Purpose

This inaugural BFDC Newsletter is written to provide the grains and fertiliser industries with update information for an important new national project: Making Better Fertiliser Decisions for Cropping Systems in Australia (BFDC). Distributed every 6 months, the BFDC Newsletter gives an opportunity to provide an update of project progress.

BFDC will:

- Establish comprehensive crop nutrient responsiveness calibrations for cereals, pulses and oilseeds nationally and regionally.
- Prepare and deliver training materials aimed at building certainty and confidence in crop nutrient response calibrations.
- Collecting all available nutrient response trials for nitrogen (N), phosphorus (P), potassium (K), and sulphur (S) used in grain crops.
- Developing an online database of nutrient response trials.
- Tailoring an interactive interface to meet the needs of users so that they can interrogate the large number of crop nutrient response trials.

Why undertake the project?

An estimated 4000 crop nutrient response trials have been conducted for different grain crops since the 1960’s. These data have not been collected to a central repository resulting in:

- Limitations to reliably interpreting isolated nutrient response datasets.
- Inconsistencies in the advice provided to farmers.
- A lack of confidence in soil testing and fertiliser recommendations.

BFDC aims to change this by making this new knowledge widely available through a process of:

A national database

The web-based BFDC database will contain results from 3500–4000 soil test–crop response trials for N, P, K and S use in cereal, pulse and oilseed crops. It will include trial data from the fertiliser industry (Incitec Pivot Fertilisers, CSBP, Summit Fertilisers and Impact Fertilisers), from all the state and federal agencies (NSW, South Australia, Queensland, Western Australia, Victoria, Tasmania and CSIRO) and from universities.

If you require assistance entering field crop trial data for nutrient responsiveness please contact the database manager, Dr Graeme Watmuff

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 BFDC Interrogator

Stage one interrogation

The BFDC Interrogator will provide users with the ability to investigate relationships from crop nutrient response trials in the database. A stage one interrogation, from the Interrogator, shows that users can choose the nutrient of interest and then identify important trial characteristics: soil type, season, state and years. It can then be refined in greater detail: soil test (e.g. Colwell P), landuse, growing season rainfall soil texture and nutrient specific information (e.g. PBI for Colwell P) through a stage two interrogation. The Interrogator will allow quick and reliable access to large numbers of trials nationally and:

- provides summary tables of data and can be used to investigate individual trial data;
- allows users to select data spatially.

New crop nutrient responsiveness recommendations

BFDC will be fully functional by June 2012. This includes:

- Revised, including new, soil test–crop responsiveness calibrations for cereals, pulses and oilseeds nationally and regionally.
- Training materials that will be delivered at workshops across Australia.
- The online BFDC Interrogator.

BFDC Newsletter No. 2, December 2010:

- Expectations of the grains and fertiliser industries, and of agencies for the database and training resources;
- Perspectives of agronomists adding trial information to the national database; and
- Progress on developing the national database.

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The BFDC project is supported by the Grains Research and Development Corporation. It is led by Industry and Investment NSW and includes substantial collaboration with the fertiliser industry (Fertiliser Industry Federation of Australia, International Plant Nutrition Institute, Incitec Pivot Fertilisers, CSBP, Summit Fertilisers, Megafert, and Impact Fertilisers), consultants (Back Paddock Company, Geographic Web Solutions, K I P Consultancy Services, Reuter and Associates, and Dodgshun Medlin), state and federal agencies (SARDI, DEEDI QLD, DAF WA, Vic DPI, TIAR, and CSIRO), agribusiness (Landmark and Elders), and universities.