

## Northern Region

The GRDC Northern Panel's vision for GRDC-supported research, development and extension is to directly improve the profitability of northern region grain growers. To achieve this GRDC must ensure funding resources go to R,D&E that address the current and potential issues growers are facing.



James Clark.

The Northern Panel has prioritised a suite of research areas, including: crown rot resistance, nematode resistance, fallow efficiency, crop water use efficiency, crop rotations/sequencing, yield and reliability of winter cereals, herbicide resistance and management, precision agriculture, and coastal farming systems.

Other priorities include irrigation agronomy, fertiliser efficiency, and the potential of a far northern grains industry.

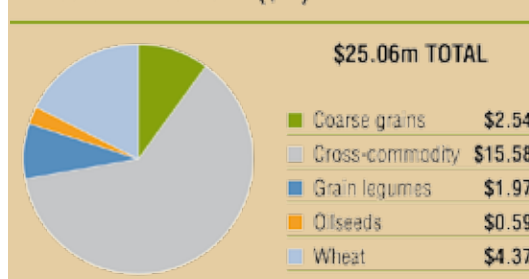
One way the Northern Panel is working towards this goal of efficient and effective R,D&E is by supporting and replicating the effective Northern Grower Alliance (NGA) model.

The NGA is successfully drawing together researchers, advisors and growers to fast track adoption of cutting edge advances in farming systems from trial plots to widespread grower uptake. NGA not only 'ground truths' research on a wider scale but it provides strong linkages and fosters two-way communication between the research community and the industry it serves.

The GRDC will be reviewing its investment in farming systems R,D&E in the north over the coming year. The Northern Panel is working towards a combination of strategic research projects that span not only across regions, but also contain local trials that fine-tune research outcomes according to regional conditions.

An exciting example of this is a new project – loosely based on the NGA model – which will help link central

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west NSW growers with technologies and knowledge that can substantially improve productivity.

### Grain Orana Alliance (GOA) launch

Central west NSW grain growers will benefit from a major investment in research, development and extension which was launched by GRDC at the Dubbo Research Update in February 2009.

Initial funding for the Grain Orana Alliance (GOA) will run from April 2009 to March 2011 and will draw together growers to facilitate the exchange of information and uptake of cutting edge technologies.

GOA will operate under the direction of a board made up of leading specialists and day to day activities will be managed by a research and extension coordinator.

The focus will largely be on extension of information so that production can be enhanced by high-impact practices such as minimum till and crop rotation. GOA will run agronomic trials that 'ground truth' northern region research specifically for the central west region.

### Fleabane

A new project aimed at further enhancing management of flaxleaf fleabane was launched in early 2009. The project is supported by GRDC and led by Dr Steve Walker, Queensland Department of Primary Industries and Fisheries (QDPI&F) principal research scientist.

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The GRDC Northern Panel visits Hayden Wass' property near Nyngan. L-R: Stuart Kearns, GRDC Manager Validation and Adoption, Aaron Sanderson, Richard Heath, James Clark, Penny Heuston, Noelia Freitas, GRDC Northern Panel Coordinator, Hayden Wass, Jodi McLean, Bill Yates, John Sheppard, Rob Taylor and David Freebairn.

(Photo: Rachel Bowman, Cox Inall)

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Flaxleaf fleabane is proving a tough customer for northern grain region growers due to its prolific seeding, ability to emerge in different seasons and relative tolerance to glyphosate.

Fleabane has proliferated in zero till farming systems in northern NSW and southern Queensland because its seeds germinate from the top one centimetre of soil. New GRDC-supported research shows the key to getting on top of fleabane is to attack all parts of the weed life cycle and keep the seedbank low.

**National Variety Trials review**

The Northern Panel encouraged growers and the Northern Region Research Advisory Committees (RAC) to provide input into the 2008 National Variety Trials (NVT) review. Almost 50 per cent of submissions to this review came from the northern region.

Prior to this review GRDC representatives toured key Queensland grain-growing centres to consult with growers and seek input into progress with the 2005-launched independent crop assessment system.

The consultative team included Queensland Primary Industries wheat breeder and northern panelist, John Sheppard; GRDC executive manager varieties, John Harvey; NVT manager, Alan Bedgood; and, myself as Northern Panel chair.

Over the next 12 months GRDC will consider the review's recommendations and work towards new contracts starting in 2010.

**Research Advisory Committees**

The GRDC Northern Panel looks forward to working with the four NSW RACs, run by NSW Farmers Association (NSWFA) and the four Queensland RACs run by the Grains Research Foundation Limited (GRFL).

Information from the RACs are a valuable path into the GRDC decision making process via the Northern Panel. Other ways to influence the direction of R,D&E funding include direct contact with panel members or researchers or via GRDC-funded programs such as NGA or GOA.

**Crown rot**

Crown rot also continues to threaten crops as one of the most costly diseases to growers across the region. Recent research shows without appropriate management crown rot can easily cause yield losses of up to 20 and 50 per cent.

GRDC research has been targeting various strategies such as varietal selection, seed treatments, chemicals, stubble management, planting configuration and soil moisture

management. This has allowed the release of timely information about disease management through the different stages of the cropping cycle.

The region's key cereal disease researcher, Dr Steven Simpfendorfer, NSW Department of Primary Industries, Tamworth, NSW was presented with the GRDC *Seed of Light* award in March.

Steven's work and activities with NGA shows there is no silver bullet for crown rot. However there are a number of management strategies that can each provide 10 to 15 per cent improvements.

If growers can incorporate at least two or three of these strategies into their farming systems management they can make a significant reduction in the losses caused.

Growers need to look at crown rot management practices such as inter-row sowing, choosing the higher resistant varieties, monitoring disease and mapping out rotations with crown rot control in mind.

**Rust**

Control of the green bridge of over-summering volunteer cereal plants remains a key focus of GRDC's rust management strategy. We urge growers to phase out rust-susceptible varieties even if they believe they can control rust outbreaks with fungicides.

There is always the chance that spraying will not be possible and outbreaks in these rust-susceptible varieties create hot spots with the potential for mutation and hence a breakdown in resistance.

We ask growers to consider the rust rating of any varieties they are planning to plant. NGA trials show even in years of low rust levels the overall benefit of rust resistant varieties is significant.

Stripe rust made its presence felt in the northern region like never before after the favourable 2007-08 summer created a green bridge for the disease. The planting of highly susceptible long season varieties meant the levels of rust inoculum in the region were abnormally high.

Research had already been done on seed treatments and the timing of applications under northern conditions, so local agronomists knew what to look for and what advice to give.

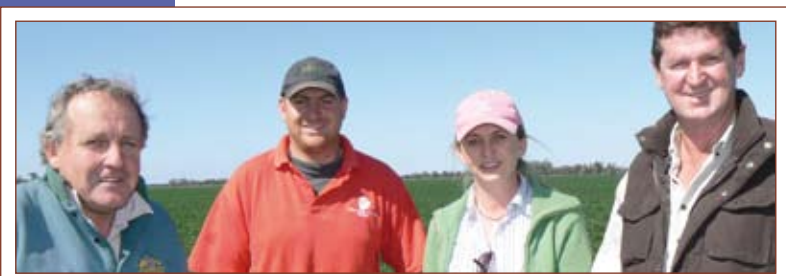
**Panel tours**

The Northern Panel's annual tours are of great value to panel members as they build a general awareness of industry issues to complement their own areas of expertise.

It is also a chance for the panel and other key decision-makers within GRDC to build strong linkages with local growers, agronomists and researchers, and to discuss priorities for directing the \$100 million grains industry research and development investment.

In September 2008 the panel toured central west NSW. The major finding of the tour was the need for extension of research and development breakthroughs in soil science, water infiltration and moisture retention.

In autumn this year the panel again took to the road to meet with growers and researchers in the South Burnett and Bundaberg regions. Of interest were the on-farm trials of adzuki beans, peanuts and irrigated soybeans, corn and navy beans. A new joint initiative between the GRDC and the Sugar R&D Corporation (SRDC) was a highlight where rotational legume cropping knowledge in coastal farming



GRDC northern panelist and Warren-based agronomist Penny Heuston meets with local growers Greg and Tim Whiteley, Gunnegalra and Geoff Mackay, Meramie.  
(Photo: Rachel Bowman)

operations has been identified as critical for the viability of the region.

In March 2009 the panel toured the South Burnett and central Queensland coastal regions with the view of assessing the potential for further farming systems R,D&E collaboration.

A joint initiative between GRDC and the SSRDC in late 2008 is supporting the linking of coastal farming operations with rotational legume cropping knowledge critical to the future viability of the region.

The Burnett and Southern Coastal Farming Systems project led by QDPI&F principal agronomist Dr Mike Bell will enhance soil health and ultimately impact on levels of fertiliser use in sugarcane.

**Panel changes**

July 2008 saw the three-year term of the Northern Panel come to an end. Every three years approximately half the panel is revolved.

The new panel members are:

- Jodi McLean, who brings a wealth of scientific background and understanding to the panel;
- Penny Heuston, a private agronomist in the Warren district who also has a great network around the NSW central west;
- Rob Taylor, a grower from Queensland's Darling Downs region. Rob has had a long association with local R&D in this area and brings a wealth of practical farming and farming systems knowledge to the panel; and,
- Aaron Sanderson, who has experienced farming in central Queensland and is now based in the Burdekin region. Aaron brings his knowledge of both regions to the panel. The Northern Panel recognises the issues associated with coastal farming systems and the potential for new and smaller crop types.

Growers Bill Yates, Garah, NSW and Richard Heath, Gunnedah, NSW remain on the panel, along with Brisbane-based scientist David Freebairn and Toowoomba, Queensland-based wheat researcher John Sheppard.

**Looking forward**

The Northern Panel's job continues to be focusing R&D to make sure it is meeting growers' needs now and building a strong research capacity to address longer term challenges.

As well as today's challenges, we need to picture what the farming system will be like in 20 years and to set up our R,D&E systems to meet these challenges and help keep growers profitable and viable.

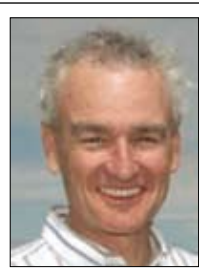
We must scope what growers are likely to need in terms of technology and information but not be too prescriptive. Succession plans in key research areas are an important part of this process.

There are many challenges and opportunities for the grains industry to deal with in coming years such as climate change; government and environmental constraints; carbon taxes; emissions trading schemes; a deregulated wheat market; GM crops; changes to domestic and export supply chains; grain storage pests; and the potential rising prominence of legumes in rotations if fertiliser costs again become prohibitive.

**James Clark**  
*Chair, GRDC Northern Region Panel*

**Southern Region**

**D**espite yet another promising start, the 2008 winter cropping season failed to deliver on expectations with tonnages in southern New South Wales, Victoria and South Australia falling well below average. An encouraging aspect of the season was that grain prices remained solid and many growers were at least able to achieve some value for their efforts. Forward forecasts for the industry's long-term prospects remain positive.



David Shannon.

Drought and increasing climate variability have prompted many growers to develop and implement low-input strategies to reduce costs. Coupled with market deregulation, this has led to a need for growers to improve their management, business and marketing skills. The GRDC is playing a key role assisting growers with whole-farm management, with publications providing information about low-risk farming, farming with limited finances and grain marketing options, as well as projects looking at benchmarking and the impacts of reduced inputs.

**GM canola**

Another positive in 2008 was the inclusion of GM canola in NSW and Victorian cropping systems. GM canola performed well in the difficult conditions. National Variety Trials (NVT) demonstrated that GM varieties were comparable to non-GM varieties in yield and quality. The experience of individual growers – some of which have been captured in the GRDC publication *GM Canola – Performance and Experience in 2008* – was that weed control was relatively easy, cheaper, safer and more effective.

**Varieties**

There is much to feel positive about with regard to crop breeding.

Barley Breeding Australia (BBA) is providing a platform to progress a national view on Australia's barley breeding needs. The three breeding nodes (BBA West, BBA South and BBA North) are progressing a steady stream of varieties that not only meet the needs in their own local region but also meet the domestic malting barley, feed and export markets in other areas. This national approach has resulted in the breeding of barley varieties not just relevant to the region they have been bred in but also able to meet the needs of other regions.

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**Where your 2007–08 research dollars were invested in the South (\$m)**

