

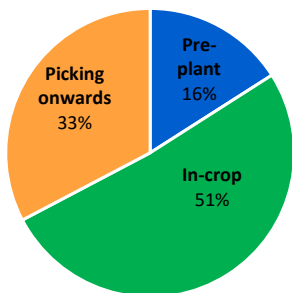
Gross Margin Budget: Furrow Irrigated Cotton

Bollgard3®, Roundup Ready Flex®

INCOME:				Example Budget	Your Budget
				\$/ha	\$/ha
12.0	bales/ha * @	Cotton lint	\$569 /bale (at gin)	\$6,828	
		Cotton seed	\$70 /bale (at gin)	\$840	
			\$639 /bale (at gin)		
		A. TOTAL GROSS INCOME \$/ha:		\$7,668	

VARIABLE COSTS:

See pg 2 for details



Fallow management	\$61
Farming: Pre-planting	\$33
Nutrition	\$804
Planting & in-crop farming	\$134
Irrigation (9.5 ML)	\$436
Insurance	\$246
Crop protection, application & licence fee	\$816
Defoliation	\$151
Picking, cartage & ginning	\$1,208
Farming: Post-crop	\$95
B. TOTAL VARIABLE COSTS \$/ha:	\$3,982

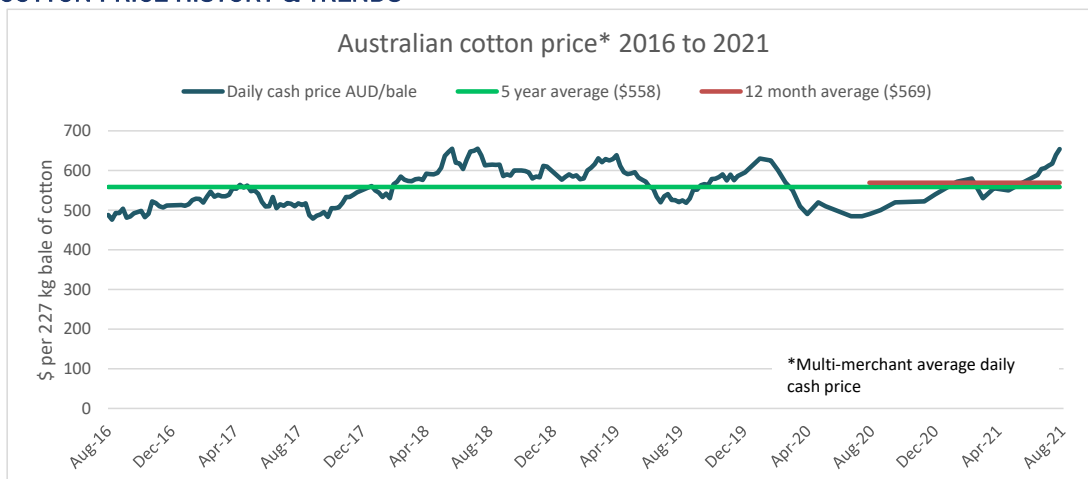
C. GROSS MARGIN (A-B) \$/ha:	\$3,686
D. GROSS MARGIN (A-B/ML applied) \$/ML:	\$387

Approximate Breakeven Yield (bales/ha) based on lint & seed prices above:	5.0 bales/ha
Approximate Breakeven Price (\$/bale inc. seed and discounts) based on 12 bales/ha:	\$322 /bale
<i>Note that break even yield & price is for variable costs only, overhead costs and labour are NOT considered</i>	

SENSITIVITY TABLE

227kg lint bales/ha	\$3,686	PRICE (\$/bale incl. of seed & discounts)				
		539	589	639	689	739
8.5		1029	1440	1851	2263	2674
10.0		1670	2154	2638	3122	3606
11.0		2097	2629	3162	3694	4226
12.0		2524	3105	3686	4267	4847
13.0		2952	3581	4210	4839	5468
14.0		3379	4057	4734	5412	6089
15.5		4020	4770	5520	6270	7020

COTTON PRICE HISTORY & TRENDS



This budget is designed to give an indication of operations and costs required to grow a cotton crop. Prices are estimates only. A grower should alter this budget to take account of individual field management plans, movements in crop and input prices and changes in seasonal conditions. In all instances, operations should be tailored to the requirements of individual paddocks. For a complete guide to cotton management, see the *Australian Cotton Production Manual*.



Variable Costs by Operation			Machinery		Inputs			TOTAL	
			Total	Rate	Cost	Cost	Cost		
			\$/ha	/ha	Unit	\$/unit	\$/ha	\$/ha	
Fallow management									
Nov	Fallow spray:	Glyphosate (450g/L)	Self Propelled	1.50	2.00	L	6.00	12.00	14
Nov	Fallow spray:	Flumioxazin (500g/L)	with above		0.03	kg	150.00	4.50	5
Jan	Fallow spray:	Paraquat (360g/L)	Self Propelled	1.50	2.00	L	6.00	12.00	14
Jan	Fallow spray:	Flumioxazin (500g/L)	with above		0.03	kg	150.00	4.50	5
Mar	Fallow spray:	Glyphosate (450g/L)	Self Propelled	1.50	2.00	L	6.00	12.00	14
Mar	Fallow spray:	Isoxaffutole (750g/kg)	with above		0.10	kg	119.00	11.90	12
Farming: Pre-planting									
Jul	Farming:	Discing	295 eng/HP	10.50					11
Jul	Farming:	Hill up	295 eng/HP	14.50					15
Aug	Farming:	Rubber tyre roller	225 eng/HP	7.50					8
Nutrition									
Jul	Fertiliser:	MAP - spread	295 eng/HP	5.00	150	kg	1.02	152.25	157
Jul	Fertiliser:	Potassium - spread	295 eng/HP	5.00	100	kg	0.77	77.00	82
Aug	Fertiliser:	Urea (140kg N) - drilled	295 eng/HP	18.50	304	kg	0.93	283.96	302
Nov	Fertiliser:	Urea (120kg N) - side dress	295 eng/HP	18.50	261	kg	0.93	243.39	262
Planting & in-crop farming									
Oct	Planting:	Precision planter	295 eng/HP	10.50					11
Oct	Planting:	Seed: Roundup Ready Flex® Bollgard3®	with above		13	kg	8.00	104.00	104
Dec	Farming:	Cultivation: Inter-row	295 eng/HP	11.00					11
Dec	Farming:	Rip / Rotobuck (twice in season)	225 eng/HP	8.00					8
Irrigation management *									
	Irrigation:	Budgeted water			9.4	ML	46.00	432.40	432
Jun	Other:	Soil moisture monitoring	Contractor	4.00					4
Crop protection, application & licence fee									
Dec	Insecticide:	Sulfoxaflor (500g/kg), target: mirids	Self Propelled	1.50	0.14	kg	346.00	48.44	50
Dec	Insecticide:	Fipronil (200g/L), target: mirids	Self Propelled	1.50	0.05	L	87.00	4.35	6
Jan	Insecticide:	Pyriproxyfen (100g/L), target: SLW	Aerial	16.00	0.50	L	116.00	58.00	74
Feb	Insecticide:	Diafenthiuron (500g/L), target: SLW, aphids, mites	Aerial	16.00	0.60	L	63.00	37.80	54
Oct	Herbicide:	Pendimethalin (455g/L)	Self Propelled	1.50	2.25	kg	14.00	31.50	33
Oct	Herbicide:	Terbuthlazine (875g/L)	with above		1.20	L	11.00	13.20	13
Nov	Herbicide:	Roundup Ready® Plantshield® (690g/kg Glyphosate)	Self Propelled	1.50	1.20	kg	11.00	13.20	15
Nov	Herbicide:	S-metolachlor OTT (960g/L)	with above		1.00	L	12.00	12.00	12
Jan	Herbicide:	Diuron (900g/L): Shielded sprayer	295 eng/HP	7.50	1.50	kg	13.00	19.50	27
Jan	Herbicide:	Roundup Ready® Plantshield® (690g/kg Glyphosate)	Aerial	16.00	1.20	kg	11.00	13.20	29
Jan	Other:	Chipping or Spot Spray		5.00					5
Feb	Other:	Mepiquat (38g/L), growth regulator	Aerial	16.00	2.00	L	3.00	6.00	22
Mar	Licence:	Bollgard 3® stacked RRF Licence Fee							390
Jun	Other:	Consultant	Contractor	70.00					70
Jun	Refuge:	Refuge crop: Pigeon peas 2.5%, see page 3			0.11	ML			16
Defoliation									
Mar	Defoliation:	Thidiazuron + Diuron (120g + 60g/L)	Self Propelled	3.00	0.15	L	168.00	25.20	28
Mar	Defoliation:	Ethephon (720g/L)	with above		0.75	L	11.00	8.25	8
Mar	Defoliation:	Crop oil	with above		1.00	L	6.00	6.00	6
Mar	Defoliation:	Thidiazuron + Diuron (120g + 60g/L)	Aerial	16.00	0.15	L	168.00	25.20	41
Mar	Defoliation:	Ethephon (720g/L)	with above		2.00	L	11.00	22.00	22
Mar	Defoliation:	Crop oil	with above		1.00	L	6.00	6.00	6
Apr	Defoliation:	ETee® (25g/L + 756g/L + 102g/L)	Aerial	16.00	0.08	L	77.00	6.16	22
Apr	Defoliation:	Ethephon (720g/L)	with above		1.00	L	11.00	11.00	11
Apr	Defoliation:	Crop oil	with above		1.00	L	6.00	6.00	6
Picking, cartage & ginning									
Apr	Picking:	Own plant: round baler (variable costs only, incl. fuel)	CP690	75.00					75
Apr	Picking:	plus wrap		51.00	/ round bale		12.00 / lint bale		144
May	Cartage:	Freight (incl. lift) 50 km from gin	costs related to yield	58.00	/ round bale		13.65 / lint bale		164
May	Ginning:	Fibre processing		65.00	/ lint bale		65.00 / lint bale		780
Jun	Levies:	Research levy & Cotton Australia levy		3.75	/ lint bale		3.75 / lint bale		45
Farming: Post-crop									
Jun	Farming:	Mulcher (check bt licence cultivation requirements)	295 eng/HP	12.50					13
Jun	Farming:	Cultivation/side bust/middle bust	295 eng/HP	12.50					13
Jun	Farming:	Bed renovation	295 eng/HP	14.50					15
Jun	Farming:	Desilting & grading channels	Contractor	50.00					50
Jun	Herbicide:	Sterilising channels	225 eng/HP	5.00					5
Other									
Nov	Crop insurance:				Premium depends on various factors				246
B. TOTAL VARIABLE COSTS \$/ha:									
					9.51	ML			3982
			Total irrigation water use ML/ha:		9.51	ML			

Furrow Irrigated Pigeon Peas

(refugia for Bollgard3® cotton)

2021-22



Variable Costs by Operation				Machinery		Inputs			TOTAL
				Total	Rate	Cost	Cost	Cost	Cost
				\$/ha	/ha	Unit	\$/unit	\$/ha	\$/ha
Fallow management									
Nov	Fallow spray:	Glyphosate (450g/L)	Self Propelled	1.50	2.00	L	6.00	12.00	13.50
Nov	Fallow spray:	Flumioxazin (500g/L)	with above		0.03	L	150.00	4.50	4.50
Jan	Fallow spray:	Paraquat (360g/L)	Self Propelled	1.50	2.00	L	6.00	12.00	13.50
Jan	Fallow spray:	Flumioxazin (500g/L)	with above		0.03	L	150.00	4.50	4.50
Mar	Fallow spray:	Glyphosate (450g/L)	Self Propelled	1.50	2.00	L	6.00	12.00	13.50
Mar	Fallow spray:	Isoxaflutole (750g/kg)	with above		0.10	kg	119.00	11.90	11.90
Farming									
Jul	Farming:	Discing	295 eng/HP	10.50					10.50
Jul	Farming:	Hill up	295 eng/HP	14.50					14.50
Aug	Farming:	Rubber tyre roller	225 eng/HP	7.50					7.50
Dec	Farming:	Cultivation: Inter-row	295 eng/HP	11.00					11.00
Nutrition									
Jul	Fertiliser:	MAP - spread	295 eng/HP	5.00	150	kg	1.02	152.25	157.25
Planting									
Oct	Planting:	Seed: Pigeon pea	225 eng/HP	10.50	15.0	kg	3.30	49.50	60.00
Irrigation									
Nov	Irrigation:	Budgeted water			4.50	ML	46.00	207.00	207.00
Herbicide & application									
Sep	Herbicide:	Pendimethalin (455g/L)	Self Propelled	1.50	2.00	kg	14.00	28.00	29.50
Sep	Herbicide:	Prometryn (500g/L)	with above		2.50	kg	17.00	42.50	42.50
May	Herbicide:	Glyphosate (450g/L)	Self Propelled	1.50	1.60	L	6.00	9.60	11.10
Post-crop									
Apr	Farming:	Crop destruction (slashing)	225 eng/HP	12.50					12.50
Jun	Farming:	Bed renovation (check bt licence requirements)	295 eng/HP	14.50					14.50
B. TOTAL VARIABLE COSTS \$/ha:									639
Total irrigation water use ML/ha:						4.5	ML/ha		

2021-22 Cotton Gross Margins, brought to you by the cotton industry's joint extension program, CottonInfo.

Foot notes

^Cost of water: The cost of applied irrigation water varies considerably depending on: source (groundwater, surface water), number of times pumped to get to field, energy source of pumps, and relevant fees and charges. In the furrow irrigated budget, a cost of \$46/ML is used assuming pumping from a regulated surface water source (fees \$9/ML) with water 'lifted' twice using diesel pumps (pumping and maintenance cost of \$37/ML), this also takes into consideration pumping tailwater. Pumping and maintenance costs can exceed \$ 110/ML for bores.

Rotation: This budget assumes the previous crop was wheat, followed by a long fallow.

Irrigation: Water ML/ha pumped from sources (surface or groundwater). CRDC grower surveys show a two year average Irrigation Water Use Index (IWUI) of 1.4 bales/ML of field applied irrigation water. For a 12 bale crop this equates to 8.5 ML applied irrigation water. Storage and conveyance losses of 10% brings total water requirement to 9.4 ML/ha. Individual water budgets will vary depending on irrigation system efficiency, and regional and seasonal variations in plant evapotranspiration and effective rainfall.

Machinery costs: The cost of each farming pass reflects variable costs only (fuel, repairs and maintenance), labour and depreciation are considered overhead costs, so are not included in this budget. Contractor rates encompass these costs and are outlined in a separate budget.

*** Yield:** Actual yields are a complex result of agronomic and environmental factors. In this budget a yield of 12 bales/ha is appropriate considering the long fallow, fertiliser program and budgeted irrigation water.

See the **Gross Margin Notes** for further details on assumptions.

Acknowledgements

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