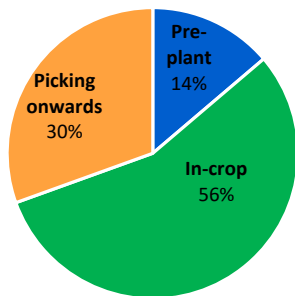


### Gross Margin Budget: Overhead Irrigated Cotton

Bollgard3®, Roundup Ready Flex®

INCOME:		Example Budget	Your Budget
		\$/ha	\$/ha
12.00	bales/ha* @		
	Cotton lint	\$569 /bale (at gin)	\$6,828
	Cotton seed	\$70 /bale (at gin)	\$840
		\$639 /bale (at gin)	
<b>A. TOTAL GROSS INCOME \$/ha:</b>		<b>\$7,668</b>	
VARIABLE COSTS:			
<i>See pg 2 for details</i>			
	Fallow management	\$61	
	Nutrition	\$751	
	Planting & in-crop farming	\$126	
	Irrigation (8.1 ML)	\$716	
	Insurance	\$246	
	Crop protection, application & licence fee	\$790	
	Defoliation	\$151	
	Picking, cartage & ginning	\$1,208	
	Farming: Post-crop	\$40	
<b>B. TOTAL VARIABLE COSTS \$/ha:</b>		<b>\$4,088</b>	
<b>C. GROSS MARGIN (A-B) \$/ha:</b>		<b>\$3,580</b>	
<b>D. GROSS MARGIN (A-B/ML applied) \$/ML:</b>		<b>\$442</b>	

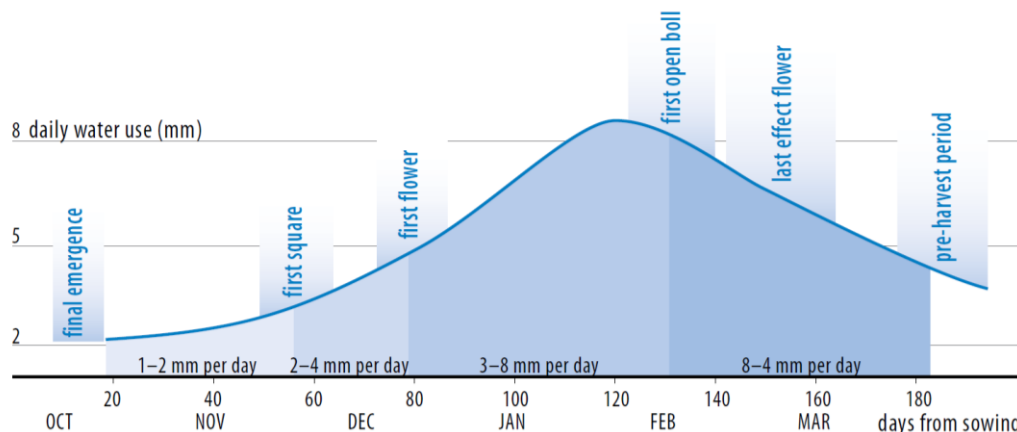


Breakeven Yield (bales/ha) based on lint & seed prices above:	5.17 bales/ha
Breakeven Price (\$/bale inc. seed and discounts) based on 12 bales/ha:	\$331 /bale
<i>Note that breakeven yield &amp; price is for variable costs only, overhead costs and labour are NOT considered</i>	

#### SENSITIVITY TABLE

227kg lint bales/ha	\$3,580	PRICE (\$/bale incl. of seed & discounts)				
		539	589	639	689	739
8.5		923	1334	1746	2157	2568
10.0		1564	2048	2532	3016	3500
11.0		1991	2524	3056	3588	4121
12.0		2419	2999	3580	4161	4742
13.0		2846	3475	4104	4733	5362
14.0		3273	3951	4628	5306	5983
15.5		3914	4664	5414	6165	6915

#### Nominal seasonal Daily Water Use (mm/day) for cotton production (WaterPak 2012)



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
<b>Fallow management</b>							
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: Isoxaflutole (750g/kg)	with above		0.10	kg	119.00	11.90	12
<b>Nutrition</b>							
Jul Fertiliser: MAP - spread	Spreader	5.00	150	kg	0.97	145.50	151
Jul Fertiliser: Potassium - spread	Spreader	5.00	80	kg	0.73	58.00	63
Aug Fertiliser: Urea (140kg N) - drilled	295 eng/HP	18.50	304	kg	0.89	269.95	288
Nov Fertiliser: Urea (120kg N) - side dress	295 eng/HP	18.50	260	kg	0.89	230.88	249
<b>Planting &amp; in-crop farming</b>							
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
<b>Irrigation management *</b>							
Nov Irrigation: Budgeted water			8.00	ML	89.00	712.00	712
Jun Other: Soil moisture monitoring	Contractor	4.00					4
<b>Crop protection, application &amp; licence fee</b>							
Dec Insecticide: Sulfoxaflor (500g/kg), target: mirids	Self Propelled	1.50	0.12	kg	346.00	41.52	43
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 Spraying	16.00	0.50	L	116.00	58.00	74
Feb Insecticide: Diafenthiuron (500g/L), target: SLW, aphids, mites	Aerial Spraying	16.00	0.60	L	63.00	37.80	54
Jul Herbicide: Pendimethalin (455g/L)	Self Propelled	1.50	2.25	kg	14.00	31.50	33
Jul Herbicide: Terbutylazine (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	1.20	kg	13.00	15.60	23
Jan Herbicide: Roundup Ready® Plantshield® (690g/kg Glyphosate)	Aerial Spraying	16.00	1.50	kg	11.00	16.50	33
Jan Other: Chipping or Spot Spray		5.00					5
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			0.10	ML			19
<b>Defoliation</b>							
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 Spraying	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 Spraying	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
<b>Picking, cartage &amp; ginning</b>							
Apr Picking: Own plant: round baler (variable costs only, incl. fuel)	CP690	75.00		per ha			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	58.00		round bale		13.65 / lint bale	164
May Ginning: Fibre processing	yield	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
<b>Farming: Post-crop</b>							
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 (check bt licence requirements)	295 eng/HP	14.50					15
<b>Other</b>							
Nov Crop insurance:						Premium depends on various factors	246
<b>B. TOTAL VARIABLE COSTS \$/ha:</b>							<b>4088</b>
<b>Total irrigation water use ML/ha:</b>			8.10	ML			



Variable Costs by Operation	Machinery	Inputs					TOTAL
		Total \$/ha	Rate /ha	Unit	Cost \$/unit	Cost \$/ha	Cost \$/ha
<b>Fallow management</b>							
Nov Fallow spray: Glyphosate (450g/L)	Self Propelled	1.50	2.00	L	6.00	12.00	<b>14</b>
Nov Fallow spray: Flumioxazin (500g/L)	with above		0.03	kg	150.00	4.50	<b>5</b>
Jan Fallow spray: Paraquat (360g/L)	Self Propelled	1.50	2.00	L	6.00	12.00	<b>14</b>
Jan Fallow spray: Flumioxazin (500g/L)	with above		0.03	kg	150.00	4.50	<b>5</b>
Mar Fallow spray: Glyphosate (450g/L)	Self Propelled	1.50	2.00	L	6.00	12.00	<b>14</b>
Mar Fallow spray: Isoxaflutole (750g/kg)	with above		0.10	kg	119.00	11.90	<b>12</b>
<b>Farming</b>							
Jul Farming: Discing	295 eng/HP	10.50					<b>10.50</b>
Jul Farming: Hill up	295 eng/HP	14.50					<b>14.50</b>
Aug Farming: Rubber tyre roller	225 eng/HP	7.50					<b>7.50</b>
Dec Farming: Cultivation: Inter-row	295 eng/HP	11.00					<b>11.00</b>
<b>Nutrition</b>							
Jul Fertiliser: MAP - spread	295 eng/HP	5.00	150	kg	0.97	145.50	<b>150.50</b>
<b>Planting</b>							
Oct Planting: Seed: Pigeon pea	225 eng/HP	10.50	15.0	kg	3.30	49.50	<b>60.00</b>
<b>Irrigation</b>							
Nov Irrigation: Budgeted water			4.00	ML	89.00	356.00	<b>356.00</b>
<b>Herbicide &amp; application</b>							
Sep Herbicide: Pendimethalin (455g/L)	Self Propelled	1.50	2.00	kg	12.00	24.00	<b>25.50</b>
Sep Herbicide: Prometryn (500g/L)	with above		2.50	kg	17.00	42.50	<b>42.50</b>
May Herbicide: Glyphosate (450g/L)	Self Propelled	1.50	1.60	L	6.00	9.60	<b>11.10</b>
<b>Post-crop</b>							
Apr Farming: Crop destruction (slashing)	225 eng/HP	12.50					<b>12.50</b>
Jun Farming: Bed renovation (check bt licence requirements)	295 eng/HP	14.50					<b>14.50</b>
<b>B. TOTAL VARIABLE COSTS \$/ha:</b>							<b>778</b>
<b>Total irrigation water use ML/ha:</b>			4.0		ML		

**2021-22 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, the energy source and efficiency of pumps, and relevant fees and charges. In the overhead irrigated budget, a cost of \$89/ML is used assuming pumping from a regulated groundwater source (fees \$9/ML) with water 'lifted' twice using diesel pumps (pumping and maintenance cost of \$37/ML. Pumping and maintenance costs can be in excess of \$110/ML for bores), plus the cost of the overhead system (pumping and maintenance cost of \$43/ML).

**# Irrigation:** Water ML/ha pumped from sources (surface or groundwater) including storage and conveyance losses. Research has shown that overhead irrigation systems can decrease water use by up to 30% compared to surface irrigation (see ACPM). A more conservative 15% has been applied to 9.4 ML/ha furrow irrigation water use (see Furrow Irrigated GM), generating an 8 ML/ha overhead irrigation requirement. 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.

**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**

We wish to acknowledge the efforts made by industry specialists and management during the development and review of the 2021 cotton gross margin budgets. Assistance was provided by the CottonInfo team, CRDC, and CSD.

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