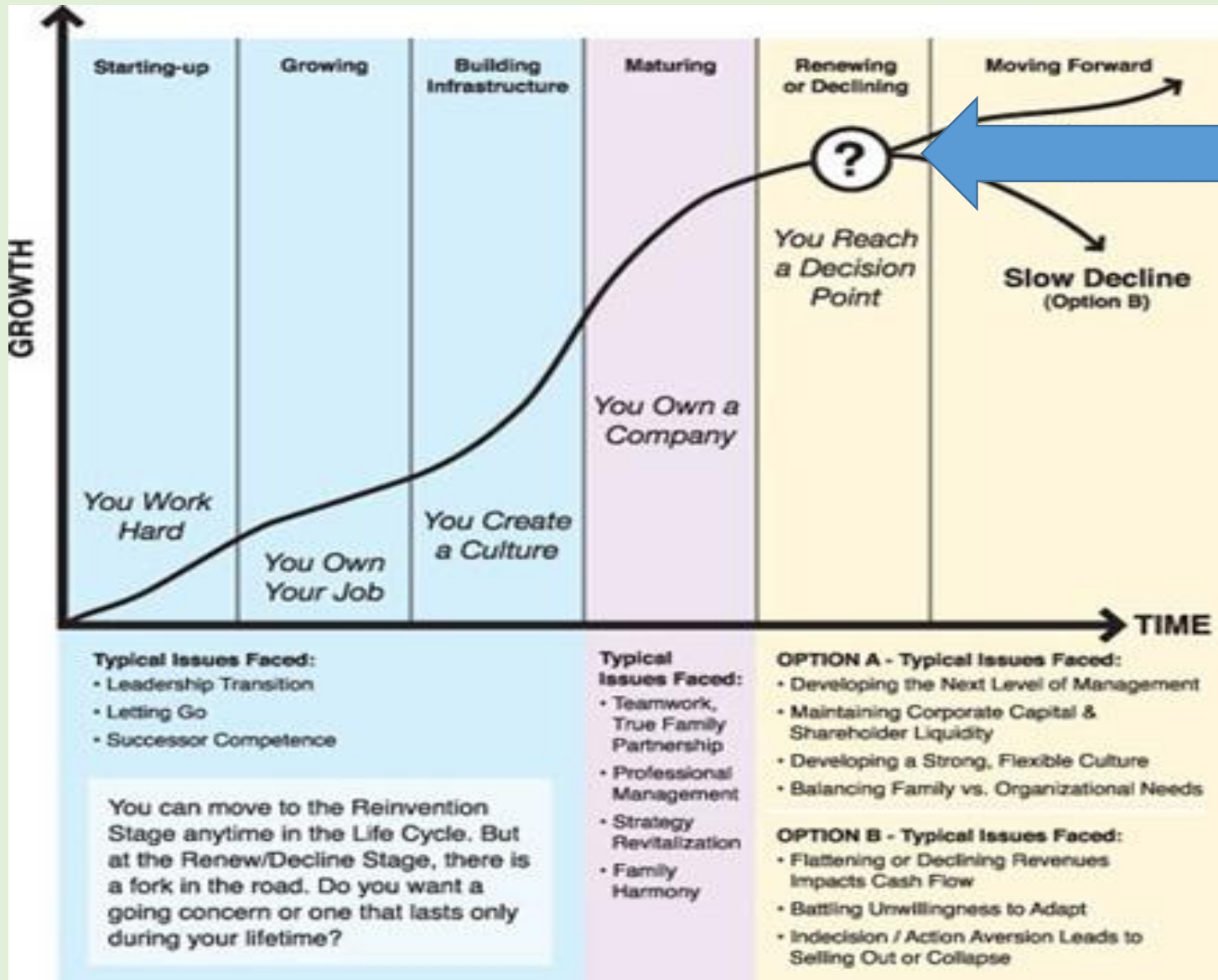
Lucinda Corrigan

Rennylea Angus, Bowna NSW



Risk in a grazing business?

- Is it risk in the biophysical environment ? Less reliable seasons, shorter growing season, later onset of winter, earlier onset of summer, designing new perennial based systems to cope with the changing climate, increasing biosecurity risks new weeds & diseases
- Is it risk in the business environment? Sourcing capital for investment in innovation, growth, financial literacy, collaborations and partnerships, independent advice, value adding through the supply chain. Consider corporate investment timelines 5-10 years, different to a family business, 6 generations, 150 years
- Is it risk in the human environment? capability, specialisation, continuous education, Employment ie IR/HR skills, consultancy to improve decision making



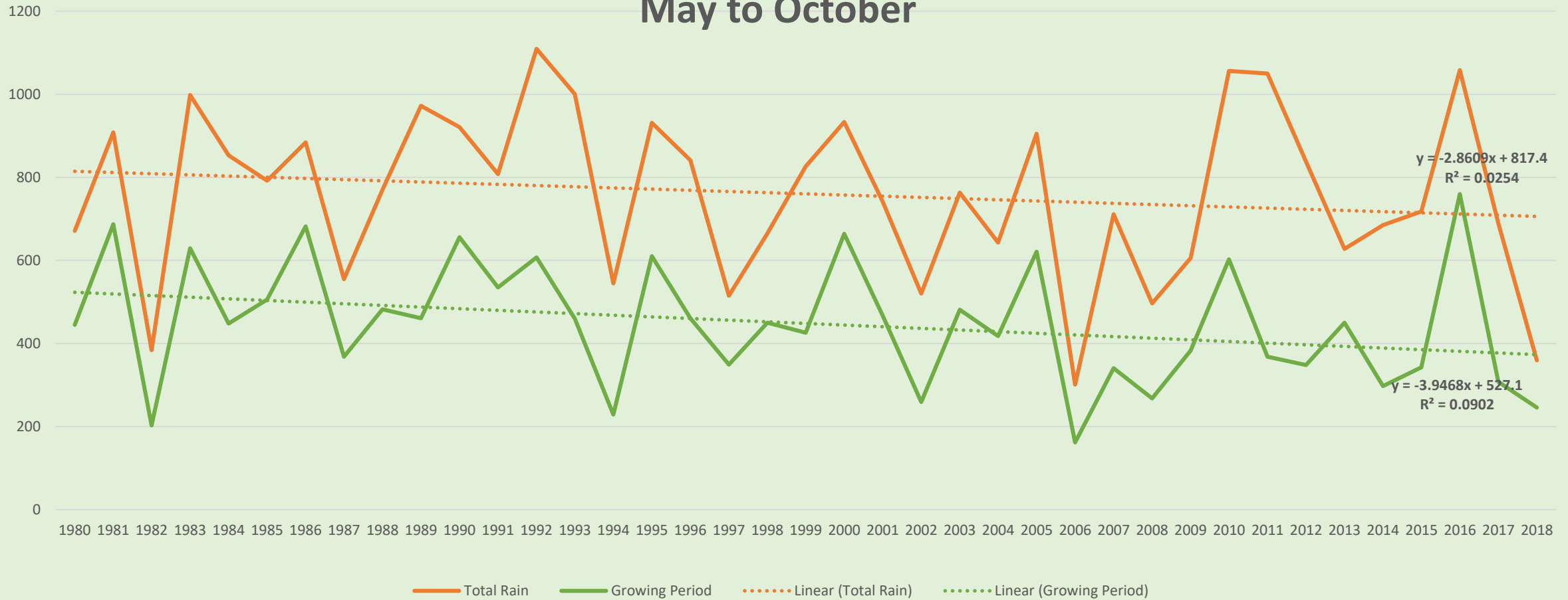
?

The Business Cycle –

CHOOSE to Grow or Decline in each generation

Rennylea Total Rainfall/Year + Rainfall by Growing Period

May to October

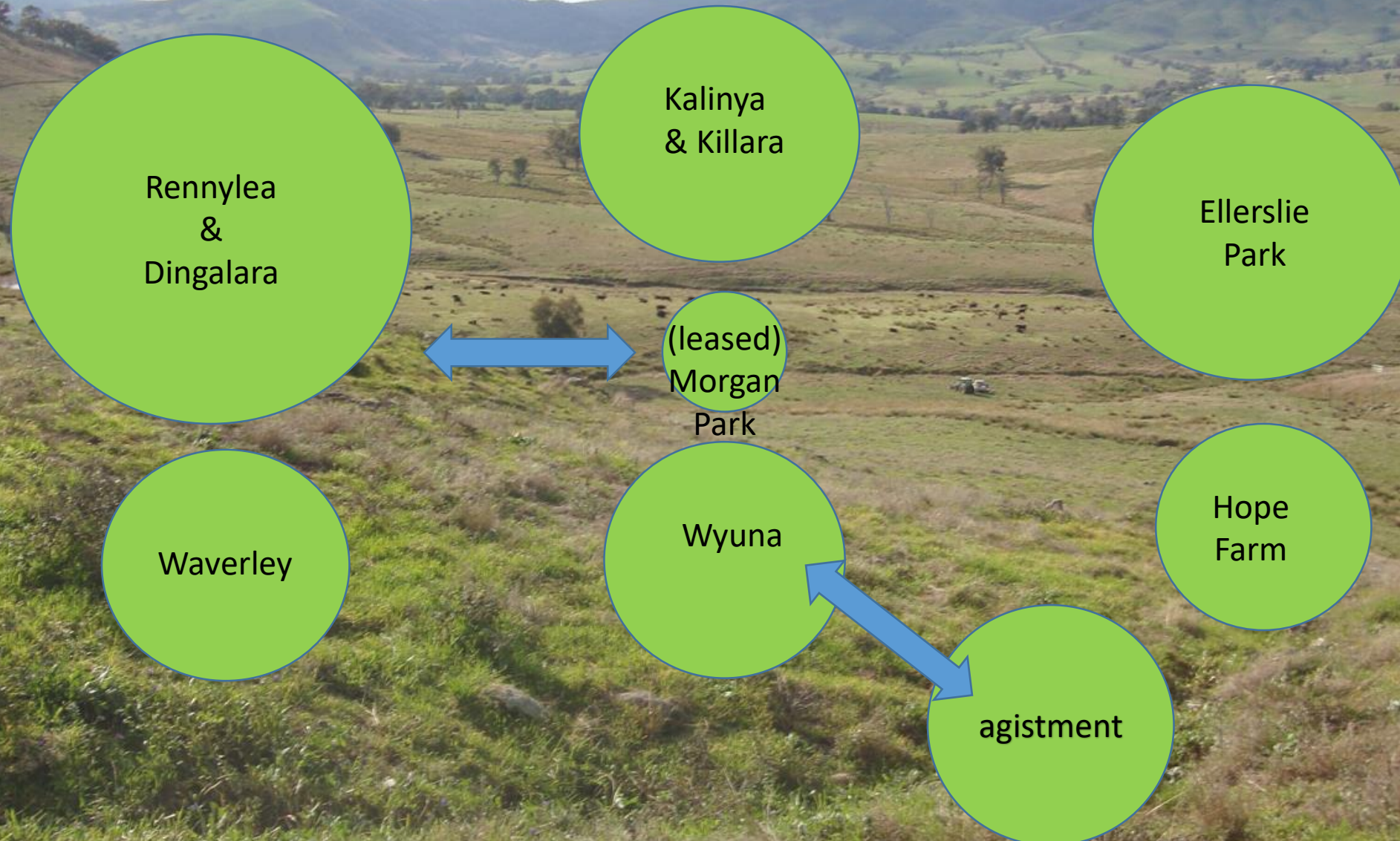




Cows @ Bowna

Dry Stock

Bulls @ Culcairn



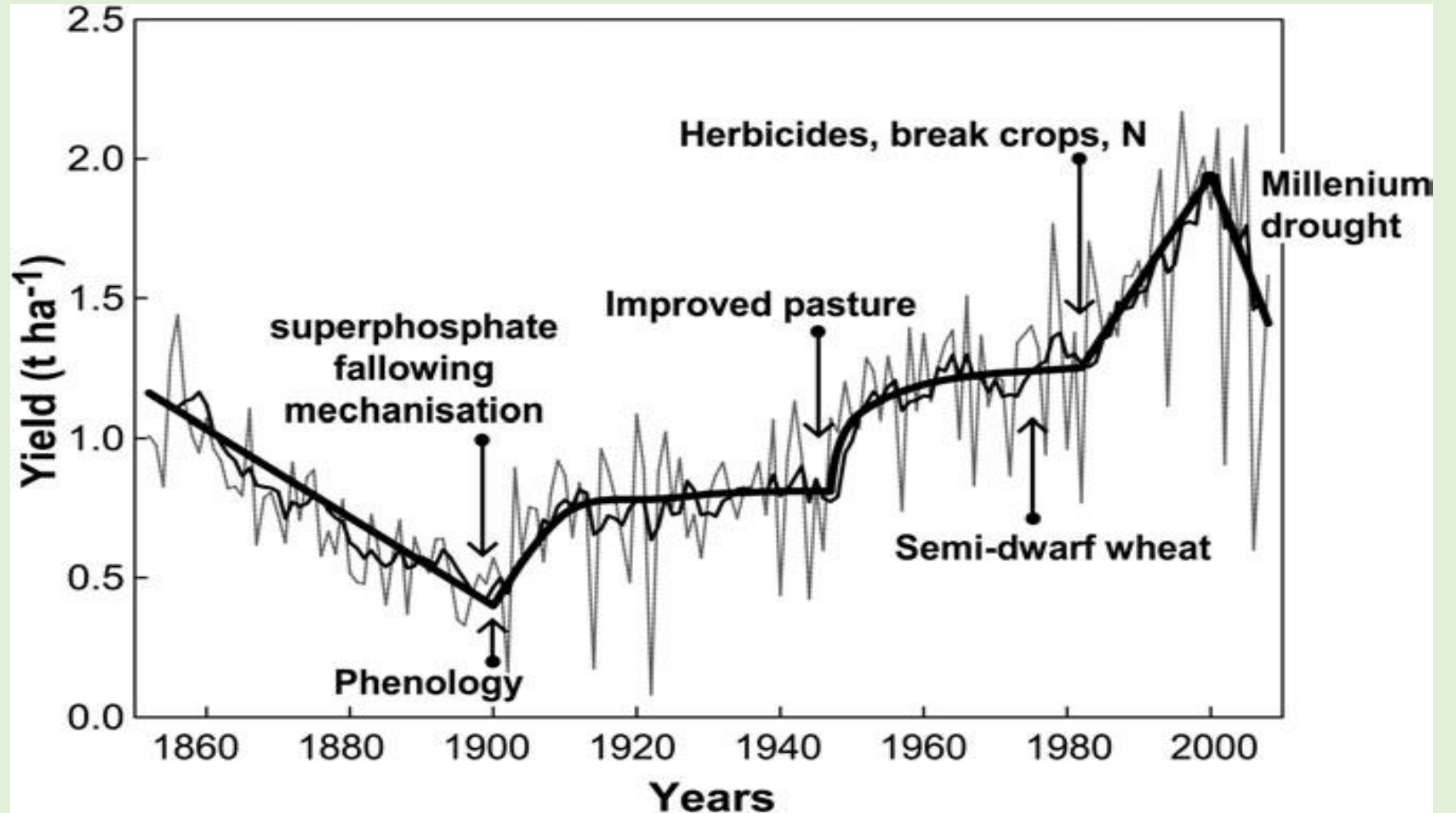
Bowna in a good year- 2011



And not so good – 2006 In Southern NSW
this scene has largely disappeared



Relentless Innovation



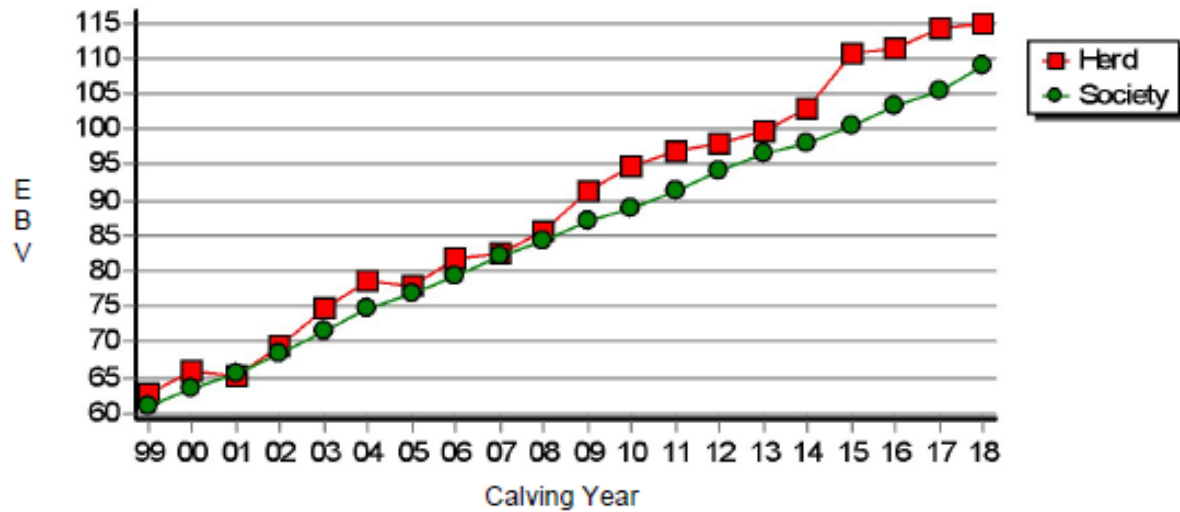
Investing in Innovation at a farm level

- New Pastures, particularly legumes eg. biserrula and bladder clover, seredallas, teder
- Genetic & Genomics, the gains are cumulative and permanent
- Systems implementation, soil health, perennial pastures,

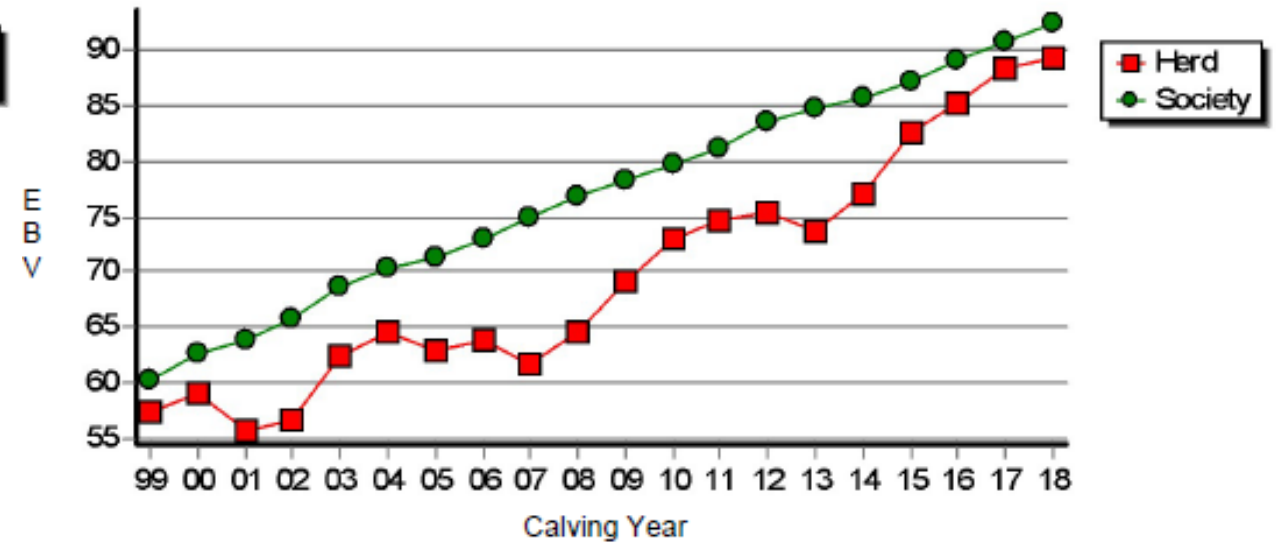


Genetic Improvement 1 – more performance

600 Day Weight (kg)

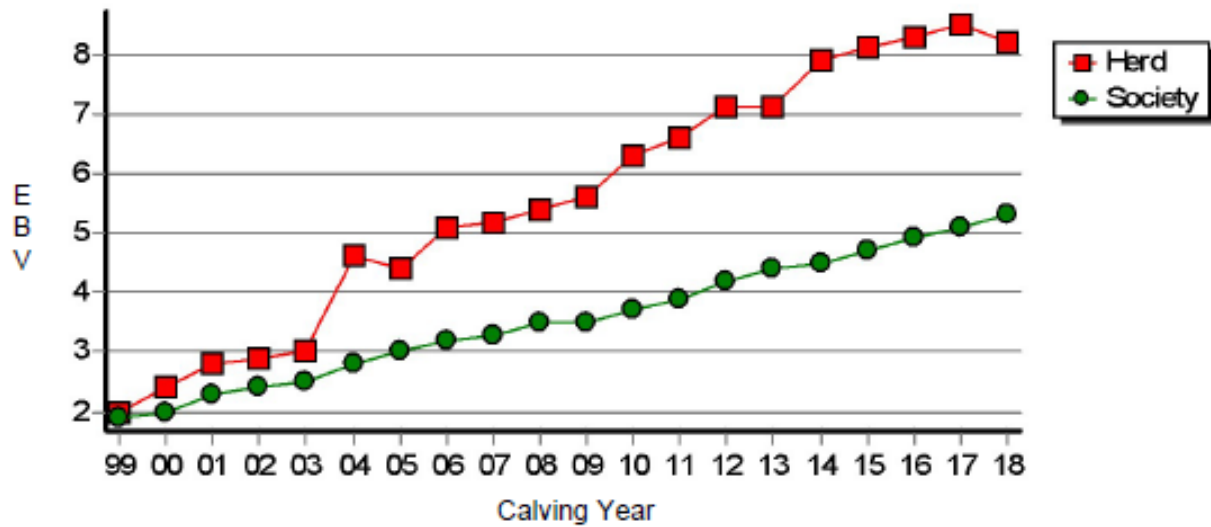


Mature Weight (kg)

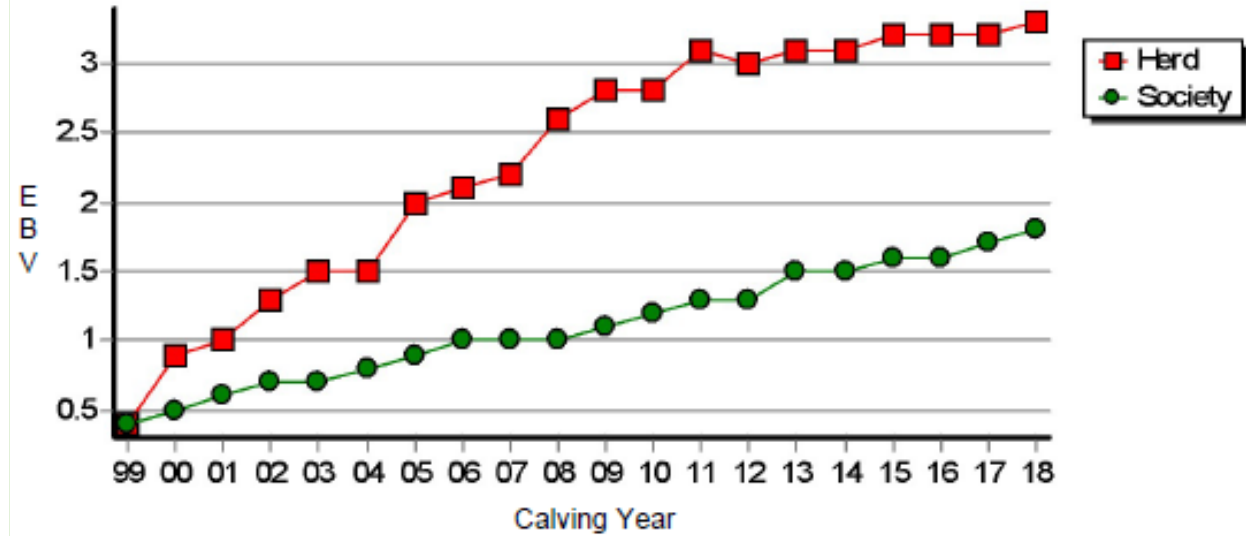


Genetic Improvement 2 – meat quality

Carcase EMA (sq.cm)



Carcase IMF% (%)



Culcairn – Weaning yard 1,000 head – an important change to sheep & cattle management



Investment in infrastructure



Focus on Innovation

- Digital and disruptive, efficiency Gains, precision to decision, Coming slowly
- Supply chain value creation,
- Data management, cloud based
- Big data analytics using genomics
- Marketing eg. Auctions Plus

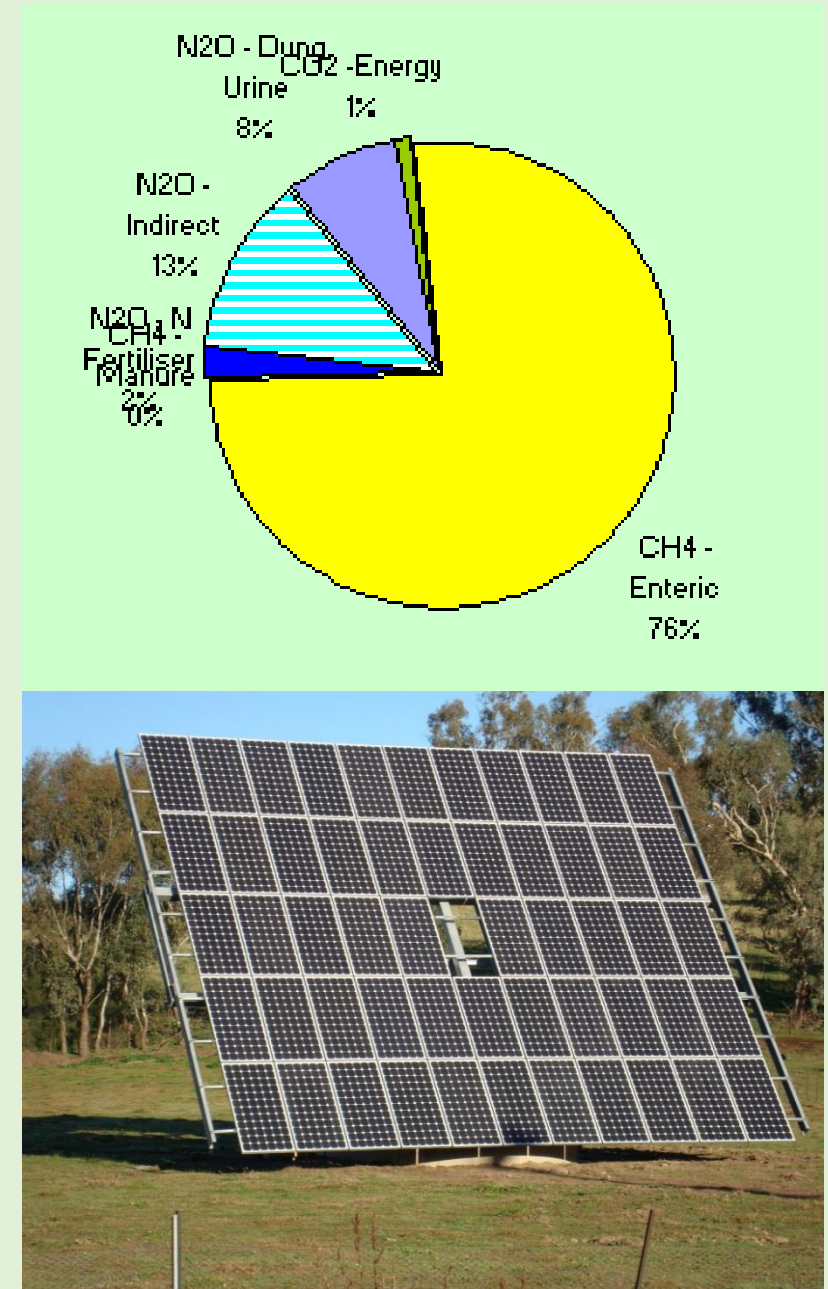


A cautionary memory!



What does Relentless Innovation Look like for Our Farm?

- It's all about the Cost of Production for Feed
- Perennial systems, pro gibb, grasses & legumes
- Research & Development, DNA data bases, analysis Of big data, new projects eg. Dung beetles
- Tree planting since 80s > 100,000 trees
- Sustainable intensification Containment area, Irrigation system to bring heifers through dry seasons
- Increase in scale to give choice and manage risk



Loss of Production & Productivity – key risk

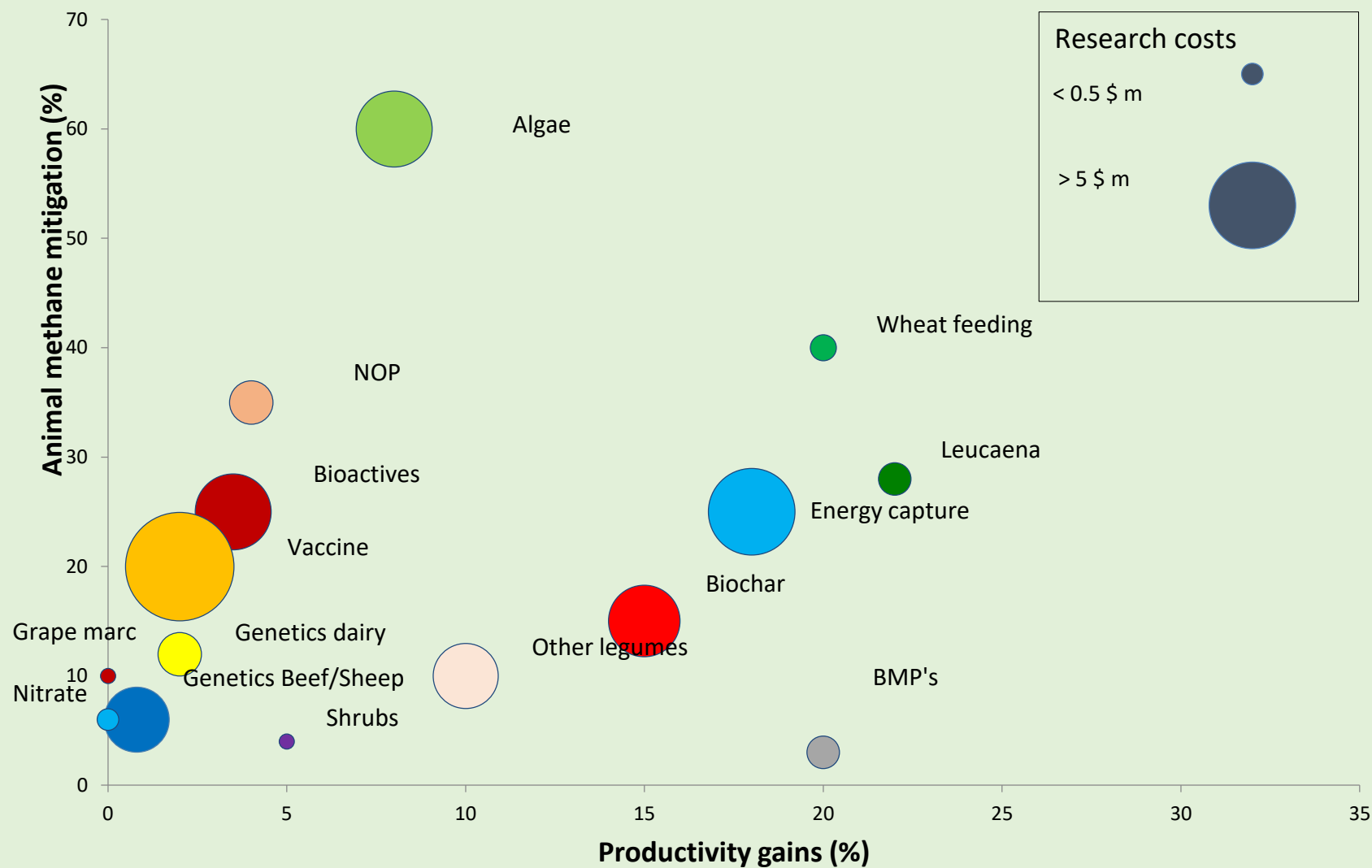
- The predicted drop in productivity varies across industries & agri ecological zones. At the same time we have an industry wide goal of \$100bn of Agricultural value by 2030 Ref Gunasekera et al 2007

	Production		Export	
Economic sector	2030*	2050*	2030*	2050*
Wheat	-9.2%	-13%	-11%	-15%
Sheep meat	-7%	-14%	-15%	-21%
Beef	-9.6%	-19%	-29%	-33%
Dairy	-9.5%	-18%	-19%	-27%
Sugar	-10%	-14%	-63%	-79%
GDP IMPACT (total economy including agriculture)	-2.8%	-5%		
* % change from 1990 base level				

Research and Development

- One of the key recommendations of the 'Change is In the Air' report for a National Agricultural Climate Change Strategy
- To invest need certainty, address gaps in knowledge
- Long term investments
- Update previous reports such Gunesequera et al 2007 which identifies the risks to various industries with current climate data
- Focus on solutions for adaptation and mitigation including the transition to clean energy and the capture and storage of carbon

Innovation map for Red Meat



The Carbon Question?

- Lapsed Emissions Reduction Fund contract
- Unconvinced about the principle of Additionality as an early adopter, eg. cattle methodology for Northern Australia is Business as Usual in our management
- Permanency, the 25 years on the Soil Carbon methodology?
- At a business level, having done Environmental Management Schemes early 2000s, Carbon accounting tool, taken up a contract and let it go, our approach is to consider what a carbon neutral strategy looks like for our part of the value chain, costs and returns
- Keen to participate but not introduce new risks we can't manage (ie contracts)

Thank You

