

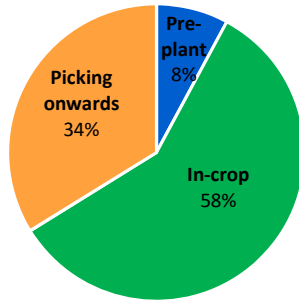
Gross Margin Budget: Furrow Irrigated Cotton

Bollgard3®, Roundup Ready Flex®

INCOME:				Example Budget	Your Budget
				\$/ha	\$/ha
12.00	bales/ha* @	Cotton lint	\$597 /bale (at gin)	\$7,164	
		Cotton seed	\$100 /bale (at gin)	\$1,200	
A. TOTAL GROSS INCOME \$/ha:				\$8,364	

VARIABLE COSTS:

See pg 2 for details



Fallow management	\$73
Farming: Pre-planting	\$36
Nutrition	\$561
Planting & in-crop farming	\$148
Irrigation (9.41 ML)	\$590
Insurance	\$248
Crop protection, application & licence fee	\$718
Defoliation	\$151
Picking, cartage & ginning	\$1,193
Farming: Post-crop	\$98
B. TOTAL VARIABLE COSTS \$/ha:	\$3,815

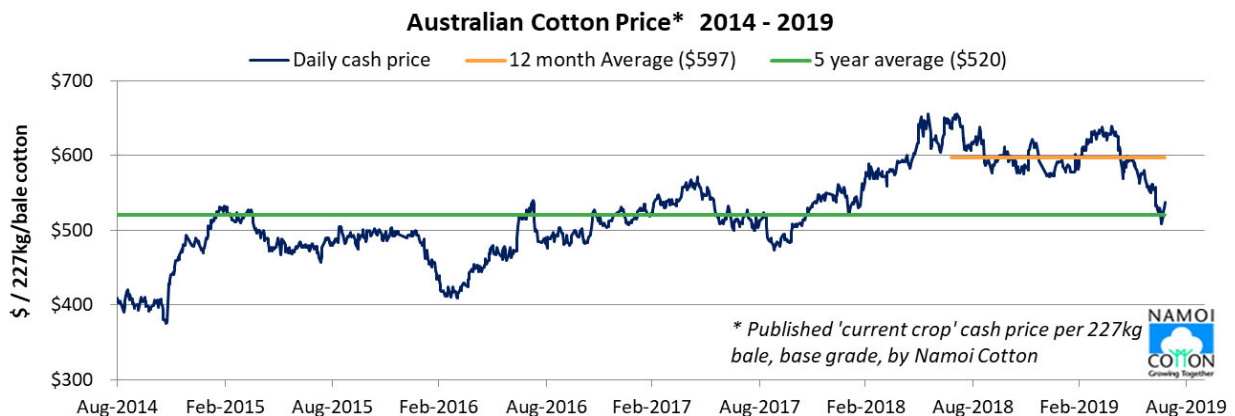
C. GROSS MARGIN (A-B) \$/ha:	\$4,549
D. GROSS MARGIN (A-B/ML applied) \$/ML:	\$483

Approximate Breakeven Yield (bales/ha) based on lint & seed prices above:	6.39 bales/ha
Approximate Breakeven Price (\$/bale) based on 12 bales/ha:	\$318 /bale
<i>Note that break even yield & price is for variable costs only, overhead costs and labour are NOT considered</i>	

SENSITIVITY TABLE

YIELD	PRICE (\$/bale incl. of seed & discounts)				
	597	647	697	747	797
9	1586	2011	2436	2861	3286
10	2342	2842	3342	3842	4342
11	2845	3395	3945	4495	5045
12	3349	3949	4549	5149	5749
13	3853	4503	5153	5803	6453
14	4357	5057	5757	6457	7157
16	5112	5887	6662	7437	8212

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 2019*.



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	5.00	10.00	11.50	
Nov	Fallow spray:	2,4-D amine (625g/L)	with above		0.40 L	6.00	2.40	2.40	
Jan	Fallow spray:	Glyphosate (450g/L)	Self Propelled	1.50	2.00 L	5.00	10.00	11.50	
Jan	Fallow spray:	Fluroxypyr (333g/L)	with above		0.40 L	29.00	11.60	11.60	
Mar	Fallow spray:	Glyphosate (450g/L)	Self Propelled	1.50	2.00 L	5.00	10.00	11.50	
Mar	Fallow spray:	Pendimethalin (440g/L)	with above		2.25 L	11.00	24.75	24.75	
Farming: Pre-planting									
Jul	Farming:	Discing	295 eng/HP	11.50				11.50	
Jul	Farming:	Hill up	295 eng/HP	16.00				16.00	
Aug	Farming:	Rubber tyre roller	225 eng/HP	8.00				8.00	
Nutrition									
Jul	Fertiliser:	MAP - spread	295 eng/HP	5.50	150 kg	0.75	111.75	117.25	
Jul	Fertiliser:	Potassium - spread	295 eng/HP	5.50	100 kg	0.68	68.40	73.90	
Aug	Fertiliser:	Urea (140kg N) - drilled	295 eng/HP	20.00	304 kg	0.62	188.48	208.48	
Nov	Fertiliser:	Urea - water run (120kg of N)	in irrigation		260 kg	0.62	161.20	161.20	
Planting & in-crop farming									
Oct	Planting:	Precision planter	295 eng/HP	11.50				11.50	
Oct	Planting:	Seed: Roundup Ready Flex® Bollgard3®	with above		13 kg	8.96	116.51	116.51	
Dec	Farming:	Cultivation: Inter-row	295 eng/HP	11.50				11.50	
Dec	Farming:	Rip / Rotobuck (twice in season)	225 eng/HP	8.00				8.00	
Irrigation management *									
Sep	Irrigation:	Pre-plant			1.60 ML	63.00	100.80	100.80	
Nov	Irrigation:	In-crop (8ML)^			7.70 ML	63.00	485.10	485.10	
Jun	Other:	Soil moisture monitoring	Contractor	4.00				4.00	
Crop protection, application & licence fee									
Dec	Insecticide:	Sulfoxaflor (500g/kg), target: mirids	Self Propelled	1.50	0.14 kg	303.00	42.42	43.92	
Dec	Insecticide:	Fipronil (200g/L), target: mirids	Self Propelled	1.50	0.05 L	93.00	4.65	6.15	
Jan	Insecticide:	Pyriproxyfen (100g/L), target: SLW	Aerial	15.00	0.50 L	116.00	58.00	73.00	
Feb	Insecticide:	Diafenthiuron (500g/L), target: SLW, aphids, mites	Aerial	15.00	0.60 L	63.00	37.80	52.80	
Oct	Herbicide:	Pendimethalin (455g/L)	Self Propelled	1.50	2.20 kg	14.00	30.80	32.30	
Nov	Herbicide:	Roundup Ready® Plantshield® (690g/kg Glyphosate)	Self Propelled	1.50	1.20 kg	8.00	9.60	11.10	
Jan	Herbicide:	Roundup Ready® Plantshield® (690g/kg Glyphosate)	Aerial	15.00	1.20 kg	8.00	9.60	24.60	
Jan	Other:	Chipping or Spot Spray		5.00				5.00	
Mar	Licence:	Bollgard 3® stacked RRF Licence Fee						390.00	
Jun	Other:	Consultant	Contractor	60.00				60.00	
Jun	Refuge:	Refuge crop: Pigeon peas 2.5%, see page 3			0.11 ML			19.20	
Defoliation									
Mar	Defoliation:	Thidiazuron + Diuron (120g + 60g/L)	Self Propelled	3.50	0.15 L	183.10	27.47	30.97	
Mar	Defoliation:	Ethephon (720g/L)	with above		0.75 L	7.00	5.25	5.25	
Mar	Defoliation:	Crop oil	with above		1.00 L	6.00	6.00	6.00	
Mar	Defoliation:	Thidiazuron + Diuron (120g + 60g/L)	Aerial	15.00	0.15 L	183.10	27.47	42.47	
Mar	Defoliation:	Ethephon (720g/L)	with above		2.00 L	7.00	14.00	14.00	
Mar	Defoliation:	Crop oil	with above		1.00 L	6.00	6.00	6.00	
Apr	Defoliation:	ETee® (25g/L + 756g/L + 102g/L)	Aerial	15.00	0.08 L	231.00	18.48	33.48	
Apr	Defoliation:	Ethephon (720g/L)	with above		1.00 L	7.00	7.00	7.00	
Apr	Defoliation:	Crop oil	with above		1.00 L	6.00	6.00	6.00	
Picking, cartage & ginning									
Apr	Picking:	Own plant: round baler (variable costs only, incl. fuel)	CP690	74.00 per ha				74.00	
Apr	Picking:	plus wrap		44.00 / round bale		10.35 / lint bale		124.24	
May	Cartage:	Lift 12 round bales/truck		7.00 / round bale		1.65 / lint bale		19.76	
May	Cartage:	Freight 50 km from gin	costs related to yield	53.00 / round bale		12.47 / lint bale		149.65	
May	Ginning:	Fibre processing		65.00 / lint bale		65.00 / lint bale		780.00	
Jun	Levies:	Research levy & Cotton Australia levy		3.75 / lint bale		3.75 / lint bale		45.00	
Farming: Post-crop									
Jun	Farming:	Mulcher/slasher (check bt licence cultivation requirements)	295 eng/HP	13.50				13.50	
Jun	Farming:	Cultivation/side bust/middle bust	295 eng/HP	13.50				13.50	
Jun	Farming:	Bed renovation	295 eng/HP	16.00				16.00	
Jun	Farming:	Desilting & grading channels	Contractor	50.00				50.00	
Jun	Herbicide:	Sterilising channels	225 eng/HP	5.00				5.00	
Other									
Nov	Crop insurance:					Premium depends on various factors		248.00	
B. TOTAL VARIABLE COSTS \$/ha:								3,815	
Total irrigation water use ML/ha:				9.41	ML				



Variable Costs by Operation			Machinery	Inputs				TOTAL
				Total \$/ha	Rate /ha	Unit	Cost \$/unit	Cost \$/ha
Fallow management								
Nov	Fallow spray:	Glyphosate (450g/L)	Self Propelled	1.50	2.00 L	5.00	10.00	11.50
Nov	Fallow spray:	2,4-D amine (625g/L)	with above		0.40 L	6.00	2.40	2.40
Jan	Fallow spray:	Glyphosate (450g/L)	Self Propelled	1.50	2.00 L	5.00	10.00	11.50
Jan	Fallow Spray:	Fluroxypyr (333g/L)	with above		0.40 L	29.00	11.60	11.60
Mar	Fallow Spray:	Glyphosate (450g/L)	Self Propelled	1.50	2.00 L	5.00	10.00	11.50
Mar	Fallow spray:	Pendimethalin (440g/L)	with above		2.25 L	11.00	24.75	24.75
Farming								
Jul	Farming:	Discing	295 eng/HP	11.50				11.50
Jul	Farming:	Hill up	295 eng/HP	16.00				16.00
Aug	Farming:	Rubber tyre roller	225 eng/HP	8.00				8.00
Dec	Farming:	Cultivation: Inter-row	295 eng/HP	11.50				11.50
Nutrition								
Jul	Fertiliser:	MAP - spread	295 eng/HP	5.50	150 kg	0.75	111.75	117.25
Planting								
Oct	Planting:	Seed: Pigeon pea	225 eng/HP	11.50	40.0 kg	3.30	132.00	143.50
Irrigation								
Nov	Irrigation:	In-crop (x4)^			4.50 ML	63.00	283.50	283.50
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	14.00	35.00	35.00
May	Herbicide:	Glyphosate (450g/L)	Self Propelled	1.50	1.60 L	5.00	8.00	9.50
Post-crop								
Apr	Farming:	Crop destruction (slashing)	225 eng/HP	13.50				13.50
Jun	Farming:	Bed renovation (check bt licence requirements)	295 eng/HP	16.00				16.00
B. TOTAL VARIABLE COSTS \$/ha:								768
Total irrigation water use ML/ha:					4.5 ML			

2019-20 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, the energy source of pumps and relevant fees and charges. In the furrow irrigated budget, a cost of \$63/ML is used assuming pumping from a regulated groundwater source (fees \$24/ML) with water 'lifted' twice using diesel pumps (pumping and maintenance cost of \$39/ML), this also takes into consideration pumping tailwater. Pumping costs can be in excess of \$120/ML for bores.

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

Irrigation: Water budgets will vary between seasons and regions. Studies have found that cotton requires at least 5-6 ML/ha of water supply. The largest impact on water use is in-crop 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

We wish to acknowledge the efforts made by industry specialists and management during the development and review of the 2019 cotton gross margin budgets. Assistance was provided by the Cotton Info team, CRDC, CCA and CSD.

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