SEEDS *for* THOUGHT

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Congratulations to Nigel Corish, 2012 Monsanto Cotton Grower of the year

The prestigious Monsanto Cotton Grower of the Year Award for 2012 has this year been awarded to Nigel and Vanessa Corish (pictured above), Corish Farms, "Yambocully", Goondiwindi.

The Grower of the Year Award recognises the grower who demonstrates high levels of achievement in most of the aspects of cotton production described in the selection criteria. The award was presented to them at the Australian Cotton Conference on the Gold Coast, at the gala dinner in August. Nigel and Vanessa were nominated by the Macintyre Valley Cotton Growers Association.

Nigel operates "Yambocully" for Corish Farms as a 4,800 ha irrigated and dryland farming and grazing enterprise at Goondiwindi. For the 2011/12 season, it included 620 ha of irrigated cotton, 120 ha irrigated wheat, 140 ha dryland cotton 1,100 ha dryland chickpea and wheat.

Irrigation water is supplied from an allocation in the Macintyre River through the Yambocully Water Board channel system, plus 5,500 megalitres of on farm storage and bores.

Nigel and Vanessa are involved in a wide range of community activities with a strong commitment to the region and the Australian cotton industry and are very deserving winners of this prestigious award.

KEY ELEMENTS OF THEIR OPERATION THAT IMPRESSED THE JUDGES INCLUDED:

- Well integrated and coordinated irrigated and dryland cropping and grazing system demonstrating strong and effective teamwork involving the on-farm team in close collaboration with their consultant, Jim O'Connor.
- Very well designed and developed furrow irrigation system with a long term area, 150 ha, of successful underground drip irrigation.
- Irrigation scheduling based on Neutron probes, push probes and continuous crop monitoring.
- Consistent yields of around 11.2 bales/ha irrigated and 5.0 bales /ha dryland.
- Comprehensive and constructive approach to staff management supported by a detailed Employee Handbook, full induction program and HH&S handbooks demonstrated by a number of long term staff and good relationships and strong team work.
- Comprehensive crop and business management strategies and performance management on farm based on extensive and detailed crop monitoring and recording systems on farm and within the Corish Farms group ensuring optimum use of resources.
- Strong commitment to industry BMP having completed the original system prior to the adoption myBMP and achieved Level 2 in all modules now ready for voluntary audit.
- Active participation and leadership in industry and community activities as Chairman of the Macintyre Valley Cotton Growers Association and a member of the Border Rivers Food and Fibre.
- Extensive community engagement as an active supporter of Gateway Schools Program with CRDC at the Goondiwindi High School and the building industry relationships in a Cotton CRC, CGA and Goondiwindi Technical Centre partnership providing activities including farm visits for primary school students.

Industry's 'Young Achiever of the Year 2012' - Jamie Iker, Emerald

Jamie Iker, a cotton and grains agronomist operating in both dryland and irrigated cropping areas of the Central Highlands won the Chris Lehmann Trust 'Young Achiever of the Year' award at the Cotton Conference at the Gold Coast in August 2012.

Jamie is a partner in a successful agronomic consultancy business Spackman Iker Consulting with longterm CQ agriculturalist, Graham Spackman. He is very familiar with the region, having been born in Emerald, and growing up on the land near Comet.

Although only 24 years of age, Jamie has packed a lot of experience into the few years since he completed his Bachelor of Applied Science at UQ, Gatton. He was thrust into the action following the disastrous floods of the 2010/11 season, initiating and conducting a number of flood damage research projects. He is currently undertaking his Masters in Science (Agriculture) through UNE, Armidale. His thesis is looking at the relationship between plant stand/density and boll rot.

Jamie has participated in the 2012 Future Cotton Leaders Program, seeing it as an opportunity to build his leadership skills to the benefit of the cotton industry and also his business.

He has been a member of the Crop Consultants Australia (CCA) since 2010, and has actively participated in various programs. He was recently nominated and accepted as a Board Member of CCA.

Jamie is passionate about promoting agriculture as a career of choice for secondary school students, as a way to attract and retain a knowledgeable workforce. He is undertaking this through contact with the agriculture faculty at his former Toowoomba high school, as well as working with Cotton Australia's Regional Manager, Renee Anderson with local CQ high school students.

Mat Stott "Point Farms" Cotton High Achiever of the Year

This year's cotton industry awards ceremony was part of one of the most successful Cotton Conferences ever held on the Gold Coast in August.

It would seem fitting that the award for the High Achiever of the Year has been won by a grower that has only recently started growing cotton. Stott and his family run properties comprising 2,200 ha at Darlington Point and Whitton in the Murrumbidgee Irrigation Area.

Mat's family have been involved in agriculture in this region for the last 50 years and have grown many crops, such as corn, wheat, vegetables, seed crops and rice over those years. Until they started growing cotton they were Pacific Seeds' biggest grower in Australia and before that at their peak they were Australia's largest grower of processing tomatoes.

In 2010 they started a new era in their farming practices by planting 500 ha of cotton and since then have expanded their program to 1000 ha last season and they are currently planting 1000 ha for this season.

Mat mentioned, "that they had been contemplating cotton for some time as local growers, the Commins family has had some success with the crop at Whitton. We had to change the way we do some of our management practices as cotton is totally different to the crops we had grown in the past."

Mat believes that the last two years have been a rapid learning curve that has allowed them to improve their management practices to create better cotton crops.

Yield results over the last two years have been good considering the 2010/11 year was a cool wet year and yields were down across the Murrumbidgee. In 2010 they yielded 8 bales/ha. While in 2011/12 season they will average 11 bales/ha.

Mat believes cotton is now part of their rotation and has a strong fit in the region. Improvements still need to be made to maximise the crop's potential but every year they are learning more about this crop, that has a great ability to compensate for fruit loss through the season and responds well to good management practices.

INDUSTRY NEWS

Report from the General Manager

▪ STEVE AINSWORTH
▪ CSD General Manager

It never ceases to amaze me how rapidly one cotton season blends into the next. Planting of the 2012/13 crop is largely complete with another large crop being sown across the Australian industry in all production valleys. Once again, the Australian industry is well positioned to deliver its customers substantial volumes of quality Australian cotton given favourable seasonal conditions.

It is also pleasing to observe that establishing this year's crop has been somewhat less challenging (in the main) than last year and this is resulting in better and more consistent plant stands. I particularly want to acknowledge the efforts of the CSD Extension and Development team in this regard who have conscientiously worked across industry to provide important information and management advice to growers and consultants to support planting decisions.

As you will read further in this edition of Seeds For Thought, CSD has recently completed an extensive re-development of the 'Shenstone' Research and Development field at Wee Waa. Our intent is to use this resource to generate a range of topical research and agronomic information important to growers. The first tranche of research trials have been planted and we will report outcomes in due course.

2012 has also been a very large season in terms of cotton planting seed supply for CSD following hot on the heels of a record 2011 season. We have just completed our largest ever seed increase program and seed -processing season with a record intake achieved in a very short processing season. This achievement was made possible with the great and timely support we receive from the dedicated group of seed increase growers, the ginning organisations and the hard work of the CSD Operations teams. On behalf of CSD, thank you for your dedicated support and efforts.

Please enjoy this edition of Seeds For Thought.

I trust the 2012/13 cotton season treats you well.

2012 - A challenging season for seed production

CSD has a proud history of delivering high quality cotton planting seed to the Australian cotton industry. The company invests in state of the art processing infrastructure, applies best practice Quality Assurance systems and employs a team of seed professionals to ensure CSD reliably supplies high quality cotton planting seed that meets the needs of growers, year in and year out.

The 2012 seed production season was the largest program in the company's history with the total production well in excess of 16,000 MT spread between 12 varieties. But numbers alone don't tell the true nature of the season and the challenges faced.

The season began in much the same manner as any year with the co-operation of about 40 long term seed increase growers across the cotton belt. Just as growers last year had issues with crop establishment in certain areas and certain fields due to weather, the same issues were also common in seed production fields requiring careful management at planting and through the crop establishment phase.

An extended period of cloudy and wet weather impacted crop development and in some circumstances waterlogging and flooding events posed quite separate and difficult crop management issues. Not many crops were lost in these circumstances and CSD applies a conservative risk policy to its seed production program and inventory policy to manage such risks. In the end these atypical weather events culminated in much of the program having significant delays in maturity with obvious flow on effects to defoliation, picking and ultimately ginning.

CSD received its first new season seed on site in Wee Waa in early May and worked closely with the ginning and transport companies to schedule ginning and seed receivals in such a way to minimize the down time to the gins whilst allowing CSD to operate to process seed for the 2012 season. Largely this process worked quite well and would not have been possible without the flexible cooperation of growers, gins and the transport companies alike. The last of the seed increase receivals occurred in October (another record) which demonstrates the very long nature of the seed receivals season.

Our delinting program commenced 24 hour, 7 day week operations shortly after Easter on retained fuzzy seed and shortly thereafter moved onto new season seed. We normally aim to conclude delinting by the end of July but this year our delinting program extended well into October, which is also unusual.

In August, concurrent with delinting operations began the large task of producing finished goods for the 2012 Early Order program. CSD has a large capacity to produce finished goods (given available seed) in a timely manner and the bulk of Early Orders were produced and distributed by mid September in readiness for planting the 2012/13 crop.

This all sounds quite straight-forward but is not possible without the efforts of the teams of dedicated operations, laboratory, technical and agronomic staff who managed through a very complex season and performed tirelessly to achieve this result. This speaks volumes to their professional commitment and passion for the cotton industry. I am very proud of the achievement of everyone involved in this program and congratulate the teams on a great job.

General Manager - Development and Communications

As an organisation clearly focused on the needs of Australian cotton growers, Cotton Seed Distributors (CSD) maintains a long term vision of investing in Research, Development and Extension (R,D&E) initiatives that deliver value to the Australian cotton grower.

Through strong partnerships, our investments in R,D&E over time have become very significant and connect a diverse network of disciplines including investments in cotton germplasm and breeding, discovery, research and development of technologies and genetic tools with application to cotton, the screening and development of novel chemistry compounds and extend to include capture the importance of an effective grower focused delivery and extension service.

Maintaining a clear focus in this space is a key need for CSD. Equally, the need to maintain effective two-way communication and feedback with industry and growers is paramount to ensure CSD continues to deliver the specific needs of the Australian grower.

To that end, CSD recently announced the

appointment of Mr Philip Armytage (pictured above) to the role of General Manager – Development & Communication. The primary focus of this role is to actively steward CSD's R,D&E investments and work across industry to ensure that a seamless whole of industry communication strategy is developed and implemented. Philip will also work closely with Dr Ian Taylor at CRDC and the cotton industry's Development and Delivery team.

Philip is no newcomer to the cotton industry. He is the former CEO of the Cotton Catchment Communities CRC and has diverse experience in agronomy, research and development for organisations such as Syngenta and Cotton Growers Services.

Speaking of the appointment, Peter Graham, Managing Director at CSD said "We are delighted to welcome Philip to CSD to complement the management of a very strong organization. CSD's long term vision is to be the leader in the field, delivering valuable R,D&E outcomes for the Australian cotton grower.

To put the importance of our investments into context, CSD is currently committing almost $7m of members funds per annum for these purposes and it is important that we maintain a clear and dedicated focus on these goals" he said.

Philip will join CSD on the 19th November and will be contactable at our Wee Waa office.

St George grower expands the growth of 'Australian Super Cotton'

St George cotton grower Glenn Rogan (pictured right) of Rogan Pastoral Company has this season made the decision to plant his whole cotton program of 1,100 hectares, to the premium cotton variety Sicala 340BRF.

Rogan Pastoral Co has been growing upland cotton at St George for 34 years. Their farming operation includes the properties 'Benelong, Willandra and Harlequin' which consists of a total area of 1200 hectares of irrigation, in one of Australia's most highly regarded cotton producing areas.

Graeme Rogan, Glenn's father, first grew cotton at 'Benelong' in 1976. A strong desire not only to be part of an industry, but also to give back to it led to participation in trialling various varieties of cotton over more than 25 years.

"In 2007, we noticed this one particular variety we were trialling had an exceptionally long staple length. At the same time we were in the middle of a drought and hadn't grown a full crop for eight years," says Glenn. "During that period, we searched for a way forward. Was there anything more that we could do to set ourselves up as an industry to stand out in the world market and still be a significant player?" From these beginnings, 'Australian Super Cotton' was born.

For the past seven years, Glenn has been a dedicated grower of Australian Long Staple (ALS) premium cotton varieties. He has also been a key grower in the Australian cotton industry's "Premium Cotton Initiative" which started in 2007. This was a collaboration between Cotton Research and Development Corporation, Australian Cotton Growers Research Association, Cotton Australia, Australian Cotton Shippers Association, Cotton Seed Distributors and the CSIRO, which with the aim of raising the bar for fibre length, strength and maturity, making the Australian cotton industry the benchmark in terms of cotton quality. Science has now taken premium cotton a step further, developing a new 'strand' of premium cotton. The development of Sicala 340BRF by CSIRO has now made this a reality.

So what makes Australian Super Cotton different? In short, it is the longest, finest and strongest threads of upland cotton grown anywhere in the world (ALS). The best of Australian Long Staple upland cotton is a class above "Egyptian" blended cotton in length, strength and fibre characteristics.

Glenn voluntarily uses 'Best Management Practices' whilst growing his cotton. One very appealing feature of this leading industry initiative is that it enables full traceability- from end product right back to which paddock the cotton was grown in by individual farmers. It also ensures that cotton is produced with the best farming techniques, technology and in an environmentally sustainable way.

Part of that environmental sustainability process involves water management, with Sicala 340BRF performing well under dryland or limited water situations.

"Premium cotton comes with its own hidden costs though unfortunately to have longer fibre length and fibre fineness often means lower yields. "We grow this variety for a specific market and reason, however the yield drag is noticeable. The first year we planted Sicala 350B we noticed a 15% drag", says Glenn." Fortunately with the more recent development of Sicala 340BRF, we have been able to significantly close the yield gap whilst still maintaining excellent fibre quality".

The most recent and significant development for Glenn has been the development of their Dri.glo project. Dri.glo, a brand produced by Australian Weaving Mills (AWM), first produced 100% Australian made, owned and grown towels and bed linen in 2011, and is sold through quality retail outlets such as Myer, David Jones, Harris Scarfe and Pillow Talk.

Glenn's premium cotton found its way to AWM because he participated in the Best Management Practices scheme, which promotes sustainable, traceable farming. So the idea of producing premium quality towels under the DriGlo label and linking them back to the farm they originated from was born.

The result is "less lint, a long staple length, the ability to make a stronger

yarn out of less fibre. That makes it a lighter towel, and lighter towels dry easily."DriGlo's towel project is wholly Australian grown, Australian made and Australian owned. "What I particularly like about the towels is that its 100% Australian cotton from my farm, not blended with anything else. As a farmer I didn't imagine I was going to be standing in my paddock holding towels. But I definitely imagined something good would come of it."

In order to fine-tune the development of his premium fibre, Glenn has recently purchased a newly developed fibre maturity instrument, which is able to accurately measure the fineness and maturity of the cotton fibre whilst it is still on the plant. This instrument is one of only six in the world and was developed here in Australia by the CSIRO. Glenn believes that this new instrument will enable them to better manage farming operations to maximise their fibre quality. "Operations such as defoliation can be more accurately timed as we will be able to measure fibre maturity more accurately while it is still on the plant, which will enable us to time defoliation to maximise fibre quality, which has always been a very tough decision to make. We can then take it a step further and begin to play around with our fertiliser program to see if there is anything we can do there to improve our quality even further. So it is a very exciting acquisition for us and we look forward to putting it to use".

The current crop of the premium variety Sicala 340BRF is now in the ground at St George and things are shaping up for another excellent crop for the 2012/13 season.

FOR MORE INFORMATION

If you would like more information on Glenn's program and the background behind it you can visit the Australian Super Cotton website.

- www.austsupercotton.com.au

Development and Delivery team update

The demand for high quality information services across the Australian cotton industry continues to drive new collaborations in the delivery of research information. At the recent 16th Annual Australian Cotton Conference, the Cotton Research & Development Corporation (CRDC), Cotton Australia and Cotton Seed Distributors announced a formal collaboration with the express aim of expanding the range of specialist information services across cotton growing regions to meet the diverse needs of Australia's cotton growers.

Announcing the collaboration, CRDC Executive Director Mr Bruce Finney said a new Australian Cotton Industry Development and Delivery Team is fully resourced and managed by CRDC, CSD and Cotton Australia.

Mr Finney said that $4m is pledged annually to resource and manage delivery of R&D information. "This will see an expansion of regional services in many cotton districts to work with farmers looking to improve practices and adopt best practice. The cotton industry is committed to ensure that every grower is geared for success with every crop.

"Improved communications of trusted advice and specialist technical knowledge is a vital ingredient of successful cotton production. Trusted information will be readily available due in part through local facilitators and enhanced communication between researchers, growers, consultants, agribusiness, natural resource management agencies and cotton industry organisations.

Dr Ian Taylor of CRDC is leading this complex and important new service and has commenced shaping a grower focused Development and Delivery team. "We are mid way through developing our Annual Operating Plan and have commenced a recruitment process to bolster regional delivery team. Our aim is to deliver a practical and meaningful operating plan to industry. We are very mindful that our efforts are customized to fit the specific needs of growers and industry alike" he said.

"To complement the increased people resourcing, we are also investing in a range of new resources for on-line information (including myBMP), information websites, mobile APPs and more traditional hard copy resources. We particularly value the input and cooperation we are receiving from the CSD Extension & Development team to help us refine our approach" Ian said.

General Manager at CSD Steve Ainsworth said "the Development & Delivery collaboration is a great initiative for the Cotton Industry. Having a focus on delivering practical research to growers aligns very closely with what CSD is all about - keeping the Australian cotton industry in a strong leadership position for the long-term" he said.

Establishment a key priority for CSD this season

Ensuring the crop gets off to a good start to the season is one thing the CSD Extension and Development Team take very seriously.

" We have conducted trials over many years on plant populations and trying to establish an uniform plant stand. We also understand that no one wants to replant not only does it cost time and money but in some regions it can affect the yield potential of the crop" CSD extension and development agronomist Robert Eveleigh said.

"As a team we were very distressed by the amount of replant that occurred last season and we developed a strategy to make certain that those scenarios were reduced this season."

"As part of our annual information tour we discussed at length factors affecting germination and emergence. We have also presented at numerous other industry groups and meetings, have published 'Facts on Fridays' on our web page and have dedicated the entire segment of 'Germinating Ideas' within the Australian Cotton Grower Magazine to this topic. We have also made seed quality data freely available to growers to ensure they have all information possible to fine tune planting decisions."

Getting a desirable plant stand is important. It effects every other decision associated with the crop from irrigation timing to nutritional timing and requirement.

The CSD Extension & Development team stresses the need to achieve a uniform plant stand, at the desired population without excessive gaps greater than 50 cm in length.

"Encouragingly," Mr Eveleigh said "so far this season we have seen a reduction in the replanting requirement by growers we hope this continues. Growers have been very cautious in planting, monitoring temperatures and conditions, and in some cases even stopping planting if conditions were not suitable."

"As part of our trial program this season we are looking closely at establishment of Sicot 74BRF. We are also looking at seed applied nutrients, planting rates and other novel treatments to assess the effects on germination and establishment. We will be collating and presenting this data to growers and industry in the coming year."

Seasonal Review

▪ CENTRAL QLD

▪ John Marshall

Field preparation was much more successful this winter due to some good widespread rainfall in mid winter. This greatly reduced concerns about volunteers for the coming season. This resulted in less interest in using Bollgard Liberty varieties this season.

The planting window for the Emerald area opened on 15th September. Because of the better tilth of most seedbeds, there was a lot more planting and watering up, with little pre-watering. Conditions for establishment have been ideal, and good stands have occurred, with almost a complete absence of replanting. Night temperatures have been below average, hence early growth has been slow.

In the Dawson-Callide, the planting window opened on 29th September. Most growers had pre-watered, and obtained good stands. A rainfall event of approx 30 mm on 12th October helped with obtaining excellent stands in most instances.

While most growers have good levels of available irrigation water, the irrigated area planted is back 20-25%, reflecting price issues and water shortage in some instances, especially along the Dawson. Very little dryland has been planted at this stage, due to price, little stored moisture in short fallows and lack of a planting rain. The Clermont area, after two consecutive good dryland seasons, may plant some area when their window opens in early November.

▪ DARLING DOWNS

▪ John Marshall

After a massive cotton season, where a record production in excess of 700,000 bales occurred, the Downs is back significantly in planted area this season. Many irrigated growers, especially those reliant on overland flow storages have little or no water. Even along the Condamine River, which did flow during last summer, many growers with higher stage pumping licences captured little water.

Attractive contracts for sorghum and maize has seen a quite large early planting of these alternative crops. The planting window opened on 15th October. With very little rain since late June, seedbed condition was not particularly good and fields have taken a considerable quantity of water for the pre-irrigation. The water shortage has meant a move back to skip row for some irrigators. A very timely rainfall event on 11th October, just before the window opened improved the bed moisture status. Since growers started planting when dry enough, soil temperatures have been on a rising plane, peaking at 22°C on 22nd October. Poor soil tilth, rapid dry down and seedling disease resulted in some very ordinary stands, although replant has been minimal. Overall, an excellent start to the season.

The total irrigated area is likely to be about 30,000 paddock ha range.

The dryland area is dramatically down on last year's record 60,000 paddock hectares because of price and little available long fallow country because of the big summer crop planting last season. Short fallows are generally at less than 50% total moisture capacity. A rainfall event of 25-50 mm occurred across all of the Downs on 11th October, and this provided an excellent planting opportunity for most growers interested in planting some dryland cotton. At this stage, it would seem that the dryland area will struggle to reach 15,000 paddock ha.

▪ MACINTYRE VALLEY

▪ Alex North

Preparation for this year's crop in the Macintyre has been quite favourable. A very dry winter has enabled growers to get their ground ready for the prospect of another big crop, after a very short turn-around due to the extremely late pick experienced last season. It is estimated that around 40-45,000 irrigated hectares will be planted this season in the Macintyre and around 21,000 ha to be planted around Mungindi, which is slightly back from last year's record crop. The prospect for this year's crop is looking very promising, with many on-farm storages being full or near full and water allocations looking excellent due to last summer's floods, which has instilled a lot of confidence for an improved crop on last year. Low forecasted cotton prices leading up to planting has resulted in many growers slightly reducing their areas and taking the opportunity to rest or fallow some problem fields.

Planting commenced in the region around Talwood and Mungindi in the last two weeks of September, with the bulk of the country being pre-irrigated.

Due to the dry winter, back-to-back cotton fields were taking large amounts of water to wet-up, but in all, planting conditions were quite favourable, with good soil temperatures and dry sunny conditions meaning that many crops were establishing under good conditions.

A cold weather front moved through the region on the October long weekend, which meant that many growers delayed any further planting until this passed. Once passed, soil temperatures rose again and this is when planting started in the Macintyre towards the end of the first week of October.

A second cold front then moved through the region around 12th of October, which brought with it some welcome rain for dryland growers, but also some very cool temperatures. Fortunately these cool temps did not hang around for too long and planting was again able to resume around the 15th.

From here planting conditions were close to ideal, with soil temperatures again on a rising plane meaning that growers were able to get stuck in and the majority of the crop was planted in the next two weeks.

Establishment of these crops has been quite good, although very hot, dry winds towards the end of October severely dried out the seed slot, causing it to crock open. Many growers in the district were forced to flush these newly emerging crops in order to wet the seed zone again to sure up their plant stand.

Due to the prospect of lower cotton prices this season, the area of dryland has been reduced from last season's record planting. The majority of the dryland crop was able to be planted after the rain in mid-October. These falls were quite patchy though, so some follow-up rain will be required to sure-up plant stands.

Overall, the season is looking very positive, with planting conditions being quite favourable leading to good crop establishment with very little re-plant being required. This combined with full storages has many looking at the prospect of excellent yields this season.

▪ BALONNE

▪ Alex North

As was the case in most other regions, the winter leading up to this season was extremely dry in the Balonne. This has been a benefit as it has allowed growers to complete their ground preparation in what was quite a short turnaround from an unusually late pick for the region brought about by the wet conditions last season.

The downfall of this dry spell has been that due to the lack of moisture, excess trash from last season's crop in the back-to-back country has been a bit of an issue for those who mulched their crop. So this has caused a less than ideal bed preparation for this coming plant.

It is estimated that around 25,000 hectares will be planted in St George this year, with approximately 31,000 hectares going in around the Dirranbandi region.

Prospect and hopes for this coming season are also very promising, with the majority of on-farm storages being near or at full capacity leading up to planting, meaning that most growers in the region will have water security for at least another season without any flows in the river. Beardmore dam was still above 80% capacity in the lead up to planting, so confidence is still high in the Balonne despite forecasts of low cotton prices in the near future. Due to the prospect of a low cotton price in the near future, areas are expected to be down on last season's record crop, although this region is not far off capacity for the third season in a row.

Pre-irrigation commenced around Dirranbandi in the second week of September. Due to the very dry winter, back-to-back fields were taking large amounts of water to pre-irrigate though were wetting up very well.

Planting commenced around the third week of September, with excellent conditions prevailing throughout the next few weeks, meaning that crops were establishing very well. The bulk of the planting in the region was completed by early October, which means that many crops were up and established before the cold fronts moved through later in October.

Thankfully the start to this season was in stark contrast to last season, with very little areas needing to be re-planted.

Further north to St George, things were progressing along very well with the bulk of the pre-irrigation occurring towards the end of September/early October. As was the case in many other regions, back-to-back fields were taking large amounts of water to wet-up. Despite a few cool nights around 5th and 12th of October, soil temps and planting conditions were very favourable, meaning that the bulk of the planting was completed over the next two weeks.

Early establishment of the St George crop has been quite good, although very dry, windy conditions around 20th of October meant that the seed-slot was drying down very rapidly, so many who pre-irrigated were forced to flush these establishing crops in order to wet the seed-zone again to sure up their plant stand.

Due to these favourable conditions around planting, very little areas were needed to be re-planted this season which was excellent.

In all things are looking very promising in the Balonne region, with good early establishment of the crop, combined with excellent water security has the outlook for a big crop in the 2012/13 being very positive.

▪ GWYDIR VALLEY

▪ James Quinn

The cotton season in the Gwydir Valley this season has got off to a good start; at this stage 65-70,000 ha will be planted under irrigation. Dryland opportunities have been extremely limited to date due to the dry spring conditions.

Pre-irrigation commenced in mid September with actual planting starting in the last week of September. Earliest plantings were into fallow fields which were to be watered up at a later date. The majority of watered up fields were fallow fields and those pre watered volunteer cotton will be an issue.

A cool change in mid October slowed planting and watering up as many growers focused on maintain conditions which are supportive for establishment. To date, in contrast to last season there has been minimal replant, with what has required replanting due to sand blasting and soil insect attack.

The complete lack of useful rainfall and high winds have created rapid dry down of soil profiles meaning moisture has got away very quickly on some growers.

The predominant variety within the valley is Sicot 74BRF, and initial growth has been good. Night time temperatures have rarely remained above 12 degrees

with the day time pushing into the mid thirties on some days.

Growers are optimistic with good establishment already behind them. Many crops will require careful management in the lead up to squaring as minimal rainfall has been received throughout October and November to assist with crop growth. Although despite this yield expectations are still high.

▪ NAMOI

▪ Rob Eveleigh

Growers have had good conditions for field prep over the last few months and apart from some delays caused by anhydrous availability the majority of growers were ready to plant by September.

Planting conditions can best be described as variable. We had a very warm start only to be followed by a very cold change in mid October. Night temperatures dropped to just 2°C and it was even colder in some parts of the valley. We have had virtually no useful rain for two months and the likelihood of a significant dryland planting decreases every day. The dry finish has also taken the shine off winter crops that are beginning to be harvested.

There was a small amount of cotton planted in September but the majority of the crop was planted in October. The crop has been slow to establish but is now growing well with the onset of very warm spring temperatures.

Only a few percent of the crop has required replanting but growers have used quite a bit of water to get the crop out of the ground. Many of the fields that were pre irrigated were also flushed after planting because of rapidly drying surface moisture. Watered up fields are mixed stories, but have generally established quickly with even plant stands.

Planting of the irrigated crop is complete. In the upper Namoi about 18,000 ha has been planted. A small area of about 2000 ha of dryland has been established near Spring Ridge and the rest of the Upper Namoi is unlikely to be planted unless it rains very soon.

The lower Namoi has planted 56,000 ha including Walgett. Only about 1200 ha of dryland cotton has been sown under very challenging conditions. Rain is desperately needed to allow most of the dryland cotton area to be planted.

Seedling disease, including black root rot has had a major impact on establishment and seedling growth. This has been spurred on by several consecutive cold shock events. At Myall Vale in the first 29 days of October there have been 18 cold shock days. There were even some frosts in the upper Namoi in mid October.

Early season insects have been light so far, with thrip numbers down a little on previous seasons. Early heliothis numbers are also quite low with many chickpea crops not requiring a spray.

The water supply situation is very good. Keepit dam is full and Split rock is almost full. That being said, growers have used more water than normal getting the crop out of the ground. Dryland fields have good sub soil moisture remaining from last summer. Current cotton prices are low and growers will be working on high yields to make a profit this year.

▪ WESTERN NSW

▪ Bob Ford

Growers at Bourke have got off to a reasonable start. Being able to pump water for the last two months has allowed them to put water straight onto fields in late August and September ready for planting.

The winter has been a dry one at Bourke allowing growers to get beds back into shape with little costs associated with fallow sprays for weeds. Interestingly, it was thought due to the dry winter volunteer cotton may be an issue for this coming season, but little has shot and started to grow after pre water.

Planting started early around 15th September this year as some of the early fields watered were losing moisture due to good day time temperatures in the 20's and 30's.

Even a cool spell over the long weekend in October had little effect on germination and establishment; and generally both soil and air temperatures have been very good. The key to the good start is, when it has been cold over night the day time temperatures have been very warm up to 35 degree celcius in some cases.

The area for the third year running is at capacity around the 11,000 ha mark with Sicot 74BRF being the dominant variety after amazing yield and quality results last season at Bourke. Sicot 71BRF is the second variety planted at about 10% of plantings.

Cotton that was planted in September and early October has bounced out of the ground. There has been very little replant and at this stage the Bourke crop is looking good and growers are looking forward to another good year.

MACQUARIE

▪ Bob Ford

The Macquarie has got off to a reasonable start with growers having good allocations of water and pumping from the river allowing them to fill storages ready for the season. Burrendong spilled again in winter.

There are around 40,000 ha of cotton to be grown this season in the Macquarie; majority of this is irrigated with some dryland. Although, very little rain in winter time has left some soil profiles dry reducing the potential dryland acres after last season's tremendous results.

Soil and air temperatures have been good in late September and early October but many growers have waited to see rising soil temperatures before planting, particularly after last season where many growers went in early and had to replant due to cold wet conditions in early October.

Sicot 74BRF is the dominant variety in the Macquarie making up to 65% of the area. It was hard to beat this variety last season with some record yields occurring north of Warren. The rest of the area is made up of Sicot 71BRF and some Siokra 24BRF in dryland.

Most of the crop is planted with very little replant occurring. Cool conditions still exist in the mornings but the day time temperatures have been very good.

▪ SOUTHERN NSW

▪ Jorian Millyard

This season the valleys are going into planting with good water allocation, however the low cotton price has seen a number of growers exit. The area is expected to be down by 25% on last season's plant of 53,000 ha. There are still a few new growers entering the industry for the first time, however their area is also reduced.

Once again planting started in the middle of September, with the bulk of the plant occurring at the end of September, early October. Planting was however delayed in the second week of October as the area experience a cold snap. Watering up the crop started again in the third week of October.

At the time of writing this article there has been no replant from the cold snap as it was too early to see any effects that might have resulted from the cooler weather. The early cotton was looking strong and was emerging in around 9 days.

Early pre-irrigated crops required a flush this year due to the warmer conditions in late September / early October, with most fields taking around 1.5 ML to either water-up or pre-irrigate.

This year the area has had a big swing to Sicot 74BRF. Last season this variety made up around 18% of the area planted, while this year it makes up for 33%. With the big move to this variety and the smaller seed size, growers have been paying greater attention to planting condition. Delaying planting until soil and air temperatures are suitable as well as soil bed condition has been the major concern with growers this year.

Trial work this season has been focused around planting. Initial work with plastic sheeting has seen emergence 5 to 8 days ahead of traditional bed planting.

We have also been conducting planting rate trials this season to look at the effect plant population has on fibre quality. As the area has some of the highest planting rates (16 - 18 seeds/m), last year work was conducted to look at the affect plant population had on yield for the area. The work showed that there was not a significant effect on yield between planting rates, but there was an effect on fibre quality. On average the area only just receives 2000 heat units, so managing the crop for earliness is critical to maintain fibre quality.

Overall it has been a positive start to planting this year, it is hoped that the price will lift and the weather stays warm. Despite the issues around ginning capacity the area is still very positive about cotton and they look forward to expansion of the industry in the south.

Below: *Cotton or Pigeon pea - What is the best refuge?*

It's time to have another look at refuges.

The planting and management of refuges has always been a controversial issue for the industry and growers.

In the early years Dr Gary Fitt and his team at ACRI worked on a range of cropping options to provide heliothis moths that were unselected by BT toxin to mate with any survivors from Ingard®. Most of those same refuge options and proportions developed almost 20 years ago have remained the same right up until today.

Refuges and other resistance management practices appear to have served the industry well. But with the introduction of Bollgard III likely in 3 to 4 years time it's a good time to have another look at refuges to see if they are still working appropriately for the technology we will be using during the next decade.

Many things have changed in the cotton industry since the early refuge studies were completed. First we moved to Bollgard II, then Roundup Ready followed by Roundup Ready Flex technologies. Pigeon pea refuges are now growth imbedded into a cotton growing system that uses a lot of Roundup. Accidents can and do happen. The insecticides we now use are generally more selective and very effective. Does sprayed cotton still act as a refuge?

Monsanto and CSD are co-funding a major research project over the next two years to compare the productivity of pigeon peas and unsprayed non Bollgard cotton. The project will also look for heliothis survivors in adjacent Bollgard II fields. The research will provide data that may allow a change in the proportion of land required for refuges.

The first year's trial work is already underway. Sites with both pigeon peas and non Bollgard cotton have been planted at several locations across the cotton belt. Once the Bollgard begins to flower both the refuges and Bollgard will be sampled for eggs and pupae every three weeks until the end of the season. Digging for pupae is difficult and time consuming work that will be done by Monsanto and local consultants.

Over the next few years this research project will provide information to allow the industry to select the best refuge options as we move into the Bollgard III era.

Round module picking and ginning review

The Australian cotton grower's love affair with round module picking technology continues unabated. It is expected that 80-85% of the 2013 crop will be harvested with round module pickers, up another 10% from this past season.

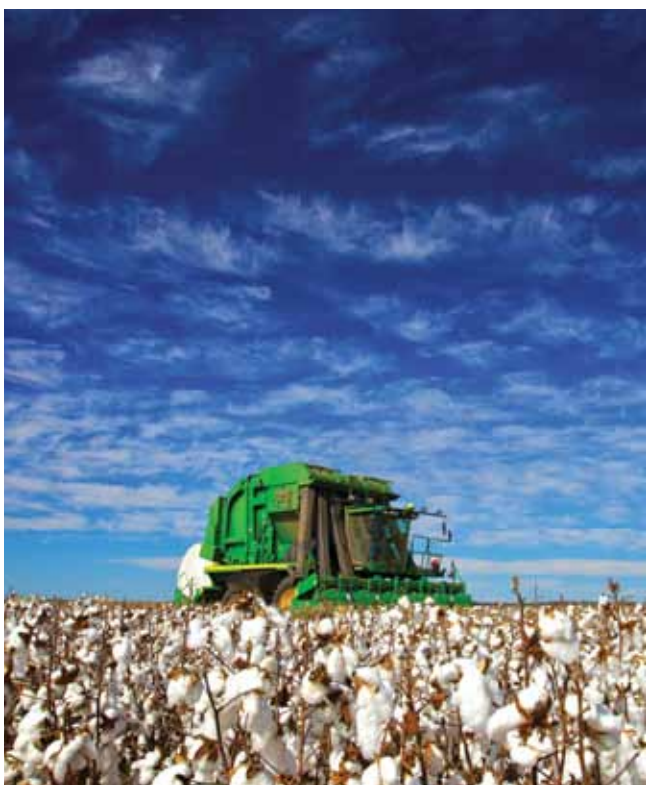
The huge picking capacity that has come from the influx of new machines combined with good quality (second hand) conventional picking technology has been invaluable in allowing the Australian industry to handle two of its biggest years on record (and possibly a third in 2013). While a lot of seed cotton has sat on field edges in round or rectangular modules for months, the high picking capacity has limited yield loss, helped minimise grade discounts to some degree and allowed the field preparation cycle to continue without delays.

Staging modules in the field and gin yard

The importance of the actual location of round modules in the field and their correct staging were clearly illustrated in many regions this past season. Not only was it the largest cotton crop ever, with many round modules having to sit in the field for extended periods of weeks, stretching into months at some locations, but also there was above average rainfall experienced in many of the cotton growing valleys between late May and mid July.

Cotton growers traditionally have put a lot of thought into where they place their module builders, taking into account water buildup and drainage in the environs of the modules and also access for module trucks should conditions turn wet after picking. Some of the wisdom and experience gained over the years appears to have been lost with staging of round modules. Some gins mentioned that there was clear evidence of round modules having sat in water in the field. Because of their very nature, the area adjacent to sausage formation staged round modules will become wetter and also slower to dry out after rain events. Some growers resorted to leaving their rounds in the field where dropped, and not staging them until a couple of days before truck arrival because of the problems these wet zones created when loading.

The importance of correct spacing of modules when staging was illustrated very clearly during this past season. Ideally, modules placed in sausage formation for pickup should have a 10-20 cm gap between each one, to prevent tearing of plastic edges due to interference of adjacent modules as they travel up the module truck incline. The other important benefit of this gap is to allow some air movement between modules, reducing the level of fungal growth on damp, shaded cotton. This problem became quite evident this season where modules were butted up with little gap. Also, in some gin yard situations where the last module in a row had been placed wagon wheel, the plastic contact with lint on the side of the adjacent module contributed to fungal growth.



Water buildup within the plastic on the base of wagon wheel staged modules in particular was more noticeable this season due to the wet conditions in early winter. Some growers and gins adopted the practice of making a small cut in the plastic at ground level to aid drainage.

Ginning and moisture levels of seed cotton

While most ginners consider that a higher proportion of round modules were received this season at the ideal moisture content for ginning (6-10%), the problem still remains that careless or inaccurate staging in the field can result in a scattering of high (>12%) moisture modules amongst the good, which creates major issues during the ginning process.

Better tools need to be utilised by picking contractors to accurately determine the module moisture content as the picking stretches into the night. While there is talk about installing accurate moisture meters on board, it would seem that other procedures will have to be utilised in the interim. Some contractors dial up their local weather station and use temperature and humidity values to assist with their decision making. Others have installed a weather station in the cabin, the accuracy of these not always as good as necessary.

The other important task in this issue is one that is often handed over to a backpacker, and that is the accurate staging at the field edge of modules according to their time of picking/moisture content. Starting at one side of the field and lining them up as they come out does not produce the best result. A simple round module identification process eg red patches on damp bales needs to be used by the contractor, and passed onto the bale lift/grab operator to ensure that there is greater homogeny amongst the round modules of individual loads going to the gin and that this information is passed on to the ginners.

Most ginners consider that the round modules, once well placed in the yard, handled the wet conditions of this past winter better than tarped modules. There was not the problem of water ponding on poorly shaped conventional modules and seeping through the plastic tarpaulin, damaging the cotton.

Lint Quality from Round Modules

The greater variability in lint quality coming from round modules has been readily apparent in all seasons since their introduction. There is not the same degree of blending as occurs in seed cotton going into a conventional module. There have often been instances of 3-4 different grades coming from 24 bale samples from an individual truck load of round modules from the field.

The sad part of this is that the smaller harvest unit should actually allow better segregation at the field level. Those areas of fields picked at higher moisture content, poorly defoliated areas, stressed patches, weedy areas can be picked separately, their smaller harvest units identified and set aside from the mainstream cotton, producing overall a higher percentage of better quality lint.

Plastic wrap damage and plastic contamination

The plastic wrap is the heart of the round module. It keeps it in shape, while keeping contaminants such as water out. Great care must be exercised from the time of the round module's deposition in the field until its arrival on the feeder at the gin to minimise damage to this wrap.

Care during the bale lift is the first important step in preventing damage to the plastic wrap. If it is not a clean lift, cotton stalks can become embedded in the plastic at the base, causing rips and the possibility of plastic contamination. As the module is transported from the field through harvested rows, it should be carried high enough to minimise contact with these rows, preventing rips. Care must also be exercised when passing over tail drains etc. When placed, the plastic wrap cannot prevent the module adopting the shape of the surface that it is placed upon. For this reason, it is important that they are staged on a high, flat surface, such as a defined driveway or disced field surface. This is the first step in ensuring that the module truck chain does not have to dig into the ground under the modules, which risks causing damage to the underside plastic.

To reduce the chance of wrap tear during loading, the alignment of the modules should be such that the centre line of the individual modules falls within a 13 cm (5 inch) band width of the composite centre line of all 5-6 modules. Within module trucks, chain type and speed of operation should be modified from what has been used for conventional modules to prevent cutting of the underside of modules during loading and unloading.

Instances of plastic tails and pieces of wrap embedded in round modules were mentioned by ginners again this season. Extreme vigilance by ginning staff is necessary to prevent this material moving into the system.

Other Issues

The jury is still out as to whether the round module picker is contributing to increased soil compaction issues. Some fields in the Emerald area for instance have now experienced two consecutive wet picks with the new machines operating. If there are issues in these fields, they should start to become apparent later in this season.

Another substantial CSD Variety Trial program for the 2012-13 season

CSD's trial program will be substantial again this season, reflecting another big industry planting, especially in the irrigated areas of the central and southern valleys and the western areas. Last year's program was the biggest ever, with a total of 68 registered trials being included in the Variety Trial Book

At this stage, a total of 55 trials will be established in 2012-13, geographically spread from Emerald in the north to Griffith in the south. The majority of the trials will be based on Bollgard II Roundup Ready varieties. This is the first season for many years that there will be no new variety featured in any of the trials. This reflects the industry's impending move to the new three gene Bollgard product in a couple of seasons, with the CSIRO breeding team's efforts primarially devoted to that change.

As with last season, the relative performance of Sicot 74BRF and Sicot 75BRF will be closely scrutinised. The latter was a little disappointing in comparative yield with Sicot 74BRF across the industry this last season, but this could be a reflection of the generally mild conditions in most growing areas. Another year's data from dryland trials will also help define its potential niche within that sector of the industry. Additional data on two other new commercial releases, namely Siokra V-18BL and Sicot 730 will also help in grower's varietal decision making.

Approximately 20% of the trials will be raingrown, and included in the irrigated trials will be some sites where wide row systems will be evaluated, a particularly important aspect for gaining additional water use efficiency data.

Seed applied fertilisers will be included as an treatment at a number of the variety trial sites to assess their potential to improve establishment and early seedling vigour.

Sicot 74BRF is the most popular variety across the industry currently, and this is just one of the strategies being evaluated to address plant establishment limitations with this variety.

COTTON COMPASS

The shifting textile powerbase - What's going down in funky town?

The global textile powerbase is shifting - slowly, but surely - and the impacts will create both challenges and opportunities.

The Chinese growth story - particularly with regards the cotton and textile industry has left us all overexposed to the Middle Kingdom, and whilst we expect China to remain a dominant force for some time to come, their focus will increasingly shift to "domestic consumption" rather than textile exports.

Rising labour and land costs combined with restrictive government policy are starting to impact on the sector, and industry appears to be voting with its feet.

We believe official Chinese cotton consumption numbers are overstated as mills are being outcompeted in terms of both their raw cotton input costs, and their costs of production. We're not suggesting this is the end of China's dominance - they have massive "field to fabric" supply chain advantages (not to mention a massive population) - but these changing competitive pressures mean their textile industry is becoming increasingly focused on domestic consumption base rather than exports... which changes the ball game significantly - particularly in the short term as the market adjusts.

THE 5 YEAR PLAN

The current Chinese 5 Year Plan is not helping - as a closer look at some of its key objectives suggest the textile sector is not a core priority.

In particular, the 5 year plan's stated objectives are:

- To restructure the Chinese economy by encouraging domestic consumption over exports;
- To develop the service sector;
- To shift toward higher value added manufacturing;
- To conserve energy;
- To clean up the environment.

None of these objectives provide the textile sector - and particularly the "first stage" spinning industry - a whole lot of love. In particular:

Domestic Consumption

In order to encourage domestic consumption, the government has a vested interest in maintaining an upward bias on wages - thereby improving living standards. Labour costs for spinners are already prohibitive compared to many competing countries. Therefore higher costs are forcing the stronger mills to modernize (and thereby become more labour efficient) and/or move offshore, and the weaker mills to shut their doors completely.

Value Added Manufacturing

Likewise, a shift toward higher value added manufacturing does nothing for the first stage spinning sector - although there may be some benefit for vertically integrated mills and downstream processors (knitters/weavers/garmenters). This perhaps suggests more yarn and/or fabrics could be produced offshore prior to import for final stage manufacturing. This may (or may not) be linked to some of the current State Reserves and Import Quota policy (which is certainly not benefiting the first stage spinning industry!). When you think about it, this kind of gels with the policy whereby there is no import quota on yarn and fabrics as opposed to raw cotton.

Pollution and Energy

Again, this is not necessarily a good look for the textile industry - with many plants (particularly older and less efficient ones) relatively high polluters and high-energy users.

"Offshoring"

Our numbers, (based on a recent survey) suggest Chinese raw cotton consumption is running at about 33 million bales (or 5 million bales lower than the USDA's current estimate).

But we don't think that consumption is necessarily "lost" to the world market. Rather, this consumption base is shifting elsewhere - both as Chinese "foreign investment" in offshore capacity and Chinese "supply arrangements" for yarn, fabric and finished goods. Additionally, many independent offshore entities are clearly operating in their own right to ramp up capacity to capitalize on their increasing competitiveness into US, EU and other markets.

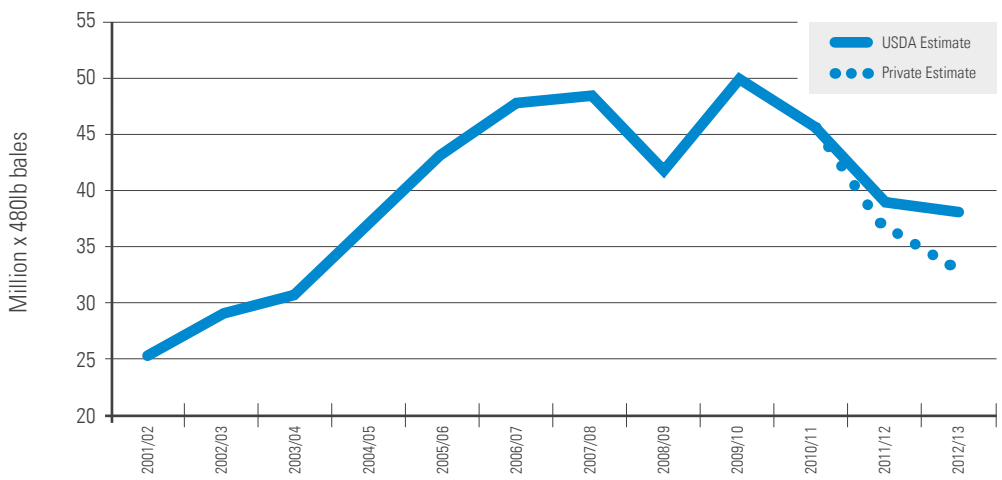
It appears that in our region, Vietnam, Indonesia and subcontinent markets (India, Pakistan and Bangladesh) are the key beneficiaries. If we were to make a bold assumption that the USDA was actually under-estimating raw cotton consumption in those markets by a combined 5%... then the potential 5 million bale 'China consumption deficit' actually drops to about 3 million bales for the region. In other regions, countries such as Turkey are also set to benefit from improved competitiveness - meaning the global consumption picture starts to look a whole lot less bleak. And, the growth in these markets is a trend that is likely to continue (see the charts on the next page) - particularly if global economic conditions start to improve.

Country Analysis

An analysis of some of the key alternate "growth markets" identified show some emerging opportunities for growth of Australian exports - particularly to Bangladesh and Vietnam (and potentially India and Pakistan as well). We've broken these markets up below into "Key Importers" and; "Key Producer/Consumers". You will note that we have left Thailand out of this example for now - and that's for two reasons:

1. Overall growth in the textile sector is likely to be limited in the short to medium term given consumers in this market suffered more than most in the volatility of the last two seasons;
2. Australia already makes up a large share of Thai cotton imports, and therefore there is limited scope for market share growth.

CHINESE COTTON CONSUMPTION



KEY IMPORTERS:

Indonesia

A number of reports suggest Indonesia has been aggressively pursuing Chinese investment in the textile sector, and according to both the USDA, and our own analysis, raw cotton consumption has rebounded significantly from last year. Our estimates for 2012/13 consumption are almost 5% higher than the USDA's. That said, Indonesian consumption is still a long way from the early to mid 2000's - when it was suffering from heavy competition from China. This suggests Indonesia has the capacity, and potential to expand consumption quickly. Australia already makes up around 20-25% of Indonesia's raw cotton imports, so our capacity to grow volume into this market is probably limited to overall growth in their consumption rather than growth in market share.

Bangladesh

Bangladesh is an interesting one, and we admit, is not our strong suit as far as our information gathering capacity is concerned (although we are addressing that). That said, the chart clearly shows strong growth in the Bangladeshi spinning sector with the exception of a blip in the last few years. The Bangladesh Manufacturers and Exporters Association (BGMEA) has outlined plans for a 10 fold increase in garment exports to China (to US$1 billion) by 2015. This followed recent meetings with the China National Garment Association (CNGA) who have also outlined a desire to increase clothing imports from Bangladesh. Garments are a major export earner for Bangladesh, making up US$19 billion out of a total $24 billion for the year ended June 2012. Australia is currently only supplying about 5% of Bangladesh cotton requirements - so there is significant potential for growth in this market - both in terms of our market share and growth in their own consumption.

Vietnam

Meanwhile, in Vietnam, Chinese investment has been a little slower - but data suggest the country's textile and garment industry is benefiting from an increasingly competitive position into other export markets, and has now taken the lead in the nation's top 10 exports. Vietnam Textile and Garment Association (VITAS) figures show an export turnover of US$10.8 billion in the first 8 months of 2012 - an increase of 6% over the same period last year. Much of this increase was to the US (up 10.6%), Japan (up 23%) and South Korea (up 19%) - while exports to the EU fell. The sector is expecting to turn over US$15 billion this year. Similarly to Bangladesh, there is significant scope for growth in Australian cotton exports to Vietnam, given we currently only make up around 3% of imports and the spinning sector continues to experience rapid growth.

KEY PRODUCER / CONSUMERS

India and Pakistan

Are a little different to the three markets outlined above - given that they are also major producers, and historically have therefore not been major importers except in the event of a crop failure. That said, the chart right clearly indicates that the upward trajectory in spinning capacity is fast moving these markets to the point where larger scale imports could become more of the "norm" rather than the exception (unless, or course, they can get their yield issues sorted in the field).

As far as spinning capacity goes, India is going through some central "planning" of its own at the moment, but - contrary to the Chinese situation - the textile sector is set to be a key beneficiary via an extension the Technology Upgradation Fund Scheme (TUFS). The information we've been able to glean is a bit murky, but it appears the working group on textiles has recommended the equivalent of about US$6.4 billion be allocated to textiles over the plan period. Processing parks - focusing on weaving and processing - would be established in seven states under the scheme. Individual regional governments (eg Gujarat; Tamil Nadu; Rajasthan) are also providing various incentives for investment in spinning and textile manufacturing capacity.

Recent relaxation of trade restrictions between India, Pakistan and Sri Lanka - with particular emphasis on the textile sector could further the scope for growth in consumption in these markets.

IN SUMMARY

The trade is potentially over-exposed with regards its reliance on China. Our view for some time has been that the focus will increasingly shift to alternate markets... and that growth in these markets is currently underestimated. This potentially creates a period of "structural change" for the global markets - presenting both challenges and opportunities.

IRRIGATED COTTON

Issues around Southern NSW cotton expansion

In 2003/04 both the Lachlan and Murrumbidgee Valley had its largest planting of 13,000 ha however in 2007/08 due to a reduction in river allocation the area fell to only 3,600 ha. With the rise in cotton prices and the fall in both rice and maize prices over the past years, the area has seen a large uptake by new growers to now bring the area of production up to 55,000 ha's with 100% water allocation. This great increase in cotton production however has brought about new issues for the area in addition to the looming Murray Darling Water Plan.

Harvest Capacity

With this expansion, the Murrumbidgee Irrigation Area (MIA) was looking at the inability to harvest the crop in a timely manner and also the ability to get the cotton ginned locally.

There were issues around getting hold of contractors and also the area faced the issue of lacking skilled labour to drive the harvest given there were around 50 plus new growers with an average crop of about 150 ha's each. A number of contractors came down from up north to help out and this also gave the opportunity for locals to get into the contract harvesting business.

Last season saw the introduction of the round bale pickers which helped to speed up the harvest. The MIA became one of the largest adaptors of the new Round Bale Cotton Pickers.

High Yields and Ginning Capacity

A new issue arose and the industry was asking "how do we get all this cotton ginned?" As well as the increase in the area planted, the Lachlan/Murrumbidgee has been increasing its average yield by around 3% each year since the year 2000 and last season was an outstanding year with many farmers averaging close to 12 b/ha (where as in 2003/04 it was about 7 b/ha).

With the outlook last year for a big 2011/12 season, a group of growers in the Griffith district got together and built a new cotton gin at Whitton.

This took some of the pressure off the Hillston gin, but there are still issues around the growers getting their cotton ginned in a timely manner. Currently ginning capacity for these gin's is full, and it looks as though ginning will continue until February next year.

This has placed a major cash flow problem in the area, and growers are having to plant around bales that are still sitting in fields.

As next season's crop is being planted, the valley will see a reduction in the area planted to around 42,000 ha. This reduction in the area has been mainly due to the fall in cotton price, a price below $400/b doesn't leave much to play with if you have to send the cotton further north to be ginned.

However growers in Victoria are having a look at cotton for the first time. Even though it is a small area, the growers have seen the advantages of being able to forward sell their crop. The expectation of a high yielding crop of around 12 b/ha would be nice for these growers, but they are looking for around 8-9 b/ha to compare against their return on an average rice crop for their area.

Further Expansion

A few years ago Griffith was considered to be too far south to grow cotton, but over the past few years we have seen the area come a long way in term of both yield and quality.

The area is now getting some of the best yields in Australia.

Expansion into Victoria with the current array of varieties and management practices may lead to this area also being the new frontier of cotton production in Australia.

To date both Sicot 71BRF and Sicot 74BRF have been performing well in the south under the different array of row configurations and also different irrigation methods.

The very narrow planting window for these two varieties means that the growers need to be on the ball, as the MIA and areas further south only just get enough heat units to make a crop.

Planting too early can result in around $150-$200/ha direct replant cost and also a loss of at least 2 b/ha, with seedling mortality having a big impact. Low micronaire issues have also been seen in the area from growers planting later than the middle of October.

The fibre quality issues are now being looked into. Trials around plant population and its affect on fibre quality are being conducted at numerous sites and more work is being done around managing the crops for earliness with growth regulants.

Current trials in Southern NSW

Currently in the Southern Valleys of NSW CSD is conducting its variety trials in Condobolin, Hillston, Griffith and now the Jerilderie area.

We are evaluating how each of the varieties are performing across a range of locations for both yield and quality. At some of these sites work is also being conducted at establishing what the desired plant population is for the area.

In the past season we have looked at different plant populations and their effect on yield to see if we could come up with the best possible plant population for cooler areas. What our trials showed was that it didn't matter if you had 8 kg/ha or up to 18 kg/ha planted, there was no increase or decrease in yield but you still needed a uniform plant stand. There was however an effect on fibre quality noticed in the quality data.

This year the plant population trial is being reproduced across a number of different locations to see if lasts season's results were not just seasonal.

The ideal planting window in southern NSW is very narrow. Planting mid to late September exposes the crop to a high degree of seedling mortality. The crop can take up to 27 days to emerge, so to plant into ideal soil temperatures it only gives us about a three week window to allow us to accumulate enough heat units to grow a crop. In fact many of the southern cotton growing areas have below 2000 day degrees to work with.

Work this season is being conducted into applying different plastics to the beds post sowing. This is to help increase the heat within the bed, creating a greenhouse effect. It is hoped that this will shorten the days to emerge from 20 down to 7-10 days. These plastics are designed to break down in the crop, one after two weeks and the other after a period of three months. The work will also be looking at the effect the plastics have on the soil moisture over the period they remain in contact.

Location	Average	2011-12
Deniliquin	1936	1944
Coleambally	1924	1928
Griffith	1977	2046
Hillston	2097	2148
Gunnedah	2157	2009
Narrabri	2386	2197
Moree	2420	2313
Bourke	2711	2574
Dalby	2292	2214
St George	2911	2849
Emerald	2701	2849

Above: *Day Degrees in various cotton regions.*

Plastic trial

With planting being one of the most important aspects of cotton production, we have seen over the years a number of "pop-up" fertiliser products applied with the cotton seed. Some have been working very well. Now there has been an improvement in this area with the addition of these 'pop-ups' now being applied directly to the seed. CSD have numerous product demonstration sites about to enable growers to come and look at the effects these products have on both germination and also early seedling vigour. Talk with your local Extension and Development Agronomist about visiting one of these sites.

71BRF vs 74BRF

A recent study by the CSD Extension and Development team has show where the yield advantage of Sicot 74BRF is over Sicot 71BRF and guidelines for cotton growers to exploit these areas.

By using the variety trial program the CSD E&D team were able to highlight similarities and significant differences between the growth habits of Sicot 71BRF and Sicot 74BRF.

I suppose there are three main points which this study highlights." CSD agronomist James Quinn said. "Firstly that there is no statistical difference between the rate of production or number of fruiting nodes produced by both varieties.

Although it is a commonly held belief that Sicot 74BRF is slow during the early stages of growth this data clearly shows both producing new fruiting structures at the same rate."

When it comes to Nodes Above White Flowers (NAWF) there is a significant difference in the number of NAWF and also in the rate of decline. Sicot 74BRF starts flowering slightly higher than Sicot 71BRF and also has a longer duration of flowering.

The accumulation of bolls was another area where Sicot 74BRF differed from Sicot 71BRF. What we have seen is Sicot 74BRF slower to amass bolls on the bottom portion of the plant and then overtake Sicot 71BRF and end up with higher boll loads at defoliation.

The longer you can keep Sicot 74BRF flowering the better the yield potential of the crop. The cross over point between the two varieties was approximately 1800 day degrees, which is late in the season. Long season areas will be able to take full advantage of this trait. However, in cooler season areas, achieving boll number parity with Sicot 71BRF will allow the heavier boll weight of Sicot 74BRF to bring home the bacon.

This study highlights the need to give Sicot 74BRF to the best start to the season as possible, have it growing vigourously into first flower and to minimise the amount of stress the plant experiences during the flowering period to prolong the time to cut out and boost yield potential. Concentrating on minimising plant stress during the flowering period to extend this for as long as possible; stress minimisation during this period will also improve boll weight.

The potential for thin biodegradable film in the Australian cotton industry

▪ by Michael Braunack and Jo Price

The use of thin plastic film potentially offers the opportunity to plant earlier, due to increased soil moisture and soil temperature.

This may assist regions to obtain successful plant stands earlier where cool conditions reduce germination and emergence; such as southern NSW. Season length may also be increased due to the ability to plant earlier, which may increase yield potential.

Also, the successful establishment of the crop may minimise the need to replant.

A field experiment was conducted at the Australian Cotton Research Institute (ACRI) comparing different planting dates on crop establishment under three biodegradable thin films.

Results indicated that the thin film elevated soil temperature and conserved water from planting to emergence.

Plant emergence was earlier and more uniform under the film compared with the bare soil control. However cotton plants were not able to penetrate the film, so yield could not be assessed. No film remained on the soil surface at harvest, so not presenting a contamination problem.

Current field trials in southern NSW are testing two thin films under cooler climatic conditions compared with those at ACRI.

Sicot 75BRF performs under pressure

There are not many cotton varieties which can boast a 16% yield increase on Sicot 74BRF at present. But in trials under heavy fusarium wilt pressure this has been the case.

"Last season was a good season for diseases - we saw a lot of verticilium wilt but also a lot of fusarium wilt in paddocks around the Gwydir Valley, brought on by the cool cloudy and wet conditions." CSD Agronomist James Quinn said.

"I was impressed with the way Sicot 75BRF looked in the trials all season. Besides having fewer gaps in the plant stand, it just looked healthier compared to the other varieties within the trial."

The health throughout the season translated to extra bolls per metre and cotton at picking time, with a 16% increase over Sicot 74BRF and almost 60% increase on the standard variety (f.rank = 100) Sicala 60BRF.

The performance under high fusarium pressure has been excellent, and I see it having a fit in the variety mix of some farms throughout the district as a wilt management tool.

After seeing the performance of Sicot 75BRF firsthand the in trials last season, "Sappa" Farm Manager Sandy Bellfield was of no doubt on the direction their variety selection was heading this season.

Above: *"Sappa" Farm Manager Sandy Bellfield and Agronomist Gus DeNotta.*

"Over the years we have tried many strategies to combat the influence this disease has on our cotton yields," Mr Bellfield said. "But, it does not take much to drop back the field or farm average when you lose areas to disease."

"We see Sicot 75BRF as one of the many tools we can use to ensure that the entire field is producing cotton not just the disease free sections."

Healthy plant - high yields

It's no great surprise to find healthy crops produce more bolls and hence more yield but they are also much more efficient in their use of water and fertiliser inputs as well.

As part of an analysis conducted by the CSD team of more than 300+ crops over the past eight seasons, it was found an increase in boll number was the key changeable driver for improving cotton yield and this was achieved, primarily from crops growing well and flowering for longer. Theoretically, at about 50 percent retention, a 15 bale/ha yielding crops would need to effectively flower for about eight weeks to achieve about 170 bolls/m - about two weeks longer than it would take to achieve 120 bolls/m - that required to yield around 10 bales/ha. The extra yield did not come from growing excessively tall crops - most were in the 21-24 node range. The difference was that they held onto more later bolls at the top of the plant and in the outer positions.

For this to occur, the plants need to be strong enough to be able to continue to produce and hold new flowers whilst having enough resources to fill existing bolls throughout the plant. This should not be confused with trying to restart a crop that has cut-out a situation that causes difficulties with crop management at the end of the season.

A healthy and actively growing crop must have access to water and nutrients when it needs it from a soil that is adequately aerated. The crop also needs access to sufficient heat and sunlight, and is not constrained by diseases or pests. Any one of these could be the limiting factor to a crop producing high yields. An additional advantage of a healthy crop is that they tend to be much more efficient, particularly in their use of water and nutrients.

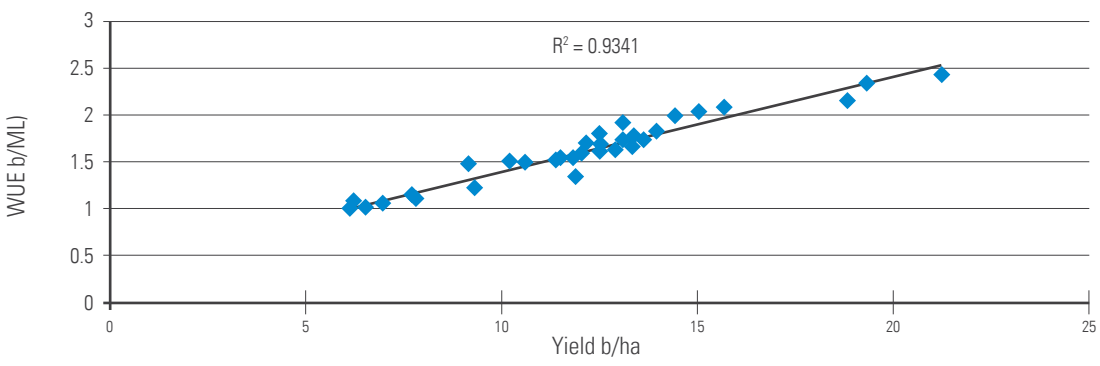
To gain a better understanding of the relationship between water use and yield, CSD's James Quinn measured the total evapotranspiration of 39 Sicot 71BRF crops over the past four seasons, and derived a water use efficiency figure in bales per megalitre, which was then compared to the actual yield of the crop (figure 1). He concluded for every extra bale/ha in yield, the water use efficiency of those crops improved by about 0.1 bales/ML. For example a 10 bale/ha crop had a WUE of 1.4 bales/ML while a 15 bale/ha was produced at 1.9 bales/ML.

There are also some factors which a grower has little control over. Extreme weather events at any time of the season can set a crop back enough to prevent it from ever producing very high yields. Wet starts can result in very shallow and lazy root systems incapable of sustaining a good boll load later in the season, while wet weather in the middle of the season can cause fruit shedding, and boll rots at the end of the season. Diseases like Fusarium and Verticillium wilts also limit yield potential, and the incidence of these diseases will vary between seasons.

Crop monitoring is essential - if you can't do it yourself, employ a good person to do it for you. If you know what's going on, you've got an opportunity to manage it. Precision agriculture and remote sensing techniques have aided crop monitoring as they help delineate variability in fields, but even these techniques work best when used in conjunction with a good, experienced set of eyes that can detect differences in how the crop is developing.

The best thing you can do is get the basics right, monitor heavily and make sure the crop has what it needs on time. Apply sound agronomic principles to ensure the crop's limiting factor is not a management issue you have control over such as water timing, nutrition and insect management. By doing this, at least the crop will reach its potential, despite what the season delivers.

Figure 1. *Comparing total crop water use efficiency (WUE) with the yield (bales/ha). Demonstrating a high yielding crop is a more efficient user of water. WUE is the bales produced divided by the total evapotranspiration.*



Below: *Wal Friend of "Carlton" Walgett with the John Grellman Shield.*

Western crops are winners!

Each year CSD awards the grower with the highest yield in our variety trials the John Grellman Shield. For the last two years western crops have won the prestigious award. Last year Clyde Agriculture at Bourke took out the award with a crop yield of 13.4 bales/ha. This year Wal and Jane Friend "Carlton" Walgett achieved the highest yield in our trials with a crop of Sicot 74BRF. The crop yielded 13.41 bales/ha a great result in a very cool year. The runner up was Charlie Arnott from Merah North, also with a crop of Sicot 74BRF, a mere 0.02 bales/ha behind the winner.

Wal's crop was planted on 14th October and watered up a few days later. Although only planted at 9.5 seeds per meter. The field achieved a plant stand of about 8 plants per metre. Just like other crops in northern NSW Wal's received plenty of rain during the first half of the season. In fact almost 400 mm of rain fell and as a result the crop was only watered five times.

Good nutrition was the key to this crop's high yield. Urea was applied at 310 kg/ha four weeks before planting. This was topped up with another two applications of 65 kg/ha of Urea during the season. The crop also received two application of foliar fertiliser to help recover from some waterlogging as well as some potassium nitrate to assist with boll filling.

Wal's agronomist Lori Nemek commented that "Insects were relatively light this past season but the crop did require some applications for mirids and other sucking pests. The crop was sprayed three times for insects."

Many fields in the Walgett region exceeded 13 bales per ha but they all had one thing in common - Sicot 74BRF. This variety has set a new bench mark for yield in most growing regions but especially in the central, northern and western growing areas. Like many growers Wal Friend has planted the whole farm to Sicot 74BRF this season.

Shenstone's new Research and Demonstration field

In an exciting development at CSD delinting and seed treatment plant at 'Shenstone' near Wee Waa, the earth has been moving. No tremor, but CSD's 14 ha field adjacent to the plant has been re-levelled and irrigation rows have been turned north-south in readiness for this season's demonstration and research trials.

The Extension and Development team from CSD see this as a strong asset to have as much of the physiological and management trial work that is carried out by the team comes with investing much time and effort into finding trial co-operators who are willing to undertake some of this work.

Jim Quinn from the E&D team commented, "Having a site so close to our team and resources will make this site a great place to bring growers to look at various behind the scenes trials that will be carried out by us".

This year we are intending to look at numerous aspects of cotton growth and physiology. Some of the work that will be conducted includes; population and planting rate effects on cotton micronaire and water use efficiency work on various row spacing, Nitrogen seed size trial and a dry land row spacing trial looking at the impact of row spacing on both yield and quality.

There will also be numerous variety demonstration trials for growers to assess at field days scheduled for January and February.

Bob Ford from the E&D team mentioned, "that the data that we generate from these trials this season will help in some of the management decisions that growers make throughout the season. This demonstrates our commitment to the industry and the backup and support of CSD varieties.

Further, with the advent of new BGIII varieties in coming years, this site will be invaluable in early assessment of these new varieties".

Below: *Gary Coulton - Manager of Federation Farm plants the new RRF varieties that will replace Sicot 71RRF.*

Federation Farm plants new RRF varieties

Large scale seed increase of two new RRF lines has begun. About 12 ha of Federation Farm, near Narrabri were planted to the new varieties in mid October. The cotton is out of the ground and off to a good start. If all goes well, CSD will have enough seed to do a further increase in 2013 and hopefully provide some seed for growers to compare against Sicot 71RRF.

Federation Farm is owned by Narrabri Shire Council and share farmed by Narrabri Community Education Trust. It distributes profits from the farming operation to Narrabri's schools. Federation Farm is a long term seed increase grower for CSD. In fact Federation Farm began the seed increase of line 1858 some 12 years ago in the same field that the new RRF lines have been planted. Line 1858 was named Sicot 71 and released a year later. The rest as they say is history. We can only hope that the new RRF lines are as successful as Sicot 71.

Sicot 71RRF was released five years ago to replace Sicot 71RR. Although Sicot 71RRF is a high yielding variety with yield potential equivalent to Sicot 71BRF, it has a major draw back. Sicot 71RRF has fibre length similar to Sicot 71. In hot seasons or where water supply is reduced Sicot 71RRF often receives discounts for fibre length. Sicot 71RRF also has a relatively low F rank of 108(10).

The table below summarises all the performance data collected from CSIRO small plot trials. The major improvements of the new lines are in fibre quality and disease rank.

Variety	Rel Yield	Length	Strength	Mic	F rank
Line-61 RRF	101	1.21	31.0	4.3	122(4)
Line-311 RRF	92	1.28	31.1	4.3	138(4)
Sicot 71RRF	100	1.16	30.3	4.1	108(10)

CSIRO trials (7 sites 2 years)

Flowering duration, a very important measurement

A study conducted by the CSD Extension and Development team has quantified the impact of the length of flowering on yield potential. Preliminary results have shown that for every day of flowering the crop generates another 0.24 bale/ha in yield.

"Many studies have looked at the overall season length but we wanted to concentrate on the flowering period. Anyone can keep the plant growing for an extended period, however, it is ensuring that this extra growth is productive that adds to the final yield of the crop." CSD Extension and Development Agronomist James Quinn said.

"In a diverse industry such as the Australian cotton industry where cotton planting regions are expanding, especially in the cooler more southern regions, season length is constrained by climatic influences. However the length of flowering is one aspect which growers can have a direct influence on."

"I think this is an important measurement on which growers and consultants can focus. It is easy and quick to measure, and has a direct implication to the yield of the crop." Mr Quinn said. "All growers have to do is note the date when the first flower is witnessed, and then monitor the NAWF till cut out (4 NAWF)."

On average the number of days of flowering within this study was 49. Consistently, those with longer flowering period yielded higher than those with a shorter duration between first flower and cut out.

"We will continue closely monitoring our trials to further add to this data set. At present it represents 38 different trials so we are starting to get a critical mass behind this data." Mr Quinn concluded.

DRYLAND DEVELOPMENT

More work required to make cotton work at Casino

This season saw two cotton demonstration sites on the North Coast of NSW. Geographically the region has a plentiful supply of water and soils range between black self mulching to sandy soils most being black/grey loam down to 1.2 metres in depth.

Climatically Casino's average maximum temperature from October to April is 29.4°C. This can be compared to a cotton growing area like Dalby which is 29.8°C and the Burdekin at 28.4°C (January-July). The average minimum temperature for Casino is 19.3°C compared to Dalby at 15.7°C and the Burdekin at 19.6°C (January-July). Rainfall for this period is 706 mm for Casino versus 503 mm Dalby and 677 mm (January-July) for the Burdekin. There are also differences in wet days and solar radiation which are seen in Table 1.

The Northern Rivers grows around 10,000 ha of Soybean, 10,000 ha of Corn and a considerable amount of Sugar cane.

The guidelines of the project were to work out whether cotton could grow in this region. The cotton was planted on 20th October and grew strongly throughout the season. Sicot 71BRF, Siokra V18BRF and Sicot 43BRF were the varieties that were evaluated. In early December the crop stood at 44 cm with total nodes of 12. Fruit was already on the plant and flowering began on 17th December.

A field day was held in late January with 15 turning up including eight farmers. Mick Fing of Monsanto and Tony Gordon, agronomist from Norco presented information and CSD supplied information on the varieties sown as well the basics of growing cotton.

Growers at the field day in January were impressed with the way the cotton grew

The western crop at Casino grew stronger than the eastern crop at Coraki. The Coraki crop had an extra 200 mm of rainfall for the season being closer to the coast and waterlogged badly.

The western crop was established on beds that had been lasered with good drainage. This worked well through the season as the cotton never really got stressed by waterlogging.

A rainfall event in early February of 300 mm had an adverse affect on the crops causing a major fruit shed. A second shedding event occurred in late February. Both these sheds we believe to have knocked 3 bales/ha off the crop.

Defoliation started in late March, but probably should have occurred two weeks earlier but was delayed by rainfall. The evidence of the late rainfall on opened cotton caused tight lock and boll rot in the lower canopy.

Tight-lock and boll rot are an issue in the lower canopy

Picking started in early May at the western farm near Casino. They harvested six modules off 20 ha. The 10% unsprayed cotton refuge was unrecognisable due to Heliothis damage, but the Bollgard II technology in terms of its effectiveness had no Heliothis damage in the crop. Weeds were also well controlled by three applications of Roundup Ready Herbicide.

The modules were transported to Queensland Cotton's gin at Cecil Plains and ginned in June. The Casino crop yielded 5.94 bales/ha with good length and micronaire, but the grade had dropped to 41-3 due to the time it took to defoliate and pick the crop.

The Coraki crop yielded 3 bales/ha with the same classing.

Trial work would still be required to work out the best system to grow the crop east of the Great Divide, but this season has answered many questions and have raised quite a few. Tony Gordon agronomist from Norco who looked after the crops is keen to continue the work and sees opportunity for cotton, but it will require a lift in the price before growers would consider it.

A list of the common questions that would make up the second stage of trial work

- Would wider row spacing's allow the crop to dry out quicker reducing grade penalties and some of the effects of waterlogging?
- What is the most ideal planting date and what population would work?
- How much Nitrogen is required under the crop when yield targets are under 10 bales/ha?
- Sicot 71BRF was a clear standout in terms of yield over the other two varieties tested last season. Is Sicot 74BRF an option?

The major question that is on the mind of growers is how competitive is cotton up against traditional crops of sorghum and corn. Stuart Saunders the grower at Casino believes that for cotton to work the price of cotton must be at $460 bale or above. From a yield perspective the crops have done well when compared to other dryland cotton yields from other districts, but consistency of yield will be more important for cotton to work on the North Coast of NSW.

WHAT HAS BEEN LEARNT?

1. Cotton can grow at Casino but east of Casino is probably too wet during summer, which could cause significant issues with boll rot late in the season.
2. Casino has good day degrees being 2312 this can be compared to Dalby at 2367 DD and the Burdekin at 2482 DD (January-July). It also has good rainfall and no irrigation would be required.
3. Beds with a slope are a must mainly for drainage purposes.
4. Insect pressure comes in the form of sucking insects or chewers, but are controlled with the same chemistry that is used over the range in more traditional growing regions.
5. Planting early in October is probably more preferred as radiation drops off mid March and could slow defoliation and picking.
6. Bollgard II and Roundup Ready Technology worked well and neighbours commented on its effectiveness.
7. Pix is required earlier around the start of December and larger quantities are required to control vegetative growth due to the ideal growing conditions early in the season.
8. Wider row spacing could help with boll rot and tight lock allowing the crop to dry out quicker and cause less damage with probably the same yield due to plant compensation.
9. The distant to the gin is a major cost at around $70 bale, but if flat top trucks could be used it would be a lot less expensive, but an infield loader would be required.
10. Picking is one of the major costs and would need good negotiations with a contractor pre-season.

Above: *CSD General Manager Steve Ainsworth with grower Stuart Saunders.* ***Below:*** *picking started early in May at this farm near Casino.*

Region	Average Maximum Temperature °C	Average Minimum Temperature °C	Average Mean Temperature °C	Rain mm	Wet days	Solar Radiation MJ/M2
Burdekin (Jan-July)	28.4	19.6	24.0	677	57	19.5
Dalby (Oct-April)	29.8	15.7	22.2	503	34	22.8
Casino (Oct-April)	29.4	19.3	24.4	706	76	23.4

Table 1: *Different temperature readings from the regions.*

First time dryland grower Andrew Gill takes out the Dr Norm Thompson Shield

This year's winner of the Dr Norm Thompson shield for the best quality cotton lint in a CSD trial is Andrew Gill (pictured right) from "Waterloo" Narromine, In fact he took home not only first, but second place as well

He was a little surprised in receiving the award for two reasons. One he had never thought this award would come to the Macquarie and secondly he never thought that he would receive it for a dryland crop.

Andrew, who normally grows 350 ha of irrigated cotton, last season put in 240 ha of dryland cotton super single row spacing to test the water, so to speak on whether dryland cotton was an option for him in a region that typically has not grown dryland cotton.

"We have some good black soils around the creek, flats which we thought would make a good candidate for growing a dryland cotton crop. The price of cotton was good and we thought it was worth a try. We had to change some of our machinery around including planters and once we knew we had a crop we purchased an old picker which went very well at picking time" Andrew said.

The crop itself had to be replanted, as rain just after planting time caused issues with plant establishment. The replant went in on 20th October. It went in on good moisture and then was followed by 15 mm of rain which brought everything up.

It was an ideal season for growing cotton in the Macquarie with 350 mm of rain falling though out the season. The summer was relatively mild which helped reduce plant stress and insect pressure was low which helped with retention.

An overland flow caused by a heavy deluge of rain in early March finished the crop off nicely and filled bolls to the top of the plant.

The crop grew to 26 nodes and a metre tall with 155 bolls to the linear metre. It received 1 kg/ha of Diuron and 2 L/ha of Grammoxone just after planting followed by three OTT Roundup Ready sprays at 1.5 kg/ha. The crop had 40 kg/ha of Urea and 40 kg/ha of MAP applied banded 25 cm from the plant line. There were two sprays for insects through the season, one for Mirids and GVB's in February, and the second at defoliation for Aphids. No Pix was applied to the crop due to the good boll load that restrained vegetative growth even after the rain during summer.

Sicot 71BRF yielded 4.71 bales/ha and had the best yield of the trial, but once again the quality of Sicala 340BRF of 42 Length, 3.7 micronaire and 33.8 grams/tex Strength, was superb which meant Andrew was this year's winner of the Dr Norm Thompson Shield.

Andrew is looking forward to growing dryland cotton again this year and has planted 320 ha of dryland, but with tongue in cheek, he added "it is probably all down hill from here after last season's results".

	Length	Length (in)	Manual Class	Micronaire	Strength	Uniformity
Sicala 340BRF	1.32	42	11-2	3.7	33.8	84.7
Sicot 75BRF	1.32	42	21-3	3.7	33.3	85.8

Table 1: *Winning quality results from Gills' Dryland CSD Variety trial 2011/12.*

John Cameron, Bongeen - Winner of Alan Brimblecombe Shield 2011/12

John Cameron from Bongeen on the central Darling Downs is the winner of the Alan Brimblecombe Shield for 2011/12. This shield is awarded to the grower achieving the highest yield in a CSD dryland variety trial. A yield of 7.1 bales/ha was measured from Sicot 74BRF in his trial harvested late April, 2012.

John had been a long term CSD dryland trial cooperator, having first grown a variety trial in the 1991/92 season. Over this 21 year period, he has conducted a trial every season, except for one year when a planting opportunity did not arise.

He has experienced the full spectre of yield results, ranging from 0.75 - 8.3 bales/ha. His row configuration has also varied over the years, initially solid, then single skip, double skip and back to single skip this past season. Being located on the alluvial floodplains and subjected to major overland flows, the farm is strip cropped on the contour, with alternating strips of fallow or wheat stubble, and summer crop during the highest risk periods.

Cotton is planted every second summer, generally into remnant cotton stubble, but on occasions into standing wheat stubble.

This season's trial was planted into a good body of standing unharvested wheat, a victim of the late floods in 2010, on 26th October 2011. Light rain commenced as the planting operation was finishing, resulting in an excellent stand of 8-9 plants/m across all varieties. The soil profile was 'full to the bottom', due to frequent overland floods during the 2010/11 summer. The field received a full fertiliser program late in the fallow, including 4 t/ha compost and 40 kg/ha N as Urea to boost the soil test level of 167 kg/ha Nitrate-N to 90 cm.

Early growth was slow, possibly because of low mychorrizal levels caused by the repeated extreme waterlogging events during the fallow. The crop picked up in the New Year but lack of effective incrop rainfall (65 mm in 10 falls recorded from mid-December to end of March 2012) did limit the crop's yield potential.

Above: *Winner of the Alan Brimblecombe Shield, John Cameron from Bongeen.*

There was some very obvious root malformation and also very noticeable differences in plant height in different rows, due to wheeltrack compaction. It was a complex pattern, as the field, from the start of the fallow, had five passes of the tractor with 12 m gear, some of these with duals, and there were also five passes with the 24 m boomspray, operating across the planter guess row. This compaction impacted yield, and also contributed to some fibre length issues in cotton in the balance of the field, planted a couple of days after the trial.

Incrop weed control included three over-the-top applications of Roundup Ready herbicide, and one interrow cultivation for fleabane. There was only one insecticide application, in late February, and defoliation was achieved with a single pass in early April.

All in all, an outstanding yield result from a crop that didn't have the easiest passage through its life time.

Kelly's dryland tops four bales

Brett Kelly from Pampas was the winner of the Darling Downs Cotton Growers Inc. award for the best dryland crop this past season. The field of Sicot 71BRF, located on the western side of the Gore Highway between Pampas and the North Branch, averaged 9.91 bale/ha (4.01 bale/ac) in a yield test conducted by Graham Boulton.

Floods had a devestating effect on summer and winter crops on much of the Downs in the 2010/11 season. This field was no exception, having an excellent crop of chickpeas on it until 50 cm of floodwater went across it in November 2010. Not surprisingly, the header was not required, and the field was fallowed for dryland cotton, planted in early November, 2011. Two additional major floods went across the field early in the fallow period.

The solid plant crop struggled early, being quite waterlogged up almost until Christmas. It had received 80 kg/ha N during the fallow, and an additional 25 kg/ha N was sidedressed into the swampy areas. Some Easy N was also used to kick start it. The crop progressed very well during January-February, and was just starting to show signs of moisture stress, when a localised rainfall event of 80 mm occurred on 22nd February. This event enabled the crop to hold onto and fill much more fruit than other dryland crops in the region.

While the crop was not very tall, having received a Pix application of 0.5 L/ha in early January, the plants were all cotton. It defoliated and picked well, producing good quality lint. No insecticides were used during the season.

Clermont dryland has second consecutive good season

Growers in the Clermont area at the northern end of the Central Highlands have just experienced the second consecutive year of excellent dryland cotton production, after a long period of drought enforced absence from the industry.

CSD has conducted a variety trial on Brendon Swaffer's 'Bungarra' property over the last two seasons. In 2010/11, the top variety yielded 3.55 bale/ha, this past season 5.11 bale/ha (2.07 bale/ac), the latter characterised by very well distributed rainfall events throughout the growing season. In fact, they continued for too long, with picking being delayed until early August because the field was inaccessible for some time due to creek flows from heavy July rainfall.

The trial field was on sloping basalt country, with soils about 60 cm depth. It had grown a high yielding 3.3 t/ha sorghum crop the previous season. Nitrogen @ 45 kg/ha was drilled in at 1.0 m spacing in October. Looking back at the season in perspective, nitrogen possibly was the limiting factor for higher yield. However, the crop was already too big in stature to allow additional side dressing when the big mid-season rains arrived. The big plants, some varieties reaching 150 cm in height in the lower parts of the field also made picking very difficult.

This crop was an excellent example of how the Bollgard II and Roundup Ready technologies have enabled dryland growers to manage difficult seasonal conditions without cost blowouts to produce a good crop. Weed control was excellent throughout, despite the frequent rainfall events, and there was only a couple of sprays required for sucking pests.