



THEME 4 - AGRONOMIC, ENVIRONMENTAL AND SOCIAL BENEFITS

The benefits of new fertilisers need to be assessed and quantified in the field. Theme 4 will measure, validate and demonstrate the agronomic, environmental, and social impacts of new fertiliser products developed through research conducted in Themes 1-3.

GOALS

- Evaluate the nitrogen loss pathways and yield benefits of existing and newly developed fertiliser products (Themes 1-3) in field trials.
- Work alongside Theme 5 to develop an index for nitrogen loss at the farm-gate level which will enable farmers to understand more fully the impact of their fertiliser management practices on the environment.
- Inform Theme 5 social cost-benefit analysis research.



THE OPPORTUNITY

- Work closely with industry organisations to quantify the benefits of new fertiliser products, generate information for their adoption, and create a framework for commercial production.

INDUSTRY OUTPUT

- Demonstrate the agronomic, environmental and social benefits of new fertilisers.
- Develop a nitrogen accounting method.

OUR PARTNERS



RESEARCH ACTIVITIES

Theme 4 will test the Hub's new fertiliser products against conventional practices to provide solid agronomic, environmental and social evidence to incentivise farmers' adoption of these new fertiliser products. It will engage strongly with industry organizations.

Research Activities

On-farm testing of new fertiliser products	<ul style="list-style-type: none">• Field testing and comparison of new fertilisers against existing products.• Testing will include:<ul style="list-style-type: none">◦ Evaluation of crop growth and nitrogen content at key growth stages.◦ Quantifying of nitrogen loss pathways such as gaseous losses and nitrate leaching.◦ Fertiliser nitrogen recovery to demonstrate the potential of new fertiliser products on-farm.
Development of nitrogen indices to inform farm management decisions	<ul style="list-style-type: none">• Develop evidence-based indices that quantify nitrogen loss per unit of yield to inform farmers of the implications of different fertiliser practices.
Promotion and adoption of new fertilisers	<ul style="list-style-type: none">• Collaboration with Incitec Pivot Fertilisers and Elders to promote and enhance adoption of products developed by the Hub.

Research Team



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