

## DRYLAND GRAIN SORGHUM (No-Till)

Farm Enterprise Budget Series - North East NSW

Summer 2009-2010

### 1. GROSS MARGIN BUDGET:

#### INCOME:

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

Sample Budget \$/ha	Your Budget \$/ha
\$720.00	

8 t/ha achievable on the Liverpool Plains, but an average range of 3.5 to 4 t/ha is more likely in other areas.

Cartage costs will vary with distance, so have not been included. The on-farm price is after cartage.

Crop prices were correct at the time of writing (Aug 2009), world market volatility makes estimation of future pricing impractical.

**A. TOTAL INCOME \$/ha:**

<b>\$720.00</b>	
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#### VARIABLE COSTS:

see following page(s) for details

Sowing.....	\$43.20	
Fertiliser & application .....	\$132.50	
Herbicide & application.....	\$128.55	
Insecticide & application.....	\$28.72	
Harvesting.....	\$84.94	
Levies and insurance.....	\$44.41	

**B. TOTAL VARIABLE COSTS \$/ha:**

<b>\$462.32</b>	
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**C. GROSS MARGIN (A-B) \$/ha:**

<b>\$257.68</b>	
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### SENSITIVITY TABLE

YIELD tonnes/ha	On Farm Price						
	\$120 /t	\$140 /t	\$160 /t	\$180 /t	\$200 /t	\$220 /t	\$240 /t
2.50	-\$135	-\$86	-\$36	\$13	\$63	\$112	\$162
3.00	-\$81	-\$22	\$37	\$97	\$156	\$216	\$275
4.00	\$26	\$105	\$184	\$263	\$343	\$422	\$501
<b>4.50</b>	\$80	\$169	<b>\$258</b>	\$347	\$436	\$525	\$614
5.00	\$133	\$232	\$331	\$430	\$529	\$628	\$727
6.00	\$240	\$359	\$478	\$597	\$716	\$834	\$953
7.00	\$348	\$486	\$625	\$763	\$902	\$1,041	\$1,179
8.00	\$455	\$613	\$772	\$930	\$1,088	\$1,247	\$1,405
9.00	\$562	\$740	\$919	\$1,097	\$1,275	\$1,453	\$1,631

# DRYLAND GRAIN SORGHUM (No-Till)

## Farm Enterprise Budget Series - North East NSW

Summer 2009-2010

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total
Operation	Month	hrs /ha	Cost	Total	Rate/ha	Cost	Total	Cost
			\$/hour	\$/ha		\$	\$/ha	\$/ha
Herbicide - ground spray, glyphosate CT	Jan	0.05	47.19	2.36	1.5 L	5.21	7.82	<b>10.17</b>
Wetter - non-ionic surfactant	Jan	with above			0.2 L	6.86	1.37	<b>1.37</b>
Herbicide - ground spray, glyphosate CT	Apr	0.05	47.19	2.36	1.2 L	5.21	6.25	<b>8.61</b>
Herbicide - 2,4-D i.p.a. 300g/L	Apr	with above			0.8 L	4.18	3.34	<b>3.34</b>
Wetter - non-ionic surfactant	Apr	with above			0.2 L	6.86	1.37	<b>1.37</b>
Herbicide - ground spray, glyphosate CT	Jun	0.05	47.19	2.36	1.2 L	5.21	6.25	<b>8.61</b>
Wetter - non-ionic surfactant	Jun	with above			0.2 L	6.86	1.37	<b>1.37</b>
Herbicide - ground spray, glyphosate CT	Sep	0.05	47.19	2.36	1.2 L	5.21	6.25	<b>8.61</b>
Wetter - non-ionic surfactant	Sep	with above			0.2 L	6.86	1.37	<b>1.37</b>
Seed - thiamethoxam + Concep II treated	Oct	0.18	66.67	12.00	2.6 kg	12.00	31.20	<b>43.20</b>
Fertiliser - Starter 12Z	Oct	with above			40.0 kg	1.10	44.00	<b>44.00</b>
Fertiliser - Urea (bulk)	Oct	with above			150 kg	0.59	88.50	<b>88.50</b>
Herbicide - ground, PSPE	Oct	0.05	47.19	2.36				<b>2.36</b>
Herbicide - S-metolachlor+atrazine	Oct	with above			3.2 L	13.49	43.17	<b>43.17</b>
Herbicide - fluroxypyr 333g/L	Nov	0.05	47.19	2.36	0.3 L	28.10	8.43	<b>10.79</b>
Wetter - non-ionic surfactant	Nov	with above			0.1 L	6.86	0.69	<b>0.69</b>
Insecticide -spray coupe (contract)	Jan			16.00				<b>12.80</b>
Nuclear polyhedrosis virus (NPV, 4 yrs in 5)	Jan	with above			0.375 L	53.07	19.90	<b>15.92</b>
Crop insurance *	Jan			4.21%				<b>30.31</b>
Desiccant - aerial spray, glyphosate CT	Feb/Mar			17.00	1.6 L	5.21	8.34	<b>25.34</b>
Wetter - non-ionic surfactant	Feb/Mar	with above			0.2 L	6.86	1.37	<b>1.37</b>
Harvest #	Mar/Apr	contract		84.94	per ha incl fuel			<b>84.94</b>
Grains Research Levy		1.020%	of farm gate value				7.34	<b>7.34</b>
GrainCorp Levy \$/t				\$1.50	per tonne			<b>6.75</b>

### AGRONOMIC NOTES:

No-Till sorghum requires a high level of management and greater input of herbicide and fertiliser than "conventional tillage" sorghum. However, it results in higher yields (often 15%) and allows more planting opportunities (due to longer retention of sowing moisture). It is also an excellent means of reducing soil erosion through stubble retention.

**Insects:** Heliothis control assumed to be required in 4 out of 5 years, thus 80% of area in the budget.

**Fertiliser:** Fertiliser requirements should be based on paddock records, soil tests and planting region.

**Sowing:** Seed price is assumed to include pre-treatment with insecticide and seed safener.

**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.

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

Wetter rate assumes spray rate of 100L/ha.

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

# Harvest costs based on \$60/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 NSW Department of Primary Industries "Summer Crop Production Guide 2009-10" and the Grain Sorghum Agfact, P3.3.5

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 \$10.75/ha, reducing the gross margin to \$247 /ha.

**MACHINERY ASSUMPTIONS:** Tractor assumption: 130-140 KW PTO (173-180 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

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.



# DRYLAND MAIZE (No-Till)

## Farm Enterprise Budget Series - North East NSW

Summer 2009-2010

### 1. GROSS MARGIN BUDGET:

#### INCOME:

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

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

5.5 t/ha achievable on the Liverpool Plains, but an average range of 3 to 4 t/ha is more likely in other areas.

Cartage costs will vary with distance, so have not been included. The on-farm price is after cartage.

Crop prices were correct at the time of writing (Aug 2009), world market volatility makes estimation of future pricing impractical.

**A. TOTAL INCOME \$/ha:**

<b>\$600.00</b>	
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#### VARIABLE COSTS:

see following page(s) for details

Sowing.....	\$138.72	
Fertiliser & application.....	\$168.90	
Herbicide & application.....	\$89.95	
Insecticide & application.....	\$0.00	
Harvesting.....	\$77.44	
Levies and insurance.....	\$29.58	

**B. TOTAL VARIABLE COSTS \$/ha:**

<b>\$504.59</b>	
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**C. GROSS MARGIN (A-B) \$/ha:**

<b>\$95.41</b>	
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### 2. EFFECT OF YIELD AND PRICE ON GROSS MARGIN PER HECTARE:

#### SENSITIVITY TABLE

YIELD tonnes/ha	On Farm Price					
	\$120 /t	\$140 /t	\$160 /t	\$190 /t	\$240 /t	\$290 /t
1.75	-\$279	-\$245	-\$210	-\$158	-\$71	\$81
2.25	-\$220	-\$175	-\$130	-\$63	\$48	\$225
2.75	-\$163	-\$108	-\$53	\$28	\$165	\$369
3.25	-\$108	-\$44	\$21	\$118	\$279	\$513
<b>3.75</b>	-\$54	\$21	<b>\$95</b>	\$207	\$393	\$657
4.10	-\$15	\$66	\$148	\$270	\$473	\$758
4.45	\$23	\$111	\$200	\$332	\$553	\$858
4.80	\$61	\$156	\$252	\$395	\$633	\$959
5.15	\$99	\$202	\$304	\$457	\$713	\$1,060
5.50	\$137	\$247	\$356	\$520	\$793	\$1,161

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.

# DRYLAND MAIZE (No-Till)

## Farm Enterprise Budget Series - North East NSW

### 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 - glyphosate CT	Jan	0.05	47.19	2.36	1.5 L	5.21	7.82	<b>10.17</b>
Wetter - non-ionic surfactant	Jan	with above			0.2 L	6.86	1.37	<b>1.37</b>
Herbicide - glyphosate CT	Apr	0.05	47.19	2.36	1.2 L	5.21	6.25	<b>8.61</b>
Wetter - non-ionic surfactant	Apr	with above			0.2 L	6.86	1.37	<b>1.37</b>
Herbicide - paraquat 250g	Jul	0.05	47.19	2.36	1.2 L	8.79	10.55	<b>12.91</b>
Herbicide - glyphosate CT	Sep	0.05	47.19	2.36	1.2 L	5.21	6.25	<b>8.61</b>
Wetter - non-ionic surfactant	Sep	with above			0.2 L	6.86	1.37	<b>1.37</b>
Sowing - thiamethoxam treated seed	Sep	0.18	66.67	12.00	12.0 kg	10.56	126.72	<b>138.72</b>
Fertiliser-* Starter 12Z	Sep	with above			60 kg	0.75	45.00	<b>45.00</b>
Fertiliser - Urea (bulk)	Sep	with above			210 kg	0.59	123.90	<b>123.90</b>
Herbicide - ground spray PSPE	Sep	0.05	47.19	2.36				<b>2.36</b>
Herbicide - s-metolachlor+atrazine	Sep	with above			3.2 L	13.49	43.17	<b>43.17</b>
Crop insurance **	Jan			4.21%				<b>25.26</b>
Harvest #	Apr	contract		77.44	per ha incl fuel			<b>77.44</b>
Grains Research Levy				0.72%	of farm gate value			<b>4.32</b>

#### AGRONOMIC NOTES:

**Sowing:** Maize can be sown when soil temperatures reach 12°C (preferably 16°C) and when the risk of frost is over. Dryland maize should only be grown in the most favourable slopes areas or where higher than average district sorghum yields are consistently achieved. Seed price is assumed to include pre-treatment with insecticide.

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

**Fertiliser:** Fertiliser requirements should be based on paddock records and soil tests. \* Maize is sensitive to zinc deficiency.

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

# Harvest costs based on \$60/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 NSW Department of Primary Industries "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 \$10.75, reducing the gross margin to \$85 /ha.

#### MACHINERY ASSUMPTIONS:

Tractor: 130-140 KW PTO (173-180 HP)

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

Note: harvest requires a corn front.

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

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.

## DRYLAND FORAGE SORGHUM: PRIME CATTLE GRAZING

### 1. Data-Cattle

#### Steers purchase weight and price

\$1.80 per kg live @ 260 kg = \$468.00 per head

#### Steers finished weight and price

\$1.82 per kg live @ 330 kg = \$600.60 per head

Dry matter t/ha 5.2  
Steers/ha 5.0

### 2. GROSS MARGIN BUDGET:

#### INCOME - GRAZING

**Grazing** (will vary substantially depending on stock type, seasonal conditions, crop growth & grazing period)

5.0 hd/ha @ 0.90 kg/day x \$1.82/kg liveweight  
i.e. 330 kg/hd @ \$601/hd

#### A. TOTAL INCOME \$/ha:

Sample Budget	Your Budget
\$/ha	\$/ha
\$3,003.00	
<b>\$3,003.00</b>	

**VARIABLE COSTS:** see following page for details

Establishment cost (seed, fertiliser, herbicides).....		\$239.18	
Cattle Variable costs - Purchase store steers, 260kg @\$1.80/kg=\$468/hd.....		\$2,340.00	
Drench, 5-in-1 vaccine, sulphur blocks.....	\$ 4.54 /hd	\$22.68	
Supplement.....	\$ - /hd	\$ -	
Commission.....	5.0% of cattle sales	\$150.15	
Industry Levies.....	\$ 5.50 /hd	\$27.50	
Yard Dues.....	\$ 3.00 /hd	\$15.00	
Freight.....	\$ 20.00 /hd	\$100.00	
Interest on up-front costs.....	10.0% 78 days	\$55.44	
<b>B. TOTAL VARIABLE COSTS \$/ha:</b>		<b>\$2,949.96</b>	
<b>C. GROSS MARGIN (A-B) \$/ha:</b>		<b>\$53.04</b>	
<b>D. GROSS MARGIN (A-B) \$/head:</b>		<b>\$10.61</b>	

### SENSITIVITY TABLE: Effect of livestock prices on gross margin per hectare

Purchase Price \$/kg	Selling Price				
	\$1.62 /kg	\$1.72 /kg	\$1.82 /kg	\$1.92 /kg	\$2.02 /kg
1.65	- \$82	\$83	\$248	\$413	\$578
1.70	- \$147	\$18	\$183	\$348	\$513
1.75	- \$212	- \$47	\$118	\$283	\$448
<b>1.80</b>	- \$277	- \$112	<b>\$53</b>	\$218	\$383
1.90	- \$407	- \$242	- \$77	\$88	\$253
2.00	- \$537	- \$372	- \$207	- \$42	\$123
2.10	- \$667	- \$502	- \$337	- \$172	- \$7

### SENSITIVITY TABLE: Effect of weight gain and selling price on gross margin per hectare

Weight gain kg/day	Selling Price				
	\$1.62 /kg	\$1.72 /kg	\$1.82 /kg	\$1.92 /kg	\$2.02 /kg
0.75	- \$371	- \$212	- \$53	\$106	\$265
0.80	- \$340	- \$179	- \$18	\$143	\$304
0.85	- \$308	- \$145	\$18	\$181	\$344
<b>0.90</b>	- \$277	- \$112	<b>\$53</b>	\$218	\$383
0.95	- \$245	- \$79	\$88	\$255	\$422
1.00	- \$214	- \$45	\$124	\$293	\$462
1.05	- \$182	- \$12	\$159	\$330	\$501

#### Assumptions

\* 5.2 t/ha of dry matter enough for 5 steers/ha

\* 0.9 kg/day weight gain assumed, with benefit from sulphur blocks

Reference: Australian Journal of Experimental Agriculture and Animal Husbandry: Volume 18 Dec. 1978

**Response by cattle grazing sorghum to salt-sulphur supplements**, by K. A. Archer and J. L. Wheder

An experiment is reported in which cattle grazed fertilized sorghum x sudangrass. Liveweight gain was increased by approximately 200 g/head/day by the provision of salt blocks containing 18 per cent sulphur (P = 0.01) and to a lesser extent by salt alone.

\* Costs per head: 5-in-1 vaccine \$0.23, drench \$2.75, \$1.56/head for sulphur block (25g/day for 90 days → 2.25 kg/hd @ \$0.80/kg)

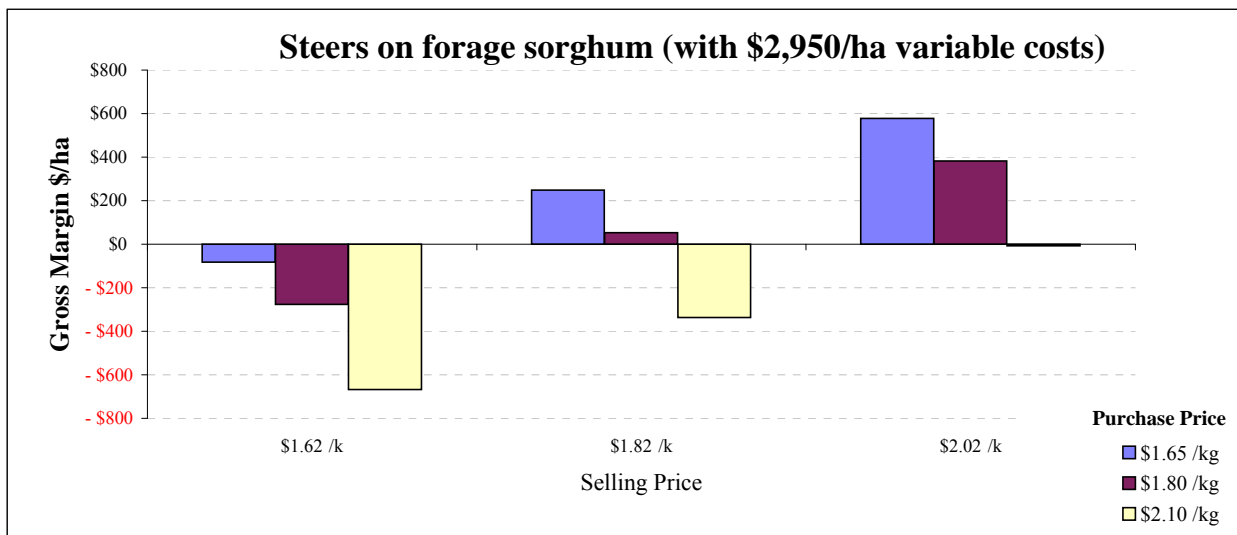
# Dryland Hybrid Forage Sorghum/Sudan Grass

Reduced till

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost \$/ha
Operation	Month	hrs /ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	
Fertiliser - Urea (bulk)	Oct	with above			180 kg	0.59	106.46	<b>106.46</b>
Seed - thiamethoxam + Concep II treated	Nov	0.18	66.67	12.00	2.6 kg	12.00	31.20	<b>43.20</b>
Fertiliser - Starter Z	Nov	with above			40.0 kg	1.10	44.00	<b>44.00</b>
Herbicide - ground spray	Nov	0.05	47.19	2.36				<b>2.36</b>
Herbicide - metolachlor+atrazine	Nov	with above (at sowing)			3.2 L	13.49	43.17	<b>43.17</b>
							<b>Total \$/ha</b>	<b>\$239.18</b>

## Steers on forage sorghum (with \$2,950/ha variable costs)

Purchase Price \$/kg	Selling Price		
	\$1.62 /kg	\$1.82 /kg	\$2.02 /kg
\$1.65 /kg	- \$82	\$248	\$578
\$1.80 /kg	- \$277	\$53	\$383
\$2.10 /kg	- \$667	- \$337	- \$7



# DRYLAND SUNFLOWERS (No-Till, mono-unsaturated)

Farm Enterprise Budget Series - North East NSW

Summer 2009-2010

## 1. GROSS MARGIN BUDGET:

### INCOME:

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

Sample Budget \$/ha	Your Budget \$/ha
\$832.00	

Cartage costs will vary with distance, so have not been included. The on-farm price is after cartage.

Crop prices were correct at the time of writing (Aug 2009), world market volatility makes estimation of future pricing impractical.

### A. TOTAL INCOME \$/ha:

<b>\$832.00</b>	
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### VARIABLE COSTS:

see following page(s) for details

Sowing.....	\$58.74	
Fertiliser & application.....	\$149.40	
Herbicide & application.....	\$70.75	
Insecticide & application.....	\$40.40	
Harvesting.....	\$64.94	
Levies and insurance.....	\$43.51	

### B. TOTAL VARIABLE COSTS \$/ha:

<b>\$427.74</b>	
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### C. GROSS MARGIN (A-B) \$/ha:

<b>\$404.26</b>	
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## 2. EFFECT OF YIELD AND PRICE ON GROSS MARGIN PER HECTARE:

### (A) SENSITIVITY TABLE

YIELD tonnes/ha	On Farm Price						
	\$460 /t	\$480 /t	\$500 /t	\$520 /t	\$550 /t	\$580 /t	\$610 /t
0.70	-\$101	-\$87	-\$73	-\$59	-\$38	-\$17	\$3
1.00	\$36	\$56	\$76	\$95	\$125	\$155	\$185
1.30	\$173	\$198	\$224	\$250	\$288	\$327	\$366
<b>1.60</b>	\$309	\$341	\$373	<b>\$404</b>	\$452	\$499	\$547
1.85	\$423	\$460	\$496	\$533	\$588	\$643	\$698
2.10	\$537	\$578	\$620	\$662	\$724	\$786	\$849
2.35	\$651	\$697	\$744	\$790	\$860	\$930	\$1,000

# DRYLAND SUNFLOWERS (No-Till, mono-unsaturated)

## Farm Enterprise Budget Series - North East NSW

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 - glyphosate CT	Jan	0.05	47.19	2.36	1.5 L	5.21	7.82	<b>10.17</b>
Wetter - non-ionic surfactant	Jan	with above			0.2 L	6.86	1.37	<b>1.37</b>
Herbicide - glyphosate CT	Mar	0.05	47.19	2.36	1.2 L	5.21	6.25	<b>8.61</b>
Wetter - non-ionic surfactant	Mar	with above			0.2 L	6.86	1.37	<b>1.37</b>
Herbicide - glyphosate CT	Jun	0.05	47.19	2.36	1.2 L	5.21	6.25	<b>8.61</b>
Herbicide - 2,4-D i.p.a. 300g/L	Jun	with above			0.66 L	4.18	2.76	<b>2.76</b>
Wetter - non-ionic surfactant	Jun	with above			0.2 L	6.86	1.37	<b>1.37</b>
Herbicide - glyphosate CT	Sep	0.05	47.19	2.36	1.5 L	5.21	7.82	<b>10.17</b>
Wetter - non-ionic surfactant	Sep	with above			0.2 L	6.86	1.37	<b>1.37</b>
Sowing - sunflower seed, treated	Sep	0.18	66.67	12.00	2.7 kg	17.31	46.74	<b>58.74</b>
Fertiliser - Urea (bulk)	Sep	with above			160 kg	0.59	94.40	<b>94.40</b>
Fertiliser - Starter Z	Sep	with above			50 kg	1.10	55.00	<b>55.00</b>
Herbicide - Stomp Xtra, pre-emerg 1 yr in 5	Sep	0.05	47.19	2.36	3.30 L	11.10	36.63	<b>7.80</b>
Crop uptake oil 0.5%	Sep	with above			0.02 L	4.09	0.07	<b>0.01</b>
Herbicide - haloxyfop-R 520g	Oct	0.05	47.19	2.36	0.1 L	147.59	14.76	<b>17.12</b>
Insecticide - alpha-cypermethrin 100g/L EC	Dec	aerial spray		17.00	0.4 L	8.00	3.20	<b>20.20</b>
Insecticide - alpha-cypermethrin 100g/L EC	Jan	aerial spray		17.00	0.4 L	8.00	3.20	<b>20.20</b>
Crop insurance **	Jan			4.21%				<b>35.03</b>
Harvest (contract) #	Mar	contract		64.94	per ha incl fuel			<b>64.94</b>
Grains Research Levy				1.02%	of farm gate value			<b>8.49</b>

### AGRONOMIC NOTES:

**Sowing:** Early spring sowings allow crops to flower before high temperatures produce heat stress.

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

Sow poly-unsaturated sunflowers later, in December-January to allow grain fill and oil laydown under cooler autumn temperatures to produce good quality oil (higher linoleic acid levels).

Seed price is assumed to include appropriate treatments.

**Insects:** Alpha-cypermethrin used to control Rutherglen bugs or heliothis.

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

**Fertiliser:** Fertiliser requirements should be based on paddock records and soil tests. Any rates given are examples only.

**Harvest:** In a limited number of years sunflowers may need to be desiccated before harvest. Check labels and permits are current. # Harvest costs based on \$60/ha for a crop up to 2.5 t/ha with estimated increments of \$1.00 per extra 100 kg/ha above 2.5 t/ha.

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

**Marketing Issues:** Sunflowers are recommended to be grown under a contract. Price deductions will occur if quality standards are not met. Three sunflowers markets are available, mono-unsaturated, poly-unsaturated and confectionery. Check with buyers prior to planting to ensure awareness of contract specifications.

*For further information refer to NSW Department of Primary Industries Agfact "Sunflower" P5.2.3 & "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 \$12.00, reducing the gross margin to \$392 /ha.

### MACHINERY ASSUMPTIONS:

Tractor: 130-140 KW PTO (173-180 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

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.

## DRYLAND SOYBEANS (No-Till)

Farm Enterprise Budget Series - North East NSW

Summer 2009-2010

### 1. GROSS MARGIN BUDGET:

#### INCOME:

1.50 tonnes/ha @ \$380.00 /tonne .....

Sample Budget \$/ha	Your Budget \$/ha
\$570.00	

Cartage costs will vary with distance, so have not been included. The on-farm price is after cartage.

Higher yields may be possible in more eastern areas (eg Inverell)

Crop prices were correct at the time of writing (Aug 2009), world market volatility makes estimation of future pricing impractical.

**A. TOTAL INCOME \$/ha:**

<b>\$570.00</b>	
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#### VARIABLE COSTS:

see following page(s) for details

Sowing.....	\$47.00	
Fertiliser & application.....	\$43.50	
Herbicide & application.....	\$110.98	
Insecticide & application.....	\$89.00	
Harvesting.....	\$74.94	
Levies and insurance.....	\$30.55	

**B. TOTAL VARIABLE COSTS \$/ha:**

<b>\$395.97</b>	
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**C. GROSS MARGIN (A-B) \$/ha:**

<b>\$174.03</b>	
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### 2. EFFECT OF YIELD AND PRICE ON GROSS MARGIN PER HECTARE:

#### (A) SENSITIVITY TABLE

YIELD tonnes/ha	Price						
	\$290 /t	\$320 /t	\$350 /t	<b>\$380 /t</b>	\$410 /t	\$440 /t	\$470 /t
0.80	-\$161	-\$137	-\$113	-\$89	-\$66	-\$42	-\$18
1.00	-\$103	-\$73	-\$44	-\$14	\$16	\$45	\$75
1.25	-\$31	\$6	\$43	\$80	\$117	\$154	\$191
<b>1.50</b>	\$40	\$85	\$129	<b>\$174</b>	\$219	\$263	\$308
1.75	\$112	\$164	\$216	\$268	\$320	\$372	\$424
2.00	\$184	\$243	\$303	\$362	\$421	\$481	\$540
2.25	\$256	\$322	\$389	\$456	\$523	\$590	\$657
2.60	\$356	\$433	\$511	\$588	\$665	\$742	\$819

# DRYLAND SOYBEANS (No-Till)

## Farm Enterprise Budget Series - North East NSW

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 - glyphosate CT	Jan	0.05	47.19	2.36	1.5 L	5.21	7.82	<b>10.17</b>
Wetter - non-ionic surfactant	Jan	with above			0.2 L	6.86	1.37	<b>1.37</b>
Herbicide - glyphosate CT	Mar	0.05	47.19	2.36	1.5 L	5.21	7.82	<b>10.17</b>
Wetter - non-ionic surfactant	Mar	with above			0.2 L	6.86	1.37	<b>1.37</b>
Herbicide - paraquat 250g/L	May	0.05	47.19	2.36	1.6 L	8.79	14.06	<b>16.42</b>
Herbicide - glyphosate CT	Aug	0.05	47.19	2.36	1.2 L	5.21	6.25	<b>8.61</b>
Wetter - non-ionic surfactant	Aug	with above			0.2 L	6.86	1.37	<b>1.37</b>
Herbicide - glyphosate CT	Sep	0.05	47.19	2.36	1.2 L	5.21	6.25	<b>8.61</b>
Wetter - non-ionic surfactant	Sep	with above			0.2 L	6.86	1.37	<b>1.37</b>
Herbicide - paraquat + diquat	Nov	0.05	47.19	2.36	2.0 L	12.32	24.64	<b>27.00</b>
Sowing: Seed + inoculum	Dec	0.18	66.67	12.00	20 kg	1.75	35.00	<b>47.00</b>
Fertiliser - Starter Z	Dec	with above			50 kg	0.87	43.50	<b>43.50</b>
Herbicide - haloxyfop-R 520g	Jan	0.05	47.19	2.36	0.15 L	147.59	22.14	<b>24.50</b>
Crop insurance **	Jan			4.34%				<b>24.74</b>
Insecticide - deltamethrin ULV	Feb	aerial spray		17.00	2.5 L	11.00	27.50	<b>44.50</b>
Insecticide - deltamethrin ULV	Mar	aerial spray		17.00	2.5 L	11.00	27.50	<b>44.50</b>
Harvest (contract) #	Apr	contract		74.94	per ha incl fuel			<b>74.94</b>
Grains Research Levy				1.02%	of farm gate value			<b>5.81</b>

### AGRONOMIC NOTES:

**Sowing:** Dryland soybeans can be a risky crop to grow. Sow only in most favoured areas on full sub-soil moisture profiles.

**Fertiliser:** Fertiliser requirements should be based on paddock records and soil tests.

**Insects:** Closely monitor for green vegetable bug and heliothis. Deltamethrin is used for green vegetable bug control in this example.

**Weeds:** Select a paddock free of broad-leaf weeds. To reduce the likelihood of herbicide resistance, rotate herbicide groups and weed management techniques. Ensure weed escapes are controlled before they can set seed.

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

**Harvest:** Crops that have poor grain prospects at flowering can be turned into good quality hay.

# Harvest costs based on \$70/ha for a crop up to 2.5 t/ha.

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

*For further information, refer to the the NSW Department of Primary Industries "Summer Crop Production Guide 2009-10" and the NSW DPI Agfact, "Soybeans" P5.2.6 and PrimeFact- Soybeans: Inland Northern NSW Planting Guide*

*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 \$13.25, reducing the gross margin to \$161 /ha.

### MACHINERY ASSUMPTIONS:

Tractor: 130-140 KW PTO (173-180 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

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.



# DRYLAND MUNGBEANS (No-Till, Double-crop)

Farm Enterprise Budget Series - North East NSW

Summer 2009-2010

## 1. GROSS MARGIN BUDGET:

### INCOME:

<b>Yield</b>	1.00 tonnes/ha	
0.88 tonnes/ha at	\$600.00 /tonne (clean seed, processing grade).....	\$528.00
0.12 tonnes/ha at	\$200.00 /tonne (gradings).....	\$24.00

Sample Budget \$/ha	Your Budget \$/ha
\$528.00	
\$24.00	

Crop prices were correct at the time of writing (Aug 2009), world market volatility makes estimation of future pricing impractical.

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

**A. TOTAL INCOME \$/ha:**

<b>\$552.00</b>	
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### VARIABLE COSTS:

see following page(s) for details

Sowing.....	\$62.50	
Fertiliser & application.....	\$43.50	
Herbicide & application.....	\$50.01	
Insecticide & application.....	\$25.08	
Harvesting.....	\$74.94	
Levies and insurance.....	\$29.59	
Grading & bagging.....	\$76.00	

**B. TOTAL VARIABLE COSTS \$/ha:**

<b>\$361.62</b>	
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**C. GROSS MARGIN (A-B) \$/ha:**

<b>\$190.38</b>	
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## 2. EFFECT OF YIELD AND PRICE ON GROSS MARGIN PER HECTARE:

### SENSITIVITY TABLE

YIELD t/ha.		\$180 /t	\$190 /t	\$200 /t	\$210 /t	\$220 /t	\$230 /t
gradings	clean seed	\$500 /t	\$550 /t	<b>\$600 /t</b>	\$650 /t	\$700 /t	\$750 /t
0.06	0.44	-\$90	-\$67	<b>-\$45</b>	-\$22	-\$0	\$22
0.08	0.62	-\$13	\$18	\$49	\$81	\$112	\$143
0.10	0.75	\$44	\$82	\$120	\$158	\$196	\$234
<b>0.12</b>	<b>0.88</b>	\$101	\$146	<b>\$190</b>	\$235	\$280	\$325
0.14	1.06	\$177	\$231	\$284	\$338	\$392	\$446
0.17	1.23	\$253	\$316	\$379	\$441	\$504	\$566
0.18	1.32	\$291	\$358	<b>\$426</b>	\$493	\$560	\$627

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.

# DRYLAND MUNGBEANS (No-Till, Double-crop)

## Farm Enterprise Budget Series - North East NSW

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	
harvest winter cereal crop	Oct/Nov							
Herbicide - glyphosate CT	Nov	0.05	47.19	2.36	1.5 L	5.21	7.82	<b>10.17</b>
Wetter - non-ionic surfactant		with above			0.2 L	6.86	1.37	<b>1.37</b>
Sowing: Seed + inoculum	Dec	0.18	66.67	12.00	25 kg	2.02	50.50	<b>62.50</b>
Fertiliser - Starter Z	Dec	with above			50 kg	0.87	43.50	<b>43.50</b>
Herbicide - haloxyfop-R 520g	Jan	0.05	47.19	2.36	0.15 L	147.59	22.14	<b>24.50</b>
Crop insurance **	Jan			4.34%				<b>23.96</b>
Insecticide - indoxacarb	Feb	0.05	47.19	2.36	0.4 L	37.16	14.86	<b>17.22</b>
Insecticide - deltamethrin ULV	Mar	0.05	47.19	2.36	0.5 L	11.00	5.50	<b>7.86</b>
Dessicant- Roundup PowerMAX™	Mar	0.05	47.19	2.36	1.5 L	7.74	11.61	<b>13.97</b>
Harvest	Mar	contract		74.94	per ha incl fuel			<b>74.94</b>
Grains Research Levy				1.02%	of farm gate value			<b>5.63</b>
Grading & bagging	May	contract		\$76 /t.				<b>76.00</b>

### AGRONOMIC NOTES:

Mungbeans can be an ideal opportunity double crop following winter cereals. Soil moisture profiles must be replenished if satisfactory yields of high quality beans are to be produced. Best suited to loam and heavier soils.

**Weeds:** Select a paddock free of broad-leaf weeds. Good weed control is essential. To reduce the likelihood of herbicide resistance, rotate herbicide groups and weed management techniques. Ensure weed escapes are controlled before they can set seed.

**Pests:** Closely monitor crops for thrips, mirids (from pre-budding and flowering), heliothis and green vegetable bug. Deltamethrin is used for green vegetable bug & mirid control and indoxacarb is used for heliothis control in this example.

**Fertiliser:** If applying phosphate fertiliser, use a fertiliser that contains good levels of sulphur as well, e.g. single superphosphate. Fertiliser requirements should be based on paddock records and soil tests.

**Harvest:** Use air assist headers to reduce losses at harvest. Harvest costs based on \$70/ha for a crop up to 2.5 t/ha. Communicate with your buyer throughout the season and have storage options available.

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

*For further information, refer to the NSW Department of Primary Industries Agfact, "Mungbeans" P4.2.19 and 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.*

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

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

**Consult marketing sources for more up to date price information.**

**LABOUR REQUIREMENTS:** - labour is not costed in this budget. If labour costs \$20.00 /hr, total labour cost would be \$9.50, reducing the gross margin to \$181 /ha.

### MACHINERY ASSUMPTIONS:

Tractor: 130-140 KW PTO (173-180 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

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.



# DRYLAND COWPEAS (Caloona) (No-Till)

Farm Enterprise Budget Series - North East NSW  
Summer 2009-2010

## 1. GROSS MARGIN BUDGET:

### INCOME:

Yield		Sample Budget \$/ha	Your Budget \$/ha
0.80	tonnes/ha		
0.68	tonnes/ha at \$700.00 /tonne (clean seed, ex-store).....	\$476.00	
0.12	tonnes/ha at \$110.00 /tonne (gradings).....	\$13.20	

A grading percentage of 15% is assumed, but it will vary according to crop and harvest conditions.

Crop prices were correct at the time of writing (Aug 2009), world market volatility makes estimation of future pricing impractical.

**A. TOTAL INCOME \$/ha:** **\$489.20**

### VARIABLE COSTS:

see following page(s) for details

Sowing.....	\$43.00	
Fertiliser & application.....	\$42.40	
Herbicide & application.....	\$87.69	
Insecticide & application.....	\$26.89	
Harvesting.....	\$74.94	
Levies and insurance.....	\$26.22	
Cartage, grading & bagging.....	\$60.80	

**B. TOTAL VARIABLE COSTS \$/ha:** **\$361.93**

**C. GROSS MARGIN (A-B) \$/ha:** **\$127.27**

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

YIELD t/ha.		Graded & Bagged Price					Gross Margin (\$/ha)
gradings		\$80 /t	\$95 /t	\$110 /t	\$120 /t	\$130 /t	
	clean seed	\$500 /t	\$600 /t	<b>\$700 /t</b>	\$750 /t	\$800 /t	
0.05	0.26	-\$189	-\$163	-\$137	-\$124	-\$111	
0.08	0.43	-\$118	-\$75	-\$32	-\$10	\$12	
0.10	0.55	-\$64	-\$8	\$48	\$76	\$104	
<b>0.12</b>	<b>0.68</b>	-\$11	\$58	<b>\$127</b>	\$162	\$197	
0.16	0.89	\$78	\$169	\$260	\$305	\$351	
0.20	1.11	\$167	\$280	\$392	\$449	\$505	
0.23	1.28	\$239	\$368	\$498	\$563	\$628	
0.26	1.45	\$310	\$457	\$604	\$678	\$752	

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.

# DRYLAND COWPEAS (Caloona) (No-Till)

## Farm Enterprise Budget Series - North East NSW

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 - glyphosate CT	Jan	0.05	47.19	2.36	1.5 L	5.21	7.82	<b>10.17</b>
Wetter - non-ionic surfactant	Jan	with above			0.2 L	6.86	1.37	<b>1.37</b>
Herbicide - glyphosate CT	May	0.05	47.19	2.36	1.2 L	5.21	6.25	<b>8.61</b>
Wetter - non-ionic surfactant	May	with above			0.2 L	6.86	1.37	<b>1.37</b>
Herbicide - paraquat	Aug	0.05	47.19	2.36	1.5 L	8.79	13.19	<b>15.54</b>
Herbicide - glyphosate CT	Sep	0.05	47.19	2.36	1.5 L	5.21	7.82	<b>10.17</b>
Wetter - non-ionic surfactant	Sep	with above			0.2 L	6.86	1.37	<b>1.37</b>
Herbicide - glyphosate CT	Nov	0.05	47.19	2.36	1.6 L	5.21	8.34	<b>10.70</b>
Wetter - non-ionic surfactant	Nov	with above			0.2 L	6.86	1.37	<b>1.37</b>
Herbicide - paraquat + diquat	Dec	0.05	47.19	2.36	2.0 L	12.32	24.64	<b>27.00</b>
Sowing: Seed + inoculum	Dec	0.18	66.67	12.00	10 kg	3.10	31.00	<b>43.00</b>
Fertiliser - single super	Dec	with above			80 kg	0.53	42.40	<b>42.40</b>
Crop insurance **	Jan			4.34%				<b>21.23</b>
Insecticide - aerial spray	Mar	contract		17.00				<b>17.00</b>
Insecticide - methomyl 225g/L	Mar	with above			1.5 L	6.59	9.89	<b>9.89</b>
Harvest	Mar	contract		74.94	per ha incl fuel			<b>74.94</b>
Grains Research Levy				1.0%	of farm gate value			<b>4.99</b>
Grading & bagging	May	contract		\$76 /t.				<b>60.80</b>

### AGRONOMIC NOTES:

**Insects:** Closely monitor crops for thrips, mirids (particularly at budding and flowering), heliothis and green vegetable bug.

**Weeds:** To reduce the likelihood of herbicide resistance, rotate herbicide groups and weed management techniques. Ensure weed escapes are controlled before they can set seed.

**Sowing:** Can be sown by direct drill into cereal stubble. Banjo (black-eye) cowpeas should only be grown under very favourable dryland conditions, seed rate 25-35 kg/ha. Seed price used includes inoculant, ensure cowpeas are well inoculated to ensure nitrogen fixation.

**Fertiliser:** Fertiliser requirements should be based on paddock records and soil tests.

**Soil:** Best suited to sandy and loam soils.

**Price:** Accurate price prediction is difficult as price can vary greatly with supply and demand.

The price indicated is delivered ex-store on a clean seed basis (ie you will need to add cartage).

Price will vary with the variety grown and grade achieved.

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

*For further information, refer to the NSW DPI Agfact "Cowpea, lab lab and pigeon pea" P4.2.21*

*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.*

**Harvest:** Harvest management is crucial to ensure a high quality, high proportion clean seed yield.

Grading losses may vary substantially and depend upon harvesting management.

**LABOUR REQUIREMENTS:** - labour is not costed in this budget. If labour costs \$20.00 /hr, total labour cost would be \$12.00, reducing the gross margin to \$115 /ha.

### MACHINERY ASSUMPTIONS:

Tractor: 130-140 KW PTO (173-180 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

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.

## COTTON (Roundup Ready Flex® - Single Skip)

### Farm Enterprise Budget Series - North East NSW

### Summer 2009-2010

#### 1. GROSS MARGIN BUDGET:

##### INCOME:

<b>Lint:</b>	3.00	bales/ha at	\$380.00	*/bale (at gin).....	\$1,140.00	
<b>Seed:</b>	1.1	tonnes/ha at	\$275.00	/tonne (at gin).....	\$297.00	

Sample Budget \$/ha	Your Budget \$/ha
\$1,140.00	
\$297.00	

\* \$20/bale reduction assumed due to quality reduction compared to irrigated cotton

Crop prices were correct at the time of writing (Aug 2009), world market volatility makes estimation of future pricing impractical.

#### A. TOTAL INCOME \$/ha:

**\$1,437.00**

##### VARIABLE COSTS:

see following page(s) for details

Cultivation.....	\$24.78	
Sowing.....	\$56.58	
Crop insurance.....	\$53.49	
Fertiliser & application.....	\$86.30	
Herbicide & application.....	\$179.12	
Insecticide & application.....	\$169.65	
Contract picking.....	\$295.59	
Cartage to gin.....	\$35.29	
Ginning charges.....	\$165.00	
Licence fees.....	\$49.50	
CA and Research Levy.....	\$13.50	
Consultant .....	\$60.00	

#### B. TOTAL VARIABLE COSTS \$/ha:

**\$1,188.80**

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

**\$248.20**

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

##### SENSITIVITY TABLE

LINT YIELD bales/ha	SEED YIELD t/ha	At Gin Price					Lint price Seed price
		\$320 /bale \$235/t	\$350 /bale \$255/t	\$380 /bale \$275/t	\$410 /bale \$285/t	\$440 /bale \$295/t	
1.5	0.5	-\$470	-\$414	-\$358	-\$308	-\$257	Gross Margin (\$/ha)
2.0	0.7	-\$305	-\$230	-\$156	-\$89	-\$22	
2.5	0.9	-\$140	-\$47	\$46	\$130	\$214	
<b>3.0</b>	<b>1.1</b>	\$25	\$137	<b>\$248</b>	\$349	\$450	
3.5	1.3	\$190	\$320	\$450	\$568	\$686	
4.0	1.4	\$355	\$504	\$652	\$787	\$921	
4.5	1.6	\$520	\$687	\$855	\$1,006	\$1,157	

# COTTON (Roundup Ready Flex® - Single Skip)

Farm Enterprise Budget Series - North East NSW

Summer 2009-2010

CALENDAR OF OPERATIONS:	Month	Machinery			Inputs				Total Cost \$/ha	
		hrs /ha	Cost \$/hour	Total \$/ha	Rate/ha	Band Width	Cost \$	Total \$/ha		
Herbicide - glyphosate CT	Jul	0.03	47.06	1.41	1.0 L	100%	5.21	5.21	<b>6.62</b>	
Wetter - non-ionic surfactant	Jul	with above			0.2 L	100%	6.86	1.37	<b>1.37</b>	
Herbicide - trifluralin (480 g/L)	Aug	0.03	47.06	1.41	2.8 L	100%	8.16	22.85	<b>24.26</b>	
Plus Incorporation	Aug	0.15	52.81	7.92		100%			<b>7.92</b>	
Urea incorporation	Aug	0.17	52.56	8.94	87 kg	66%	0.59	33.86	<b>42.80</b>	
Fertiliser - MAP plus potassium blend	Aug	with above			50 Kg	100%	0.87	43.50	<b>43.50</b>	
Cultivation - scarifier	Sep	0.17	52.56	8.94					<b>8.94</b>	
Herbicide - trifluralin (480 g/L)	Sep	with above			3.2 L	100%	8.16	26.11	<b>26.11</b>	
Planting - precision planter	Oct	0.14	55.30	7.74					<b>7.74</b>	
Planting - seed	Oct	with above			10 kg	66%	7.40	48.84	<b>48.84</b>	
Insecticide - chlorpyrifos (500g/L)	Oct	with above	water injection		1.5 L	66%	12.50	12.38	<b>12.38</b>	
Crop insurance	Oct	Premium depends on various factors								<b>53.49</b>
Roundup Ready® Roundup	Nov	0.03	47.06	1.41	1.2 kg	100%	15.64	18.77	<b>20.18</b>	
Cultivation - inter-row	Nov	0.15	52.81	7.92					<b>7.92</b>	
Insecticide - endosulfan (350g/L)	Dec	0.03	47.06	1.41	2.1 L	20%	10.22	4.29	<b>5.70</b>	
Roundup Ready® Roundup	Dec	0.03	47.06	1.41	1.2 kg	100%	15.64	18.77	<b>20.18</b>	
Insecticide - endosulfan (350g/L)	Dec	0.03	47.06	1.41	2.1 L	66%	10.22	14.16	<b>15.58</b>	
Insecticide - emamectin (17g/L)	Dec	0.03	47.06	1.41	0.7 L	66%	88.44	40.86	<b>42.27</b>	
Insecticide - endosulfan (350g/L)*	Jan	0.03	47.06	1.41	2.1 L	66%	10.22	14.16	<b>15.58</b>	
Herbicide - shielded sprayer	Jan	0.09	55.81	5.02					<b>5.02</b>	
Roundup Ready® Roundup	Jan	with above			1.2 kg	66%	15.64	12.39	<b>12.39</b>	
Roundup Ready Flex® Licence fee	Jan					66%		75.00	<b>49.50</b>	
Insecticide - indoxacarb (200g/L)	Jan	0.03	47.06	1.41	0.85 L	66%	37.16	20.85	<b>22.26</b>	
Insecticide - amitraz (200 g/L)	Feb	0.03	47.06	1.41	2.0 L	66%	6.44	8.50	<b>9.91</b>	
Insecticide - ethion + zeta-cypermethrin	Feb	with above			2.5 L	66%	16.61	27.41	<b>27.41</b>	
Insecticide - chlorpyrifos-methyl (500g/L)	Mar	0.03	47.06	1.41	2.0 L	66%	13.00	17.16	<b>18.57</b>	
Defoliant - thidiazuron + diuron (120 + 60 g/L)	Apr	0.03	47.06	1.41	0.25 L	66%	189.00	31.19	<b>32.60</b>	
Defoliant - crop oil	Apr	with above			2.0 L	66%	4.09	5.40	<b>5.40</b>	
Defoliant - ethepon (720 g/L)	Apr	with above			2.0 L	66%	8.93	11.79	<b>11.79</b>	
Defoliant - ethepon (720 g/L)	Apr	0.03	47.06	1.41	2.0 L	66%	8.93	11.79	<b>13.20</b>	
Contract picking and module building	May	contract		\$285/ha					<b>285.00</b>	
Contract Module lifting	May	contract		\$60 /module @ 17 bales per module					<b>10.59</b>	
Contract module cartage to gin	May	contract		\$200 /module @ 50km from gin					<b>35.29</b>	
Ginning charges	May	contract		\$55 /bale					<b>165.00</b>	
Consultant	May	contract							<b>60.00</b>	
Levies	May			\$4.50 /bale					<b>13.50</b>	
<b>TOTAL COSTS \$/HA:</b>									<b>1,189</b>	

## AGRONOMIC NOTES: -

**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.

\* Check endosulfan label for restrictions on for use on cotton.

**For more detailed information, see the I&I NSW "Cotton Pest Management Guide 2009-10".**

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

*Use of a particular formulation does NOT imply recommendation of that formulation by NSW DPI.*

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

**Management:** This budget is for a long fallow following a winter cereal crop.

**Fertiliser:** Fertiliser requirements should be based on paddock records and soil tests.

**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 \$28.50/ha, reducing the gross margin to \$220 /ha.

## 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

# COTTON (Roundup Ready Flex® Bollgard II® - Single Skip)

Farm Enterprise Budget Series - Northern Zone

Summer 2009-2010

## 1. GROSS MARGIN BUDGET:

### INCOME:

			Sample Budget \$/ha	Your Budget \$/ha
Lint -	3.00 bales/ha at	\$380 */bale (at gin).....	\$1,140.00	
Seed -	1.08 tonnes/ha at	\$275 /tonne (at gin).....	\$297.00	

\* \$20/bale reduction assumed due to quality reduction compared to irrigated cotton

Crop prices were correct at the time of writing (Aug 2009), world market volatility makes estimation of future pricing impractical.

**A. TOTAL INCOME \$/ha:** **\$1,437.00**

## VARIABLE COSTS:

see following page(s) for details

	Bollgard II®	Your budget
Cultivation.....	\$15.84	
Sowing.....	\$56.58	
Crop insurance.....	\$28.17	
Fertiliser & application.....	\$103.74	
Herbicide & application.....	\$188.91	
Insecticide & application.....	\$36.56	
Contract harvesting.....	\$295.59	
Cartage to gin.....	\$35.29	
Ginning charges.....	\$165.00	
CA and Research Levy.....	\$13.50	
Licence fees.....	\$257.40	
Other (eg consultant).....	\$60.00	
Unsprayed cotton refuge crop, 10% of RR Bollgard II area.....	\$31.96	
<b>B. TOTAL VARIABLE COSTS \$/ha:</b>	<b>1,288.54</b>	

**C. GROSS MARGIN (A-B) \$/ha:** **\$148.46**

## SENSITIVITY TABLES

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

Lint bales/ha	Seed t/ha	\$320 /bale \$235 /t	\$350 /bale \$255 /t	\$380 /bale \$275 /t	\$410 /bale \$285 /t	\$440 /bale \$295 /t	Lint price Seed price
2.00	0.72	-\$405	-\$330	-\$256	-\$189	-\$121	<b>Gross Margin (\$/ha)</b>
3.00	1.08	-\$75	\$37	\$148	\$249	\$350	
<b>3.00</b>	<b>1.08</b>	-\$75	\$37	<b>\$148</b>	\$249	\$350	
4.00	1.44	\$255	\$404	\$553	\$687	\$821	
4.50	1.62	\$420	\$587	\$755	\$906	\$1,057	
5.00	1.80	\$585	\$771	\$957	\$1,125	\$1,293	

# COTTON (Roundup Ready Flex® Bollgard II® - Single Skip)

Farm Enterprise Budget Series - Northern Zone

Summer 2009-2010

Operation	Month	Machinery			Inputs				Total Cost \$/ha
		hrs /ha	Cost	Total	Rate/ha	Band Width	Cost	Total	
			\$/hour	\$/ha			\$	\$/ha	
Herbicide - glyphosate CT	Jul	0.03	47.06	1.41	1.0 L	100%	5.21	5.21	<b>6.62</b>
Wetter - non-ionic surfactant	Jul	with above			0.2 L	100%	6.86	1.37	<b>1.37</b>
Herbicide - trifluralin (480 g/L)	Aug	0.03	47.06	1.41	2.8 L	100%	8.16	22.85	<b>24.26</b>
Plus Incorporation	Aug	0.15	52.81	7.92		100%			<b>7.92</b>
Urea incorporation	Aug	0.17	52.56	8.94	87 kg	100%	0.59	51.30	<b>60.24</b>
Fertiliser - MAP plus potassium blend	Aug	with above			50 Kg	100%	0.87	43.50	<b>43.50</b>
Crop insurance	Oct	Premium depends on various factors							<b>28.17</b>
Planting - precision planter	Oct	0.14	55.30	7.74		100%			<b>7.74</b>
Planting- seed Roundup Ready Flex® Bollgard II®	Oct	with above			10 kg	66%	7.40	48.84	<b>48.84</b>
Roundup Ready® Roundup	Nov	0.03	47.06	1.41	1.2 kg	100%	15.64	18.77	<b>20.18</b>
Cultivation - interrow	Nov	0.15	52.81	7.92		100%			<b>7.92</b>
Insecticide - fipronil (200g/L)	Nov	0.03	47.06	1.41	0.06 L	66%	371.33	15.44	<b>16.85</b>
Roundup Ready® Roundup	Dec	0.03	47.06	1.41	1.2 kg	100%	15.64	18.77	<b>20.18</b>
Herbicide - diuron (900 g/kg)	Dec	0.03	47.06	1.41	1.5 kg	66%	10.61	10.50	<b>11.92</b>
Herbicide - prometryn (500 g/L)	Dec	with above			2.20 L	66%	16.31	23.68	<b>23.68</b>
Herbicide - shielded sprayer	Jan	0.09	55.81	5.02					<b>5.02</b>
Roundup Ready® Roundup	Jan	with above			1.0 kg	100%	15.64	15.64	<b>15.64</b>
Bollgard II® Licence fee *	Jan					66%		315.00	<b>207.90</b>
Roundup Ready Flex® Licence fee *	Jan					66%		75.00	<b>49.50</b>
Insecticide - fipronil (200g/L)	Jan	0.03	47.06	1.41	0.06 L	66%	371.33	15.44	<b>16.85</b>
Insecticide - dimethoate (400g/L)	Feb	0.03	47.06	1.41	0.5 L	66%	4.37	1.44	<b>2.85</b>
Defoliant - thidiazuron + diuron (120 + 60 g/L)	Mar	0.03	47.06	1.41	0.25 L	66%	189.00	31.19	<b>32.60</b>
Defoliant - crop oil	Mar	with above			2.0 L	66%	4.09	5.40	<b>5.40</b>
Defoliant - ethepon (720 g/L)	Mar	with above			1.5 L	66%	8.93	8.84	<b>8.84</b>
Defoliant - ethepon (720 g/L)	Mar	0.03	47.06	1.41	2.0 L	66%	8.93	11.79	<b>13.20</b>
Contract picking & module building	May	contract		\$285/hectare					<b>285.00</b>
Contract Module lifting	May	contract		\$60.00 /module @ 17 bales per module					<b>10.59</b>
Contract module cartage to gin	May	contract		\$200 /module @ 50km from gin					<b>35.29</b>
Ginning charges	May	contract		\$55.00 /bale					<b>165.00</b>
ACF levy and Research levy	May	contract		\$4.50 /bale					<b>13.50</b>
Consultant	May	contract							<b>60.00</b>
Refuge crop - unsprayed conventional cotton @ 10%									<b>31.96</b>
<b>TOTAL COSTS:</b>									<b>1,289</b>

## 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 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 unsprayed (ie no insecticides) conventional cotton at 10% of the Bollgard II® area.

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

**For further details see the I&I NSW "Cotton Pest Management Guide 2009-10".**

**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 NSW Department of Primary Industries.*

*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 \$21.25, reducing the gross margin to \$127 /ha.

## 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

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.

## COTTON (Roundup Ready Flex® - Refuge for Bollgard II®)

### Farm Enterprise Budget Series - North East NSW

Summer 2009-2010

#### GROSS MARGIN BUDGET:

##### INCOME:

**Lint:** 0.00 bales/ha at /bale (at gin).....

**Seed:** 0.0 tonnes/ha at /tonne (at gin).....

Sample Budget \$/ha	Your Budget \$/ha
\$0.00	
\$0.00	

#### A. TOTAL INCOME \$/ha:

<b>\$0.00</b>	
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##### VARIABLE COSTS:

see Calendar of Operations below for details

Cultivation.....	\$37.18	
Sowing.....	\$52.95	
Crop insurance.....	\$0.00	
Fertiliser & application.....	\$60.24	
Herbicide & application.....	\$119.76	

#### B. TOTAL VARIABLE COSTS \$/ha:

<b>\$270.13</b>	
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#### C. GROSS MARGIN (A-B) \$/ha:

<b>(\$270.13)</b>	
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CALENDAR OF OPERATIONS:		Machinery			Inputs				Total
Operation	Month	hrs /ha	Cost \$/hour	Total \$/ha	Rate/ha	Band Width	Cost \$	Total \$/ha	Cost \$/ha
Herbicide - glyphosate CT	Jul	0.03	47.06	1.41	1.0 L	100%	5.21	5.21	<b>6.62</b>
Wetter - non-ionic surfactant	Jul	with above			0.2 L	100%	6.86	1.37	<b>1.37</b>
Herbicide - trifluralin (480 g/L)	Aug	0.03	47.06	1.41	2.8 L	100%	8.16	22.85	<b>24.26</b>
Plus Incorporation	Aug	0.15	52.81	7.92		100%			<b>7.92</b>
Urea incorporation	Aug	0.17	52.56	8.94	87 kg	66%	0.59	51.30	<b>60.24</b>
Cultivation - scarifier	Sep	0.17	52.56	8.94					<b>8.94</b>
Herbicide - trifluralin (480 g/L)	Sep	with above			3.2 L	100%	8.16	26.11	<b>26.11</b>
Planting - precision planter	Oct	0.14	55.30	7.74					<b>7.74</b>
Planting - seed	Oct	with above			10 kg	66%	6.85	45.21	<b>45.21</b>
Herbicide - fluometuron+prometryn (440 & 400 g/L)	Oct	with above			3.5 L	100%	14.14	49.49	<b>49.49</b>
Cultivation - inter-row	Nov	0.15	52.81	7.92					<b>7.92</b>
Herbicide - shielded sprayer	Dec	0.09	55.81	5.02					<b>5.02</b>
Herbicide - glyphosate (450 g/L)	Dec	with above			2.0 L	66%	5.21	6.88	<b>6.88</b>
Roundup Ready Flex® Licence fee *	Dec					66%		75.00	<b>49.50</b>
Slashing	Apr	0.20	62.01	12.40					<b>12.40</b>
<b>TOTAL COSTS \$/HA:</b>									<b>320</b>
<b>TOTAL COSTS for 10% hectare:</b>									<b>31.96</b>

#### AGRONOMIC NOTES:

MANAGEMENT:- Each grower is required to grow a refuge crop as part of the resistance management plan for the Roundup Ready Flex® Bollgard II® cotton varieties.

\* The technology licence fee for \$75/ha for Roundup Ready Flex® (GST-exclusive).

For the purposes of this example, we have used unsprayed (ie no insecticides) conventional cotton at 10% of the Roundup Ready Flex® Bollgard II® area.

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

## PERENNIAL TROPICAL GRASS PASTURE

Farm Enterprise Budget Series - Northern NSW

Vertosols (black soils)

Summer 2009-2010

<u>1. ESTABLISHMENT - Prepared Seedbed</u>				Sample Budget	Your Budget
VARIABLE COSTS:				\$/ha	\$/ha
<i>Machinery Operations</i>					
<u>Month</u>	<u>Operation</u>	<u>Tractor time</u>	<u>Cost</u>		
		(Hrs/ha)	(\$/unit)		
July	Chisel plough	0.22	48.90 \$/Hr	\$10.76	
September	Scarify	0.17	47.46 \$/Hr	\$8.07	
	Harrow	0.17	47.46 \$/Hr	\$8.07	
October	Herbicide, pre-sowing	0.05	47.19 \$/Hr	\$2.36	
	Glyphosate CT	1.5 L	5.21 /L	\$7.82	
	Wetter with glyphosate	0.2 L	6.86 /L	\$1.37	
	Sow	0.17	67.89 \$/Hr	\$11.54	
	Single Super	150 Kg/Ha	0.42 /Kg	\$63.00	
<i>Bare seed (coated seed will require a higher rate per ha)</i>					
Bambatsi Panic	2.0 Kg/Ha	@	\$18.55 /Kg	\$37.10	
Rhodes grass	1.0 Kg/Ha	@	\$12.54 /Kg	\$12.54	
Purple Pigeon grass	1.0 Kg/Ha	@	\$12.50 /Kg	\$12.50	
<b>B. Total Variable Costs</b>				<b>\$175.12</b>	

<u>2. MAINTENANCE (every 2 years)</u>				Sample Budget	Your Budget
VARIABLE COSTS:				\$/ha	\$/ha
<i>Machinery Operations</i>					
<u>Month</u>	<u>Operation</u>				
April	Topdress fertiliser	contract spread @ \$80/t		\$10.00	
<i>Fertiliser</i>					
- Sulphate of Ammonia	125 Kg/Ha	@	\$0.28 /Kg	\$35.00	
Cost every 2 years				<b>\$45.00</b>	
<b>B. Total Variable Costs</b>				<b>\$22.50</b>	

### NOTES:

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

**Preparation:** This budget does not allow for costs prior to pasture establishment, such as forage oats crops.

**Fertiliser:** Fertiliser requirements should be based on paddock records and soil tests. Nitrogen fertiliser may need to be used if there is no legume in the pasture being sown.

Costs vary widely across the region, depending on the objective of the enterprise, sowing time or location.

Different soils have different requirements in terms of fertiliser rates.

**Pasture varieties:** The varieties in the budget are an example only, check pasture variety recommendations for your rainfall zone and soil type.

For detailed information please refer to other publications on pasture production, including "Pasture Production for Livestock" or the "Pasture Planner" on the I&I NSW website ([www.dpi.nsw.gov.au/agriculture](http://www.dpi.nsw.gov.au/agriculture)), which has extensive information on varieties and their suitability to each zone of NSW.

### Suggested average planting establishment success rates:

High rainfall zone (east of Moree/Newell Highway) 2 in 3 years

Medium rainfall zone (west of Moree/Newell Highway) 2 in 3 years

Low rainfall zone (Walgett) 1 in 4 years

**Machinery** - Tractor pto power: 57 KW PTO (76 HP) AND 63 KW ENGINE (86 HP)

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

You may need to add overhead costs as well.



## PERENNIAL TROPICAL GRASS PASTURE

Farm Enterprise Budget Series - Northern NSW

Chromosols (red soils)

Summer 2009-2010

<u>1. ESTABLISHMENT - Prepared Seedbed</u>					Sample Budget	Your Budget
VARIABLE COSTS:					\$/ha	\$/ha
<i>Machinery Operations</i>						
<u>Month</u>	<u>Operation</u>	<u>Tractor time</u>	<u>Cost</u>			
		(Hrs/ha)	(\$/unit)			
July	Chisel plough	0.22	48.90 \$/Hr	\$10.76		
September	Scarify	0.17	47.46 \$/Hr	\$8.07		
	Harrow	0.17	47.46 \$/Hr	\$8.07		
October	Herbicide, pre-sowing	0.05	47.19 \$/Hr	\$2.36		
	Glyphosate CT	1.5 L	5.21 /L	\$7.82		
	Wetter with glyphosate	0.2 L	6.86 /L	\$1.37		
	Sow	0.17	67.89 \$/Hr	\$11.54		
	SF25	150 Kg/Ha	0.50 /Kg	\$75.00		
<i>Bare seed (coated seed will require a higher rate per ha)</i>						
Premier Digit grass	2.0 Kg/Ha	@	\$17.52 /Kg	\$35.04		
Rhodes grass	1.0 Kg/Ha	@	\$12.54 /Kg	\$12.54		
<b>B. Total Variable Costs</b>					<b>\$172.56</b>	

<u>2. MAINTENANCE (every 2 years)</u>					Sample Budget	Your Budget
VARIABLE COSTS:					\$/ha	\$/ha
<i>Machinery Operations</i>						
<u>Month</u>	<u>Operation</u>					
April	Topdress fertiliser	contract spread @ \$80/t		\$10.00		
<i>Fertiliser</i>						
- Sulphate of Ammonia	125 Kg/Ha	@	\$0.28 /Kg	\$35.00		
				Cost every 2 years	<b>\$45.00</b>	
<b>B. Total Variable Costs</b>					<b>\$22.50</b>	

**NOTES:**

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

**Preparation:** This budget does not allow for costs prior to pasture establishment, such as forage oats crops.

**Fertiliser:** Fertiliser requirements should be based on paddock records and soil tests. Nitrogen fertiliser may not be used if there is no legume in the pasture being sown.

Costs vary widely across the region, depending on the objective of the enterprise, sowing time or location.

Different soils have different requirements in terms of fertiliser rates.

**Pasture varieties:** The varieties in the budget are an example only, check pasture variety recommendations for your rainfall zone and soil type.

For detailed information please refer to other publications on pasture production, including "Pasture Production for Livestock" or the "Pasture Planner" on the I&I NSW website ([www.dpi.nsw.gov.au/agriculture](http://www.dpi.nsw.gov.au/agriculture)), which has extensive information on varieties and their suitability to each zone of NSW.

**Suggested average planting establishment success rates:**

High rainfall zone (east of Moree/Newell Highway) 2 in 3 years

Medium rainfall zone (west of Moree/Newell Highway) 2 in 3 years

Low rainfall zone (Walgett) 1 in 4 years

**Machinery** - Tractor pto power: 57 KW PTO (76 HP) AND 63 KW ENGINE (86 HP)

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

You may need to add overhead costs as well.