



# NSW DEPARTMENT OF PRIMARY INDUSTRIES

## FABA BEANS - (Furrow Irrigated - Beds)

Irrigated Winter - 2009

Murrumbidgee Valley

### 1. GROSS MARGIN BUDGET:

**INCOME:**

5.00 tonnes/ha @ \$300 /t (on farm)

Standard Budget \$/ha	Your Budget \$/ha
\$1,500	

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

<b>\$1,500</b>	
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**VARIABLE COSTS:**

See following page for detail

Cultivation.....	\$44
Sowing.....	\$130
Fertiliser.....	\$78
Fungicide.....	\$85
Herbicide.....	\$69
Insecticide.....	\$52
Contract harvesting.....	\$12
Levies.....	\$15
Crop insurance.....	\$49
Irrigation.....	\$165
<b>B. TOTAL VARIABLE COSTS \$/ha:</b>	<b>\$700</b>

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

<b>\$800</b>	
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**D. GROSS MARGIN \$/ML\*:**

<b>\$178</b>	
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\* Note. The method of calculation of gross margin per ML for the Murrumbidgee budgets varies because of the difficulty of identifying an alternative dryland alternative on specialist flood irrigated land. It is recommended where farmers can identify a dryland alternative that they subtract the gross margin of the dryland alternative from the gross margin of the irrigated crop and then divide by the number of ML. This will give a better indication of the contribution the irrigation water has made to increasing returns.

### SENSITIVITY TABLES

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

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)					Gross Margin (\$/ha)
	\$260 /t	\$280 /t	<b>\$300 /t</b>	\$320 /t	\$340 /t	
3.50	\$236	\$303	\$370	\$437	\$504	
4.00	\$360	\$437	\$513	\$590	\$666	
4.50	\$485	\$571	\$657	\$743	\$829	
<b>5.00</b>	\$609	\$705	<b>\$800</b>	\$896	\$992	
5.50	\$733	\$839	\$944	\$1049	\$1155	
6.00	\$858	\$973	\$1088	\$1203	\$1317	
6.50	\$982	\$1107	\$1231	\$1356	\$1480	

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

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)					Gross Margin (\$/ML)
	\$260 /t	\$280 /t	<b>\$300 /t</b>	\$320 /t	\$340 /t	
3.50	\$52	\$67	\$82	\$97	\$112	
4.00	\$80	\$97	\$114	\$131	\$148	
4.50	\$108	\$127	\$146	\$165	\$184	
<b>5.00</b>	\$135	\$157	<b>\$178</b>	\$199	\$220	
5.50	\$163	\$186	\$210	\$233	\$257	
6.00	\$191	\$216	\$242	\$267	\$293	
6.50	\$218	\$246	\$274	\$301	\$329	

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CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost
Operation	Month	hrs/ha	Cost	Total	Rate/ha	Cost	Total	Cost \$/ha
			\$/hour	\$/ha		\$	\$/ha	
Scarify	Jan/Feb	0.17	\$45.05	\$7.71				<b>\$7.71</b>
Shape beds	Mar	0.26	\$46.38	\$12.08				<b>\$12.08</b>
Broadleaf & grass weed control <i>eg. boom spray (glyphosate 450)</i>	Apr	contract		\$10.00	1.00 L/ha	\$8.15/L	\$8.15	<b>\$18.15</b>
Additional bed shape	Apr	0.26	\$46.38	\$12.08				<b>\$12.08</b>
Sow	May	0.17	\$62.38	\$10.48	120kg/ha	\$0.95/kg	\$114.00	<b>\$124.48</b>
Seed inoculation		with above			120kg/ha	\$0.050/kg	\$6.00	<b>\$6.00</b>
Apply phosphorus / sulphur fertiliser ( <i>eg. Grain Legume Super</i> )		with above			225kg/ha	\$0.890/kg	\$77.63	<b>\$77.63</b>
Construct tail drain		0.26	\$46.38	\$12.08				<b>\$12.08</b>
Pre-emergent weed spray <i>eg. ground spray Simazine</i>	May,	contract	\$10.00	\$10.00	2.0 L/ha	\$12.46/kg	\$24.92	<b>\$34.92</b>
Grass weed spray <i>eg. Haloxyfop (Verdict®)</i>	June	contract	\$10.00	\$10.00	0.060 L/ha	\$94.00/L	\$5.64	<b>\$15.64</b>
1st leaf disease spray ( <i>eg. mancozeb</i> )	Jun/Jul	with above			2.20kg/ha	\$11.54/kg	\$25.39	<b>\$25.39</b>
2nd leaf disease spray ( <i>eg. mancozeb</i> )	Jul	contract		\$10.00	2.00kg/ha	\$11.54/kg	\$23.08	<b>\$33.08</b>
3rd leaf disease spray ( <i>eg. *aerially spray carbendazim</i> )	Jul/Aug	contract		\$18.15	0.50kg/ha	\$16.30/kg	\$8.15	<b>\$26.30</b>
4th leaf disease spray + heliothis spray ( <i>eg. aerially apply mancozeb + synthetic pyrethroid</i> )	Oct	contract		\$18.15	2.38kg/ha	\$11.54/kg	\$27.47	<b>\$45.62</b>
<i>eg. lambda-cyhalothrin (Karate Z®)</i>					0.03kg/ha	\$214.88/kg	6.4464	<b>\$6.45</b>
Contract harvest	Nov/Dec	contract		\$2.47				<b>\$2.47</b>
Chaser Bin	Nov/Dec	0.22	\$45.05	\$9.91				<b>\$9.91</b>
Irrigation*					4.5ML/ha	\$36.78/ML	\$165.49	<b>\$165.49</b>
Crop Levies					1.00% of on-farm value			<b>\$15.00</b>
Crop Insurance					3.270% of on-farm value			<b>\$49.05</b>

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

**AGRONOMIC NOTES:**

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

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

<b>Cropcheck</b>	- Monitor and record crop performance. Key checks include establishment, weeds, insects, disease and grain fill.
<b>Paddock selection:</b>	- Select paddocks with low broadleaf weed burdens. - Good weed control is required in previous years. - Grow faba beans on soils with a pH above 5.2 (CaCl <sub>2</sub> ).
<b>Rotation</b>	- Suited to farming systems following a winter cereal or maize.
<b>Varieties</b>	- This budget is based on Farah. Farah is for human consumption. Other options are Nura and Fiesta VF. See "Winter Crop Variety Sowing Guide 2009" for approved varieties for SNSW.
<b>Sowing</b>	- Sowing rate should be adjusted according to seed size, seedling vigour and sowing date. Aim to establish 20 plants/m <sup>2</sup> for early - mid May sowing and 25 plants /m <sup>2</sup> for late May - early June sowing. - If using your own seed, adjust seed price accordingly.
<b>Fertiliser:</b>	- A fertiliser such as Grain Legume Super is applied to supply high phosphorus and sulphur requirements.
<b>Disease control:</b>	- Fungicides are essential to maintain seed quality. This budget is based on 4 fungicide sprays. Total number of sprays depends on seasonal conditions. May need up to 5 - 6 fungicide sprays in high disease years. Disease outbreaks in faba beans vary according to seasonal conditions. Check with your local agronomic advisor for appropriate disease control strategies for your area. * Aerial spray used later in the season. - Mancozeb is applied as a preventative disease spray against Chocolate Spot, Ascochyta, and rust. New variety Nura has increased resistance to ascochyta chocolate spot and rust. This variety has the potential to significantly reduce fungicide variable costs. - Refer to Pulse Point 16: "Foliar disease of Faba Beans - Management in Southern NSW" for 'fungicide sprays in high disease years.

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### AGRONOMIC NOTES CONTINUED:

<b>Weed Control</b>	<ul style="list-style-type: none"><li>- Pre-emergent herbicides such as simazine (eg: Gesatop®), imazethapyr (eg: Spinnaker®) or metribuzin (eg: Sencor®) can be used for broadleaf weed control.</li><li>- Additional herbicides may be required to be tank mixed pre emergent depending on paddock history and weed spectrum.</li><li>- Apply appropriate grass selective herbicide according to your herbicide resistance management program.</li><li>- Post-emergent herbicides may not be required on crops following maize.</li><li>- Refer to <i>Weed Control in Winter Crops 2009</i> for alternative herbicides.</li></ul>
<b>Pest Control</b>	<ul style="list-style-type: none"><li>- Refer to "Insect and Mite Control in Field Crops 2009".</li><li>- Establishment pests are not normally a problem. Heliothis is the main pest at flowering/podding.</li><li>- A synthetic pyrethroid can be used up to 7 November to comply with the Heliothis IRM Strategy.</li></ul>
<b>Irrigation</b>	<ul style="list-style-type: none"><li>- Schedule spring irrigations according to plant water use. Faba beans respond well to irrigation and are the most waterlogging tolerant pulse crop, capable of withstanding some waterlogging.</li><li>- *Budget allows for three spring waterings (1.5 ML/ha for pre-irrigation and 1 ML for each spring irrigation).</li><li>- <b>*The budget uses MIA total water costs based on 25% allocation.</b></li><li>- <b>Irrigation cost includes the variable cost and fixed water costs of \$19.18/ML</b></li><li>- <b>Water costs used in the MIA budgets are based on 2008-09 prices.</b></li><li>- <b>For prices in other areas and districts, refer to the water prices section.</b></li></ul>
<b>Machinery</b>	<ul style="list-style-type: none"><li>- Machinery costs include variable costs only for the tractor, implements and header.</li><li>- Contract harvesting does not include the cost of fuel.</li></ul>
<b>Labour</b>	<ul style="list-style-type: none"><li>- The labour required for machinery operations is 1.68 hr/ha.</li><li>- Using a labour cost of \$14/hr, an additional \$23/ha can be deducted from the budget.</li></ul>
<b>Economic note:</b>	<ul style="list-style-type: none"><li>- These gross margins are only a guide. They do not include overhead costs or GST.</li><li>- Input and crop prices are correct at the time of writing (March 2009). Market uncertainty makes estimation of future pricing impractical.</li><li>- <b>Use your own figures and price assumptions to determine your own gross margin.</b></li></ul>