

Minutes of Darling Downs RAC Meeting – 24 Feb 2011

USQ Toowoomba

meeting commenced at 9:35am

1. RAC introduction (not required)

2. Chairman's Welcome and Confirmation of Agenda

As Mr Bidstrup was an apology, Mr Newton stood as acting Chairman and opened the meeting and welcomed the members and guests.

3. Attendance

Members: C. Hornick, C. Joseph, M. Burgis, L Berry, S. Pfeffer, Bede O'Mara, B Coleman,
Nominees: R. Williams (QDPI), M. Sutherland USQ, W. Newton (GRFL), G Whish (CSRIO), D. Freebairn. (GRDC)
Guests: D. Skerman.
Co-ordinator: L Webb

4. Apologies

W. Bidstrup, J. Thompson, Z. Hochman (CSIRO), C. Joseph, B. Warren

5. Election of Chairman

With the commencement of the new RAC term the existing Chairman, Wade Bidstrup had advised the coordinator that he was willing to stand as Chairman for another term. The acting Chairman Mr Newton called for nominations.

Mr Wade Bidstrup was nominated (moved S. Pfeffer, seconded W. Newton) and was elected unanimously and unopposed as Chairman for the coming year.

6. Confirmation of Minutes from the meeting of 17 Aug, 2010

Confirmed

7. Matters Arising

7.1 There were no matters arising.

8. Business

8.1 The meeting broke into 3 groups and reassessed the Priority Issues...(See PIP for amendments)

9. Guest Speaker

David Freebairn(GRDC) delivered a PP presentation prepared by GRDC

- 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

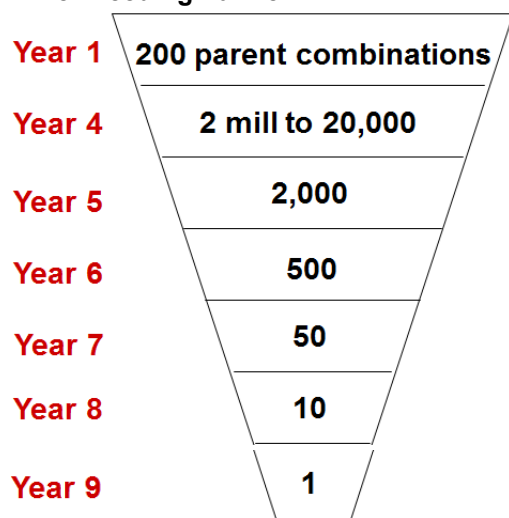
2002 - CSIRO set up Graingene with AWB Limited, GRDC and Syngenta Seeds to produce varieties for the main wheat belt

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

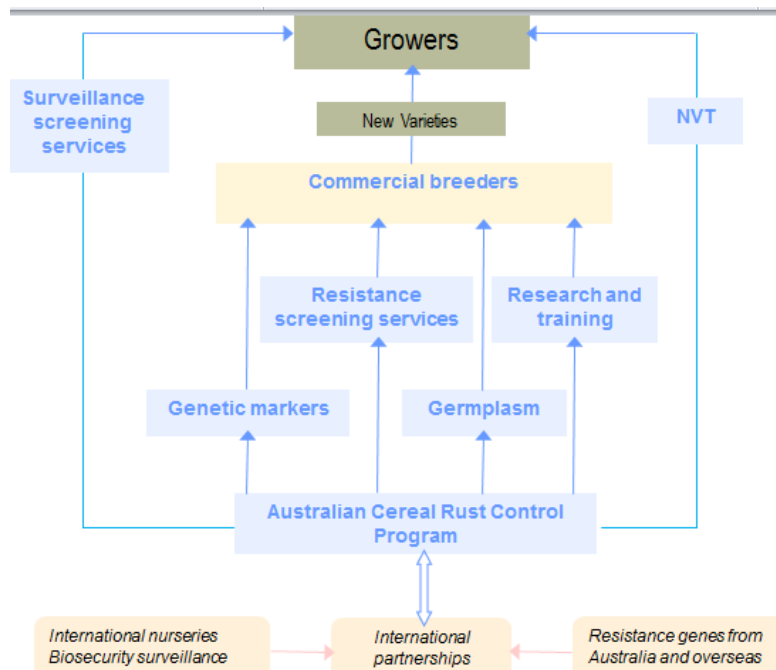
2008 - Shut down of EGA and transfer of QDPI and NSW DPI wheat breeding to AGT

"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.
- Prebreeders develop germplasm
- Prebreeders 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

10. RAC members' reports

Lindsay Berry

- it was a very very wet year and a late harvest with a lot of damage

- sorghum crop was okay
- expecting high disease levels in winter

Mike Burgis

- substantial soil erosion occurred due to run off and flooding
- substantial infrastructure damage will take some time to repair
- research loss occurred-results will be difficult to obtain
- lesson learnt-must use fungicide
- exceptional seasonal conditions will result in substantial economic pressure
- Blazeaid- reluctance to accept
- seasonal conditions brought on the 1st impact of control traffic
- noticeable differing effects strip cropping v's open paddock

Daniel Skerman

- lots of paddocks un-harvested- mainly chickpeas
- large areas of late planted corn
- large variation in sorghum crops
- excess wet may have leached nutrients

Bede O'Mara

- large volumes of liquid "N" utilised-some supply issues
- urea was a wasted on flooded areas
- nitrogen levels for winter crops will be an issue(soil tests required)

Wayne Newton

- substantial damage to irrigation setups to property adjacent rivers
- early spring sorghum is light weight
- ground is hard
- weeds are an issue
- roundup ready assisted
- some spray drift issues
- cotton industry understanding of issues

Ben Coleman

- most disappointing year
- white grain disorder-subjective sample analysis issues, machine calibration and toxin testing required-blending assists
- chickpea disaster
- leaching issue
- weed control-Feather Top Rhodes grass
- seed availability

Shane Pfeffer

- season was wet from end July through to January
- wheat was very poor crop
- white grain acceptance issue- said to be acceptable for chickens but not for pigs
- barley-Shepherd variety weathered okay
- chickpeas harvested 50%
- feather top Rhodes grass-if sprayed when active growing OK
- Spring mung bean returned 1 t per hectare \$1225 per tonne
- wheat seed from northern New South Wales

- chick pea seed scarce
- barley- Grout was a disaster
- Cashflow requirements will force winter planting-

11. RAC nominees' reports

Dr Williams (QDPI) reported on a number of items including:-

- review of accommodation requirements in Toowoomba.
- addressing filled requirements
- building identity for agricultural science
- Crop and Food science department within DEEDI
- highlights document due soon
- Post management forum
- Factsheets /growers/_agronomists
- barley breeding expression of interest-negotiations continuing
- revamping Web for better client connection

Prof Sutherland (USQ - Centre for Systems Biology).

- National research benchmark (measure of excellence in research)
- USQ scored "4" which equates to world class rating
- tour of research facilities

Research Goals

Improved cereal varieties through ID of resistant lines for use by breeders

Identification of genetic regions responsible for host resistance and the actual genes/pathways responsible

Understand biology of disease and resistance

Three groups of projects with a range of collaborators:

- 1) Transfer of hexaploid resistance into durums – I&I NSW.
- 2) Improved genetic markers for resistance – DEEDI, I&I NSW, UQ, U of Syd.
- 3) National Ring Test. Optimisation and comparison of phenotypic rating methods – DEEDI, I&I NSW, CSIRO, U of Syd, SARDI.

Trials for Ring Test: Wellcamp, Coonamble, Tamworth, Narrabri, South Australia (Roseworthy & Hart)

Visual disease rating

Quantitation of fungal DNA in host tissue

Yield comparison between inoculated and uninoculated plots

Research Questions:

Do all visual assessment techniques correlate?

Do seedling test scores or fungal DNA correlate with yield losses?

Do any lines show evidence of tolerance (significant infection levels but low symptoms and/or little yield loss?)

How does this fungus grow in cereal tissues? Use of fluorescence microscopy.

Mr Newton (GRFL)

- Mr John Moloney has recently been appointed as director
- there is a need for additional grower directors

David Freebairn (GRDC)

- John Harvey new CEO starts March 1
- currently finalising 2011 investments
- northern panel seeking members(good experience)
- emerging carbon consideration requires nitrogen input

Jeremy Walsh (CSIRO)

- NVT trials-mass of data available to be sorted(but less due to weather)
- new soil moisture measuring equipment available
- young graduate appointed to Toowoomba

12. Next meeting

Date: 18 Aug, 2011

Venue: Heritage Research Centre Warwick

Visit:-

13. Closure

Meeting closed at 3:30pm