

The background image shows a close-up of a dry, cracked paddock. The ground is dark and fissured, with a layer of dry, golden-brown straw or mulch scattered across the surface. The cracks are deep and irregular, suggesting severe drought conditions.

A perspective from the paddock of climate  
change impacts in Australian agriculture.

Pete Mailler

Sittara Pty Ltd



# Sittara Pty Ltd

**A family farming business established in 1997, based south west of Goondiwindi leasing, sharefarming and owning land.**

**Primary enterprise - Grain production**

**Secondary enterprises - Contract farming**

**Droughtmaster cattle stud**

**Opportunity cattle trading**

**Consulting - agronomy**

**finance**

**industry**



# Sittara Farming System

**Farming system developed to mitigate weather, disease, pest, nutrition and labour constraints.**

**Internally focussed on what we can manage**

**CTF and minimum tillage**

**Structured 5 year rotation strategy**

W	S	W	S	W	S	W	S	W	S
Cereal	Fallow	Legume	Fallow	Cereal	Fallow	Fallow	Crop	Fallow	Fallow

**Optimise not maximise cropping frequency**

**Planting and harvest are most expensive operations so make every crop profitable – or don't plant.**

**Incorporating marketing strategies and grain storage systems to mitigate market volatility**



# **Innovation has been a theme for us**

**The first commercial gps controlled tractor in the world on our farm**

- **Game changing technology**
- **Reduced all inputs up to 15% (pesticides, fertilisers, fuel and labour)**
- **Enabled true controlled traffic systems improving soil structure**

**Early adopters of technology and varieties**

**Not zealots or puritans, always working from first principles**

**Pay attention to what our country and crops are telling us**

**Decline in financial resilience over time making this harder**



# Things are changing

**We are above average farmers, but.....**

**Weather volatility is frequently beating cultural mitigants now**

**Despite constant innovation – neither production nor profit has risen**

- **Yields and profits are now declining due to weather volatility**

**Risk profiles are shifting faster than awareness**

**Structured systems becoming more opportunistic**

**Productivity strategies are shorting natural capital**

**Short term compromises have long term consequences**

**The problems are now beyond internal systems management**

**Credit squeeze is inevitable**



# What is happening commercially?

**In any business model the decision to invest must incorporate a risk reward assessment.**

**Typically, low risk investment can be justified on relatively low returns.**

**Conversely, higher risk ventures require higher returns to justify the investment.**

**Australian agriculture is being wound into a high risk low reward category that belies the value of the sector to society**

**Climate change is the major driver, coupled with grossly inadequate public policy settings around mitigating risk**



# Why does it matter?

**The farmer's first job is to provide for their family**

**If the returns don't match the risks then individually we can and likely will choose not to be farmers, but society still needs someone to do it**

**It is a social imperative to ensure the agricultural sector is viable**

**Ergo as a society, we must attract, retain and protect investment, human and natural capital to optimise our agricultural capacity to underpin a stable society**

**A business as usual approach with incremental reform won't do it**



# What does it mean for the sector?

Need to better align natural capital management cycles with finance/tenure cycles or we will never catch up.

Narrow policy and R&D productivity focus will only make things worse

Agricultural business and structure must evolve fundamentally

For most things, history is a now poor indicator of the future in agriculture

Without transformational change we will lose the most important skills and characteristics from Australian agriculture:

- Adaptability
- Resilience
- Innovation
- Emotional connection



# Financial implications

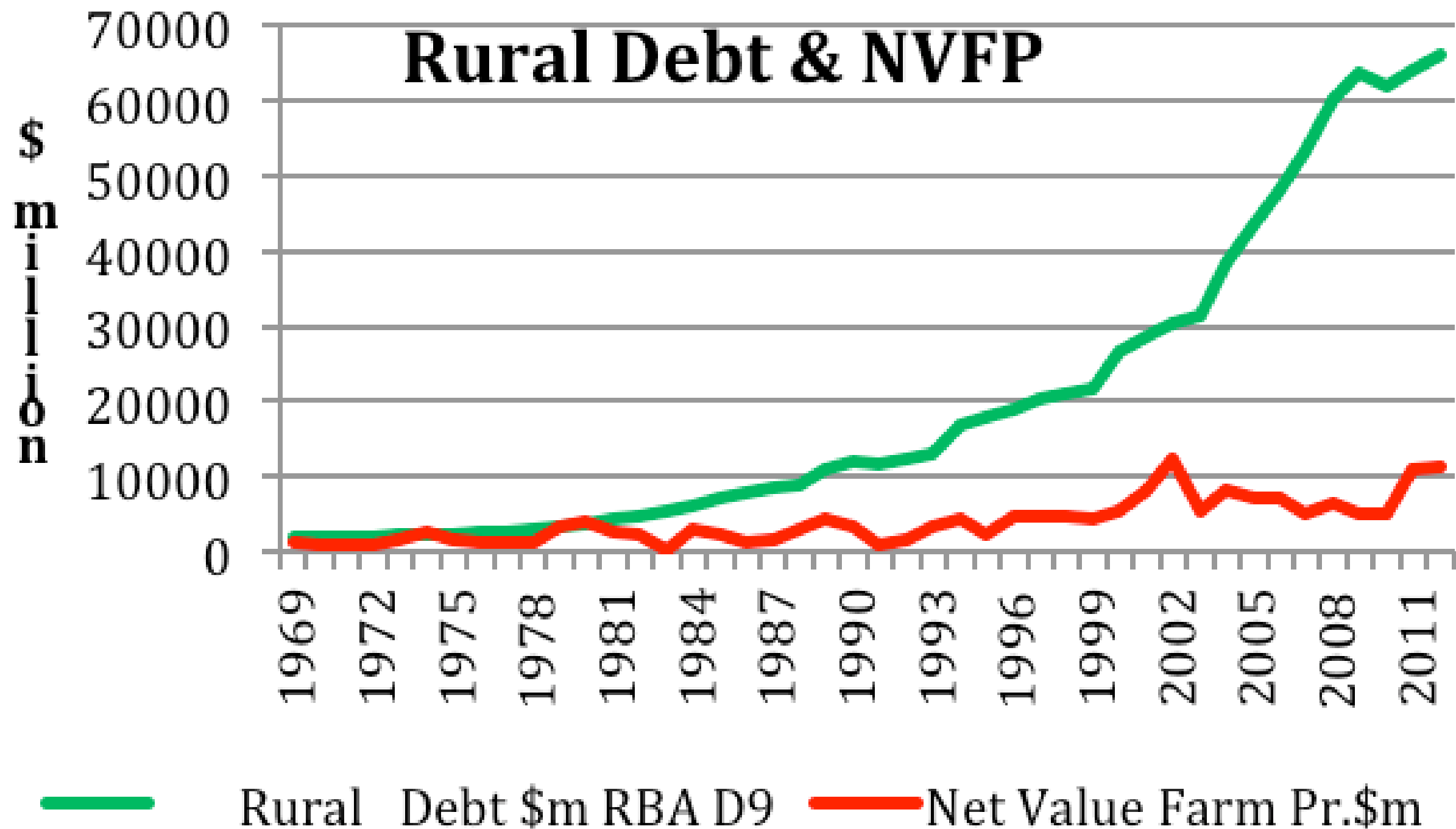
## **3Cs of Credit**

- **Collateral – what can we liquidate to recover the debt**
- **Cash flow – can a borrower service the debt**
- **Character – attitude to risk is a key component**

**Banks are like casinos. They take a calculated risk on individual transactions, but they work to ensure the odds are in their favour so that the overall book is safe.**

**Climate change is increasing risk and threatens the safety of the book and so it threatens cost of capital and ultimately access to credit.**







# Agriculture is the key, but.....

**Agricultural practice is determined by public policy and market forces**

**The current system is what it is because that is what the market prescribes – intentionally or otherwise**

**The tendency to blame farmers for agricultural outcomes is trite, unfair and unhelpful**

**That said, agriculture must also own its reality rather than deny it**

**Hannah Critchlow suggests that conservative thinkers become more conservative in the face of fearful outlooks**

**The greatest impediments to the necessary changes rising from climate change are emotional and psychological - inside and outside of the agricultural sector**



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# Where do we start?

**Better understanding of agricultural structure as it is and how it is changing**

- low confidence in ABARES data and its interpretation

**Reaffirm agriculture's central and integral importance**

- agriculture is not extraneous to social stability or prosperity

**Agriculture can, should and does provide much more than commodities**

- quantify what is, what can be and how to reward it

**Change the framing around agriculture**

- consumers and consumptive demand are implicated in every aspect of agriculture



# Wheat

**Wheat is made up of approximately 72% starch and cellulose**

**Basic compound more or less is  $C_6H_{12}O_5$**

**Therefore wheat is approximately 28% C by weight**

**This equates to roughly 800Kg of  $CO_2$  stripped from the atmosphere per tonne of wheat produced**

**The production of wheat is not a net emitter**

**The wheat cycle is a net emitter because of transport, processing and consumption.**

**The climate protocol states this as an agricultural emission.**



# Agriculture reinvented



**Agriculture as a sector arguably has the most to lose from a changing climate, BUT society as a whole will inevitably feel the knock on effects.**

**We have opportunities to lead and benefit from the solutions at a farm and community level.**

**Society must recognise the integral importance of agricultural and natural capital sustainability and ensure the full cost is met**

**Any person or institution arguing for incremental or minimalist responses to the impacts of climate change for agriculture does not understand the problem.**



# In the mean time

**The risk profile of ag production in my district has shifted and severe financial hardship is inevitable for the entire community**

**I have little to no confidence that the policy settings or structural arrangements for agriculture will evolve fast enough to prevent it**

**I am now planning our exit from the production sector, but not entirely from agriculture.**

**We are now implementing a progressive scale down**

**Opportunities remain in the sector, but land/rent prices will need to correct to reflect the emerging production potential**

**My own situation aside, the people who will leave ahead of the pain are the ones we can least afford to lose from the sector.**



# There are better bets than conventional ag

**Chillamurra Solar Farm – 4.8MWp**

**Selling power into the NEM**

**Project Life: 30 years**

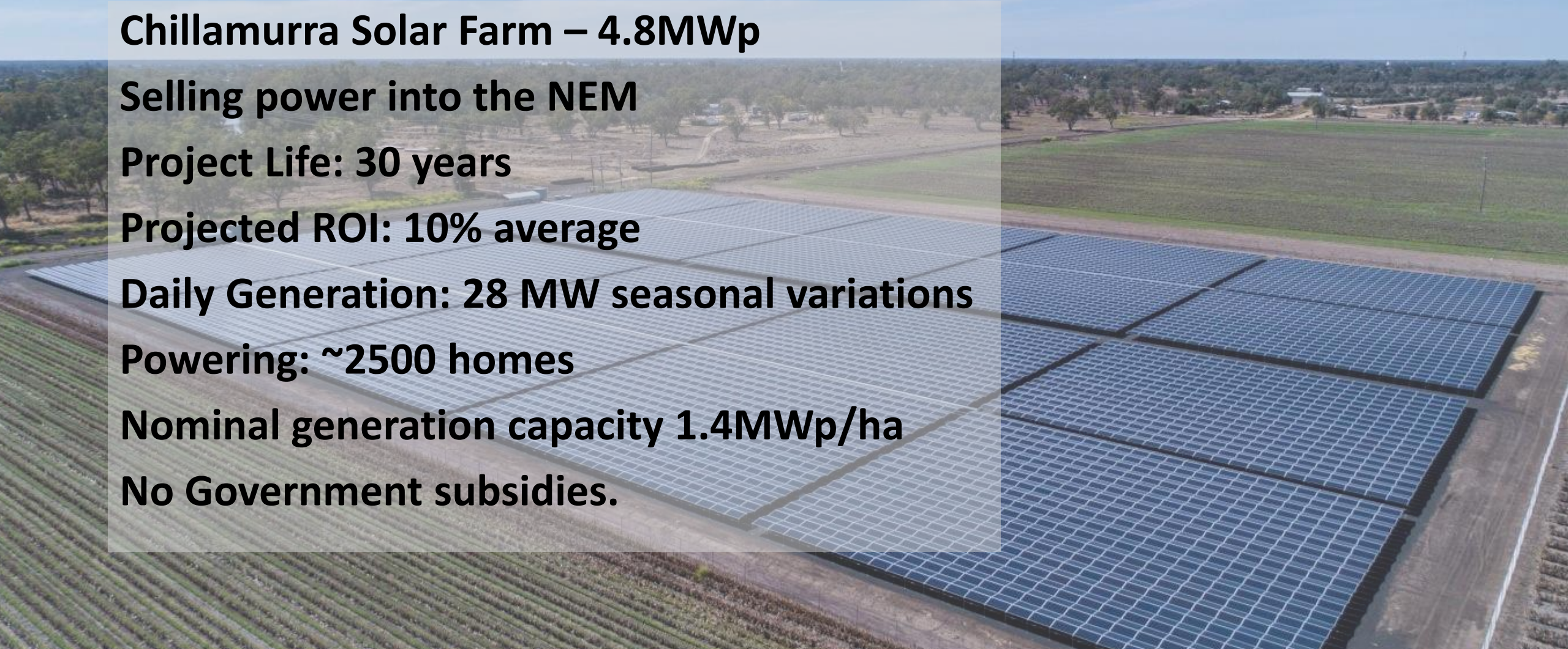
**Projected ROI: 10% average**

**Daily Generation: 28 MW seasonal variations**

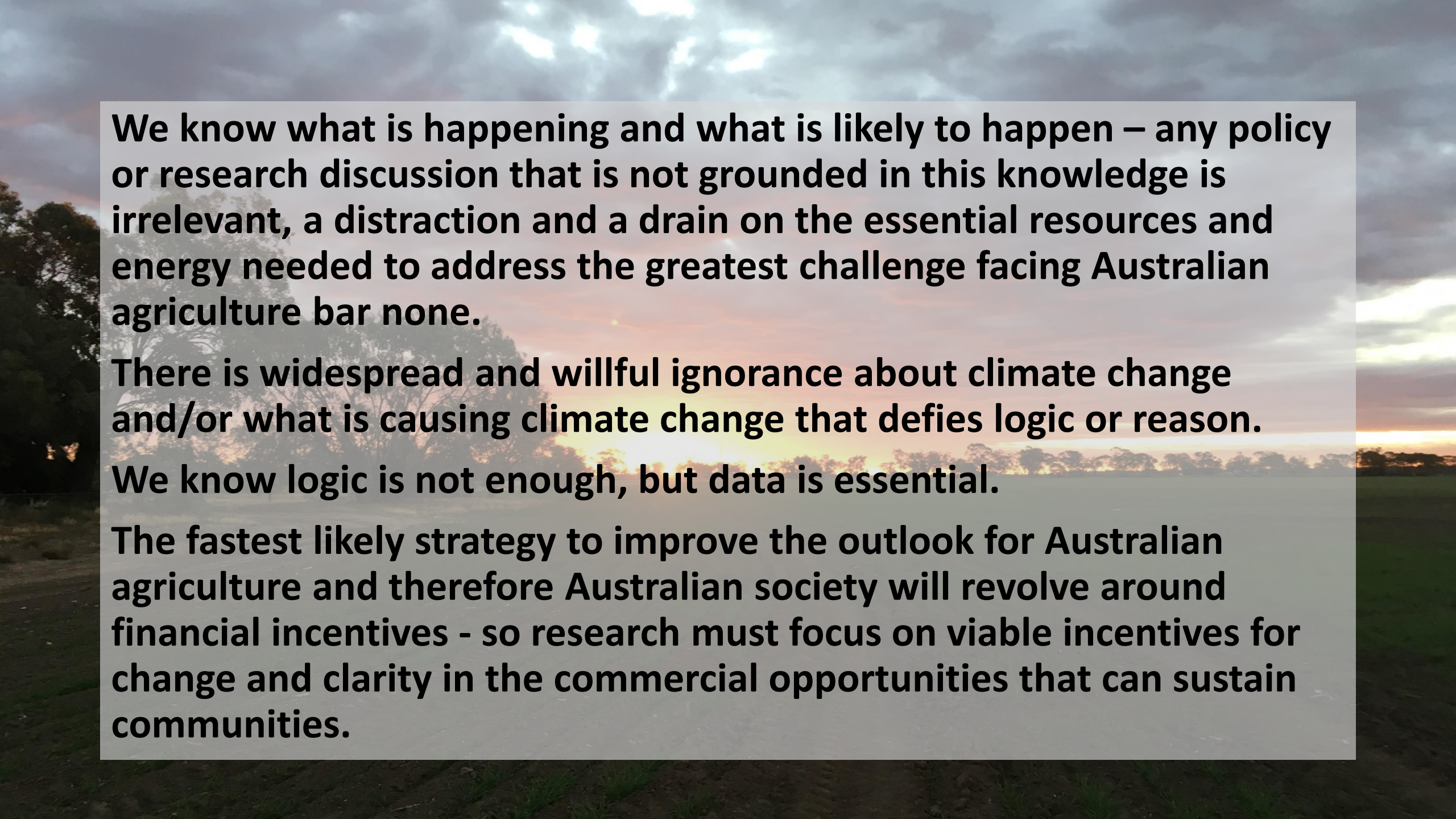
**Powering: ~2500 homes**

**Nominal generation capacity 1.4MWp/ha**

**No Government subsidies.**







**We know what is happening and what is likely to happen – any policy or research discussion that is not grounded in this knowledge is irrelevant, a distraction and a drain on the essential resources and energy needed to address the greatest challenge facing Australian agriculture bar none.**

**There is widespread and willful ignorance about climate change and/or what is causing climate change that defies logic or reason.**

**We know logic is not enough, but data is essential.**

**The fastest likely strategy to improve the outlook for Australian agriculture and therefore Australian society will revolve around financial incentives - so research must focus on viable incentives for change and clarity in the commercial opportunities that can sustain communities.**





The steaks are high!