



CQ-RAC meeting Emerald – Wednesday 28th August

Attendees: Graham Spackman (Chair), Nigel Gregg, Anthony Lee, Richard Sequeira, Gordon Staal, Lisa Bradburn (proxy for David Jordan), Sandrine Makiela, Gary Fullelove, John Cutler.

Apologies: Myles Ballentine, Colin Dunne, David Jordan, Michael Mactaggart, John Sheppard, Rex Williams.

CQ Minutes from March 2013: Accepted.

Business Arising: Gary Fullelove to expand on DAFF capability in nominee report.

GRF Issues:

Grains Institute Proposal

John gave an outline of the objectives of GRFL in putting the proposal forward. Gary was able to brief the meeting on the DAFF response and some of the issues they had with the present proposal. That included the multipurpose use of some nominated DAFF facilities, HR complications of transferring staff and financial problems. The view during discussion was that the philosophy behind the proposal had merit and discussions should continue.

Bazley Review of RAC

As a preview to discussion on the GRDC review, key points were outlined. These included a need to improve support for RAC's to make meetings more efficient, to improve the PIP document and to improve the link with R&D providers. It was noted that a number of comments in the Bazley review were included in the GRDC review.

Report on GRDC Issue Identification Mechanism

Copies of the Executive Summary were distributed to members. John Cutler began discussion with the following remarks:

The effectiveness of all RAC's is presented as similar while it is acknowledged that the Northern Region has been more structured and effective.

A key recommendation is to reallocate RAC funding to be more strategic.

GRFL plans to continue to support its RAC's. GRFL seeks to have a clear grower voice in how grower research levy funds are committed. GRFL is keen to support growers to develop their understanding of how research and its management to be able to contribute higher level forums.

It is understood that Nth NSW have been allocated funds for RAC's for the next year. GRFL will be discussing a similar allocation.

Members involved with Grower Solution Groups discussed the activities of those groups and the relationship to RAC's. It was commented that the report seemed to understate the use made of the PIP by research providers and their senior scientists as well as Agronomists. Members agreed that the PIP was readily available to all who wanted it even though the Review was concerned it was not a public document.



The meeting agreed that there were too many demands on growers to turn up to events discussing research priorities. If it could be recognised that supported RAC's could be the primary grower input to issue identification then the need for Grower Solution Groups to identify research needs would be reduced. If other forums are set up by GRDC it will be the same growers and agronomists called on. How new forums will better identify research question development is unclear as is the role of RAC's if they continue.

Member reports:

Lisa Bradburn:- Sorghum program had a good trial at Capella and not so good at the Emerald Ag College research station. Winter nursery at Ayr is good.

Nigel Gregg:- Continuing problems with feather top rhodes and sweet summer grass. In some cases practices are going backwards from controlled traffic with increased cultivation to control grass weeds resulting in erosion and soil moisture loss.

This year's summer crop was one of the best ever. Early planted wheat and chickpeas look good.

Gordon Staal:- There are now issues with compaction and some growers are making questionable use of diamond harrows, kelly chains or discs, etc to level ground.

Growers using long term forecasts have opted for the wrong strategy when weather did not turn out to be the forecast most likely.

Spray drift has been a problem with growers disappointed with the response from Biosecurity Qld.

Gordon questioned whether the genetics of secondary root and crown root development are understood and used in variety selection.

African Turnip has become a problem weed in chickpeas.

Staygreen in sorghum has been causing problems as some varieties are proving very difficult to spray out before harvest.

Anthony Lee:- There has been a big increase in fertiliser use. Some crops on black soils have "crashed" for the first time with adequate N fertiliser and moisture below suggesting an acute nutritional problem. Discussion followed on use of P and K and deep placement. It was noted that on farm solutions to the practicality of deep placement of fertiliser are needed.

Weed control has been an issue on scrub soils.

Graham Spackman:- Best sorghum ever with yields 3-4t/ha in the Capella area. There have been seed quality problems with poor plant stands noted in some varieties, notably MR **Buster** which has reduced yields this year.

Corn has performed well with better varieties now available to growers. Growers who get their management right are getting good crops but a lack of markets is an issue.

Winter crops are variable with early crops on good moisture looking well. Chickpeas have moderate insect pressure so far, with only 1-2 sprays being applied commonly.



Weeds. Some growers are managing feathertop ok but sweet summer grass is a bigger problem on some farms.

Richard Sequeira:-

CQGS activities.

- The winter road show visited 8 districts and were attended by 102 growers and 65 industry people
- A comprehensive management plan for FTR and SSG based on trial results and other existing information was presented
- R&D Issues collected at those meetings showed soil/plant nutrition is the overriding priority in all areas of CQ
- Grass weed management remains a high priority, growers are still struggling with FTR and SSG.
- The project's cereal/legume rotation work ends in October – a new fertiliser response trials protocol has been developed and is being finalised. The new protocol will be implemented in approx 8 trials over the next 12-18 months
- Key priorities in grass weed management are ways and means of making the double knock strategy more consistently effective and promoting greater uptake of a holistic integrated weed management strategy .
- The project team is now finalising herbicide trial protocols for the summer based on priorities from grower meetings.

Outstanding R&D Issues

- Long term monitoring of fertilizer and deep placement nutrient trials. Current programs aren't sufficiently funded to continue long-term monitoring of responses to deep fertiliser placement.
- Conventional wisdom on our understanding of N mineralisation, budgeting and management with fertilisers has been challenged. This needs to be examined as a priority and steps taken to address knowledge gaps, possibly through additional research, pulse agronomy or some combination of avenues. (Current research is studying N response in grain sorghum to clarify currently used N management guidelines apparently based on scant data)

During discussion on Richard's report others commented that the group had been criticised by GRDC for including other GRDC funded projects in their Road Show activities when other projects were funded to conduct their own activities.

Nominee reports

Sandrine Makiela CQU:-

- Dryland rice at Alton Downs was yielding well with some varieties yielding up to 6-8t/ha. Further initial screening until the end of 2014
- Soil health scientists are tracking soil microbes over the season comparing till and no-till. A WA researcher is mapping soil microbe data and CQ data is not available. (Offers of assistance were made from the meeting) CQ soils appear to be some of the poorest for soil microbes. Nigel mentioned some work where Nottingham researchers were suggesting that there was potential for the use of certain N-fixing bacteria to nodulate the roots of non-legume crops.

Gary Fullelove DAFF:-



- QLD strategy to double production by 2040 has been launched with the RD&E plan on how it will help achieve the Minister's plan
- A key strategy is to partner with as many organisations as possible such as Universities etc.
- Biloela research farm will be sold. Biloela staff will remain in the office buildings. All seed from the long term store has gone to the new facility at Horsham, Vic.
- DAFF is looking at increasing investment in Emerald Ag College and upgrading the Hospital Rd facility. A research area of 67ha is available and sheds and facilities are being constructed for the new DAFF research station base. A new planter and a header are included
- Eagle Farm complex is now empty. Stuart Addison from Agrisearch in Toowoomba is setting up a commercial post-entry quarantine facility there.
- A submission has gone to the Minister to seek a new irrigated research farm on the Eastern Darling Downs. Wellcamp and Kingsthorpe are to be sold. Extra area is needed to support Hermitage RS and the facility will be available to other Research Organisations
- Staffing: A replacement is being sought for Mal Ryley who may be offered Research Associate status to mentor new staff after retirement. A replacement being sought for Hugh Brier. Ryan Fowler is understudy to Greg Platz. A new initiative for Plant Diagnostics has been funded for 3 years to provide ad-hoc support to horticulture and grains, relieving work load of plant pathologists etc. New agronomist positions are to be rolled out, 2 in CQ and 4 in SQ using funds saved from closure of barley program.

GUEST SPEAKER - ANDREW BATE - ROBOTICS

Andrew spoke with enthusiasm about concepts which could change the way we think about grain farming. Is bigger really best? Bigger wider faster machines can be too heavy, cause more compaction creating other problems. An answer, robotics. Widely used by the military and in mining.

The concept. SWARM FARMING. Lots of smaller simple machines which are safer, weigh less, are modular so there can be more redundancy to cover failure. Many operations work better at slower speeds such as using microwave for weed control.

"The things we haven't thought of are the most exciting"

Andrew is working with the Australian Centre for Robotics at QUT on:-

- Navigation – vision technology with GPS backup – more accurate than GPS
- Obstacle clearance
- Multi robot coordination
- Ethics and legal considerations

The first generation machines are likely to focus on weed control with working prototypes next year? There are many engineering as well as electronic challenges to meet. Second generation machines are likely to focus on planting.

Progress of this project will be watched with great interest.

Communication

Following Andrew's futuristic presentation there was a brief discussion on the use of modern technology for communication for the RAC. There was support for GRF to follow this up for future meetings. Social media,



webinars were among things mentioned. The possibility of having a meeting at several locations using high speed video conferencing was canvassed.

Another comment was to have the Issue ID meeting with no other business on the agenda and to allow full focus on that task.

Next meeting

The March 2014 meeting would traditionally be held at Biloela. It was decided to wait to see if there was to be any change in RAC approach as a response to the GRDC review and the discussion on communication. All members were supportive of continuing the RAC role.

The meeting closed at 2:30pm