

SUMMER 2013-14 GOONDIWINDI



CHALLENGING YEAR ENDS IN SUCCESS WITH SORGHUM

A challenging year on three properties owned by the Cook family through southern Queensland still produced excellent results last season.

Kieran Cook said they planted approximately 10,000 acres of sorghum into country at "Kindon", near Goondiwindi, "Brushy" at Meandarra and "Kilbournie" at Tara in a range of different situations.

"We were going to long fallow country through to cotton because of low grain prices. Then when it came to pull the trigger, to plant cotton, the money wasn't good enough so we put it all back into sorghum," Kieran Cook said.

"Then we planted more sorghum purely because we had a bit of a disease problem with wheat. We had crown rot and disease, so we decided to plant sorghum," Noel Cook added.

Some eight thousand acres of sorghum was also double-cropped directly into wheat stubble.

The country that had been destined for cotton was planted to sorghum in early September and included Pioneer® hybrid G22, Pioneer® hybrid G33 and MR-Bazley. G22 was the best performed sorghum in the early plant, followed by G33 and the MR-Bazley.

Average yields of 3.7 t/ha (1.5 t/acre) were achieved on the early plant with the double-cropped country yielding 2.5 t/ha (1 t/acre).

"Then at Kilbournie it was a mid-October plant, and then we didn't get much rain till Christmas time. If it hadn't have rained at Christmas there wouldn't have been anything on the other two and the G33 still would have had grain," Kieran said.

In the lead-up to the Christmas rain, the sorghum survived through eight days above 40 degrees Celsius.

Kieran said G33 seemed to be a lot more drought tolerant.

"It went through that heat and the other wasn't hardly going to push a head."

"It nearly died and we got the rain at Christmas and then Cyclone Oswald and it finished beautifully."

"We were lucky. As I said to Dad, "Good things come to those who wait." It certainly did, it yielded well, but there was some waiting."

The rain which fell with the cyclone allowed the sorghum to tiller and produce yields of just under 5 t/ha (2 t/acre).

On the Meandarra property, an opportunity plant into wheat country came after the inundation from the cyclone.

"We got a bit over 5 inches when Cyclone Oswald came through and then we were ready to plant, just in the beginning of February, and we got another 15-20mm, which put us off till the 8th of February," Kieran said.

"Even then it was too wet and we struggled to get it in and finished on the 14th of February.

"We are sort of hoping a tonne or a bit better to the acre. Planted when the window was probably shut."

Most of the sorghum was sown at rates of between 50,000 and 65,000 seeds per hectare, with a John Deere MaxEmerge planter used.

Kieran said they had excellent establishment occurring in very good moisture conditions.

"Every plant came up and it was just too thick," he said.



Sorghum grown on Kindon Station, Goondiwindi by Noel Cook (centre), Kieran Cook (left) and Brodie Cook (right) proved a successful option last season

He said following the success of the sorghum hybrids, both G22 and G33 would be planted to the various properties next year.

Kieran thought the G22 had a better fit on Kindon and G33 would suit the Tara country better.

His father Noel said in the double-cropped areas, G33 was better than G22 although G22 had the edge in the fallow country.

Kieran said G33 was deceiving with the amount of yield.

"It never looks as good," he said. "Even when you drive across the Downs, the 22 gets out of the flag and looks good, the 33 will be still down amongst the flag."

"It seems to come into head and looks really nice and then the flag comes and takes the edge off it. It doesn't make any difference to what comes in the header, but it is just visual"

Noel said they did make a comparison between the two hybrids during the growing season.



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Noel Cook (right), Kieran Cook (centre) and Brodie Cook (left) had excellent results with sorghum on three properties last season.



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"It was just interesting here at Christmas time, we went out and had a look at it and the G22 looked to have a magnificent head compared to the G33 alongside it. We brought the heads off both back and weighed them and the 33 was actually heavier than the 22."

He said the sorghum harvested at Kindon, in particular, had excellent grain quality and weighed very well.

"Our sorghum here has all averaged about 81 kilograms a hectolitre, with anywhere between a half and three quarter per cent screenings. All our double-crop was the same, 81 kilograms."

"It was like wheat. It makes a big difference to your yield."

Kieran said they were impressed with the seed quality of the Pioneer sorghum.

"Pioneer bags are a lot better for us. I know that is only a little thing. It is a far better bag. It does make it easier."

He said both G22 and G33 stood up really well and were desiccated using Roundup Attack.

"The Attack really seems to be smashing it, which is good," he said.

PIONEER® HYBRID G33 PROVES BEST OPTION FOR NORTH STAR CONDITIONS

James Hardcastle, of North Star, NSW had an excellent result with G33 sorghum planted late on the property.

Pioneer® hybrid G33 sorghum recorded an excellent yield on a late plant for James Hardcastle of North Star, in northern New South, despite a dry start to the season.

Mr Hardcastle said he originally planted the sorghum paddock, located on the western "Werchillabah" property, in spring but poor establishment due to very dry conditions meant that crop was sprayed out shortly afterwards.

He waited through a dry November period and eventually replanted the area in mid-December.

With a bit of help from small showers, remnants of Cyclone Oswald, he said the crop never looked back and produced very good yields at harvest.

"It worked a treat," he said. "It shot up and was straight into it."

At harvest, the G33 produced average yields of 5.5 t/ha with some parts of the paddock producing yields that were even higher.

"It was enjoyable to harvest," Mr Hardcastle said.

He said the crop produced large green leaves and excellent quality grain and didn't really tiller, which may have been a result of the dry conditions earlier.

"I have never seen grain that was better. The heads were very big and the grain colour was a very nice orange colour."

The crop was harvested in May after being sprayed out during the lead-up and took in the chemical well.

One metre row spacings were used with the seed sown at a planting rate of approximately 60,000 seeds per hectare.

A solid row configuration was chosen over skip row because the paddock had good subsoil moisture after being fallowed through from a previous winter crop.

Urea at 80 kilograms per hectare was placed under the spring-planted sorghum and was utilised well by the later planted crop.

Mr Hardcastle said he had grown the Pioneer® hybrid G22 sorghum in the past but chose G33 as the quicker maturity suited the later plant situation.



“G22 WAS VERY IMPRESSIVE... IT HAD NICE BIG HEADS ON IT.”

SORGHUM SURVIVES INUNDATION AT YELARBON LAST SEASON

Sorghum survived three major rainfall events throughout the summer on the Tait property at Yelarbon, in southern Queensland last season.

Jamie Tait said they planted sorghum into country that had been fallowed through from wheat but then the crops endured 200mm of rain in eight hours in mid-December, 100mm of rain three weeks later and another 100mm of rain shortly afterwards due to Cyclone Oswald.

He said the result were crops which were severely waterlogged and showed signs of nitrogen deficiency due to the conditions.

Despite this, the Pioneer® brand sorghum **G22** still produced an average yield over all areas of 3.5 t/ha.

“It was a fantastic average for us,” Mr Tait said.

The crop had been planted in three sections with the earliest on September 20, the second in mid-October and the third in early December.

Mr Tait said Pioneer® hybrid G22 was sown in the last two plants and was the pick of the sorghums grown on the property.

“G22 was very impressive,” he said. “It had nice big heads on it.”

He said it was very hard to draw any conclusions from the year but they certainly would be growing G22 next season and considering Pioneer® hybrid G33.

The sorghum was planted at rates of between 50,000 and 55,000 plants per hectare into either single-skip or double-skip row spacings.

Weed control was achieved with a combination of atrazine and dual and kept the paddock very clean throughout most of the season in spite of the adverse weather conditions.

The area has traditionally been a winter crop region but has switched to a summer crop focus in more recent years.

“We are really concentrating on summer crop,” Mr Tait said. “It is now up to half the area. Sorghum is one of our main crops.”

The shift to sorghum has occurred with the introduction of zero-till technology to conserve moisture leading up to planting and also the single-skip and double-skip row configurations.



Jamie Tait, of Yelarbon, QLD, was impressed with G22 sorghum last season.

Mr Tait said they were always keen to put some of their sorghum in as soon as the ground temperatures warm up in September and then also plant other areas later in the season.

Sorghum is generally planted on long-fallow country, although the moisture left in the paddocks after last season will mean double-cropping into sorghum this year will be a likely outcome.

“We could double-crop barley into some of it but we will go back-to-back sorghum on a few blocks,” Mr Tait said.

Nitrogen will also be pre-applied this season to allow the plants to take advantage of the nutrients through the year.

RESEARCH PROVES BENEFITS OF CORN IN COTTON ROTATION

Research conducted by NSW Department of Primary Industries has highlighted the benefits of including corn as part of a cotton rotation.

Principal Research Scientist, Dr Nilantha Hulugalle, of the Australian Cotton Research Institute, said the project was initiated to see whether the bulky corn crop delivered more organic matter to the soil.

It also followed anecdotal evidence from growers who had achieved higher yields from a corn/cotton rotation compared to a cotton/cotton rotation.

This scenario was tested last season by Dr Hulugalle by sowing back-to-back cotton and a cotton-corn-cotton sequence under conventional- and minimum-tillage (permanent beds) .

The highest yield in that comparison was with cotton-corn-cotton minimum tillage with the cotton achieving 10.1 bales per hectare compared to the yield of cotton in the cotton rotation at 9.0 bales per hectare.

In the conventional tillage scenario, the cotton following corn produced 9.8 bales per hectare compared with cotton after cotton at 8.2 bales per hectare.

“The initial stand out result is that the cotton treatment that included corn significantly outperformed their counterparts in yield,” Dr Hulugalle said.

Yield increases in the corn rotation ranged from 12 per cent through to more than 21 per cent and added significantly to the gross margin, with an extra \$697 per hectare achieved in the maximum

tillage scenario and an extra \$389 in the minimum tillage crop.

“It is looking very promising and the results were very unexpected,” Dr Hulugalle said. “These are quite substantial.”

He said a lot of growers he worked with had mentioned corn was one of the best rotations and the trials backed this up.

“THERE WAS ALSO A SIGNIFICANT DECREASE IN THE BLACK ROOT ROT NUMBERS IN CORN. WE SUSPECT CORN IS CONTROLLING OTHER DISEASES AS WELL.”

“The results are just so striking,” he said. “In all our treatments following corn, the cotton yields increased.

“It appears that corn will positively affect the profitability of all the treatments by enabling a significant yield increase within the cotton.

Included in the research was a study looking at the soil carbon numbers and the effects on disease by adding corn into the rotations.

Dr Hulugalle said soil organic carbon

was higher after corn than cotton in the surface of on-farm sites in the MIA and Macquarie Valley. Similar results were also seen in the Namoi valley during the previous season.

He said of particular interest was the increase in carbon in the sub-soil in the ACRI trial, at depths of 60cm or more.

“A large proportion of the root mass of the corn crop goes to depths below 60cm and there is a significant increase in the amount of organic matter in these depths after corn.”

“Another advantage of this rotation was that cotton root systems after corn went deeper and were much more extensive so were able to access extra moisture and nutrients.”

“There was also a significant decrease in the black root rot numbers in corn. We suspect corn is controlling other diseases as well.”

The success of the trial has led to a number of other projects being proposed for the near future.

Dr Hulugalle said they would like to look at the deep sub-soil carbon storage and also the interaction between soil fertility and soil fauna.

“Soil fauna influence litter and organic matter decomposition in soils and have an important role in ecosystem productivity.”

He said adding another crop into the rotation caused changes to the type and amount of soil fauna and could be another factor in why corn works so well in a cotton rotation.





White corn proved a success for David Coulton, Goondiwindi, Queensland

WHITE CORN SUCCESS AT GOONDIWINDI

Corn was the obvious rotational option with cotton last season for David Coulton, of Goondiwindi in southern Queensland and a previous relationship with an end user produced an offer to grow a white corn for speciality markets.

Mr Coulton said he had grown yellow corn before and decided to plant the Pioneer® hybrid 33V62 white corn as an option when cotton prices fell below \$400 a bale last season.

He said corn was preferred in the cotton rotation over wheat because of the volume of grain that could be harvested from the area.

Some country on the property had grown cotton for four seasons straight so there was a real need to put another crop into the rotation.

The area will be rotated back to cotton this season and should provide benefits for that crop going forward.

"The country after corn looks fantastic," Mr Coulton said. "We grow corn in the rotation for disease control."

Yields from 33V62 last season averaged out at 11.7 tonnes per hectare in a very good result under trying seasonal conditions.

Mr Coulton said they kept the water up to the corn during the early part of the season, during a period of sustained hot and dry conditions.

The crop was planted in mid-September into one metre row spacings at a rate of 60,000 seeds per hectare. Just over 300 kilogram per hectare of urea was used, with 200 kilograms per hectare applied up-front and a further 110 kilograms per hectare water-run with the irrigations.

Irrigation was used to water-up the crop and Mr Coulton said this led to excellent germination and a very good start to the season.

The challenge of the season came at the end of January when the remnants of Cyclone Oswald swept through the area and deposited some 17 inches of rain across the property.

Mr Coulton said he had given the corn a watering the week prior and was

concerned the heavy rain and cyclonic winds would cause the crop to fall over.

This didn't occur and the corn stood well and suffered only minor grain quality issues and was able to be harvested without incident shortly afterwards.

The grain was of good quality and sent to a processing end user through Lachlan Commodities in Forbes, New South Wales.

"All things considered it did very well," Mr Coulton said.

He said the water flows that accompanied the rainfall helped fill his water storages and provided enough irrigation option for the 2013/14 summer crop season.

The property has substantial on-farm storage options for corn grain although there is a preference to contract to an end user when possible.

In the past, Mr Coulton has grown high amylose corn for Lachlan Commodities. The success of this provided the opportunity to grow the white corn option last season.

LATE PLANT SORGHUM SUCCESS AT GOONDIWINDI

Sorghum planted late on the property of Mark O'Donoghue, located just north of Goondiwindi, in Queensland, proved to be an excellent option last season.

Mr O'Donoghue said they were able to sow the sorghum in early January, which was the first opportunity they had to plant all season.

Normally they would have sown sorghum during the spring but a complete lack of rain over a four month period meant this was not possible.

Eventually a planting opportunity arose with some rainfall and the Pioneer® hybrid G22 and Pioneer® hybrid G56 were sown at a rate of 3 kilograms per hectare.

"We had really good moisture below but when we planted, the top was a bit marginal," Mr O'Donoghue said.

The season changed dramatically at the end of January with the remnants of Cyclone Oswald sweeping through the area and dropping 12 inches of rain over a 24 hour period.

Sorghum seedlings were approximately four inches in height and much of the paddocks went under water, with two inches of flood water coursing across the area.

"The sorghum was just high enough," Mr O'Donoghue said. "It really was that one event that changed the season."

He said, at harvest, the sorghum produced yields in excess of 4 t/ha with G22 averaging 4.05 t/ha and G56 at 4.50 t/ha.

The yields were certainly above average for the property and a tremendous result considering that much of the season was spent waiting for rain and there were stages where a summer crop looked as though it would be an unlikely option.

"If the weather goes with you, farming is great," Mr O'Donoghue said.

It was the first time G22 had been sown on the property and he said it performed very well across the board.

He said the grain quality was very good, with much of it weighing between 80 and 81 kilograms per hectolitre.

Both hybrids were sprayed out at the same time prior to harvest, although G22 demonstrated quicker maturity and was probably mature one to two weeks prior to the G56.

At harvest G22 dried down and was one per cent lower in moisture at the same time.

The late plant and harvest produced another benefit with sorghum commodity prices rising dramatically in the early months of 2013.

"It was a double boost with the sorghum prices the way they were," Mr O'Donoghue said.

Sorghum has become a more prominent crop in recent years on the property with poorer winter seasons and the ability of the summer crop to better handle conditions.

Mr O'Donoghue said their country had a lot of melon holes in it and the sorghum was a lot more forgiving in those conditions.

He said sorghum had the ability to handle very wet and very dry conditions through a season.

Last season the sorghum was sown with 20 kilograms per hectare of MAP and it also received 20 kilograms per hectare of urea.

The paddocks had been fallowed through from a winter crop the previous season and had good nutrition in the soil structure.



Sorghum planted late on the property of Mark O'Donoghue, located just north of Goondiwindi in Queensland, proved to be an excellent option last season.



STRIKE

trials

STRIKE TRIALS HELP ADVANCE AND CHARACTERISE PRODUCTS FOR LOCAL CONDITIONS

This year DuPont Pioneer is introducing a new on-farm trialling program aimed at increasing the amount and quality of yield and agronomic data available for growers, agronomists and consultants so they can make better decisions on which canola, corn and sorghum hybrids to grow or recommend.

STRIKE stands for Seed Technology Research In Key Environments and will be an intensively managed program with research staff planting and collecting data from test sites.

The STRIKE trials replaces the current Product Advancement Trials (PAT). The on-farm STRIKE sites will include both large-scale demonstrations and smaller-plot replicated trials.

One of the main benefits of STRIKE is that it will allow an increased number of hybrids to be tested over more sites and years providing around 150 sets of data for each hybrid by the time it is commercialised. The STRIKE trials will also include comparisons with the leading competitor hybrids from other seed companies.

STRIKE will provide Pioneer with better information on product advancement but the key aim of the program is to give decision-makers, such as growers, agronomists and consultants, more reliable yield results and other agronomic characteristics about Pioneer® brand hybrids.

WHAT STRIKE MEANS FOR YOU...

- A much larger range of testing environments
- Individual trial site selection to reflect as many possible planting situations and times
- The ability to provide Pioneer and decision makers, such as agronomists and farmers, with better trial results through more locations for product advancement decisions
- Strike gives Pioneer the opportunity to test far more experimental varieties in this new trialling program. A hybrid now will have up to 150 sets of results prior to it being commercialised
- Trial entries are replicated at every site
- Farmers and consultants can rest assured that the results that are used out of strike trials are true and correct and offer them sound decision making information on yield and other agronomic characteristics on Pioneer® brand hybrids
- Pioneer has the ability to add onto the side of strike trials any agronomic research work we wish to look at as well, providing further value adding information on our hybrids

CORN CHARACTERISTICS AND PLANTING GUIDE									
Hybrid	NEW P1467	32P55	NEW P1756	NEW P1070	P1813-IT	P2307	33V62	P1419E	
CRM	114	114	117	110	118	123	114	114	
Dryland - feed (position)	1	2	2	3	4				
Irrigation - feed (position)	1	2	2	4	3				
Irrigation - processing (position)		1	1		2				
Silage (position)	1	2	2		3	3			
Clearfield (position)					1				
Waxy (position)									1
White (position)							1		
Husk cover (score 1-9)	7	7	7	6	8	9	5	6	
Cob rot resistance (score 1-9)	7	7	7	7	7	7	9	7	
Drought tolerance (score 1-9)	8	8	8	8	8	7	7	7	
Standability (score 1-9)	9	9	9	9	9	7	8	9	
Yield for maturity (score 1-9)	9	9	9	9	9	7	9	9	
Early planting window	Mid August - end September								
Late planting window	Mid December - early January								
Recommended planting rates	Seeds per hectare								
Good dryland	22-25,000								
Favourable dryland	28-33,000								
1 irrigation	35,000								
2 irrigations	45,000								
3 irrigations	60,000								
4 irrigations	70,000								

GRAIN SORGHUM CHARACTERISTICS AND PLANTING GUIDE				
Hybrid		G33	G22	G99
Maturity		Med-quick	Medium	Medium
Head type		Semi-open	Semi-open	Open
Grain colour		Bright red	Orange	Bright red
Midge rating		MT6	MT4	MT5
Recommended for cool start		Yes	Yes	Yes
Tillering habit		Moderate	Moderate	Low-moderate
Plant height		Short	Medium	Short-medium
Staygreen		Low	Low-moderate	Moderate-high
Lodging resistance		8.0	8.0	8.5
Average days to 50% flower	Spring	69-74	73-78	70-75
	Summer	64-69	71-76	66-71
Recommended planting rates seeds/ha	Marginal dryland	35-40,000	35-40,000	40-45,000
	Favourable dryland	55-90,000	55-90,000	60-95,000
	Irrigation	65-120,000	65-120,000	NR

FORAGE SORGHUM CHARACTERISTICS AND PLANTING GUIDE				
Hybrid	SSS Super Sweet Sudan	Mega Sweet	Betta Graze	Graze-N-Sile
Maturity	Quick	Medium-slow	Medium-quick	Medium
Primary Use	Haymaking	Beef cattle grazing	Cattle & sheep grazing	Pit silage
	Round bale silage	Pit silage	Haymaking	
	Cattle and sheep grazing	Standover feed	Round bale silage	
Forage type	Sweet sudan x sudan	Grain sorghum x sweet sorghum	Sorghum x sudan	Tall grain sorghum
Features	Very fine stems with high plant sugars	Stronger stems to support a large grain-bearing plant	Fine stems with high plant sugars	Tall sorghum plant with high yield capacity
	Sweet & leafy Prolific tillering	Good stress tolerance High yield capacity	Good cold tolerance Suited to early starts	White grain
	Extremely palatable at all stages of growth Good leaf disease resistance	High plant sugars and grain-bearing attributes. Feed value increases with maturity	Clean, disease-free leaves	High grain to stover ratio for better quality silage
	Responds well to heavy grazing or cutting with quick re-growth and an abundance of tillers	Best all-rounder for beef cattle grazing or pit silage	Responds well to heavy grazing or cutting with quick re-growth and an abundance of tillers	Can be grazed if needed
	High quality	Flexible management	General purpose	Quality pit silage

PLANTING RATES KGS/HA				
Average dryland	1-3	2-3	3-4	NR
Favourable dryland	3-8	3-5	5-8	3-4
Full irrigation	8-15	7-10	10-15	7-10
Narrow row spacings/broadacre planting recommended for SSS & Betta Graze				

For further information contact:
Ben Thrift on 0437 531 084 or visit www.pioneer.com

