

Minutes of WDM RAC Meeting – 8 March 2011

Bowls Club, Miles

meeting commenced at 9:45am

1. Chairman's Welcome and Confirmation of Agenda

In the absence of Chairman Nev Boland, Charles Nason consented to act as acting Chairman and opened the meeting and welcomed the members and guests.

2. Attendance

C. Nason, V. French, J Crocker, T. Kapcejevs, J. Colbourne, L Hill, M. Duffield
Nominees: R. Taylor (GRDC), A. Kelly (DEEDI), A. Borrell (UQ), L. McIntyre (CSIRO)
Guests: J. Duffield, R. Hamilton, D. Hill
Co-ordinator: L. Webb

3. Apologies

N Boland, N Benson, A Kluck, J. Sturgess, M. Dieters, D. Poulsen, D. Scanlan

4. Confirmation of Minutes (03/09/2010)

Confirmed

5. Election of Chairman

With the commencement of the new RAC term the acting Chairman, Mr Charles Nason declared the position vacant and called for nominations
Mr Nev Boland was nominated (moved M. Duffield, seconded C. Nason) and was elected unanimously and unopposed as Chairman for the coming year.

6. RAC Members' Reports

Vic French

- the winter season looked good early then it rained and rained
- a lot of the area was unharvested
- "head blight" was an issue
- there is a dire need for resistant varieties-rust and yellow spot
- Farmers saw the benefit of spraying
- chickpeas were a disaster
- barley was a disaster-new variety Shepherd performed well
- sorghum- early crops were excellent-some ergot-a lot of Midge

Rod Hamilton

- season was one of exceptional circumstances
- white grain disease
- may burn to break the disease cycle
- self- mulching soils better suited for Zero till
- mice are coming!
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James Colbourne

- December/January sorghum plantings were eaten by mice
- Mungbean plantings were also eaten by mice and much is unlikely to be harvested
- chickpeas-farmers didn't put a precautionary fungicide sprays-complacency-
- canopy management-wider row spacing's increased airflow-other factors included planting time, density, and water availability.

- Farmers are experienced dryland managers.
- A simulation model may be useful

Liz Hill

- the season had an extended cool period-disease implications
- crop lagged development-timeliness of sprays was important
- soil health may have been an issue-rotation management
- root legion nematodes are increasing

David Hill

- chickpeas-plant later in a wet year -issues included lodging /Heliothis /splitting
- wheat-significant stripe rust et cetera
- barley-Shepherd variety went very well-some lodging from the rain-halfway up the stems-went malting classification
- moving to summer cropping
- nearby property utilised compost tea in wheat-only sprayed once-very good crop

Rod Taylor

- “Mouse off” use under threat
- GRDC emergency fund application for mice control
- good hygiene helps mice control-typically there is a build-up in autumn, death in winter however a death failure in winter may produce a plague in summer.
- With mice, baiting is very important-winter planting is now under threat-burning and deep planting may help-air baiting with is about \$35 per hectare

Mark Duffield

- wheat-grew “Bounty”-didn't spray for rust
- barley-grew Shepherd and Grout -harvested 90% and 30%
- mice-suggest ploughing may assist in control
- Feather Tops Rhodes grass has spread extensively-winter cropping in crop rotations may assist in suppressing-spraying with roundup when young is effective

Jennifer Crocker

- Sorghum-early harvested crop was good-later crop had problems with emergence, mice and grasshoppers.
- Widespread soil erosion occurred
- Chickpeas-failed crop stubble very difficult to plant into- now seen as a very high risk crop

John Duffield

- farmers have dry farming expertise -the very wet year was not managed well

7. Guest Speaker

Rob Taylor delivered a PP presentation prepared by GRDC- key points included....

- The global wheat breeding environment
- Wheat breeding in Australia
- Where are the next varieties coming from?
- How is GRDC addressing longer term challenges?

Private:

Syngenta, Limagrain,
Bayer Crop Science,
BASF, Monsanto,

Dow Agrosciences

Public:

CIMMYT, ICARDA.

Public wheat breeding in the US and Canada

Plant Breeder's Rights Legislation:- The Plant Breeder's Rights Act (1994) grants breeders 'ownership' of their varieties and enables them to set conditions on their use by others.

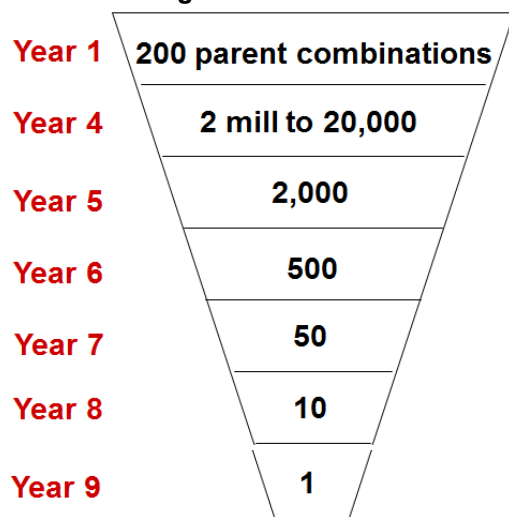
GRDC National Wheat Breeding strategy :- The strategy has changed in response to a changed environment for wheat breeding.

- Public investment in breeding was declining.
- The 1994 Plant Breeder's Rights legislation created value capture mechanism in the form of seed and End Point Royalties. This provided an incentive for private investment
- GRDC has been re-directing levy money into pre-competitive, strategic pre-breeding research and other important parts of the GRDC portfolio.

Northern Wheat Breeding M & As

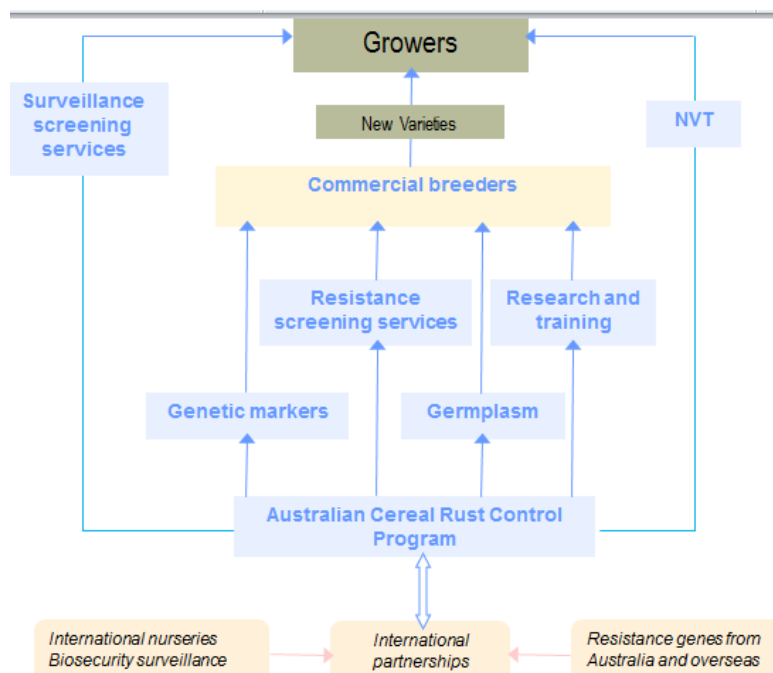
- 2001 - Establishment of SunPrime Seeds, a wheat breeding JV between GRDC, Sydney Uni, and GrainCorp
- 2002 - CSIRO set up Graingene with AWB Limited, GRDC and Syngenta Seeds to produce varieties for the main wheat belt
- 2003 - Creation of Enterprise Grain Australia (EGA), a partnership between GRDC, QDPI, NSW DPI and WA Department of Agriculture.
- 2005 - Merger between SunPrime Seeds and AGT
- 2008 - Shut down of EGA and transfer of QDPI and NSW DPI wheat breeding to AGT

"The Breeding Funnel"



GRDC pre-breeding priorities include:

- Frost
- Salinity
- Drought
- Disease
- Quality



- **Rust biosecurity : managing the risks**

Continuous - incursions

- mutations

Requires continuous supply of new resistance genes

Wheat Breeding: Key Points

- We've got a structure for wheat breeding in Australia designed to make it world leading and sustainable.
- GRDC no longer directly invests grower levies into breeding programs. We've redirected a lot of those funds into pre-breeding and other activities like agronomy.
- GRDC's investment in pre-breeding is critical for solving long term challenges because no-one else can and will do it.
- NVT now offers robust information for growers.
- Improving the EPR system is critical for a viable wheat breeding industry in the future.
- Pre-breeders develop germplasm
- Pre-breeders and breeders need close links
- PVR- very low collection of funds in Queensland
- varieties that are broadly adaptable is the most important attribute
- Frost research has moves South- Renée negotiation with GRDC
- expansion in Asia will help with Queensland varietal access
- breeding is almost totally commercial now
- there is a significant need for northern region focus

8. RAC nominees' reports

Andy Borrell (UQ)

- Pre-breeding-very wet season has enabled selection for yield and disease resistance rather than drought

Rob Taylor (GRDC)

- weeds in the northern region an investment priority
- herbicide resistance an emerging issue
- canola/mustard rotation trials happening
- pre-breeding-Crown rot and nematodes trait selection priority
- update meeting at Miles poorly attended-Goondiwindi well attended
- only 2 companies registered for rust sprays
- spray registrations- need for quicker process and alignment of protocols
- communications-need for a better system to communicate issues and remedies
- extended contracts-consideration being given to extending some research projects to 5 years

Alison Kelly (DEEDI)

- NVT-some exciting testing occurring
- National framework implications
- methodology issues being assessed
- Crown Rot, Nematodes and Frost traits priority
- David Poulson-damage assessment-supply chain issues-impact expected over 2 to 3 years-evidence of psychological battering
- 20/20 strategy happening-consolidation phase
- review of accommodation in Toowoomba-Leslie Research Centre nearly full
- young farmers with expertise will manage larger areas in the future
- short-term employment contracts a reality-reallocation to vacant positions are normality

Lynne McIntyre(CSIRO)

- operations in 5 areas- sugar, soyabeans, tropical forestry, wheat
- Fuzarium group-lots of samples
- abiotic group-water, heat, yield
- germplasm evaluation-what works and why, -what is needed
- Narrabri facilities-common site –GRDC supported
- flood damage at Gatton had research implications-lodging trials data compromised - glasshouses underwater-Soybean crops survived and looking good-lack of planting opportunity for new trials-overall damage may equate to a loss of one year research
- GMO wheat trials-understanding of gene function

Tom Kapcejevs

- Nematodes F4 screening- three-year project
- Crown rot F2 screening
- H45 progeny with good PHS resistance in pipeline
- Gregory Heritage-some lines showing promise
- long coleoptile from CSIRO now being trialled(minimum 10 cm screening)
- Cook and Hartog – Still main families, but adding other sources including CIMMYT to add greater adaptability and a wider germplasm
- SUN440H serious impacts regarding the mixup in propagation – Expected to be released later this year.

9. Next meeting

Date: 30 Aug 2011

Venue: Liz Hill

Speakers: TBA

10. **Closure**-Meeting closed at 4:50pm