Department of Primary Industries and Regional Development

GOVERNMENT OF WESTERN AUSTRALIA

mla MEAT & LIVESTOCK AUSTRALIA

SheepLinks FutureSheep

Climate adaptation to ensure a sustainable WA sheep industry

The climate in south-west Western Australian has become drier and hotter since the mid-1970s. Future climate projections by 2030 and 2050 show a continuing drying and warming trend which will affect pasture and livestock production.

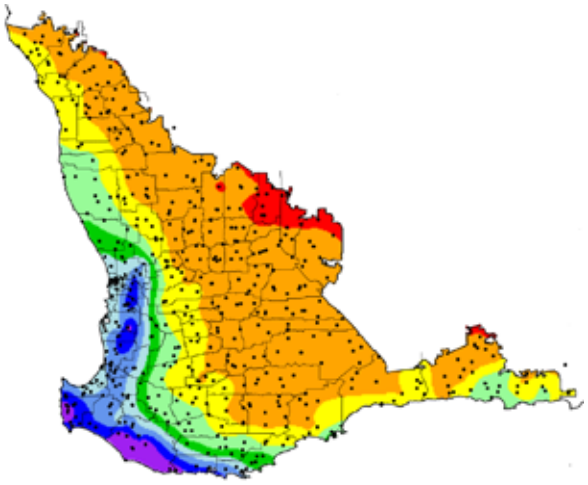
The FutureSheep project is part of the SheepLinks program, developed in partnership between the Department of Primary Industries and Regional Development and Meat & Livestock Australia. It will investigate how producers in the medium and low rainfall zones can adapt to the impact of the climate in 2030 and 2050.

The project will:

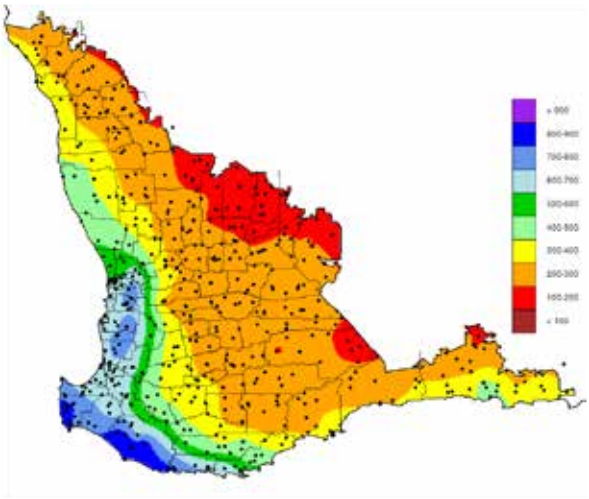
- Model representative farms in three key sheep producing regions of WA - Merredin, Kojonup and Wagin using the projected climate scenarios for 2030 and 2050.
- Work with producers to identify adaptations to climate change that are profitable, environmentally sustainable and targeted towards future market opportunities.
- Work with a reference group of producers, scientists and consultants.
- Develop case studies with producers already facing climate challenges.
- Conduct producer workshops and industry forums.

Adaptation options for profitability and business resilience

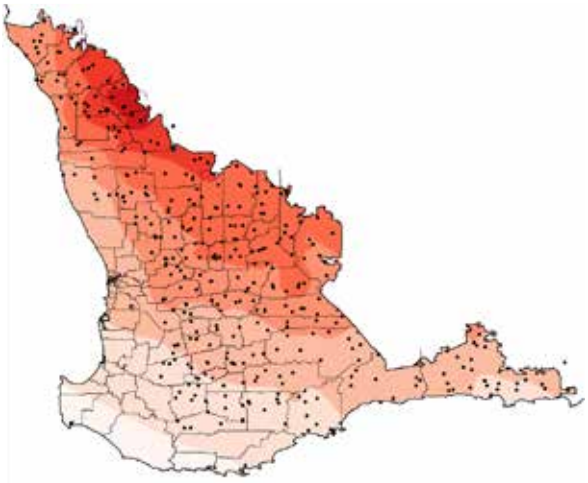
- **Feedbase** – Pasture and shrub species that are better adapted to hotter and drier conditions and able to fill feed gaps. A number of these are currently being field tested by the SheepLinks FEED365 project.
- **Animal management and genetics** – Altered management calendars such as joining date, improved reproduction or feed conversion efficiency and heat tolerance.
- **Business models** – Enterprise balance including crop alternatives and conservation grazing models, alternative markets - for example, carbon or sustainable farming, risk management and business diversification.



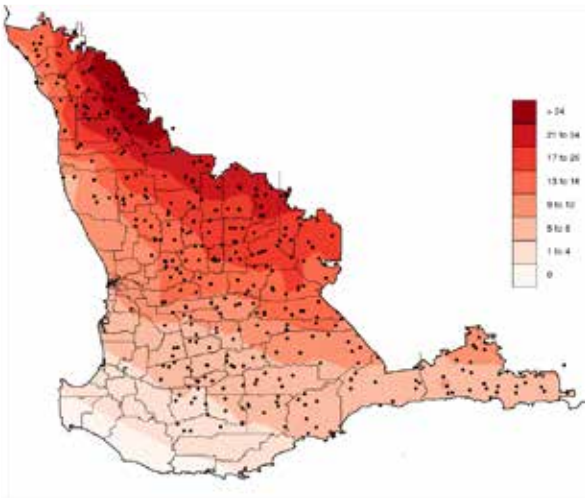
Average April-October rainfall under current conditions (years 1991-2020).



Future April-October rainfall (mm) projections in 2050 under greenhouse gas emission Representative Concentration Pathways (RCP) 4.5 from the Climate Services for Agriculture website.



Days above 32°C in August-November under current conditions (years 1991-2020).



Days above 32°C in August-November projections in 2050 under greenhouse gas emission RCP 4.5 from the Climate Services for Agriculture website.

Evaluate methods to reach whole farm carbon neutrality:

- Animal genetics and husbandry practices that may reduce sheep methane losses.
- Pasture and shrub species that can potentially reduce methane emissions and/or provide modest increases in soil carbon.
- Planting of trees and shrubs to sequester carbon.

For more information, visit **agric.wa.gov.au/FutureSheep** or contact Janet.Conte@dpird.wa.gov.au

Important disclaimer

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