

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

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(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 MI	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 MI	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 MI	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 MI	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 MI	78.28	39.14	39.14
Irrigate	Mar				0.5 MI	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 MI/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.