

Gross Margin Budget: Furrow Irrigated Cotton,

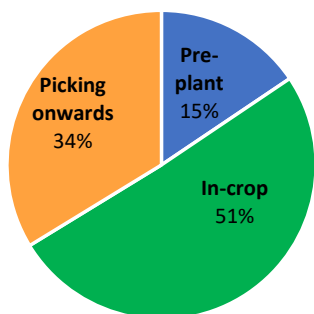
All operations contracted

Bollgard3®, Roundup Ready Flex®

INCOME:				Example Budget	Your Budget
				\$/ha	\$/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)		
			5 SS INCOME \$/ha:	\$8,238	

VARIABLE COSTS:

See pg 2 for details



Fallow management	\$99
Farming: Pre-planting	\$151
Nutrition	\$911
Planting	\$171
Irrigation (6.8 ML applied)	\$893
Insurance	\$304
Crop protection, application & licence fee	\$1,004
Defoliation	\$156
Picking, cartage & ginning	\$1,677
Farming: Post-crop	\$200
B. TOTAL VARIABLE COSTS \$/ha:	\$5,565

C. GROSS MARGIN (A-B) \$/ha:	\$2,673
D. GROSS MARGIN (A-B/ML applied) \$/ML:	\$297

Approximate Breakeven Yield (bales/ha) based on lint & seed prices above:

7.2 bales/ha

Approximate Breakeven Price (\$/bale) based on 12 bales/ha:

\$455 /bale

Break even yield & price is for variable costs only, overhead costs and labour are NOT considered

SENSITIVITY TABLE

227kg lint bales/ha	\$2,673	PRICE (\$/bale incl. of seed & discounts)				
		586	636	686	736	786
8.5		-101	308	718	1127	1536
10.0		593	1074	1556	2037	2519
11.0		1055	1585	2114	2644	3174
12.0		1517	2095	2673	3251	3829
13.0		1979	2605	3231	3857	4483
14.0		2442	3116	3790	4464	5138
15.5		3135	3881	4628	5374	6121

Contract rates include variable, overhead and labour costs as well as a profit margin. Rates are also influenced by supply and demand in a season or valley, quality of equipment on offer and the size of the job (to ensure relocation costs are recouped). A total contracting bill to grow a cotton crop may be in the range of **\$900-\$1300 /ha.**

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*.



All operations contracted

Variable Costs by Operation		Machinery		Inputs			TOTAL	
		Includes contractor rate AND cost of fuel	Total \$/ha	Rate /ha	Unit	Cost \$/unit	Cost \$/ha	Cost \$/ha
Fallow management (long fallow)								
Fallow spray:	Glyphosate (450g/L)	Self Propelled	15.00	2.00	L	5.17	10.34	25
Fallow spray:	Flumioxazin (500g/L)	with above		0.03	kg	150.54	4.52	5
Fallow spray:	Paraquat (360g/L)	Self Propelled	15.00	2.00	L	5.98	11.96	27
Fallow spray:	Flumioxazin (500g/L)	with above		0.03	kg	150.54	4.52	5
Fallow spray:	Glyphosate (450g/L)	Self Propelled	15.00	2.00	L	5.17	10.34	25
Fallow spray:	Isoxafutole (750g/kg)	with above		0.10	kg	124.56	12.46	12
Farming: Pre-planting								
Farming:	Discing		61.00					61
Farming:	Hill up		58.00					58
Farming:	Rubber tyre roller		32.00					32
Nutrition								
Fertiliser:	MAP (15kg N, 33kg P, 2kg S) - spread pre plant		17.00	150	kg	1.11	167.10	184
Fertiliser:	Potassium (50kg K) - spread pre plant		17.00	100	kg	1.02	101.50	119
Fertiliser:	Urea (140kg N) - drilled pre plant		52.00	304	kg	0.86	261.43	313
Fertiliser:	Urea (130kg N) - side dress early-mid season		52.00	283	kg	0.86	242.76	295
Planting								
Planting:	Precision planter		52.00					52
Planting:	Seed: Roundup Ready Flex® Bollgard3®	with above		13	kg	9.19	119.44	119
Irrigation management								
Irrigation:	Budgeted water (7 x irrigations) *			8.8	ML	61.50	544.03	544
Irrigation:	Contract irrigators (labour)		30.00	/ha/irrigation x 7				210
Irrigation:	Contract irrigating supervisor (liaise with agronomist, manage pumps and rotobucks)							100
Farming:	Rotobuck/Knockdown (twice in season)		30.00					30
Other:	Soil moisture monitoring	Own	8.75					9
Crop protection, application & licence fee								
Insecticide:	Sulfoxaflor (500g/kg), target: mirids	Self Propelled	15.00	0.14	kg	302.90	42.41	57
Insecticide:	Fipronil (200g/L), target: mirids	Self Propelled	15.00	0.07	L	71.36	4.99	20
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	15.00	2.25	kg	12.82	28.85	44
Herbicide:	Terbuthlazine (875g/L)	with above		1.20	L	14.75	17.70	18
Herbicide:	Roundup Ready® Plantshield® (690g/kg Glyphosate)	Self Propelled	15.00	1.20	kg	10.50	12.60	28
Herbicide:	S-metolachlor OTT (960g/L)	with above		1.00	L	14.26	14.26	14
Herbicide:	Diuron (900g/L): Shielded sprayer		27.00	1.50	kg	15.50	23.25	50
Herbicide:	Roundup Ready® Plantshield® (690g/kg Glyphosate)	Self Propelled	15.00	1.20	kg	10.50	12.60	28
Farming:	Cultivation: Inter-row		56.00					56
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		75.00					75
Refuge:	Refuge crop: Pigeon peas 2.5%, see page 3			0.1	ML			33
Defoliation								
Defoliation:	Thidiazuron + Diuron (120g + 60g/L)	Aerial Spraying	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:	Thidiazuron + Diuron (120g + 60g/L)	Aerial Spraying	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 Spraying	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:	Contract round baler incl. stacking at end of field	CP690	415.00	per ha				415
Picking:	Fuel	CP690	27.50	L/Ha		1.11 \$/L		31
Picking:	plus wrap		51.00	/ round bale		12.00 / lint bale		144
Cartage:	Freight (incl. lift) 50 km from gin		63.00	/ round bale		14.82 / lint bale		178
Ginning:	Fibre processing		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		55.00					55
Farming:	Pupae busting (check bt licence cultivation requirements)		60.00					60
Farming:	Desilting & grading channels		70.00					70
Herbicide:	Sterilising channels		15.00					15
Other								
Crop insurance:						Premium depends on various factors		304
B. TOTAL VARIABLE COSTS \$/ha:								5565
Total irrigation water use ML/ha:				9.0	ML			



Variable Costs by Operation			Machinery		Inputs			TOTAL	
			Includes contractor rate AND cost of fuel	Total \$/ha	Rate /ha	Unit	Cost \$/unit	Cost \$/ha	Cost \$/ha
Fallow management (long fallow)									
Nov	Fallow spray:	Glyphosate (450g/L)	Self Propelled	15.00	2.00	L	5.1675	10.34	25
Nov	Fallow spray:	Flumioxazin (500g/L)	with above		0.03	L	150.54	4.52	5
Jan	Fallow spray:	Paraquat (360g/L)	Self Propelled	15.00	2.00	L	5.98	11.96	27
Jan	Fallow spray:	Flumioxazin (500g/L)	with above		0.03	L	150.54	4.52	5
Mar	Fallow spray:	Glyphosate (450g/L)	Self Propelled	15.00	2.00	L	5.17	10.34	25
Mar	Fallow spray:	Isoxaflutole (750g/kg)	with above		0.10	kg	124.56	12.46	12
Farming									
Jul	Farming:	Discing		61.00					61
Jul	Farming:	Hill up		58.00					58
Aug	Farming:	Rubber tyre roller		32.00					32
Dec	Farming:	Cultivation: Inter-row		56.00					56
Nutrition									
Jul	Fertiliser:	MAP (15kg N, 33kg P, 15kg S) - spread pre plant		17.00	150	kg	1.11	167.10	184
Planting									
Oct	Planting:	Planter & seed: Pigeon pea		52.00	15.0	kg	3.30	49.50	102
Irrigation									
Nov	Irrigation:	Contract irrigators (labour)		30.00	/ha	/irrigation	x4		120
Nov	Irrigation:	Contract irrigating supervisor (liaise with agronomist, manage pumps and rotobucks)							100
Nov	Irrigation:	Budgeted water (4 x irrigations)			4.50	ML	61.50	276.75	277
Herbicide & application									
Sep	Herbicide:	Pendimethalin (455g/L)	Self Propelled	15.00	2.00	kg	12.82	25.65	41
Sep	Herbicide:	Prometryn (500g/L)	with above		2.50	kg	18.29	45.71	46
May	Herbicide:	Glyphosate (450g/L)	Self Propelled	15.00	1.60	L	5.17	8.27	23
Post-crop									
Apr	Farming:	Crop destruction (slashing)		55.00					55
Jun	Farming:	Pupae bust (check bt licence cultivation requirements)	295 eng/HP	60.00					60
B. TOTAL VARIABLE COSTS \$/ha:								1313	
Total irrigation water use ML/ha:					4.5 ML				

2023-24 Cotton Gross Margins, brought to you by the cotton industry's joint extension program, CottonInfo.

Footnotes

^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.

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.

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

*** 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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