

GRDC’s Geraldton port zone Regional Cropping Solutions Network (RCSN) held two Open Forums in June 2019. The meetings were held at Yuna Community Centre (24 June at 4pm) and Perenjori Sports Club (25 June at 8am).

A total of 62 guests attended the two Open Forums. Members of the general public were able to register for the Open Forums at the RCSN website [www.rcsn.net.au](http://www.rcsn.net.au) and could submit an issue/idea should they be unable to attend.

Those presenting across the forums included:

- Luigi Moreschi (CSBP) & Belinda Eastough (Yuna farmer): Lupins and Manganese – What do we know?
- Bob Nixon (Kalannie farmer) & Joel Andrews (MapIQ): What can be achieved if compaction, acidity and aluminium toxicity are removed; & how to find your own on-farm lime sources

Also in attendance were GRDC staff and Western Panel, and some Geraldton port zone RCSN members. Online GroupMap technology was used to capture audience input. A key part of the Open Forum 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 shorter term, smaller RCSN initiated projects have been put on the ground in the Geraldton port zone since 2011. Final reports are available online at the Online Farm Trials website, [www.farmtrials.com.au](http://www.farmtrials.com.au) or on [www.rcsn.net.au](http://www.rcsn.net.au).

All issues raised at the Open Forums at Yuna and Perenjori were discussed by the RCSN members at their meeting held on 5<sup>th</sup> July in Geraldton. The RCSN also added further issues after gaps were identified. All issues were ranked according to five main factors: Does it impact on grower’s profitability? What area is affected by the issue? How frequently does the issue occur? If work was conducted on the issue, would it deliver more value to growers? Is the issue something that we can effect change upon?

**Table 1: Summary of areas of interest raised at the Open Forums at Yuna (Y) & Perenjori (PJ); or by RCSN members**

Areas of interest raised at Geraldton port zone Open Forums and RCSN members	Expanded areas of interest from Open Forums and RCSN members	RCSN member feedback from RCSN member meeting and further action
Y - Legume pastures	In rotation, agronomy, weed control, species and varieties	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 continued to have presence within GRDC with consideration given within their current legume investments
Y - Summer weed control	Caltrop, melons, roly poly, button grass, flannel bush, flea bane, saffron thistle, caltrop. Residuals (IMI's), Mechanical methods, Night spraying	Noted as an issue by RCSN members at their member meeting, however the RCSN did not further develop this issue at this time. There is current GRDC investment occurring in part of this space around summer weed early identification and control
<i>Nitrogen management in a year like this</i>	<i>In field tissue testing. Create a quick test for nitrogen and sulphur that can be done cheaply and quickly in paddock situations. PJ - Matching inputs to higher yield potential. Season N requirements, OC%, after amelioration, high input year/season, in season testing, what is the next limiting factor?</i>	<i>Ranked highly by RCSN members at their member meeting. The RCSN identified this as an issue impacting on profitability and further developed some aspects of this issue.</i>
Grain quality traits	Is it breeding or nutrition management? Further work on this	Noted as an issue by RCSN members at their member meeting, however the RCSN did not further develop this issue at this time. There is current large GRDC investment occurring in this space
Movement of machinery on roads	App for working out requirements for moving machinery on public roads and lodging the necessary applications. Who is going to do this???	Noted as an issue by RCSN members at their member meeting, however the RCSN did not further develop this issue at this time.

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PJ - Non wetting soils	STILL! Mechanical rather than chemical. Non wetting on gravel. How do we fix it without bringing up the rocks.	Noted as an issue by RCSN members at their member meeting, however the RCSN did not further develop this issue at this time. There is current large GRDC investment occurring in this space
Farm business management and technology in the business	The business around farming is becoming more complex and takes time and work. eg. STP, paperless offices, data management and interpretation. Must not lose sight of supporting this across generations (not everyone is young and tech savvy) and with all partners. There are legal consequences to not doing this that can impact a business severely eg. New requirements for moving machinery on public roads. State lobby groups don't have the resources to handle these issues.	Noted as an issue by RCSN members at their member meeting, however the RCSN did not further develop this issue at this time. There is some GRDC investment in this space via PinG and Farm Business Updates
PJ - Heavy soil rotation options	eg legumes on heavy soils that may be shallow dry & stony; legumes for heavy land	Noted as an issue by RCSN members at their member meeting, however the RCSN did not further develop this issue at this time. There is current large GRDC investment occurring in this space
Y - Cost of production	Less dependence on speculative market determining price, utilising a cost of production model ensuring greater confidence	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 continued to have presence within GRDC
Y - Machinery cost/reliability		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 continued to have presence within GRDC. Some GRDC investment occurring in this space with farm machinery investment strategies and case studies
<i>Barley varieties in Northern ag region</i>	<i>Barley is being used across a greater area in the Northern ag region than in the past. More should be included in NVT work in the region.</i>	<i>Ranked highly by RCSN members at their member meeting. The RCSN identified this as an issue impacting on profitability and further developed some aspects of this issue.</i>
Seeding machine options	Further discussion and testing of singulator planting machines.	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 continued to have presence within GRDC
Low protein in wheat (esp Sceptre)	Is it nutrition or variety? Packages around varieties need work for LRZ, MRZ and HRZ. Can WA soils compete with more fertile soils when it comes to producing high protein wheat? Should we be throwing money at protein? Research and on farm.	Ranked highly by RCSN members at their RCSN 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 continued to have presence within GRDC.
Y - Water holding ability and acidity in poorer sands.	Research into polymers (seed coating or tech like polyurease); water holding crystals and alternative technologies	Noted as an issue by RCSN members at their member meeting, however the RCSN did not further develop this issue at this time.
<i>Crop choices suitable for March/April sowing</i>	<i>Management and selection of winter crops to manage crop development better and take advantage of March/April germination opportunities and survive dry periods till winter rains arrive.</i>	<i>Ranked highly by RCSN members at their member meeting. The RCSN identified this as an issue impacting on profitability and further developed some aspects of this issue.</i>
<i>Manganese nutrition in lupins.</i>	<i>Need to look at best ways to get Mn into grain. Current research is dated. Need to look at new</i>	<i>Ranked highly by RCSN members at their member meeting. The RCSN identified this as an issue</i>

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	<i>varieties and Mn sources. Also consideration of split seed from mechanical means.</i>	<i>impacting on profitability and further developed some aspects of this issue.</i>
Tramline renovation	What is the best way forward- a mechanical fix? Sowing at x degrees to tram?	Noted as an issue by RCSN members at their member meeting, however the RCSN did not further develop this issue at this time.
PJ - Heat stress in all crops: Early bolting and at flowering/grain fill	Hybrids vs OPs	Ranked highly by RCSN members at their RCSN 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 continued to have presence within GRDC. RCSN wanted to see a review of all work done to assess any gaps.
Succession	Succession always comes up but why are there still so many bad and sad examples of failure? What can grower groups do? What can GRDC do? Is it poor business management that is causing this and lack of communication? How can we disrupt/educate the generation that thinks doing nothing is doing something. Too many disastrous examples in our zone to ignore.	Ranked highly by RCSN members at their RCSN member meeting. The RCSN identified this as an issue impacting heavily on farming families in the zone but did not further develop this issue at this time. However, the RCSN wanted to ensure that it continued to have presence within GRDC and noted possible review of what information and tools are available. Some of this provided through private enterprise.
Ripping post seeding in all crops.	How long after germination can we go with various tyne depth and spacing? Perhaps longer in wide row lupin and canola.	Noted as an issue by RCSN members at their member meeting, however the RCSN did not further develop this issue at this time. There is current GRDC investment occurring in this space
Y – Dry sowing versus waiting for weed emergence	Dry sowing with pre-emvs vs wait 10 days before knockdown. Which has greater benefit - 1. Wait 10 days before knockdown (but risk losing early sowing advantage) or 2. Dry sowing with pre-emergents (but end up with more weeds). Test which varieties are most suitable in each situation. 2yr trial comparing dry sowing with pre-emvs vs wait 10 days before knockdown to find which has greater benefit (cleaner crop vs losing early sowing opportunity) - for different varieties	Noted as an issue by RCSN members at their member meeting, however the RCSN did not further develop this issue at this time. There has been some GRDC investment in the past in this space which the RCSN would like to revisit
Short season wheat and lupin lines	Numbered lines are being canned on a May germination, need 3 Time of Emergence in our zone (April, May, June) to capture the best genetics for wheat and lupins in our zone. Weed control v yield. Use short season varieties to allow delayed sowing for better weed control or use in late soil amelioration situations	Ranked highly by RCSN members at their RCSN 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 continued to have presence within GRDC. RCSN identified that a literature review and gap analysis be conducted
Soil acidity (including lime and gypsum)	Lime incorporation methods-spending too much on lime only changing surface pH (eastern ag zones soil variability. Y - Soil constraints of heavier soils. Ability to mix lime/gypsum without bringing up too much clay and destroying machinery. Engineered soil management. What soil structure & crop potential should we be aiming for eg. Sandy soils if we have limed and removed compaction issues. Goals? Lime incorporation methods-spending too much on lime only changing surface pH (eastern ag zones soil	Ranked highly by RCSN members at their RCSN 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 continued to have presence within GRDC

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	variability. PJ - Movement of lime down the profile in shallow/rocky soil	
Compaction and Ripping	PJ - compaction - longevity of the different systems after ripping. LRZ decision making around Plozza vs Ripper Spaders vs Deep ripping with incl plates. Dry summer, late break Plozza's don't come out, is the investment worth considering for others? Is there economics on this?	Ranked highly by RCSN members at their RCSN 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 continued to have presence within GRDC. There is current GRDC investment in this space
Data management and ownership	Y - Data capture and management. PJ - data management - who owns the data, transferring it if you don't subscribe	Ranked highly by RCSN members at their RCSN 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 continued to have presence within GRDC.
Green on Green	Y - "Green on green" technology, a future way to minimise grain residue as minimal herbicide applied to the crop. PJ - Sprayer technology around Green on Green.	Noted as an issue by RCSN members at their member meeting, however the RCSN did not further develop this issue at this time.
Weed control following cultivation and amelioration (pre-ems)	Y, PJ - Short season varieties to allow for a knockdown/ amelioration wet and June seeding in late break years. Y - Short season crop varieties with long coleoptile length to handle ameliorated soil, photo period maturing. Y - agronomy packages following soil amelioration	Ranked highly by RCSN members at their RCSN 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 continued to have presence within GRDC. There is current GRDC investment looking at weed control after amelioration
PJ - Employment of staff	Compliance, awards, HR, managing best practice and expectations. Y - labour costs	Ranked highly by RCSN members at their RCSN 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 continued to have presence within GRDC.
PJ - Exploring alternative lime sources - liquids, Morrell lime, on farm lime - speed of reaction, return on investment	What is the value of it. \$/ton. It is a by-product. Are there any impurities that we should be concerned coming through production process. Finding good alternate lime is not easy. Where to look, where to send samples, rocks, how to dig it up, does it need screening and costs of etc - get people to talk rather than do more trials. Calcium hydroxide (burnt lime) does it work. Can it be spread neat? How low can we go?	Ranked highly by RCSN members at their RCSN 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 continued to have presence within GRDC. There is current GRDC investment looking at lime products including case studies, and how to asses
MRL's	Do we need independent testing and arbitration? Guilty until proven innocent. Who decides on what is a reasonable punishment? Glyphosate in grain when not applied since pre sowing. Many positives being found and no glyphosate applied within a kilometre. Is their residual in soil to contaminate grain? Y - MRL testing grain at delivery. Covering different application methods, direct application vs grown on residues. Determining MRLs when applied as per label early bs late. A lot of confusion around Intervix application. Independent sampling vs CBH testing. Needs more clarity. Independent testing of MRL's and MRL education. Y - Social license and public trust. Being able to farm in the most efficient sustainable	Ranked highly by RCSN members at their RCSN member meeting. The RCSN identified this as an very important issue but did not further develop this issue at this time. However, the RCSN wanted to ensure that it continued to have presence within GRDC.

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	manner. le glyphosate, MRL, live export. Keeping people in the game.	
Root disease	PJ - root diseases in lighter soils – RLN, rhizoctonia, management strategies. Nematode carrier ratings for legume pastures. Had a trial of legume pasture (pure) vs fallow and rhizo numbers through the roof. Part of growing alternatives to cereals is the disease break.	Noted as an issue by RCSN members at their member meeting, however the RCSN did not further develop this issue at this time.
Salinity management	PJ - forward planning & maintain awareness to prevent spread of salinity on farm- to avoid loss of currently productive land. PJ - salinity management - strategies for land reclamation. Physical reclamation - additives (gypsum etc). Seed treatments? Organic matter	Noted as an issue by RCSN members at their member meeting, however the RCSN did not further develop this issue at this time.
Weather forecasting and seasonal variability	Y - Accurate long term weather forecasts- more accurate at even 4 days! Y - Season variability-crop type and variety diversity	Ranked highly by RCSN members at their RCSN 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 continued to have presence within GRDC. There is current GRDC investment in the Forewarned; Forearmed project
<i>Social licence</i>	<i>PJ - Amelioration- how we manage our social licence, communication and selling the message before we get stopped from doing it, 2019 has seen a lot of topsoil movement and the public perception of it is not positive. Social license roundup etc biggest threat to ag. Education</i>	<i>Ranked highly by RCSN members at their member meeting. The RCSN identified this as an issue impacting on profitability and further developed some aspects of this issue.</i>
Soil amelioration	Y - Cost effectiveness on soil amelioration on different soil types particularly heavier soil type and the costs and effectiveness of different tillage methods. Y - Basic soil amelioration across variety of soil and different implements	Ranked highly by RCSN members at their RCSN 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 continued to have presence within GRDC. There is current GRDC investment in soil amelioration
Farming systems comparisons	Comparison on different farming systems, continuous cropping (rotation) vs mixed enterprise (rotation) vs permanent pasture annual and perennial. Y - effect on soil C of different farming systems. For example, effect on soil C of 1. Pasture with cereal crop, 2. Legume crop with cereal crop, 3. Canola with cereal crop....etc. Y - Long term trials (10-15 years) looking at effect of different farming systems on organic carbon e.g comparing pasture with cereal crop vs legume crop with cereal crop vs canola with cereal crop ...	Noted as an issue by RCSN members at their member meeting, however the RCSN did not further develop this issue at this time.
Lupin agronomy	New pre ems coming through for canola and wheat. Do they have any fit in lupin program? Y - More research into chemistry to control broadleaf weeds (blue lupins, doublegees and radish. Lupins!! Must be on NAR list every time - weed control; breeding. What is being done?	Ranked highly by RCSN members at their RCSN 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 continued to have presence within GRDC.
PJ, Y - Strategies for managing blue lupins on sand-plain in white lupin crops	White lupins are a successful crop but their yield can be destroyed by blue lupins and there is no best practice management strategies for managing them. Y - Lupin variety specific agronomy particularly radish	Ranked highly by RCSN members at their RCSN 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



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	and blue Lupin control as we are using chemistry that is 30 years old. Lupin agronomy packages have not progressed at the same rate as wheat.	continued to have presence within GRDC. GRDC are highly aware of this issue
Stubble residue management from the previous season - prior to re-planting	PJ - farming systems to increase soil cover to conserve moisture, germinating crops in marginal moisture, crop establishment in general, concern that poorer crop establishment after burning. Why are people still burning paddocks. Doesn't make sense.	Noted as an issue by RCSN members at their member meeting, however the RCSN did not further develop this issue at this time.
<i>Rotations</i>	<i>PJ - Knowledge of profitable rotations for controlling resistant weeds with low cost inputs. PJ - Optimizing fallows within rotation - profitability, weed control, moisture retention</i>	<i>Ranked highly by RCSN members at their member meeting. The RCSN identified this as an issue impacting on profitability and further developed some aspects of this issue.</i>
Wattyl tree management	Y - Re-emergence of wattyl trees, especially after soil amelioration. Effective control methods without scrub chaining the whole paddock and therefore leaving the soil bare and prone to erosion. Y - Effective low water rate control of wattle trees/woody weeds. Less than 150L/ha	Noted as an issue by RCSN members at their member meeting, however the RCSN did not further develop this issue at this time.

**NB: ALL issues raised at the Open Forums 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.**

**Thanks and Further Details.**

GRDC now have a Facebook page – [www.facebook.com/theGRDC/](http://www.facebook.com/theGRDC/) (like us!) as well as a dedicated RCSN website – [www.rcsn.net.au](http://www.rcsn.net.au). Follow us on Twitter @Julianne\_Hill, or visit GRDC [www.grdc.com.au](http://www.grdc.com.au). Thank you to everyone who attended the Open Forums and contributed to the detailed discussions. For further details, contact the RCSN Facilitator Julianne Hill on 0447 261 607 or email [regionalcroppingsolutions@gmail.com](mailto:regionalcroppingsolutions@gmail.com)