

# Dairy Businesses for Future Climates



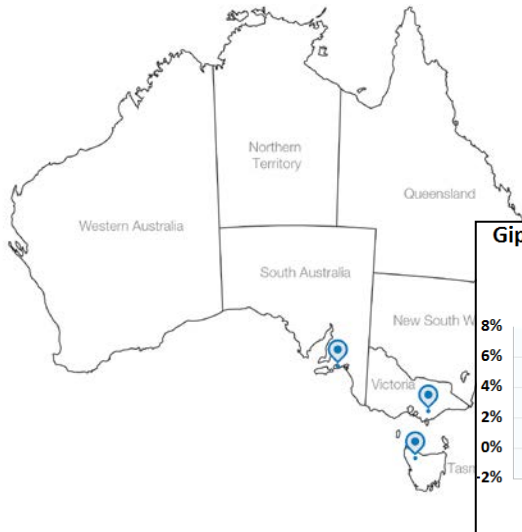
## Preparing Australian Dairy Businesses for Extreme and More Variable Climates – a Research Project Integrating Economic, Biophysical and Social Aspects



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on behalf of project team**

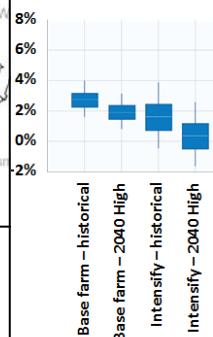
# Project Approach

Location of the Dairy Businesses for Future Climates case study farms

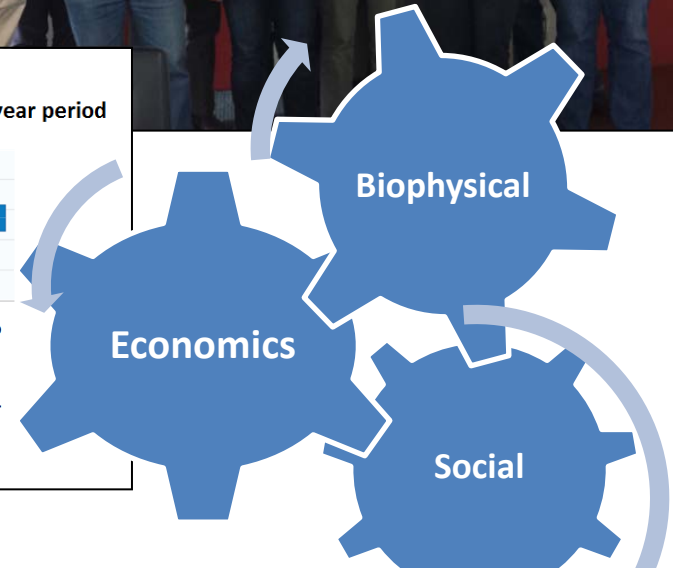
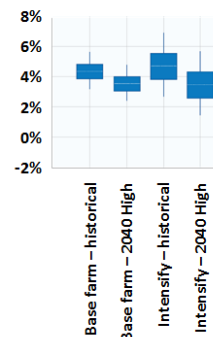


Gippsland – Internal rate of return (%) over 10 year periods

'Dry' 10 year period

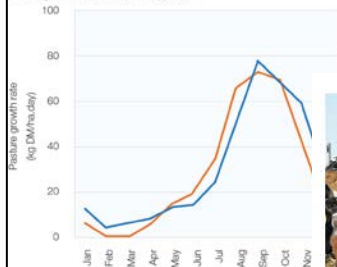


'Wet' 10 year period



Central Gippsland, Victoria

Monthly average pasture growth rates for a perennial ryegrass pasture in the historical and 2040 High climate scenarios at Gippsland



Option 1 - INTENSIFY

- Pasture grazing at a higher stocking rate
- Additional supplementary feeding
- Split calving



Option 2 - ADAPT

- Fewer cows
- Greater milk production per cow
- Autumn calving



Option 3 - SIMPLIFY

- Aimed to reduce purchased feed
- Optimise pasture use at a lower stocking rate
- Autumn calving

## Key findings

- Farmers are generally confident to adapt to incremental climate change (scoping interviews)
- Profitability of dairy farm businesses was negatively affected by the 2040 climate change scenarios modelled (integrated biophysical and economic modelling)
- Dairy farm managers will need to continue to adapt their farm systems to manage risks presented by future climate.
- The adaptive or simplified farm production systems tested are realistic alternatives to the long term trend of intensification for dairy businesses in future climates.

## What does this mean?

**For Dairy Businesses** : Annual rate of productivity growth required to maintain profitability in 2040 High scenario:

- Fleurieu Peninsula = 0.6% per year
- Gippsland = 0.6% per year
- Tasmania = 0.3% per year

Dairy annual productivity growth = 1.6% (ABARES)

Climate Change is a substantial additional challenge (on top of business as usual).

**For the Dairy Industry:** Supporting adaptive capacity of businesses: strategic business planning; regional workforce; social license to operate; robust agricultural advisory sector