

GRDCs Albany port zone Regional Cropping Solutions Network (RCSN) held three Open Meetings on the 7 and 15 August 2017. The meetings were held at Hyden Hotel (7 August at 12pm); Woodanilling Tavern (15 August at 9am); and the Reid’s Property, Kilamarup, near Boyup Brook (15 August at 3pm).

A total of 108 guests attended the three open meetings. Members of the general public were able to register for the Open Meetings at the RCSN website www.rcsn.net.au and could submit an issue/idea should they be unable to attend.

Those presenting across the meetings included:

- Peter Roberts, Andy Duncan and Steve Jefferies (GRDC): GRDC Update and Investment into Soils Constraints
- Andrew Etherton (GRDC): GRDC Investments into High Rainfall Crop Production
- Glenn McDonald (DPIRD): Strategic Tillage
- Dr Heping Zhang (CSIRO): High Rainfall Wheat and Canola Production
- Garren Knell (ConsultAg): What Worked and Did not Work for Frost in 2016

The following Regional Cropping Solutions Network initiated projects were also presented during the meeting series:

- Phil Longmire (Beaumont Grower): Managing Inputs using VRT
- Devon Gilmour (McIntosh and Son): iHSD and Harvest Weed Seed Control
- Peter Hills (HillsAg): The 10 Tools of Harvest Weed Seed Management

Also in attendance were Albany RCSN members. Online GroupMap technology was used to capture audience input. A key part of the open meeting was the opportunity for participants to share the top issues affecting their profitability. The aim of these discussions was to provide growers with direct input into the analysis of current local priorities affecting productivity and profitability to assist in the discussions relating to future projects by GRDC’s RCSN and by GRDC’s Western Panel and GRDC staff.

A number of projects have been put on the ground in the Albany port zone through the RCSNs since 2011. Final reports are available online at the Online Farm Trials website, www.farmtrials.com.au or by contacting Julianne Hill, RCSN Coordinator.

All issues raised at the Open meetings at Hyden, Woodanilling and Boyup Brook were discussed by the RCSN members at their meeting held on 16 August in Boyup Brook. The RCSN also added further issues after gaps were identified. All issues were ranked according to three main factors:

1. Is the idea/issue something that impacts on grower’s profitability?
2. If work was conducted on the issue, would it deliver more value to growers?
3. And is the issue something that we can effect change upon?

Table 1: Summary of areas of Interest raised at the Hyden (HYD); Woodanilling (W); and Boyup Brook (B).

Areas of interest raised at Albany port zone Open meetings	Expanded areas of interest by Open meeting attendees	RCSN member feedback from Closed meeting and further action
B, HYD: Crop sequencing, rotations and legumes	Profitable break crop - lupin agronomy packages for HRZ (R and D and extension lacking). Winter soybean species, do they exist? Legume in the pasture rotation. An alternative to sub clover. Agronomy management packages for serradella. Crop sequencing for the management of root diseases and nematodes; and profitability.	Ranked highly by RCSN members at their closed member meeting. The RCSN identified this as an issue but did not further develop this issue at this time. However, the RCSN wanted to ensure that it was raised as an issue within GRDC.
B: Snails and slugs	Snails and slugs - potential spread of snails and extent of slugs, management options beyond burning crop stubbles and harvest management. Snails - knowing the hotspots and potential areas where they can spread. Slugs (and maybe snails). Affecting crop establishment. Difficult to control. Refinement of management practices. Problems with pasture establishment.	Ranked highly by RCSN members at their closed member meeting. The RCSN identified this as an issue impacting on profitability in some years and also noted that the area of spread is increasing, however noted that much of this work is being covered by current GRDC/DPIRD investments.

Areas of interest raised at Albany port zone Open meetings	Expanded areas of interest by Open meeting attendees	RCSN member feedback from Closed meeting and further action
HYD, B: Management of gravels (including but not limited to forest gravels)	Nutrient management package on gravels other than forest gravels. A better tool for testing P and K in forest gravels. Using DGT testing for P and K in forest gravels. Accessing High P in soils. High pH and Al tying up P. Reefinator in both Albany and Kwinana east - case studies, strips, economic analysis. Deep ripping side by side. Nutrient management after reeefinating	Ranked highly by RCSN members at their closed member meeting. The RCSN identified this as an issue heavily impacting on profitability over most years, however noted that much of this work is being covered by a current GRDC investment.
HYD, W, B: Frost - Identification, management, matching varieties	Ice nucleating bacteria and their influence on frost. INB need to be understood as to types, biology, life cycle of introduction to crop and behaviour during frost conditions and control. A system for testing and ID in crop needs to be developed first as well as a literature review for cereals. Genetic options. Long season varieties and growth regulators to avoid frost, and sow earlier and grazing opportunities. Misidentification of nutritional effects/deficiency vs frost. Copper and potash could be affecting the crops and creating the appearance of frost damage. Narrow spacing x frost x weed competition appears to increase frost risk in this area with narrow spacing. Sowing time - weighing up effects of frost vs heat with an early an early break and crop establishment especially for canola and oats. Matching varieties to sowing time.	Ranked highly by RCSN members at their closed member meeting. The RCSN identified this as an issue heavily impacting on profitability over many years, however noted that much of this work is being covered by the current long term GRDC investment in frost.
<i>HYD, W, B: Heat and frost stress. NVT, Long seasons wheats, early sowing. TOS trials x region.</i>	<i>Long season wheat varieties in NVT are not showing their true potential as there is only one seeding date (NVTs need two times of sowing in long season wheat trials for low rainfall areas) (we need a replacement for Yitpi). Varieties for earlier sowing opportunities, and suit grazing. NVT long season wheat varieties not showing true potential as only know seeding date, sowing time - weighing up effects of frost vs heat with early break and crop establishment. Building a picture of yield. Get better at gaining more data from trial sites. Frost events, TOS, establishment, rain, disease etc. Multi use trials.</i>	<i>Ranked highly by RCSN members at their closed member meeting. The RCSN identified this as an issue heavily impacting on profitability over many years, and noted that much of this work is being covered by the current long term GRDC investment in frost. However, RCSN members further developed part of this particularly around management; and market options</i>
HYD, W: Grain marketing	Education for those who never forward sell grain. Grain marketing. Risk for mixed growers.	Ranked highly by RCSN members at their closed member meeting. The RCSN identified this as an issue impacting on profitability over most years, however noted that much of this work is being covered by private providers and did not further develop this issue at this time.
HYD, W: Harvest weed seed management	Growers having difficulty adopting successful harvest weed seed management (cannot burn after a wet harvest). Adoption of harvest weed seed management.	Ranked highly by RCSN members at their closed member meeting, however RCSN members felt that much of this was being covered by AHRI and other GRDC investments currently underway.
HYD, W: Herbicide resistance	Knockdown herbicide resistance - specifically glyphosate and paraquat. Glyphosate in low rainfall cropping systems: glyphosate resistance, fallow, knockdown options; address the over reliance on glyphosate. What are the cost effective alternatives in low rainfall parts of the zone?	Ranked highly by RCSN members at their closed member meeting. The RCSN identified this as an issue however felt that much of this was being covered by AHRI and others, but wanted to ensure that it was raised as an issue with GRDC.

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HYD, W: Matching inputs to outputs	NDVI maps, readily available to growers to be useful to make decisions. Eg CSBP ones are available monthly but not useful by then. VRT - Matching nutrient inputs to outputs particularly on gravel soils. Linking with variable rate. P as well not just N.	Ranked highly by RCSN members at their closed member meeting. The RCSN identified this as an issue heavily impacting on profitability over most years, however noted that much of this work is being covered by a current GRDC investment.
HYD, W: Stubble management including earwigs, nutrient cycling, herbicide tie-up	Increased stubble loads from a run of good years has seen issues around earwigs (as well as army worm and slaters). Also issues with nutrient cycling, herbicide tie up (Trifluralin viability), and disease. Should we still be maximising stubble retention and how do we seed through it?	Ranked highly by RCSN members at their closed member meeting. The RCSN identified this as an issue however did not further develop this issue at this time. The RCSN will ensure that it is raised as an issue with GRDC.
W: Canola issues	Economics of OP canola Vs hybrid, Canola yield ceiling in high rainfall areas. Knowing when to spray for good ROI for sclerotinia, off label options and alternative management. Canola yield ceiling in high rainfall areas.	Ranked highly by RCSN members at their closed member meeting. The RCSN identified this as an issue impacting on profitability over many years, however noted that much of this work is being covered by a current GRDC investment led by CSIROs Heping Zang and Yens Berger: Achieving high yield in canola and wheat in HRZ WA.
<i>HYD, W: Nematodes</i>	<i>Nematodes, subsidised testing to investigate cross section across district at both summer time when most testing is done and then follow through to more testing in season. This will allow understanding of how numbers change. Growers still unsure of rotational implication and management for controlling nematodes.</i>	<i>Ranked highly by RCSN members at their closed member meeting. The RCSN identified this as an issue increasingly impacting on profitability, and noted that much of this work is being covered in current work being conducted under the GRDC National nematode epidemiology and management program. However, RCSN members ranked this highly and further developed some aspects of this issue.</i>
<i>HYD, B, W: Subsoil constraints, adoption of deep ripping and CTF on south coast soils.</i>	<i>Soil classification for the HRZ to use in modelling like Yield Prophet, soil water modelling, APSIM. Subsoil amelioration, continually an important area of research. More understanding of which soils are responsive, how to manage. Alternative methods of amelioration, local sources. How to identify areas to target. Subsoil constraints - sodicity, compaction, Al toxicity, non-wetting, waterlogging on forest gravels. Better understanding of soils in the Albany port zone. Issues that impact on profitability are subsoil constraints etc. Longevity and economics of one off strategic tillage options for soil constraints. Extension work. Research on soil biology; chem effects on soil biology.</i>	<i>Ranked highly by RCSN members at their closed member meeting. The RCSN identified this as an issue impacting on profitability and noted that much of this work is being covered in a current GRDC tender which closed in July; and in current work being conducted under the GRDC Soils constraints investments. However, RCSN members ranked this highly and further developed some aspects of this issue.</i>
<i>HYD, B: Addressing the yield gap in canola and other cereals</i>	<i>Whole farming system, why aren't we achieving the yields on farm that the researchers tell us we should be in field trials e.g. trials showing 2t/ha improvement from ripping in trial work, but not so stark on farm. What are we missing to make larger yield difference, we keep doing best practice but the yields are staying stable. Understand relationship between plot yields and broad acre scale yields. Also understanding of spatial variability across paddocks to determine wins/losses from</i>	<i>Ranked highly by RCSN members at their closed member meeting. The RCSN identified this as an issue impacting on profitability and further developed some aspects of this issue.</i>

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	<i>treatments - need to have number of years of yield data to accurately determine this.</i>	
B - Waterlogging management	Deep ripping interaction to manage areas prone to waterlogging	Ranked highly by RCSN members at their closed member meeting. The RCSN identified this as an issue however did not further develop this issue at this time. The RCSN will ensure that it is raised as an issue with GRDC.
B - Aphids	Revisiting aphid control thresholds	Noted as an issue by RCSN members at their closed member meeting, however the RCSN did not further develop this issue at this time. The RCSN will ensure that it is raised as an issue with GRDC.
B – Managing seasonal changes	Knowledge gap - provide informed decisions to adopt to change from season to season. Re: summer cropping to provide feed during autumn gap, summer crop could also be cash crop and N fixation.	Noted as an issue by RCSN members at their closed member meeting, however the RCSN did not further develop this issue at this time. The RCSN will ensure that it is raised again as an issue with GRDC.
B - Review Cu and TE requirements in high yielding crops	MPCN (More Profit from Crop Nutrition) initiative did a lot of research in this over last 2-3 years with trace elements that were perceived to be causing yield losses.	Noted as an issue by RCSN members at their closed member meeting, however the RCSN did not further develop this issue at this time. The RCSN will ensure that it is raised again as an issue with GRDC.
W - Precision seeding equipment	Does buying a DBS pay?	Noted as an interesting issue by RCSN members at their closed member meeting, however the RCSN did not further develop this issue at this time.
HYD - Connectivity and communications	Internet accessibility and communications need to improve to use technology available	Ranked highly by RCSN members at their closed member meeting. The RCSN identified this as an issue heavily impacting on farming businesses, however noted that this issue may be outside the scope of the RCSNs.
B – Industry collaboration	Collaboration with other levy bodies such as AWI MLA, as well as researchers etc	Noted as an issue by RCSN members at their closed member meeting, and will endeavour to include other levy bodies in future activities if appropriate. The RCSN will ensure that it is raised as an issue with GRDC.
W – Green-bridge management	Improving the adoption of green-bridge management to provide better management for aphids and diseases from season to season	Noted as an issue by RCSN members at their closed member meeting, however the RCSN did not further develop this issue at this time. The RCSN will ensure that it is raised again as an issue with GRDC.
HYD – Summer weed management	Alternative summer weed knockdown options. Prickly salt wort and kerosene grass. Summer weed management.	Ranked highly by RCSN members at their closed member meeting. The RCSN identified this as an issue heavily impacting on farming businesses at times, however felt that much of this work will be covered under current GRDC investments:

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		DAW00257 Locally Important Weeds; & UA00156 Emerging weeds project (seed bank biology of emerging weeds)
HYD - Business risk mitigation	Recovery from disaster (cash flow disasters) (frost and drought)	Ranked highly by RCSN members at their closed member meeting. The RCSN identified this as an issue heavily impacting on farming businesses at times, however noted that this issue may be outside the scope of the RCSN's.

NB: ALL issues raised at the Open Meetings as notes above will continue to have presence at the RCSN discussion table and will be forwarded to the GRDC Western Panel and GRDC for continued visibility that may feed into existing or future initiatives.

Connect with Us.

GRDC now have a Facebook page – www.facebook.com/theGRDC/ (like us!) as well as a dedicated RCSN website – www.rcsn.net.au. Follow us on Twitter @Julianne_Hill, or visit GRDC www.grdc.com.au.

Thanks and Further Details.

Thank you to everyone who attended the Open Meetings and contributed to the detailed discussions. For further details on the RCSN, please visit www.rcsn.net.au or contact the RCSN Facilitator Julianne Hill (GRDC Regional Cropping Solutions Network Co-ordinator) on 0447 261 607 or email regionalcroppingsolutions@gmail.com.