

On-farm storage

Market deregulation would appear to have led to a sudden rise in demand for on-farm grain storage, and the GRDC has responded with the development of a program aimed at providing growers with information about best practice on-farm storage. Silos are a significant investment for growers and the program is intended to assist them in maximising the benefits while managing the risks.

Spring tour

The Regional Panel Spring Tours were held in early September, and the Southern Panel enjoyed a busy week with panel members dividing into two groups – one covering South Australia and Victoria, and a second eastern leg covering New South Wales and the ACT.

The annual Spring Tours are the opportunity for panel members to consult extensively with researchers, growers, advisers and industry representatives, on a wide range of emerging grains issues. This consultation with industry forms the platform for setting our research priorities and future benchmarks.

New Southern Panel members

The Spring Tour was the first for four new panel members, whose wide variety of expertise in research, industry and farming is adding considerably to our efforts to prioritise research in the southern region. In addition to the re-appointments of Dr Mark Peoples, Merna Curnow, Andrew Rice, Dr Allan Mayfield and Dr Andy Barr, the following members were newly appointed to the panel in 2008:

- Peter Schwarz, an irrigation farmer at Naringaningalook north of Shepparton in Victoria, chairman of the Victorian Irrigated Cropping Council, deputy chair of the Goulburn Murray Landcare Network and treasurer of the Irrigated Cropping Forum.
- Richard Konzag, a farmer at Mallala in SA, a member of the SA Advisory Board of Agriculture (Executive) and chair of the 'Achieving an informed and supportive Government' working group.
- Dr Chris Blanchard, senior lecturer at Charles Sturt University's School of Biomedical Sciences, a graduate of the Australian Rural Leadership Program and former chair of the Royal Australian Chemical Institute (Cereal Chemistry Division).
- John Crosbie, a supply chain, logistics and change management consultant based in Victoria, former director of the Quality Wheat CRC, Graingene, and Export Grain Logistics Pty Ltd.

David Shannon
Chair, GRDC Southern Region Panel



GRDC Southern Panel Deputy Chair, Mark Peoples and Chair, David Shannon on Spring Tour. (Photo: Porter Novelli)

Western Region

WA's grain growers in 2008 may well have thought themselves recipients of the Chinese curse 'may you live in interesting times'.



Neil Young.

The 2008–09 grain harvest of 13 million tonnes was the second highest on record, achieved despite multiple challenges, including unseasonal rain, hail, dry periods and frost. One –40°C frost event on the night of September 22 caused many Great Southern growers to lose up to 90 per cent of their crop.

With a rust epidemic occurring in the eastern states, WA growers were warned to be vigilant, but rust, when and where it occurred, was well contained.

In addition, there were changes in grain marketing, considerable debate over GM crops, issues associated with raising and maintaining soil organic carbon, climate change, and much discussion about future carbon accounting legislation. Crops planted on record grain prices and high fertiliser and fuel costs were harvested on falling grain prices.

Despite all these factors, WA growers continue to demonstrate that they're at the forefront of productivity and efficiency in their industry.

2009 priorities

Breeding crops more tolerant to drought and disease, improving seasonal forecasting and providing tools and services to growers to manage climate risk are key strategies of the GRDC's current Strategic R&D five year plan 2007–2012, *Prosperity Through Innovation*.

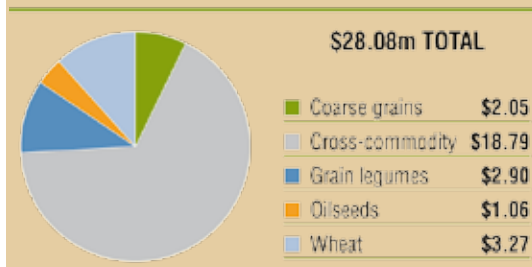
With the focus on proactively addressing climate variability and sustainability issues, part of the plan is to deliver and facilitate adoption of practical approaches to minimise nitrous oxide emissions, including more efficient application of nitrogenous fertilisers. Water use efficiency will also be addressed.

Integrated pest and weed management will receive greater attention in an attempt to reduce reliance on chemicals and prevent development of resistant plant and fungal species.

Dr Richard Oliver and his team at the Australian Centre for Necrotrophic Fungal Pathogens (ACNFP), Murdoch University, will survey growers to determine the extent of resistance in fungal diseases of grain.

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



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Barley varietal identification was trialled in 2008 by the South East Premium Wheat Growers Association (SEPWA), jointly funded by GRDC and DAFWA. New technology was tested for sample throughput, reliability and efficiency.

Emerging weeds

A collaborative study by DAFWA and Curtin University, funded by GRDC, is investigating what growers think are the significant agricultural weeds. Results will be compared with field observations of almost 500 paddocks.

The 'Emerging Weed Survey' will determine if weed rankings have changed since 1997 when a similar survey was conducted and, if so, what's changed them.

Drs Pippa Michael and Roger Mandel are the Curtin researchers coordinating the postal and field surveys.

Flaxleaf fleabane is emerging as a weed of broadacre crops in WA and GRDC supported Dr Sally Peltzer, DAFWA, Albany, is studying control of large plants in post-harvest stubble.

GM easement

The WA moratorium on GM canola has been eased and this season will see 20 growers trialling 1000 hectares of GM canola. This is good news for growers concerned about falling behind in the technologies available to their peers and, indeed, competitors, in other parts of Australia and overseas.

GRDC has released a booklet *GM Canola – performance and experiences in 2008*. It contains Roundup Ready canola grower case studies, field trial results and demonstration site activities from Victoria and NSW, where GM canola was successfully grown in 2008.



Western Region Panel members attending the WANTFA Spring Field Day 2008 (left to right): Neil Young, Kojonup grower and Panel Chairman, Anna Butcher, Brookton grower, Vince Logan, GRDC Executive Manager, Merrie Carlshausen, Wubin grower, Tracey Gianatti, Grower Group Alliance, Ralph Burnett, application technology specialist, Dr Fran Hoyle, DAFWA, David Fienberg, CBH, Professor Richard Oliver, Director of the Australian Centre for Necrotrophic Fungal Pathogens (ACNFP) and Deputy Panel Chairman and Peter Roberts, Dunn Rock grower. (Photo: Rose Yeoman, Brendon Cant & Associates)

At the WA Agribusiness Crop Updates in February 2009, organised by DAFWA, John Harvey, GRDC Executive Manager Practices, addressed the possibilities for a herbicide tolerant lupin in WA. The GRDC has secured access to appropriate technology and CLIMA at UWA is about to undertake proof of concept in lupin.

The case for a herbicide tolerant GM lupin was earlier publicly expressed by Mingenew grower Clancy Michael at the GRDC supported 12th International Lupin Conference, Fremantle, September 2008.

Frost incidence

For the past 20 years in WA, the incidence of frost has increased. And with growers planting crops with higher inputs and higher yields, consequent per hectare loss is up.

Consultant Garren Knell of ConsultAg estimates financial loss to WA growers from frost in the 2008 season at about \$105 million.

He is co-author of *Managing Frost Risk*, a joint publication between ConsultAg in WA and SARDI, the outcome of five years of GRDC-funded frost agronomy research.

It aims to help growers minimise and manage frost risk on high-risk paddocks, especially in the southern and central wheatbelt.

The booklet details how to avoid or minimise frost and assess damage, explaining what growers can do with frosted crops to maximise returns that year or beyond and explores options for frost management.

The GRDC will invest more than \$750,000 during the next four years to investigate a range of strategies, including developing cereals with improved frost resistance.

Dr Ben Biddulph, DAFWA, is investigating frost tolerance in wheat and barley lines grown in Pingelly.

New lupin

In a world first, Dr Jon Clements, Centre for Legumes in Mediterranean Agriculture (CLIMA), The University of Western Australia and other collaborative researchers have produced a hybrid lupin that may provide a pathway to transfer best plant characteristics between narrow leafed and yellow lupins. The three year project was supported by GRDC.

Nuffield scholar

Leon Ryan was awarded a GRDC-funded Nuffield scholarship to investigate factors influencing international grain demand and the potential for product substitution.

Leon manages the family's 3000 hectare farm in York, which produces cereals, canola and pulses and runs a 1000-ewe breeding flock.

His study this year will focus on future demand for staples such as cereals and pulses, the social impact of higher food prices and the price sensitivity of 'preferred' products, such as durum wheat for pasta. He will investigate how price-elastic supply and demand is and at what point food becomes too expensive to either produce or consume, and is then substituted with another food.

Lupin conference

Given that lupin pioneer Dr John Gladstones domesticated narrow leafed lupins in WA – where 85 per cent of the world's lupin crop now grows – it's appropriate that the GRDC supported 12th International Lupin Conference was held in Fremantle last September.

The two day conference attracted delegates from around the world. Lupin breeding, genetics, agronomy, nutraceutical properties and potential for lupin meals in aquaculture as well as lupin foods were on the menu.

Seed of Light

Scientist Dr Bill Bowden, with a career spanning more than 40 years with DAFWA, was the 2009 GRDC Western Region *Seed of Light* award recipient for excellence in communication.

Bill has significantly contributed to the development of agriculture, to the philosophy of agricultural science and the professional development of three generations of agricultural scientists.

South Perth-based, he received the award at the GRDC supported 2009 WA Agribusiness Crop Updates in February at Burswood.

Bill's career, which began with research on phosphorus nutrition of crops and pastures, was extended in his PhD by developing models for ion adsorption in crops and pastures.

His PhD research in soil chemistry, from UWA in 1973, contributed to the development of *Decide*, the first fertiliser decision support system (DSS) used in Australia. It remains the basis for recommendations for profitable fertiliser applications to crops and pastures.

Other DSSs developed by Bill, collaboratively or individually, include *Woolmodel*, *NPDecide*, *SPLAT*, the *TopCrop Nitrogen Calculator*, *WA Wheat* and commercial fertiliser recommendation systems.

He is a key contributor to four major inter-institutional and national GRDC research initiatives: Subsoil Constraints, Precision Agriculture, Nutrient Management and Soil Biology.

Spring tour

WA growers had the opportunity to discuss priorities for R&D investment with members of the GRDC Western Region Panel during the 2008 Spring Tour in the central agricultural region.

The three day tour provided valuable feedback to the GRDC about where and how GRDC's annual WA investment of about \$25 million could best be spent.

Grower identified issues included weed control and herbicide resistance, breeding for disease resistance and drought tolerance, adoption of new technologies, sustainable management techniques, GM crops, soil carbon, water use efficiency and the need for good break crops.

Panel members visited InterGrain, a South Perth based company developed as a wheat breeding partnership between DAFWA and GRDC.

They also visited the Muresk Institute of Agriculture, a Curtin University research site and the GRDC-supported Western Australian No-Tillage Farmers Association (WANTFA) Spring Field Day at Meckering, as well as meeting the Regional Agribusiness Reference Group (RARG) in Northam.

WANTFA members discussed regional priorities and indicated the need for economic analyses of no-till to include all components of the farming system.

On day three of the tour, panel members visited a large scale pulse breeding trial at DAFWA, Northam, as well as industry trials.

The panel viewed a radish resistance project by Nufarm, novel seed dressings by Syngenta, a Dow herbicide trial and new products by Bayer.

The panel was joined on tour by Ross Johns, Victorian grower and GRDC board member, Tom McCue, GRDC Manager Extension and Grower Programs and Julia Polkinghorne, Western Panel Support Officer.

Panel members met post-tour to discuss grower issues and to identify future GRDC investments.

New panel members

Diverse and specialised skills characterise the new 'crop' of growers, scientists and supply chain experts who comprise the GRDC Western Region Panel.

Five new panel members were appointed for three year terms in July 2008 and joined existing members Neil Young (Chairman), Professor Richard Oliver (Deputy Chairman) of the GRDC supported Australian Centre for Necrotrophic Fungal Pathogens at Murdoch University, Ralph Burnett, crop protection consultant, Merrie Carlshausen, Wubin grower and Vince Logan, GRDC, Executive Manager New Products.

- David Fienberg is Senior Operations Manager, Supply Chain Quality at the CBH Metro Grain Centre and is the Chair and Executive Director of Australasian Lupin Processing.
- Anna Butcher is an active partner in a mixed farming property in Brookton, WA, producing grain, export hay and sheep for meat and wool. She has a background in secondary education in the fields of mathematics, science, agriculture and gifted education and is a graduate of the AICD and Australian Rural Leadership Program.
- Grower Peter Roberts farms 3000 hectares, mainly cereals, at Dunn Rock. He is a former president of SEPWA and a member of the Western Region Barley Council. Passionate about R&D, he believes innovation is the key to productivity and sustainability.
- Tracey Gianatti is currently Coordinator of the GRDC supported Grower Group Alliance (GGA) which supports 40 grower groups throughout the WA wheatbelt. The GGA aims to provide grower groups with expanded networking capacity and greater involvement in collaborative projects with other grower groups, industry partners and the wider research community.
- Carbon specialist, Dr Fran Hoyle of DAFWA has a PhD in soil biology. Her professional interests include resource use efficiency, soil/root/plant interactions, soil organic carbon turnover, farming systems and communicating research outcomes.

Panel thanks

Sincere thanks are extended to all panel members who contributed their skills, enthusiasm and knowledge in 2008. We have had many interesting and meaningful discussions, as well as vigorous debate, on all aspects of the grains supply chain.

We also welcome Amy Fay, an agricultural science graduate, appointed to the position of Western Panel Support Officer in February and wish her predecessor, Julia Polkinghorne, well in her new career.

Neil Young
Chair, GRDC Western Region Panel