

SURFACE IRRIGATED COTTON (Roundup Ready Flex® Bollgard II®)

Farm Enterprise Budget Series - Northern Zone

Summer 2009-2010

1. GROSS MARGIN BUDGET:

INCOME:			Sample Budget \$/ha	Your Budget \$/ha
Lint -	7.00 bales/ha at	\$400 /bale (at gin).....	\$2,800.00	
Seed -	2.52 tonnes/ha at	\$275 /tonne (at gin).....	\$693.00	

A. TOTAL INCOME \$/ha: **\$3,493**

VARIABLE COSTS:

see following page(s) for details

	RR Bollgard II®	Your budget
Cultivation.....	\$154.84	
Sowing.....	\$96.54	
Crop insurance.....	\$55.00	
Fertilizer & application.....	\$437.93	
Herbicide & application.....	\$253.14	
Insecticide & application.....	\$91.24	
Irrigation.....	\$229.39	
Contract harvesting.....	\$309.71	
Cartage to gin.....	\$82.35	
Ginning charges.....	\$385.00	
CA and Research Levy.....	\$31.50	
Licence fees.....	\$390.00	
Other (eg consultant).....	\$60.00	
Pigeon pea refuge crop, 5% of cotton area.....	\$23.22	
B. TOTAL VARIABLE COSTS \$/ha:	2,599.86	

C. GROSS MARGIN (A-B) \$/ha: **\$893**

D. GROSS MARGIN (A-B) \$/MI: **\$128**

SENSITIVITY TABLES

2. EFFECT OF YIELD AND PRICE ON GROSS MARGIN PER HECTARE:

Lint bales/ha	Seed t/ha	\$340 /bale \$235 /t	\$370 /bale \$255 /t	\$400 /bale \$275 /t	\$430 /bale \$285 /t	\$460 /bale \$295 /t	Lint price Seed price
4.00	1.44	-\$677	-\$528	-\$379	-\$245	-\$111	
6.00	2.16	\$23	\$246	\$469	\$671	\$872	
7.00	2.52	\$372	\$633	\$893	\$1,128	\$1,364	Gross Margin (\$/ha)
8.00	2.88	\$722	\$1,020	\$1,317	\$1,586	\$1,855	
10.00	3.60	\$1,422	\$1,794	\$2,166	\$2,502	\$2,838	
12.00	4.32	\$2,121	\$2,568	\$3,014	\$3,417	\$3,821	
14.00	5.04	\$2,821	\$3,342	\$3,863	\$4,333	\$4,803	

3. EFFECT OF YIELD AND PRICE ON GROSS MARGIN PER MEGALITRE:

Lint bales/ha	Seed t/ha	\$340 /bale \$235 /t	\$370 /bale \$255 /t	\$400 /bale \$275 /t	\$430 /bale \$285 /t	\$460 /bale \$295 /t	Gross Margin (\$/MI)
4.00	1.44	-\$97	-\$75	-\$54	-\$35	-\$16	
6.00	2.16	\$3	\$35	\$67	\$96	\$125	
7.00	2.52	\$53	\$90	\$128	\$161	\$195	Gross Margin (\$/MI)
8.00	2.88	\$103	\$146	\$188	\$227	\$265	
10.00	3.60	\$203	\$256	\$309	\$357	\$405	
12.00	4.32	\$303	\$367	\$431	\$488	\$546	
14.00	5.04	\$403	\$477	\$552	\$619	\$686	

SURFACE IRRIGATED COTTON (Roundup Ready Flex[®] Bollgard II[®])

Farm Enterprise Budget Series - Northern Zone

(diesel pump from river-regulated)

Summer 2009-2010

CALENDAR OF OPERATIONS:		Machinery			Inputs				Total	
Operation	Month	hrs /ha	Cost \$/hour	Total \$/ha	Rate/ha	Band Width	Cost \$	Total \$/ha	Total Cost \$/ha	
Stalk pull and mulch	May	contract						100%		75.00
Middlebusting	Jul	0.23	51.81	11.92				100%		11.92
Fertiliser - anhydrous ammonia	Jul	with above		100KgN	122 Kg	100%	0.87	106.10		106.10
Herbicide - glyphosate ground spray	Jul	0.03	47.06	1.41	1.0 L	100%	5.21	5.21		6.62
Wetter - non-ionic surfactant	Jul	with above			0.2 L	100%	6.86	1.37		1.37
Fertiliser - MAP plus potassium blend	Aug	0.15	52.81	7.92	100 Kg	100%	0.87	87.00		94.92
Herbicide - trifluralin ground spray	Aug	0.03	47.06	1.41	2.8 L	100%	8.16	22.85		24.26
Plus incorporation	Aug	0.15	52.81	7.92		100%				7.92
Pre irrigate	Sep				1.4 MI	100%	32.77	45.88		45.88
Fertiliser - MAP plus potassium blend	Sep	0.14	55.30	7.74	100 Kg	100%	0.83	83.00		83.00
Planting - precision planter	Oct	0.14	55.30	7.74		100%				7.74
Planting- seed Roundup Ready Flex [®] Bollgard II	Oct	with above			12 kg	100%	7.40	88.80		88.80
Insecticide - imidacloprid	Oct	with above			seed treatment					
Roundup Ready [®] Roundup	Nov	0.03	47.06	1.41	1.2 kg	100%	15.64	18.77		20.18
Irrigate	Nov				1.0 MI	100%	32.77	32.77		32.77
Insecticide - fipronil (200g/L)	Nov	0.03	47.06	1.41	0.06 L	60%	371.33	14.04		15.45
Fertiliser - urea	Dec	with above		120KgN	261 Kg	100%	0.59	153.91		153.91
Roundup Ready [®] Roundup	Dec	0.03	47.06	1.41	1.2 kg	100%	15.64	18.77		20.18
Irrigate	Dec				1.0 MI	100%	32.77	32.77		32.77
Insecticide - fipronil (200g/L)	Dec	0.03	47.06	1.41	0.06 L	60%	371.33	14.04		15.45
Herbicide - diuron (900 g/kg)	Dec	0.03	47.06	1.41	1.5 kg	85%	10.61	13.53		14.94
Herbicide - prometryn (500 g/L)	Dec	with above			2.20 L	85%	16.31	30.50		30.50
Irrigate	Jan				1.2 MI	100%	32.77	39.32		39.32
Roundup Ready [®] Roundup (shielded sprayer)	Jan	0.09	55.81	5.02	1.0 kg	60%	15.64	9.38		14.41
Cultivation - chipping casual labour	Jan	contract		60.00		100%				60.00
Bollgard II [®] Licence fee *	Jan							315.00		315.00
Roundup Ready Flex [®] Licence fee *	Jan							75.00		75.00
Insecticide - indoxacarb (150g/L)	Jan	aerial spray		17.00	0.65 L	100%	37.16	24.15		41.15
Irrigate	Jan				1.2 MI	100%	32.77	39.32		39.32
Crop insurance	Jan	Premium depends on various factors						55.00		55.00
Irrigate	Feb				1.2 MI	100%	32.77	39.32		39.32
Insecticide - dimethoate (400g/L)	Feb	aerial spray		17.00	0.5 L	100%	4.37	2.19		19.19
Defoliant - thidiazuron + diuron (120 + 60 g/L)	Mar	aerial spray		17.00	0.25 L	100%	189.00	47.25		64.25
Defoliant - crop oil	Mar	with above			2.0 L	100%	4.09	8.18		8.18
Defoliant - ethepon (720 g/L)	Mar	with above			1.5 L	100%	8.93	13.40		13.40
Defoliant - ethepon (720 g/L)	Mar	aerial spray		17.00	2.0 L	100%	8.93	17.86		34.86
Contract picking & module building	May	contract		\$285/ha						285.00
Contract Module lifting	May	contract		\$60.00	/module @ 17 bales per module					24.71
Contract module cartage to gin	May	contract		\$200.00	/module @ 50km from gin					82.35
Ginning charges	May	contract		\$55.00	/bale					385.00
Levies	May	contract		\$4.50	/bale					31.50
Consultant	May	contract								60.00
Refuge crop - pigeon peas @ 5%										23.22
TOTAL COSTS:									2,600	

This budget should be used as a GUIDE ONLY and should be changed by the grower to take account of movements in crop and input prices, changes in seasonal conditions and individual farm characteristics. Estimated prices are GST-exclusive.

NOTES:

MANAGEMENT:- Each grower is required to grow a refuge crop as part of preventative resistance management. Since the refuge crop is an integrated part of growing Roundup Ready Flex[®] Bollgard II[®] cotton, refuge crop costs have been included as part of the gross margin budget.

For the purposes of this example, we have used irrigated pigeon peas at 5% of the cotton area.

Please refer to the Monsanto Roundup Ready Flex[®] Bollgard II[®] Resistance Management Plan for more information on refuge crops and minimum requirements.

For further details see the Industry & Investment NSW "Cotton Pest Management Guide 2009-2010".

SEED: Seed costs per kg will vary with the time of ordering and the seed treatment chosen.

HERBICIDES: Fallow herbicides have been substituted for cultivation during the winter to avoid soil compaction. To reduce the likelihood of herbicide resistance, rotate herbicide groups and weed management techniques.

Use of a particular formulation does NOT imply recommendation of that formulation by Industry & Investment NSW.

Always read chemical labels and follow directions, as it is your legal responsibility to do so.

LICENCE FEES: * The technology licence fees for Bollgard II[®] for 2009-10 is \$315/ha per green hectare and \$75/ha for Roundup Ready Flex[®] (GST-exclusive).

DEFOLIANT: Good conditions are required to get the best performance. The choice of defoliant and rate used depends on the moisture status of the plant and seasonal conditions.

LABOUR REQUIREMENTS:

- labour is not costed in this budget. If labour costs \$20.00 /hr, total labour cost would be \$27.75, reducing the gross margin to \$865 /ha.

This does not include labour required to irrigate since this is more likely to be an overhead cost.

MACHINERY ASSUMPTIONS:

Tractor: 170 KW PTO (230 HP) and 200 KW engine (265 HP)

Machinery costs refer to variable costs of: fuel, oil, filters, tyres, batteries and repairs.

You may need to add overhead costs as well, please refer to the Tractor and Implement Costs Guide

IRRIGATION:

Water pumping costs:

Estimated water usage charge of \$22.66 per ML assumed, your charges may be different. calculated using a flood/furrow system with diesel powered pumping from surface supply.

Water requirements

7.00 ML/ha is sufficient to adequately irrigate cotton 4 out of 5 years. This assumes little useful rainfall during the growing season.

SURFACE IRRIGATED PIGEON PEAS (refugia for Bollgard II® cotton)

Northern Zone (diesel pump from river)

Summer 2009-2010

CALENDAR OF OPERATIONS:		Machinery			Inputs				Total	
Operation	Month	hrs /ha	Cost	Total	Rate/ha	Band Width	Cost	Total	Total Cost \$/ha	
			\$/hour	\$/ha			\$/	\$/ha		
Stalk pull and mulch	May	contract								75.00
Middlebusting	Jul	0.23	51.81	11.92		100%				11.92
Herbicide - glyphosate (450 g/L)	Jul	0.03	47.06	1.41	1.0 L	100%	5.21	5.21		6.62
Wetter - non-ionic surfactant	Jul	with above			0.2 L	100%	6.86	1.37		1.37
Herbicide - prometryn (500 g/L)	Aug	with above			4.50 L	85%	16.31	62.39		62.39
Herbicide - trifluralin (480 g/L)	Aug	0.03	47.06	1.41	2.8 L	100%	8.16	22.85		24.26
Plus incorporation	Aug	0.15	52.81	7.92		100%				7.92
Pre irrigate	Sep				1.4 MI	100%	32.77	45.88		45.88
Herbicide - prometryn (500 g/L)	Sep	0.03	47.06	1.41	4.5 L	85%	16.31	62.39		63.80
Planting - precision planter	Oct	0.14	55.30	7.74		100%				7.74
Seed + inoculum (group J)	Oct	with above			40 kg	100%	1.70	68.00		68.00
Irrigate	Dec				1.0 MI	100%	32.77	32.77		32.77
Irrigate	Jan				1.0 MI	100%	32.77	32.77		32.77
Slashing	May									12.00
Contract delving and pushing	May	contract								12.00
TOTAL COSTS:									464	
TOTAL COSTS for 5% hectare:									23.22	

NOTES: For more detailed information, see the NSW Department of Primary Industries "Cotton Pest Management Guide 2009-2010".

Always read chemical labels and follow directions, as it is your legal responsibility to do so.

Use of a particular brand name does NOT imply recommendation of that brand by NSW Department of Primary Industries.

SOWING: Irrigated pigeon peas are one refuge crop option for irrigated cotton. They need to be sown when the soil temperature is 17°C and rising, and within 2 weeks of cotton planting. Group J inoculum should be used.

WEEDS: When a refuge needs cultivation, the Bollgard II® crop should be cultivated at the same time.

IRRIGATION: Pigeon pea generally needs less water than cotton, and may require only a pre-irrigation and irrigation every second time the cotton is irrigated.

CROP REMOVAL: Pigeon peas should only be harvested or slashed after the Bollgard II® crop has been removed.

Please refer to the Monsanto Bollgard II® Resistance Management Plan for more information on refuge crops and minimum requirements.

LABOUR REQUIREMENTS: - labour is not costed in this budget. If labour costs \$20.00 /hr, total labour cost would be \$15.25. This still does not include labour required to irrigate.

MACHINERY ASSUMPTIONS: Tractor: 170 KW PTO (230 HP) and 200 KW engine (265 HP)

Machinery costs refer to variable costs of: fuel, oil, filters, tyres, batteries and repairs.

You may need to add overhead costs as well, please refer to the Tractor and Implement Costs Guide

IRRIGATION: Estimated water usage charge of \$22.66 per ML assumed, your charges may be different.

Water pumping costs: calculated using a flood/furrow system with diesel powered pumping from surface supply.

Water use: 3.4MI/Ha