

## Keys stories for your region

### Julianne Hill, RCSN western region coordinator

Things have been busy since harvest, with annual GRDC Farm Business, Grains Research and Regional Update events, farming systems group forums and regular on-farm work of summer spraying, building sheds, fencing, shearing, drenching and finance/budget reviews.

It's also been a busy couple of months for the GRDC's five RCSN groups, which met in February to discuss and prioritise grains RD&E issues that impact on grower profitability in their particular port zone.

This year, to learn more about and help rank these local issues, many RCSN members travelled to GRDC Update events and visited leading grains research and scientific facilities. For some RCSN group members, this included trips to Canberra and South Australia. Highlights from their meetings and activities are outlined below.

Each RCSN is now planning a second meeting for July or August, which will be staged in conjunction with 15 'Open Forums' across regional areas of the State. These forums are designed to give all WA growers an opportunity to have input into how grower levies are invested by GRDC. Keep an eye out for registration details in coming RCSN newsletters.

The feedback received during the 'Open Forums' - and in discussions with growers and networks in their local port zones - is fed by RCSN members into GRDC through the Western Regional Panel and WA-based staff. This adds to the mix of feedback received by the Western Regional Panel from wide-ranging sources to help guide GRDC investments.

Earlier this month, GRDC called for expressions of interest from grain growers and other industry stakeholders wanting to join the western RCSN groups.

This is to fill positions made vacant by members stepping down after a two-year term and include:

- Kwinana West port zone- two growers and one agribusiness representative
- Kwinana East port zone - three growers and one agribusiness
- Albany port zone - one grower and one agribusiness
- Esperance port zone - two growers
- Geraldton port zone - two agribusiness.

Prospective new RCSN members will represent their region, where they have good networks and linkages. For an application form and more information, go to the [RCSN's dedicated website](#) before the closing date of April 23.



For more details about specific programs and projects with GRDC investments in the western region, see the [GRDC website](#), the [RCSN's dedicated website](#), the [GRDC's Online Farm Trials \(OFT\) website](#) or contact me - Julianne Hill: 0447 261 607, [email](#), or [Twitter](#). Really looking forward to seeing you around the traps soon.

**Caption:** RCSN coordinator Julianne Hill. PHOTO: GRDC identifying priority issues for GRDC

## Around the RCSN Port Zones



### Albany: Checking out the CCDM for disease and pest science

Disease identification and management has been a regular issue in the Albany port zone and RCSN members decided to align their meeting with a visit to the GRDC and Curtin University-supported Centre for Crop and Disease Management (CCDM).

This facility uses State-of-the-art technology and has world-leading researchers working to help growers better identify and manage crop diseases, such as Sclerotinia stem rot.

Department of Primary Industries and Regional Development (DPIRD) senior nematologist Dr Sarah Collins also came across to the CCDM to speak to the RCSN group about nematodes. She says when it comes to root lesion nematode (RLN) management, correct identification of species with soil testing is vital - as different species have different crop hosts.

She says use of more canola in rotations and a run of drier seasons were underpinning high RLN populations in the Albany port zone region.

Dr Collins says using crop sequences as a management tool can be risky and serradella was emerging as a good break crop option for paddocks with severe RLN burdens.

Dr Lingling Gao, of the CSIRO Division of Plant Industry, was at the CCDM and told the Albany RCSN group that her research team - supported by GRDC investments - aims to identify cereal crop genes and gene markers for resistance to RLN to help crop breeders boost genetic defences to these pests.

She says most winter wheat varieties grown in WA are highly susceptible to nematodes.

But the parents of pre-breeding populations - known as multiparent advanced generation inter-cross (MAGIC) and derived from four elite wheat varieties - vary in degree of resistance to major RLN species and may be a valuable genetic resource in helping to tackle nematodes.

Dr Gao says there is potential to identify some lines from MAGIC populations with stronger resistance than the parents and that of current wheat varieties. This requires more glasshouse and field testing.

For more information, contact Dr Gao at: 08 9333 6624 or [lingling.gao@csiro.au](mailto:lingling.gao@csiro.au); or Sarah Collins, DPIRD, on 08 9368 3612, [sjcollins@agric.wa.gov.au](mailto:sjcollins@agric.wa.gov.au).

**GRDC Project Code (RLN):** DAV00128

Some useful resources are:

- Soilborne disease information and GRDC Update Paper '[2016 Soilborne Disease and PREDICTA® B update](#)'
- DPIRD YouTube video '[Root Lesion Nematodes](#)'.

At their February meeting, Albany RCSN members identified the top issues impacting heavily on the profitability of growers in their port zone as:

- Machinery investment
- Disease/soil pest management and fungicide issues - including Sclerotinia stem rot, cereal leaf diseases and RLN
- Soil amelioration - including ripping
- Frost management/risks
- Water repellent soil management
- Nitrogen management

- Improving farming systems by incorporating a profitable legume or break crop
- Head loss in barley
- Snail management - particularly at harvest
- Waterlogging

**CAPTION:** Albany port zone RCSN members saw latest research advances into diseases such as Sclerotinia stem rot and pests including root lesion nematodes at the Centre for Crop and Disease Management in Perth. PHOTO: GRDC

## Kwinana West: Digging into soil issues at Cervantes

Soil acidity is regularly raised as an R&D priority in this port zone and RCSN members wanted to find out more about liming sources and options. The group decided to hold its February meeting to coincide with a visit to Cervantes, where key WA lime and soil researchers joined them in a brainstorming session about managing this constraint.

The group had a lively discussion with DPIRD research officer Chris Gazey, Desiree Futures consultant James Fisher and Aglime of Australia's Steve Carr and Dave Gartner.



Improving business management and exploring business structures are other issues regularly raised as important to growers in the Kwinana West port zone and, to this end, the RCSN group toured the Cervantes-based Lobster Shack facility. They saw first-hand how this operation has vertically integrated in many different ways, including sourcing and capturing markets for their products.

During their RCSN meeting, Kwinana West group members identified the top issues that impact heavily on the profitability of growers in their port zone as:

- In-crop weed control
- Summer weed management
- Decisions about machinery investments
- Business management
- Break crops and rotations
- Frost management/risk
- Late nitrogen application for protein management
- National Variety Trials using typical district inputs
- Soil compaction and managing water repellent soils and gravels.

**CAPTION:** Kwinana West RCSN members went on a tour through the Lobster Shack at Cervantes to view how one business has grown, spread its risks and vertically integrated over time. PHOTO: Julianne Hill, RCSN



## Kwinana East and Esperance: Capitalising on Canberra-based R&D

Esperance and Kwinana East port zone RCSN members travelled to the nation's capital in February to visit key

grains R&D centres and catch up with GRDC program managers based at the Canberra office - including National Variety Trials (NVT) manager Tom Giles.

At the CSIRO, in Black Mountain, research geneticist and GRDC Western Regional Panel member, Dr Greg Rebetzke, coordinated 12 researchers to address the group in a 'speed dating'-type session. This provided succinct summaries of relevant and interesting applied research to the WA delegation.

Dr Rebetzke's focus at CSIRO is R&D into cereal coleoptile length and advancing crop breeding. The RCSN group members visited the national Parliament, meeting Chief Government Whip Nola Marino and Member for O'Connor, Rick Wilson, who explained legislative processes.

They also went to the federal Department of Agriculture and Water Resources, which is responsible for collecting the grains R&D levy and disbursing it. This body has wider functions, including setting many of the industry's export standards and limits and liaising internationally on tariffs. This was especially topical, particularly for Esperance growers, given changes to lentil and chickpea tariffs introduced by India.

One of the Esperance RCSN members commented that the *"Canberra trip gave me a lot of contacts and an understanding of the vast resources available to us as growers and advisers...for me, it was great to gain a better understanding of the 'behind the scenes' of GRDC - as well as current work by CSIRO"*.

RCSN meetings coinciding with the Canberra visit identified the top priority R&D issues facing growers in both port zones and these are outlined below.

#### Esperance:

- Best practice nitrogen strategies
- Soil constraints - including compaction, waterlogging, acidity, salinity and boron
- Glyphosate resistance and chemical residue limits
- Break crop options - especially legumes - for soil improvement and rotation choice
- Canola agronomy packages
- Controlling summer weeds
- Managing staff/human resources
- High yielding wheat packages
- Business management decision making
- Snails/slaters/slugs/vegetable beetles/earwigs
- Frost management/risks.

#### Kwinana East:

- Maintaining glyphosate effectiveness
- Involvement in R&D for nitrogen-fixing crop developments
- Canola - more resilience as a break crop for the eastern grainbelt
- Phosphorus use efficiency and aluminium toxicity
- Nitrogen management - comparing liquid and granular (seeding and spray/spread application)
- Salinity
- Improving crop vigour in low rainfall environment
- Machinery investment versus repair costs benchmarks
- In-paddock technology and connectivity
- Satellite biomass imagery for management tools - including for summer spraying, canola direct heading at harvest.

**CAPTION:** GRDC Western Regional Panel member and CSIRO scientist Dr Greg Rebetzke kicked-off discussions with the Kwinana East and Esperance RCSN group members in Canberra about grains R&D. PHOTO: Julianne Hill, RCSN

## Geraldton: Updating at Adelaide

*"I came away with at least ten key pieces of information that I will be sharing amongst my grower clients, farming systems groups in the region and fellow consultants".*

That was the comment from one Geraldton RCSN member after the group's visit to South Australia - aligned with its February meeting.



RCSN members attended the GRDC Grains Research Update, Adelaide and met with RCSN groups based in South Australia. They also toured the Australian Precision Ag Laboratory (APAL), WAITE Agricultural Research Institute and South Australian Research and Development Institute (SARDI).

Weeds, soil nitrogen and climate adaptation were the hot topics discussed, as these are R&D issues high on the priority list for the Geraldton port zone RCSN.

One group member said a trip to Richard and Trish Konzag's farm, near Mallala, was highly beneficial in many aspects, including learning about strategies for optimising returns on investment, using a robust farm structure, planning rotations and managing weeds.

During their RCSN meeting, the Geraldton group members identified the following top issues as impacting heavily on profitability of growers in their port zone:

- Identification and management of summer weeds
- Potassium and nitrogen measurement and management
- Nutrition after soil amelioration - including ripping
- New variety agronomy packages - including for disease management
- Long term impacts of controlled traffic farming
- Connectivity and networks
- Machinery replacement decisions.

**CAPTION:** As well as attending the GRDC Grains Research Update, Adelaide, Geraldton port zone RCSN members toured the farm of South Australian grain growers Richard and Trish Konzag near Mallala. PHOTO: Julianne Hill, RCSN

## Hot topics

### GRDC ploughs investment into nutrients and soils

WA soils and grain crop nutrition R&D is getting a \$14.5 million boost from GRDC (as the major investor with an \$8.3 million commitment) and its collaborative partners: The University of WA (UWA); DPIRD; CSIRO; Murdoch University; CSBP; and Summit Fertilizers.

The initiative was announced at the GRDC Grains Research Update, Perth and has been driven in response to grassroots feedback from growers and industry stakeholders gathered through extensive GRDC consultation - including by its Western Regional Panel and RCSN groups.

The investment has been split into three major suites of projects that are unprecedented in WA in terms of scale and collaboration. It will draw on a wide range of skills and scientific knowledge available from multiple organisations.

Project one is worth a total of \$9.7 million across five years and aims to improve WA growers' profitability through more efficient nutrient use - with a focus on nitrogen, phosphorus, potassium and their interactions.

This will feed data into projects two and three, which focus on the impact of mechanical soil amelioration practices on nutrient re-distribution in the soil and new methods for collecting soil samples in growers' paddocks.

For more information about these projects, contact Dr Rowan Maddern, GRDC Perth, at: 08 9230 4600 or [rowan.maddern@grdc.com.au](mailto:rowan.maddern@grdc.com.au).

### Tools to help pre-sowing planning

As preparations start for pulling out seeding gear across the State, there are a range of resources available to help grain growers plan agronomy and crop management for 2018.

Essential reading includes the 2018 Crop Variety Sowing Guides for WA, produced with GRDC investments. These cover all major crops and can be found on the [GRDC website](#).

DPIRD has also set up regularly updated online information hubs for:

- [The 'Essentials for growing a successful wheat crop'](#)
- [Barley crop information](#)
- [An essential guide for oats](#)
- [Canola information](#)
- [GRDC Case Study booklet 'Break crops and rotations of WA'](#)
- [Break-crop R&D](#)
- [Webinars stemming from the 2017 Australian Agronomy Conference.](#)

Latest findings from key WA tactical agronomy, disease, pests, variety performance, rotations and other R&D projects - presented to the recent 2018 GRDC Grains Research Update events - are also available online at the [GIWA website](#) and the [GRDC website](#).

## New GrowNotes™ for lupin planting

GRDC has a new 'one-stop shop' essential guide to planting, growing, managing and marketing lupin crops in WA.

The western region lupin GrowNotes™ can be found on the [GRDC website](#).

It contains valuable information about the new lupin variety for WA - PBA Leeman<sup>®</sup> - and complements other western region GrowNotes™ for barley, wheat, canola and durum crops.

The GrowNotes™ are aimed at boosting growers' profitability by providing latest R&D information.

**GRDC Project Code:** CIC00033-C.

## Digging into a new soils resource

For those not already in the know, 'SoilsWest' is a key research partnership between UWA and DPIRD, supported by GRDC investments. It involves R&D projects focused on improving soil function to boost the productivity, profitability and sustainability of farming systems in this State.

The latest 'SoilsWest' newsletter is now online on the [SoilsWest website](#) and contains valuable information about timely topics, including:

- A Ranking Options for Soil Ameliorants (ROSA) tool from DPIRD
- The Avon Valley Critical Zone Observatory
- WA post-graduate studies into water repellence management
- Soil nutrition for the coming season
- A link to the 'Soil Quality: 2 Integrated Soil Management' book.

For more information contact UWA at: 08 6488 7889 or [admin@soilswest.org.au](mailto:admin@soilswest.org.au).

## Cereal root disease lab re-opens

SARDI has opened its newly-refurbished PREDICTA® B laboratory for DNA-based soil testing to identify - before seeding - any major soil-borne pathogens that pose risks to crops.

This can help grain growers plan management tactics to minimise potential yield losses from diseases such as crown rot and pests such as RLN.

PREDICTA® B requires a dedicated sampling strategy and is not a simple add on to a soil nutrition test, according to SARDI's Dr Alan McKay.

He says the new SARDI laboratory is currently processing about 250 soil samples per day from across Australia and this is likely to increase to more than 400 per day in the next few weeks.

PREDICTA® B results will be reported each Friday until June. For more information, contact Alan at: (Skype ph) 08 8429 2216 or [alan.mckay@sa.gov.au](mailto:alan.mckay@sa.gov.au).

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