

# GRDC investment in R, D & E addressing priority issues identified by the Regional Cropping Solutions Network - South



## SOILS AND NUTRITION

- Assessment of nitrogen and water co-limitations by remote sensing as a tool to improve wheat and canola profitability and manage risk
- Direct comparison between selected field infrared instruments for the prediction of soil properties in grain cropping soils
- Evaluation of late nitrogen applications to achieve yield potential and increase protein in wheat
- Improving nitrous oxide abatement in higher rainfall cropping systems and developing nitrogen response curves
- Improving profit and reducing risk by managing nitrogen in wheat and extreme temperature in pulses
- Increasing production on sandy soils in the low and medium rainfall areas of the Southern region
- Increasing the effectiveness of nitrogen fixation in pulse crops through development of improved rhizobial strains, inoculation and crop management practices
- Legume management for economic nitrogen production in the low rainfall areas of North West Victoria
- Managing legume and fertiliser nitrogen in the Southern Region
- Measuring and managing soil water in Australian agriculture
- More Profit from Crop Nutrition
  - » Benchmarking wheat yield against nitrogen use
  - » Regional soil testing guidelines for the Southern Region
  - » Nitrogen and water interactions
  - » Reassessing the value and use of fixed nitrogen
  - » Nutrient performance indicators
  - » Phosphorous requirements to accompany high nitrogen levels
  - » Managing micronutrient deficiencies in cropping systems of eastern Australia
- New tools to measure and monitor soil moisture
- Nitrogen fixing break-crops and pastures for high rainfall zone acid soils
- Nitrogen inputs by free living nitrogen fixing bacteria - grower messages
- Nutrient performance indicators
- Optimising nitrogen fixation of grain legumes - Southern Region
- Optimising the yield and economic potential of high input cropping systems in the high rainfall zone
- Program for improving farmer confidence in targeted nitrogen management through automated sensing, decisions and intelligent infrastructure - Future Farm Initiative
- Proximal soil sensing for profitable and sustainable farming
- Real-time evaluation of soil nitrate using ion exchange technology
- Scoping study - Reviewing mechanisms and magnitude of nutrient mineralisation in Australian grain producing soils
- Soil acidity is limiting grain yield
- Soil spectroscopy capability
- Spatial variability of soil acidity and response to liming in cropped land of the Victorian high rainfall zone
- Strategies to better synchronise nutrient supply and crop demand
- Tools for rapid real time measurement of nutrients
- Understanding biological farming inputs
- Understanding how waterlogging affects water and nitrogen use by wheat
- Understanding plant available soil water and implications for crop management
- Understanding the amelioration processes of the sub-soil application of amendments in the Southern Region
- Updated nutrient response curves in the northern and southern regions