



Durum Growers Association SA Inc

www.durumgrowerssa.org.au

From the Chairman ...

Issue 3-October 2012

Exciting times are ahead for Durum growers. A bold statement some may say but with the release of Tjilkuri in 2011, and more recently Yawa and 802 as well as Hyperno and Saintly, producers have a greater potential to lift farm production with varieties to suit their environment. More varieties are not many years away but they need more evaluation before release.



2012 has been a challenging year for most areas especially without the subsoil moisture of 2011. It is a tribute to all farmers and modern seeding technology with below average rainfall in most cropping areas how well Durum crops are handling the year. Lets hope they all mature well with good grades.

The DGA has been very busy in recent times with our AGM on July 10 with the election of a new chairman, and new committee members, Malcolm Eastwood from Kaniva, Ben Hunt from Bordertown and Fil Ciancio from San Remo. Thank you to Leith Cooper as past chairman for his great service to the DGA.

That same evening we held a very well attended tribute night for Prof Tony Rathjen with many speeches recognising Tony's outstanding service to agriculture in Australia.

Crop walks at Georgetown and Navan the Mid North High Rainfall site on September 4th and Paskeville on the 26th September went well with Yawa released by Prof Tony Rathjen on the 4th.

The Bordertown/Kaniva field trip held on 16th of October went really well with big crowds and outstanding crops to view, many thanks to all people involved with all crop walks, a job well done to promote the industry.

Dr Jason Able has been very active with his input which the DGA really appreciate. Jason attended another industry day on the 17th of October at Horsham and was overwhelmed with producer and industry support which is encouraging for increased Durum production in Western Victoria.

The committee is already planning Forums for 2013 at Kaniva and Blyth. See our website for further information regarding Forums, crop walks and industry updates.

It has been a busy few months for me as chairman but I must thank secretary Monica for her outstanding work, and John Green who coordinates sponsorship and trial work, for his great support.

To all committee members and Sponsors, the DGA can not operate without you, a special thanks to you all as well as our seed multipliers.

Wishing you all a hassle-free, prosperous harvest.

Mark Hill, Chairman

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WID802 and Yawa release—4th September 2012

As part of the annual durum crop walk in Kaniva on the 16th October, WID802 – a new durum variety bred under the southern node of Durum Breeding Australia was officially released at Alwyn Dyer's property. Professor Tony Rathjen (now retired) was largely responsible for the breeding of this variety which certainly appears to be favourable for the Kaniva district.

Dr Jason Able, southern node leader of Durum Breeding Australia, said; 'even though another new variety Yawa has outperformed WID802 in this district based on long term National Variety Trial data, growers are showing that WID802 in their own experience is winning the day'.

Yawa, released in September this year in the mid-north region, is another exceptionally high yielding variety with excellent semolina colour.

WID802 is a well adapted, high yielding durum suitable for production in most areas of southern Australia. Dr Able said that it has a yield advantage over the majority of durum varieties and that it has been classified as APDR by Wheat Quality Australia for South Australia. The test weight is acceptable and like other durum varieties has excellent levels of resistance to leaf, stem and stripe rust (MR or better).

With more than 30 growers and agronomists at the crop walk, other highlights included inspecting durum on Simon Ballinger's (Tjilkuri) and Wally Meyer's (WID802) properties, and attending the NVT site with Dr Able discussing current and potential durum varieties that may be released as early as 2014. Dr Able also outlined where the southern node of Durum Breeding Australia is headed. Of particular note were the recent and significant investments made by GRDC, San Remo and the University of Adelaide, as well as the students in the breeding program which have commenced research looking at water-use efficiency and crown rot.

"Thanks to the GRDC, the program now has a further five years of funding. Nationally this is worth \$6 million, of which about 50% comes to the southern node. San Remo and the University have also made valuable contributions which enable equipment upgrades for the breeding operations."



Prof Tony Rathjen at the release of Yawa at the Mid North High Rainfall Trial Site, Riverton.



Dr Able also pointed out that in conjunction with the Durum Growers Association and other organisations including SARDI, the breeding program will go from strength to strength over the years ahead. A new project recently funded by SAGIT will enable SARDI, the DGA and the breeding program to investigate new strategies for grass weed control. DGA chairman Mark Hill stated that 'this project will be very important in identifying alternative options for ryegrass control due to Sakura not being recommended when growing durum.'

With an estimated 12,000 ha of durum being sown in this district alone for 2012, the future is looking bright. Both Dr Able and Alwyn Dyer were quick to point out that while some growers may be reaching their limit, the district as a whole could easily expand further over the coming years (potentially doubling) with the varieties that have recently been released.



Jason Able
Lecturer in Plant Breeding & Genetics,
DBA Southern Node Leader,
School of Agriculture, Food & Wine,
The University of Adelaide

Foreword

As many of you are aware the durum breeding program at the Waite was founded by Professor Tony Rathjen in 1989 and since 1990 has involved an informal partnership between the University of Adelaide, the SA Durum Growers Association (DGA) and San Remo Macaroni Pty Ltd. More recently (2007), the Australian Durum Wheat Improvement Program (ADWIP) was formed and ran until end-June 2012. Now with a new negotiated program funded by the GRDC, Durum Breeding Australia (DBA) has been launched. While we are still a publically funded breeding program, we felt that it was important to have a brand which was recognisable and which will help significantly expand the industry further. We are also very fortunate to still have continued financial support from San Remo and the University of Adelaide. More on this below....

Key Highlights 2012

- ◆ Two new varieties (developed under ADWIP) but released as part of DBA were released in 2012. The first of these Yawa (4th September) is an exceptional high yielding variety with excellent semolina colour. It was great to see Drs Gururaj Kadkol and Mike Sissons from the northern node make the trip over here for the release. The second variety released, WID802 (16th October) is also a high yielding variety with good colour attributes. The grain size is larger than Yawa and is less prone to having higher screenings. Both of these varieties were bred by Professor Tony Rathjen, Dr David Cooper. Dr Mike Sissons from NSW DPI in Tamworth also had a substantial role to play in getting these to be released, having completed all the quality analysis needed to meet Wheat Quality Australia's criteria. See the DGA website for fact sheets on these two varieties!

- ◆ Two advanced breeding lines remain in the National Variety Trials (NVT), 2012 (UAD0951096 and UAD1053255). These lines are showing promise, particularly UAD0951096. This line is yielding exceptionally well not only in SA but all over NSW as well. Grain size is excellent (~50 g / TGW), which is comparable to the larger grain size varieties from the north (including Caparoi and EGA Bellaroi). Colour is also acceptable, being in the high 20's (Tjilkuri/WID802 level). More news on the development of UAD0951096 and UAD1053255 next year at the Durum Forums.
- ◆ Current pre-breeding research that is directly linked with the breeding program at the University of Adelaide will underpin further improvements in crown rot tolerance (with Hugh Wallwork – we have submitted a tender to GRDC), zinc efficiency (UA/GRDC) and grass weed control (through Rob Wheeler, Kenton Porker [SARDI] and the DGA, which is funded by SAGIT). Not being able to use Sakura on durum may limit further expansion of the industry short-medium term. Consequently, management and genetic solutions are needed. The breeding program will work in conjunction with Rob, Kenton and the DGA to ensure that all current promising breeding lines (predominantly S3 and S4 materials) are evaluated by Kenton, and that any useful germplasm is fast-tracked.
- ◆ With many new operational changes having been made (in the process of being made) to the breeding program; it is an exciting time to be involved with durum. In addition to new equipment that will see the program move into the 21st Century, many more crosses are being made each year with diverse germplasm sources. This will enable the program to screen many more potential new combinations of traits that perform well in our environment.

- ◆ Other exciting news for this year is that the breeding program will have a new Victorian site for trials from 2013 which will be run on Alwyn Dyer's property. This along with the trial at Ted and Janette's in Bordertown will give us some excellent data on how the material is tracking in the varying soil-types down that way.
- ◆ This year, in conjunction with Birchip Cropping Group and Agritech Rural, we were fortunate enough to have sown 2 'Time of Sowing' variety trials at Horsham. I presented a talk at a very well attended field day (~50 growers and agronomists) on the 17th October. Hopefully a few growers from the Horsham area will be prepared to try durum in 2013, subject to DBA obtaining out of region classification for the recent varieties.
- ◆ Operational changes in the south have been notched up a gear. We will have our new header arriving early in the New Year. The Wintersteiger Delta is a state of the art piece of harvesting equipment. This will result in the program running more efficiently during harvest time. As a consequence of this, we are in the process of having a new seeder built which will marry with the Delta. These two equipment purchases, along with a new truck, have only been made possible through the contributions that San Remo and the University have made towards the durum breeding program. So a big thanks to them. To celebrate the arrival of the Delta, be on the look-out for an event some-time in the New Year at the Waite Campus where we will unveil 'her' name.
- ◆ Out in the field, there were some minor signs of chilling/frost damage during flowering at some of our sites. This was not isolated to any particular lines or experiments and was not widespread. Unfortunately the Bordertown trial at Ted & Janette's was a bit disappointing. Slow establishment and much colder weather (than anticipated) in July resulted in the durum getting a very slow start against the dreaded ryegrass. These conditions in combination with some water logging around the area where most of our trial was, means that about 70% of this trial has been abandoned in 2012. Fortunately, the ryegrass was not as prevalent around our pre-breeding trial and F₂ plots (which contain some crosses of significant interest including the one in the photo over the page).



Figure 1: The Wintersteiger 'Delta'.



Figure 2: Early generation cross (left) which shows significantly early maturity (more so than Saintly, shown on the right). The anthers in the line on the left have clearly dehisced, whereas the anthers on Saintly are yet to emerge in most cases. It is early days but it will be one to watch, and a possible exciting alternative to Saintly!

- ◆ Finally, the southern node of the breeding program has seen an expansion in student numbers over the past year. Whether it is pre-breeding or discovery research, we now have five students involved.
 - ◇ Two students (Mohsin and Salum) will complete their Masters by Coursework this year. Mohsin (supervised by Jason, Dr Marg Evans and Assoc Prof. Amanda Able) has been investigating the link between Zn application and incidence of crown rot, while Salum (in Prof. Diane Mather's lab) was studying the genetic variation in durum using marker-based approaches. Some of these results can be presented at next year's durum forums.
 - ◇ Another student, Domenico, has joined us from Italy and he is also looking at crown rot. He is being supervised by Jason and Diane. His role will be to use both genotypic (markers) and phenotypic approaches to determine whether a correlation between the two methods can be detected in a set of durum lines that have come to us courtesy of our breeder in the northern region (Dr Gururaj Kadkol).
- ◇ Haipei Liu has also very recently joined us from China. Haipei was one of very few students to receive a prestigious Adelaide University China Fee Scholarship. Haipei's project will focus on improving our understanding of water-use efficient germplasm in durum. While Haipei's research will be largely confined to the lab and the glasshouses, her research throughout the three years will still have a field component and in the final year should see her validate these results in her own trial(s). The results of her work may have important benefits for the breeding program in the medium term. Her supervisors are Jason, Diane and Amanda.
- ◇ Last but not least, James Walter who is currently completing his third year of his undergrad degree wants to come into the group next year to complete his Honours. James will be learning a lot of new skills in the area of molecular biology looking at several genes that are important during reproduction. His supervisors are Jason and Dr Kelvin Khoo. Hopefully all going well, we will be able to convince James to stay on for a PhD.

Crop Walks—2012



Bruce Crawford, Georgetown Crop Walk 4th Sept 2012



John Stuart, San Remo, Guru Kadkol, DPI Tamworth, Fil Ciano, San Remo, Dr Jason Able and Ed Cay, AGG at Bruce Crawford's property, Georgetown.



Rob Wheeler, speaking at the Crop Walk 4th Sept 2012 at the Mid North High Rainfall Trial Site, Riverton



Crop Walk 16th Oct 2012 at Simon Ballinger's property, Serviceton, Victoria.



Kenton Porker at the Crop Walk at Paskeville on 26th September.



Dr Jason Able, Jon Moynihan, AGG and John Green, Farmer Bute at NVT Trial Site SE



Left: Crop Walk 16th Oct 2012 at Alwyn Dyer's property, Kaniva

Seed for Sale—Neville Sharpe

The Durum Growers Association

will have seed of Tjilkuri, WID802, Hyperno and Saintly available at harvest off header and cleaned (by order).

All varieties including Yawa (WID803) have been registered for delivery at harvest for export and local consumption.

**Get in early by contacting
Neville Sharpe**

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Prof Tony Rathjen's Farewell—Adelaide 2012



Leith Cooper, Allen Kelly, Neville Sharpe, Tony Rathjen, John Lush, David Shannon, John Green and Mark Hill [absent Michael Jaeschke]



Fil Ciancio, San Remo and Neville Sharpe



Graham Trengove, John Green, Lois and Tony Rathjen



Monica Trengove & Allan Mayfield



John Lush and David Shannon

Thank you

To all of our Sponsors for their support during the year and for the future.

To the Researchers for their commitment to the Durum Industry.

To the Consultants for sharing their knowledge with growers.

To all of our Growers and

To the Media

On behalf of the Durum Growers Association SA

We wish you a successful harvest and a very

Merry Christmas and a Happy & Safe New Year

See you in 2013

