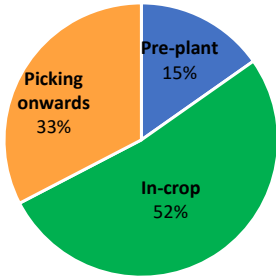


Gross Margin Budget: Furrow Irrigated Cotton

Bollgard3®, Roundup Ready Flex®

INCOME:	Example Budget \$/ha	Your Budget \$/ha
12.0 bales/ha* @ Cotton lint	\$594 /bale (at gin)	\$7,127
Cotton seed	\$93 /bale (at gin)	\$1,111
	\$686 /bale (at gin)	
A. TOTAL GROSS INCOME \$/ha:	\$8,238	
VARIABLE COSTS:		
See pg 2 for details		
Fallow management	\$61	
Farming: Pre-plant	\$47	
Nutrition	\$820	
Planting	\$132	
Irrigation (6.8 ML applied)	\$568	
Insurance	\$304	
Crop protection, application & licence fee	\$876	
Defoliation	\$156	
Picking, cartage & ginning	\$1,317	
Farming: Post-crop	\$118	
B. TOTAL VARIABLE COSTS \$/ha:	\$4,398	
C. GROSS MARGIN (A-B) \$/ha: \$3,840		
D. GROSS MARGIN (A-B/ML applied) \$/ML: \$427		



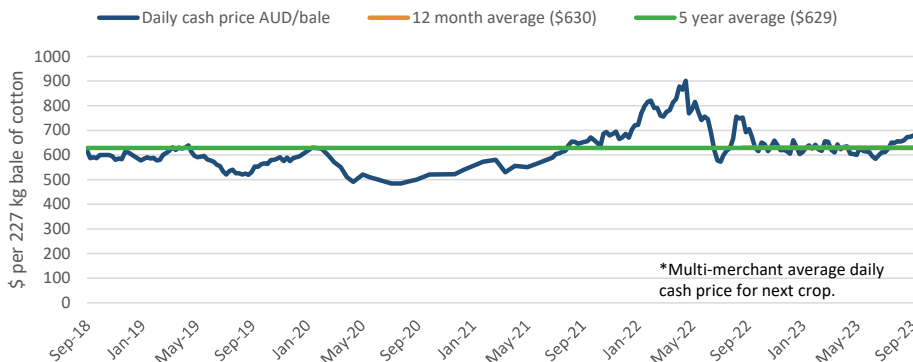
Approximate Breakeven Yield (bales/ha) based on lint & seed prices above: **5.1 bales/ha**
 Approximate Breakeven Price (\$/bale inc. seed and discounts) based on 12 bales/ha: **\$354 /bale**
 Note that break even yield & price is for variable costs only, overhead costs and labour are NOT considered

SENSITIVITY TABLE

227kg lint bales/ha	\$3,840	PRICE (\$/bale incl. of seed & discounts)				
		586	636	686	736	786
8.5		1066	1475	1884	2294	2703
10.0		1759	2241	2722	3204	3685
11.0		2222	2751	3281	3811	4340
12.0		2684	3262	3840	4417	4995
13.0		3146	3772	4398	5024	5650
14.0		3608	4282	4957	5631	6305
15.5		4302	5048	5795	6541	7287

COTTON PRICE HISTORY & TRENDS

Australian cotton price* 2018 to 2023



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 \$/ha	Rate /ha	Unit	Cost \$/unit	Cost \$/ha	Cost \$/ha
Fallow management (long fallow)							
Fallow spray: Glyphosate (450g/L)	Self Propelled	1.37	2.00	L	5.17	10.34	12
Fallow spray: Flumioxazin (500g/L)	with above		0.03	kg	150.54	4.52	5
Fallow spray: Paraquat (360g/L)	Self Propelled	1.37	2.00	L	5.98	11.96	13
Fallow spray: Flumioxazin (500g/L)	with above		0.03	kg	150.54	4.52	5
Fallow spray: Glyphosate (450g/L)	Self Propelled	1.37	2.00	L	5.17	10.34	12
Fallow spray: Terbutylazine (875g/kg)	with above		1.00	L	14.75	14.75	15
Farming: Pre-planting							
Farming: Discing	295 eng/HP	25.63					26
Farming: Hill up	295 eng/HP	16.00					16
Farming: Rubber tyre roller	225 eng/HP	5.80					6
Nutrition							
Fertiliser: MAP (15kg N, 33kg P, 2kg S) - spread pre plant	295 eng/HP	8.41	150	kg	1.11	167.10	176
Fertiliser: Potassium (50kg K) - spread pre plant	295 eng/HP	8.41	100	kg	1.02	101.50	110
Fertiliser: Urea (140kg N) - drilled pre plant	295 eng/HP	15.10	304	kg	0.86	261.43	277
Fertiliser: Urea (130kg N) - side dress early-mid season	295 eng/HP	15.10	283	kg	0.86	242.76	258
Planting							
Planting: Precision planter	295 eng/HP	12.69					13
Planting: Seed: Roundup Ready Flex® Bollgard3®	with above		13	kg	9.19	119.44	119
Irrigation management							
Irrigation: Budgeted water (from source) *			8.8	ML	61.50	544.03	544
Other: Soil moisture monitoring		8.75					9
Farming: Rotobuck/Knockdown (twice in season)	225 eng/HP	15.12					15
Crop protection, application & licence fee							
Insecticide: Sulfoxaflor (500g/kg), target: mirids	Self Propelled	1.37	0.14	kg	302.90	42.41	44
Insecticide: Fipronil (200g/L), target: mirids	Self Propelled	1.37	0.07	L	71.36	4.99	6
Insecticide: Spirotetramat (240g/L), target: SLW	Aerial	18.00	0.40	L	190.89	76.36	94
Insecticide: Acetamiprid (218g/L), Emamectin (32.5g/L) target for above product: SLW, aphids, shield bugs	Aerial	18.00	0.30	L	88.52	26.55	45
Herbicide: Pendimethalin (455g/L)	Self Propelled	1.37	2.25	kg	12.82	28.85	30
Herbicide: Terbutylazine (875g/L)	with above		1.20	L	14.75	17.70	18
Herbicide: Roundup Ready® Plantshield® (690g/kg Glyphosate)	Self Propelled	1.37	1.20	kg	10.50	12.60	14
Herbicide: S-metolachlor OTT (960g/L)	with above		1.00	L	14.26	14.26	14
Herbicide: Diuron (900g/L): Shielded sprayer	295 eng/HP	8.77	1.50	kg	15.50	23.25	32
Herbicide: Roundup Ready® Plantshield® (690g/kg Glyphosate)	Aerial	18.00	1.20	kg	10.50	12.60	31
Farming: Cultivation: Inter-row	295 eng/HP	11.94					12
Other: Chipping or Spot Spray		10.00					10
Growth regulant: Mepiquat (380g/L), growth regulator	Aerial	18.00	0.06	L	23.80	1.43	19
Growth regulant: Mepiquat (380g/L), growth regulator / cutout	Aerial	18.00	0.20	L	23.80	4.76	23
Licence: Bollgard 3® RRF Licence Fee: Price Discount							390
Other: Consultant	Contractor	75.00					75
Refuge: Refuge crop: Pigeon peas 2.5%, see page 3			0.1	ML			19
Defoliation							
Defoliation: Thidiazuron + Diuron (240g + 120g/L)	Aerial	18.00	0.15	L	173.00	25.95	44
Defoliation: Ethephon (900g/L)	with above		0.75	L	9.94	7.45	7
Defoliation: Spraying oil	with above		1.00	L	7.02	7.02	7
Defoliation: Thidiazuron + Diuron (240g + 120g/L)	Aerial	18.00	0.15	L	173.00	25.95	44
Defoliation: Ethephon (900g/L)	with above		0.75	L	9.94	7.45	7
Defoliation: Crop oil	with above		1.00	L	7.02	7.02	7
Defoliation: ETee® (25g/L + 756g/L + 102g/L)	Aerial	18.00	0.08	L	80.83	6.47	24
Defoliation: Ethephon (900g/L)	with above		0.75	L	9.94	7.45	7
Defoliation: Crop oil	with above		1.00	L	7.02	7.02	7
Picking, cartage & ginning							
Picking: Own plant: round baler (variable costs only, incl. fuel)	CP690	86.00 per ha					86
Picking: plus wrap		51.00 / round bale			12.00 / lint bale		144
Cartage: Freight (incl. lift) 50 km from gin	costs related to	63.00 / round bale			14.82 / lint bale		178
Ginning: Fibre processing	yield	72.00 / lint bale			72.00 / lint bale		864
Levies: Research levy & Cotton Australia levy		3.75 / lint bale			3.75 / lint bale		45
Farming: Post-crop							
Farming: Mulcher	295 eng/HP	17.13					17
Farming: Pupae bust (check bt licence cultivation requirements)	295 eng/HP	22.95					23
Farming: Desilting & grading channels	Contractor	70.00					70
Herbicide: Sterilising channels	225 eng/HP	8.00					8
Other							
Crop insurance:					Premium depends on various factors		304
B. TOTAL VARIABLE COSTS \$/ha:							4398
Total irrigation water use ML/ha:			9.0	ML			



Variable Costs by Operation	Machinery	Inputs				TOTAL	
		Total \$/ha	Rate /ha	Unit	Cost \$/unit	Cost \$/ha	Cost \$/ha
Fallow management (long fallow)							
Fallow spray: Glyphosate (450g/L)	Self Propelled	1.37	2.00	L	5.17	10.34	12
Fallow spray: Flumioxazin (500g/L)	with above		0.03	L	150.54	4.52	5
Fallow spray: Paraquat (360g/L)	Self Propelled	1.37	2.00	L	5.98	11.96	13
Fallow spray: Flumioxazin (500g/L)	with above		0.03	L	150.54	4.52	5
Fallow spray: Glyphosate (450g/L)	Self Propelled	1.37	2.00	L	5.17	10.34	12
Fallow spray: Isoxaflutole (750g/kg)	with above		0.10	kg	124.56	12.46	12
Farming							
Farming: Discing	295 eng/HP	25.63					26
Farming: Hill up	295 eng/HP	16.00					16
Farming: Rubber tyre roller	225 eng/HP	5.80					6
Nutrition							
Fertiliser: MAP (15kg N, 33kg P, 2kg S) - spread pre plant	295 eng/HP	8.41	150	kg	1.11	167.10	176
Planting							
Planting: Planter & seed: Pigeon pea	225 eng/HP	12.69	15.0	kg	3.30	49.50	62
Irrigation							
Irrigation: Budgeted water			4.50	ML	61.50	276.75	277
Herbicide & application							
Herbicide: Pendimethalin (455g/L)	Self Propelled	1.37	2.00	kg	12.82	25.65	27
Herbicide: Prometryn (500g/L)	with above		2.50	kg	18.29	45.71	46
Herbicide: Glyphosate (450g/L)	Self Propelled	1.37	1.60	L	5.17	8.27	10
Farming: Cultivation: Inter-row	295 eng/HP	11.94					12
Post-crop							
Farming: Crop destruction (slashing)	225 eng/HP	17.13					17
Farming: Pupae bust (check bt licence cultivation requirements)	295 eng/HP	22.95					23
B. TOTAL VARIABLE COSTS \$/ha:						754	
Total irrigation water use ML/ha:			4.5 ML/ha				

2023-24 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. This budget assumes 82% surface water and 18% groundwater (2021-22 Grower Survey), with a total surfacewater cost of \$58/ML (extract and lift to storage) and a groundwater cost of \$74/ML (extract only), both including pump fuel and maintenance and water usage charges.

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

Irrigation: Water ML/ha pumped from sources (surface or groundwater). NSW DPI Cotton Water Benchmarking shows a two year average (2017-18 and 2021-22) field applied water of 6.7ML/ha correlating with a 12+ bale crop. Water application for refuge pigeon peas is estimated at 4.5 ML/ha, giving total cotton (1 ha) and refuge (0.025 ha) water use of 6.8 ML/ha. Average conveyance efficiency of 76% (NSW DPI 2017-18 and 2021-22) brings total sourced water to 9.0 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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