

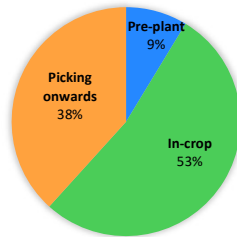
Gross Margin Budget: Furrow Irrigated Cotton

All operations contracted ~ Bollgard3®, Roundup Ready Flex®

INCOME:				Example	Your
				Budget	Budget
				\$/ha	\$/ha
11.00	bales/ha* @	Cotton lint	\$466 /bale (at gin)	\$5,126	_____
		Cotton seed	\$75 /bale (at gin)	\$825	_____
A. TOTAL GROSS INCOME \$/ha:				\$5,951	_____

VARIABLE COSTS:

See pg 2 for details



Fallow management	\$135	_____
Farming: Pre-planting	\$123	_____
Nutrition	\$391	_____
Planting & in-crop farming	\$193	_____
Irrigation (9.71 ML)	\$809	_____
Insurance	\$110	_____
Crop protection, application & licence fee	\$572	_____
Defoliation	\$155	_____
Picking, cartage & ginning	\$1,386	_____
Farming: Post-crop	\$159	_____
B. TOTAL VARIABLE COSTS \$/ha:	\$4,033	_____

C. GROSS MARGIN (A-B) \$/ha:	\$1,918
D. GROSS MARGIN (A-B/ML applied) \$/ML:	\$197

Approximate Breakeven Yield (bales/ha) based on lint & seed prices above:	8.65 bales/ha
Approximate Breakeven Price (\$/bale) based on 11 bales/ha:	\$367 /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)				
	366	416	466	516	566
8	-1084	-709	-334	41	416
9	-660	-210	240	690	1140
10	-377	123	623	1123	1623
11	-94	456	871	1556	2106
12	189	789	1389	1989	2589
13	472	1122	1772	2422	3072
15	897	1622	2347	3072	3797

Contract rates include variable, overhead and labour costs as well as a profit margin. Rates are also influenced by the size of a job (to ensure relocation costs are recouped) and supply and demand in a season or valley. A total contracting bill to grow a cotton crop may be in the range of \$1000-\$1400/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 2017*.

Furrow Irrigated Cotton (Bollgard3®Roundup Read Flex®)

2017-2018



All operations contracted

Variable Costs by Operation	Machinery	Inputs				TOTAL
		Total \$/ha	Rate /ha Unit	Cost \$/unit	Cost \$/ha	Cost \$/ha
Fallow management						
Nov Fallow spray: Glyphosate (450g/L)	Self Propelled	11.50	2.00 L	4.00	8.00	19.50
Nov Fallow spray: 2,4-D amine (625g/L)	with above		0.40 L	4.00	1.60	1.60
Jan Fallow spray: Glyphosate (450g/L)	Self Propelled	11.50	2.00 L	4.00	8.00	19.50
Jan Fallow Spray: Fluroxypyr (333g/L)	with above		0.40 L	22.00	8.80	8.80
Mar Fallow Spray: Glyphosate (450g/L)	Self Propelled	11.50	2.00 L	4.00	8.00	19.50
Mar Fallow spray: Pendimethalin (440g/L)	with above		2.25 L	11.00	24.75	24.75
Jun Fallow Spray: Glyphosate (450g/L)	Self Propelled	11.50	2.00 L	4.00	8.00	19.50
Jun Fallow Spray: Diuron (900g/kg)	with above		1.00 Kg	9.00	9.00	9.00
Jun Fallow Spray: S-metolachlor (960g/L)	with above		1.00 L	13.00	13.00	13.00
Farming: Pre-planting						
Jul Farming: Discing	Contractor	43.75				43.75
Jul Farming: Hill up	Contractor	58.75				58.75
Aug Farming: Rubber tyre roller	Contractor	20.00				20.00
Nutrition						
Jul Fertiliser: MAP	with 'Hill up'		150 kg	0.62	92.85	92.85
Aug Fertiliser: Urea (140kg N)	Contractor	49.50	304 kg	0.44	134.06	183.56
Nov Fertiliser: Urea - water run (120kg of N)	in irrigation		260 kg	0.44	114.66	114.66
Planting & In-crop farming						
Oct Planting: Precision planter	Contractor	49.50				49.50
Oct Planting: Seed: Roundup Ready Flex® Bollgard3®	with above		13 kg	8.85	115.05	115.05
Dec Farming: Cultivation: Inter-row	Contractor	20.25				20.25
Dec Farming: Rip / Rotobuck (twice in season)	Contractor	8.00				8.00
Irrigation management						
Sep Irrigation: Pre-plant			1.60 ML	50.00	80.00	80.00
Nov Irrigation: Contract irrigators (labour)		25.00	/ha/irrigation	x 9		225.00
Nov Irrigation: Contract irrigating supervisor (liaise with agronomist, manage pumps and rotobucks)						100.00
Nov Irrigation: In-crop (x8)			8.00 ML	50.00	400.00	400.00
Jun Other: Soil moisture monitoring	Contractor	4.00				4.00
Crop protection, application & licence fee						
Dec Insecticide: Sulfoxafior (500g/kg), target: mirids	Contractor	11.50	0.12 L	260.00	31.20	42.70
Dec Insecticide: Fipronil (200g/L), target: mirids	Contractor	11.50	0.06 L	107.00	6.42	17.92
Jan Insecticide: Clothianidin (200g/L), target: mirids, GVB	Aerial Spraying	15.00	0.20 L	69.00	13.80	28.80
Jan Insecticide: Pyriproxyfen (100g/L), target: SLW	Aerial Spraying	15.00	0.50 L	132.00	66.00	81.00
Feb Insecticide: Diafenthiuron (500g/L), target: SLW, aphids, mites	Aerial Spraying	15.00	0.60 L	61.00	36.60	51.60
Oct Herbicide: Pendimethalin (455g/L)	Contractor	11.50	2.20 kg	14.00	30.80	42.30
Nov Herbicide: Roundup Ready® Plantshield® (690g/kg Glyphosate)	Contractor	11.50	1.20 kg	8.00	9.60	21.10
Jan Herbicide: Roundup Ready® Plantshield® (690g/kg Glyphosate)	Aerial Spraying	15.00	1.20 kg	8.00	9.60	24.60
Dec 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			29.41
Defoliation						
Mar Defoliation: Thidiazuron + Diuron (120g + 60g/L)	Contractor	14.00	0.15 L	157.00	23.55	37.55
Mar Defoliation: Ethephon (720g/L)	with above		0.50 L	7.00	3.50	3.50
Mar Defoliation: Crop oil	with above		1.00 L	6.00	6.00	6.00
Mar Defoliation: Thidiazuron + Diuron (120g + 60g/L)	Aerial Spraying	15.00	0.15 L	157.00	23.55	38.55
Mar Defoliation: Ethephon (720g/L)	with above		2.50 L	7.00	17.50	17.50
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 Spraying	15.00	0.08 L	224.00	17.92	32.92
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: Contract round baler incl. stacking at end of field	CP690	330.00	per ha			330.00
Apr Picking: Fuel	CP690	28.00	L/Ha			21.00
Apr Picking: plus wrap		47.00	round bale		11.06 / lint bale	121.65
May Cartage: Lift		7.00	round bale	12 round bales/truck	1.65 / lint bale	18.12
May Cartage: Freight	costs related to yield	53.00	round bale	50 km from gin	12.47 / lint bale	137.18
May Ginning: Fibre processing		65.00	/ lint bale		65.00 / lint bale	715.00
Jun Levies: Research levy & Cotton Australia levy		3.90	/ lint bale		3.90 / lint bale	42.90
Farming: Post-crop						
Jun Farming: Mulcher with root cutter	Contractor	50.00				50.00
Jun Farming: Desilting & grading channels	Contractor	50.00				50.00
Jun Herbicide: Sterilising channels	Contractor	12.00				12.00
Jun Farming: Bed renovation (check bt licence requirements)	Contractor	47.25				47.25
Other						
Nov Crop insurance:			Premium depends on various factors			110.00
B. TOTAL VARIABLE COSTS \$/ha:						4,255
Total Irrigation water use ML/ha:			9.71 ML			

Furrow Irrigated Pigeon Peas - All operations contracted
(refugia for Bollgard3® cotton)

2017-2018



Variable Costs by Operation	Machinery	Inputs				TOTAL	
		Total \$/ha	Rate /ha	Unit	Cost \$/unit	Cost \$/ha	Cost \$/ha
Fallow management							
Nov Fallow spray: Glyphosate (450g/L)	Self Propelled	11.50	2.00	L	4.00	8.00	19.50
Nov Fallow spray: 2,4-D amine (625g/L)	with above		0.40	L	4.00	1.60	1.60
Jan Fallow spray: Glyphosate (450g/L)	Self Propelled	11.50	2.00	L	4.00	8.00	19.50
Jan Fallow Spray: Fluroxypyr (333g/L)	with above		0.40	L	22.00	8.80	8.80
Mar Fallow Spray: Glyphosate (450g/L)	Self Propelled	11.50	2.00	L	4.00	8.00	19.50
Mar Fallow spray: Pendimethalin (440g/L)	with above		2.25	L	11.00	24.75	24.75
Jun Fallow Spray: Glyphosate (450g/L)	Self Propelled	11.50	2.00	L	4.00	8.00	19.50
Jun Fallow Spray: Diuron (900g/kg)	with above		1.00	Kg	9.00	9.00	9.00
Jun Fallow Spray: S-metolachlor (960g/L)	with above		1.00	L	13.00	13.00	13.00
Farming							
Jul Farming: Discing	Contractor	43.75					43.75
Jul Farming: Hill up	Contractor	58.75					58.75
Aug Farming: Rubber tyre roller	Contractor	20.00					20.00
Dec Farming: Cultivation: Inter-row	Contractor	20.25					20.25
Nutrition							
Jul Fertiliser: MAP	with 'Hill up'		150	kg	0.62	92.85	92.85
Planting							
Oct Planting: Seed: Pigeon pea	Contractor	49.50	40.0	kg	4.00	160.00	209.50
Irrigation							
Nov Irrigation: Contract irrigators (labour)		25.00	/ha/Irrigation	x4			100.00
Nov Irrigation: Contract irrigating supervisor (liaise with agronomist, manage pumps and rotobucks)							100.00
Nov Irrigation: In-crop (x4)			4.50	ML	50.00	225.00	225.00
Herbicide & application							
Sep Herbicide: Pendimethalin (455g/L)	Contractor	11.50	2.00	kg	11.00	22.00	33.50
Sep Herbicide: Prometryn (500g/L)	with above		2.50	kg	15.00	37.50	37.50
May Herbicide: Glyphosate (450g/L)	Contractor	11.50	1.60	L	4.00	6.40	17.90
Post-crop							
Apr Farming: Crop destruction (slashing)	Contractor	35.00					35.00
Jun Farming: Bed renovation (check bt licence requirements)	Contractor	47.25					47.25
B. TOTAL VARIABLE COSTS \$/ha:						1,176	
Total Irrigation water use ML/ha:			4.5		ML		

2017-18 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 \$50/ML is used assuming pumping from a regulated groundwater source (fees \$17/ML) with water 'lifted' twice using diesel pumps (pumping and maintenance cost of \$33/ML). Pumping costs can be in excess of \$120/ML for bores.

Irrigation: In cotton, requirements for applied irrigation water typically range from 8-13 ML/ha. 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.

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 11 bales/ha is appropriate considering the long fallow, fertiliser program and budgeted irrigation water.

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

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