



# Clean Coastal Catchments

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## Objective

- Working with farmers to keep diffuse pollution out of coastal waterways while supporting profitable and sustainable agriculture.

## Outcomes

- Help farmers in intensive coastal agricultural industries to:
  - Better manage nutrient inputs and runoff
  - Improve land and water stewardship
  - Reduce impact on water quality and the marine estate
  - Improve long term economic and environmental sustainability



# Key Components

1. Farm level water quality monitoring
2. North coast: blueberry nutrition research & water recycling demo farm
3. North coast: macadamia nutrition trials and erosion research
4. South coast: Livestock research
5. Social Research
6. Best Practice Management Education program
7. Fertiliser Stewardship Group
8. Onground Action Incentive Grant Program

# Farm level water quality monitoring

- 6 farm level water and nutrient monitoring networks established
  - Data collation is being undertaken
  - Monitoring and regular sampling programme of nutrients in leaf, soil and water samples from macadamia and blueberry demonstration sites is continuing
  - Rainfall simulations completed and report pending
- Additional monitoring networks are being considered (eg. Shoalhaven)



# Blueberry Nutrition Research Facility - Wollongbar

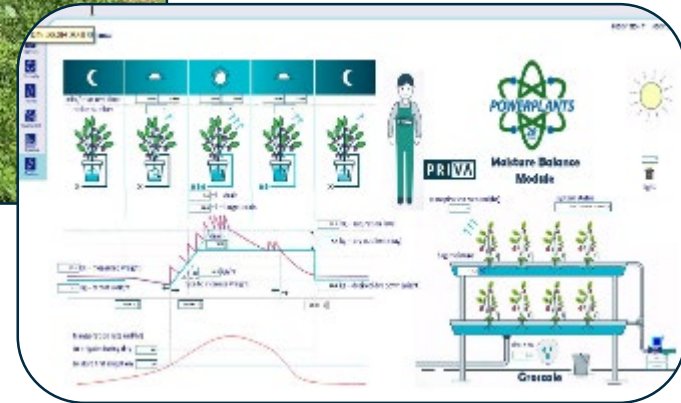
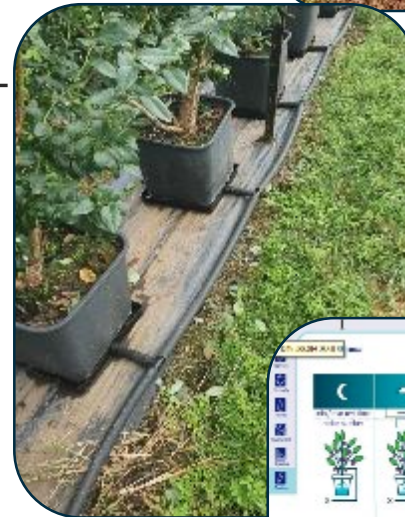
Our state of the art facility houses complex experiments investigating nutrient and water requirements of Australian blueberry varieties

- Analysis of fertigation and leachate data
- Nutrition guidelines and recommendations for growers
- Current nutrition recommendations based on old information from areas and varieties not representative of the NSW Blueberry Industry



# Demonstration Sites

- 2 Macadamia sites – North Coast around Ballina
  - Integrated orchard management
  - Drainage
- 3 berry/greenhouse vegetable sites – North Coast. Corindi, Woolgoolga and Bucca
  - Fertigation and irrigation water recirculation and disinfection
  - Weight-based irrigation scheduling
- (Potential) Dairy effluent management – Crooked River Shoalhaven



# Macadamia erosion control research

- Testing a range of erosion control treatments for their efficacy and longevity
- Wood mulches applied at 10cm depth and compost at 5cm depth
- Erosion pins established at 30cm and 1m from trunk
- Significant rainfall event tested mitigation methods under extreme conditions



## Preliminary Results (Over 15 Months):

- **Double ground mulch most effective so far:**
  - retained its integrity
  - decomposed slowly
  - High root and fungal penetration
  - Provided soil protection



# Livestock

- Dairy and beef cattle initially focusing on the South Coast
- Nutrient and effluent management focus
- Monitoring site established at Tilba Tilba Lake on South Coast (EES)
- Industry consultation interviews conducted as part of gap analysis
- Collaborations between LLS, EES, Fertcare, Dairy Australia and Bega Cheese being formed.



- Farm phosphorus pathway modelling



# Practice Change

- **Social Research**

Working with growers to:

- Understand current behaviours, attitudes and practices
- Identify practice change that has most potential to reduce sediment and nutrient losses
- Facilitate adoption of practice change through information, demonstration and capacity building

- **Fertcare accreditation training**

- **Fertiliser Stewardship Group**

- Blueberry and Macadamia
- Livestock



# Onground Action Incentive Grant Program

- Administered by LLS
- Incentive grants for:
  - Integrated orchard management in Macadamia orchards
  - Improvements in irrigation efficiencies and nutrient management in berry and greenhouse vegetable operations
  - Erosion mitigation
  - Riparian protection and stock exclusion in livestock enterprises
- Progress to date:
  - 50 macadamia orchards with IOM (>300ha better managed)
  - 5 Blueberry irrigation systems more efficient
  - 7 Dairy/Beef farms provided incentives to fence and reveg waterways (Bega valley, Eurobodalla, Shoalhaven)
  - 7 Berry/Greenhouse veg projects receiving incentives for erosion control (3) and irrigation system improvements (4)

# Where to find out more

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Project profile page:

[www.dpi.nsw.gov.au/agriculture/water/clean-coastal-catchments](http://www.dpi.nsw.gov.au/agriculture/water/clean-coastal-catchments)

