Growing durum demand in SA: gross margin sensitivity analysis trials

UA415

COONALPYN, ROSEWORTHY, SANDERSTON, WANDEREAH, YEELANNA

2016

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Table 1. Summary of calculations for gross margins in the 2016 bread wheat and durum wheat trials conducted as part of UA415 sponsored through SAGIT.

BREAD / DURUM GROSS MARGIN ANALYSIS								**2016**
			Low Yield	Low Yield	High Yield	High Yield	Average	Actual
			Low Price	High Price	Low Price	High Price	GM	Best GM
Coonalpyn	Bread		702	862	802	980	817	912
	Durum		1462	1737	1816	2146	1834	2035
Roseworthy	Bread		686	823	1095	1290	929	1095
	Durum		1697	1697	2176	2176	2019	2176
Sanderston	Bread		819	961	892	1044	947	1044
	Durum		258	1246	294	1357	1060	1357
Wandereah	Bread		380	475	562	684	539	684
	Durum		1164	1164	1385	1385	1284	1385
Yeelanna	Bread		359	629	548	898	655	790
	Durum		303	1067	353	1191	711	1067

Notes: The calculations for these gross margin figures can be found in the supporting documents. When assessing the gross margins the following points should be noted:

1. *Input prices are as charged to the durum breeding group, and are in general higher than a farmer would pay due to product size.*
2. *Delivery charges and rail freight are to the nearest silo, and have been taken from either Viterra or AWB websites.*
3. *It is assumed all durum would be delivered to Balaklava, unless it only made feed quality in which case it would go to the nearest silo.*
4. *If screenings was the only limiting factor to a higher grade being paid, a cost of $14 per tonne was deducted and the yield lowered to the amount it would be with 5% screenings. No value was placed on screenings. This makes the assumption that the protein will not drop with the removal of screenings.*
5. *These calculations do not consider a carry-over price or put a value on the need to store grain on farm, it only looks at a hectare of crop in the field.*
6. *At Sanderston, the farmer applied a protective application of rust control which was applied to both bread and durum. The durum did not need this spray and it has not been included in the cost of production.*
7. *The high, low, and average refer to the 4 durum and 4 bread wheat varieties grown in these trials.*

A short summary for each trial site is listed below. Table 1 outlines the gross margins obtained for each site and whether durum or bread wheat had the highest gross margin at each site. This table should be viewed with the UA415 excel supplementary spreadsheet that shows all working calculations including test weights, screenings, protein and yield and grades assigned to each variety at each site based on the quality results.

COONALPYN

- The site was sown into good soil moisture at the same time as the farmer sowed the surrounding crop.
- Yields were exceptional across all varieties with the 2 best varieties achieving top quality (DR1), although protein did fall off with the other 6 varieties. The much higher price of durum saw a significantly higher gross margin than what the bread wheat achieved.
- No obvious signs of stress during the season.
- Emu Rock (H1) and DBA-Aurora (DR1) had the highest gross margins and are the varieties compared in the attached.
- At this site, the table shows that durum had a significantly higher GM than the bread wheat across all yield / price combinations.

ROSEWORTHY

- The site was sown into slightly dry soil around the same time as the surrounding crop.
- The site received good rainfall from shortly after sowing and was not under any moisture stress for the rest of the year.
- Both durum and bread wheat yielded very similar to each other.
- Trojan (APW) gave the best bread wheat gross margin (even though it is only an APW variety). All durum varieties made DR1 quality, in part due to the high rate on nitrogen (96 kg of N) applied later in the year. WID802 slightly out-yielded DBA-Aurora and Yawa.
- Across all yield / price combinations the durum had a significantly higher gross margin.

SANDERSTON

- The site was sown into minimal soil moisture, and all varieties struggled until the season improved in late May. From this point on moisture was not an issue and good yields were achieved.
- The bread wheat varieties out-yielded the durum varieties by nearly 30%.
- This yield difference was in part due to the bread wheat being able to recover more quickly from the dry start.
- The good finish saw good quality grains from both bread and durum wheat varieties, with the exception being Yawa (having a very low test weight).
- The yield difference meant that the durum varieties' gain in gross margin was not as large as some sites, but the low value of bread wheat saw the durum have a comfortable advantage over the bread wheat varieties in several of the yield / price combinations (excluding low yield/low price and high yield/low price).

WANDEREAH

- The site was sown slightly earlier than the surrounding crop, although not early by district practice.
- The trial was sown dry and received good opening rains in the next 2-3 days.
- A very good end to the season saw yield and quality for both bread and durum wheat varieties to be very good, with all achieving their top grade.
- Both bread and durum wheat varieties had very similar yields, so the gross margin difference is a straight reflection of the much higher durum price.
- Bread wheat ranged from 3.8 t ha^{-1} (Emu Rock) to 4.9 t ha^{-1} (Cobra), while the durum variety yields ranged from 4.1 t ha^{-1} (Tamaroi) to 4.7 t ha^{-1} (DBA-Aurora).

YEELANNA

- This site was sown around the same time as the surrounding crop and enjoyed good soil moisture all through the season.
- On the down-side, and largely due to the distance from Adelaide, this site was the last one harvested and endured heavy rainfalls through late December which severely affected the quality.
- The gross margins were much closer at this site due to the lower prices achieved, but in most yield / price combinations the durum showed a significantly higher figure.
- In reality, if durum was being grown in a season like this it would have been harvested before the bread wheat due to its higher value and would not have been affected by the late rains at the end of December.
- Protein achievement for the durum varieties at this site was disappointing.

SUMMARY

- The year was exceptional across all sites with very good yields being achieved.
- Due to bread wheat staying close to $200 per tonne and durum contracts (San Remo area-based) offered at approximately $400, it was always going to be extremely difficult for bread wheat varieties to achieve a similar gross margin.
- The season did show that it is possible to economically achieve high yields and good protein as shown at Roseworthy, but if sown into the right paddock with a good history high yields and good quality can be achieved with no added nitrogen as shown at Sanderston.
- Even though it was an exceptionally wet season, there was little rust detected and this has improved the gross margin obtained for bread wheat varieties as spraying was not needed (with the exception of Sanderston where a spray was applied).
- With another favourable season in 2017, it is expected that the gross margins will be similarly high for the durum varieties over the bread wheat varieties; even though it is expected that the price for durum may be lower than the 2016 contracted price.

COONALPYN BREAD						2016		Total Production HA	1	
Gross Return		**Yield t / Ha**		**$ / t**		**$ / Ha**		Tonnes Produced :	6.7	
		6.70		218		1460.6		Tonnes Sold :	6.7	
								Tonnes Retained :	0	
Marketing Charges										
Total - Road, Rail		6.7		49.92		334.464		Gross Cash	1460.6	
and Delivery Fees		6.7		0		0		Total Marketing Cost	334.464	
3		6.7		0		0				
4		6.7		0		0		Net Payment	1126.136	
		Total Charges		49.92		334.464		Harvest Payment	1126.136	100%
								Post Harvest	0	0%
		Net Price		168.08		1126.136		Pool Remaining	0	0%
Variable Costs		**Quantity**	**Unit**	**$ / Unit**	**Unit**		**$**			
Seed		68	kg / ha	0.218	$ / kg		14.824		15	
Seed Dressing		70	mL/Ha	50	$ / L		3.5		4	
Fertiliser	DAP	100	kg / ha	998	$ / T		99.8		100	
Fertiliser 2	UAN	0	L / ha	750	$ / 1000L		0		0	
Chemical 1	Ultramax	2	L / ha	8	$ / L		16		16	
Chemical 2	Striker	0.15	L / ha	50	$ / L		7.5		8	
Chemical 3	Jedi Duo	1.8	L / ha	20	$ / L		36		36	
Chemical 4	MCPA	0.5	L / ha	11	$ / L		5.5		6	
Chemical 5	Lontrel	0.125	L / ha	20	$ / L		2.5		3	
Chemical 6	Tilt	0	L / ha	16	$ / L		0		0	
Insurance		1%					14.6		15	
Freight		6.7	T / ha	0	$ / T		0		0	
Fuel		9	L / ha	1.5	$ / L		13.5		14	
				Total On Farm Variable Costs :			213.73	**Total Variable Costs :**	214	
								Cash Gross Margin :	912	
								Plus Grain Retained :	0	
				Gross Margin / Ha :			912.41	**Total Gross Margin :**	912	
Break Even Yield :		0.98								
Break Even Price :		31.90								
Sensitivity Analysis				(Calculated on	213.73	variable costs)				
Shows approximate GM/Ha for High, Average and Low yields and prices achieved in trials										
Does not take into account changes to insurance or freight as yield changes - would have a minor effect on GM										
				Price $ / t						
		t / Ha	**193**	**203.75**	**218**					
High Yield		**7.1**	802	878	980					
Average Yield		**6.70**	745	817	912					
Low Yield		**6.4**	702	771	862					

COONALPYN DURUM						2016		Total Production HA	1	
Gross Return	**Yield t / Ha**		**$ / t**			**$ / Ha**		Tonnes Produced :	6.3	
	6.30		400			2520		Tonnes Sold :	6.3	
								Tonnes Retained :	0	
Marketing Charges										
Total, includes road	6.3		27.35			172.305		Gross Cash	2520	
and rail freight, and	6.3		0			0		Total Marketing Cost	172.305	
delivery / EPR	6.3		0			0				
4	6.3		0			0		Net Payment	2347.695	
	Total Charges		27.35			172.305		Harvest Payment	2347.695	100%
								Post Harvest	0	0%
	Net Price		372.65			2347.695		Pool Remaining	0	0%
Variable Costs	**Quantity**	**Unit**	**$ / Unit**	**Unit**		**$**				
Seed	80	kg / ha	0.4	$ / kg		32			32	
Seed Dressing	0	kg / ha	50	$ / kg		0			0	
Fertiliser DAP	100	kg / ha	998	$ / T		99.8			100	
Fertiliser 2 UAN	100	l/ha	750	$/1000L		75			75	
Chemical 1 Ultramax	2	L / ha	8	$ / L		16			16	
Chemical 2 Striker	0.15	L / ha	50	$ / L		7.5			8	
Chemical 3 Jedi Duo	1.8	L / ha	20	$ / L		36			36	
Chemical 4 MCPA A	0.5	L / ha	11	$ / L		5.5			6	
Chemical 5 Lontrel	0.125	L / ha	20	$ / L		2.5			3	
Insurance	1%					25.2			25	
Freight	6.3	T / ha	0	$ / T		0			0	
Fuel	9	L / ha	1.5	$ / L		13.5			14	
			Total On Farm Variable Costs :			313		**Total Variable Costs :**	313	
								Cash Gross Margin :	2035	
								Plus Grain Retained :	0	
			Gross Margin / Ha :			2034.70		**Total Gross Margin :**	2035	
Break Even Yield :	0.78									
Break Even Price :	49.68									
Sensitivity Analysis		(Calculated on	313	variable costs)						
Shows approximate GM/Ha for High, Average and Low yields and prices achieved in trials										
Does not take into account changes to insurance or freight as yield changes - would have a minor effect on GM										
			Price $ / t							
	t / Ha	**350**	**375**	**400**						
High Yield	**6.6**	1816	1981	2146						
Average Yield	**6.18**	1679	1834	1988						
Low Yield	**5.5**	1462	1599	1737						

ROSEWORTHY BREAD					2016		Total Production HA	1	
Gross Return	**Yield t / Ha**		**$ / t**		**$ / Ha**		Tonnes Produced :	7.8	
	7.80		208		1622.4		Tonnes Sold :	7.8	
							Tonnes Retained :	0	
Marketing Charges									
Total - includes rail,	7.8		29.84		232.752		Gross Cash	1622.4	
road freight and	7.8		0		0		Total Marketing Cost	232.752	
recieval fees	7.8		0		0				
4	7.8		0		0		Net Payment	1389.648	
	Total Charges		29.84		232.752		Harvest Payment	1389.648	100%
							Post Harvest	0	0%
	Net Price		178.16		1389.648		Pool Remaining	0	0%

Variable Costs		**Quantity**	**Unit**	**$ / Unit**	**Unit**		**$**		
Seed		68	kg / ha	0.208	$ / kg		14.144		14
Seed Dressing		70	mL/Ha	50	$ / L		3.5		4
Fertiliser	DAP	100	kg / ha	998	$ / T		99.8		100
Fertiliser 2	UAN	100	L / ha	750	$ / 1000L		75		75
Chemical 1	Ultramax	2	L / ha	8	$ / L		16		16
Chemical 2	Striker	0.15	L / ha	50	$ / L		7.5		8
Chemical 3	Jedi Duo	1.8	L / ha	20	$ / L		36		36
Chemical 4	LVE	1	L / ha	11	$ / L		11		11
Chemical 5	Lontrel	0.075	L / ha	20	$ / L		1.5		2
Chemical 6	Tilt	0	L / ha	16	$ / L		0		0
Insurance		1%					16.2		16
Freight		7.8	T / ha	0	$ / T		0		0
Fuel		9	L / ha	1.5	$ / L		13.5		14
				Total On Farm Variable Costs :			294.17	**Total Variable Costs :**	294
								Cash Gross Margin :	1095
								Plus Grain Retained :	0
				Gross Margin / Ha :			1095.48	**Total Gross Margin :**	1095

Break Even Yield :	1.41
Break Even Price :	37.71

Sensitivity Analysis (Calculated on 294.17 variable costs)

Shows approximate GM/Ha for High, Average and Low yields and prices achieved in trials

Does not take into account changes to insurance or freight as yield changes - would have a minor effect on GM

		Price $ / t		
	t / Ha	**208**	**218.75**	**233**
High Yield	**7.8**	1095	1179	1290
Average Yield	**6.48**	859	929	1021
Low Yield	**5.5**	686	745	823

ROSEWORTHY DURUM					2016		Total Production HA	1	
Gross Return	**Yield t / Ha**		**$ / t**		**$ / Ha**		Tonnes Produced :	7.30	
	7.30		400		2920		Tonnes Sold :	7.30	
							Tonnes Retained :	0.00	
Marketing Charges									
Total - includes road	7.30		32		233.60		Gross Cash	2920.00	
and rail freight, and	7.30		0		0.00		Total Marketing Cost	233.60	
delivery / EPR	7.30		0		0.00				
Cleaning	7.30		0		0.00		Net Payment	2686.40	
	Total Charges		32		233.60		Harvest Payment	2686.40	100%
							Post Harvest	0.00	0%
	Net Price		368		2686.40		Pool Remaining	0.00	0%

Variable Costs		**Quantity**	**Unit**	**$ / Unit**	**Unit**		**$**		
Seed		68	kg / ha	0.218	$ / kg		14.824		15
Seed Dressing		0	kg / ha	50	$ / kg		0		0
Fertiliser	DAP	100	kg / ha	998	$ / T		99.8		100
Fertiliser 2	UAN	375	l/ha	750	$ / 1000L		281.25		281
Chemical 1	Ultramax	2	L / ha	8	$ / L		16		16
Chemical 2	Striker	0.15	L / ha	50	$ / L		7.5		8
Chemical 3	Jedi Duo	1.8	L / ha	20	$ / L		36		36
Chemical 4	LVE	1	L / ha	11	$ / L		11		11
Chemical 5	Lontrel	0.075	L / ha	20	$ / L		1.5		2
Chemical 6	Tilt	0	L / ha	16	$ / L		0		0
Insurance		1%					29.2		29
Freight		7.3	T / ha	0	$ / T		0		0
Fuel		9	L / ha	1.5	$ / L		13.5		14
				Total On Farm Variable Costs :			510.57	**Total Variable Costs :**	511
								Cash Gross Margin :	2176
								Plus Grain Retained :	0
				Gross Margin / Ha :			2175.83	**Total Gross Margin :**	2176

Break Even Yield :	1.28				
Break Even Price :	69.94				

Sensitivity Analysis (Calculated on 510.57 variable costs)

Shows approximate GM/Ha for High, Average and Low yields and prices achieved in trials

Does not take into account changes to insurance or freight as yield changes - would have a minor effect on GM

		Price $ / t		
	t / Ha	**400**	**400**	**400**
High Yield	**7.3**	2176	2176	2176
Average Yield	**6.88**	2019	2019	2019
Low Yield	**6**	1697	1697	1697

SANDERSTON BREAD					2016		Total Production HA	1	
Gross Return	**Yield t / Ha**		**$ / t**		**$ / Ha**		Tonnes Produced :	6.1	
	6.10		227		1384.7		Tonnes Sold :	6.1	
							Tonnes Retained :	0	
Marketing Charges									
Total, includes road	6.1		19.45		118.645		Gross Cash	1384.7	
and rail freight, and	6.1		0		0		Total Marketing Cost	118.645	
delivery fees	6.1		0		0				
4	6.1		0		0		Net Payment	1266.055	
	Total Charges		19.45		118.645		Harvest Payment	1266.055	100%
							Post Harvest	0	0%
	Net Price		207.55		1266.055		Pool Remaining	0	0%
Variable Costs	**Quantity**	**Unit**	**$ / Unit**	**Unit**		**$**			
Seed	68	kg / ha	0.227	$ / kg		15.436		15	
Seed Dressing	70	mL/Ha	50	$ / L		3.5		4	
Fertiliser DAP	100	kg / ha	998	$ / T		99.8		100	
Fertiliser 2 UAN	0	L / ha	750	$ / 1000L		0		0	
Chemical 1 Ultramax	2	L / ha	8	$ / L		16		16	
Chemical 2 Striker	0.15	L / ha	50	$ / L		7.5		8	
Chemical 3 Jedi Duo	1.8	L / ha	20	$ / L		36		36	
Chemical 4 MCPA	0.5	L / ha	11	$ / L		5.5		6	
Chemical 5 Lontrel	0.125	L / ha	20	$ / L		2.5		3	
Chemical 6 Tilt	0.5	L / ha	16	$ / L		8		8	
Insurance	1%					13.8		14	
Freight	6.1	T / ha	0	$ / T		0		0	
Fuel	9	L / ha	1.5	$ / L		13.5		14	
		Total On Farm Variable Costs :				222	**Total Variable Costs :**	222	
							Cash Gross Margin :	1044	
							Plus Grain Retained :	0	
			Gross Margin / Ha :			1044	**Total Gross Margin :**	1044	
Break Even Yield :	0.98								
Break Even Price :	36.33								
Sensitivity Analysis			(Calculated on	222	variable costs)				
Shows approximate GM/Ha for High, Average and Low yields and prices achieved in trials									
Does not take into account changes to insurance or freight as yield changes - would have a minor effect on GM									
			Price $ / t						
	t / Ha	**202**	**216.75**	**227**					
High Yield	**6.1**	892	982	1044					
Average Yield	**5.925**	860	947	1008					
Low Yield	**5.7**	819	903	961					

SANDERSTON DURUM						2016		Total Production HA	1	
Gross Return		**Yield t / Ha**		**$ / t**			**$ / Ha**	Tonnes Produced :	4.3	
		4.30		400			1720	Tonnes Sold :	4.3	
								Tonnes Retained :	0	
Marketing Charges										
Total - road freight		4.3		32.15			138.245	Gross Cash	1720	
delivery and EPR		4.3		0			0	Total Marketing Cost	138.245	
3		4.3		0			0			
4		4.3		0			0	Net Payment	1581.755	
		Total Charges		32.15			138.245	Harvest Payment	1581.755	100%
								Post Harvest	0	0%
		Net Price		367.85			1581.755	Pool Remaining	0	0%
Variable Costs		**Quantity**	**Unit**	**$ / Unit**	**Unit**		**$**			
Seed		68	kg / ha	0.4	$ / kg		27.2		27	
Seed Dressing		0	kg / ha	50	$ / kg		0		0	
Fertiliser	DAP	100	kg / ha	998	$ / T		99.8		100	
Fertiliser 2	UAN	0	l/ha	750	$/ 1000L		0.0		0	
Chemical 1	Ultramax	2	L / ha	8	$ / L		16		16	
Chemical 2	Striker	0.15	L / ha	50	$ / L		7.5		8	
Chemical 3	Jedi Duo	1.8	L / ha	20	$ / L		36		36	
Chemical 4	LVE	0.5	L / ha	11	$ / L		5.5		6	
Chemical 5	Lontrel	0.125	L / ha	20	$ / L		2.5		3	
Insurance		1%					17.2		17	
Freight		4.3	T / ha	0	$ / T		0		0	
Fuel		9	L / ha	1.5	$ / L		13.5		14	
				Total On Farm Variable Costs :			225.2	**Total Variable Costs :**	225	
								Cash Gross Margin :	1357	
								Plus Grain Retained :	0	
				Gross Margin / Ha :			1356.555	**Total Gross Margin :**	1357	
Break Even Yield :		0.56								
Break Even Price :		52.37								
Sensitivity Analysis				(Calculated on	225.2	variable costs)				
Shows approximate GM/Ha for High, Average and Low yields and prices achieved in trials										
Does not take into account changes to insurance or freight as yield changes - would have a minor effect on GM										
				Price $ / t						
		t / Ha	**153**	**338.25**	**400**					
High Yield		**4.3**	294	1091	1357					
Average Yield		**4.20**	282	1060	1320					
Low Yield		**4**	258	999	1246					

WANDEREAH BREAD				2016		Total Production HA	1	
Gross Return	**Yield t / Ha**	**$ / t**		**$ / Ha**		Tonnes Produced :	4.9	
	4.90	226		1107.4		Tonnes Sold :	4.9	
						Tonnes Retained :	0	
Marketing Charges								
Total - includes road	4.9	35.67		174.78		Gross Cash	1107.4	
and rail freight, and	4.9	0		0		Total Marketing Cost	174.783	
delivery fees	4.9	0		0				
4	4.9	0		0		Net Payment	932.617	
	Total Charges	35.67		174.78		Harvest Payment	932.617	100%
						Post Harvest	0	0%
	Net Price	190.33		932.62		Pool Remaining	0	0%

Variable Costs		**Quantity**	**Unit**	**$ / Unit**	**Unit**	**$**		
Seed		68	kg / ha	0.226	$ / kg	15.368		15
Seed Dressing		70	mL/Ha	50	$ / L	3.5		4
Fertiliser	DAP	100	kg / ha	998	$ / T	99.8		100
Fertiliser 2	UAN	50	L / ha	750	$ / 1000L	37.5		38
Chemical 1	Ultramax	2	L / ha	8	$ / L	16		16
Chemical 2	Striker	0.15	L / ha	50	$ / L	7.5		8
Chemical 3	Jedi Duo	1.8	L / ha	20	$ / L	36		36
Chemical 4	LVE	0.5	L / ha	11	$ / L	5.5		6
Chemical 5	Lontrel	0.125	L / ha	20	$ / L	2.5		3
Chemical 6	Tilt	0	L / ha	16	$ / L	0		0
Insurance		1%				11.1		11
Freight		4.9	T / ha	0	$ / T	0		0
Fuel		9	L / ha	1.5	$ / L	13.5		14
			Total On Farm Variable Costs :			248.24	**Total Variable Costs :**	248
							Cash Gross Margin :	684
							Plus Grain Retained :	0
				Gross Margin / Ha :		684.38	**Total Gross Margin :**	684

Break Even Yield :	1.10				
Break Even Price :	50.66				

Sensitivity Analysis		(Calculated on	248.24	variable costs)

Shows approximate GM/Ha for High, Average and Low yields and prices achieved in trials

Does not take into account changes to insurance or freight as yield changes - would have a minor effect on GM

		Price $ / t		
	t / Ha	**201**	**219.75**	**226**
High Yield	**4.9**	562	654	684
Average Yield	**4.275**	459	539	565
Low Yield	**3.8**	380	451	475

WANDEREAH DURUM						2016		Total Production HA	1	
Gross Return	**Yield t / Ha**		**$ / t**			**$ / Ha**		Tonnes Produced :	4.7	
	4.70		400			1880		Tonnes Sold :	4.7	
								Tonnes Retained :	0	
Marketing Charges										
Total - includes road	4.7		32.15			151.11		Gross Cash	1880	
freight, delivery fee	4.7		0			0.00		Total Marketing Cost	151.105	
and EPR	4.7		0			0.00				
4	4.7		0			0.00		Net Payment	1728.895	
	Total Charges		32.15			151.11		Harvest Payment	1728.895	100%
								Post Harvest	0	0%
	Net Price		367.85			1728.90		Pool Remaining	0	0%
Variable Costs	**Quantity**	**Unit**	**$ / Unit**	**Unit**		**$**				
Seed	80	kg / ha	0.4	$ / kg		32			32	
Seed Dressing	0	kg / ha	50	$ / kg		0			0	
Fertiliser DAP	100	kg / ha	998	$ / T		99.8			100	
Fertiliser 2 UAN	150	l/ha	750	$/ 1000L		112.5			113	
Chemical 1 Ultramax	2	L / ha	8	$ / L		16			16	
Chemical 2 Striker	0.15	L / ha	50	$ / L		7.5			8	
Chemical 3 Jedi Duo	1.8	L / ha	20	$ / L		36			36	
Chemical 4 MCPA	0.5	L / ha	11	$ / L		5.5			6	
Chemical 5 Lontrel	0.125	L / ha	20	$ / L		2.5			3	
Insurance	1%					18.8			19	
Freight	4.7	T / ha	0	$ / T		0			0	
Fuel	9	L / ha	1.5	$ / L		13.5			14	
			Total On Farm Variable Costs :			344.10		**Total Variable Costs :**	344	
								Cash Gross Margin :	1385	
								Plus Grain Retained :	0	
			Gross Margin / Ha :			1384.80		**Total Gross Margin :**	1385	
Break Even Yield :	0.86									
Break Even Price :	73.21									
Sensitivity Analysis			(Calculated on	344.1	variable costs)					
Shows approximate GM/Ha for High, Average and Low yields and prices achieved in trials										
Does not take into account changes to insurance or freight as yield changes - would have a minor effect on GM										
			Price $ / t							
	t / Ha	**400**	**400**	**400**						
High Yield	**4.7**	1385	1385	1385						
Average Yield	**4.43**	1284	1284	1284						
Low Yield	**4.1**	1164	1164	1164						

YEELANNA BREAD					2016		Total Production HA	1	
Gross Return	**Yield t / Ha**		**$ / t**		**$ / Ha**		Tonnes Produced :	6	
	6.00		206		1236		Tonnes Sold :	6	
							Tonnes Retained :	0	
Marketing Charges									
Total - includes road and	6		26.68		160.08		Gross Cash	1236	
rail freight and delivery	6		0		0		Total Marketing Cost	160.08	
3	6		0		0				
4	6		0		0		Net Payment	1075.92	
	Total Charges		26.68		160.08		Harvest Payment	1075.92	100%
							Post Harvest	0	0%
	Net Price		179.32		1075.92		Pool Remaining	0	0%

Variable Costs		**Quantity**	**Unit**	**$ / Unit**	**Unit**		**$**		
Seed		68	kg / ha	0.206	$ / kg		14.008		14
Seed Dressing		70	mL/Ha	50	$ / L		3.5		4
Fertiliser	DAP	100	kg / ha	998	$ / T		99.8		100
Fertiliser 2	UAN	100	L / ha	750	$ / 1000L		75		75
Chemical 1	Ultramax	2	L / ha	8	$ / L		16		16
Chemical 2	Striker	0.15	L / ha	50	$ / L		7.5		8
Chemical 3	Jedi Duo	1.8	L / ha	20	$ / L		36		36
Chemical 4	MCPA	0.5	L / ha	11	$ / L		5.5		6
Chemical 5	Lontrel	0.125	L / ha	20	$ / L		2.5		3
Chemical 6	Tilt	0	L / ha	16	$ / L		0		0
Insurance		1%					12.4		12
Freight		6.0	T / ha	0	$ / T		0		0
Fuel		9	L / ha	1.5	$ / L		13.5		14
				Total On Farm Variable Costs :			285.67	**Total Variable Costs :**	286
								Cash Gross Margin :	790
								Plus Grain Retained :	0
				Gross Margin / Ha :			790.25	**Total Gross Margin :**	790

Break Even Yield :	1.39
Break Even Price :	47.61

Sensitivity Analysis (Calculated on 286 variable costs)

Shows approximate GM/Ha for High, Average and Low yields and prices achieved in trials

Does not take into account changes to insurance or freight as yield changes - would have a minor effect on GM

		Price $ / t		
	t / Ha	**153**	**188**	**206**
High Yield	**6.6**	548	781	898
Average Yield	**5.83**	450	655	759
Low Yield	**5.1**	359	538	629

YEELANNA DURUM					2016		Total Production HA	1	
Gross Return	**Yield t / Ha**		**$ / t**		**$ / Ha**		Tonnes Produced :	5.2	
	5.20		300		1560		Tonnes Sold :	5.2	
							Tonnes Retained :	0	
Marketing Charges									
Total - includes road	5.2		52.35		272.22		Gross Cash	1560	
freight, delivery	5.2		0		0.00		Total Marketing Cost	272.22	
and EPR	5.2		0		0.00				
4	5.2		0		0.00		Net Payment	1287.78	
	Total Charges		52.35		272.22		Harvest Payment	1287.78	100%
							Post Harvest	0	0%
	Net Price		247.65		1287.78		Pool Remaining	0	0%

Variable Costs		**Quantity**	**Unit**	**$ / Unit**	**Unit**		**$**		
Seed		80	kg / ha	0.3	$ / kg		24		24
Seed Dressing		0	kg / ha	50	$ / kg		0		0
Fertiliser	DAP	100	kg / ha	998	$ / T		99.8		100
Fertiliser 2	UAN	0	l/ha	750	$/ 1000L		0		0
Chemical 1	Ultramax	2	L / ha	8	$ / L		16		16
Chemical 2	Striker	0.15	L / ha	50	$ / L		7.5		8
Chemical 3	Jedi Duo	1.8	L / ha	20	$ / L		36		36
Chemical 4	MCPA	0.5	L / ha	11	$ / L		5.5		6
Chemical 5	Lontrel	0.125	L / ha	20	$ / L		2.5		3
Insurance		1%					15.6		16
Freight		5.2	T / ha	0	$ / T		0		0
Fuel		9	L / ha	1.5	$ / L		13.5		14
				Total On Farm Variable Costs :			220.4	**Total Variable Costs :**	220
								Cash Gross Margin :	1067
								Plus Grain Retained :	0
				Gross Margin / Ha :			1067.38	**Total Gross Margin :**	1067

Break Even Yield :	0.73
Break Even Price :	42.38

Sensitivity Analysis (Calculated on 220.4 variable costs)

Shows approximate GM/Ha for High, Average and Low yields and prices achieved in trials

Does not take into account changes to insurance or freight as yield changes - would have a minor effect on GM

		Price $ / t		
	t / Ha	**153**	**227**	**300**
High Yield	**5.7**	353	772	1191
Average Yield	**5.35**	318	711	1105
Low Yield	**5.2**	303	685	1067