

# MANAGING CLIMATE RISK USING FINANCIAL TOOLS

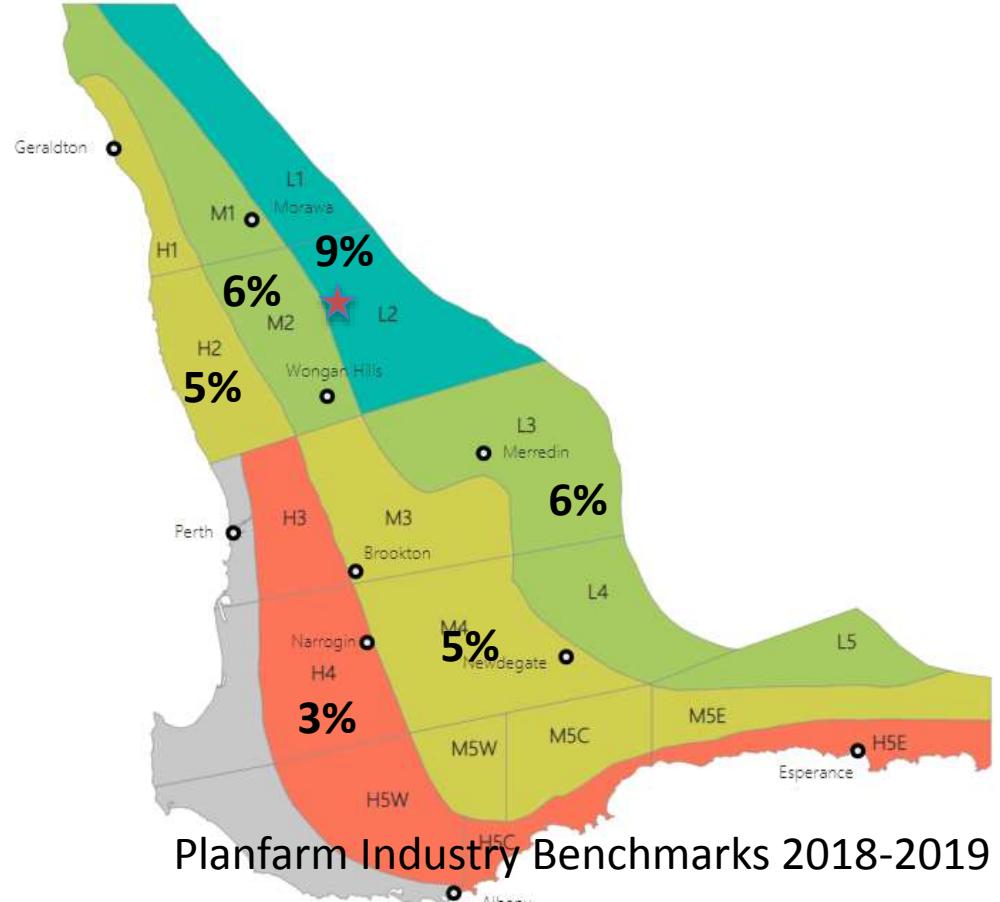
DYLAN HIRSCH

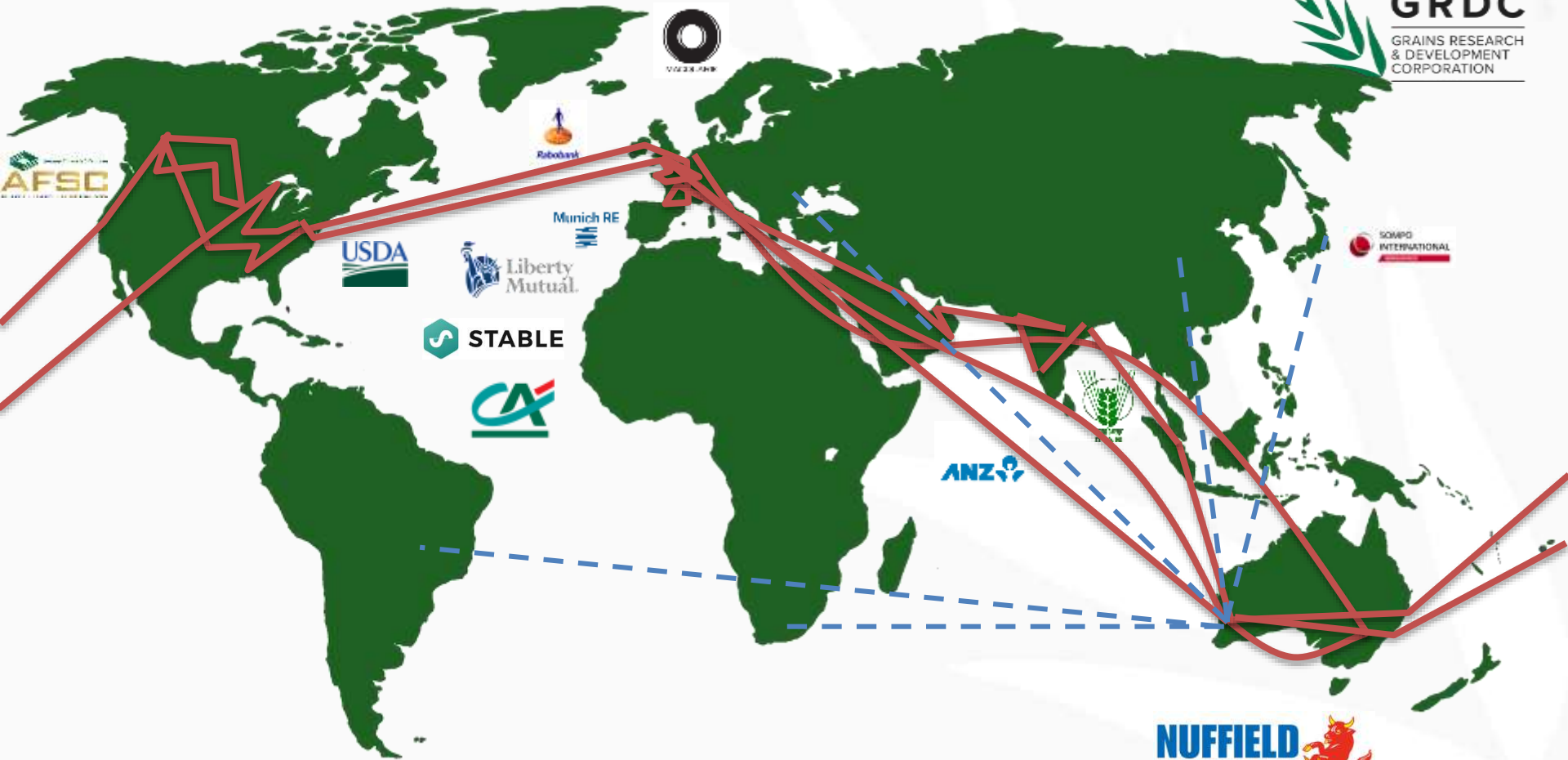


**GRDC**  
GRAINS RESEARCH  
& DEVELOPMENT  
CORPORATION



# OUR BUSINESS IN THE LRZ





**AFSC**

**USDA**

**STABLE**

**CA**

**Liberty Mutual**

**Munich RE**

**Roboasi**

**ANZ**

**SOMP INTERNATIONAL**

**USAID-FAO**

**USAID-USAID**



# FINDINGS

- Australia is unique in our grains production volatility
- Margins and ROC expectations become smaller as ag economy develops
- Subsidies are not the major reason why crop insurance programs work elsewhere
- Index insurance products are superseding traditional crop insurance
- Australian ag economy has significant growth opportunities

# A TALE OF TWO TOWNS

Perenjori, WA

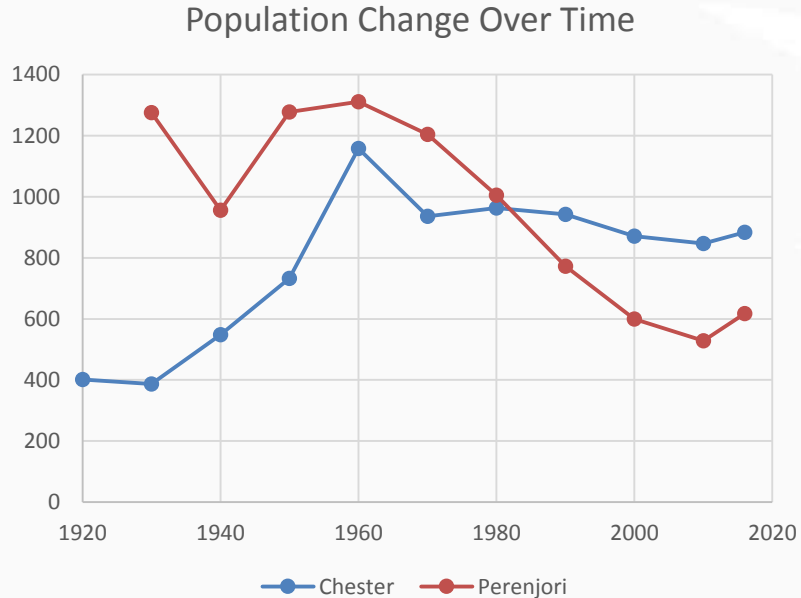


Chester, Montana USA



# A TALE OF TWO TOWNS

## Population

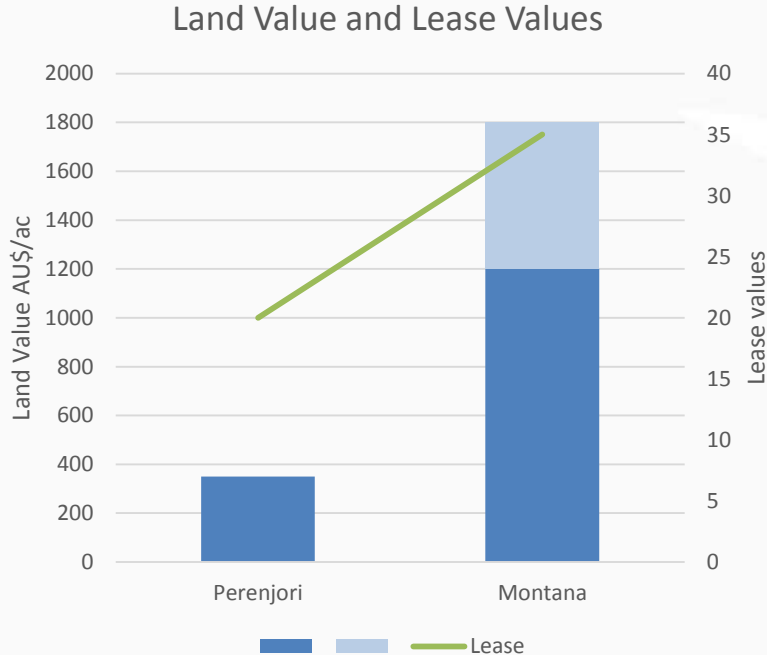


## Similarities

- Wheat 1-3t/ha
- Some canola and legumes
- Family farms 3000-6000ha
- Chemical fallow common
- Graze unproductive country
- 200km to nearest city



# A TALE OF TWO LANDOWNERS



## Differences

- Land 1.5x price to lease
- Land 5x price to buy
- Crop insurance
- Subsidies (AU\$25/ac)
- More farmers lease land
- More diverse range of local businesses
  
- Healthier local economy!

# DO WE NEED SUBSIDIES?



## Or data?

- Canada has government subsidised crop insurance
- Private unsubsidised products now available too
- How can they compete?





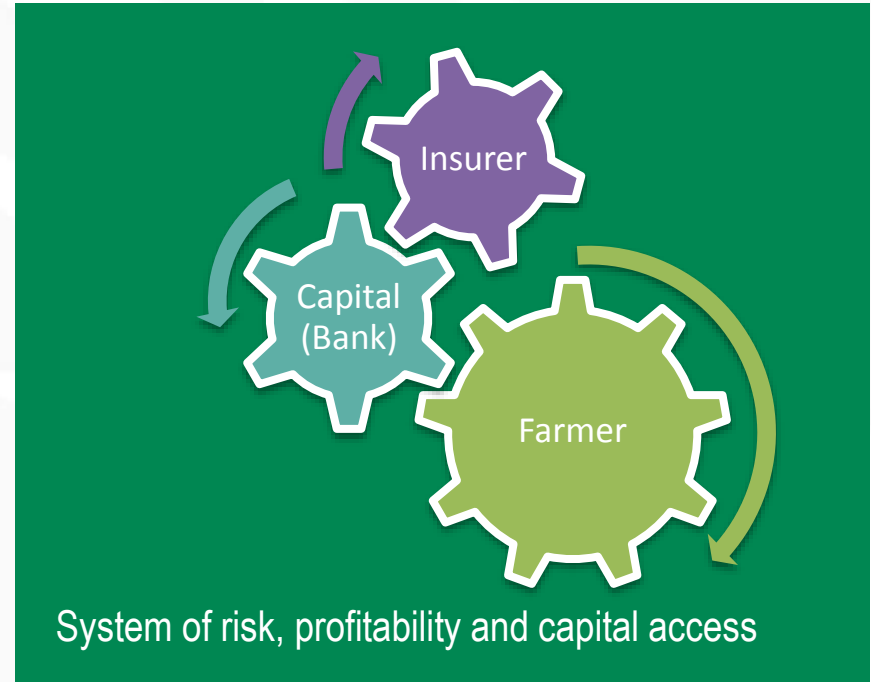
# PACKAGED FINANCE & INSURANCE



# HOW TO MAKE IT WORK IN AUSTRALIA

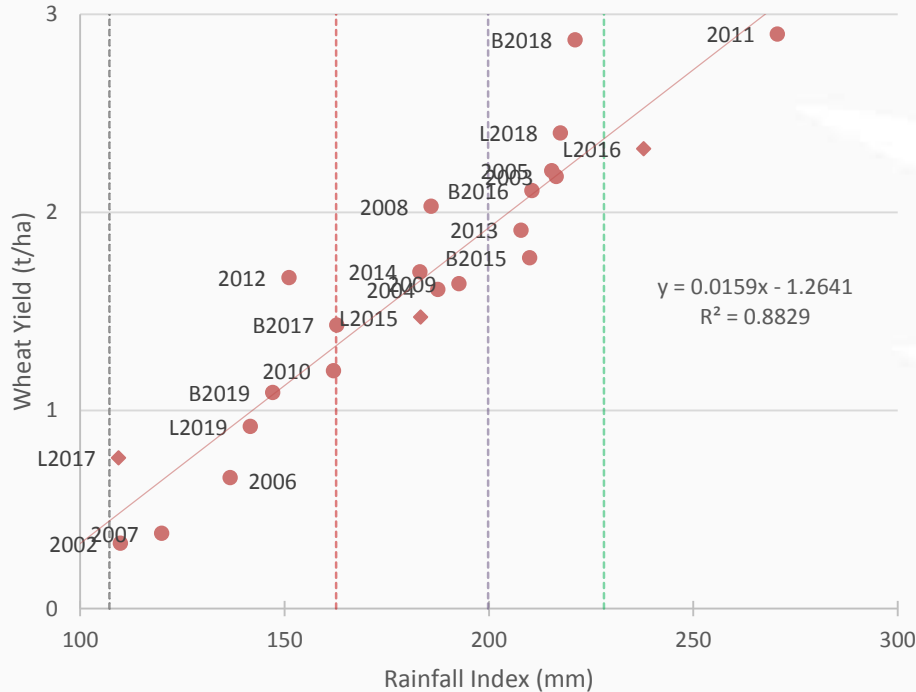
## Enable the capital, not the farmer

- The most efficient insurance systems work in conjunction with leveraged businesses & finance products
- Separate the land asset owner from the operating business



# WHAT ARE WE DOING?

Apr-Oct Rainfall Index vs Yield



## Rainfall insurance using put options

Works in situations where you can predict yield using weather data

### Benefits:

- Self confidence to dry sow, borrow capital
- Forward sell more grain

### Cost

- Premium minus average payout (\$10/ha)

# BARRIERS TO ADOPTION

- Options have significant upfront cost (change to swap type structure?)
- Stamp duty
- Recognition of risk reduction by lenders
- Data

# RECOMMENDATIONS

## To manage risk and grow our industry

- GRDC & government agencies to invest in industry performance data
- ABARES to adapt surveys to allow broader benchmarking
- Agronomists/consultants to familiarise themselves with index insurance products, fill 3<sup>rd</sup> party advisor void
- Farmers to work with ag lenders to develop risk products which benefit both parties
- Ag lenders to incentivise farmers who reduce exposure to seasonal weather



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