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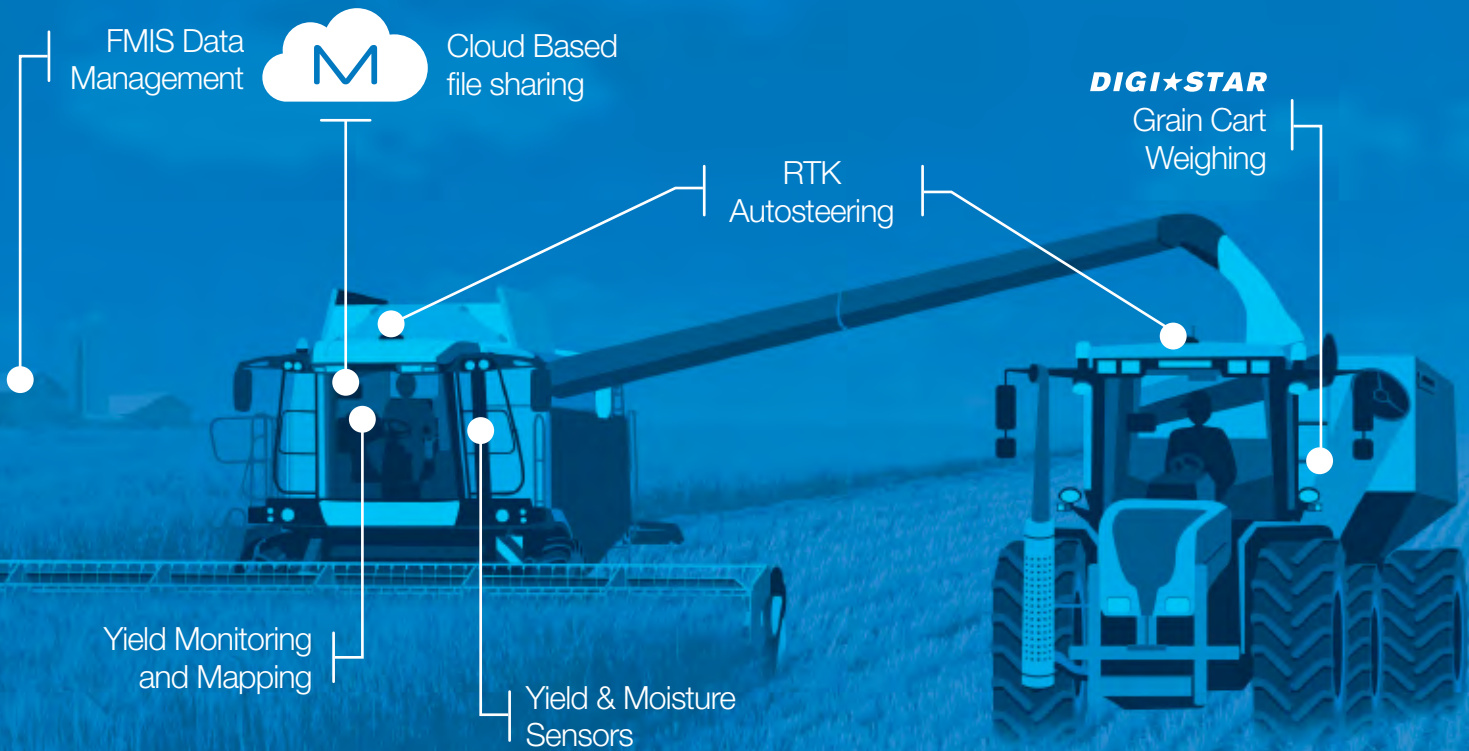


STRONG DEMAND FOR QUALITY AUSTRALIAN COTTON

FARM PROFILE/
**BUCHANAN FAMILY
FARM, COME-BY-
CHANCE, NSW**

MARKET UPDATE/
**GLOBAL
PRODUCTION AT
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PUBLISHER

Glencore Agriculture Pty Ltd
 Level 1, 186 Greenhill Rd, Parkside SA 5063
 T: (08) 8211 7199
 E: gbm@glencoreagri.com

DESIGN & PRODUCTION

fuller.com.au

ADVERTISING

Kelly Cummings
 Glencore Agriculture
 T: +61 8 8385 8321
 E: kelly.cummings@glencoreagri.com.au

COVER NOTE

Cotton Farmer Tom Eather

COVER PHOTO

Shanna K Whan, SKW Images
 lthingskwhub.com

At *AgriBusiness*, we want to provide useful, insightful, and up to date information in each and every issue. If there are any topics you would like to see featured in future editions or if you have any feedback about *AgriBusiness*, please contact us at gbm@glencoreagri.com.au

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FOREWORD/

PHILIP HUGHES, GENERAL MANAGER, TRADING AUSTRALIA/NEW ZEALAND

USING OUR STRENGTHS TO CONNECT WITH END-USER MARKETS

With global production of the main commodities forecast to be at the second-highest level ever this year, Australia will focus on its key strengths in quality, food safety and geographic advantage to connect commodities with end-user markets.

Diets in key markets are evolving and Asian consumers are turning more towards wheat to make noodles, bread and flour, so Australia's close proximity to Southeast Asia provides us with a comparative advantage to supply the region.

High-protein wheat is increasingly in demand, and given the challenges the US is facing in this area, this is a great opportunity for Australian wheat growers. However, we do have increasing competition from Russia and Canada.

Global stocks are also forecast to decline for the first time in many years, and if this trend continues, we will see a positive impact on prices.

The Australian winter crop is forecast to be substantially down on last year's record production and below the longer-term average, given the dry start which hampered many regions' sowing efforts. The rains in July and August have helped somewhat, but as we know, spring is when the season is made.

Growers are diversifying even more these days as pulses and cotton are increasingly making up crop rotations, depending on the region. Glencore Agriculture is active in all of these markets, which is why we've decided to change our name to better reflect the diversity of our business beyond grain.

Formally known as Glencore Grain, Glencore Agriculture prides itself on having local contacts with global connections. Our strong relationships across the supply chain help to connect growers with over 30 destination markets worldwide.

For any marketing questions or insights, please don't hesitate to contact one of our field officers listed on page 36.

To ensure Australia's competitiveness worldwide, food safety and quality management is critically important to connect growers with export markets.

Many importing countries have tightened their food safety requirements with low or nil tolerances for chemical residue or pests. This places even more pressure on the grower to implement farm management practices by adhering to chemical labels, managing pests and ensuring vehicles are free of contaminants.

As outlined on page 18, the whole industry needs to work together on market access issues. We have a strong reputation for food safety and quality control and we need to continue to be vigilant to keep our biosecurity procedures at world's best practice.

Keeping the agriculture community safe and healthy is also paramount to a successful harvest, both mentally and physically. We offer a number of tips for on-farm safety and mental health awareness within this magazine.

I hope you enjoy reading this edition and I wish you a safe and successful harvest.

Philip Hughes
General Manager, Trading
Australia/New Zealand

MARKET UPDATE/

WORDS/ PHILIP HUGHES, GENERAL MANAGER, TRADING AUSTRALIA/NEW ZEALAND

NEAR-RECORD YEAR DESPITE DROP IN PRODUCTION

Global forecasts for the 2017/18 season are expected to yield the second-largest crop ever, despite the production of agricultural commodities decreasing by 2.4 per cent from last year's record crop.



World stocks, particularly in corn and barley, are predicted to decline for the first time in six years, according to an early season report from the United States Department of Agriculture (USDA) released in August.

While six months ago, the world was flush with grain and had huge stockpiles, in contrast it is predicted that own-consumption will draw down on most of these stocks over the coming year.

This will cause a slight 2 per cent decline in global exports, however the 2017/18 season is still forecast to be the second largest year for international trade on record with 530mmt of key commodities set to be exported.

Wheat

Wheat production globally is expected to be down 1.6 per cent to

743mmt in 2017/18, caused mainly by the United States sowing its lowest wheat acreage in decades as Americans look to corn and beans for higher profits.

The Australian wheat crop is forecast to drop by 33 per cent from last year to 23.5mmt following a poor start to the season in most states. This brings Australia down to a slightly below-average wheat production compared to last year's all-time record of 35mmt.

Wheat crops in Canada and Brazil are also expected to decline, while India and North Africa are two of the few regions set to grow in 2017/18.

Compounding lower production are the dry conditions being experienced in North America, bringing concerns around low protein and the availability of quality wheat.

High protein wheat is highly sought after by buyers, with low-

protein making up the majority of global stocks.

The global wheat stocks-to-use ratio is at a high 36 per cent, but when India and China are excluded, this drops to below 20 per cent. This is the first time the stocks-to-use ratio for the major export regions has dipped below 20 per cent since 2007/08.

Feed

Corn is presenting a similar story with production forecast to be down by 3.5 per cent globally, but still at near-record levels of 1.033 billion tonnes.

Interestingly, corn consumption will reach 1.061 billion tonnes, exceeding production for the first time in seven years. As a result, corn stocks will be drawn down for the first time in a decade and are forecast to fall 12 per cent to 200mmt.

Likewise, demand for barley is strong



with consumption (145mmt) likely to exceed production (140mmt) this year. This will cause barley stocks to drop to extremely tight levels with a stock-to-use ratio of 12.5 per cent, compared to 16 per cent last year.

The stocks-to-use ratio for corn is at 19 per cent, a drop of 2.5 per cent, creating some nervous feed markets. As the world's population moves towards eating more protein and demand for animal feed increases, supply will need to keep pace.


Oilseeds

The 2017/18 season will see world soybean production at its second highest level ever, dropping 1 per cent from last year's record of 352mmt down to 347mmt.

Soybean supply and demand is well balanced, with consumption also at 343mmt. Stocks are stabilising at

97mmt following a huge lift in stocks in 2016/17.

Canola is the one commodity which is forecast to grow by 5 per cent globally, despite a tough year in Australia with local crops tipped to be down 23 per cent to 3.2mmt.

All eyes are on the Eyre Peninsula and the Kwinana and Geraldton zone to see what size crops these regions yield this year, following dry conditions in April and May hampering sowing efforts and crop establishment. 

The 2017/18 season is still forecast to be the second largest year for international trade on record with 530mmt of key commodities set to be exported.

IN BRIEF/

GLENCORE AGRICULTURE CHANGES ITS NAME BUT NOT ITS FOCUS

In July 2017, Glencore Grain in Australia changed its name to Glencore Agriculture.

This name change was introduced to better reflect the diversity of the business, while remaining aligned with the company's global brand.

As you may have noticed, this also prompted a name change for *Grain Business* magazine to *AgriBusiness*.

Phil Hughes, General Manager of Trading, said the name change would not affect the way the company operates.

"Business will continue as usual," he said. "Growers should be assured that all paperwork is still valid and all information is still correct.

"The name change better reflects the business as we not only market grain, but pulses, oilseeds, cotton and protein meals as well."

Glencore Agriculture has a team of 15 field officers in nine locations across Australia – Adelaide, Cummins, Fremantle, Dardanup, Swan Hill, Dooen, Narrabri, Wagga Wagga and Toowoomba – who will assist with any queries regarding this change.

In cereal grains, the business will continue to focus on wheat, barley and sorghum.

"We are one of the largest suppliers of wheat globally and consistently supply milling, durum, noodle and feed wheats in both bulk and containers," Phil said.

"We participate in the malting barley and feed barley market and are a major supplier to the malting and brewing sectors in China, Japan and across the Asian region.

"We are also well-positioned as an exporter of red sorghum to Asian markets importing sorghum for feed, industrial and food products. We also service local feed and ethanol industries."

Glencore Agriculture is one of the largest direct handlers of pulses globally and offers multiple products, varieties and quality specifications across all commodities including dry field peas, chickpeas, lentils, edible beans and lupins.

"We supply bulk and containerised pulses to customers in key destinations in the Indian subcontinent, China, Europe, North America, South America and the Middle East," Phil said.

"In canola, we are a significant supplier to global markets for a range of customers in the industrial, biodiesel and food industries, while also a major participant in sustainable canola and high oleic canola."

As Australia's cotton industry grows, Glencore Agriculture's team on the east coast has increased its presence in this market.

"In cotton, we have a specific emphasis on supply chain and quality management to ensure we service the individual needs of customers and consumers worldwide," Phil said.

Glencore Agriculture is also the largest importer of protein meals into Australia and supplies product to a range of feed manufacturers and customers. **db**

GLENCORE AGRICULTURE

Glencore Agriculture website

A new dynamic website for Glencore Agriculture in Australia has also been launched at glencoreagriculture.com.au

The new website is a significant upgrade from the old site and has been built for better viewing from mobile phones and tablets.

It provides more information for growers and buyers, and better search options for pricing.

A daily contract pricing bid sheet is available, as well as live contract pricing during the afternoons.

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YIELD/

WORDS/ JEANETTE SEVERS

GROWERS ENCOURAGED TO FOCUS ON RISK MANAGEMENT

After a bumper cereal harvest across Australia last year, growers are now faced with the task of managing poor yield scenarios, mostly due to the lack of early rain across many regions.





Canola crop in Western Australia

The 2016/17 wheat harvest season returned \$5.93 billion to growers, according to ABARES. However, the record Australian harvest was offset by high inputs, as diseases and pests benefitted from the increased canopy cover.

Last year's excess would not be replicated this year as many growers realise poor or no germination of their crops, according to agronomists John Minogue and David Pfeiffer.

ABARES estimated 22.5 million hectares was sown in early autumn this year – a mix of decreased national cereal crop but an increase in canola and legumes.

The difference between years has been caused by the unpredictable and unreliable weather pattern that Australia has experienced since late summer. It enabled summer crops to be harvested but many growers will be looking at a harvest of 0-1t/ha after winter.

"We sowed in well below average rainfall and there was no rain whatsoever in June," NSW agronomist and grower, John Minogue, said.

"A lot of areas were very wet last year, so some growers got crops sown into a good profile of moisture holding on from last year – but other areas showed variable germination."

John estimated some regions measured up to one metre of moisture into the soil profile. He used the Newell Highway in NSW to explain germination and performance.

"Generally east of the Newell Highway, crop conditions

“Good growers reduce inputs in poor seasons – in the case of patchy germination, you might be best to abandon the crop, turning it over for grazing.”

appear to be OK. West of the Newell Highway, crop conditions are quite variable, in tune with the weather," John said.

Time of sowing was also a consideration.

"Any early sown crops on lighter soils appear to be successfully germinated," John said.

He recommended managing the season to emerge with minimum impact on soils and economics; and considering integrated livestock options.

"If it's not going to rain, don't put inputs into the crop. If it's going to rain, apply inputs like nitrogen," John said.

"Weed control is necessary if the crop is not stressed and if – for example, in the case of canola – the crop got away. Otherwise, ease off use of fungicides, except in the case of chickpeas.

"Good growers reduce inputs in poor seasons. In the case of patchy germination, you might be best to abandon the crop, turning it over for grazing."

In Western Australia, the option of grazing livestock was less realistic given many broadacre farmers were solely focused on cropping, according to agronomist David Pfeiffer.

His team at Synergy Consulting met 35-plus grower groups and individual crop farmers during June and early July, to discuss the season and risk management options.

"We had significant summer rain – 100-300mm across a large area of the west – which instilled confidence going forward and enabled early sowing, as growers expected, realistically, good germination and follow up rain," David said.



“Those with lighter – medium soils were able to sow early.

“Autumn was dry. Many have had less than 15mm from the three rain events across April, May to the third week in June.

“A lot of the areas received 15-25mm in the first week of July, which has enabled germination. But some areas, like the north-east corridor and those sowing into heavy soils, still don’t have germination.

“Most of Western Australia is at decile one. Frosts have helped dry things up even more.”

Similar to John’s advice to grain growers in the east, David recommended sticking with a plan.

“Everyone’s got different levels of stress and risk appetite. We’ve been advising people to be very mindful of what they spend on inputs,” David said.

“Last year’s record harvest required high levels of inputs for summer weed control and knockdown sprays and nitrogen.

“This year, with lower yield expectations in many areas, there’s little need for nitrogen application so far.

“Growers need to get out into their paddocks and have a look at what’s going on before making decisions. Under the stressed growing conditions aphid numbers have exploded in canola crops; with the need to adopt the more expensive new mode of action Transform® to combat not only the cabbage and turnip, but green peach aphids.”

But David didn’t rule out a late recovery.

“We’ve been here before. In 2015, 100mm of rain fell on 30 July and the season went ahead,” he said.

Many croppers in the north and north-east of Western

“We’ve been here before. In 2015, 100mm of rain fell on 30 July and the season went ahead.”

Australia were now focused on “washing out” grain contracts and sourcing quality seed in readiness for next season’s sowing.

The Bureau of Meteorology (BoM) forecasters are striving to provide accurate information about the current and trending weather situation being experienced across Australia.

Below average rainfall across Australia in the first half of the year was supported


by El Nino-like conditions; this was recently downgraded to an inactive El Nino watch. BoM forecasters recently issued information indicating below average rainfall would continue in the current quarter – July to September.

Irrespective of current frost conditions across Australia, day-time temperatures would continue to be higher than normal, particularly across the southern half, with high pressure systems from a sub-tropical ridge influencing these conditions. The same high-pressure systems are contributing to the dry conditions.

The situation is similar on Africa’s west cape, where unprecedented dry conditions are also being experienced by grain growers. These conditions further reinforce BoM predictions that Australian climate patterns are being influenced by a long-term increasing trend in global air and ocean temperatures.

But the unpredictability of rainfall has seen some WA growers benefitting from moisture.

“In every district, there’s an area the size of a postage stamp which has got up and going,” David said.

There were similar reports out of the Wimmera Mallee district, where some crop areas were wetter and others dry. 

BUCHANAN FAMILY FARM FARM PROFILE

WORDS/ MEL KITSCHKE





PROPERTY LOCATION
Come-By-Chance,
150km west of Narrabri,
55km east of Walgett.

OWNERS/MANAGERS

Charlie Buchanan (34) and wife Elsie Buchanan (32). Charlie is the fifth generation Buchanan at Bungle Gully.

PROPERTY NAMES

Bungle Gully and Notrella (8km from Bungle Gully).

RAINFALL

Annual district average: 450 mm
Actual rainfall over last four years:
2014 – 339 mm
2015 – 431 mm
2016 – 660 mm
2017 – 181 mm (as of August 2017)

TOTAL FARM AREA

10,595 hectares owned plus 1555 hectares leased. 7100 hectares of the total farm area is arable and the remainder is non-arable.

SOIL TYPES

Mostly self-mulching black clays, plus some red loamy soils and low-lying flood country.

CROPS GROWN

Wheat (50 per cent), fodder (5 per cent), legumes (25 per cent), fallow and dry land cotton (25 per cent).

EMPLOYEES

One permanent worker, and casual workers for sowing and harvest.

MACHINERY

- Tractors: Three with GPS, including: John Deere 8345 FWA, Fendt 936 FWA, CAT Challenger 865.
- Seed Rig: One large broad acre planter (Boss Engineering) and one precision planter (Excel Precision).
- Spray Rig: One Rogator self-propelled, and one Gold Acre with weed seeker trailing boom.
- Harvester: One New Holland 9080 and one Claas 580, both with Mac Don fronts.
- Trucks: Two Western Star.



Charlie and Elsie Buchanan on the farm

- Q When was the farming district settled?
- A Come-by-Chance was settled in 1865 by the Evans family.
- Q What is the history of your farm?
- A Bungle Gully was first owned by the Evans family who settled the area in 1865. The Buchanan family purchased the property in 1931, and produced Merino sheep, Poll Hereford cattle, and cut Mitchel grass for hay. They were one of the first families to undertake cropping in the district.
- Q What made you want to be a farmer?
- A I grew up on this farm and have always had a passion for it. I enjoy the challenges it brings, it's also a great place to raise a family.
- Q What education and training did you undertake?
- A I jackarooed in the Northern Territory, then studied Rural Business Management at Marcus Oldham College in Geelong, Victoria. I also worked on other farms on the Queensland border and Tasmania before coming home.

- Q How did this education and on-farm experience help you when you came home to the farm?
- A Marcus Oldham allows you to see a wide variety of farms in many locations both in Australia and overseas. Working for other people exposed me to different farming practises and allowed me to work as a member of a team, outside of our family farm.
- Q Is Elsie actively involved in the farm?
- A Yes, Elsie comes from a stock background and is a school teacher. However, this year we have been running the farm together and she has been learning all of the different aspects of the business, from stock to cropping to book work.
- Q How do you manage your cropping program?
- A We grow wheat, chickpeas, canola, faba beans and dryland cotton. Our aim is to have a wheat stubble every second crop to benefit the fallow period between crops.
Wheat and chickpeas have

historically been the two most reliable commodities for us. However, a continual rotation of these two crops will eventually start to inhibit yields through disease. Crown rot with wheat and root lesion nematodes is brought on by having excessive amounts of chickpeas in a rotation, which affects most crops if the numbers get too high.

By including canola in our program, we get all of the positives of a break crop. We also like having faba beans and canola in our rotation as they spread the planting and harvest window, this allows us to get away with using one planting rig to do the whole lot.

We haven't had the opportunity to grow faba beans and canola in the past five years due to the late break last year and the weather being so dry. Since the 2011/12 summer we have had three crops of dryland cotton.

During our first attempt, we received 525mm of in-crop rain and yields averaged 5.5 bales/ha which I doubt I'll ever see again. The next two crops did not have kind growing conditions, so we had yields just above or near breakeven – 1.82 bales/ha in 2016 and 0.98 bales/ha in 2017. We will keep persevering with cotton, but only when the conditions of the paddock are 100 per cent right, as it's a crop that brings great economical value if the February rains come.

Q Which varieties of grain work best in your area?

A We focus on two wheat varieties, Lancer and Spitfire.

Lancer is a long season wheat and Spitfire is a quicker variety and fairly consistent, whether it's been sown in mid-May or early July – this is when 30 per cent of our wheat was sown in 2016 because of a late break and wet conditions. Both are APH varieties.

Hatrick is our favourable chickpea variety, although we've put some Seamer in this year for seed increase.

Q Are you 100 per cent no-till or do you use a mix of tillage practices?

A We are more in the category of minimum tillage practices. Since 2004, everything has been on controlled traffic – either 18 metres or 36 metres, with harvesting at 12 metres.

If we get a couple of dry years, our self-mulching black clays can really start to crack open as they shrink and dry up. If this looks like happening we may work the country to form big farrows to reduce any more evaporation. That way, when it does start to rain again we get a better infiltration, while also making it smoother for spraying.

Q How have your soils improved over time?

A With stubble retention, minimum tillage practices and controlled traffic, our soils have improved. The soil now has better structure and better water holding capability.

Q What is your fertiliser regime?

A After big years we replace our nitrogen levels aiming for a three tonne crop, generally by pre-sowing about 120 kg/ha to 160 kg/ha of urea.

We have also spread by plane, ground rig and incorporated inter-rowing near the end of tilling to boost protein levels.

Spreading is a big risk and a costly exercise if a good fall of rain doesn't follow, so in the future I would like to double our seed cart size and side band every second row (of wheat and canola) with urea when we have a good idea of moisture depth.

Q What is your normal herbicide regime?

A Depending on the season and what we've planted we will do about four summer sprays, a knockdown spray before sowing, and usually only one in-crop spray for weeds.

“We also like having faba beans and canola in our rotation as they spread the planting and harvest window”





Charlie Buchanan inspecting the soil with the family dog

For legumes, we could do three in-crop fungicide sprays depending on the season.

Conserving moisture is our main priority, and with a lot of acres to cover, herbicide is the most effective and efficient way of controlling weeds at this stage.

We try to cover paddocks while the weed is still young, as they're easier to kill, and to help retain moisture.

With legumes, we always wait for a weed germination before sowing to allow for post-emergent spray (Balance and Simazine) to do the rest as it's very important to us to keep these crops clean.

Pesticides are only sprayed when disease needs to be dealt with, rather than a pre-emptive spray.

This year we have been advised to spray chickpeas early, even without disease, so the plant remains disease free from the beginning.

Q How do you manage herbicide resistance and chemical use?

A We use break crops, long fallows, summer cropping and make spraying a priority when needed.

We hit the weeds with the correct rates and take into consideration everyone else around us.

Q Do you use GPS Auto Steer technology?

A We use a 2cm GPS Auto Steer on all spray rigs, headers and tractors.

Q Are you using the information much at this stage?

A Our soils and topography are fairly consistent so at this stage we don't see a big need to head towards variable rate. However, we would like to make more use of yield mapping to improve drainage.

Q Do you use off-farm soil and plant testing and quality guidance services?

A We get soils tested either annually or bi-annually.

We use test results as a guide but usually crop yields from the previous year dictate how much nitrogen will need to be replaced.

Q Do you belong to a farm management group?

A Yes, Agripath. This is our first year with the benchmarking group. We believe the results will be a valuable resource for the more efficient running of our business, especially when taken over the next three to five years

Q Do you use a farm management adviser?

A We use a private agronomist whose knowledge and input is invaluable to our business. My father, who is now retired, is only ever a phone call away. His experience at Bungle Gully and knowledge of farming is irreplaceable and always valued.

Q What is your harvesting routine?

A We use our own headers and at least one extra contractor during harvest. We get the most out of our headers by running them 24 hours a day, utilising our 9600 tonne



on-farm storage. One third of our grain is delivered during harvest, while the remainder is stored and can be blended on-farm depending on the price per category.

- Q Tell us more about your on-farm storage.
- A Our on-farm storage consists of: elevated silos that hold 1200 tonnes, seed silos holding 400 tonnes, and grain sheds that hold 8000 tonnes. We also use silo bags when we have big years.
- Q How do you sell/market your crop?
- A We have a mixed strategy for our grain marketing. We forward sell a percentage, and our on-farm storage allows us to sell after harvest when markets bounce.

We would also like to try a multigrade contract with 25 per cent of our wheat once the crop is in the ground and moisture profiles are looking good.

We were hesitant last year as we came very close to a wipeout due to it being

“We get soils tested either annually or bi-annually. We use test results as a guide but usually crop yields from the previous year dictate how much nitrogen will need to be replaced.”

such a wet year, so only a small amount was forward sold.

With our chickpeas we forward sold 22 per cent last year taking advantage of considerably high prices.

We haven't done any pool sales for a long time as cash sales have been a priority. In the end, we want to go where the price is best and with a strong company, where you know you're going to get paid. We have found that with Glencore Agriculture, Narrabri, since we've been using them.

With our cotton, I like to sell proportions as the season progresses.

Q Who do you rely on for grain marketing advice?

A I get the Profarmer daily market SMS, so I have an idea of what's happening on a day to day basis. We also receive plenty of email market reports.

Q Tell us about your livestock operation?

A We run Dorper Ewes and Black Angus cattle on our flood prone and lighter country that can't be farmed.

We have been de-stocking our Dorpers due to dry conditions and are now down to 300 breeders.

We are running around 180 Black Angus cattle. We buy Te Mania bulls, which we join in September and calve in June/July.

We join our rams in March and lamb in August/September. More management is required for the cattle as the Dorpers do very well on scrubby flood prone country.

Q What are the three biggest challenges/risks to your farm business?

A 1. Filling our soil profile; 2. Weed resistance – it's not a problem yet but we're aware of it; 3. Council roads – there are no wet weather roads for 40kms in three directions.

Q How do you try to manage those challenges/risks?

A 1. We manage filling our soil profile by being very pedantic about weed control, using minimum tillage practices, conserving stubble, and leaving paddocks to long fallow if there is no moisture rather than sowing every year.

2. We avoid resistance by making weed control the number one priority on the farm, using an experienced agronomist, and keeping up with latest research and information.

3. We use on-farm storage as our roads are often inaccessible in wet weather.

Q What technological developments do you foresee might improve your family farm?


A Not so much a technological development, but a sealed main road would have a hugely positive impact on the efficient running of farms in this area.

Finding staff is also a problem in this area, which autonomous tractors could possibly solve in the future.

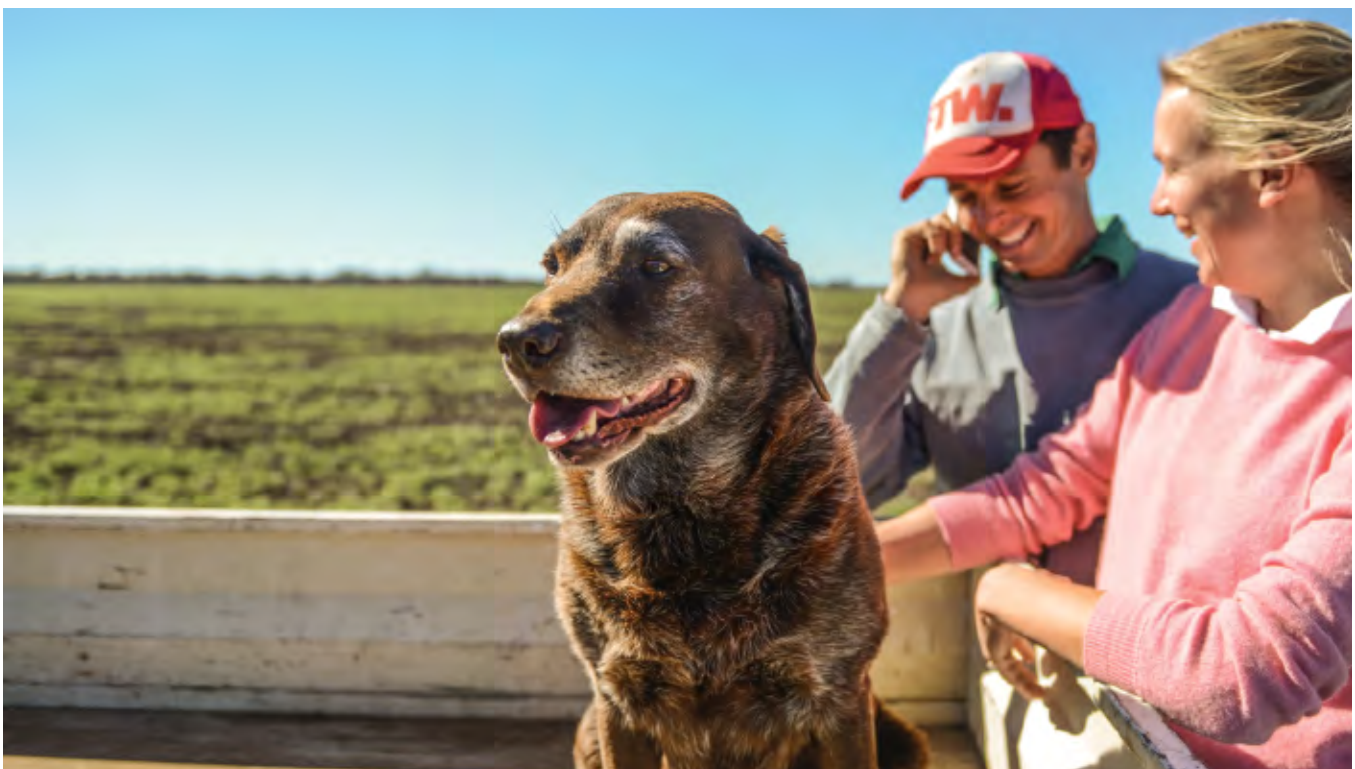
Q Will you encourage your children to return to the farm?

A Yes, if they were interested. They would be free, however, to make their own career choices outside of farming.

Q What is your retirement/succession plan?

A I'm still a bit young to be considering retirement, but in terms of succession, I would talk to my children openly and continually. 

“We avoid resistance by making weed control the number one priority on the farm, using an experienced agronomist.”



Charlie and Elsie Buchanan with the family dog

Local team with global contacts. It's our

AGRICULTURE

As one of the Australia's largest buyers and exporters of wheat, barley, oilseeds, pulses, sorghum and cotton, growers' needs are at the heart of our culture.

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QUALITY MANAGEMENT/

WORDS/ JEANETTE SEVERS

MAXIMISING YIELD WHILE PROTECTING OUR EXPORT REPUTATION

Grain growers are important partners in an integrated approach to biosecurity that is focused on delivering a food safe product to overseas customers.

The industry relies on growers following agronomy, chemical application and harvesting practices to maintain market access and ensure yields are not downgraded at the receival site.

If compromised, Australia's market access to the increasingly educated and affluent middle-class population of Asia and the Indian sub-continent is at risk.

Andrew Hannon, Group Commercial Manager at Viterra, said taking a whole-of-industry approach to pest and disease control is necessary both economically and reputationally. As such, the Australian grain industry's investment in research and development is focused on providing tools for growers to incorporate a range of management practices to minimise pests and contaminants in crop.

"All of industry needs to work together on market access issues," Andrew said.

"This includes absolute adherence to the label of any chemical they are using, or considering for use, on their crop. The critical factor is adhering to the importing country's phytosanitary and food safety requirements."

For grain growers, that means remembering that some overseas

customers have a low or zero tolerance for some chemical residues. Post-receival testing of grain for chemical residues ensures Australia's grain is meeting importing country requirements. Breaches of chemical application can be detected in this way with sophisticated traceability, then used to notify growers.

The recently introduced permit for the application of glyphosate to barley has resulted in the need for declaration at the receival site. Where barley has been treated with glyphosate, that load can only reach feed grade.

"Based on growers' gross margins, this could lower the economic return on their grain. Growers will consider whether this is offset by the agronomic benefit," Andrew said.

"Our customers are increasing their demand for food safety throughout the supply chain. Australia has a reputation for producing high quality, safe food, but we need to ensure we maintain this."

Managing the crop to avoid and reduce pest infestation – and subsequent control measures – begins with the stubbles and extends as far as controlling access points on-farm.

"The last thing the Australian grain industry wants is a reputation for

infected grain or rejected exports," said CSIRO entomologist Dr Geoff Baker.

Geoff researches the impact of invertebrate pests on the Australian grains industry, with a particular interest in Mediterranean snails, an invasive pest.

In a pure broadacre cropping enterprise, growers often use slashing, rolling and cable-drag to knock stubble down. Where livestock is integrated into the cropping system, sheep can graze stubbles and weeds that emerge pre-sowing.

"Retaining stubble and organic matter to improve soil fertility and moisture at the soil surface creates an ideal environment for snails," Geoff said.

"Snails are active breeders from April to winter and if you get a heavy autumn rainfall, the chances of a heavy snail population later in the year, around harvest time, is quite high.

"Mediterranean snails have a habit, in late spring, of climbing up the crop, to escape the hot ground surface."

Options for growers include baiting for snails and slugs, pre-sowing or post-emergent.

"Snail populations are very erratic in any area in any given year. Baiting once the season breaks and getting

“Taking a whole of industry approach to pest and disease control is necessary both economically and reputationally”



baits on the ground before egg laying commences should help control them,” Geoff said.

“Growers are required to stop baiting before harvest.”

Growers are recommended to abide by the label requirements – in some cases baiting will need to cease two months pre harvest. This control enables the baits to drop to the ground and significantly reduces the likelihood of the crop needing to be downgraded at the receival site, or returned to the farm for sieving.

“The economic cost of production losses from Mediterranean snails in the crop has been estimated at \$120 million per year, or \$35-\$45/ha,” entomologist Dr Michael Nash said.

“Mediterranean snails are the biggest invertebrate pest in Australian grain.”

Biological control is also part of the tool box available to grain growers.

While the impact of a parasitoid fly against the pointed snail has been limited until now, recent research indicates it’s becoming established. Australian scientists are now sourcing new genetic material of this fly to combat pointed snails that infest crops in southern growing areas.

“Biological control will form part of an integrated biosecurity management

protocol that growers can use against non-Indigenous pests to improve crop yield,” Michael said.

“Biosecurity also means controlling access points for deliveries on-farm, containment and washdown areas. Vehicles are a common transport method for invertebrate and weed pests.”

Growers also need to recognise their role in limiting and managing visitor and vehicle access to the farm.

Greg Baker, from the South Australian Research and Development Institute (SARDI), said that other integrated control methods include break crops.

“Chickpeas are the obvious break crop for controlling snails, while lentils limit slug infestations,” he said.

“Sheep grazing also control slugs, to a limited degree. Long fallow, an effective control method, has become unpopular among growers.

“Pest control is ongoing and growers need to be using all the cultural and baiting controls available, applying them when they are required.”


Ensuring weed management was selectively applied – spraying glyphosate or another product – will help reduce the amount of vegetation cover that pests use to infest the crop.

Pre- and post-emergent spraying, weed tickling during the early growth stages, are part of the tool box to control weeds infesting the crop and will reduce the population of invertebrate pests.

Andrew agreed: “Crop chemicals are effective agronomic controls, but must be used as per the manufacturer’s label to ensure we meet the importing country’s requirements

“The whole industry needs to work together on market access issues. Our export markets are continually growing, because Australia has a strong reputation for food safety and quality control.”

The best options for disease, pest control and optimising yield come from industry integrated research and extension activities. Australia’s research focus includes selective breeding for disease control, drought and frost resistance, pest resistance and palatability and increasing yield.

“I think that’s one of the biggest advantages we have. Breeding varieties that increase yield per hectare means more grain for producers, increased economies of scale for bulk handlers and higher market volumes for exporters,” Andrew said. 

Maize being harvested



GLOBAL INSIGHT/

MAIZE HEADING TO NEW ZEALAND

Interest in Australian maize is on the rise with new export opportunities opening up for growers in New Zealand.

Australian maize production has fluctuated over the past couple of years, peaking at 495,000 tonnes in 2014 and is expected to be about 410,000 tonnes in 2017.

In the meantime, New Zealand has had disappointing yields, allowing Glencore Agriculture to leverage its international relationships to send a bulk shipment of Australian maize to its New Zealand customers.

Charlie Waters, a Trader at Glencore Agriculture, said it was the first time Glencore Agriculture had exported maize to New Zealand.

“A ship was loaded from Geelong in July and sent to New Zealand to fill a shortfall for their domestic market,” Charlie said.

“New Zealand had about 20-25 per cent crop losses this year after cyclones Debbie and Cook hit crops in April, which were already suffering from early dry weather in December and January.

“Our strong relationships enabled us to help our New Zealand business to

meet its customer requirements, while looking after Australian growers at the same time.”

Maize is grown mainly as an irrigated summer crop across the eastern states in Victoria, New South Wales and Queensland.


While some growers sow maize for silage or cob, feed maize has solid demand domestically through feed lots and feed mills.

Apart from feed, other common varieties include gritting maize which is used for milling into corn flour, corn chips and other products; while waxy maize is used for industrial starch purposes. Niche varieties include popping corn and white maize.

About 20 per cent of the national crop is exported, mainly to Japan and South Korea for manufactured snack food products.

Charlie said New Zealand is a valuable new market for growers, which Glencore Agriculture will continue to focus on.

“Some growers may not even know that we trade in maize, but we’re always looking for new markets and trade for different commodities,” he said.

“Because of our global reach, we’re able to take advantage of those opportunities when they arise.” 



Growers Mark and Laurie on board the ship that exported their maize to New Zealand

FARM SAFETY/ WORDS/ LAUREN BOBRIGE


TEN TIPS FOR STAYING SAFE AND HEALTHY DURING HARVEST

While it is important to finish harvest on time and achieve successful results, safety should take the top priority.

Dr Tony Lower, Director of the Australian Centre for Agricultural Health and Safety, said it is vital to ensure growers and the people they employ work safely and are appropriately skilled for the job.

“Growers experience intense pressure and fatigue during harvest,” Tony said.

“And there is usually a higher number of inexperienced seasonal workers employed – all factors that expose the industry to a heightened risk of danger.”

To ensure you are not exposing yourself and others to danger, here are the top 10 tips to ensure you and your staff stay safe and healthy this harvest. 



01

Prior to harvest, run a safety induction with everyone involved – employees, contractors and even your family members – to discuss the way safety will be managed during harvest. Expectations for safety should be made clear to everyone.

02

Make sure everyone is appropriately trained to use the machinery safely. To ensure this, make use of relevant training courses provided by manufacturers and suppliers.

03

Check guards on machinery and equipment, such as harvesters, tractors, silos, chaser bins, field bins and auger, are in position and fitted correctly.

04

Create a step by step policy for undertaking maintenance. This includes turning off and removing keys from the ignition of any machinery, or prior to working under raised hydraulics, header fronts and combs. Hydraulic and ram locks should be fitted and the comb checked and supported.

05

Identify all electrical hazards and where they exist on the property.

06

Make sure there is always a first-aid kit with a tourniquet in close proximity to where you are working. This could mean placing a first-aid kit in the harvester or your truck.

07

Fire is a common risk during harvest and, according to Kondinin Group research, each year on average around seven per cent of harvesters will start a fire. Of these, one in 10 cause significant damage to the machine or surrounding crop. To reduce the risk of fire, closely monitor bearings, hydraulic lines and belts, and ensure the harvester is kept free of dust. Furthermore, install a fire extinguisher on tractors and fuel trailers and postpone paddock work during high-risk fire days.

08

Speak with workers and family members about fatigue. The farming fatigue self-assessment by the Australian Centre for Agricultural Health and Safety recommends that if you answer yes to any of the following questions, you should see your farm manager before commencing or continuing to work.

- If you had less than six hours sleep in the past 24 hours
- If you had less than 12 hours sleep in the past 48 hours
- If after finishing the upcoming shift, you have been awake for 16 hours or more
- If you have three or more of the following signs of fatigue: yawning, irritable, rubbing or closing your eyes, struggling to stay awake, no energy or motivation
- Poor short term memory
- Near misses
- Can't concentrate on task
- Reduced coordination
- Nodding off or micro sleeps

09

The Australian Centre for Agricultural Health and Safety recommends that all farms include fatigue management within their safety plan. This might include structuring the roster to reduce the potential for fatigue-related issues to arise by monitoring the length and timing of shifts and breaks, number of shifts in a row and days off between shifts. Furthermore, where practical, staff should work in pairs, change tasks often and increase break times.

10

Dehydration and hypoglycemia (low blood sugar) can be more dangerous than you realise when carrying out physical work and working for long periods. During harvest ensure you and your employees are drinking plenty of water and eating nutritious meals frequently throughout the day.

MARKET ACCESS/

STRONG DEMAND FOR AUSTRALIAN COTTON

Australia is known for producing some of the highest yielding and best quality cotton in the world, providing incentives for growers to make the switch to the lucrative summer crop.







Erin Barton, Field Officer for Glencore Agriculture and cotton grower Tom Eather

International demand for Australian cotton is very strong, despite hot and dry seasonal conditions affecting the 2016/17 crop.

Erin Barton, Field Officer for Glencore Agriculture based in Narrabri, said the 2016/17 crop produced about four million bales across the key cotton states of Queensland, New South Wales and Victoria.

“Australian cotton is highly regarded by end-use customers. It’s consistently high quality and has almost zero contamination,” she said.

“Our presence in the cotton market is growing year on year. The majority is exported to spinning mills in China, South East Asia and the Indian subcontinent.

“Cotton is a key commodity for our business and complements the work we do in grains. It’s great to be able to work closely with growers all year round and connect them with markets for all of their commodities.”

More and more farming operations are now choosing to grow cotton, something cotton producer Darren Eather understands quite well.

“We’ve been growing cotton for about 24 years and the past

decade or so has seen yields increase three-fold,” Darren said.

“I used to get five to six bales a hectare and now we get 15 or 16 bales.”

Darren and wife Leanne, son Tom and daughter Julia, have about 5000 hectares of arable farm land, mainly based in northern New South Wales with an extra parcel in the Murrumbidgee area purchased four years ago. They have a mix of dryland and irrigated cotton crops in summer and wheat, canola and chickpea crops in winter.

“I can see Murrumbidgee being the biggest cotton growing area in Australia in the next four years,” Darren said.

“Many people are turning to cotton from rice, and a lot more young people are coming onto the irrigated areas.

“Breeding has been a big thing that’s changed in the cotton industry. The varieties and quality are excellent and they have strong resistance to diseases.

“In research and development, cotton is leaps ahead of grain.”

Darren said a group of growers run the local gin about 10 kilometres from his southern NSW property at Carrathool.

Ginning helps separate the cotton into two different



products: cotton seed and cotton lint. Cotton seed can go directly to feed markets or be manufactured into oil and meal for food and feed markets, while cotton lint is used for textiles.

Erin said customers valued Glencore Agriculture's strong relationships through the supply chain.

"We have a specific emphasis on quality management and an efficient supply chain, which services the individual needs of customers and consumers worldwide.

"Our global network ensures we have strong relationships across the full supply chain, enabling us to meet the customer's exact quality and contract specifications, benefitting growers by increasing demand." **db**

"Australian cotton is highly regarded by end-use customers. It's consistently high quality and has almost zero contamination."

COMMUNITY/

MENSWATCH PROGRAM OFFERS REAL SOLUTIONS TO FARMERS

In South Australia in 2010, farmers made up more than half of the rural men who took their own lives. These statistics underpin the need for programs to help men identify the issues that are affecting their health.

According to Anthony Smith, of the Australian Institute of Male Health and Studies (AIMHS), there has been an alarming 42 per cent increase in suicide deaths in Australia over the past 10 years, but programs such as the Menswatch program are here to help.

The Menswatch program consists of three meetings, with discussion led by AIMHS facilitators. The program has been helping South Australian men to identify their stress triggers and how they can support their neighbours and friends.

In the past 10 years, more than 2000 men, mostly grain growers and sheep farmers, have been helped through Menswatch.

“Farming is a demanding, entrepreneurial exercise, and a lot of the support these blokes need is outside the formal mental health system,” Anthony said.

“We look at principles and strategies for helping men, when they feel trapped and overwhelmed by their stress. What’s important is discussing with these blokes the ideas they have about what they can do.”

Anthony said men want solutions to concrete problems, similar to helping a mate fix the CV joint on his tractor. The Menswatch program helps them identify the not-so-obvious clues that indicate their friends are working under significant stress.

“Men will rally around and help each other with fixing the tractor, but be hesitant about discussing emotions and asking how they are coping,” he said.

“Farming is a demanding, entrepreneurial exercise and a lot of the support these blokes need is outside the formal mental health system.”

“We often feel afraid that if we say something, it might be misinterpreted.

“You can’t know someone is planning to kill themselves, but changing patterns in personality can be cues – is he spending more time in the pub, have you seen him at the footy lately, is he looking dishevelled, untidy, or like he hasn’t been looking after himself?”

Other more obvious cues are breakdowns in family relationships, leading to separation.

“Many husbands and wives decide it will be better if she moves into the town with the children; and they rationalise they are making this decision for the good of the children. But often it’s a decision that’s made after a long period of depression and stress,” Anthony said.

He said that obvious, but often undiscussed stresses, included dealing with the damage caused by poor seasons, from unfavourable weather conditions, drought and bushfires, and trying to service large debts.

The Menswatch program is delivered over three evening sessions, usually including a meal, in a safe space where discussion is facilitated by experienced personnel.

“Men know they’re feeling uncomfortable and stressed, but what they want is a solution to how they can deal with a \$1 million debt on the farm. They want a service that will help them find active solutions,” Anthony said.

“When their family leaves the farm, the farmer is even more isolated than he was before.





FIND OUT MORE

For more information about the Menswatch program go to the Male Suicide Prevention Australia website:

malesuicidepreventionaustralia.com.au

If you or a friend are in need of urgent help, call Lifeline on 13 11 14.

“If one of my mates is doing it tough, these techniques help me know how and when I can step in and help him.”

“We help men identify what their stress points are and how they can change the dynamic positively – this includes techniques for staying calm when they do start discussing things with their wives and other people in their lives.”

The program includes peer support techniques, so participants can learn the skills to open up conversations with friends who they feel are going through a tough time.


“If one of my mates is doing it tough, these techniques help me know how and when I can step in and help him,” Anthony said.

The Fat Farmers group raised funds through a fitness challenge held at the Eyre Peninsula Field Days last year, sponsored by a number of local small businesses. Viterra recently committed \$5000 and these combined funds

will enable Fat Farmers and Lower Eyre Agricultural Development Association to run Menswatch programs on the Eyre Peninsula this year.

“We encourage farmers to attend events that support them to help themselves and each other – getting and staying active is a very important way to offset stress,” said Fat Farmers coordinator, Sally Fisher.

“It’s very easy to let activity fall off in busy times and when we’re stressed.”

The Menswatch programs are being held on the Eyre Peninsula, South Australia, in the second half of this year. In addition, a number of other sessions are being delivered across South Australia, in the Victorian Wimmera and New South Wales regions. 

TECHNOLOGY/

WORDS/ JEANETTE SEVERS

WHAT WE KNOW ABOUT THE WHEAT GENOME

Australian scientists are working with international researchers to discover the world's most resilient wheat varieties, with the aim of increasing production levels by 60 per cent by 2050.

The 10 Wheat Genomes Project is a global partnership that leverages collaborative expertise and funding from seven countries with the aim of contributing to the characterisation of the wheat 'pan-genome'.

As part of the Australian contribution to the 10 Wheat Genomes Project, the Grains Research and Development Corporation (GRDC) has invested in genetic sequencing research led by the University of Adelaide's Professor Peter Langridge.

Peter said the research focuses on identifying the genetic sequences that will help link genes to phenotypes (varietal characteristics).

By linking genes to particular varieties this research will assist Australian wheat breeders to improve the rate of genetic gain in new wheat varieties for Australian growers, maintaining their competitive edge and profitability.

The Australian contribution to this global partnership is coordinated by the GRDC's Dr Francis Ogonnaya (through GRDC investment) and is focused on Mace and Lancer.

Other countries contributing to the research are Canada, United Kingdom, Switzerland, Germany, United States of America – and it is probable Japan will join the group.

The partnership will generate at least 10 high quality wheat genomes and develop strategies and resources to compare multiple wheat genome sequences from around the globe.

Genome 'dʒi:nəm/ noun

The complete set of genes or genetic material (or genetic instructions) present in a cell or an organism. Each genome contains all the information needed to build that organism and allow it to grow and develop. For example, genomic instructions that dictate how a variety of wheat will react to drought. Genomic sequencing determines the precise order that DNA or genetic information is coupled together.

Canada is coordinating the global research program, following the Group of 20 (G20) countries' commitment in 2012 to strategies to improve global food security.

The program, called the Wheat Initiative, enables global research efforts to focus on gathering and sharing data, with the hope of considerably shortening the time needed to identify, breed and trial new varieties, leading to more efficient breeding techniques.

"Knowledge and tools will be the key outcomes from this project," Francis said.

"The knowledge will be the

number of important genes we identify, while the tools will be the markers which are linked to those genes (and suites of genes), which will allow us to develop varieties with improved yield, quality, disease resistance and abiotic stress tolerance."

According to Francis, the study of Mace and Lancer genotypes at the molecular level should enable researchers to gather a greater quantity of data to aid breeding improvements in a shorter time frame.

"Global sharing of our knowledge will lead to more discovery and understanding of the sequence of genes that create better varieties," he said.

"Wheat is the world's biggest crop and any research has to improve competition and benefit growers. In Australia,



that means investment in research and development has to demonstrate clear routes to market and bring commercial benefits to growers.

“We are continually looking to meet the needs of farmers for varieties that are high yielding, have disease resistance and meet quality criteria, as well as being adaptive to our diverse and challenging environment.”

According to Peter Langridge, a number of disease resistance genes have been isolated from wheat in recent years. Last year, a global consortium coordinated by the International Wheat Genome Sequencing Consortium (IWGSC), an associated program of the Wheat Initiative, sequenced a wheat genome for the first time and the researchers have made this data publicly available.

“Wheat is really difficult to work with, given that it has a genome six-times larger than the human genome,” Peter said.

“A couple of years ago if you wanted to clone a gene from wheat, you had to set aside at least 10 years, but it’s now a lot easier to discover genes.

“This first sequencing of a wheat genome in 2016 (by the IWGSC) provided us with reference points to identify disease resistance and how wheat varieties react to heat and drought stress.”

The wheat genome is highly dynamic and changeable, which has allowed wheat to adapt to different environments,

“We are continually looking for varieties that are high yielding, have disease resistance and meet quality criteria, as well as being adaptive to our diverse and challenging environment.”

such as Australia’s unstable weather and climate conditions. This adds to the complexity of ensuring consistent yields.


“We need to identify which wheat genomes and genes are dynamic, which wheat genes are stable, and the overall structure and behaviour of the wheat genome. We can use this information to then support the gene discovery efforts,” Peter said.

“When we know what the key features of the genomes are, we can start sequencing a large number of other wheat varieties at a reduced cost.”

Peter said they have already identified that many Australian wheat varieties have the ability to adapt to change. If the season is good, they’ll grow quite vigorously, if they’re exposed to a drought event, they’ll change their behaviour and become more conservative in the way they develop.

“It’ll be really nice to identify the basis of how wheat does this. We want varieties that can take advantage of a good season, and can minimise the damage in a bad one,” he said.

“Identifying these key genes will enable us to be predictive and ask specific questions about how we might improve characteristics against the resources we have.

“Sharing resources and knowledge across countries will enable partners in the consortium to accelerate discoveries into how new technologies can develop heat and drought tolerance in wheat.” 

OUT AND ABOUT/

GLENCORE AGRICULTURE ATTENDS INDUSTRY EVENTS AROUND AUSTRALIA



The Western Australian Glencore Agriculture team, Dwayne Allen, Timothy Giumelli and Rob Hadrill at the Dowerin Field Days

Glencore Agriculture attended this year's Dowerin Field Days on 30-31 August.

Rob Hadrill, Timothy Giumelli and Dwayne Allen spoke with local growers and other grains industry members about this year's winter crops.

The Dowerin Field Days is an agricultural expo held in the Central Wheatbelt of Western Australia. The 2017 event saw 24,000 attendees.



Glencore Agriculture's Lyndon Asser with Nick Carracher and Luke Mason at the Australian Grains Industry Conference in Melbourne



Glencore Agriculture's Damien Lee and Lyndon Asser (middle) with Craig Cochrane (far left) and Shaun Williams (far right) at the Australian Grains Industry Conference in Melbourne

The Australian Grains Industry Conference was held on 1-2 August at Melbourne's Crown Promenade. It is the biggest grain industry conference in Australia. Glencore Agriculture is a sponsor and attendee of the event. 



Glencore Agriculture's Benn Oliver and Lyndon Asser with Japanese visitors

IN BRIEF/

JAPANESE DISTILLER GIVES SA GROWERS A TASTE OF SHOCHU

Glencore Agriculture often hosts international customers in Australia, taking delegations from all over the world on farm tours to demonstrate where Australian commodities originate and to showcase the supply chain.



Sanwa's "iichiko" range of high-grade Shochu liquor

Turning this concept on its head, a recent visit from Japanese distiller, Sanwa, gave a number of South Australian barley growers the opportunity to taste the fruits of their labour from an end-use perspective.

Representatives from Sanwa visited the Yorke Peninsula and Mid North of South Australia to speak directly with local barley growers, allowing them to taste the high-end spirit, Shochu, made from premium Commander barley.

Lyndon Asser, Glencore Agriculture's Senior Commercial Manager, said Sanwa had been purchasing premium South Australian

malting barley for the past 20 years as the key ingredient in its "iichiko" range of high-grade Shochu liquors.

"This was a unique opportunity for growers to hear directly from an international end-user," Lyndon said.


"Sanwa explained why high standards of quality are so important and discussed how Commander delivers a superior product.

"The Shochu tasting was the highlight of course, with growers appreciating the clarity of the end product and its smooth taste."

Lyndon said Glencore Agriculture has hosted many international delegations from Asia, the Middle

East, Africa and Europe, but this event was unique as it allowed growers to gain an insight into the product their barley contributes to.

"It's about building a connection between end-users and growers and helping both parties understand the importance of quality and consistency in the supply chain.

"When a delegation visits Australia it's a great opportunity for us to promote our clean and green environment, world class facilities and food safety and quality processes – this gives our end-users a high level of confidence that their product will meet their specific requirements." 



INDUSTRY PROFILE/

WORDS/ JEANETTE SEVERS

PLANT BIOSECURITY COOPERATIVE RESEARCH CENTRE – WHERE ARE THEY NOW?

In its penultimate year, leaders of the Plant Biosecurity CRC are working to ensure cooperative, industry-led, scientific research continues beyond mid-2018 – in part by generating future revenue for scientific research, through intellectual property rights.

According to Dr Michael Robinson, CEO, Plant Biosecurity CRC, it comes at a time when biosecurity has never been more important to protect Australia's agricultural productivity and ensure export markets.

Future revenue streams from intellectual property rights are also dependent on a continued collaborative model – industry, government, scientific institutions – that focuses on biosecurity research.

Most recently, the CRC has developed new insect control technology to eventually be commercialised for local and international use.

The food-grade silica product has the potential to achieve highly effective pest control in the grains industry as well as other commodities, including almonds.

"The Plant Biosecurity CRC holds the intellectual property rights on its use," Michael said.

"It's a product that's already in our food; it's a matter of developing the product to be capable of killing insects post-harvest.

"Our aim is to enable an income stream that can be ploughed back into biosecurity research for the benefit of Australia and our industry partners."

This new product will join pest and disease traps the CRC has developed, in collaboration with local and overseas partners.

"The CRC owns all IP rights from all research we've funded. Some of the smart spore traps defer co-owned rights," Michael said.

Many growers are aware of the Russian Wheat Aphid, after it was found in crops last year. The aphid was identified in populations of insects taken from the Insect Suction Trap.

It is one of a number of smart spore trapping technologies developed by the South Australia Research and Development Institute (SARDI) and funded by the Plant Biosecurity CRC that includes the Mobile Jet Spore Sampler.

Attached to a moving vehicle, this trap can be programmed to collect airflow at pre-designated GPS locations, recording humidity, temperature and time of day. With its larger than normal capacity to collect insects and pathogens, the trap could help growers identify the best time to apply fungicides to their crops.

Another tool – a computer model to analyse post-border pest spread – was developed to quantify the results of pest and disease outbreaks overseas, to identify how pests could populate in Australia and the mitigating factors affecting their distribution. Rust pathogens in wheat was the chosen scenario.

"The CRC collaborated with lead scientists in New Zealand who scoped pathways of distribution, identified vulnerable Australian regions for establishment and spread of the rust disease, and key points where early intervention could reduce invasion spread," Michael said.

"The importance of global biosecurity collaboration is underlined by this research – international linkages are essential to developing the best science in the world."

That includes knowledge sharing with Australia's key trade partners and neighbours.

"Southeast Asia is our biggest market for wheat export," Michael said.


While he believes the new silica pest control product will support trade of grains, other collaborative research has already shown benefits.

Using Pestpoint™ software over the past year enabled staff from plant protection organisations in Laos, Cambodia and Thailand, and experts from Australia and Thailand, to record details of more than 500 plant pests.

In Kenya – one of Australia's largest suppliers of cut flowers – the Plant Biosecurity CRC helped develop phytosanitary capacity to reduce Australia's biosecurity risk.

"In Africa, our partnership in sharing expertise and knowledge has enabled some countries to open up new trade markets and contribute to global intelligence gathering," Michael said.

"The more we all know about pests and diseases, the better we can monitor trade routes and reduce the risk to Australia's agriculture, the environment and our regional communities.

"Science is the currency of biosecurity, and it's particularly important for trade negotiations. The CRC has provided a great system for industry-directed scientific research delivering real impact for industry." 

INDUSTRY PROFILE/

MEET GLENCORE AGRICULTURE'S FIELD OFFICERS

With nine accumulation offices located around Australia, Glencore Agriculture offers growers a wealth of expertise and local knowledge.



Rob Haddrill – WA Accumulation Manager



Dwayne Allen – WA Field Officer



Nicole Linke – SA Field Officer



David Fleming – SA Field Officer

Building relationships with growers, sharing market insights, attending and speaking at conferences, and meeting growers at events is an important part of the team's role in passing on their industry knowledge.

Glencore Agriculture's strong relationships extend along the supply chain, including end-users.

International and domestic end-use customers are regularly invited to tour facilities and meet growers so they can gain a deeper understanding of where their products are coming from and how they are managed.

This open communication also allows growers to gain a better understanding of where their products end up.

Western Australia

Based in Perth and Dardanup, the WA team has a wealth of knowledge in the agriculture industry.

Rob Haddrill, WA Accumulation Manager, and Field Officers Dwayne Allen and Tim Giumelli pride themselves on having a strong rapport with WA growers.

"We like to be supporting growers," Rob said. "It's important to both parties that we have a relationship with growers and it makes the job more enjoyable too."

"Being local, our WA Field Officers have a strong understanding of each region and its growers."

South Australia

The South Australian team consists of Andrew Wilsdon, General Manager of Accumulation and Grower Services; Benn Oliver, SA Accumulation Manager; and Field Officers Adam Crabb, Craig Williams, Nicole Linke (all based in Adelaide) and David Fleming (based in Cummins).

Benn said the experienced team is focused on building relationships with growers and end-users.

"Our Field Officers have a strong understanding of each region and its growers" he said.

"We also enjoy hosting a number of international delegations to South Australia to showcase the full supply chain."

"It's beneficial to growers as it allows them to see what each commodity is used for, and how strong the demand could be for a particular grade."

Victoria

Julian Fry, Victorian Accumulation Manager, has more than two decades of experience working in the agribusiness sector, and is based in Swan Hill in the Victorian Mallee.

"It's great going out and meeting growers," Julian said. "The more people we network with, the more industry insight we gain and can share with others."



Tim Giumelli – WA
Field Officer



Andrew Wilsdon – SA
General Manager of
Accumulation and
Grower Services



Benn Oliver – SA
Accumulation Manager



Adam Crabb – SA
Field Officer



Craig Williams – SA
Field Officer



Julian Fry – VIC
Accumulation Manager



Greg Williams –
Southern NSW
Accumulation Manager



Erin Barton – NSW
Field Officer



Nick Kelly – QLD
and Northern NSW
Accumulation Manager



Brendan Adler – QLD
Field Officer

New South Wales

The NSW team comprises of Greg Williams, Southern NSW Accumulation Manager based in Wagga Wagga; and Field Officer Erin Barton, based in Narrabri.

Both have a history in grain, with Greg's experience based in logistics and trading, while Erin has over a decade of experience in accumulation and brokering.

The team agrees that making and maintaining relationships is pivotal to the role.

"It's a close-knit industry and you can be as involved as you like," Erin said. "I enjoy getting to know growers and making new contacts."


"I want to see growers succeed each season, and if I can help that by sharing knowledge, I will."

Queensland

Based in Toowoomba, Nick Kelly is the Accumulation Manager for Queensland and Northern NSW, with Field Officer Brendan Adler.

With a small team representing a large geographical area, Nick said it is important to create local contacts in the industry.

"Sharing industry information between us and the grower is vital," he said.

For any grower accumulation enquiries please contact 1300 453 626. 

COMMUNITY/

SPONSORSHIP SCORES GOALS IN THE COMMUNITY

Understanding the importance of regional sport in rural communities inspired Glencore Agriculture to become platinum sponsors of the Darling Downs Rugby Referees Association (DDRRA).

Nick Kelly, Glencore Agriculture's Queensland and Northern NSW Regional Manager, said Downs Rugby is the largest community rugby competition in the world, which means having trained referees to officiate its games is vital.

"With 24 senior and junior clubs across the Darling Downs, there are more than 2,000 registered players and 1,000 games played annually," he said. "You can't play games without referees."

"The DDRRA is a non-profit association that organises the referees for these games – it's a mammoth task. They are also responsible for refereeing school and senior games, representative fixtures and helping with the modified rugby program for players living with disabilities."

Scott Lindblom, President of DDRRA, said the association relies solely on support from clubs, schools and sponsorships.

"All of our referees are volunteers so sponsorship is spent directly on uniforms, travel and skill development," he said. "Our nationally certified referee coaches provide consistency and development for the Australian Rugby Union."

"As the union incorporates towns in a 110,000 square kilometre area, from Gatton and Toowoomba in the east – sweeping out through the west to Dalby, Condamine, Roma, St George, Warwick and Goondiwindi – each Saturday our referees often travel up to a 12-hour round trip.

"We are so grateful for the time our referees donate to the union, as well as our sponsors – without them there wouldn't be a competition."

Nick said Glencore Agriculture's sponsorship is a great way for the company to give back to the regions it does business in.

"Many of our growers and trading partners play in the union or follow teams in their local communities," he said.

"We feel that local sport is the fabric of many regional communities, it keeps communities strong and active and referees play a vital role in sport.

"By supporting the DDRRA we're also helping volunteers continue their great work in the community."

Glencore Agriculture's sponsorship of Darling Downs Referees will be across three seasons – 2017, 2018 and 2019. 



Glencore Agriculture is a platinum sponsor of the Darling Downs Rugby Referees Association



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