



**BARLEY: FEED/MALTING (Flood Irrigated - Border Check/Conv. Sown)**  
Irrigated Winter - 2012 Murrumbidgee Valley

**1. GROSS MARGIN BUDGET:**

INCOME:	Standard Budget \$/ha	Your Budget \$/ha
4.50 tonnes/ha @ \$150 /t (on farm, malt price)	\$675	
<b>A. TOTAL INCOME \$/ha:</b>	<b>\$675</b>	
<b>VARIABLE COSTS:</b>		
See following page for detail		
Cultivation.....	\$65	
Sowing.....	\$102	
Fertiliser.....	\$205	
Herbicide.....	\$39	
Contract harvesting.....	\$69	
Levies.....	\$14	
Crop insurance.....	\$15	
Irrigation.....	\$33	
<b>B. TOTAL VARIABLE COSTS \$/ha:</b>	<b>\$542</b>	
<b>C. GROSS MARGIN (A-B) \$/ha:</b>	<b>\$133</b>	
<b>D. GROSS MARGIN \$/ML:</b>	<b>\$53</b>	

**SENSITIVITY TABLES**

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

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)				
	\$110 /t	\$130 /t	<b>\$150 /t</b>	\$170 /t	\$190 /t
3.00	-\$189	-\$131	-\$73	-\$15	\$43
3.50	-\$137	-\$69	-\$1	\$67	\$134
4.00	-\$88	-\$10	\$67	\$144	\$222
<b>4.50</b>	-\$41	\$46	<b>\$133</b>	\$220	\$307
5.00	\$5	\$102	\$199	\$295	\$392
5.50	\$52	\$158	\$264	\$371	\$477
6.00	\$98	\$214	\$330	\$446	\$562

← Gross Margin (\$/ha)

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

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)				
	\$110 /t	\$130 /t	<b>\$150 /t</b>	\$170 /t	\$190 /t
3.00	-\$76	-\$52	-\$29	-\$6	\$17
3.50	-\$55	-\$28	\$0	\$27	\$54
4.00	-\$35	-\$4	\$27	\$58	\$89
<b>4.50</b>	-\$16	\$18	<b>\$53</b>	\$88	\$123
5.00	\$2	\$41	\$79	\$118	\$157
5.50	\$21	\$63	\$106	\$148	\$191
6.00	\$39	\$86	\$132	\$179	\$225

← Gross Margin (\$/ML)

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.

**BARLEY: FEED/MALTING (Flood Irrigated - Border Check/Conv. Sown)**

**Murrumbidgee Valley**

**Irrigated Winter - 2012**

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost
Operation	Month	hrs/ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	\$/ha
Rip Banks	Nov/Dec	0.22	\$48.80	\$10.89				<b>\$10.89</b>
Disc Plough	Dec/Jan	0.35	\$42.85	\$14.88				<b>\$14.88</b>
Landplane	Mar	0.17	\$45.05	\$7.71				<b>\$7.71</b>
Bank up		0.26	\$46.38	\$12.08				<b>\$12.08</b>
Scarify	Apr/May	0.17	\$45.05	\$7.71				<b>\$7.71</b>
Sow	Apr/May	0.17	\$62.38	\$10.48	90kg/ha	\$1.02/kg	\$91.80	<b>\$102.28</b>
Apply starter fertiliser <i>eg. DAP</i>		with above			125kg/ha	\$0.760/kg	\$95.00	<b>\$95.00</b>
Seed Dressing ( <i>eg. Baytan®</i> )		with above			0.125kg/ha	\$35.30/kg	\$4.41	<b>\$4.41</b>
Trail drains		0.26	\$46.38	\$12.08				<b>\$12.08</b>
Grass weed control <i>eg. tralkoxydim, (Achieve®)</i>	Jun	contract		\$10.00	0.4kg/ha	\$60.60/kg	\$24.24	<b>\$34.24</b>
Topdress nitrogen fertiliser <i>eg. broadcast urea</i>	Jun/Jul	0.17	\$62.38	\$10.48	150kg/ha	\$0.662/kg	\$99.30	<b>\$109.78</b>
Contract harvest	Nov	contract		\$58.95				<b>\$58.95</b>
Chaser Bin		0.22	\$45.05	\$9.91				<b>\$9.91</b>
Irrigation					2.5ML/ha	\$13.27/ML	\$33.18	<b>\$33.18</b>
Crop Levies			\$1.50 /t	+	1.02% of on-farm value			<b>\$13.60</b>
Crop Insurance					2.280% of on-farm value			<b>\$15.39</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, tiller numbers, disease and grain fill.
<b>Rotation:</b>	- This is the first crop following wheat after rice.
<b>Varieties:</b>	<ul style="list-style-type: none"><li>- Check "Winter crop variety sowing guide 2012" for approved varieties for SNSW.</li><li>- There are three main types of barley varieties; malt, food and feed grade.</li><li>- For feed grain production consider Capstan or Oxford. For food grade consider Hindmarsh.Gardiner Fairview and Baudin are suitable for malt production on full irrigation. For partial irrigation consider Buloke and Commander.</li><li>- There are a number of new barley varieties undergoing classification. New varieties may be available in limited release and include Bass, Navigator and Westminster.</li></ul>
<b>Seed:</b>	- Budgets based on seed at \$1,0200/t
<b>Protein:</b>	- Protein levels for malt should be between 9-12%, ideal protein 10.5%.
<b>Fertiliser:</b>	- For malt barley, nitrogen application and the spring irrigation need to be strategically applied to ensure grain meets protein specifications. High fertility paddocks usually produce grain protein too high for malt grade. High rates of nitrogen can optimise feed grain yields
<b>Sowing Time:</b>	- See NSW DPI "Winter crop variety sowing guide 2012" for recommended sowing time for each variety, generally May till mid June.
<b>Weed Control:</b>	<ul style="list-style-type: none"><li>- Herbicides are boomsprayed in a dry year and aerial sprayed in a wet year.</li><li>- An additional broadleaf herbicide may be required if wireweed or toadrush are a problem.</li><li>- Refer to NSW DPI "Weed control in winter crops 2012" for alternative herbicides.</li></ul>
<b>Seed Dressing:</b>	- Required for control of seedling leaf diseases.
<b>Irrigation:</b>	<ul style="list-style-type: none"><li>- Budget allows for a pre-irrigation (1.5ML) plus one spring irrigation (1ML).</li><li>- Only pre-irrigating a proportion of intended winter crop area to reduce risk of waterlogging</li><li>- Barley is the most susceptible winter cereal to waterlogging.</li><li>- <b>Irrigation cost includes the variable cost only.</b></li><li>- <b>Water costs used in the MIA budgets are based on 2011-12 prices.</b></li><li>- <b>For water costs in other areas, 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 2.70 hr/ha.</li><li>- Using a labour cost of \$22/hr, an additional \$59/ha can be deducted from the budget.</li></ul>
<b>Economic note:</b>	<ul style="list-style-type: none"><li>- Prices are based on feed barley. These gross margins are only a guide.</li><li>- They do not include overhead costs or GST.</li><li>- Input and crop prices are correct at the time of writing (April 2012). 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>



**Winter Annual Pasture: Sub clover based - Establishment (Flood Irrigated - Border Check)**

**Murrumbidgee Valley & Murray Valley**

**Costs only**

**Irrigated Winter - 2012**

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total
Operation	Month	hrs /ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	Cost \$/ha
Disc	Jan	0.35	\$42.85	\$14.88				<b>\$14.88</b>
Scarify (x 2)	Jan/Feb	0.17	\$45.05	\$15.43				<b>\$30.86</b>
Grade	Feb	0.17	\$45.05	\$7.71				<b>\$7.71</b>
Pre-emergent weed control ( <i>eg. trifluralin</i> )	Mar/Apr	0.05	\$41.38	\$2.23	2.10 L/ha	\$8.50/L	\$17.85	<b>\$20.08</b>
Scarify-incorp (x 2)		0.17	\$45.05	\$15.43				<b>\$30.86</b>
Sow		0.17	\$62.38	\$10.48	10kg/ha	\$5.10/kg	\$51.00	<b>\$61.48</b>
Apply phosphorus fertiliser ( <i>eg. combine single super</i> )		with above			250kg/ha	\$0.380/kg	\$95.00	<b>\$95.00</b>
Seed inoculation		with above			10kg/ha	\$0.04/kg	\$0.40	<b>\$0.40</b>
Aphid & mite spray ( <i>eg. dimethoate</i> )	May	contract		\$10.00	0.15 L/ha	\$12.25/L	\$1.84	<b>\$11.84</b>
Broadleaf weed spray ( <i>eg. bromoxynil</i> )	Jun	contract		\$10.00	2.00 L/ha	\$15.00/L	\$30.00	<b>\$40.00</b>
Irrigation*					5.00ML/ha	\$13.27/ML	\$66.35	<b>\$66.35</b>

## AGRONOMIC NOTES:

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See [www.dpi.nsw.gov.au](http://www.dpi.nsw.gov.au) for specific information on subclover.

<b>Inoculation</b>	- Use correct strain of rhizobium inoculant on clover seed (Strain C for subclover) to ensure N fixation.
<b>Establishment</b>	- Use adequate rate of good quality seed. Subclover thickens with time. - Optimum sowing time March-April. Establishment costs should be spread over the life of the stand. - May be sown under a light cover crop, but riskier in dry years.
<b>Weeds</b>	- Minimise weed competition for seedlings. - Trifluralin used for pre-emergent control of grasses (assuming clover is sown without grasses) - In a rice, cereals, pasture rotation, the need for trifluralin is reduced if fallow is commenced before seed set of grasses. - Broadleaf weeds controlled with bromoxynil or other chemicals. - Other options available (see NSW DPI " <i>Weed control in pastures and lucerne</i> ").
<b>Insects</b>	- Aphids and mites may require control after establishment or in spring. Dimethoate used for earthmite control. - A 2nd irrigation (or rainfall) within 7 days of sowing is necessary to ensure establishment.
<b>Varieties</b>	- Choose varieties with waterlogging tolerance and disease resistance. (See NSW DPI " <i>Pasture varieties used in NSW</i> ").
<b>Fertilise:</b>	- Incorporate lime if soil is acid (pH (CaCl <sub>2</sub> ) <5.0), well before sowing. - P, S and Mo are essential for clover. Use single superphosphate or equivalent at sowing.
<b>Irrigation*</b>	- Ensure germinating seedlings do not dry out. Water in autumn for forage production and at least once in spring is essential for good seed set to ensure regermination in following year. - <b>Irrigation cost includes the variable cost only.</b> - <b>Water costs used in the MIA budgets are based on 2011-12 prices.</b> - <b>For prices in other areas, refer to the water prices section.</b>
<b>Machinery</b>	- Machinery costs include variable costs only for the tractor and implements.
<b>Labour</b>	- The labour required for machinery operations is 1.78 hr/ha. - Using a labour cost of \$22/hr, an additional \$39/ha can be deducted from the budget.
<b>Economic note</b>	- These gross margins are only a guide. They do not include overhead costs or GST. - Input and crop prices are correct at the time of writing (April 2012). Market uncertainty makes estimation of future pricing impractical. - <b>Use your own figures and price assumptions to determine your own gross margin.</b>



**WHEAT: ASW/APW/AH**

(Flood Irrigated - Landformed Contour Bay / Conv. Sown)

Irrigated Winter - 2012

Murrumbidgee Valley

**1.GROSS MARGIN BUDGET:**

**INCOME:**

4.00 tonnes/ha @ \$200 /t (on farm)

Standard Budget \$/ha	Your Budget \$/ha
\$800	

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

<b>\$800</b>	
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**VARIABLE COSTS:**

See following page for detail

Cultivation.....	\$62	
Sowing.....	\$107	
Fertiliser.....	\$188	
Herbicide.....	\$55	
Fungicide.....	\$54	
Contract harvesting.....	\$63	
Levies.....	\$8	
Crop insurance.....	\$18	
Irrigation.....	\$27	
<b>B. TOTAL VARIABLE COSTS \$/ha:</b>	<b>\$583</b>	

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

<b>\$217</b>	
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**D. GROSS MARGIN \$/ML:**

<b>\$109</b>	
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**SENSITIVITY TABLES**

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

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)					Gross Margin (\$/ha)
	\$160 /t	\$180 /t	<b>\$200 /t</b>	\$220 /t	\$240 /t	
2.50	-\$166	-\$118	-\$70	-\$21	\$27	
3.00	-\$89	-\$31	\$27	\$85	\$143	
3.50	-\$12	\$56	\$124	\$192	\$259	
<b>4.00</b>	\$62	\$140	<b>\$217</b>	\$294	\$372	←
4.50	\$134	\$221	\$308	\$395	\$482	
5.00	\$205	\$302	\$398	\$495	\$592	
5.50	\$276	\$383	\$489	\$596	\$702	

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

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)					Gross Margin (\$/ML)
	\$160 /t	\$180 /t	<b>\$200 /t</b>	\$220 /t	\$240 /t	
2.50	-\$83	-\$59	-\$35	-\$11	\$14	
3.00	-\$44	-\$15	\$14	\$43	\$72	
3.50	-\$6	\$28	\$62	\$96	\$130	
<b>4.00</b>	\$31	\$70	<b>\$109</b>	\$147	\$186	←
4.50	\$67	\$110	\$154	\$197	\$241	
5.00	\$103	\$151	\$199	\$248	\$296	
5.50	\$138	\$191	\$245	\$298	\$351	

**WHEAT: ASW/APW/AH (Flood Irrigated - Landformed Contour Bay / Conv. Sown)**

**Murrumbidgee Valley**

**Irrigated Winter - 2012**

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total
Operation	Month	hrs/ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	Cost \$/ha
Disc Plough	Dec/Jan	0.35	\$42.85	\$14.88				<b>\$14.88</b>
Scarify	Feb	0.17	\$45.05	\$7.71				<b>\$7.71</b>
Grade	Mar	0.17	\$45.05	\$7.71				<b>\$7.71</b>
Bank up		0.26	\$46.38	\$12.08				<b>\$12.08</b>
Scarify	Mar/Apr	0.17	\$45.05	\$7.71				<b>\$7.71</b>
Sow	May	0.17	\$62.38	\$10.48	100kg/ha	\$0.97/kg	\$97.00	<b>\$107.48</b>
Apply starter fertiliser <i>eg. DAP</i>		with above			125kg/ha	\$0.760/kg	\$95.00	<b>\$95.00</b>
Seed Treatment <i>eg. Triadimenol (Baytan®)</i>		with above			100kg/ha	\$35.30/kg	\$35.30	<b>\$35.30</b>
Push ends		0.26	\$46.38	\$12.08				<b>\$12.08</b>
Grass weed control <i>eg. boom spray Pinoxaden+cloquintocetmexyl (Axial®)</i>	Jun	contract		\$10.00	0.30 L/ha	\$150.00/L	\$45.00	<b>\$55.00</b>
Topdress nitrogen fertiliser <i>eg. broadcast urea</i>	Jun/Jul	0.17	\$62.38	\$10.48	125kg/ha	\$0.662/kg	\$82.75	<b>\$93.23</b>
Spray Fungicide Stripe Rust <i>eg. Triadimefon (Bayleton 125 EC)</i>	Sept/Oct	contract		\$10.00	1.00 L/ha	\$9.00/L	\$9.00	<b>\$19.00</b>
Contract harvest	Dec	contract		\$52.94				<b>\$52.94</b>
Chaser Bin		0.22	\$45.05	\$9.91				<b>\$9.91</b>
Irrigation					2.0ML/ha	\$13.27/ML	\$26.54	<b>\$26.54</b>
Crop Levies					1.02% of on-farm value			<b>\$8.12</b>
Crop Insurance					2.280% of on-farm value			<b>\$18.24</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:

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<b>Cropcheck:</b>	<ul style="list-style-type: none"><li>- Monitor and record crop performance. Key checks include establishment, weeds, insects, tiller numbers, disease, soil moisture and grain fill.</li></ul>
<b>Rotation:</b>	<ul style="list-style-type: none"><li>- This is the first crop following a rice fallow.</li></ul>
<b>Varieties:</b>	<ul style="list-style-type: none"><li>- See NSW DPI <i>Winter crop variety sowing guide 2012</i>. Choose varieties for lodging resistance and quality fit on irrigation</li></ul>
<b>Seed + Treatment:</b>	<ul style="list-style-type: none"><li>- If using own seed, treat with registered seed dressing. Germination test recommended.</li><li>- Stripe rust now affects these varieties so consider fungicide seed dressings such as Triadimenol (eg. Baytan®) or Fluquinconazole (eg. Jockey®) to prevent yield loss.</li><li>- With susceptible varieties in-furrow treatments (eg: Uptake® or Triadimefon) may also be an option).</li><li>- Budgets are based on seed purchased at \$970/tonne.</li></ul>
<b>Protein &amp; Payments:</b>	<ul style="list-style-type: none"><li>- Protein levels for first crop following rice can be low to moderate - around 8.5 - 10.5%.</li><li>- Budget price is for APW 10% protein. Premiums/discounts are paid on a sliding scale for protein above and below 10%.</li></ul>
<b>Sowing Time:</b>	<ul style="list-style-type: none"><li>- Consider April -EGA Wedgetail, Bolac. May - EGA Gregory, Merinda, Livingston</li><li>- Please note: Refer to your District Agronomist for information from the High Yielding Cereal Project 2008-2011. Sow at the correct time. See NSW DPI "<i>Winter crop variety sowing guide 2012</i>" for recommended sowing windows for each variety.</li></ul>
<b>Disease Control:</b>	<ul style="list-style-type: none"><li>- Budget for a stripe rust seed dressing and at least 1 fungicide spray for stripe rust in the spring. (The total number of sprays depends upon seasonal conditions and varietal susceptibility)</li></ul>
<b>Weed Control:</b>	<ul style="list-style-type: none"><li>- Herbicides are boomsprayed in a dry year and aerial sprayed in a wet year.</li><li>- An additional broadleaf herbicide may be required if vetch, wireweed, thistles and toadrush are a problem.</li><li>- Refer to NSW DPI "<i>Weed control in winter crops 2012</i>" for alternative herbicides.</li></ul>
<b>Irrigation:</b>	<ul style="list-style-type: none"><li>- Schedule spring irrigations according to plant water use.</li><li>- Budget allows for two spring waterings with water use 1ML/ha per irrigation.</li><li>- <b>Irrigation cost includes the variable cost only.</b></li><li>- <b>Water costs used in the MIA budgets are based on 2011-12 prices.</b></li><li>- <b>For water costs in other areas, 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 2.42 hr/ha.</li><li>- Using a labour cost of \$ 22 /hr, an additional \$53.24/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 (April 2012). 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>



**WHEAT: Biscuit (Furrow Irrigated - Beds)**

Irrigated Winter - 2012

Murrumbidgee Valley

**1. GROSS MARGIN BUDGET:**

**INCOME:**

6.50 tonnes/ha @ \$200.0 /t (on farm)

Standard Budget \$/ha	Your Budget \$/ha
\$1,300	

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

<b>\$1,300</b>	
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**VARIABLE COSTS:**

See following page for detail

Cultivation.....	\$12	
Sowing.....	\$107	
Fertiliser.....	\$247	
Herbicide.....	\$83	
Fungicide.....	\$54	
Contract harvesting.....	\$93	
Levies.....	\$13	
Crop insurance.....	\$30	
Irrigation.....	\$60	
<b>B. TOTAL VARIABLE COSTS \$/ha:</b>	<b>\$700</b>	

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

<b>\$600</b>	
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**D. GROSS MARGIN \$/ML:**

<b>\$133</b>	
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**SENSITIVITY TABLES**

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

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)					Gross Margin (\$/ha)
	\$160 /t	\$180 /t	\$200 /t	\$220 /t	\$240 /t	
5.00	\$135	\$232	\$328	\$425	\$522	
5.50	\$206	\$313	\$419	\$525	\$632	
6.00	\$278	\$394	\$510	\$626	\$742	
<b>6.50</b>	\$349	\$475	<b>\$600</b>	\$726	\$852	←
7.00	\$420	\$556	\$691	\$826	\$962	
7.50	\$492	\$637	\$782	\$927	\$1072	
8.00	\$563	\$718	\$873	\$1027	\$1182	

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

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)					Gross Margin (\$/ML)
	\$160 /t	\$180 /t	\$200 /t	\$220 /t	\$240 /t	
5.00	\$30	\$51	\$73	\$94	\$116	
5.50	\$46	\$69	\$93	\$117	\$140	
6.00	\$62	\$87	\$113	\$139	\$165	
<b>6.50</b>	\$78	\$105	<b>\$133</b>	\$161	\$189	←
7.00	\$93	\$123	\$154	\$184	\$214	
7.50	\$109	\$141	\$174	\$206	\$238	
8.00	\$125	\$160	\$194	\$228	\$263	

## WHEAT: Biscuit (Furrow Irrigated - Beds)

Murrumbidgee Valley

Irrigated Winter - 2012

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total
Operation	Month	hrs/ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	Total Cost \$/ha
Burn Stubble	Apr/May							
Broadleaf & grass weed control ( <i>eg. boom spray glyphosate 450</i> ) + <i>Triasulfuron (Logran®)</i>	May	contract		\$10.00	1.00 L/ha	\$4.42/L	\$4.42	<b>\$14.42</b>
		With above			0.35kg/ha	\$63.5/kg	\$22.23	<b>\$22.23</b>
Sow	May	0.17	\$62.38	\$10.48	100kg/ha	\$0.97/kg	\$97.00	<b>\$107.48</b>
Apply starter fertiliser ( <i>eg. DAP</i> )		with above			150kg/ha	\$0.760/kg	\$114.00	<b>\$114.00</b>
Seed Treatment <i>eg: Triadimenol (Baytan®)</i>		with above			100kg/ha	\$35.30/kg	\$35.30	<b>\$35.30</b>
Clean furrows		0.26	\$46.38	\$12.08				<b>\$12.08</b>
Grass + broadleaf weed control ( <i>eg. boom spray Pinoxaden+cloquintocetmexyl (Axial®) and Bromoxynil + Pyrasulfotole (Velocity®)</i> )	Jun/Jul	contract		\$10.00	0.30 L/ha	\$39.10/L	\$11.73	<b>\$21.73</b>
	Jun/Jul	contract		\$10.00	0.50 L/ha	\$30.00/L	\$15.00	<b>\$25.00</b>
Topdress nitrogen fertiliser ( <i>broadcast urea</i> )	Jun/Jul	0.17	\$62.38	\$10.48	185kg/ha	\$0.662/kg	\$122.47	<b>\$132.95</b>
Spray Fungicide Stripe Rust <i>eg. Triadimefon (Bayleton 125EC)</i>	Sept/Oct	contract		\$10.00	1.00 L/ha	\$9.00/L	\$9.00	<b>\$19.00</b>
Contract harvest	Dec	contract		\$82.96				<b>\$82.96</b>
Chaser Bin		0.22	\$45.05	\$9.91				<b>\$9.91</b>
Irrigation					4.5ML/ha	\$13.27/ML	\$59.72	<b>\$59.72</b>
Crop Levies					1.02% of on-farm value			<b>\$13.20</b>
Crop Insurance					2.280% of on-farm value			<b>\$29.64</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>	<ul style="list-style-type: none"><li>- Monitor and record crop performance. Key checks include establishment, weeds, insects, tiller numbers, disease and grain fill.</li></ul>
<b>Rotation:</b>	<ul style="list-style-type: none"><li>- Sod seeded into burnt maize or soybean stubble. Costs will be higher where beds are constructed for this crop.</li></ul>
<b>Varieties:</b>	<ul style="list-style-type: none"><li>- See NSW DPI "<i>Winter crop variety sowing guide 2012</i>" for approved varieties in SNSW.</li><li>- Consider Yenda and QAL 2000. Contact end user for preferred varieties.</li></ul>
<b>Seed:</b>	<ul style="list-style-type: none"><li>- If using own seed treat with registered seed dressing. Germination test is recommended.</li><li>- If sowing stripe rust susceptible varieties, consider fungicide seed dressings such as Triadimenol (eg Baytan®) or Fluquinconazole (eg Jockey®). With susceptible varieties in-furrow treatments (such as Intake® or Triadimefon) may also be an option.</li><li>- Budgets are based on seed purchased at \$970/tonne.</li></ul>
<b>Protein:</b>	<ul style="list-style-type: none"><li>- Aim for a protein content of 8.0 to 9.5% to optimise returns.</li></ul>
<b>Sowing Time:</b>	<ul style="list-style-type: none"><li>- Yenda for late April. QAL 2000 from mid May.</li><li>- See NSW DPI "<i>Winter crop variety sowing guide 2012</i>" for recommended sowing windows for each variety.</li></ul>
<b>Disease Control:</b>	<ul style="list-style-type: none"><li>- Budget for a stripe rust seed dressing and at least 1 fungicide spray for stripe rust in spring. (The total number of sprays depends upon seasonal conditions and varietal susceptibility)</li><li>- These biscuit wheat varieties are susceptible so need to be fully protected.</li></ul>
<b>Weed Control:</b>	<ul style="list-style-type: none"><li>- Herbicides are boomsprayed in a dry year and aerial sprayed in a wet year.</li><li>- Budget contains costs for post-emergent herbicides but post-emergent herbicides may not be required on crops following maize.</li><li>- Refer to NSW DPI "<i>Weed control in winter crops 2012</i>" for alternative herbicides.</li></ul>
<b>Irrigation:</b>	<ul style="list-style-type: none"><li>- Water-up beds and schedule spring irrigations according to plant water use. Budget allows for watering up (water use of 1.5ML/ha) and three spring irrigations (1ML/ha each). Irrigation requirements will depend on seasonal conditions.</li><li>- <b>Irrigation cost includes the variable cost only</b></li><li>- <b>Water costs used in the MIA budgets are based on 2011-12 prices.</b></li><li>- <b>For prices in other areas, 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>Bed Cropping:</b>	<ul style="list-style-type: none"><li>- Bed cropping may require additional capital investment in equipment from \$2,000 to \$20,000.</li></ul>
<b>Labour:</b>	<ul style="list-style-type: none"><li>- The labour required for machinery operations is 1.02 hr/ha.</li><li>- Using a labour cost of \$22/hr, an additional \$22/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 (April 2012). 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>



**WHEAT: Biscuit (Flood Irrigated Landformed Contour Bay / Sod Sown)**  
Irrigated Winter - 2012 Murrumbidgee Valley

**1. GROSS MARGIN BUDGET:**

**INCOME:**

3.50 tonnes/ha @ \$200 /t (on farm)

Standard Budget \$/ha	Your Budget \$/ha
\$700	

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

<b>\$700</b>	
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**VARIABLE COSTS:**

See following page for detail

Cultivation.....	\$12	
Sowing.....	\$127	
Fertiliser.....	\$188	
Herbicide.....	\$22	
Fungicide.....	\$61	
Contract harvesting.....	\$59	
Levies.....	\$7	
Crop insurance.....	\$16	
Irrigation.....	\$16	
<b>B. TOTAL VARIABLE COSTS \$/ha:</b>	<b>\$509</b>	

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

<b>\$191</b>	
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**D. GROSS MARGIN \$/ML:**

<b>\$159</b>	
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**SENSITIVITY TABLES**

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

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)					Gross Margin (\$/ha)
	\$160 /t	\$180 /t	<b>\$200 /t</b>	\$220 /t	\$240 /t	
2.00	-\$176	-\$137	-\$99	-\$60	-\$21	
2.50	-\$99	-\$50	-\$2	\$46	\$95	
3.00	-\$21	\$37	\$95	\$153	\$211	
<b>3.50</b>	\$56	\$124	<b>\$191</b>	\$259	\$327	
4.00	\$130	\$207	\$285	\$362	\$439	
4.50	\$201	\$288	\$375	\$462	\$549	
5.00	\$273	\$369	\$466	\$563	\$659	

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

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)					Gross Margin (\$/ML)
	\$160 /t	\$180 /t	<b>\$200 /t</b>	\$220 /t	\$240 /t	
2.00	-\$147	-\$115	-\$82	-\$50	-\$18	
2.50	-\$82	-\$42	-\$2	\$39	\$79	
3.00	-\$18	\$31	\$79	\$127	\$176	
<b>3.50</b>	\$47	\$103	<b>\$159</b>	\$216	\$272	
4.00	\$108	\$173	\$237	\$302	\$366	
4.50	\$168	\$240	\$313	\$385	\$458	
5.00	\$227	\$308	\$388	\$469	\$549	

## WHEAT: Biscuit (Flood Irrigated Landformed Contour Bay / Sod Sown)

Murrumbidgee Valley

Irrigated Winter - 2012

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost
Operation	Month	hrs/ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	\$/ha
Burn Stubble	Apr/May							<b>\$0.00</b>
Sow	May	0.17	\$62.38	\$10.48	120kg/ha	\$0.97/kg	\$116.40	<b>\$126.88</b>
Apply starter fertiliser (eg: DAP)		with above			125kg/ha	\$0.760/kg	\$95.00	<b>\$95.00</b>
Seed Treatment eg. Triadimenol (Baytan®)		with above			120kg/ha	\$35.30/kg	\$42.36	<b>\$42.36</b>
Push ends		0.26	\$46.38	\$12.08				<b>\$12.08</b>
Grass weed spray eg. Pinoxaden+cloquintocetmexyl (Axial®)	Jun	contract		\$10.00	0.30 L/ha	\$39.10/L	\$11.73	<b>\$21.73</b>
Topdress nitrogen fertiliser (eg. broadcast urea)	Jun/Jul	0.17	\$62.38	\$10.48	125kg/ha	\$0.662/kg	\$82.75	<b>\$93.23</b>
Spray Fungicide Stripe Rust eg. Triadimefon (Bayleton® 125EC)	Sept/Oct	contract		\$10.00	1.00 L/ha	\$9.00/kg	\$9.00	<b>\$19.00</b>
Contract harvest	Dec	contract		\$49.42				<b>\$49.42</b>
Chaser Bin		0.22	\$45.05	\$9.91				<b>\$9.91</b>
Irrigation					1.2ML/ha	\$13.27/ML	\$15.92	<b>\$15.92</b>
Crop Levies					1.02% of on-farm value			<b>\$7.11</b>
Crop Insurance					2.280% of on-farm value			<b>\$15.96</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>	<ul style="list-style-type: none"><li>- Monitor and record crop performance. Key checks include establishment, weeds, insects, tiller numbers, disease and grain fill.</li></ul>
<b>Rotation:</b>	<ul style="list-style-type: none"><li>- Sod seeding into burnt rice stubble. Nominated yield is low because of water logging risk.</li></ul>
<b>Varieties:</b>	<ul style="list-style-type: none"><li>- See NSW DPI "<i>Winter crop variety sowing guide 2012</i>" for approved varieties in SNSW . QAL2000 and Yenda popular high yielding biscuit wheats. Contact end user for preferred varieties.</li></ul>
<b>Seed + Treatment:</b>	<ul style="list-style-type: none"><li>- If using own seed treat with registered seed dressing. Germination test recommended.</li><li>- Stripe rust now affects the above biscuit varieties.</li><li>- If sowing stripe rust susceptible varieties, consider fungicide seed dressings such as Triadimenol (eg Baytan®) or Fluquinconazole (eg Jockey®) to prevent yield losses.</li><li>- With susceptible varieties in-furrow treatments (such as Intake® or Triadimefon) may also be an option.</li><li>- Budgets are based on seed purchased at \$970/tonne.</li></ul>
<b>Protein:</b>	<ul style="list-style-type: none"><li>- Aim for a protein content of 8.0 to 9.5% to optimise returns.</li></ul>
<b>Sowing Time and rate:</b>	<ul style="list-style-type: none"><li>- Yenda for grain only (from late April to mid May) and Qal2000 (2nd week of May till end of May).</li><li>- See NSW DPI "<i>Winter crop variety sowing guide 2012</i>" for recommended sowing times for each variety. Higher seed rate required due to risk of poor establishment and reduced tillering.</li></ul>
<b>Disease Control:</b>	<ul style="list-style-type: none"><li>- Budget for a stripe rust seed dressing and at least 1 fungicide spray for stripe rust in the spring. (The total number of sprays depends upon seasonal conditions and varietal susceptibility)</li></ul>
<b>Weed Control:</b>	<ul style="list-style-type: none"><li>- Herbicides are boomsprayed in a dry year and aerial sprayed in a wet year.</li><li>- An additional broadleaf herbicide may be required if vetch, wireweed, thistles and toadrush are a problem.</li><li>- Refer to NSW DPI "<i>Weed control in winter crops 2012</i>" for alternative herbicides.</li></ul>
<b>Irrigation:</b>	<ul style="list-style-type: none"><li>- If the layout has suitable drainage and a spring irrigation is required, apply as close to head emergence as possible. *Budget allows for one spring watering (irrigation requirements will depend on seasonal conditions).</li><li>- <b>Irrigation cost includes the variable cost only.</b></li><li>- <b>Water costs used in the MIA budgets are based on 2011-12 prices.</b></li><li>- <b>For water costs in other areas, 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 1.02 hr/ha.</li><li>- Using a labour cost of \$22/hr, an additional \$22/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 (April 2012). 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>



**WHEAT: Biscuit (Flood Irrigated - Border Check / Conv. Sown)**

Irrigated Winter - 2012

Murrumbidgee Valley

**1. GROSS MARGIN BUDGET:**

**INCOME:**

5.50 tonnes/ha @ \$200 /t (on farm)

Standard Budget \$/ha	Your Budget \$/ha
\$1,100	

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

<b>\$1,100</b>	
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**VARIABLE COSTS:**

See following page for detail

Cultivation.....	\$73	
Sowing.....	\$107	
Fertiliser.....	\$224	
Fungicide.....	\$54	
Herbicide.....	\$48	
Contract harvesting.....	\$81	
Levies.....	\$11	
Crop insurance.....	\$25	
Irrigation.....	\$46	
<b>B. TOTAL VARIABLE COSTS \$/ha:</b>	<b>\$670</b>	

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

<b>\$430</b>	
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**D. GROSS MARGIN \$/ML:**

<b>\$123</b>	
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**SENSITIVITY TABLES**

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

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)					Gross Margin (\$/ha)
	\$160 /t	\$180 /t	\$200 /t	\$220 /t	\$240 /t	
4.00	\$51	\$128	\$206	\$283	\$360	
4.50	\$122	\$209	\$296	\$383	\$470	
5.00	\$194	\$290	\$387	\$484	\$581	
<b>5.50</b>	\$265	\$371	<b>\$430</b>	\$584	\$691	
6.00	\$336	\$452	\$569	\$685	\$801	
6.50	\$408	\$533	\$659	\$785	\$911	
7.00	\$479	\$615	\$750	\$885	\$1021	

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

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)					Gross Margin (\$/ML)
	\$160 /t	\$180 /t	\$200 /t	\$220 /t	\$240 /t	
4.00	\$15	\$37	\$59	\$81	\$103	
4.50	\$35	\$60	\$85	\$110	\$134	
5.00	\$55	\$83	\$111	\$138	\$166	
<b>5.50</b>	\$76	\$106	<b>\$123</b>	\$167	\$197	
6.00	\$96	\$129	\$162	\$196	\$229	
6.50	\$117	\$152	\$188	\$224	\$260	
7.00	\$137	\$176	\$214	\$253	\$292	

# WHEAT: Biscuit (Flood Irrigated - Border Check / Conv. Sown)

Murrumbidgee Valley

Irrigated Winter - 2012

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost
Operation	Month	hrs/ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	Total Cost \$/ha
Rip Banks	Nov/Dec	0.22	\$48.80	\$10.89				<b>\$10.89</b>
Disc Plough	Dec/Jan	0.35	\$42.85	\$14.88				<b>\$14.88</b>
Scarify	Feb	0.17	\$45.05	\$7.71				<b>\$7.71</b>
Landplane	Mar	0.17	\$45.05	\$7.71				<b>\$7.71</b>
Bank up	Mar	0.26	\$46.38	\$12.08				<b>\$12.08</b>
Scarify	Mar/Apr	0.17	\$45.05	\$7.71				<b>\$7.71</b>
Sow	May	0.17	\$62.38	\$10.48	100kg/ha	\$0.97/kg	\$97.00	<b>\$107.48</b>
Apply starter fertiliser ( <i>eg. DAP</i> )		with above			150kg/ha	\$0.760/kg	\$114.00	<b>\$114.00</b>
Seed treatment <i>eg Triadimenol (Baytan®)</i>		with above			100kg/ha	\$35.30/kg	\$35.30	<b>\$35.30</b>
Tail Drains		0.26	\$46.38	\$12.08				<b>\$12.08</b>
Grass weed spray <i>eg. Pinoxaden+cloquintocetmexyl (Axial®)</i>	Jun	contract		\$10.00	0.30 L/ha	\$127.23/L	\$38.17	<b>\$48.17</b>
Topdress nitrogen fertiliser ( <i>eg. broadcast urea</i> )	Jul	0.17	\$62.38	\$10.48	150kg/ha	\$0.662/kg	\$99.30	<b>\$109.78</b>
Spray Fungicide Stripe Rust <i>eg. Triadimefon (Bayleton®)</i>	Sept/Oct	contract		\$10.00	1.00 L/ha	\$9.00/kg	\$9.00	<b>\$19.00</b>
Contract harvest	Dec	contract		\$70.95				<b>\$70.95</b>
Chaser Bin		0.22	\$45.05	\$9.91				<b>\$9.91</b>
Irrigation					3.5ML/ha	\$13.27/ML	\$46.45	<b>\$46.45</b>
Crop Levies					1.02% of on-farm value			<b>\$11.17</b>
Crop Insurance					2.280% of on-farm value			<b>\$25.08</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>	<ul style="list-style-type: none"><li>- Monitor and record crop performance. Key checks include establishment, weeds, insects, tiller numbers, disease and grain fill.</li></ul>
<b>Rotation:</b>	<ul style="list-style-type: none"><li>- This is the first crop following a rice fallow. Therefore, the budget shows higher land preparation costs.</li></ul>
<b>Varieties:</b>	<ul style="list-style-type: none"><li>- See NSW DPI "<i>Winter crop variety sowing guide 2012</i>" for approved varieties in SNSW</li><li>- QAL2000 and Yenda. Contact end user for preferred varieties.</li></ul>
<b>Seed + treatment:</b>	<ul style="list-style-type: none"><li>- If using own seed treat with a registered seed dressing. Germination test recommended.</li><li>- Stripe rust now affects the above biscuit varieties. If sowing stripe rust susceptible varieties, consider fungicide seed dressings such as Triadimenol (eg Baytan®) or Fluquinconazole (eg Jockey®) to prevent yield losses.</li><li>- With susceptible varieties in-furrow treatments (such as Intake®) may also be an option.</li><li>- Budgets are based on seed purchased at \$970/tonne.</li></ul>
<b>Protein:</b>	<ul style="list-style-type: none"><li>- Aim for a protein content of 8.0 to 9.5% to optimise returns.</li></ul>
<b>Sowing Time:</b>	<ul style="list-style-type: none"><li>- Yenda for grain only (from late April to mid May) and QAL2000 (2nd week of May till end of May).</li><li>- See "<i>Winter crop variety sowing guide 2012</i>" for recommended sowing times for each variety.</li></ul>
<b>Disease Control:</b>	<ul style="list-style-type: none"><li>- Budget for a stripe rust seed dressing &amp; at least 1 fungicide spray for stripe rust in the spring. (the total number of sprays depends upon seasonal conditions and varietal susceptibility)</li></ul>
<b>Weed Control:</b>	<ul style="list-style-type: none"><li>- Herbicides are boomsprayed in a dry year and aerial sprayed in a wet year.</li><li>- An additional broadleaf herbicide may be required if vetch, wireweed, thistles and toadrush are a problem. Refer to "<i>Weed control in winter crops 2012</i>" for alternative herbicides.</li></ul>
<b>Irrigation:</b>	<ul style="list-style-type: none"><li>- Schedule spring irrigations according to plant water use.</li><li>- Budget allows for a pre-irrigation (1.5ML) and two spring waterings (1ML each).</li><li>- Spring irrigations will depend on seasonal conditions.</li><li>- Growers can reduce the effect of waterlogging problems by only pre-irrigating a proportion of intended winter crop area.</li><li>- <b>Irrigation cost includes the variable cost only.</b></li><li>- <b>Water costs used in the MIA budgets are based on 2011-12 prices.</b></li><li>- <b>For water costs in other areas, 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 2.70 hr/ha.</li><li>- Using a labour cost of \$22/hr, an additional \$59/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 (April 2012). 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>



**LUCERNE: Maintenance (Flood Irrigated - Border Check)**

Irrigated Winter - 2012

Murray Valley &  
Murrumbidgee Valley

**1. GROSS MARGIN BUDGET:**

**INCOME:**

9.00 t/ha @	\$350.00 /tonne ON FARM
6.00 t/ha @	\$200.00 /tonne ON FARM
<b>15.00 t/ha @</b>	<b>\$290.00 /tonne ON FARM *</b>
(5 cuts @ 3 t/ha/cut)	* Weighted average price

Standard Budget \$/ha	Your Budget \$/ha
\$3,150.00	
\$1,200.00	

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

<b>\$4,350</b>
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**VARIABLE COSTS:**

See following page for detail

Cultivation.....	\$0
Sowing.....	\$0
Fertiliser.....	\$135
Fungicide.....	\$0
Herbicide.....	\$36
Insecticide.....	\$12
Contract hay mowing, raking.....	\$1,200
Cartage & stacking.....	\$720
Irrigation.....	\$173
<b>B. TOTAL VARIABLE COSTS \$/ha:</b>	<b>\$2,276</b>

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

<b>\$2,074</b>
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**D. GROSS MARGIN \$/ML:**

<b>\$160</b>
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**SENSITIVITY TABLES**

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

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)					Gross Margin (\$/ha)
	\$190 /t	\$240 /t	<b>\$290 /t</b>	\$390 /t	\$490 /t	
10.50	\$295	\$820	\$1345	\$2395	\$3445	
12.00	\$388	\$988	\$1588	\$2788	\$3988	
13.50	\$481	\$1156	\$1831	\$3181	\$4531	
<b>15.00</b>	\$574	\$1324	<b>\$2074</b>	\$3574	\$5074	
16.50	\$667	\$1492	\$2317	\$3967	\$5617	
18.00	\$760	\$1660	\$2560	\$4360	\$6160	
19.50	\$853	\$1828	\$2803	\$4753	\$6703	

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

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)					Gross Margin (\$/ML)
	\$190 /t	\$240 /t	<b>\$290 /t</b>	\$390 /t	\$490 /t	
10.50	\$23	\$63	\$103	\$184	\$265	
12.00	\$30	\$76	\$122	\$214	\$307	
13.50	\$37	\$89	\$141	\$245	\$349	
<b>15.00</b>	\$44	\$102	<b>\$160</b>	\$275	\$390	
16.50	\$51	\$115	\$178	\$305	\$432	
18.00	\$58	\$128	\$197	\$335	\$474	
19.50	\$66	\$141	\$216	\$366	\$516	

## LUCERNE: Maintenance (Flood Irrigated - Border Check)

Murray Valley & Murrumbidgee Valley

Irrigated Winter - 2012

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total
Operation	Month	Cost		Total	Rate/ha	Cost		Total
		hrs/ha	\$/hour	\$/ha		\$	\$/ha	
Broadleaf & grass weed spray ( <i>eg. Sprayseed and diuron</i> )	Jun/Jul	contract		\$10.00	2.40 L/ha	\$6.00/L	\$14.40	<b>\$24.40</b>
		with above			1.50 L/ha	\$7.70/L	\$11.55	<b>\$11.55</b>
Topdress with single super phosphate ( <i>eg. superfect</i> )	Aug	0.05	\$41.38	\$2.23	350kg/ha	\$0.380/kg	\$133.00	<b>\$135.23</b>
Insect & mite spray ( <i>eg. dimethoate</i> )	Sep	contract		\$10.00	0.15 L/ha	\$12.25/L	\$1.84	<b>\$11.84</b>
Mowing, raking and baling	contract	Sep-Apr	600	bales/ha @	\$2.00	\$/bale	\$1,200.00	<b>\$1,200.00</b>
Cartage & stacking	contract	Sep-Apr	600	bales/ha @	\$1.20	\$/bale	\$720.00	<b>\$720.00</b>
Irrigation*	Sep-Mar				13.0ML/ha	\$13.27/ML	\$172.51	<b>\$172.51</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.

<b>AGRONOMIC NOTES:</b>	See the NSW DPI publications: " <i>Lucerne for pasture and fodder</i> ", " <i>Weed control in pastures and lucerne</i> " and " <i>Insect and mite control in field crops</i> "
<b>Prices:</b>	<ul style="list-style-type: none"> <li>- Manage stand well for best production, quality and persistence</li> <li>- Prices are estimated and GST-exclusive.</li> <li>- Prices based on small (25kg) bales - Prices should be \$6-8/bale for this price per tonne.</li> <li>- Hay prices are highly sensitive to supply and demand. Higher quality can improve returns.</li> </ul>
<b>Rotation:</b>	<ul style="list-style-type: none"> <li>- Expected productive stand life 3 - 4 years.</li> <li>- Terminate stand when no longer economically viable (ie less than 50 plants/m<sup>2</sup>) or weedy or thin patches. Rotate with cereals to reduce disease and insect problems.</li> </ul>
<b>Weed Control:</b>	<ul style="list-style-type: none"> <li>- Apply herbicides to dormant lucerne in winter, after cutting or grazing, to control broadleaf and grass weeds (Consult <i>Weed control in pastures and lucerne</i>).</li> <li>* Note that Diuron is under review by the APVMA. It can still be used used in lucerne but people need to read and consult the current use permit before use and observe requirements.</li> </ul>
<b>Insect Control:</b>	<ul style="list-style-type: none"> <li>- Regularly monitor for insects. Cut, graze or spray when necessary to control pests.</li> </ul>
<b>Irrigation:</b>	<ul style="list-style-type: none"> <li>- Good irrigation management is critical for high yields and persistence. Fast irrigation essential on flood layouts. Water use depends upon the soil type and weather (10 - 16 ML ha per season).</li> <li>- Irrigation scheduling allows more efficient water use and helps to avoid waterlogging.</li> <li>- <b>Irrigation cost includes the variable cost only.</b></li> <li>- <b>Water costs used in the MIA budgets are based on 2010-11 prices.</b></li> <li>- <b>For water costs in other areas, refer to the water prices section.</b></li> </ul>
<b>Fertiliser:</b>	<ul style="list-style-type: none"> <li>- High inputs of phosphorus fertiliser are needed to replace nutrients removed by highly productive hay stands.</li> </ul>
<b>Production:</b>	<ul style="list-style-type: none"> <li>- Five cuts are made during the season (6-7 possible depending on season and location).</li> <li>- Assume 1 tonne=40 small (25kg) square bales.</li> <li>- Assume 9 t is good quality and 6 t is downgraded by weather, weeds, etc.</li> </ul>
<b>Cutting Management:</b>	<ul style="list-style-type: none"> <li>- For stand persistence under flood irrigation allow 2 cm regrowth before watering again to avoid scald. To avoid damage to crown buds, do not cut below 7cm.</li> </ul>
<b>Risk:</b>	<ul style="list-style-type: none"> <li>- The production of high quality lucerne hay involves significant risk (mainly weather) which potential growers should take into account.</li> </ul>
<b>Machinery:</b>	<ul style="list-style-type: none"> <li>- Machinery costs include variable costs only for the tractor and implements</li> <li>- Baling and mowing prices are based on contract small bale prices.</li> <li>- Two tractors: of 57 kW (76 HP) PTO and 63 kW (86 HP) engine; and of 130 kW (175 HP) PTO and 146 kW (196 HP) engine are assumed.</li> </ul>
<b>Economics:</b>	<ul style="list-style-type: none"> <li>- Input and crop prices are correct at the time of writing (April 2011). Market uncertainty makes estimation of future pricing impractical.</li> <li>- <b>Cost of establishment should be spread over life of the stand</b></li> </ul>



**LUCERNE: Establishment (Flood Irrigated - Border Check)**

Irrigated Winter - 2012

Murray Valley &  
Murrumbidgee Valley

**1. GROSS MARGIN BUDGET:**

**INCOME:**

5.0 t/ha @	\$350 /tonne ON FARM
3.0 t/ha @	\$200 /tonne ON FARM
<b>8.0 t/ha @</b>	<b>\$294 /tonne ON FARM *</b>
(4 cuts @ 2 t/ha/cut)	* Weighted average price

Standard Budget \$/ha	Your Budget \$/ha
\$1,750	
\$600	

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

<b>\$2,350</b>
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**VARIABLE COSTS:**

See following page for detail

Cultivation.....	\$75
Sowing.....	\$115
Fertiliser.....	\$114
Fungicide.....	\$6
Herbicide.....	\$40
Insecticide.....	\$15
Mow, rake and bale.....	\$640
Cartage & stacking.....	\$384
Irrigation.....	\$106
<b>B. TOTAL VARIABLE COSTS \$/ha:</b>	<b>\$1,496</b>

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

<b>\$854</b>
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**D. GROSS MARGIN \$/ML:**

<b>\$107</b>
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**SENSITIVITY TABLES**

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

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)					Gross Margin (\$/ha)
	\$194 /t	\$244 /t	<b>\$294 /t</b>	\$394 /t	\$494 /t	
5.00	-\$335	-\$85	\$165	\$665	\$1165	
6.00	-\$205	\$95	\$395	\$995	\$1595	
7.00	-\$76	\$274	\$624	\$1324	\$2024	
<b>8.00</b>	\$54	\$454	<b>\$854</b>	\$1654	\$2454	←
9.00	\$184	\$634	\$1084	\$1984	\$2884	
10.00	\$314	\$814	\$1314	\$2314	\$3314	
11.00	\$443	\$993	\$1543	\$2643	\$3743	

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

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)					Gross Margin (\$/ML)
	\$194 /t	\$244 /t	<b>\$294 /t</b>	\$394 /t	\$494 /t	
5.00	-\$42	-\$11	\$21	\$83	\$146	
6.00	-\$26	\$12	\$49	\$124	\$199	
7.00	-\$9	\$34	\$78	\$166	\$253	
<b>8.00</b>	\$7	\$57	<b>\$107</b>	\$207	\$307	←
9.00	\$23	\$79	\$135	\$248	\$360	
10.00	\$39	\$102	\$164	\$289	\$414	
11.00	\$55	\$124	\$193	\$330	\$468	

# LUCERNE: Establishment (Flood Irrigated - Border Check)

## Murray Valley & Murrumbidgee Valley

Irrigated Winter - 2012

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost
Operation	Month	hrs/ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	\$/ha
Plough	Dec	0.22	\$48.80	\$10.89				<b>\$10.89</b>
Off-set disc	Jan	0.35	\$42.85	\$14.88				<b>\$14.88</b>
Scarify	Feb/Mar	0.17	\$45.05	\$7.71				<b>\$7.71</b>
Pre-emergent weed spray (eg. <i>trifluralin</i> )	Apr	contract		\$10.00	1.70 L/ha	\$8.50/L	\$14.45	<b>\$24.45</b>
Harrow (x 2)		0.17	\$62.38	\$20.97				<b>\$41.94</b>
Sow	Apr/May	0.17	\$62.38	\$10.48	12kg/ha	\$8.70/kg	\$104.40	<b>\$114.88</b>
Seed inoculation		with above			12kg/ha	\$0.04/kg	\$0.48	<b>\$0.48</b>
Fungicide seed treatment (eg. Metalaxyl)		with above			150 mL/100kg seed	\$0.32/mL	\$5.80	<b>\$5.80</b>
Apply single super phosphate (eg. <i>Superfect</i> ®)		with above			300kg/ha	\$0.380/kg	\$114.00	<b>\$114.00</b>
Insect & mite spray (eg. <i>Boom spray bifenthrin</i> )	May	contract		\$10.00	0.10 L/ha	\$46.00/L	\$4.60	<b>\$14.60</b>
Broadleaf weed spray (eg. <i>2,4-DB</i> )	May/Jun	contract		\$10.00	1.00 L/ha	\$5.97/kg	\$5.97	<b>\$15.97</b>
Cut, rake and bale	Oct-Apr	contract	320.00	bales/ha	2.00	\$/bale		<b>\$640.00</b>
Cartage & stacking	Oct-Apr	contract	320.00	bales/ha	1.20	\$/bale		<b>\$384.00</b>
Irrigation*	Sep - Mar				8.0ML/ha	\$13.27/ML	\$106.16	<b>\$106.16</b>

<b>AGRONOMIC NOTES:</b>	See the NSW DPI publications: " <i>Lucerne for pasture and fodder</i> ", " <i>Weed control in pastures and lucerne</i> " and " <i>Insect and mite control in field crops</i> "
<b>Prices:</b>	<ul style="list-style-type: none"> <li>- Domestic hay prices fluctuate widely depending on supply and demand.</li> <li>- Prices are estimated and GST-exclusive.</li> <li>- During drought years prices may range from \$300-600/ t. Prices used here reflect the current drought.</li> <li>- Higher prices are generally achieved during early winter. Having adequate storage helps to achieve better season prices.</li> <li>- Prices based on small (25kg) bales - price per bale basis (between \$6-10 /bale). Small bales often receive higher returns per tonne than larger bales. Larger bales are cheaper to bale and transport.</li> </ul>
<b>Rotation:</b>	<ul style="list-style-type: none"> <li>- Expected stand life 3 - 4 years for hay production. Lucerne fixes nitrogen for use by subsequent crops.</li> <li>- Rotate lucerne with cereals to avoid insect &amp; disease problems.</li> </ul>
<b>Layouts:</b>	<ul style="list-style-type: none"> <li>- Even grades with slopes of 1:750 - 1:1000 are preferred for flood irrigation to allow good drainage and avoid waterlogging.</li> </ul>
<b>Varieties:</b>	<ul style="list-style-type: none"> <li>- Use adapted, root-rot resistant varieties (semi-dormant to highly winter active).</li> </ul>
<b>Inoculation:</b>	<ul style="list-style-type: none"> <li>- Inoculate lucerne with correct strain of rhizobia (AL) to ensure good nodulation for nitrogen fixation (pretreated seed is available but increases cost).</li> </ul>
<b>Weed Control:</b>	<ul style="list-style-type: none"> <li>- Minimise weed competition.</li> <li>- Pre-emergent herbicide controls grasses and wireweed during establishment.</li> <li>- Post-emergent herbicide applied for broadleaf weed control (2,4-DB is used in this budget but other options are available.)</li> </ul>
<b>Disease Control:</b>	<ul style="list-style-type: none"> <li>- Root rot resistant varieties are crucial for flood irrigation.</li> <li>- Treat seed with a fungicide to prevent damping off disease.</li> </ul>
<b>Insect Control:</b>	<ul style="list-style-type: none"> <li>- Seedlings are very susceptible to insects, particularly earth mites (RLEM, BOM) and aphids.</li> <li>- Regularly monitor establishing crops and take necessary remedial action.</li> <li>- Consider seed treatment or preventative bare earth sprays in high risk situations.</li> </ul>
<b>Sowing time:</b>	<ul style="list-style-type: none"> <li>- Sow lucerne in autumn (or early spring, if irrigation water is available) when temperatures are mild.</li> <li>- Avoid sowing in very cold or hot conditions.</li> </ul>
<b>Production:</b>	<ul style="list-style-type: none"> <li>- Assume four cuts are made during the first season. Assume that 1 tonne = 40 small square 25kg bales.</li> <li>- Assume 5 t is high quality and 3 t is downgraded by weather, weeds, etc.</li> </ul>
<b>Harvest Management:</b>	<ul style="list-style-type: none"> <li>- Do not cut until plants are 20cm tall and allow plants to flower once during the first year to aid persistence.</li> </ul>
<b>Fertiliser:</b>	<ul style="list-style-type: none"> <li>- Lime should be incorporated at least 3 months before sowing, if soil is acid (pH &lt; 5.2 (CaCl<sub>2</sub>)). This cost is not included in the budget.</li> <li>- Phosphorus fertiliser banded beneath the seed at sowing helps establishment and early growth.</li> <li>- Molybdenum super at sowing aids nodulation. Apply gypsum to sodic or crusting soils to improve soil permeability, reduce crusting and improve establishment.</li> </ul>
<b>Irrigation:</b>	<ul style="list-style-type: none"> <li>- <b>Irrigation cost includes the variable cost only.</b></li> <li>- <b>Water costs used in the MIA budgets are based on 2011-12 prices.</b></li> <li>- <b>For water costs in other areas, refer to the water prices section.</b></li> </ul>
<b>Risk:</b>	<ul style="list-style-type: none"> <li>- The production of high quality lucerne hay involves significant risk due to weather and price fluctuations which potential growers should take into account. Thus, some of hay is at a lower price.</li> </ul>
<b>Machinery:</b>	<ul style="list-style-type: none"> <li>- Machinery costs include variable costs only for the tractor and implements. Two tractors: of 57 kW (76 HP) PTO and 63 kW (86 HP) engine; and of 130 kW (175 HP) PTO and 146 kW (196 HP) engine are assumed.</li> </ul>
<b>Economics:</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 (April 2012). Market uncertainty makes estimation of future pricing impractical.</li> <li>- Cost of establishment should be spread over life of the stand</li> </ul>



**Department of  
Primary Industries**

**FABA BEANS - (Furrow Irrigated - Beds)  
Irrigated Winter - 2012**

**Murrumbidgee Valley**

**1. GROSS MARGIN BUDGET:**

**INCOME:**

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

Standard Budget \$/ha	Your Budget \$/ha
\$1,350	

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

<b>\$1,350</b>
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**VARIABLE COSTS:**

See following page for detail

Cultivation.....	\$44
Sowing.....	\$141
Fertiliser.....	\$78
Fungicide.....	\$104
Herbicide.....	\$49
Insecticide.....	\$44
Contract harvesting.....	\$106
Levies.....	\$14
Crop insurance.....	\$44
Irrigation.....	\$60
<b>B. TOTAL VARIABLE COSTS \$/ha:</b>	<b>\$684</b>

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

<b>\$666</b>
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**D. GROSS MARGIN \$/ML:**

<b>\$148</b>
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**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	\$300 /t	\$320 /t	\$340 /t	
3.00	\$124	\$181	\$239	\$296	\$354	
3.50	\$247	\$314	\$381	\$448	\$515	
4.00	\$370	\$447	\$523	\$600	\$677	
4.50	\$494	\$580	<b>\$666</b>	\$752	\$838	
5.00	\$617	\$712	\$808	\$904	\$1000	
5.50	\$740	\$845	\$950	\$1056	\$1161	
6.00	\$863	\$978	\$1093	\$1208	\$1323	

**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	\$300 /t	\$320 /t	\$340 /t	
3.00	\$28	\$40	\$53	\$66	\$79	
3.50	\$55	\$70	\$85	\$100	\$114	
4.00	\$82	\$99	\$116	\$133	\$150	
<b>4.50</b>	\$110	\$129	<b>\$148</b>	\$167	\$186	
5.00	\$137	\$158	\$180	\$201	\$222	
5.50	\$164	\$188	\$211	\$235	\$258	
6.00	\$192	\$217	\$243	\$268	\$294	

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.

## FABA BEANS - (Furrow Irrigated - Beds)

### Murrumbidgee Valley

Irrigated Winter - 2012

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost
Operation	Month	hrs/ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	\$/ha
Scarify	Jan/Feb	0.17	\$45.05	\$7.71				\$7.71
Shape beds	Mar	0.26	\$46.38	\$12.08				\$12.08
Broadleaf & grass weed control <i>eg. boom spray (glyphosate 450)</i>	Apr	contract		\$10.00	1.00 L/ha	\$4.42/L	\$4.42	\$14.42
Additional bed shape	Apr	0.26	\$46.38	\$12.08				\$12.08
Sow	May	0.17	\$62.38	\$10.48	120kg/ha	\$1.05/kg	\$126.00	\$136.48
Seed inoculation		with above			120kg/ha	\$0.040/kg	\$4.80	\$4.80
Apply phosphorus / sulphur fertiliser ( <i>eg. Grain Legume Super</i> )		with above			225kg/ha	\$0.530/kg	\$77.63	\$77.63
Construct tail drain		0.26	\$46.38	\$12.08				\$12.08
Pre-emergent weed spray <i>eg. ground spray Simazine</i>	May, contract		\$10.00	\$10.00	2.0 L/ha	\$6.00/kg	\$12.00	\$22.00
Grass weed spray <i>eg. Haloxyfop (Verdict®)</i>	June contract		\$10.00	\$10.00	0.060 L/ha	\$48.90/L	\$2.93	\$12.93
1st leaf disease spray ( <i>eg. mancozeb</i> )	Jun/Jul	with above			2.20kg/ha	\$8.65/kg	\$19.03	\$19.03
2nd leaf disease spray ( <i>eg. mancozeb</i> )	Jul	contract		\$10.00	2.00kg/ha	\$8.65/kg	\$17.30	\$27.30
3rd leaf disease spray ( <i>eg. *aerially spray carbendazim</i> )	Jul/Aug	contract		\$18.15	0.50kg/ha	\$80.00/kg	\$40.00	\$58.15
4th leaf disease spray + heliothis spray ( <i>eg. aerially apply mancozeb + synthetic pyrethroid plus</i> <i>eg. lambda-cyhalothrin (Karate Z®)</i> )	Oct	contract		\$18.15	2.38kg/ha	\$8.65/kg	\$20.59	\$38.74
		with above			0.03kg/ha	\$163.64/kg	4.9092	\$4.91
Contract harvest	Nov/Dec	contract		\$96.29				\$96.29
Chaser Bin	Nov/Dec	0.22	\$45.05	\$9.91				\$9.91
Irrigation*					4.5ML/ha	\$13.27/ML	\$59.72	\$59.72
Crop Levies					1.02% of on-farm value			\$13.77
Crop Insurance					3.270% of on-farm value			\$44.15

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>	<ul style="list-style-type: none"><li>- Monitor and record crop performance. Key checks include establishment, weeds, insects, disease and pod fill.</li></ul>
<b>Paddock selection:</b>	<ul style="list-style-type: none"><li>- Select paddocks with low broadleaf weed burdens.</li><li>- Good weed control is required in previous years.</li><li>- Grow faba beans on soils with a pH above 5.2 (CaCl<sub>2</sub>).</li></ul>
<b>Rotation</b>	<ul style="list-style-type: none"><li>- Suited to farming systems following a winter cereal or maize.</li></ul>
<b>Varieties</b>	<ul style="list-style-type: none"><li>- This budget is based on Farah. Farah is for human consumption.</li><li>- Other options are Nura and Fiesta VF.</li><li>- See NSW DPI "<i>Winter crop variety sowing guide 2012</i>" for approved varieties for SNSW.</li></ul>
<b>Sowing</b>	<ul style="list-style-type: none"><li>- 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.</li><li>- If using your own seed, adjust seed price accordingly.</li></ul>
<b>Fertiliser:</b>	<ul style="list-style-type: none"><li>- A fertiliser such as Grain Legume Super is applied at sowing to supply high phosphorus and sulphur requirements.</li></ul>
<b>Disease control:</b>	<ul style="list-style-type: none"><li>- 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.</li><li>- 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.</li><li>- Refer to Pulse Point 16: "<i>Foliar disease of Faba Beans - Management in Southern NSW</i>" for fungicide sprays in high disease years.</li></ul>
<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 NSW DPI "<i>Weed control in winter crops 2012</i>" for alternative herbicides.</li></ul>
<b>Pest Control</b>	<ul style="list-style-type: none"><li>- Refer to NSW DPI "<i>Insect and mite control in field crops 2012</i>".</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>

## FABA BEANS - (Furrow Irrigated - Beds)

Murrumbidgee Valley

Irrigated Winter - 2012

### AGRONOMIC NOTES CONTINUED:

<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>Irrigation cost includes the variable cost only.</b></li><li>- <b>Water costs used in the MIA budgets are based on 2011-12 prices.</b></li><li>- <b>For water costs in other areas, 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 \$22/hr, an additional \$37/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 (April 2012). 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>



**CANOLA: (Furrow Irrigated - Beds)**

**Irrigated Winter - 2012**

**Murrumbidgee Valley**

**1. GROSS MARGIN BUDGET:**

**INCOME:**

3.00 tonnes/ha @ \$520 /t (on farm, 42% oil)

Standard Budget \$/ha	Your Budget \$/ha
\$1,560	

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

<b>\$1,560</b>	
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**VARIABLE COSTS:**

See following page for detail

Cultivation.....	\$44	
Sowing.....	\$68	
Fertiliser.....	\$373	
Herbicide.....	\$43	
Insecticide.....	\$21	
Contract windrowing.....	\$30	
Contract harvesting.....	\$84	
Levies.....	\$20	
Crop insurance.....	\$51	
Irrigation.....	\$46	
<b>B. TOTAL VARIABLE COSTS \$/ha:</b>	<b>\$781</b>	

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

<b>\$779</b>	
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**D. GROSS MARGIN \$/ML:**

<b>\$223</b>	
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**SENSITIVITY TABLES**

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

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)					Gross Margin (\$/ha)
	\$480 /t	\$500 /t	\$520 /t	\$540 /t	\$560 /t	
1.50	-\$17	\$12	\$41	\$70	\$98	
2.00	\$212	\$251	\$289	\$327	\$365	
2.50	\$507	\$555	\$602	\$650	\$698	
<b>3.00</b>	\$736	\$793	<b>\$925</b>	\$908	\$965	←
3.50	\$965	\$1032	\$1099	\$1166	\$1233	
4.00	\$1194	\$1270	\$1347	\$1423	\$1500	
4.50	\$1423	\$1509	\$1595	\$1681	\$1767	

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

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)					Gross Margin (\$/ML)
	\$480 /t	\$500 /t	\$520 /t	\$540 /t	\$560 /t	
1.50	-\$5	\$3	\$12	\$20	\$28	
2.00	\$61	\$72	\$83	\$93	\$104	
2.50	\$145	\$158	\$172	\$186	\$199	
<b>3.00</b>	\$210	\$227	<b>\$264</b>	\$259	\$276	←
3.50	\$276	\$295	\$314	\$333	\$352	
4.00	\$341	\$363	\$385	\$407	\$429	
4.50	\$406	\$431	\$456	\$480	\$505	

**CANOLA: (Furrow Irrigated - Beds)**
**Murrumbidgee Valley Irrigated Winter - 2012**

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total
Operation	Month	hrs/ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	Total Cost \$/ha
Scarify	Jan/Feb	0.17	\$45.05	\$7.71				<b>\$7.71</b>
Apply sulphur fertiliser ( <i>eg. broadcast gypsum</i> )	Mar	0.26	\$46.38	\$12.08	500kg/ha	\$0.056/kg	\$28.00	<b>\$40.08</b>
Shape beds, fertilise urea		0.26	\$46.38	\$12.08				<b>\$12.08</b>
Apply nitrogen fertiliser ( <i>eg. Urea</i> )	Mar	with above			125kg/ha	0.662kg/ha	\$82.75	<b>\$82.75</b>
Pre-emergent weed spray ( <i>eg. trifluralin</i> )	Apr	contract		\$10.00	1.70 L/ha	\$8.50/L	\$14.45	<b>\$24.45</b>
Additional bed shape		0.26	\$46.38	\$12.08				<b>\$12.08</b>
Sow treated seed	Apr/May	0.17	\$62.38	\$10.48	4kg/ha	\$14.50/kg	\$58.00	<b>\$68.48</b>
Apply phosphorus fertiliser ( <i>eg: MAP</i> )		with above			150kg/ha	\$0.93/kg	\$140	<b>\$140.10</b>
Construct tail drains		0.26	\$46.38	\$12.08				<b>\$12.08</b>
Apply earthmite spray <i>eg. bifenthrin (Telstar®)</i>		contract		\$10.00	0.075 L/ha	\$46.00/L	\$3.45	<b>\$13.45</b>
Broadleaf weed spray <i>eg. Chlopyralid (Lontrel®)</i>	Jun	contract		\$10.00	0.30 L/ha	\$27.32/L	\$8.20	<b>\$18.20</b>
Apply nitrogen fertiliser ( <i>eg. urea</i> )	Jul	contract		\$24.46	125kg/ha	\$0.662/kg	\$82.75	<b>\$109.75</b>
Apply heliothis spray synthetic pyrethroid <i>eg. lambda-cyhalothrin (Karate Z®)</i>	Sep/Oct	contract	(1 year in 3)	\$6.05	0.036 L/ha	\$163.64/L	\$1.96	<b>\$8.01</b>
Contract windrowing	Nov	contract		\$30.00				<b>\$30.00</b>
Contract harvest	Nov/Dec	contract		\$74.30				<b>\$74.30</b>
Chaser Bin		0.22	\$45.05	\$9.91				<b>\$9.91</b>
Irrigation					3.5ML/ha	\$13.27/ML	\$46.45	<b>\$46.45</b>
Crop Levies			\$1.50 /t	+	1.02% of on-farm value			<b>\$20.33</b>
Crop Insurance					3.27% of on-farm value			<b>\$51.01</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>Varieties:</b>	- For new varieties available, see NSW DPI " <i>Winter crop variety sowing guide 2012</i> " and consult with your district agronomist.
<b>Sowing Time:</b>	- Ideal sowing time of 20th April to 10th of May is crucial for profitable yields.
<b>Rotation:</b>	- Usually follows a winter cereal. Costs are lower if sowing into permanent beds. Check soil pH and lime if the pH(CaCl <sub>2</sub> ) is less than 5.
<b>Oil Content:</b>	- An oil bonus/discount of 1.5% of price is applied for every 1% above/below 42% oil content. - Irrigated crops require high fertiliser inputs for good yields and quality.
<b>Disease management</b>	- Use variety and paddock selection and seed treatments to minimise the effects of blackleg - See latest variety blackleg ratings available from your District Agronomist.
<b>Fertiliser:</b>	- Due to canola's high sulphur requirements, gypsum is preferred. - Aim to apply 40 - 60% of total nitrogen requirements before sowing. - If deep soil N test indicates 100 units N consider a split N topdressing strategy.
<b>Weed Control:</b>	- Herbicides are boomsprayed in a dry year and aerial sprayed in a wet year. Aerial spray used later in the season. Refer to " <i>Weed control in winter crops 2012</i> " for alternative herbicides.
<b>Pest Control:</b>	- Apply synthetic pyrethroid spray before Nov 7 to comply with Heliothis IRM Strategy. - Use imidacloprid (eg. Goucho®) treated seed to suppress mites and aphids in low pressure situations. See NSW DPI " <i>Insect and mite control in field crops 2012</i> ".
<b>Irrigation:</b>	- Schedule spring irrigations according to plant water use. Use soil moisture monitoring equipment. - *Budget allows establishment irrigation (1.5ML/ha) and 2 spring irrigations 1ML/ha each. - <b>Irrigation cost includes the variable cost only.</b> - <b>Water costs used in the MIA budgets are based on 2011-12 prices.</b> - <b>For water costs in other areas, refer to the water prices section.</b>
<b>Windrowing:</b>	- Reduces risk of crop loss from shattering and adverse weather conditions.
<b>Bedcropping:</b>	- Bed cropping produces high yields but may require additional capital investment in equipment from \$2,000 to \$20,000.
<b>Machinery:</b>	- Machinery costs include variable costs only for the tractor, implements and header. - Contract harvesting does not include the cost of fuel.
<b>Labour:</b>	- The labour required for machinery operations is 2.00 hr/ha. - Using a labour cost of \$22/hr, an additional \$44/ha can be deducted from the budget.
<b>Economic note:</b>	- These gross margins are only a guide. They do not include overhead costs or GST. - Input and crop prices are correct at the time of writing (April 2012). Market uncertainty makes estimation of future pricing impractical. - <b>Use your own figures and price assumptions to determine your own gross margin.</b>



**Winter Annual Pasture: Sub clover - Maintenance (Flood Irrigated - Border Check)**

**Murrumbidgee Valley & Murray Valley Costs only**

**Irrigated Winter - 2012**

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost \$/ha
Operation	Month	hrs /ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	
Topdress phosphorus fertiliser <i>(eg. single super)</i>	Feb/Mar	0.05	\$41.38	\$2.23	300kg/ha	\$0.38/kg	\$114.00	<b>\$116.23</b>
Insect & mite spray <i>eg. dimethoate</i>	May/June	contract		\$10.00	0.15 L/ha	\$12.25/L	\$1.84	<b>\$11.84</b>
Broadleaf weedspray <i>eg. bromoxynil</i>	May/June	contract		\$10.00	2.00 L/ha	\$15.00/L	\$30.00	<b>\$40.00</b>
Irrigation*					5ML/ha	13.3ML/ha	\$66.35	<b>\$66.35</b>

**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.**

**Fertiliser** - Fertiliser requirement depends on irrigation intensity, amount of forage removed and the value of production. Irrigated annual pastures require at least 300 kg/ha single super every year to replace phosphorus.

**Stocking rate** - Intensively irrigated and fertilised annual pastures can maintain 18-24 DSE (dry sheep equivalent)/ha per year (autumn till late spring) if well managed, but the more usual rate is 10-12 DSE/ha. Earlier irrigation, higher inputs of fertiliser and water allow more stock to be carried.  
 - Avoid overgrazing in winter as pasture recovery time increases.  
 - Set stocking helps to maintain clover dominant pasture.

**Irrigation** - Ideally subclover is irrigated 2-3 times in autumn commencing in late Feb/early March to establish stands and twice in spring to ensure seed set.  
 - Germination is reduced with earlier commencement of irrigation. If the autumn is dry, up to 5 irrigations may be required.  
 - Autumn production is directly related to plant population resulting from seed set in the previous spring.  
**- Irrigation cost includes the variable cost only.**  
**- Water costs used in the MIA budgets are based on 2011-12 prices.**  
**- For prices in other areas, refer to the water prices section.**

**Machinery** - Machinery costs include variable costs only for the tractor and implements.

**Labour** - The labour required for machinery operations is 0.07 hr/ha.  
 - Using a labour cost of \$22/hr, an additional \$24/ha can be deducted from the budget.

**Economic note** - These gross margins are only a guide. They do not include overhead costs or GST.  
 - Input and crop prices are correct at the time of writing (April 2012). Market uncertainty makes estimation of future pricing impractical.  
**- Use your own figures and price assumptions to determine your own gross margin.**

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.