

SURFACE IRRIGATED SORGHUM (diesel pump from bore)

Farm Enterprise Budget Series - Northern Zone

Summer 2009-2010

1. GROSS MARGIN BUDGET:

INCOME:

8.00 tonnes/ha at \$160.00 /tonne (on farm)

Sample Budget \$/ha	Your Budget \$/ha
\$1,280.00	

A. TOTAL INCOME \$/ha:

\$1,280.00	
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VARIABLE COSTS:

see following page(s) for details

Cultivation.....	\$7.92	
Sowing.....	\$44.29	
Fertilizer.....	\$243.63	
Herbicide.....	\$114.05	
Insecticide.....	\$24.21	
Irrigation.....	\$187.00	
Harvest.....	\$119.94	
Levies and insurance.....	\$78.94	
B. TOTAL VARIABLE COSTS \$/ha:	\$819.99	

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

\$460.01	
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D. GROSS MARGIN \$/MI:

\$121.06	
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2. EFFECT OF YIELD AND PRICE ON GROSS MARGIN PER HECTARE:

YIELD tonnes/ha	On Farm Price						
	\$120 /t	\$140 /t	\$160 /t	\$180 /t	\$200 /t	\$220 /t	\$240 /t
5.00	-\$179	-\$80	\$19	\$118	\$217	\$316	\$415
6.00	-\$71	\$47	\$166	\$285	\$404	\$523	\$641
7.00	\$36	\$175	\$313	\$452	\$590	\$729	\$867
8.00	\$143	\$302	\$460	\$618	\$777	\$935	\$1,093
9.00	\$251	\$429	\$607	\$785	\$963	\$1,141	\$1,320
10.00	\$358	\$556	\$754	\$952	\$1,150	\$1,348	\$1,546
11.00	\$465	\$683	\$901	\$1,118	\$1,336	\$1,554	\$1,772

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

YIELD tonnes/ha	On Farm Price						
	\$120 /t	\$140 /t	\$160 /t	\$180 /t	\$200 /t	\$220 /t	\$240 /t
5.00	-\$47	-\$21	\$5	\$31	\$57	\$83	\$109
6.00	-\$19	\$12	\$44	\$75	\$106	\$138	\$169
7.00	\$9	\$46	\$82	\$119	\$155	\$192	\$228
8.00	\$38	\$79	\$121	\$163	\$204	\$246	\$288
9.00	\$66	\$113	\$160	\$207	\$253	\$300	\$347
10.00	\$94	\$146	\$198	\$250	\$303	\$355	\$407
11.00	\$122	\$180	\$237	\$294	\$352	\$409	\$466

SURFACE IRRIGATED SORGHUM (diesel pump from bore)

Farm Enterprise Budget Series - Northern Zone

Summer 2009-2010

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total
Operation	Month	hrs/ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	Cost \$/ha
Herbicide - ground spray, glyphosate CT	Jan	0.05	47.19	2.36	1.2 L	5.21	6.25	8.61
Herbicide - 2,4-D i.p.a. 300g/L	Jan	with above			0.66 L	4.18	2.76	2.76
Wetter - non-ionic surfactant	Jan	with above			0.2 L	6.86	1.37	1.37
Herbicide - ground spray, glyphosate CT	Mar	0.05	47.19	2.36	1.2 L	5.21	6.25	8.61
Herbicide - triclopyr	Mar	with above			0.08 L	39.99	3.20	3.20
Wetter - non-ionic surfactant	Mar	with above			0.2 L	6.86	1.37	1.37
Herbicide - ground spray, glyphosate CT	May	0.05	47.19	2.36	1.0 L	5.21	5.21	7.57
Wetter - non-ionic surfactant	May	with above			0.2 L	6.86	1.37	1.37
Herbicide - ground spray, glyphosate CT	Aug	0.05	47.19	2.36	1.2 L	5.21	6.25	8.61
Wetter - non-ionic surfactant	Aug	with above			0.2 L	6.86	1.37	1.37
Fertilizer -Bulk Urea	Sep	0.12	65.67	7.88	325 kg	0.59	191.75	199.63
Herbicide - s-metolachlor+atrazine	Sep	0.03	47.06	1.41	3.2 L	13.49	43.17	44.58
Pre-Irrigate #	Oct				1.4 MI	49.21	68.89	68.89
Sowing - thiamethoxam + Concep II treated seed	Oct	0.12	69.06	8.29	3 kg	12.00	36.00	44.29
Fertiliser - Starter 12Z	Oct	with above			40 kg	1.10	44.00	44.00
Inter-row cultivate	Nov	0.15	52.81	7.92				7.92
Irrigate	Dec				1.2 MI	49.21	59.05	59.05
Irrigate	Jan				1.2 MI	49.21	59.05	59.05
Insecticide -Nuclear polyhedrosis virus (4 yrs in 5)	Jan	aerial spray		17.00	0.25 L	53.07	13.27	24.21
Crop insurance *	Jan						4.21%	53.89
Dessicant - aerial spray, glyphosate CT	Mar				1.2 L	5.21	6.25	23.25
Wetter - non-ionic surfactant	Mar	with above			0.2 L	6.86	1.37	1.37
Harvest **	Mar	contract		119.94	per ha incl fuel			119.94
Grains Research Levy					1.020%	of farm gate value		13.06
GrainCorp Levy \$/t					\$1.50	/tonne		12.00

AGRONOMIC NOTES:

*Sorghum is sensitive to zinc deficiency. Zinc treatment should be included where necessary, in this example zinc is applied 1 year in 5.

Planting time: Planting sorghum after the end of December significantly increases the chances of sorghum ergot, which can cause a substantial decline in yields and unsaleable grain.

Insects: Heliothis control may be required about 4 out of 5 years.

Weeds: To reduce the likelihood of herbicide resistance, rotate herbicide groups and weed management techniques.

Insurance: * Varies with local government area and postcode, check with your insurer.

** Harvest costs based on \$65/ha for a crop up to 2.5 t/ha with estimated increment of \$1.00 per extra 100 kg/ha above 2.5 t/ha. Includes estimate of harvester fuel cost.

For further information see the NSW DPI "Summer Crop Production Guide 2009-10"

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

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

LABOUR REQUIREMENTS:

- labour is not costed in this budget. If labour costs \$20.00 /hr, total labour cost would be \$15.50, reducing the gross margin to \$445 /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 usage charge of \$3.71 per ML assumed, your charges may be different.

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

Water requirements 3.80 ML/ha is sufficient to adequately irrigate sorghum 4 out of 5 years.

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



SURFACE IRRIGATED MAIZE (diesel pump from bore)

Farm Enterprise Budget Series - Northern Zone

Summer 2009-2010

1. GROSS MARGIN BUDGET:

INCOME:

10.00 tonnes/ha at \$160.00 /tonne (on farm)

Sample Budget \$/ha	Your Budget \$/ha
\$1,600.00	

A. TOTAL INCOME \$/ha:

\$1,600.00	
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VARIABLE COSTS:

see following page(s) for details

Cultivation.....	\$7.92	
Sowing.....	\$272.29	
Fertilizer.....	\$326.93	
Herbicide.....	\$89.43	
Insecticide.....	\$12.60	
Irrigation.....	\$351.85	
Harvest.....	\$139.94	
Levies and insurance.....	\$78.88	

B. TOTAL VARIABLE COSTS \$/ha:

\$1,279.84	
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C. GROSS MARGIN (A-B) \$/ha:

\$320.16	
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D. GROSS MARGIN \$/MI:

\$44.78	
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SENSITIVITY TABLES

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

YIELD tonnes/ha	On Farm Price					
	\$120 /t	\$140 /t	\$160 /t	\$190 /t	\$240 /t	\$290 /t
7.00	-\$404	-\$265	-\$126	\$82	\$430	\$777
8.00	-\$295	-\$136	\$22	\$261	\$658	\$1,055
9.00	-\$186	-\$7	\$171	\$439	\$886	\$1,333
10.00	-\$77	\$122	\$320	\$618	\$1,114	\$1,611
11.00	\$32	\$251	\$469	\$797	\$1,343	\$1,889
12.00	\$141	\$380	\$618	\$975	\$1,571	\$2,167
13.00	\$250	\$509	\$767	\$1,154	\$1,799	\$2,445

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

YIELD tonnes/ha	On Farm Price					
	\$120 /t	\$140 /t	\$160 /t	\$190 /t	\$240 /t	\$290 /t
7.00	-\$57	-\$37	-\$18	\$11	\$60	\$109
8.00	-\$41	-\$19	\$3	\$36	\$92	\$148
9.00	-\$26	-\$1	\$24	\$61	\$124	\$186
10.00	-\$11	\$17	\$45	\$86	\$156	\$225
11.00	\$5	\$35	\$66	\$111	\$188	\$264
12.00	\$20	\$53	\$86	\$136	\$220	\$303
13.00	\$35	\$71	\$107	\$161	\$252	\$342

SURFACE IRRIGATED MAIZE (diesel pump from bore)

Farm Enterprise Budget Series - Northern Zone

Summer 2009-2010

250

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total
Operation	Month	hrs/ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	Cost \$/ha
Herbicide - ground spray, glyphosa	Jan	0.05	47.19	2.36	1.2 L	5.21	6.25	8.61
Herbicide - 2,4-D i.p.a. 300g/L	Jan	with above			0.66 L	4.18	2.76	2.76
Wetter - non-ionic surfactant	Jan	with above			0.2 L	6.86	1.37	1.37
Herbicide - ground spray, glyphosa	Mar	0.05	47.19	2.36	1.2 L	5.21	6.25	8.61
Herbicide - triclopyr	Mar	with above			0.08 L	39.99	3.20	3.20
Wetter - non-ionic surfactant	Mar	with above			0.2 L	6.86	1.37	1.37
Herbicide - ground spray, glyphosa	May	0.05	47.19	2.36	1.0 L	5.21	5.21	7.57
Wetter - non-ionic surfactant	May	with above			0.2 L	6.86	1.37	1.37
Herbicide - ground spray, glyphosa	Aug	0.05	47.19	2.36	1.2 L	5.21	6.25	8.61
Wetter - non-ionic surfactant	Aug	with above			0.2 L	6.86	1.37	1.37
Fertilizer -Bulk Urea	Sep	0.12	65.67	7.88	435 kg	0.59	256.65	264.53
Pre-Irrigate	Sep				1.4 ML	49.21	68.89	68.89
Sowing - thiamethoxam treated seed	Oct	0.12	69.06	8.29	25 kg	10.56	264.00	272.29
Fertiliser-* Starter 12Z	Oct	with above			60 kg	1.04	62.40	62.40
Seed treatment - semevin	Oct	with above			180 ml	0.07	12.60	12.60
Herbicide - s-metolachlor+atrazine	Oct	0.03	47.06	1.41	3.20 L	13.49	43.17	44.58
Inter-row cultivate	Nov	0.15	52.81	7.92				7.92
Irrigate	Dec				1.0 ML	49.21	49.21	49.21
Irrigate	Dec				1.25 ML	49.21	61.51	61.51
Irrigate	Jan				1.25 ML	49.21	61.51	61.51
Irrigate	Jan				1.25 ML	49.21	61.51	61.51
Crop insurance **	Jan			4.21%				67.36
Irrigate	Feb				1.0 ML	49.21	49.21	49.21
Harvest #	Apr	contract		139.94	per ha incl fuel			139.94
Grains Research Levy				0.72%	of farm gate value			11.52

AGRONOMIC NOTES:

Sowing Time: Maize can be sown from October onwards.

Weeds: s-metolachlor+atrazine used for grass and broadleaf weed control.

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 I&I NSW.

* Maize is sensitive to zinc deficiency. Zinc boosted fertiliser or treatment should be included where necessary.

Insurance: ** Varies with local government area and postcode, check with your insurer.

Harvest costs based on \$39.50/ha for a crop up to 2.5 t/ha with estimated increment of \$1.58 per extra 100 kg/ha above 2.5 t/ha.

For further information see the NSW DPI "Summer Crop Production Guide 2009-10"

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

LABOUR REQUIREMENTS: - labour is not costed in this budget. If labour costs \$20.00 /hr, total labour cost would be \$15.50, reducing the gross margin to \$305 /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.

Maize Harvesting requires a corn front. Ownership or running costs are not included in this budget.

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

IRRIGATION: Water usage charge of \$3.71 per ML assumed, your charges may be different.

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

Water requirements 7.15 ML is sufficient to adequately irrigate maize 4 out of 5 years.

SURFACE IRRIGATED SUNFLOWERS (mono-unsaturated)

Farm Enterprise Budget Series - Northern Zone

Summer 2009-2010 (diesel pump from bore)

1. GROSS MARGIN BUDGET:

INCOME:

3.00 tonnes/ha at \$520.00 /tonne (on farm)

Sample Budget \$/ha	Your Budget \$/ha
\$1,560.00	

A. TOTAL INCOME \$/ha:

\$1,560.00	
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VARIABLE COSTS:

see following page(s) for details

Cultivation.....	\$18.68	
Sowing.....	\$60.22	
Fertilizer.....	\$191.28	
Herbicide.....	\$70.55	
Insecticide.....	\$51.38	
Irrigation.....	\$191.92	
Levies and insurance.....	\$81.59	
Harvest.....	\$69.94	
B. TOTAL VARIABLE COSTS \$/ha:	\$735.55	

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

\$824.45	
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D. GROSS MARGIN \$/MI:

\$211.40	
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2. EFFECT OF YIELD AND PRICE ON GROSS MARGIN PER HECTARE:

(A) SENSITIVITY TABLE

YIELD tonnes/ha	On Farm Price				
	\$470 /t	\$495 /t	\$520 /t	\$545 /t	\$570 /t
1.50	-\$17	\$20	\$57	\$95	\$132
2.00	\$216	\$265	\$315	\$364	\$414
2.50	\$448	\$510	\$572	\$634	\$696
3.00	\$676	\$750	\$824	\$899	\$973
3.50	\$904	\$990	\$1,077	\$1,163	\$1,250
4.00	\$1,131	\$1,230	\$1,329	\$1,428	\$1,527
4.50	\$1,359	\$1,470	\$1,581	\$1,693	\$1,804

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

YIELD tonnes/ha	On Farm Price				
	\$470 /t	\$495 /t	\$520 /t	\$545 /t	\$570 /t
1.50	-\$4	\$5	\$15	\$24	\$34
2.00	\$55	\$68	\$81	\$93	\$106
2.50	\$115	\$131	\$147	\$163	\$178
3.00	\$173	\$192	\$211	\$230	\$249
3.50	\$232	\$254	\$276	\$298	\$321
4.00	\$290	\$315	\$341	\$366	\$392
4.50	\$348	\$377	\$406	\$434	\$463

SURFACE IRRIGATED SUNFLOWERS (mono-unsaturated)

Farm Enterprise Budget Series - Northern Zone

Summer 2009-2010 (diesel pump from bore)

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total
Operation	Month	hrs/ha	Cost	Total	Rate/ha	Cost	Total	Cost \$/ha
			\$/hour	\$/ha		\$	\$/ha	
Herbicide - ground spray, glyphos	Jan	0.05	47.19	2.36	1.2 L	5.21	6.25	8.61
Herbicide - 2,4-D i.p.a. 300g/L	Jan	with above			0.66 L	4.18	2.76	2.76
Wetter - non-ionic surfactant	Jan	with above			0.2 L	6.86	1.37	1.37
Herbicide - ground spray, glyphos	Mar	0.05	47.19	2.36	1.2 L	5.21	6.25	8.61
Herbicide - triclopyr	Mar	with above			0.08 L	39.99	3.20	3.20
Wetter - non-ionic surfactant	Mar	with above			0.2 L	6.86	1.37	1.37
Hill-Up (or bed)	May	0.22	48.90	10.76				10.76
Fertilize -Bulk Urea	May	with above			260 kg	0.59	153.40	153.40
Herbicide - Stomp Xtra	Aug	0.03	47.06	1.41	3.3 L	11.10	36.63	38.04
Herbicide - glyphosate CT	Aug	with above			1.0 L	5.21	5.21	5.21
Wetter - non-ionic surfactant	Aug	with above			0.2 L	6.86	1.37	1.37
Fertiliser - Starter 12Z	Aug	0.12	65.67	7.88	40 kg	0.75	30.00	37.88
Pre-Irrigate	Aug				1.5 ML	49.21	73.82	73.82
Sow with planter	Sept	0.12	69.06	8.29				8.29
Seed	Sept	with above			3 kg	17.31	51.93	51.93
Insecticide - chlorpyrifos EC	Sept	with above			0.75 L	14.64	10.98	10.98
Inter-row cultivate	Oct	0.15	52.81	7.92				7.92
Irrigate	Nov				1.2 ML	49.21	59.05	59.05
Insecticide - alpha-cypermethrin 100g/L EC	Dec	aerial spray		17.00	0.4 L	8.00	3.20	20.20
Irrigate	Dec				1.2 ML	49.21	59.05	59.05
Insecticide - alpha-cypermethrin 100g/L EC	Jan	aerial spray		17.00	0.4 L	8.00	3.20	20.20
Crop insurance **	Jan			4.21%				65.68
Harvest (contract) #	Feb	contract		69.94	per ha incl fuel			69.94
Grains Research Levy				1.02%	of farm gate value			15.91

AGRONOMIC NOTES:

Spring sown sunflowers are likely to have higher water requirements, up to 7.5 ML/ha.

Do not sow poly-unsaturated sunflowers in spring as low quality oil is unacceptable to margarine manufacturers.

To reduce the likelihood of herbicide resistance, rotate herbicide groups and weed management techniques.

Insects: *Deltamethrin assumed to be required to control Rutherglen bugs or heliothis.

For further information see the NSW DPI "Summer Crop Production Guide 2009-10"

Harvest costs based on \$64.94 (including \$4.94/ha fuel) /ha for a crop up to 2.5 t/ha with estimated increment of \$1.00 per extra 100 kg/ha above 2.5 t/ha.

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

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

Insurance: ** Varies with local government area and postcode, check with your insurer.

LABOUR REQUIREMENTS: - labour is not costed in this budget. If labour costs \$20.00 /hr, total labour cost would be \$18.50, reducing the gross margin to \$806 /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 usage charge of \$3.71 per ML assumed, your charges may be different.

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

Water requirements 3.90 ML is sufficient to adequately irrigate sunflowers 4 out of 5 years.

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.



SURFACE IRRIGATED SOYBEANS (diesel pump from bore)

Farm Enterprise Budget Series - Northern Zone

Summer 2009-2010

1. GROSS MARGIN BUDGET:

INCOME:

3.00 tonnes/ha at \$380.00 /tonne (on farm)

Sample Budget \$/ha	Your Budget \$/ha
\$1,140.00	

A. TOTAL INCOME \$/ha:

\$1,140.00	
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VARIABLE COSTS:

see following page(s) for details

Cultivation.....	\$26.60	
Sowing.....	\$122.04	
Fertiliser.....	\$87.00	
Herbicide.....	\$54.52	
Insecticide.....	\$44.50	
Irrigation.....	\$295.26	
Levies and insurance.....	\$61.10	
Harvest.....	\$79.94	
B. TOTAL VARIABLE COSTS \$/ha:	\$770.96	

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

\$369.04	
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D. GROSS MARGIN \$/MI:

\$61.51	
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SENSITIVITY TABLES

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

YIELD tonnes/ha	On Farm Price				
	\$330 /t	\$355 /t	\$380 /t	\$405 /t	\$430 /t
1.50	-\$264	-\$227	-\$190	-\$153	-\$116
2.00	-\$101	-\$52	-\$2	\$47	\$97
2.50	\$62	\$124	\$186	\$248	\$310
3.00	\$221	\$295	\$369	\$443	\$518
3.50	\$379	\$465	\$552	\$639	\$725
4.00	\$537	\$636	\$735	\$834	\$933
4.50	\$696	\$807	\$918	\$1,030	\$1,141

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

YIELD tonnes/ha	On Farm Price				
	\$330 /t	\$355 /t	\$380 /t	\$405 /t	\$430 /t
1.50	-\$44	-\$38	-\$32	-\$26	-\$19
2.00	-\$17	-\$9	\$0	\$8	\$16
2.50	\$10	\$21	\$31	\$41	\$52
3.00	\$37	\$49	\$62	\$74	\$86
3.50	\$63	\$78	\$92	\$106	\$121
4.00	\$90	\$106	\$123	\$139	\$156
4.50	\$116	\$134	\$153	\$172	\$190

SURFACE IRRIGATED SOYBEANS (diesel pump from bore)

Farm Enterprise Budget Series - Northern Zone

Summer 2009-2010

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total
Operation	Month	hrs/ha	Cost	Total	Rate/ha	Cost	Total	Total Cost \$/ha
			\$/hour	\$/ha		\$	\$/ha	
Herbicide - ground spray, glyphosate CT	Jan	0.05	47.19	2.36	1.2 L	5.21	6.25	8.61
Herbicide - 2,4-D i.p.a. 300g/L	Jan	with above			0.66 L	4.18	2.76	2.76
Wetter - non-ionic surfactant	Jan	with above			0.2 L	6.86	1.37	1.37
Herbicide - ground spray, glyphosate CT	Mar	0.05	47.19	2.36	1.2 L	5.21	6.25	8.61
Wetter - non-ionic surfactant	Mar	with above			0.2 L	6.86	1.37	1.37
Herbicide - ground spray, glyphosate CT	May	0.05	47.19	2.36	1.0 L	5.21	5.21	7.57
Wetter - non-ionic surfactant	May	with above			0.2 L	6.86	1.37	1.37
Hill-Up (or Bed)	Aug	0.22	48.90	10.76				10.76
Fertiliser - Starter Z	Aug	with above			100 kg	0.87	87.00	87.00
Spray and incorporate	Nov	0.15	52.81	7.92				7.92
Herbicide - trifluralin (480 g/L)	Nov	with above			2.8 L	8.16	22.85	22.85
Pre-Irrigate	Nov				1.4 ML	49.21	68.89	68.89
Sowing: Seed + inoculum	Dec	0.12	69.06	8.29	65 kg	1.75	113.75	122.04
Inter-row cultivate	Jan	0.15	52.81	7.92				7.92
Irrigate	Jan				1.2 ML	49.21	59.05	59.05
Crop insurance **	Jan			4.34%				49.48
Irrigate	Feb				1.2 ML	49.21	59.05	59.05
Irrigate	Feb				1.2 ML	49.21	59.05	59.05
Insecticide - deltamethrin ULV	Mar	aerial spray		17.00	2.5 L	11.00	27.50	44.50
Irrigate	Mar				1.0 ML	49.21	49.21	49.21
Harvest #	Apr	contract		79.94	per ha incl fuel			79.94
Research Levy				1.02%	of farm gate value			11.63

AGRONOMIC NOTES:

Insects: Closely monitor for green vegetable bug, heliothis and mites. Deltamethrin is applied to control green vegetable bugs or heliothis.

Fertiliser: Soybean is sensitive to zinc deficiency. Zinc treatment should be included when necessary in this example zinc is applied 1 year in 5.

Weeds: To reduce the likelihood of herbicide resistance, rotate herbicide groups and weed management techniques.

Insurance: ** Varies with local government area and postcode, check with your insurer.

Harvest costs based on \$74.94 (including \$4.94/ha fuel) /ha for a crop up to 2.5 t/ha with estimated increment of \$1.00 per extra 100 kg/ha above 2.5 t/ha.

For further information, refer to the I&I NSW Agfact, "Soybeans" P5.2.6 and the NSW DPI "Summer Crop Production Guide 2009-10".

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

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

LABOUR REQUIREMENTS: - labour is not costed in this budget. If labour costs \$20.00 /hr, total labour cost would be \$16.75, reducing the gross margin to \$352 /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 usage charge of \$3.71 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 requirements 6.0ML/Ha is sufficient to adequately irrigate soybeans 4 out of 5 years.

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.

SPRAY IRRIGATED MUNGBEANS (no-till)

Farm Enterprise Budget Series - Northern Zone

Summer 2009-2010

1. GROSS MARGIN BUDGET:

INCOME:

Yield	1.50 tonnes/ha	
1.32 tonnes/ha at	\$600.00	/tonne (clean seed, processing grade).....
0.18 tonnes/ha at	\$200.00	/tonne (gradings).....

A grading percentage of 12% is assumed, but it will vary according to crop and harvest conditions.

A. TOTAL INCOME \$/ha:

Sample Budget \$/ha	Your Budget \$/ha
\$792.00	
\$36.00	

\$828.00	
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VARIABLE COSTS: see following page(s) for details

Sowing.....	\$58.79	
Fertilizer & application.....	\$77.50	
Herbicide & application.....	\$143.59	
Insecticide & application.....	\$44.50	
Irrigation.....	\$117.42	
Harvesting.....	\$74.94	
Levies and insurance.....	\$44.38	
Cartage, grading & bagging.....	\$114.00	

B. TOTAL VARIABLE COSTS \$/ha:

\$675.12	
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C. GROSS MARGIN (A-B) \$/ha:

\$152.88	
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D. GROSS MARGIN \$/MI:

\$101.92	
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SENSITIVITY TABLES

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

YIELD t/ha.		\$180 /t	\$190 /t	\$200 /t	\$205 /t	\$210 /t	\$215 /t
gradings	clean seed	\$460 /t	\$530 /t	\$600 /t	\$640 /t	\$680 /t	\$720 /t
0.14	1.06	-\$137	-\$63	\$12	\$54	\$97	\$139
0.16	1.14	-\$103	-\$22	\$59	\$105	\$151	\$197
0.17	1.23	-\$68	\$19	\$106	\$155	\$205	\$255
0.18	1.32	-\$34	\$60	\$153	\$206	\$259	\$312
0.20	1.45	\$18	\$121	\$223	\$282	\$340	\$399
0.22	1.58	\$70	\$182	\$294	\$358	\$422	\$485
0.24	1.76	\$139	\$264	\$388	\$459	\$530	\$601

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

YIELD t/ha.		\$180 /t	\$190 /t	\$200 /t	\$205 /t	\$210 /t	\$215 /t
gradings	clean seed	\$460 /t	\$530 /t	\$600 /t	\$640 /t	\$680 /t	\$720 /t
0.14	1.06	-\$92	-\$42	\$8	\$36	\$65	\$93
0.16	1.14	-\$69	-\$15	\$39	\$70	\$101	\$131
0.17	1.23	-\$45	\$13	\$71	\$104	\$137	\$170
0.18	1.32	-\$22	\$40	\$102	\$137	\$173	\$208
0.20	1.45	\$12	\$81	\$149	\$188	\$227	\$266
0.22	1.58	\$47	\$121	\$196	\$239	\$281	\$324
0.24	1.76	\$93	\$176	\$259	\$306	\$353	\$400

SPRAY IRRIGATED MUNGBEANS (no-till)

Farm Enterprise Budget Series - Northern Zone

Summer 2009-2010

(spray irrigated from river-regulated)

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total
Operation	Month	hrs /ha	Cost	Total	Rate/ha	Cost	Total	Total Cost \$/ha
			\$/hour	\$/ha		\$	\$/ha	
Herbicide - ground spray, glyphosate CT	Jan	0.05	47.19	2.36	1.2 L	5.21	6.25	8.61
Herbicide - 2,4-D i.p.a. 300g/L	Jan	with above			0.66 L	4.18	2.76	2.76
Wetter - non-ionic surfactant	Jan	with above			0.2 L	6.86	1.37	1.37
Herbicide - ground spray, glyphosate CT	Mar	0.05	47.19	2.36	1.2 L	5.21	6.25	8.61
Wetter - non-ionic surfactant	Mar	with above			0.2 L	6.86	1.37	1.37
Herbicide - ground spray, glyphosate CT	May	0.05	47.19	2.36	1.0 L	5.21	5.21	7.57
Wetter - non-ionic surfactant	May	with above			0.2 L	6.86	1.37	1.37
Herbicide - ground spray, glyphosate CT	Sep	0.05	47.19	2.36	1.2 L	5.21	6.25	8.61
Wetter - non-ionic surfactant	Sep	with above			0.2 L	6.86	1.37	1.37
Fertiliser - single super (+ Mo)	Nov	with above			125 kg	0.62	77.50	77.50
Herbicide - glyphosate CT	Nov	0.03	47.06	1.41	1.5 L		0.00	1.41
Wetter - non-ionic surfactant	Nov	with above			0.2 L	6.86	1.37	1.37
Sowing: Seed + inoculum	Dec	0.12	69.06	8.29	25 kg	2.02	50.50	58.79
Irrigation	Jan				0.5 ML	78.28	39.14	39.14
Herbicide - ground spray	Jan	0.03	47.06	1.41				1.41
Herbicide - acifluorfen	Jan	with above			1.5 L	53.27	79.91	79.91
Crop insurance **	Jan			4.34%				35.94
Irrigation	Feb				0.5 ML	78.28	39.14	39.14
Irrigation	Feb				0.5 ML	78.28	39.14	39.14
Insecticide - deltamethrin ULV	Feb	aerial spray		17.00	2.5 L	11.00	27.50	44.50
Dessicant- <i>check current permits</i>	Mar	0.05	47.19	2.36	2.0 L	7.74	15.48	17.84
Harvest	Mar	contract		74.94	per ha incl fuel			74.94
Grains Research Levy				1.02%	of farm gate value			8.45
Grading & bagging	May	contract		\$76 /t.				114.00

AGRONOMIC NOTES:

A good way to grow irrigated mungbeans is to no-till after harvesting winter cereal crops. In this case, weed control is achieved with post-emergent herbicide applications. Good weed control is essential.

To reduce the likelihood of herbicide resistance, rotate herbicide groups and weed management techniques.

Winter crop stubble should be left intact if possible.

Pests: Closely monitor crops for thrips and mirids at budding and flowering.

Heliothis (armigera) are now resistant to many insecticides. Consult an agronomist to find out resistance levels in your area. Deltamethrin is used for green vegetable bug control in this budget.

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

Fertiliser: If applying phosphate fertiliser, use a fertiliser that contains good levels of sulphur as well, e.g. single superphosphate.

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

Insurance: ** Varies with local government area and postcode, check with your insurer.

PRICE: - The price given is for processing grade mungbeans at the time of writing.

Consult marketing sources for more up to date price information.

Marketing: Mungbeans sown in spring and harvested in February are more likely to achieve good prices.

The Asian harvest starts in March/April and this can cause downward pressure on prices.

Consult your local trader or Bean Growers Australia Phone 07-4162 1100

Harvest: use air assist headers to reduce losses at harvest

For further information, refer to the NSW DPI "Summer Crop Production Guide 2009-10"

LABOUR REQUIREMENTS: - labour is not costed in this budget. If labour costs \$20.00 /hr, total labour cost would be \$10.75, reducing the gross margin to \$142 /ha. This 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/ ML assumed, your charges may be different.

Water pumping costs are calculated using a spray system with diesel powered pumping from surface supply.

Water requirements 1.50 ML is sufficient to adequately irrigate mungbeans 4 out of 5 years.

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.

SPRAY IRRIGATED NAVY BEANS

Farm Enterprise Budget Series - Northern Zone

Summer 2009-2010

1. GROSS MARGIN BUDGET:

INCOME:		Sample Budget \$/ha	Your Budget \$/ha
Yield	1.70 tonnes/ha		
Clean seed	1.50 tonnes/ha at \$940.00 /tonne	\$1,406.24	
Gradings	0.20 tonnes/ha		
A grading percentage of 12% is assumed. The price listed is nett of grading costs.			
A. TOTAL INCOME \$/ha:		\$1,406.24	

VARIABLE COSTS:

see following page(s) for details

Sowing.....	\$108.29	
Fertilizer & application.....	\$221.91	
Herbicide & application.....	\$101.54	
Insecticide & application.....	\$81.28	
Irrigation.....	\$234.84	
Harvesting.....	\$118.64	
Levies.....	\$14.34	
Insurance.....	\$61.03	
B. TOTAL VARIABLE COSTS \$/ha:	\$941.87	

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

\$464.37

D. GROSS MARGIN \$/ML:

\$154.79

SENSITIVITY TABLES

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

Total Yield t/ha	Yield t/ha clean seed	Price (clean seed)					Gross Margin (\$/ha)
		\$890 /t	\$915 /t	\$940 /t	\$965 /t	\$990 /t	
0.80	0.70	-\$297	-\$280	-\$263	-\$245	-\$228	
1.10	0.97	-\$68	-\$44	-\$20	\$4	\$28	
1.40	1.23	\$161	\$192	\$222	\$253	\$283	
1.70	1.50	\$390	\$427	\$464	\$501	\$538	
2.30	2.02	\$849	\$899	\$949	\$999	\$1,049	
2.65	2.33	\$1,116	\$1,174	\$1,232	\$1,289	\$1,347	
3.00	2.64	\$1,384	\$1,449	\$1,514	\$1,580	\$1,645	

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

Total Yield t/ha	Yield t/ha clean seed	Price (clean seed)				
		\$890 /t	\$915 /t	\$940 /t	\$965 /t	\$990 /t
0.80	0.70	-\$99	-\$93	-\$88	-\$82	-\$76
1.10	0.97	-\$23	-\$15	-\$7	\$1	\$9
1.40	1.23	\$54	\$64	\$74	\$84	\$94
1.70	1.50	\$130	\$142	\$155	\$167	\$179
2.30	2.02	\$283	\$300	\$316	\$333	\$350
2.65	2.33	\$372	\$391	\$411	\$430	\$449
3.00	2.64	\$461	\$483	\$505	\$527	\$548

SPRAY IRRIGATED NAVY BEANS

Farm Enterprise Budget Series - Northern Zone

Summer 2009-2010

(spray irrigated from river -regulated)

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total
Operation	Month	hrs /ha	Cost	Total	Rate/ha	Cost	Total	Total Cost \$/ha
			\$/hour	\$/ha		\$	\$/ha	
Herbicide - ground spray, glyphosate CT	Jan	0.05	47.19	2.36	1.2 L	5.21	6.25	8.61
Herbicide - 2,4-D i.p.a. 300g/L	Jan	with above			0.66 L	4.18	2.76	2.76
Wetter - non-ionic surfactant	Jan	with above			0.2 L	6.86	1.37	1.37
Herbicide - ground spray, glyphosate CT	Mar	0.05	47.19	2.36	1.2 L	5.21	6.25	8.61
Wetter - non-ionic surfactant	Mar	with above			0.2 L	6.86	1.37	1.37
Herbicide - ground spray, glyphosate CT	May	0.05	47.19	2.36	1.0 L	5.21	5.21	7.57
Wetter - non-ionic surfactant	May	with above			0.2 L	6.86	1.37	1.37
Herbicide - ground spray, glyphosate CT	Sep	0.05	47.19	2.36	1.2 L	5.21	6.25	8.61
Wetter - non-ionic surfactant	Sep	with above			0.2 L	6.86	1.37	1.37
Fertiliser - Urea	Nov	with above		74kg of N	161 kg	0.59	94.91	168.91
Herbicide - ground spray	Nov	0.03	47.06	1.41				1.41
Herbicide - trifluralin (480 g/L)	Nov	with above			2.1 L	8.16	17.14	17.14
Sowing: Seed + inoculum	Dec	0.12	69.06	8.29	50 kg	2.00	100.00	108.29
Fertiliser - Single Super	Dec	with above			100 kg	0.53	53.00	53.00
Irrigate	Jan				0.5 ML	78.28	39.14	39.14
Insecticide - aerial spray	Jan	aerial spray		17.00				17.00
Insecticide - deltamethrin ULV	Jan	with above			2.5 L	11.00	27.50	27.50
Irrigate	Jan				0.5 ML	78.28	39.14	39.14
Herbicide - bentazone	Jan	0.03	47.06	1.41	1.0 L	39.93	39.93	41.34
Crop insurance **	Jan			4.34%				61.03
Irrigate	Feb				0.5 ML	78.28	39.14	39.14
Insecticide - dimethoate	Feb	0.03	47.06	1.41	0.8 L	4.37	3.50	4.91
Irrigate	Feb				0.5 ML	78.28	39.14	39.14
Insecticide - aerial spray	Feb	aerial spray		17.00				17.00
Insecticide - thiodicarb 375	Feb	with above			0.75 L	13.28	9.96	9.96
Irrigate	Feb				0.5 ML	78.28	39.14	39.14
Irrigate	Mar				0.5 ML	78.28	39.14	39.14
Insecticide - dimethoate	Mar	0.03	47.06	1.41	0.8 L	4.37	3.50	4.91
Harvest #	Apr	contract		99.94	per ha incl fuel			99.94
Drying (if above 15% moisture)	Apr			\$11 /t				18.70
Research Levy	Apr			1.02%	of farm gate value			14.34

AGRONOMIC NOTES:

Management: Yields of up to 3 t/ha can be achieved with exceptional management.

Not recommended in the west, yields with current varieties will probably plateau around 1.5-1.9 t/ha

Sowing: Sowing in late December-early January is advisable to avoid heat stress at flowering.

Weeds: To reduce the likelihood of herbicide resistance, rotate herbicide groups and weed management techniques.

Irrigation: It is important to avoid waterlogging with navy beans.

Depending on the season, pre-irrigation may be required, at about 0.3 ML/ha

Fertiliser: The rate used for Single Super is for a moderate phosphorus deficiency. In very deficient situations up to 200 kg/ha could be used. Navy beans may need extra nitrogen fertiliser to achieve yield potential.

Insurance: ** Varies with local government area and postcode, check with your insurer.

Harvest costs based on \$99.94/ha for crop up to 2.5 t/ha with estimated increment of \$1.00 per extra 100kg.

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

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

Marketing: Payment is usually on the basis of clean seed yield.

For further details contact: Bean Growers Australia: phone 07 4162 1100 fax: 07 41 624 706

Website <http://www.beangrowers.com.au/> or email info@beangrowers.com.au

LABOUR REQUIREMENTS: - labour is not costed in this budget. If labour costs \$20.00 /hr, total labour cost would be \$11.00, reducing the gross margin to \$453 /ha. This 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 costs may be different.

Water pumping costs: calculated using a spray system with diesel powered pumping from surface supply

Water requirements 3.00 ML is sufficient to adequately irrigate navy beans 4 out of 5 years.

SURFACE IRRIGATED COTTON (Roundup Ready Flex®)

Farm Enterprise Budget Series - Northern Zone

Summer 2009-2010

1. GROSS MARGIN BUDGET:

INCOME:

Lint -	7.00	bales/ha at	\$400.00	/bale (at gin).....
Seed -	2.52	tonnes/ha at	\$275.00	/tonne (at gin).....

A. TOTAL INCOME \$/ha:

Sample Budget \$/ha	Your Budget \$/ha
\$2,800.00	
\$693.00	
\$3,493.00	

VARIABLE COSTS:

see following page(s) for details

Cultivation.....	\$154.84	
Sowing.....	\$89.94	
Crop insurance.....	\$55.00	
Fertilizer & application.....	\$243.46	
Herbicide & application.....	\$218.37	
Insecticide & application.....	\$473.96	
Irrigation.....	\$229.39	
Contract harvesting.....	\$309.71	
Cartage to gin.....	\$82.35	
Ginning charges.....	\$385.00	
Licence fees.....	\$75.00	
CA and Research Levy.....	\$31.50	
Other.....	\$60.00	
B. TOTAL VARIABLE COSTS \$/ha:	\$2,408.52	

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

\$1,084	
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D. GROSS MARGIN (A-B) \$/MI:

\$155	
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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	\$340 /bale \$235/t	\$370 /bale \$255/t	\$400 /bale \$275/t	\$430 /bale \$285/t	\$460 /bale \$295/t	Lint price Seed price Gross Margin (\$/ha)
4.00	1.44	-\$486	-\$337	-\$188	-\$54	\$81	
6.00	2.16	\$214	\$437	\$660	\$862	\$1,063	
7.00	2.52	\$564	\$824	\$1,084	\$1,320	\$1,555	
8.00	2.88	\$913	\$1,211	\$1,509	\$1,777	\$2,046	
10.00	3.60	\$1,613	\$1,985	\$2,357	\$2,693	\$3,029	
12.00	4.32	\$2,313	\$2,759	\$3,206	\$3,609	\$4,012	
14.00	5.04	\$3,012	\$3,533	\$4,054	\$4,524	\$4,995	

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

Lint Yield bales/ha	Seed Yield t/ha	\$340 /bale \$235 /bale	\$370 /bale \$255 /bale	\$400 /bale \$275 /bale	\$430 /bale \$285 /bale	\$460 /bale \$295 /bale
4.00	1.44	-\$69	-\$48	-\$27	-\$8	\$12
6.00	2.16	\$31	\$62	\$94	\$123	\$152
7.00	2.52	\$81	\$118	\$155	\$189	\$222
8.00	2.88	\$130	\$173	\$216	\$254	\$292
10.00	3.60	\$230	\$284	\$337	\$385	\$433
12.00	4.32	\$330	\$394	\$458	\$516	\$573
14.00	5.04	\$430	\$505	\$579	\$646	\$714

SURFACE IRRIGATED COTTON (Roundup Ready Flex®)

Farm Enterprise Budget Series - Northern Zone

(diesel pump from river-regulated)

Summer 2009-2010

CALENDAR OF OPERATIONS:			Machinery			Inputs			Total
Operation	Month				Rate/ha	Band Width			Total Cost \$/ha
		hrs /ha	Cost \$/hour	Total \$/ha			Cost \$	Total \$/ha	
Stalk pull and mulch	May	contract							75.00
Middlebusting	Jul	0.23	51.81	11.92		100%			11.92
Fertiliser - anhydrous ammonia	Jul	with above		140KgN	171 Kg	100%	0.87	148.54	148.54
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
Fertiliser - MAP plus potassium blend	Aug	0.15	52.81	7.92	100 Kg	100%	0.87	87.00	94.92
Herbicide - trifluralin (480 g/L)	Aug	0.03	47.06	1.41	3.2 L	100%	8.16	26.11	27.52
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
Planting - precision planter	Oct	0.14	55.30	7.74		100%			7.74
Planting- seed Roundup Ready®	Oct	with above			12 kg	100%	6.85	82.20	82.20
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 - endosulfan (350g/L) (mirids)	Nov	0.03	47.06	1.41	2.1 L	40%	4.75	3.99	5.40
Herbicide - shielded sprayer	Dec	0.09	55.81	5.02					5.02
Herbicide - glyphosate (450 g/L)	Dec	with above			2.0 L	40%	5.21	4.17	4.17
Insecticide - emamectin (17 g/L)	Dec	0.03	47.06	1.41	0.7 L	30%	88.44	18.57	19.98
Insecticide - BT	Dec	with above			1.5 L	30%	10.90	4.91	4.91
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 - spinosad 480g/L	Jan	aerial spray		17.00	0.2 L	100%	617.74	123.55	140.55
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				100%			60.00
Insecticide - indoxacarb (200g/L)	Jan	aerial spray		17.00	0.85 L	100%	37.16	31.59	48.59
Insecticide - spinosad 480g/L	Jan	aerial spray		17.00	0.2 L	100%	617.74	123.55	140.55
Irrigate	Jan				1.2 MI	100%	32.77	39.32	39.32
Crop insurance	Jan	Premium depends on various factors						55.00	55.00
Roundup Ready Flex® Licence fee *	Jan							75.00	75.00
Insecticide - indoxacarb (200g/L)	Feb	aerial spray		17.00	0.85 L	100%	37.16	31.59	48.59
Insecticide - beta-cyfluthrin (25 g/L)	Feb	0.03	47.06	1.41	0.8 L	100%	7.35	5.88	7.29
Insecticide - amitraz (200 g/L)	Feb	with above			2.0 L	100%	6.44	12.88	12.88
Irrigate	Feb				1.2 MI	100%	32.77	39.32	39.32
Insecticide - chlorpyrifos (300 g/L)	Mar	aerial spray		17.00	3.0 L	100%	9.41	28.23	45.23
Defoliant - thidiazuron + diuron (120 + 60 g/L)	Apr	aerial spray		17.00	0.25 L	100%	189.00	47.25	64.25
Defoliant - crop oil	Apr	with above			2.0 L	100%	4.09	8.18	8.18
Defoliant - ethepon (720 g/L)	Apr	with above			1.3 L	100%	8.93	11.61	11.61
Defoliant - ethepon (720 g/L)	Apr	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 cartage to gin	May	contract						\$200.00 /module @ 50km from gin	82.35
Ginning charges	May	contract						\$55.00 /bale	385.00
Consultant	May	contract							60.00
Levies	May	contract						\$4.50 /bale	31.50
TOTAL COSTS:									2,409

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: ® = registered Trade Mark

INSECTS: The selection of insecticides is highly dependent on the insect spectrum, growers should be aware this is a generic selection of products. growers should be mindful of IPM strategies when making product selections. Always refer to the Insecticide Resistance Management Strategy for Cotton when selecting insecticide products.

For more detailed information, see the I&I NSW "Cotton Pest Management Guide 2009-2010".

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

Use of a particular formulation name 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.

MANAGEMENT:- this budget is typical of "back to back" cotton assuming the cotton crop is in a 2 year cotton - 1 year wheat rotation.

DEFOLIANT: Good condition 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 \$23.50/ha, reducing the gross margin to \$1,061 /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: # 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 requirements 7.00 ML is sufficient to adequately irrigate cotton 4 out of 5 years. This assumes no useful rainfall during the growing season.

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

Farm Enterprise Budget Series - Northern Zone

Summer 2009-2010

1. GROSS MARGIN BUDGET:

			Sample Budget \$/ha	Your Budget \$/ha
INCOME:				
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	Gross Margin (\$/ha)
6.00	2.16	\$23	\$246	\$469	\$671	\$872	
7.00	2.52	\$372	\$633	\$893	\$1,128	\$1,364	
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	Gross Margin (\$/MI)
6.00	2.16	\$3	\$35	\$67	\$96	\$125	
7.00	2.52	\$53	\$90	\$128	\$161	\$195	
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

SURFACE IRRIGATED LUCERNE - Established stand

Farm Enterprise Budget Series - Northern Zone

Summer 2009-2010

1. GROSS MARGIN BUDGET:

INCOME:			Sample Budget	Your Budget
7 cuts per season @ 1.90 t/ha per cut			\$/ha	\$/ha
Total Yield =	13.30 tonnes per hectare			
@	40 bales per tonne (25 kg bales)			
60% AFIA Grade A1	320 bales/ha@	\$7.50 / bale	\$2,400	
20% AFIA Grade B2	106 bales/ha@	\$6.00 / bale	\$636	
20% AFIA Grade C3	106 bales/ha@	\$4.00 / bale	\$424	
A. TOTAL INCOME \$/ha:			\$3,460	

See http://www.afia.org.au/quality/national_grades/ for more details on hay grades used.

VARIABLE COSTS:

see following page(s) for details

Depreciation of establishment cost.....	\$90.50
Fertilizer.....	\$356.79
Herbicide.....	\$71.97
Insecticide.....	\$3.32
Irrigation.....	\$327.70
Mow, rake & bale (contract).....	\$1,353.80
Twine @ \$0.113/bale.....	\$60.29
Cart and stack 100% of hay (\$60/t).....	\$798.00
B. TOTAL VARIABLE COSTS \$/ha:	\$3,062.37

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

\$397.63

D. GROSS MARGIN \$/MI:

\$39.76

SENSITIVITY TABLES

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

Yield Cuts	tonnes/ha	Grade A1 \$3.50	Grade A1 \$5.50	Grade A1 \$7.50	Grade A1 \$9.50	Grade A1 \$11.50
		Grade B2 \$2.00	Grade B2 \$4.00	Grade B2 \$6.00	Grade B2 \$8.00	Grade B2 \$10.00
		Grade C3 \$0.00	Grade C3 \$2.00	Grade C3 \$4.00	Grade C3 \$5.00	Grade C3 \$6.00
		\$100 /tonne	\$180 /tonne	\$260 /tonne	\$332 /tonne	\$404 /tonne
4 cuts	5.8	-\$1,416	-\$952	-\$488	-\$70	\$348
5 cuts	8.3	-\$1,521	-\$857	-\$193	\$405	\$1,003
6 cuts	10.8	-\$1,626	-\$762	\$102	\$880	\$1,658
7 cuts	13.3	-\$1,730	-\$666	\$398	\$1,356	\$2,314
8 cuts	15.8	-\$1,835	-\$571	\$693	\$1,831	\$2,969
9 cuts	18.3	-\$1,940	-\$476	\$988	\$2,306	\$3,624
10 cuts	20.8	-\$2,045	-\$381	\$1,283	\$2,781	\$4,279

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

Yield Cuts	tonnes/ha	Grade A1 \$3.50	Grade A1 \$5.50	Grade A1 \$7.50	Grade A1 \$9.50	Grade A1 \$11.50
		Grade B2 \$2.00	Grade B2 \$4.00	Grade B2 \$6.00	Grade B2 \$8.00	Grade B2 \$10.00
		Grade C3 \$0.00	Grade C3 \$2.00	Grade C3 \$4.00	Grade C3 \$5.00	Grade C3 \$6.00
		\$100 /tonne	\$180 /tonne	\$260 /tonne	\$332 /tonne	\$404 /tonne
4 cuts	5.8	-\$142	-\$95	-\$49	-\$7	\$35
5 cuts	8.3	-\$152	-\$86	-\$19	\$41	\$100
6 cuts	10.8	-\$163	-\$76	\$10	\$88	\$166
7 cuts	13.3	-\$173	-\$67	\$40	\$136	\$231
8 cuts	15.8	-\$184	-\$57	\$69	\$183	\$297
9 cuts	18.3	-\$194	-\$48	\$99	\$231	\$362
10 cuts	20.8	-\$204	-\$38	\$128	\$278	\$428

SURFACE IRRIGATED LUCERNE - Established stand

Farm Enterprise Budget Series - Northern Zone

(diesel pump from river-regulated)

Summer 2009-2010

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost \$/ha
		Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha		
Operation	Month	hrs/ha						
Spray - paraquat + diquat	Jul	0.10	17.05	1.71	2.5 L	12.32/L	30.80	32.51
Spray - diuron	Jul	with above			2.5 L	9.20/L	23.00	23.00
Apply Single Super	Aug	0.42	17.01	7.14	125kg	0.42/kg	52.50	59.64
Spray aphids -dimethoate	Aug	0.10	17.05	1.71	0.37 L	4.37/L	1.62	3.32
Fertiliser- #Muriate of Potash	Aug	0.42	17.01	7.14	250kg	1.16/kg	290.00	297.14
Irrigate	Oct				1.25 MI	32.77/MI	40.96	40.96
Irrigate	Nov				1.25 MI	32.77/MI	40.96	40.96
Mow, rake 3 times and bale	Nov	contract		193.40				193.40
Cart and stack hay in shed	Nov	\$1.50	per bale @ 76 bales/ha per cut					114.00
Irrigate	Nov				1.25 MI	32.77/MI	40.96	40.96
Mow, rake 3 times and bale	Dec	contract		193.40				193.40
Cart and stack hay in shed	Dec	\$1.50	per bale @ 76 bales/ha per cut					114.00
Irrigate	Dec				1.25 MI	32.77/MI	40.96	40.96
Mow, rake 3 times and bale	Dec	contract		193.40				193.40
Cart and stack hay in shed	Dec	\$1.50	per bale @ 76 bales/ha per cut					114.00
Herbicide (haloxyfop-R)	Dec	0.10	17.05	1.71	0.1 L	147.59/L	14.76	16.46
Irrigate	Feb				1.25 MI	32.77/MI	40.96	40.96
Mow, rake 3 times and bale	Feb	contract		193.40				193.40
Cart and stack hay in shed	Feb	\$1.50	per bale @ 76 bales/ha per cut					114.00
Irrigate	Mar				1.25 MI	32.77/MI	40.96	40.96
Mow, rake 3 times and bale	Mar	contract		193.40				193.40
Cart and stack hay in shed	Mar	\$1.50	per bale @ 76 bales/ha per cut					114.00
Irrigate	Apr				1.25 MI	32.77/MI	40.96	40.96
Mow, rake 3 times and bale	Apr	contract		193.40				193.40
Cart and stack hay in shed	Apr	\$1.50	per bale @ 76 bales/ha per cut					114.00
Irrigate	May				1.25 MI	32.77/MI	40.96	40.96
Mow, rake 3 times and bale	May	contract		193.40				193.40
Cart and stack hay in shed	May	\$1.50	per bale @ 76 bales/ha per cut					114.00

AGRONOMIC NOTES:

Herbicides: paraquat + diquat and diuron applied to established stands to clean up weeds.

To reduce the likelihood of herbicide resistance, rotate herbicide groups and weed management techniques.

Fertilisers: # In areas of long term irrigated hay production, there is a possibility that higher rates of potash may be required to correct chronic potassium deficiency.

Hay storage: The assumption is made that all of the hay is stored on farm prior to selling.

Hay Grades: The Australian Fodder Industry Association (AFIA) has developed a national grading system for legume and cereal hays. It is based on digestible dry matter, crude protein content and metabolisable energy.

AFIA (Incorporated in 1996) is the peak body for the hay and silage industries. Further information and a fodder vendor declaration form is available from AFIA. Phone: 03 9890 6855 Website: www.afia.org.au

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

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

LABOUR REQUIREMENTS: Labour for carting hay from the paddock to the shed is accounted for in this budget.

Labour to apply fertiliser or spray is not costed. If we assume a labour cost of \$20/hr the total labour cost would be \$28.50/hectare, reducing the gross margin to \$369/ha.

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

MACHINERY ASSUMPTIONS:

Tractor: pto power: 57 KW (76 HP)

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

Mow, Rake, Bale costs: If you use your own machinery for mowing, raking and baling then substitute this cost in your budget.

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

Estimated water pumping cost of \$10.11 per ML assumed, your costs may be different.

Water use assumed: 10.00 MI/Ha

Costs calculated using a flood/furrow system with diesel powered pumping from surface supply.

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.

SPRAY IRRIGATED LUCERNE - Established stand

Farm Enterprise Budget Series - Northern Zone

Summer 2009-2010

1. GROSS MARGIN BUDGET:

INCOME:

7 cuts per season @ 2.20 t/ha per cut
 Total Yield = **15.40** tonnes per hectare
 @ 40 bales per tonne (25 kg bales)

			Sample Budget \$/ha	Your Budget \$/ha
60% AFIA Grade A1	370 bales/ha@	\$7.50 / bale	\$2,772	
20% AFIA Grade B2	123 bales/ha@	\$6.00 / bale	\$739	
20% AFIA Grade C3	123 bales/ha@	\$4.00 / bale	\$493	
A. TOTAL INCOME \$/ha:			\$4,004	

See http://www.afia.org.au/quality/national_grades/ for more details on hay grades used.

VARIABLE COSTS:

see following page(s) for details

Depreciation of establishment cost.....	\$90.50	
Fertilizer.....	\$356.79	
Herbicide.....	\$71.97	
Insecticide.....	\$0.00	
Irrigation.....	\$626.24	
Mow, rake & bale (contract).....	\$1,471.40	
Twine @ \$0.113/bale.....	\$69.81	
Cart and stack 100% of hay (\$60/t).....	\$924.00	
B. TOTAL VARIABLE COSTS \$/ha:	\$3,610.71	
C. GROSS MARGIN (A-B) \$/ha:	\$393.29	
D. GROSS MARGIN \$/MI:	\$49.16	

SENSITIVITY TABLES

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

Yield	Price per bale		Grade A1 \$3.50	Grade A1 \$5.50	Grade A1 \$7.50	Grade A1 \$9.50	Grade A1 \$11.50
	Cuts	tonnes/ha	Grade B2 \$2.00	Grade B2 \$4.00	Grade B2 \$6.00	Grade B2 \$8.00	Grade B2 \$10.00
			Grade C3 \$0.00	Grade C3 \$2.00	Grade C3 \$4.00	Grade C3 \$5.00	Grade C3 \$6.00
			\$100 /tonne	\$180 /tonne	\$260 /tonne	\$332 /tonne	\$404 /tonne
4 cuts	8.8		-\$1,674	-\$970	-\$266	\$367	\$1,001
5 cuts	11.0		-\$1,806	-\$926	-\$46	\$746	\$1,538
6 cuts	13.2		-\$1,939	-\$883	\$173	\$1,124	\$2,074
7 cuts	15.4		-\$2,071	-\$839	\$393	\$1,502	\$2,611
8 cuts	17.6		-\$2,203	-\$795	\$613	\$1,880	\$3,148
9 cuts	19.8		-\$2,335	-\$751	\$833	\$2,259	\$3,684
10 cuts	22.0		-\$2,467	-\$707	\$1,053	\$2,637	\$4,221

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

Yield	Price per bale		Grade A1 \$3.50	Grade A1 \$5.50	Grade A1 \$7.50	Grade A1 \$9.50	Grade A1 \$11.50
	Cuts	tonnes/ha	Grade B2 \$2.00	Grade B2 \$4.00	Grade B2 \$6.00	Grade B2 \$8.00	Grade B2 \$10.00
			Grade C3 \$0.00	Grade C3 \$2.00	Grade C3 \$4.00	Grade C3 \$5.00	Grade C3 \$6.00
			\$100 /tonne	\$180 /tonne	\$260 /tonne	\$332 /tonne	\$404 /tonne
4 cuts	8.8		-\$209	-\$121	-\$33	\$46	\$125
5 cuts	11.0		-\$226	-\$116	-\$6	\$93	\$192
6 cuts	13.2		-\$242	-\$110	\$22	\$140	\$259
7 cuts	15.4		-\$259	-\$105	\$49	\$188	\$326
8 cuts	17.6		-\$275	-\$99	\$77	\$235	\$393
9 cuts	19.8		-\$292	-\$94	\$104	\$282	\$461
10 cuts	22.0		-\$308	-\$88	\$132	\$330	\$528

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SPRAY IRRIGATED LUCERNE - Established stand

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(diesel pump from river-regulated*)

Summer 2009-2010

CALENDAR OF OPERATIONS:		Machinery*			Inputs			Total
Operation	Month	hrs/ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	Cost \$/ha
Apply Single Super	Jul	0.42	17.01	7.14	125kg	0.42/kg	52.50	59.64
Spray - paraquat + diquat	Jul	0.10	17.05	1.71	2.5 L	12.32/L	30.80	32.51
Spray - diuron	Jul	with above			2.5 L	9.20/L	23.00	23.00
Fertiliser- #Muriate of Potash	Aug	0.42	17.01	7.14	250kg	1.16/kg	290.00	297.14
Irrigate	Sep				1.00 MI	78.28	78.28	78.28
Irrigate	Oct				1.00 MI	78.28	78.28	78.28
Mow, rake 3 times and bale	Nov	contract		210.20				210.20
Cart and stack hay in shed	Nov	\$1.50	per bale @ 88 bales/ha per cut					132.00
Irrigate	Nov				1.00 MI	78.28	78.28	78.28
Mow, rake 3 times and bale	Dec	contract		210.20				210.20
Cart and stack hay in shed	Dec	\$1.50	per bale @ 88 bales/ha per cut					132.00
Irrigate	Dec				1.00 MI	78.28	78.28	78.28
Herbicide (haloxyfop-R)	Dec	0.10	17.05	1.71	0.1 L	147.59/L	14.76	16.46
Mow, rake 3 times and bale	Jan	contract		210.20				210.20
Cart and stack hay in shed	Jan	\$1.50	per bale @ 88 bales/ha per cut					132.00
Irrigate	Jan				1.00 MI	78.28	78.28	78.28
Mow, rake 3 times and bale	Feb	contract		210.20				210.20
Cart and stack hay in shed	Feb	\$1.50	per bale @ 88 bales/ha per cut					132.00
Irrigate	Feb				1.00 MI	78.28	78.28	78.28
Mow, rake 3 times and bale	Mar	contract		210.20				210.20
Cart and stack hay in shed	Mar	\$1.50	per bale @ 88 bales/ha per cut					132.00
Irrigate	Mar				1.00 MI	78.28	78.28	78.28
Mow, rake 3 times and bale	Apr	contract		210.20				210.20
Cart and stack hay in shed	Apr	\$1.50	per bale @ 88 bales/ha per cut					132.00
Irrigate	Apr				1.00 MI	78.28	78.28	78.28
Mow, rake 3 times and bale	May	contract		210.20				210.20
Cart and stack hay in shed	May	\$1.50	per bale @ 88 bales/ha per cut					132.00

AGRONOMIC NOTES:

Herbicides: Paraquat+diquat and diuron applied in July to established stands to clean up weeds.

To reduce the likelihood of herbicide resistance, rotate herbicide groups and weed management techniques.

Fertilisers: # In areas of long term irrigated hay production, there is a possibility that higher rates of potash may be required to correct chronic potassium deficiency.

Hay storage: The assumption is made that all of the hay is stored on farm prior to selling.

Hay Grades: The Australian Fodder Industry Association (AFIA) has developed a national grading system for legume and cereal hays. It is based on digestible dry matter, crude protein content and metabolisable energy.

AFIA (Incorporated in 1996) is the peak body for the hay and silage industries. Further information and a fodder vendor declaration form is available from AFIA. Phone: 03 9890 6855 Website: www.afia.org.au

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

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

LABOUR REQUIREMENTS: Labour for carting hay from the paddock to the shed is accounted for in this budget.

Labour to apply fertiliser or spray is not costed. If we assume a labour cost of \$20/hr the total labour cost would be \$26.00/ha, reducing the gross margin to \$367/ha.

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

MACHINERY ASSUMPTIONS:

Tractor: pto power: 57 KW (76 HP)

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

Mow, Rake, Bale costs: If you use your own machinery for mowing, raking and baling then substitute this cost in your bud

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

Estimated water pumping cost of \$55.62 per ML assumed, your costs may be different.

Water use assumed: 8.00 ML/ha

calculated using a spray system with diesel powered pumping from surface supply

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