UWA Future Farm 2050

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Program Leader, Animal Production Systems
Why “2050”?
The Project: UWA Future Farm 2050

Vision
Best-practice farm for 2050. Do it now.
Feed the world, don’t destroy the planet.

Mission
Facilitate state, national and international research into future farming systems
- Multidisciplinary inputs, projects
- Test-bed for innovative design and practice
- Links for UWA (rural, scientific, national, international)
- Leadership (best in Australia; #34 in the world)
“Ridgefield”, Pingelly

Boyagin Reserve

1,588 ha
3,924 acres
425 mm rainfall
$5.3 m
You are cordially invited to:

UWA Future Farm, Official Opening

20th November 2009

Time: 11.00 am - 17.00 pm
Venue: UWA Future Farm, Pingelly
± 158km south-east of Perth

- Official opening by Honourable Terry Redman, Minister for Agriculture and Food, WA.
- Guests include: Prof Lyn Beazley (Chief Scientist WA), Mr Malcolm Goff (Acting Director-General, DAFWA), and Prof Alan Robson (Vice-Chancellor, UWA).

www.ioa.uwa.edu.au
The UWA Institute of Agriculture presents:

Will climate change affect your future farming? Which challenges will farmers face? How will they cope?

Coping with Climate Change Field Day

UWA FUTURE FARM “Ridgefield”, Pingelly WA

Date: October 1, 2010
1) Animal Production

Clean, Green and Ethical Management

Low-cost, precision management (technology)

Production animals as ‘ecological agents’
2) ‘No-Till’ Crop Production
Make every raindrop count
Drier, hotter climate
Integration: cropping, livestock, native ecology
Soil carbon
3) Ecosystem Restoration

Plant and animal biodiversity

Impact on other enterprises

Carbon
The Enterprises
Restoring ecological values

Boyagin Reserve

‘Carbon Farming’?
4) **People:** UWA People, The Local Community

A. Pingelly and Brookton
   a) Contribution to local economy
   b) Schools (UWA Centenary 2013)

B. Collaborations
   a) UWA Faculty of Architecture, Landscape & Fine Arts
   b) UWA Faculty of Engineering, Mathematics & Computer Science
   c) UWA Institute for Regional Development

C. Built environment (design, materials), Energy and water management ("Smart Farm")
   a) Farm House, Shearing Shed ("FREOS")
   b) Solar energy
   c) Pingelly township; rural community
The Project: UWA Future Farm 2050

Progress to Date

Infrastructure
Projects
Management
The Project: UWA Future Farm 2050

Progress to Date

Infrastructure
- Fencing, Water: $2m investment
- Automatic weather station
- Buildings, Energy
Patrick Beale, Domenic Trimboli
Advanced Timber Concepts Research Centre, UWA
The “ALVA House”

Official Opening
October 2011
Patrick Beale, John McLean
Architecture Honours Students

Facility for Research Education Outreach Shearing
Dr Ricardo Rüther (July-December 2011)
University of Santa Catarina (Brazil)
University of Freiburg (Germany)
UWA Engineering

100% solar?

Turn-key system: Au$90k for the complete plant:
25% of 2008 estimate!
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Progress to Date

Infrastructure
- Fencing, Water: $2m investment
- Buildings, Energy

Projects
- Animal enterprise: methane
- Cropping: soil mapping, hydrology
- Ecosystem: tree planting
Projects

Animal enterprise

Attack methane on 3 fronts:

1) ‘Maternal efficiency’ (with DAFWA)
2) Genetics (with DAFWA)
3) New forages (with CSIRO)

Also: 1 of 4 ‘National Demonstration Sites’ for the national program funded by DAFF and MLA (“RELRP”)
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Progress to Date

Infrastructure Projects
Animal enterprise: methane
Cropping: soil mapping, hydrology
Ecosystem: tree planting
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Progress to Date

Infrastructure

Projects

Animal enterprise: methane
Ecosystem: tree planting
Cropping: soil mapping, hydrology

Management

Web site
Advisory Committee
The population of the world is tipped to reach nine billion by 2050 and UWA is already working on developing the best farming methods to help feed that many people.

The University’s new research farm near Pingelly will be developed as self-supporting, sustainable, clean, green and ethical – a best-practice farm for 2050, hence the name WA Future Farm 2050.

The 1,600 hectare property, officially opened at the end of 2009, has already started pooling expertise from across three faculties: Natural and Agricultural Sciences, Engineering Computing and Mathematics, and Architecture Landscape and Visual Arts.

Plant and animal biologists are working on restoring the farm’s natural ecosystem; agricultural scientists are planning crop and animal enterprises; architects and environmental engineers are designing efficient buildings and water and energy management systems.

**Management Portal** (password access)
- Online forms for new projects
- Interactive online database of projects
- Booking system for visits, meetings

**Interactive Showcase; Interactive Farm Map** (free access)
- Links to exciting current projects
- Status: water, electricity usage, weather (automatic)
- Possibly live streaming web cameras
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Progress to Date

Future Farm Advisory Committee
Rogor Newman
Anthony Turton
Felicity Astbury (CEO Facey Group)
Two others TBA

Ashley Herbert (Agrarian Management)
DAFWA Narrogin
CSIRO

UWA: Chair, Executive,
Ridgefield Manager(s)