

# Breeding Challenges for Oat Variety Improvement in Australia—Drought

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SOUTH  
AUSTRALIAN  
RESEARCH &  
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**PIRSA**

**PREMIUM**  
FOOD AND WINE FROM OUR  
**CLEAN**  
ENVIRONMENT



# CORE Lines

Single rows at Turretfield Research Centre - 2013



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# CORE Lines



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# Enhancing grain yield and quality under water deficits

- 32 entry trial, 3 reps sown at 3 sites—  
low, medium, high rainfall
- Varied phenotypes-prostrate, erect, early, late, high WSC, milling, hay
- Data collected
  - ✓ Early vigour-visual & Normalised Difference Vegetative Index (NDVI), Greenseeker
  - ✓ Chlorophyll content, Spad
  - ✓ Canopy temperature, thermal images
  - ✓ Phenology
  - ✓ Grain and hay yield and quality
  - ✓ Biomass and yield components
  - ✓ Soil moisture-sowing and harvest

# Equipment



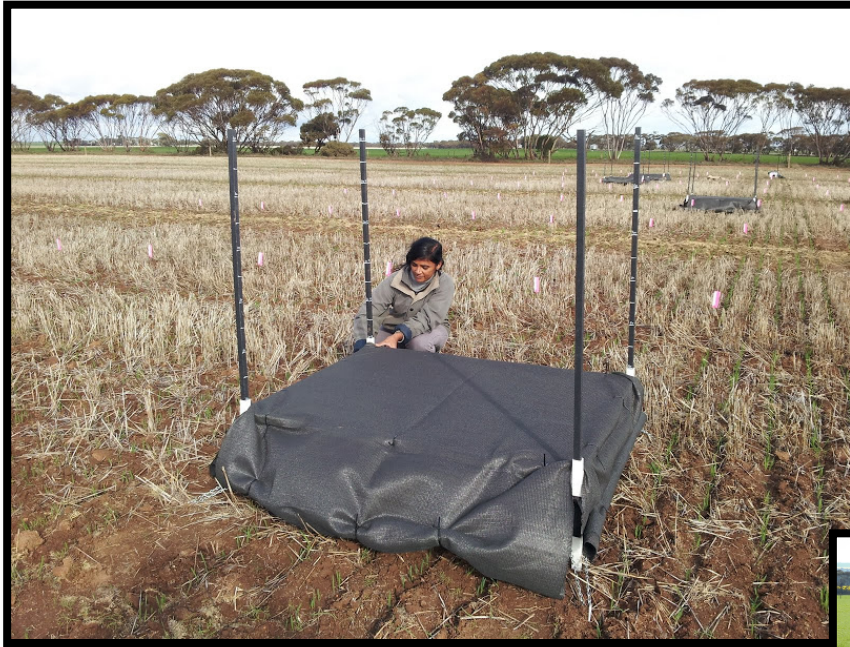
Spad meter



Greenseeker

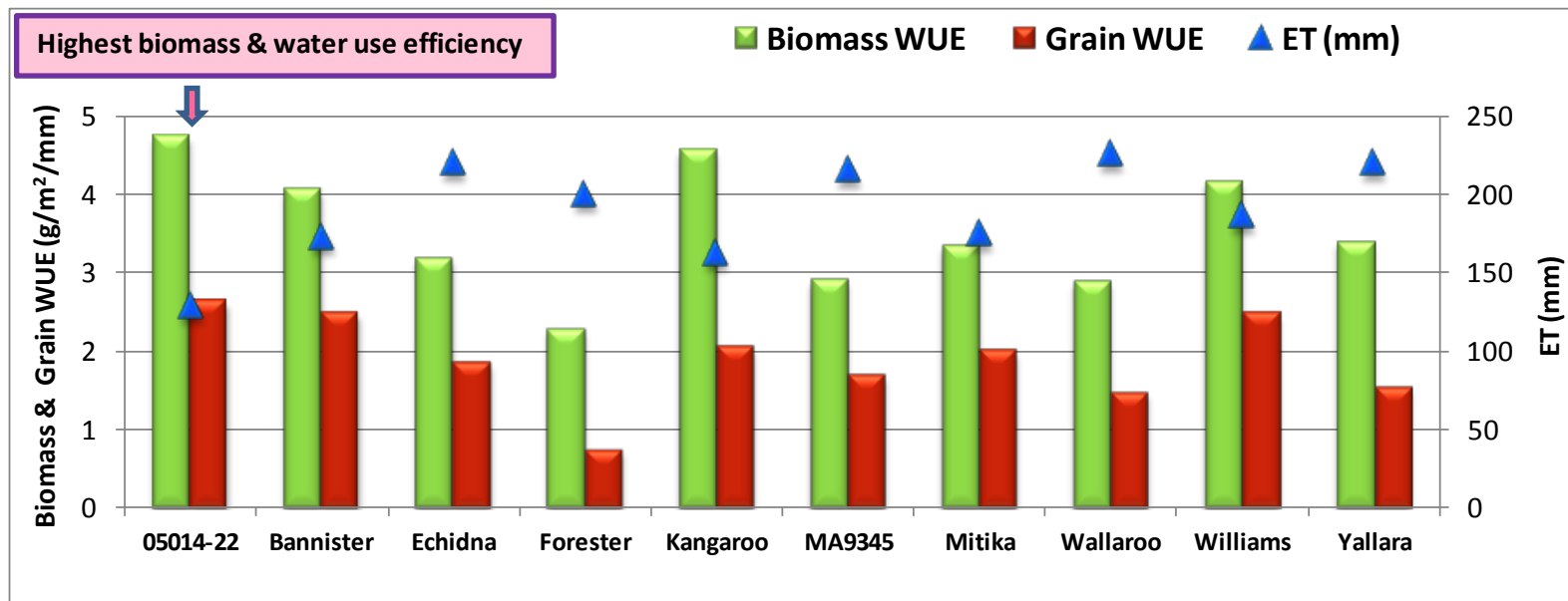


# Shade Trial— Pinery



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# Evapotranspiration, Biomass and Grain Water Use Efficiency Pinery 2012



# Thank You



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