

GRDC's Regional Cropping Solutions Network (RCSN) held three 'Summer Sesh' events during January 2020. The meetings were held at Jurien Bay Hotel (13<sup>th</sup> January at 5pm with 19 attendees); Broadwater Stilts Restaurant (15<sup>th</sup> January at 5pm with 65 attendees) and Due South, Albany (20<sup>th</sup> January at 5pm with 46 attendees). Online GroupMap technology was used to capture audience input. A key part of these events was the opportunity for participants to share the top issues affecting their profitability. The opportunities and constraints from these events were collated and included for discussion at the various RCSN member meetings held during February.

GRDC's Kwinana East port zone RCSN held their member meeting on 6<sup>th</sup> and 7<sup>th</sup> February at Augusta Hotel. Prior to their meeting, the RCSN members visited Advance Packing & Marketing Services (APMS) to look at a range of technology, specialist equipment & other factors included in the safe handling, transport and packing of avocados; and visited Manjimup DPIRD to view trials of quinoa, barley, wheat, oats and other crops, including a range of cereal breeding work to look at sodic soils and heat tolerance.

Nine Kwinana East port zone RCSN members attended their member meeting including: Clint Della Bosca, Ty Henning, Glen Brayshaw, Alex Leake, Floyd Sullivan, Callum Wesley, Nic McGregor, Darren Kilminster, and Stuart Faulkner. Apologies were received from: Cathy Cooke, Nick Gillett and Luke Yates. Jules Alvaro (Western Panel); Jo Wheeler (GRDC Grower relations – West); Georgia Megirian (Crop Protection Manager – West; Lucy Broad (General Manager Grower Communications and Extension Group); Julianne Hill, RCSN coordinator and RCSN support Cindy Power and Helen Ablett were in attendance. An update on disease issues for the zone was delivered by Georgia Megirian, with a Deep Dive Gap analysis conducted on this topic. An NVT update was also given by Kwinana East port zone NVT representative Ty Henning.

All RCSN members were asked to bring ideas from 5 farmers/advisors from their area, and consider these ideas along with ideas raised from the Summer Sesh events. They were then asked WHAT WILL HELP GROWERS? Consideration was given to area, frequency and impact on profit of the issue or idea and ideas ranked accordingly. These ideas/issues were further discussed: Does this issue still need some work done or has it been fully addressed with past or current R, D or E? ie there is a Research, development or extension gap still. Are they still an issue? Has enough been done on them?

RCSN members then further discussed and expanded on those top issues that need further investment, choosing two to further develop using a MAKAT framework. The following issues were further developed: Long term look at farming systems management options for the Kwinana East port zone; and Crown rot management on heavy soil types of the eastern wheatbelt.

**Table 1: Summary of areas of interest raised at Summer Sesh events or by RCSN members**

| Areas of interest raised at Kwinana East port zone Summer Sesh events and by RCSN members | Expanded areas of interest  | RCSN member feedback from RCSN member meeting and further action  |
|---|---|---|
| <b>Glyphosate use</b>   | Glyphosate application that is not used as a harvest aid (ie just for normal crop production) - develop information for government officials and grain marketers on how safe it is. What glyphosate alternatives are there, if it is banned from use?   | Noted as a very high ranking issue by RCSN members at their member meeting, with this feedback passed onto the Crop Protection Manager – West.  |
| <b>Low rainfall environment farming particularly around sodicity and acidity</b>          | Further research into managing sodic soils. Not chasing big yields, just margin. Identify new or existing fodder crops/varieties/species suited to LRF zone which can be grazed then potentially produce hay or grain. There are a number of Triticale varieties used in SA for fodder, but these varieties are for high rainfall. A suitable variety for WA's LRF acidic soils may help reduce the need for expensive soil amelioration, with the added benefit of grazing for profit. | Noted as a very high ranking issue by RCSN members at their member meeting, with this feedback passed onto the Manager Agronomy, Soils and Farming Systems – West. There is some GRDC investment occurring in this space          |
| <b>Varietal tolerance in wheat and barley for heat and moisture stress</b>                | Hotter and drier winters/springs has seen our current varieties struggle. What is out there that suits our zone?  | Noted as a very high ranking issue by RCSN members at their member meeting, with this feedback passed onto the Manager Agronomy, Soils and Farming Systems – West. There is current large GRDC investment occurring in this space |
| <b>Long term system management trials.</b>  | <i>Farmers 5+ years down CTF continuous cropping with nil livestock and full stubble retention are</i>  | <i>Ranked highly by RCSN members at their member meeting. The RCSN identified this as</i>   |

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|   | <i>achieving incredible results. We need to quantify this benefit against typical wheat/sheep rotations found in the eastern wheatbelt that are in non CTF systems.</i>  | <i>an issue impacting on profitability and further developed some aspects of this issue. Possible revisit of WANTFAs long term work; also current RCSN initiated investment in this space</i>                               |
| Lack of break crop/pasture options.   | Need higher yielding, reliable and lower break even options for the LRZ  | Noted as a very high ranking issue by RCSN members at their member meeting, with this feedback passed onto the Manager Agronomy, Soils and Farming Systems – West.  |
| Early sowing agronomy packages  | Herbicide package research and extension (products, rates, and applications in sometimes dry, warm autumn conditions) for early sown crops (canola, winter wheat etc). Lack of early sowing opportunities through the risk of frost and heat   | Noted as a very high ranking issue by RCSN members at their member meeting, with this feedback passed onto the Manager Agronomy, Soils and Farming Systems – West.  |
| IWM including mapping, green on green, ryegrass and radish management:                    | More analysis of IWM methods and technology. Effects of different methods over multiple seasons. When does it become economic (different technology) and the thresholds for numbers of weeds for different technologies? Spraying of chaff lines – best options.   | Noted as a very high ranking issue by RCSN members at their member meeting, with this feedback passed onto the Crop Protection Manager – West. There is current GRDC investment occurring in this space                     |
| Acidity and aluminium   | More varieties of all crops need Al and acidity tolerance, including barley, wheat, canola, legumes and rhizobia. Further economics of soil amelioration in the LRF zone and lime incorporation options in windy environments. Investigate varietal differences for things like Al tolerance, N usage, frost tolerance etc   | Noted as a very high ranking issue by RCSN members at their member meeting, with this feedback passed onto the Manager Agronomy, Soils and Farming Systems – West. There is current GRDC investment occurring in this space |
| Short season wheat and barley agronomy trials   | Similar to a late sown NVT, to allow for options around late start, or waiting for a germination at the end of the seeding program. Expansion or growth of the area best practice variety trials to replace some NVT sites. NVT can be strategically placed for most value.  | Noted as a very high ranking issue by RCSN members at their member meeting, with this feedback passed onto the Manager Agronomy, Soils and Farming Systems – West.  |
| Connectivity and revisiting options   | Revisiting new technologies of today on connectivity. Eg. Wi-Fi. Crisp wireless.   | Identified by the RCSN members as urgent and important, but currently outside GRDC scope  |
| Diminishing population in rural communities   | This is leading to a lack of skilled labour in our communities. Upskilling farm managers which in turn will help to maintain and/or upskill their own labour. There is a need to have more widely regarded certs and qualifications so workers have pathway in and out of agriculture.   | Identified by the RCSN members as not urgent but important, with GRDC currently considering its building capacity portfolio. Planfarm Academy program is a possible resource  |
| Long term weather forecasting   | For 3-6 months, the growing season, or just 3-7 days out, with greater accuracy.   | Identified by the RCSN members as not urgent but important. There is a current GRDC investment in this space  |
| Barley Grass management   | Weed seed control is an issue as barley grass has shed already at harvest time so mills don't work. The mills can't get the short ryegrass, or Skeleton weed either. Tordon is not controlling skeleton weed efficiently either if insufficient rainfall is received after application. The ideal is to integrate an economic IWM strategy into a farming system for annual ryegrass, radish, wild oats, brome and barley grass. | Noted as a very high ranking issue by RCSN members at their member meeting, with this feedback passed onto the Crop Protection Manager – West. There is current GRDC investment occurring in this space                     |
| Matricaria Management   | Cheap matricaria control in crops and medic pastures in particular, as well as field peas and  | Noted as a very high ranking issue by RCSN members at their member meeting, however   |

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|   | other pulses. Current control is expensive and this weed can outcompete some crops.  | the RCSN did not further develop this issue at this time as RCSN members developed this issue at their July 2019 meeting for GRDC consideration  |
| <b>Effects of header nutrient re-distribution on K, P, S.</b>                             | Economics of not getting it right, issues regarding 12 to 18m header fronts in CTF systems   | Noted as an issue by RCSN members at their member meeting, however the RCSN did not further develop this issue at this time but provided advice to GRDC on further extension in this space including messaging from current and past work in this space  |
| <b>Herbicide carryover in soil</b>  | Microbial degradation of herbicides - as discussed in ICAN herbicide workshops with Mark Congreve. Chemical effects on soil microbes especially with the high off label usage rates, high amounts of Glyphosate used in RR canola systems, and in years of high summer rainfall. | Noted as a very high ranking issue by RCSN members at their member meeting, however the RCSN did not further develop this issue at this time as RCSN members developed this issue at their July 2019 meeting for GRDC consideration  |
| <b><i>Crown rot a big problem in the eastern wheat belt with the heavy soil types</i></b> | <b><i>Further information and extension of varietal tolerance of wheat and barley</i></b>  | <b><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></b>   |
| <b>Agronomic packages for oats</b>  | Grass selective options for oats and IMI oats. More options in general for weed control in oats  | Noted as a very high ranking issue by RCSN members at their member meeting, with this feedback passed onto the Crop Protection Manager – West. There is current GRDC investment occurring in this space  |
| <b>Access to chemicals to do the right job.</b>   | We want some help in improving legislation, enabling us to have the freedom to farm in a responsible way   | Noted as a very high ranking issue by RCSN members at their member meeting, with this feedback passed onto the Crop Protection Manager – West. While not an area that GRDC works in, data and support can be provided to relevant bodies   |
| <b>Where to invest limited dollars?</b>   | There is no prescription to run an individual farm business. Whole farm system: crop sequence choice x sowing depth x sowing time. Ameliorated and non-ameliorated soils. Break crops or cereal/canola depending on depth to moisture, time of season, economics.                | Noted as a very high ranking issue by RCSN members at their member meeting, however the RCSN did not further develop this issue at this time as RCSN members developed this issue at their February 2019 meeting for GRDC consideration. It will be considered also for Business Updates for this zone |
| <b>Fungicide application</b>  | Still lots of confusion amongst growers as to what is the best fungicide product to use. Another key area is aerial application efficiency for resistant fungicide and insecticide issues, such as adjuvant selection with aircraft setup and environmental conditions.          | <b>Noted as an issue by RCSN members at their member meeting, with further input provided by RCSN members to GRDC in a Deep Dive</b>   |
| <b>Getting tech for use on farm in Australian conditions.</b>                             | Fast tracking research to meet these farming conditions. How do we make us an attractive market?   | Noted as an issue by RCSN members at their member meeting, however the RCSN did not further develop this issue at this time  |
| <b>N timing - what is the best time for application?</b>                                  | This has changed over the years and needs to be revisited.   | Noted as an issue by RCSN members at their member meeting, however the RCSN did not further develop this issue at this time but provided advice to GRDC on further extension in this space including messaging from current and past work  |

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| Deep placement of nutrients - P mainly, K possibly.                                       | When to do it, where to place it, how to do it. Does deep placement of P on high PBI soils impact yield? I.e when you need to put 20+ kg/ha of P in furrow on a very high PBI soil does this impact emergence in a dry start? | Noted as an issue by RCSN members at their member meeting, however the RCSN did not further develop this issue at this time but provided advice to GRDC on further extension in this space including messaging from current and past work |

**NB: ALL issues raised at the Summer Sesh events and RCSN member meetings 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

Thank you to everyone who attended the Summer Sesh events and RCSN member meetings and contributed to these discussions.

For further details, contact the RCSN Facilitator Julianne Hill on 0447 261 607 or email [regionalcroppingsolutions@gmail.com](mailto:regionalcroppingsolutions@gmail.com). You are also welcome to visit the RCSN website – [www.rcsn.net.au](http://www.rcsn.net.au); and to follow us on Twitter @Julianne\_Hill, or visit GRDC - [www.grdc.com.au](http://www.grdc.com.au).

A number of RCSN initiated projects have been put on the ground in the Kwinana East port zone since 2011 and can be found on the RCSN website at [www.rcsn.net.au](http://www.rcsn.net.au).

The winter round of Open Forums will be held during mid-August 2020 within the Kwinana East port zone, followed by an RCSN member meeting (depending on Covid-19) which will be held in Southern Cross on 13<sup>th</sup> and 14<sup>th</sup> August 2020. Further details will be available soon.