



## SPRAY IRRIGATED NAVY BEANS

Farm Enterprise Budget Series - Northern Zone

Summer 2012-2013

### 1. GROSS MARGIN BUDGET:

#### INCOME:

**Yield** 1.70 tonnes/ha

Clean seed 1.50 tonnes/ha at \$1,000.00 /tonne .....

Gradings 0.20 tonnes/ha

A grading percentage of 12% is assumed. The price listed is net of grading costs.

Crop prices were correct at the time of writing **A. TOTAL INCOME \$/ha:**

pricing impractical.

Sample Budget \$/ha	Your Budget \$/ha
\$1,496.00	

<b>\$1,496.00</b>	
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#### VARIABLE COSTS:

see following page(s) for details

Sowing.....	\$109.41	
Fertiliser & application.....	\$240.39	
Herbicide & application.....	\$55.36	
Insecticide & application.....	\$109.57	
Irrigation.....	\$305.91	
Harvesting.....	\$119.94	
Levies.....	\$15.26	
Insurance.....	\$64.93	

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

<b>\$1,020.75</b>	
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**C. GROSS MARGIN (A-B) \$/ha:**

<b>\$475.25</b>	
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**D. GROSS MARGIN \$/ML:**

<b>\$158.42</b>	
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### 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)
		\$950 /t	\$975 /t	\$1,000 /t	\$1,025 /t	\$1,050 /t	
0.80	0.70	-\$334	-\$316	-\$299	-\$281	-\$264	
1.10	0.97	-\$89	-\$65	-\$41	-\$17	\$7	
1.40	1.23	\$156	\$187	\$217	\$248	\$278	
<b>1.70</b>	<b>1.50</b>	\$401	\$438	<b>\$475</b>	\$512	\$549	
2.30	2.02	\$891	\$941	\$991	\$1,041	\$1,091	
2.65	2.33	\$1,177	\$1,235	\$1,292	\$1,350	\$1,408	
3.00	2.64	\$1,463	\$1,528	\$1,593	\$1,659	\$1,724	

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

Total Yield t/ha	Yield t/ha clean seed	Price (clean seed)				
		\$950 /t	\$975 /t	\$1,000 /t	\$1,025 /t	\$1,050 /t
0.80	0.70	-\$111	-\$105	-\$100	-\$94	-\$88
1.10	0.97	-\$30	-\$22	-\$14	-\$6	\$2
1.40	1.23	\$52	\$62	\$72	\$83	\$93
1.70	1.50	\$134	\$146	<b>\$158</b>	\$171	\$183
2.30	2.02	\$297	\$314	\$330	\$347	\$364
2.65	2.33	\$392	\$412	\$431	\$450	\$469
3.00	2.64	\$488	\$509	\$531	\$553	\$575

# SPRAY IRRIGATED NAVY BEANS

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Summer 2012-2013

(spray irrigated from river -regulated)

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost \$/ha
Operation	Month	hrs /ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	
Herbicide - ground spray, 450 g/L glyph	Jan	0.05	51.87	2.59	1.6 L	4.50	7.20	<b>9.79</b>
Herbicide - 2,4-D i.p.a. 300 g/L	Jan	with above			0.66 L	4.20	2.77	<b>2.77</b>
Wetter - non-ionic surfactant	Jan	with above			0.2 L	6.72	1.34	<b>1.34</b>
Herbicide - ground spray, 450 g/L glyph	Mar	0.05	51.87	2.59	1.2 L	4.50	5.40	<b>7.99</b>
Wetter - non-ionic surfactant	Mar	with above			0.2 L	6.72	1.34	<b>1.34</b>
Herbicide - ground spray, 450 g/L glyph	May	0.05	51.87	2.59	1.0 L	4.50	4.50	<b>7.09</b>
Wetter - non-ionic surfactant	May	with above			0.2 L	6.72	1.34	<b>1.34</b>
Herbicide - ground spray, 450 g/L glyph	Sep	0.05	51.87	2.59	1.2 L	4.50	5.40	<b>7.99</b>
Wetter - non-ionic surfactant	Sep	with above			0.2 L	6.72	1.34	<b>1.34</b>
Fertiliser - Urea	Nov	with above		74kg of N	161 kg	0.68	109.39	<b>183.39</b>
Herbicide - ground spray	Nov	0.03	56.38	1.69				<b>1.69</b>
Herbicide - trifluralin (480 g/L)	Nov	with above			2.1 L	6.02	12.64	<b>12.64</b>
Sowing: Seed + inoculum	Dec	0.12	78.38	9.41	50 kg	2.00	100.00	<b>109.41</b>
Fertiliser - Single Super	Dec	with above			100 kg	0.57	57.00	<b>57.00</b>
Irrigate	Jan				0.50 ML	101.97	50.99	<b>50.99</b>
Insecticide - aerial spray	Jan	aerial spray		20.00				<b>20.00</b>
Insecticide - deltamethrin ULV	Jan	with above			2.5 L	11.18	27.95	<b>27.95</b>
Irrigate	Jan				0.50 ML	101.97	50.99	<b>50.99</b>
Crop insurance **	Jan			4.34%				<b>64.93</b>
Irrigate	Feb				0.5 ML	101.97	50.99	<b>50.99</b>
Insecticide - dimethoate	Feb	0.03	56.38	1.69	0.8 L	10.49	8.39	<b>10.08</b>
Irrigate	Feb				0.5 ML	101.97	50.99	<b>50.99</b>
Insecticide - aerial spray	Feb	aerial spray		20.00				<b>20.00</b>
Insecticide - thiodicarb 375 g/L	Feb	with above			0.75 ML	28.60	21.45	<b>21.45</b>
Irrigate	Feb				0.50 ML	101.97	50.99	<b>50.99</b>
Irrigate	Mar				0.50 ML	101.97	50.99	<b>50.99</b>
Insecticide - dimethoate	Mar	0.03	56.38	1.69	0.8 L	10.49	8.39	<b>10.08</b>
Harvest #	Apr	contract		101.24	per ha incl fuel			<b>101.24</b>
Drying (if above 15% moisture)	Apr			\$11 /t				<b>18.70</b>
Research Levy	Apr			1.02%	of farm gate value			<b>15.26</b>

## AGRONOMIC NOTES:

**Management:** Yields of up to 3 t/ha can be achieved with a high standard of 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 NSW DPI.*

*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](mailto:info@beangrowers.com.au)

**LABOUR REQUIREMENTS:** - labour is not costed in this budget. If labour costs \$21.70 /hr, total labour cost would be \$11.12, reducing the gross margin to \$464 /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 \$31.75 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.