

Nitrous Oxide Research Program

Nitrous oxide research program coordination – Grains Research and Development Corporation

This project will take a leadership role in the administration and coordination of the Nitrous Oxide Research Program. This will include the management of program governance and reporting.

Integrated data and synthesis framework for reducing nitrous oxide emissions from Australian agricultural soils – Queensland University of Technology

This project will undertake the management and technical oversight of the Nitrous Oxide Research Program. It will develop standardised data collection protocols, develop a web-based remote data capture program and manage project datasets for national databases.

Reducing nitrous oxide emissions from sugarcane lands – Sugar Research and Development Corporation and Grains Research and Development Corporation

This project will measure nitrous oxide emissions from sugarcane and grain legume–sugarcane rotations near Mackay, with and without the use of inhibitors. The standardised data will then be incorporated into the broad program dataset.

Decreasing nitrous oxide emissions in high rainfall legume/wheat cropping systems – Victorian Department of Primary Industries and Grains Research and Development Corporation

This project will measure nitrous oxide emissions from direct drilled and conventionally sown legume/wheat rotations – with and without the use of inhibitors – at a site near Hamilton. The standardised data will then be incorporated into the broad program dataset.

Fertiliser management strategies for decreasing on-farm greenhouse gas emissions – University of Western Australia, Department of Agriculture and Food WA, and Grains Research and Development Corporation

This project will measure nitrous oxide emissions from direct drilled wheat at Wongan Hills, south west Western Australia that has been grown under a range of treatments. The standardised data will then be incorporated into the broad program dataset.

The potential of inhibitors for the mitigation of nitrous oxide emissions from animal production systems, in south-eastern Australia – Victorian Department of Primary Industries and Dairy Australia

This project will measure nitrous oxide emissions following the application of urine and inhibitors at the *DemoDairy* site near Terang, Victoria, as well as numerous additional satellite sites. The standardised data will then be incorporated into the broad program dataset.

Enhanced efficiency fertilisers as mitigation tools for reducing greenhouse gas emissions from intensive agricultural systems in Australia – University of Melbourne and Incitec Pivot fertilisers Pty and Grains Research and Development Corporation

This project will entail a laboratory based assessment of nitrous oxide emissions from a range of soils which have been treated with nitrification inhibitors. The standardised data will then be incorporated into the broad program dataset.

Irrigated cotton and grain cropping systems – Queensland University of Technology and Cotton Catchment Communities CRC and Grains Research and Development Corporation.

This project will measure nitrous oxide emissions from irrigated cotton and grain cropping systems between the Darling Downs in Queensland and the Macquarie Valley in New South Wales. The standardised data will then be incorporated into the broad program dataset.

Funded by Grains Research and Development Corporation.

Winter rain-fed cereals – New South Wales Department of Primary Industries, University of Melbourne, University of New England and Grains Research and Development Corporation.

This project will measure nitrous oxide emissions from winter rain-fed cereals under various treatments, including: different row placements of crops; and inclusion of legumes in the rotation. The standardised data will then be incorporated into the broad program dataset.

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