



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

Southern Zone - Murrumbidgee & Lachlan Rivers

Summer 2011-12

1. GROSS MARGIN BUDGET:

INCOME:

Lint -	9.00	bales/ha at	\$540.00	/bale (at gin).....
Seed -	2.27	tonnes/ha at	\$215.00	/tonne (at gin).....

Standard Budget \$/ha	Your Budget \$/ha
\$4,860.00	
\$488.05	
\$5,348.05	

A. TOTAL INCOME \$/ha:

\$5,348.05	
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VARIABLE COSTS:

see opposite page for details

Cultivation.....	
Sowing.....	
Crop insurance.....	
Fertiliser & application.....	
Herbicide/growth regulator & application.....	
Insecticide & application.....	
Irrigation.....	
Contract picking.....	
Cartage to gin.....	
Ginning charges.....	
ACF and Research Levy.....	
Bollgard II and Roundup Ready Flex ® Licence Fees.....	
Other.....	

Your Budget	
BollgardII® 1 ha	BollgardII® 1 ha
\$149.06	
\$158.40	
\$55.00	
\$417.20	
\$296.32	
\$215.71	
\$304.06	
\$415.71	
\$70.94	
\$495.00	
\$40.50	
\$370.00	
\$178.66	
\$3,166.56	

B. TOTAL VARIABLE COSTS \$/ha:

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

\$2,181.49	
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D. GROSS MARGIN (A-B) \$/ML:

\$211.80	
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SENSITIVITY TABLES

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

Lint Yield bales/ha	Seed Yield t/ha	\$480 /bale \$185/t	\$510 /bale \$200/t	\$540 /bale \$215/t	\$570 /bale \$230/t	\$600 /bale \$245/t	Lint price Seed price
6.00	2.16	\$127	\$339	\$551	\$764	\$976	Gross Margin (\$/ha)
7.00	2.52	\$669	\$916	\$1,164	\$1,412	\$1,660	
8.00	2.88	\$1,211	\$1,494	\$1,777	\$2,060	\$2,344	
9.00	2.27	\$1,573	\$1,877	\$2,181	\$2,486	\$2,790	
10.00	3.60	\$2,295	\$2,649	\$3,003	\$3,357	\$3,711	
11.00	3.96	\$2,837	\$3,226	\$3,616	\$4,005	\$4,395	
12.00	4.32	\$3,379	\$3,804	\$4,229	\$4,654	\$5,078	

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

Lint Yield bales/ha	Seed Yield t/ha	\$480 /bale \$185 /t	\$510 /bale \$200 /t	\$540 /bale \$215 /t	\$570 /bale \$230 /t	\$600 /bale \$245 /t	Lint price Seed price
6.00	2.16	\$12	\$33	\$54	\$74	\$95	Gross Margin (\$/ML)
7.00	2.52	\$65	\$89	\$113	\$137	\$161	
8.00	2.88	\$118	\$145	\$173	\$200	\$228	
9.00	2.27	\$153	\$182	\$212	\$241	\$271	
10.00	3.60	\$223	\$257	\$292	\$326	\$360	
11.00	3.96	\$275	\$313	\$351	\$389	\$427	
12.00	4.32	\$328	\$369	\$411	\$452	\$493	

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

Southern Zone - Murrumbidgee & Lachlan Rivers

Summer 2011-12

CALENDAR OF OPERATIONS:		Machinery			Inputs				Total
Operation	Month	hrs /ha	Cost \$/hour	Total \$/ha	Rate/ha	Band Width	Cost (\$)	Total \$/ha	Cost \$/ha
Offset disc wheat stubble	Feb	Contract		35.00					35.00
Cultivation	Mar	Contract		35.00					35.00
Hill up	Mar	Contract		55.00		100%			\$55.00
Fertiliser - anhydrous ammonia	Mar	with above			220 kg	100%	0.90	198.00	\$198.00
Cultivation - hill renovation	Jul	Contract		35.00					\$35.00
Fertiliser - MAP plus zinc 2%	Jul	with above			120 kg	100%	1.01	121.20	\$121.20
Rolling cultivation	Aug	Contract		18.00		100%			\$18.00
Rubber tyre roller	Sept	Contract		10.00		100%			\$10.00
Herbicide - ground spray, glyphosate CT	Sep	Contract		10.00	1.2 L	100%	4.42	5.30	\$15.30
Herbicide - hammer	Sept	with above			0.04 L	100%	180.00	6.30	\$6.30
Crop insurance	Oct	Premium depends on various factors						55.00	\$55.00
Planting - precision planter	Oct	Contract		40.00		100%			\$40.00
Planting - seed	Oct	with above			16 kg	100%	7.40	118.40	\$118.40
Insecticide - thimet (e.g. Zeemet®)	Oct	with above			3 kg	100%	13.65	40.95	\$40.95
Herbicide - pendimethalin(e.g. Stomp®440)	Oct	with above			2.25 L/Ha	100%	11.92	26.82	\$26.82
Irrigate (water up)	Oct				2.0 ML	100%	28.42	56.84	\$56.84
Herbicide - Roundup Ready®	Nov	0.03	78.31	2.13	1.20 kg	100%	8.00	9.60	\$11.73
Irrigate	Nov				1.3 ML	100%	28.42	36.95	\$36.95
Herbicide - Roundup Ready®	Dec	0.03	78.31	2.13	1.20 kg	100%	8.00	9.60	\$11.73
Insecticide - fipronil (Regent®)	Dec	0.09	81.73	7.57	0.13 L	50%	349.35	21.83	\$29.40
Cultivation - interrow	Dec	0.15	87.90	13.56		100%			\$13.56
Herbicide - fluometuron (e.g. Cotoran®)	Dec	with above			3.0 L	80%	17.61	42.26	\$42.26
Irrigate	Dec				1.3 ML	100%	28.42	36.95	\$36.95
Fertiliser (urea, water run)	Dec	with above			80 kg	100%	0.70	56.00	\$56.00
Irrigate	Jan				1.2 ML	100%	28.42	34.10	\$34.10
Fertiliser (urea, water run)	Dec	with above			60 kg	100%	0.70	42.00	\$42.00
Insecticide - clothianidin (e.g. Shield™)	Dec	contract		14.50	0.25 L	100%	78.00	19.50	\$34.00
Surfactant	Dec	with above			0.06 L	100%	5.96	0.36	\$0.36
Insecticide - pirimicarb	Jan	contract		14.50	0.3 L	100%	60.00	18.00	\$32.50
Growth Regulator - mepiquat (e.g. Pix®)	Jan	with above			2.0 L	100%	3.75	7.50	\$7.50
Irrigate	Jan				1.2 ML	100%	28.42	34.10	\$34.10
Growth Regulator - mepiquat (e.g. Pix®)	Jan			14.50	1.0 L	100%	3.75	3.75	\$18.25
Irrigate	Feb				1.3 ML	100%	28.42	36.95	\$36.95
Insecticide - abamectin	Feb	contract		14.50	0.3 L	100%	25.00	7.50	\$22.00
Irrigate	Feb				1.0 ML	100%	28.42	28.42	\$28.42
Irrigation equip. repairs and maintenance				\$1.10/ML					\$11.33
Bollgard II stacked with Roundup Ready Flex®									
Licence fee *	Feb								\$370.00
Insecticide - diafenthion	Mar	contract		14.50	0.6 L	100%	70.00	42.00	\$56.50
Irrigate	Mar				1.0 ML	100%	28.42	28.42	\$28.42
Defoliant - thidiazuron (e.g. Dropp Ultra Max®)	Mar	contract		14.50	0.13 L	100%	132.00	16.50	\$31.00
Defoliant - ethephon (e.g. Prep®)	Mar	with above			0.5 L	100%	9.33	4.67	\$4.67
Defoliant - eg DC Tron crop oil	Mar	with above			1.0 L	100%	5.96	5.96	\$5.96
Defoliant - thidiazuron (e.g. Dropp Ultra Max®)	Mar	contract		14.50	0.08 L	100%	132.00	10.56	\$25.06
Defoliant - ethephon (e.g. Prep®)	Mar	with above			3.0 L	100%	9.33	27.99	\$27.99
Defoliant - eg DC Tron crop oil	Mar	with above			1.0 L	100%	5.96	5.96	\$5.96
Defoliant - thidiazuron (e.g. Dropp Ultra Max®) 1 yr in 2	Mar	contract		14.50	0.05 L	50%	132.00	3.30	\$17.80
Defoliant - ethephon (e.g. Prep®)	Mar	with above			1.5 L	50%	9.33	7.00	\$7.00
Defoliant - eg DC Tron crop oil	Mar	with above			1.0 L	50%	5.96	2.98	\$2.98
Refuge crop - pigeon peas @ 5%									\$21.66
Contract picking & module building	April	contract		\$500/hr	@	0.78 hours/ha			\$390.00
Contract module lifting	May	contract		\$ 60.00	/module @ 21 bales per module				\$25.71
Contract cartage to gin	May	contract		\$3.35	/km @ 40 km from gin				\$70.94
Ginning charges	May	contract		\$ 55.00	/bale @ 9 bales/ha				\$495.00
Mulcher with root cutters	May	contract		45.50	/ha 100%				\$45.50
Consultant	May	contract		\$ 85.00	/ha				\$85.00
Sterilising channels	May	contract		\$ 60.00					\$60.00
Contract delving and pushing	May	contract		\$ 12.00					\$12.00
ACF levy and Research levy	May	contract		\$ 4.50	/bale				\$40.50
TOTAL COSTS:									\$3,166.56

This budget is ONLY A GUIDE and should be altered for movements in crop and input prices, changes in seasonal conditions and the farm characteristics. Estimated prices are GST exclusive.

IRRIGATED COTTON (Roundup Ready Flex® Bollgard II®)

NOTES:

MANAGEMENT:

The selection of insecticides is highly dependent on the insect spectrum, growers should be aware this is a generic program and selection of products should be made with IPM strategies in mind. Follow the Insecticide Resistance Management Strategy for your region.

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 Bollgard II® Roundup Ready Flex® cotton, refuge crop costs and income should be included as part of the gross margin budget.

* The technology licence fees for Bollgard II® for 2011-12 is \$315/ha per green hectare and \$79/ha for Roundup Ready Flex® (GST-exclusive). This examples uses Monsanto Cotton Choices™ Option 1 which provides a discount on the technology licence fees for 2011-12. However you should choose the option which best suits your farming operation.

Insecticides suggested in this budget and spray timing are examples only and strategies will vary with individual circumstances. Individual paddocks need careful monitoring to determine pest and beneficial insect populations. Use recommended thresholds for all pests. Avoid using broad spectrum sprays and avoid using continuous sprays from the same chemical group.

For more detailed information, see the Cotton CRC "Cotton Pest Management Guide "2011-12" at www.cottoncrc.org.au

VARIETIES:

Selection an appropriate variety for the sowing date and region is essential.

HERBICIDES:

Fallow herbicides are used in conjunction with cultivation to aid in bed preparation. To reduce the likelihood of herbicide resistance, rotate herbicide groups and weed management techniques.

Use of a particular brand name does NOT imply recommendation of that brand by NSW DPI.

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

MANAGEMENT:- this budget is typical of "cotton following wheat" rotation.

DEFOLIANT: Dropp Ultra Max and Prep have been used as the primary defoliant in this example. Good conditions are required to get the best performance. The type of defoliant used depends on the moisture status of the plant.

FERTILISER REQUIREMENTS:

A petiole test may be carried out up to 4 times during the season. A nitrogen petiole test is approximately \$22 ex. GST and a full nutrient test of all elements costs around \$49 ex. GST. All fertiliser strategies should be following comprehensive soil testing prior to sowing.

LABOUR REQUIREMENTS:

- Labour is not costed in this budget. If labour costs \$21.00 /hr, total labour cost would be \$9.89, reducing the gross margin to \$2,172/ha.

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 contract rates, as most farmers use contractors for specialised operations

IRRIGATION:

Water costs:

Lachlan River estimated water costs are used, based on 2009-10 prices.

Water requirements

10.30 ML is required to grow a successful high yielding crop. This assumes average rainfall during the growing season. This figure varies widely according to in-crop rainfall, evaporation and soil type. Irrigation requirements typically range from 8 - 13 ML / ha. Using bore water will increase pumping costs, repairs and maintenance. Some irrigation systems are more efficient than others.



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

Southern Zone - Murrumbidgee & Lachlan Rivers

Summer 2011-12

CALENDAR OF OPERATIONS:		Machinery			Inputs				Total
Operation	Month	hrs /ha	Cost	Total	Rate/ha	Band	Cost	Total	Total Cost \$/ha
			\$/hour	\$/ha		Width	\$	\$/ha	
Stalk pull and mulch	May	contract							75.00
Middlebusting	Jul	0.23	60.53	13.92		100%			13.92
Herbicide - glyphosate (450 g/L)	Jul	0.03	55.78	1.67	1.0 L	100%	4.42	4.42	6.09
Wetter - non-ionic surfactant	Jul	with above			0.2 L	100%	3.91	0.78	0.78
Herbicide - prometryn (500 g/L)	Aug	with above			4.50 L	85%	14.48	55.39	55.39
Herbicide - trifluralin (480 g/L)	Aug	0.03	55.78	1.67	2.8 L	100%	5.87	16.44	18.11
Plus incorporation	Aug	0.15	61.53	9.23		100%			9.23
Pre irrigate	Sep				1.4 MI	100%	28.42	39.79	39.79
Herbicide - prometryn (500 g/L)	Sep	0.03	55.78	1.67	4.50 L	85%	14.48	55.39	57.06
Planting - precision planter	Oct	0.14	64.02	8.96		100%			8.96
Planting - inoculated (group J) seed	Oct	with above			40 kg	100%	1.70	68.00	68.00
Irrigate	Dec				1.0 MI	100%	28.42	28.42	28.42
Irrigate	Jan				1.0 MI	100%	28.42	28.42	28.42
Slashing	May								12.00
Contract delving and pushing	May	contract							12.00
TOTAL COSTS:									433
TOTAL COSTS for 5% hectare:									21.66

NOTES: For more detailed information, see the I&I NSW "Cotton Pest Management Guide 2011-2012".

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 \$21.00/hr, total labour cost would be \$16.01. 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 \$31.75 per ML assumed, your charges may be different. calculated using a flood/furrow system with diesel powered pumping from surface supply.

Water pumping costs:

Water use:

3.4MI/Ha