# UWA Farm Ridgefield, Pingelly

## Imagine a best practice farm for the year 2050

### Why 2050?

By then, we will have to feed and clothe 50 per cent more people with minimal environmental impact.

The UWA Future Farm 2050 project (FF2050) was established in 2009 as a best practice farm for the future.

FF2050 continues to grow, with multiple local and global partners.

### Mission

To facilitate multidisciplinary research on future farming at local, national and international levels, leading to the development of economically viable but better farming systems.

### Location

FF2050 is based on UWA Farm Ridgefield, a 1600-hectare commercial farm in Western Australia's grain belt, which experiences a Mediterranean climate and an annual rainfall of 425mm.

UWA acknowledges that Ridgefield Farm is situated on Gnaala Karla Boodja, and that the Noongar people remain the spiritual and cultural custodians of their land, and continue to practise their values, languages, beliefs and knowledge.

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## Four key enterprises

### Clean, Green and Ethical Animal Production

Livestock products that are clean (fewer drugs, hormones and chemicals), green (better ecosystem care), and ethical (better animal welfare).

### Conservation Cropping

Sustainable rain-fed cropping through better agronomic and environmental management, founded on soil conservation and regeneration landcare.

### Restoration of ecosystems and biodiversity

Use of native species to drive change at landscape scale, restore biodiversity and provide ecosystem services, from soil biology to carbon capture and erosion prevention.

### Farmers, Community and Infrastructure

Supporting healthy people living in vibrant rural communities, engaging with the Pingelly community, and breaking down the city-country divide.

## Key projects

**Global Farm Platform (Worldwide Universities Network):** investigating sustainable ruminant production to help feed the world.

**Merino Lifetime Productivity:** a national project using genetics to maximise lifetime performance and thus profits from wool and meat (partners: Australian Wool Innovation; Merino breeders; Murdoch University).

**Oestrogenic clovers:** renovating pastures that contain oestrogenic clovers that can cause infertility in sheep (partner: Meat & Livestock Australia).

**Genetic breakthroughs:** reducing methane emissions and promoting resistance to gastro-intestinal worms and flystrike.

**Technological advances:** increasing crop yields by improving machine performance and enabling cropping of otherwise inaccessible land (partner: Ausplow Farming Systems).

**'Critical Zone' Observatory:** assessing interactions among the atmosphere, hydrosphere, lithosphere and biosphere, in the entire space from tree canopy down to the aquifer.

**Flux Tower:** predicting changes in Australia's terrestrial biosphere and climate to better manage natural resources, including water balance, carbon flows (including sequestration) and nutrient resources.

**Ridgefield Multiple Ecosystem Services Experiment:** a long-term study of the value, as measured by carbon capture and ecosystem services, of restoring native vegetation into unproductive farm land.

**Restoration of native ecosystems:** planting native grasses, shrubs and trees to simultaneously improve farm productivity and biodiversity (partner: Greening Australia).

**City School programs:** students germinate seeds of native plants, bring them to UWA Farm Ridgefield, and place them into areas designated for biodiversity restoration.

**Massive Open Online Course:** delivering a free online course titled 'Discover Best-Practice Farming for a Sustainable 2050' (Partner: Coursera).

**Farm house:** designed by UWA architects and featuring exciting and unique innovations, including solar power, an electricity monitoring system, and full rainwater supply.

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