



RICE - MEDIUM GRAIN (aerial sown)

Farm Enterprise Budget Series - Murrumbidgee Valley

Summer 2009/2010

1. GROSS MARGIN BUDGET:

INCOME:

10.00 t/ha @ \$550.00 /t (on farm)

Standard Budget \$/ha	Your Budget \$/ha
\$5,500	

A. TOTAL INCOME \$/ha:

\$5,500	
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VARIABLE COSTS:

See following page for detail

Cultivation.....	\$19	
Sowing.....	\$107	
Fertiliser.....	\$296	
Herbicide.....	\$324	
Insecticide.....	\$4	
Irrigation.....	\$223	
Aerial image.....	\$4	
Levies & Insurance.....	\$91	
Harvest.....	\$264	
Cartage	\$115	
B. TOTAL VARIABLE COSTS \$/ha:	\$1,446	

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

\$4,054	
\$290	

D. GROSS MARGIN \$/ML:

SENSITIVITY TABLES

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

YIELD t/ha	On Farm Water Price				
	\$550 /t	\$550 /t	\$550 /t	\$550 /t	\$550 /t
7.00	\$2,431	\$2,431	\$2,431	\$2,431	\$2,431
8.50	\$3,243	\$3,243	\$3,243	\$3,243	\$3,243
10.00	\$4,054	\$4,054	\$4,054	\$4,054	\$4,054
11.50	\$4,866	\$4,866	\$4,866	\$4,866	\$4,866
13.00	\$5,677	\$5,677	\$5,677	\$5,677	\$5,677

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

YIELD t/ha	On Farm Price				
	\$550 /t	\$550 /t	\$550 /t	\$550 /t	\$550 /t
7.00	\$174	\$174	\$174	\$174	\$174
8.50	\$232	\$232	\$232	\$232	\$232
10.00	\$290	\$290	\$290	\$290	\$290
11.50	\$348	\$348	\$348	\$348	\$348
13.00	\$405	\$405	\$405	\$405	\$405

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. Estimated prices are GST - exclusive

RICE - MEDIUM GRAIN (aerial sown)

Farm Enterprise Budget Series - Murrumbidgee Valley

Summer 2009/2010

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total
Operation	Month	hrs/ha	Cost \$/hour	% of area	Total \$/ha	Rate/ha	Cost \$/ha	Total \$/ha
Chisel plough	Aug	0.22	48.80		\$10.89			\$10.89
Broadcast phosphorus fertiliser eg: <i>broadcast Superfect®</i>	Sept	0.10	16.61		\$1.58	125kg/ha	\$371.00/t	\$46.38
Apply nitrogen fertiliser eg: <i>drill urea</i>	Sep/Oct	0.28	46.71		\$13.08	250kg/ha	\$551.00/t	\$137.75
Reform banks	Sep/Oct	1.18	18.06	4%	\$0.85			\$0.85
Rolling	Sep/Oct	0.20	38.55		\$7.56			\$7.56
Grass weed control eg: <i>aerial spray molinate</i>	Oct	contract			\$25.00	1.50 L/ha	\$6.31/L	\$9.47
Aquatic weed control eg: <i>aerial spray benzofenap (Taipan®)</i>	Oct	with above				2.00 L/ha	\$54.59/L	\$109.18
Bloodworm control eg: <i>aerial spray chlorpyrifos</i>	Oct	with above				0.15 L/ha	\$20.91/L	\$3.14
Aerial sow	Oct	contract			\$36.00	150kg/ha	\$0.47/kg	\$70.50
Aquatic weed control eg: <i>aerial spray thiobencarb (Saturn®)</i>	Oct/Nov	contract			\$25.00	3.75kg/ha	\$21.35/kg	\$80.06
Bloodworm control eg: <i>aerial spray alpha cypermethrin (Dominex Duo®)</i>	Oct/Nov	with above				0.10 L/ha	\$12.80/L	\$1.28
Aquatic weed control eg: <i>aerial spray Basagran M60</i>	Nov/Dec	contract			\$27.00	2.50 L/ha	\$19.15/L	\$47.88
Aerial Image	Dec				\$3.85			\$3.85
Topdress Nitrogen fertiliser eg: <i>aerial topdress urea</i>	Jan	contract			\$28.00	125kg/ha	\$551.00/t	\$68.88
Harvest	Apr/May	contract				10.0 t/ha	\$25.00/t	\$250.00
Chaser bin		0.32	45.05		\$14.19			\$14.19
Irrigation*						14.0ML/ha	\$15.90/ML	\$222.60
Cartage						10.0 t/ha	\$11.50/t	\$115.00
Research levy (farm gate value)						10.0 t/ha	\$0.00	\$0.00
Crop insurance (estimated crop value)						\$5,500	1.65%	\$90.75

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. Estimated prices are GST - exclusive

AGRONOMIC NOTES	See <i>RICECHECK Recommendation s and Rice Crop Protection Guide 2009.</i> Note that average yield in the past 5 years for Amaroo in the MIA is 10t/ha.
Price	- The prices of medium and long grain for 2009-10 are Sunrice premium pool contract prices for 65,000 tonnes. Tonnes grown above the the premium pool will probably be received at a lower price. This budget is based on Amaroo. Costs may vary for other varieties.
Varieties	- Amaroo and Reiziq are standard medium grain varieties. Other medium grain varieties include Quest for late October sowing, Jarrah for November sowing. Other medium grain varieties include Opus and Illabong.
Rotation	- This is the first crop following a winter cereal or previous rice crop.
Weed Control	- Herbicides used in the budget are based on the Taipan [®] with standard Saturn [®] & Molinate Primer program (program 3). Seek advice for using alternative programs and see the 'Rice Crop Protection Guide 2009". Sound weed management for aquatic weeds delays the build up of herbicide resistance. Management programs emphasise the importance of using 2 herbicides on each weed and/or rotating herbicides to avoid using the same herbicide in consecutive rice crops.
Insect Control	- Bloodworms are a major insect pest at establishment and should be controlled before or at sowing. Alpha cypermethrin (Dominex Duo [®]) and Fipronil (Cosmos [®]) seed dressing are alternatives to chlorpyrifos (See Rice Crop Protection Guide 2009). Other Pests: Ducks may need controlling, especially in the more western areas. Duck control is not included in this budget.
Pesticide Residues	- Drainage water containing pesticides must be retained on-farm for at least 28 days after application for MIA and 21 days for CIA.
Fertiliser	- Split apply urea to minimise risk of cold damage. Conduct NIR tissue test at PI to verify urea topdress requirement. Total nitrogen rate depends on paddock history and seasonal conditions. Apply phosphorus where Colwell soil P is less than 20mg/kg.
Aerial Image	- An aerial image should be used at PI to help identify the factors influencing rice crop growth variability and crop yield. This image may then be used to target NIR sampling at PI.
Sowing costs	- Aerial sown rice has a lower labour requirement than other sowing alternatives but consequently incurs higher application costs. The cost of dry broadcast sowing is \$70.20/ha at a sowing rate of 180kg/ha compared to \$93.53 in the aerial sown budget with 150 kg/ha seed rate.
Irrigation	- High yields require good water depth management. Aim for 20-25cm water depth at microspore. Crop water use varies with variety, seasonal conditions, soil type and depth of watertable. The MIA variable water costs are used in the budget. - The medium grain varieties (Amaroo, Quest, Jarrah) are more tolerant of salinity than long grain varieties (Langi, Doongara, Kyeema). There is some evidence that the medium grain varieties Reiz and Illabong are more sensitive to salinity than the other medium grain varieties. It is suggested that growers monitor and very carefully manage water salinity levels if growing more sensitive varieties.
Machinery	- Machinery costs include variable costs only for the tractor and implements. Two tractors: of 57 kW (77 HP) PTO and 66 kW (90 HP) engine; and of 141 kW (190 HP) PTO and 66 kW (90 HP) engine; and of 141 kW (190 HP) PTO and 148 kW (225 HP) engine are assumed.
More information	See Production of Quality Rice in South East Australia. Also Rice Crop Production Guide, Choose a Rice Variety, Ricecheck and Using Groundwater for rice production, DII NSW website

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. Estimated prices are GST - exclusive



RICE MEDIUM GRAIN (Sod Sown)

Farm Enterprise Budget Series - Murrumbidgee Valley

Summer 2009/2010

1. GROSS MARGIN BUDGET:

INCOME:

10.00 t/ha @ \$550.00 /t (on farm)

Standard Budget \$/ha	Your Budget \$/ha
\$5,500	

A. TOTAL INCOME \$/ha:

\$5,500	
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VARIABLE COSTS:

See following page for detail

Cultivation.....	\$2	
Sowing.....	\$93	
Fertiliser.....	\$199	
Herbicide.....	\$137	
Insecticide.....	\$0	
Aerial image.....	\$4	
Irrigation.....	\$207	
Levies & Insurance.....	\$91	
Harvest.....	\$264	
Cartage.....	\$115	
B. TOTAL VARIABLE COSTS \$/ha:	\$1,112	

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

\$4,388	
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D. GROSS MARGIN \$/ML:

\$338	
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SENSITIVITY TABLES

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

YIELD t/ha	On Farm Price				
	\$550 /t	\$550 /t	\$550 /t	\$550 /t	\$550 /t
7.00	\$2,875	\$2,875	\$2,875	\$2,875	\$2,875
8.50	\$3,632	\$3,632	\$3,632	\$3,632	\$3,632
10.00	\$4,388	\$4,388	\$4,388	\$4,388	\$4,388
11.50	\$5,145	\$5,145	\$5,145	\$5,145	\$5,145
13.00	\$5,902	\$5,902	\$5,902	\$5,902	\$5,902

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

YIELD t/ha	On Farm Price				
	\$550 /t	\$550 /t	\$550 /t	\$550 /t	\$550 /t
7.00	\$221	\$221	\$221	\$221	\$221
8.50	\$279	\$279	\$279	\$279	\$279
10.00	\$338	\$338	\$338	\$338	\$338
11.50	\$396	\$396	\$396	\$396	\$396
13.00	\$454	\$454	\$454	\$454	\$454

RICE - MEDIUM GRAIN (sod sown)

Farm Enterprise Budget Series - Murrumbidgee Valley

Summer 2009/2010

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total	
Operation	Month	hrs/ha	Cost \$/hour	% of area	Total \$/ha	Rate/ha	Cost	Total \$/ha	Total Cost \$/ha
<i>Broadleaf & grass weed control eg: boom spray glyphosate 450</i>	Sep	0.05	41.38		\$2.23	1.00 L/ha	\$4.65/L	\$4.65	\$6.88
Reform banks		1.18	46.38	4%	\$2.18				\$2.18
Sow	Sep/Oct	0.28	46.71		\$13.08	170kg/ha	\$0.47/kg	\$79.90	\$92.98
Apply starter fertiliser eg: DAP		with above				70kg/ha	\$826.00/t	\$57.82	\$57.82
Grass weed control eg: paraquat, Barnstorm 250	Oct/Nov	with above				1.00 L/ha	\$8.35/L	\$8.35	\$8.35
Grass weed control eg: Cyhalofop (Barnstorm®)		0.05	41.38		\$2.23	1.00 L/ha	\$96.00/L	\$96.00	\$98.23
<i>Grass weed control eg: molinate</i>		Drip				3.75 L/ha	\$6.31/L	\$23.66	\$23.66
Broadcast urea	Oct/Nov	with above				80kg/ha	\$551.00/t	\$44.08	\$44.08
Aerial image	Dec				\$3.85				\$3.85
<i>Topdress nitrogen fertiliser eg: aerial topdress urea</i>	Jan	contract			\$28.00	125kg/ha	\$551.00/t	\$68.88	\$96.88
Harvest	Apr/May	contract				10.0 t/ha	\$25.00/t	\$250.00	\$250.00
Chaser bin		0.32	45.05		\$14.19				\$14.19
Irrigation*						13.0ML/ha	\$15.90/ML	\$206.70	\$206.70
Cartage						10.0 t/ha	\$11.50/t	\$115.00	\$115.00
Research levy (farm gate value)						10.0 t/ha	\$0.00/t	\$0.00	\$0.00
Crop insurance (estimated crop value)						\$5,500	1.65%	\$90.75	\$90.75

The budget is ONLY A GUIDE and should be altered for movements in crop and input prices, changes in seasonal conditions and the farm characteristics. Estimated prices are GST - exclusive

AGRONOMIC NOTES	See <i>RICECHECK Recommendations and Rice Crop Protection Guide 2009</i>
Price	- The prices of medium and long grain for 2009-10 are Sunrice premium pool contract prices for 65,000 tonnes. Tonnes grown above the the premium pool will probably be received at a lower price. on Amaroo. Costs may vary for other varieties.
Rotation	- This is the first crop following a 3 year sub clover pasture.
Varieties	- Amaroo and Reiziq are standard. Other medium grain varieties include Quest for late October sowing and Jarrah for November sowing. Sow varieties on time (See <i>Choosing a Rice Variety for 2007 on the web</i>)
Weed Control	- Barnyard Grass (> 5 leaf) may need to be controlled prior to molinate application - Barnstorm® or Aura® (group A) can be used for grass control before permanent water - See <i>Rice Crop Protection Guide 2009</i> for application and outline of alternative herbicides. - The reliance on one mode of action e.g. Group A will lead to increased resistance. Always use an alternative mode of action with Group A herbicide.
Insect Control	- In cooler seasons control of bloodworms and leaf miner may be required following permanent water.
Pesticide Residues	- Drainage water containing pesticides must be retained on-farm for 28 days after application for the MIA and 21 days for the CIA.
Fertiliser	- A low pre-flood nitrogen rate is applied because of the clover history - Conduct NIR tissue test at PI to verify urea topdressing requirement.
Aerial image	- Total nitrogen rate depends on paddock history (ie: how good was the pasture) and seasonal conditions. - An aerial image may be used at PI to help identify the factors influencing rice crop growth variability and crop yield. This image may then be used to target NIR sampling at PI.
Costs	- Apply phosphorus where Colwell soil P is less than 20mg/kg. - Sodsown rice has lower production costs; less nitrogen fertilizer and machinery use, compared to aerial sown rice.
Irrigation	- High yields require good water depth management. Aim for 20-25cm water depth at microspore. Crop water use varies with variety, seasonal conditions, soil type and depth of watertable. The MIA variable water costs are used in the budget. - The medium grain varieites (Amaroo, Quest, Jarrah) are more tolerant of salinity than long grain varieities (Langi, Doongara, Kyeema). There is some evidence that the medium grain varieities Reiziq and Illabong are more sensitive to salinity than the other medium grains. - It is suggested that growers monitor & very carefully manage water salinity levels if growing if growing more sensitive varieties. The budget is based on the assumption of 25% water allocation.
Machinery	- Machinery costs include variable costs only for the tractor and implements. Two tractors of 57 kW (77 HP) PTO and 66 kW (90 HP) engine; and of 141 kW (190 HP) PTO and 148 kW (225 HP) engine are assumed.
More information	- See Production of Quality Rice in South East Australia. Also Rice Crop Production Guide, - Choose a Rice Variety, Ricecheck and Using Groudwater for rice production, DII NSW website

The budget is ONLY A GUIDE and should be altered for movements in crop and input prices, changes in seasonal conditions and the farm characteristics. Estimated prices are GST - exclusive



RICE - LONG GRAIN (aerial sown)

Farm Enterprise Budget Series - Murrumbidgee Valley

Summer 2009/2010

1. GROSS MARGIN BUDGET:

INCOME:

9.25 t/ha @ \$610.00 /t (on farm)

Standard Budget \$/ha	Your Budget \$/ha
\$5,643	

A. TOTAL INCOME \$/ha:

\$5,643	
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VARIABLE COSTS:

See following page for detail

Cultivation.....	\$19	
Sowing.....	\$114	
Fertilizer.....	\$296	
Herbicide.....	\$279	
Insecticide.....	\$4	
Aerial Image.....	\$4	
Irrigation.....	\$207	
Harvest.....	\$245	
Cartage.....	\$106	
Levies & Insurance.....	\$93	
B. TOTAL VARIABLE COSTS \$/ha:	\$1,368	

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

\$4,274	
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D. GROSS MARGIN \$/ML:

\$329	
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SENSITIVITY TABLES

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

YIELD t/ha	On Farm Price				
	\$610 /t	\$610 /t	\$610 /t	\$610 /t	\$610 /t
6.85	\$2,922	\$2,922	\$2,922	\$2,922	\$2,922
7.65	\$3,373	\$3,373	\$3,373	\$3,373	\$3,373
8.45	\$3,824	\$3,824	\$3,824	\$3,824	\$3,824
9.25	\$4,274	\$4,274	\$4,274	\$4,274	\$4,274
10.05	\$4,725	\$4,725	\$4,725	\$4,725	\$4,725
10.85	\$5,176	\$5,176	\$5,176	\$5,176	\$5,176
11.65	\$5,627	\$5,627	\$5,627	\$5,627	\$5,627

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

YIELD t/ha	On Farm Price				
	\$610 /t	\$610 /t	\$610 /t	\$610 /t	\$610 /t
6.85	\$225	\$225	\$225	\$225	\$225
7.65	\$259	\$259	\$259	\$259	\$259
8.45	\$294	\$294	\$294	\$294	\$294
9.25	\$329	\$329	\$329	\$329	\$329
10.05	\$363	\$363	\$363	\$363	\$363
10.85	\$398	\$398	\$398	\$398	\$398
11.65	\$433	\$433	\$433	\$433	\$433

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RICE - LONG GRAIN (aerial sown)

Farm Enterprise Budget Series - Murrumbidgee Valley

Summer 2009/2010

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost \$/ha	
Operation	Month	hrs/ha	Cost \$/hour	% of area	Total \$/ha	Rate/ha	Cost		Total \$/ha
Chisel plough	Aug	0.22	48.80		\$10.89				\$10.89
<i>Broadcast phosphorus fertiliser eg: broadcast Superfect®</i>	Sept	0.10	16.61		\$1.58	125kg/ha	\$371/t	\$46.38	\$47.96
<i>Apply nitrogen fertiliser eg: drill urea</i>	Sep/Oct	0.28	46.71		\$13.08	250kg/ha	\$551/t	\$137.75	\$150.83
Reform banks	Sep/Oct	1.18	18.06	4%	\$0.85				\$0.85
Rolling	Sep/Oct	0.20	38.55		\$7.56				\$7.56
<i>Grass weed control eg: aerial spray molinate</i>	Oct	contract			\$25.00	3.75 L/ha	\$18.75/L	\$70.31	\$95.31
	Oct	with above				2.00 L/ha	\$54.59/L	\$109.18	\$109.18
<i>Aquatic weed control eg: aerial spray Benzofenap (Taipan®)</i>		with above				0.15 L/ha	\$20.91/L	\$3.14	\$3.14
<i>Bloodworm control eg: aerial spray chlorpyrifos</i>		with above							
Sow	Oct	contract			\$36.00	150kg/ha	\$0.52/kg	\$78.00	\$114.00
<i>Bloodworm control eg: aerial alpha cypermethrin (Dominex Due®)</i>		with above				0.10 L/ha	\$12.80/L	\$1.28	\$1.28
<i>Aquatic weed control eg: aerial spray Basagran M60</i>	Nov/Dec	contract			\$27.00	2.50 L/ha	\$19.15/L	\$47.88	\$74.88
<i>Aerial image of crop</i>	Dec				\$3.85				\$3.85
<i>Topdress nitrogen fertiliser eg: aerial topdress urea</i>	January	contract			\$28.00	125kg/ha	\$551.00/t	\$68.88	\$96.88
Harvest	Mar/Apr/May	contract				9.25 t/ha	\$25.00/t	\$231.25	\$231.25
Chaser bin		0.32	45.05		\$14.19				\$14.19
Irrigation*						13.0ML/ha	\$15.90/ML	\$206.70	\$206.70
Cartage						9.25 t/ha	\$11.50/t	\$106.38	\$106.38
Research levy (farm gate value)						9.25 t/ha	\$0.00/t	\$0.00	\$0.00
Crop insurance (estimated crop value)						\$5,643	1.65%	\$93.10	\$93.10

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AGRONOMIC NOTES	See <i>RICECHECK Recommendations and Rice Crop Protection Guide 2009</i>
Price	- The prices of medium and long grain for 2009-10 are Sunrice premium pool contract prices for 65,000 tonnes. Tonnes grown above the the premium pool will probably be received at a lower price. This budget is based on Langi. Inputs may vary for other varieties.
Rotation	- This is the first crop following a winter cereal or a previous rice crop.
Varieties	- Langi. Other long grain varieties required for year 2010 are Doongara (\$20-\$30 /t premium) and Kyeema (\$150/t premium) above medium grain prices.
Weed Control	- Sow varieties on time. Recommendations for <i>Choosing a Rice Variety 2 007 are on the web</i> - Herbicides used in the budget are based on program 1 in the 'Rice Crop protection Guide 2009'. Seek advice when using alternative programs and refer to the Rice Crop Protection Guide 2009. Sound weed management for aquatic weeds delays the build up of herbicide resistance. Management programs emphasise the importance of using 2 herbicides on each weed and/or rotating herbicides to avoid using the same herbicide in consecutive rice crops.
Insect Control	- Bloodworms are a major insect pest at establishment and should be controlled before or at sowing. Alphacypermethrin (Dominex Duo®) and Fipronil (Cosmos®) seed dressing are alternatives to chlorpyrifos. The 'Rice Crop Protection Guide 2009' outlines the alternatives for bloodworm control.
Other Pests	- Ducks may also need to be controlled, especially in the more western areas. Duck control is not included in this budget.
Pesticide Residues	- Drainage water containing pesticides must be retained on-farm for at least 28 days for the MIA and 21 days for the CIA.
Fertiliser	- Split apply urea to minimise risk of cold damage. Conduct NIR tissue test at PI to verify urea topdressing requirement. Total nitrogen rate depends on paddock history and seasonal conditions. Apply phosphorus where Colwell soil P is less than 20mg/kg.
Aerial Image	- An aerial image may be used at PI to help identify the factors influencing rice crop growth variability and crop yield. This image may then be used to target NIR sampling at PI.
Sowing costs	- Aerial sown rice has a lower labour requirement than other sowing alternatives but consequently incurs higher application costs.
Irrigation	- High yields require good water depth management. Aim for 20-25cm water depth at microspore. Crop water use varies with variety, seasonal conditions, soil type and depth of watertable. The MIA variable water costs are used in the budget. - The medium grain varieties (Amaroo, Quest, Jarrah) are more tolerant of salinity than long grain varieties (Langi, Doongara, Kyeema). There is some evidence that the medium grain varieties Reiziq and Illabong are more sensitive to salinity than the other medium grains. - It is suggested that growers monitor & very carefully manage water salinity levels if growing more sensitive varieties. The budget is based on the assumption of 25% water allocation.
Machinery	- Machinery costs include variable costs only for the tractor and implements. Two tractors of 57 kW (77 HP) PTO and 66 kW (90 HP) engine; and of 141 kW (190 HP) PTO and 148 kW (225 HP) engine are assumed.
More information	- See Production of Quality Rice in South Eastern Australia.

The budget is ONLY A GUIDE and should be altered for movements in crop and input prices, changes in seasonal conditions and the farm characteristics. Estimated prices are GST - exclusive



RICE - MEDIUM GRAIN (aerial sown using bore water)

Farm Enterprise Budget Series - Murrumbidgee Valley

Summer 2009/2010

1. GROSS MARGIN BUDGET:

INCOME:

9.00 t/ha @ \$550.00 /t (on farm)

Standard Budget \$/ha	Your Budget \$/ha
\$4,950	

A. TOTAL INCOME \$/ha:

\$4,950	
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VARIABLE COSTS:

See following page for detail

Cultivation.....	\$19	
Sowing.....	\$107	
Fertiliser.....	\$296	
Herbicide.....	\$324	
Insecticide.....	\$4	
Irrigation.....	\$884	
Aerial image.....	\$4	
Levies & Insurance.....	\$82	
Harvest.....	\$239	
Cartage	\$104	
B. TOTAL VARIABLE COSTS \$/ha:	\$2,062	

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

\$2,888	
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D. GROSS MARGIN \$/ML:

\$181	
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SENSITIVITY TABLES

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

YIELD t/ha	On Farm Price				
	\$550 /t	\$550 /t	\$550 /t	\$550 /t	\$550 /t
6.00	\$1,375	\$1,375	\$1,375	\$1,375	\$1,375
7.50	\$2,132	\$2,132	\$2,132	\$2,132	\$2,132
9.00	\$2,888	\$2,888	\$2,888	\$2,888	\$2,888
10.50	\$3,645	\$3,645	\$3,645	\$3,645	\$3,645
12.00	\$4,402	\$4,402	\$4,402	\$4,402	\$4,402

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

YIELD t/ha	On Farm Price				
	\$550 /t	\$550 /t	\$550 /t	\$550 /t	\$550 /t
6.00	\$86	\$86	\$86	\$86	\$86
7.50	\$133	\$133	\$133	\$133	\$133
9.00	\$181	\$181	\$181	\$181	\$181
10.50	\$228	\$228	\$228	\$228	\$228
12.00	\$275	\$275	\$275	\$275	\$275

RICE - MEDIUM GRAIN (aerial sown using bore water)

Farm Enterprise Budget Series - Murrumbidgee Valley

Summer 2009/2010

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total
Operation	Month	hrs/ha	Cost \$/hour	% of area	Total \$/ha	Rate/ha	Cost	Total \$/ha
Chisel plough	Aug	0.22	48.80		\$10.89			\$10.89
Broadcast phosphorus fertiliser <i>eg: broadcast Superfect®</i>	Sept	0.10	16.61		\$1.58	125kg/ha	\$371.00/t	\$46.38
Apply nitrogen fertiliser <i>eg: drill urea</i>	Sep/Oct	0.28	46.71		\$13.08	250kg/ha	\$551.00/t	\$137.75
Reform banks	Sep/Oct	1.18	18.06	4%	\$0.85			\$0.85
Rolling	Sep/Oct	0.20	38.55		\$7.56			\$7.56
Grass weed control <i>eg: aerial spray molinate</i>	Oct	contract			\$25.00	1.50 L/ha	\$6.31/L	\$9.47
Aquatic weed control <i>eg: aerial spray benzofenap (Taipan®)</i>	Oct	with above				2.00 L/ha	\$54.59/L	\$109.18
Bloodworm control <i>eg: aerial spray chlorpyrifos</i>		with above				0.15 L/ha	\$20.91/L	\$3.14
Aerial sow	Oct	contract			\$36.00	150kg/ha	\$0.47/kg	\$70.50
Aquatic weed control <i>eg: aerial spray thiobencarb (Saturn®)</i>	Oct/Nov	contract			\$25.00	3.75kg/ha	\$21.35/kg	\$80.06
Bloodworm control <i>eg: aerial spray alpha cypermethrin (Dominex Duo®)</i>		with above				0.10 L/ha	\$12.80/L	\$1.28
Aquatic weed control <i>eg: aerial spray Basagran M60</i>	Nov/Dec	contract			\$27.00	2.50 L/ha	\$19.15/L	\$47.88
Aerial Image	Dec				\$3.85			\$3.85
Topdress Nitrogen fertiliser <i>eg: aerial topdress urea</i>	Jan	contract			\$28.00	125kg/ha	\$551.00/t	\$68.88
Harvest	Apr/May	contract				9.0 t/ha	\$25.00/t	\$225.00
Chaser bin		0.32	45.05		\$14.19			\$14.19
Irrigation*						16.0ML/ha	\$55.25/ML	\$883.95
Cartage						9.0 t/ha	\$11.50/t	\$103.50
Research levy (farm gate value)						9.0 t/ha	\$0.00	\$0.00
Crop insurance (estimated crop value)						\$4,950	1.65%	\$81.68

*Bore water price to be used (includes pumping cost).

AGRONOMIC NOTES	<p>See <i>RICECHECK Recommendations and Rice Crop Protection Guide 2009</i></p> <ul style="list-style-type: none"> - Rice is sensitive to saline water, growers are advised to see the Primefact "Rice production using groundwater" available from the DII NSW Website. - The Ricecheck Recommendations and Rice crop protection guide are also recommended.
Varieties	<ul style="list-style-type: none"> - Rice varieties differ in their salt sensitivity, growers with lower quality ground water are recommended to grow Amaroo, if possible. Other varieties to consider include, Quest and Opus - Avoid Illabong, Reiziq and all long grain varieties on ground water. - Sow on time as per Ricecheck recommendations and see Primefact "Choosing a rice variety for 2007" on the web
Price	<ul style="list-style-type: none"> - The prices of medium and long grain for 2009-10 are Sunrice premium pool contract prices for 65,000 tonnes. Tonnes grown above the the premium pool will probably be received at a lower price. This budget is based on Amaroo. Costs may vary for other varieties.
Rotation	<ul style="list-style-type: none"> - This is the first crop following a winter cereal or previous rice crop. - If this crop follows several years of ground water usage, soil structural issues may lead to wet boggy harvests
Weed Control	<ul style="list-style-type: none"> - Herbicides used in the budget are based on the Taipan[®] with standard Saturn[®] & Molinate Primer program (program 3). Seek advice for using alternative programs and see the 'Rice Crop Protection Guide 2009". Sound weed management for aquatic weeds delays the build up of herbicide resistance. Management programs emphasise the importance of using 2 herbicides on each weed and/or rotating herbicides to avoid using the same herbicide in consecutive rice crops.
Insect Control	<ul style="list-style-type: none"> - Bloodworms are a major insect pest at establishment and should be controlled before or at sowing. Alpha cypermethrin (Dominex Duo[®]) and Fipronil (Cosmos[®]) seed dressing are alternatives to chlorpyrifos (See Rice Crop Protection Guide 2009). Other Pests: Ducks may need controlling, especially in the more western areas. Duck control is not included in this budget.
Pesticide Residues	<ul style="list-style-type: none"> - Drainage water containing pesticides must be retained on-farm for at least 28 days after application for the MIA and Murray Valley and 21 days for the CIA.
Fertiliser	<ul style="list-style-type: none"> - Split apply urea to minimise risk of cold damage. Conduct NIR tissue test at PI to verify urea topdress requirement. Total nitrogen rate depends on paddock history and seasonal conditions. Apply phosphorus where Colwell soil P is less than 20mg/kg.
Aerial Image	<ul style="list-style-type: none"> - An aerial image should be used at PI to help identify the factors influencing rice crop growth variability and crop yield. This image may then be used to target NIR sampling at PI.
Sowing costs	<ul style="list-style-type: none"> - Aerial sown rice has a lower labour requirement than other sowing alternatives but consequently incurs higher application costs.
Irrigation	<ul style="list-style-type: none"> - High yields on bore water require constant monitoring of water quality to ensure salt levels remain within recommended levels. Crop water usage is normally significantly higher with saline water than with surface (channel) water. Actual water usage will vary depending on the water quality, seasonal conditions, soil type and rice variety. - High yields require good water management, follow Ricecheck water management guidelines. - Deep water (20-25 cm) is particularly important during the cold sensitive microspore stage.
Yield	<ul style="list-style-type: none"> - Use of saline ground water commonly leads to a yield penalty of up to 1 t/ha - Yields of less than 8 t/ha are common on groundwater in western Murray Valley
Machinery	<ul style="list-style-type: none"> - Machinery costs include variable costs only for the tractor and implements. Two tractors: of 57 kW (77 HP) PTO and 66 kW (90 HP) engine; and of 141 kW (190 HP) PTO and 66 kW (90 HP) engine; and of 141 kW (190 HP) PTO and 148 kW (225 HP) engine are assumed.
More information	<ul style="list-style-type: none"> - See Production of Quality Rice in South Eastern Australia and also DII NSW Publications



MAIZE - GRIT (rows / beds) using bore water

Farm Enterprise Budget Series - Murrumbidgee Valley/Lachlan valley

Summer 2009/2010

1. GROSS MARGIN BUDGET:

INCOME:

11.00 t/ha @ \$340.00 /t (on farm)

Standard Budget \$/ha	Your Budget \$/ha
\$3,740	

A. TOTAL INCOME \$/ha:

\$3,740

VARIABLE COSTS:

See following page for detail

Cultivation.....	\$43
Sowing.....	\$261
Fertilizer.....	\$472
Herbicide.....	\$54
Insecticide.....	\$26
Irrigation.....	\$552
Levies & Insurance.....	\$94
Harvest.....	\$179
B. TOTAL VARIABLE COSTS \$/ha:	\$1,682

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

\$2,058

D. GROSS MARGIN \$/ML:

\$206

SENSITIVITY TABLES

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

YIELD t/ha	On Farm Price				
	\$300 /t	\$320 /t	\$340 /t	\$360 /t	\$380 /t
8.00	\$797	\$953	\$1,109	\$1,265	\$1,421
9.50	\$1,213	\$1,399	\$1,584	\$1,769	\$1,954
11.00	\$1,630	\$1,844	\$2,058	\$2,273	\$2,487
12.50	\$2,046	\$2,289	\$2,533	\$2,777	\$3,021
14.00	\$2,462	\$2,735	\$3,008	\$3,281	\$3,554

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

YIELD t/ha	On Farm Price				
	\$300 /t	\$320 /t	\$340 /t	\$360 /t	\$380 /t
8.00	\$80	\$95	\$111	\$127	\$142
9.50	\$121	\$140	\$158	\$177	\$195
11.00	\$163	\$184	\$206	\$227	\$249
12.50	\$205	\$229	\$253	\$278	\$302
14.00	\$246	\$273	\$301	\$328	\$355

MAIZE - GRIT (rows / beds) using bore water

Farm Enterprise Budget Series - Murrumbidgee Valley/Lachlan valley

Summer 2009/2010

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost
Operation	Month	hrs/ha	Cost \$/hour	% of area	Total \$/ha	Rate/ha	Cost	Total \$/ha
Deep rip	Feb	0.22	48.80		\$10.89			\$10.89
Hill up		0.26	46.38		\$12.08			\$12.08
<i>Broadleaf & grass weed control</i>	August	contract			\$15.00	0.80 L/ha	\$4.65/L	\$3.72
<i>eg: aerial spray glyphosate 450</i>								
<i>Apply nitrogen fertiliser eg:</i>	Aug/Sep	0.28	46.71		\$13.08	350kg/ha	\$551.00/t	\$192.85
<i>apply urea</i>								
<i>Apply starter fertiliser eg: MAP</i>		with above				185kg/ha	\$826/t	\$152.81
<i>Pre emergent Weed control eg:</i>	Sep/Oct	0.05	41.38		\$2.23	3.20 L/ha	\$10.25/L	\$32.80
<i>boom spray s-metolachlor +</i>								
<i>atrazine (Primextra Gold®)</i>								
<i>Apply zinc fertiliser eg: boom</i>		with above				3kg/ha	\$1.15/kg	\$3.45
<i>spray zinc hepta hydrate</i>								
Incorporate/Shape beds		0.26	46.38		\$12.08			\$12.08
Tail drain maintenance	Sep/Oct	0.78	19.70	2%	\$0.31			\$0.31
Sow	Oct/Nov	0.14	56.31		\$7.82	1.1 bags/ha	\$230/bag	\$253.00
<i>Wireworm control eg: apply</i>		with above				2kg/ha	\$12.80/kg	\$25.60
<i>terbufos (Counter150 G®)</i>								
<i>Apply nitrogen fertiliser eg:</i>	Nov/Dec/Jan					200kg/ha	\$551.00/t	\$110.20
<i>water run urea</i>								
Inter row cultivate	Nov/Jan	0.17	45.05		\$7.71			\$7.71
Harvest	Mar/Apr/May	contract				11.0 t/ha	\$15.00/t	\$165.00
Chaser bin		0.32	45.05		\$14.19			\$14.19
Irrigation*						10.0ML/ha	\$55.25/ML	\$552.47
Crop levy (farm gate value)						\$3,740	0.70%	\$26.18
Crop insurance (estimated crop value)						\$3,740	1.82%	\$68.07

The budget is ONLY A GUIDE and should be altered for movements in crop and input prices, changes in seasonal conditions and the farm characteristics. Estimated prices are GST - exclusive

AGRONOMIC NOTES	See <i>Summer Crop Guide 2009-10 DII NSW</i>
Prices	<ul style="list-style-type: none"> - Prices are estimated and GST-exclusive. - The maize price mentioned above is weighted for both contracted grit and uncontracted feed maize. Any grower contemplating growing maize should secure markets prior to sowing.
Rotation	<ul style="list-style-type: none"> - Commonly grown as the first crop in the rotation or in a maize - fallow rotation. Note: this budget does not take into account maize stubble management
Varieties	<ul style="list-style-type: none"> - Variety is determined by contract and end use. Grit maize is used for cornflakes, cornchips and stockfeed. Waxy maize is used for starch products. High amylose maize is significantly lower yielding, but attracts higher prices. New varieties offer higher yield potential
Weed Control	<ul style="list-style-type: none"> - Application of s-metalachlor + Atrazine (Primextra Gold®) for the control of some grass and broadleaf weeds. Extra s-metalachlor (Dual Gold®) may be added to s-metalachlor + atrazine (Primextra Gold®) where barnyard grass infestations are heavy.
Insect Control	<ul style="list-style-type: none"> - Application of terbufos (Counter 150 G®) is for the control of wireworms. If control of armyworm or heliothis is warranted follow the Insecticide Resistance Management Strategy. - More damaging mite populations can develop as a consequence of early application of pyrethroid/carbamate insecticides. Due to poor target coverage heliothis is not normally sprayed.
Irrigation	<ul style="list-style-type: none"> - Schedule irrigations according to plant water use. Waterlogging increases nitrogen loss and reduces grain yields. Water stressed crops are more prone to disease infection i.e. fusarium, boil smut. - Water costs are the cost of pumping ground water (GW) with diesel engine in the MIA. - Cost of irrigation pumping and delivery varies significantly. Bore pumpers on diesel engines cost up to \$55.25/ML to pump and deliver, however river pumpers will be much less. The budget is based on the assumption of 25% water allocation. The GW costs are based on 2008-09 prices.
Drying	<ul style="list-style-type: none"> - May not be required on short to medium season hybrids if sown early. Drying costs are not included in this budget.
Capital Machinery	<ul style="list-style-type: none"> - Row cropping may require additional capital investment in equipment from \$2000 to \$20,000. - Machinery costs include variable costs only for the tractor and implements. Two tractors of 57 kW (77 HP) PTO and 66 kW (90 HP) engine; and of 141 kW (190 HP) PTO and 148 kW (225 HP) engine are assumed.
More information	<ul style="list-style-type: none"> - See Maize, Growth and Development, Procrop Publication, 'NSW Bookshop Phone' - Maize Association of Australia website www.maizeaustralia.com.au.

The budget is ONLY A GUIDE and should be altered for movements in crop and input prices, changes in seasonal conditions and the farm characteristics. Estimated prices are GST - exclusive



SOYBEANS (edible) - ROWS/BEDS

Farm Enterprise Budget Series - Murrumbidgee Valley

Summer 2009/2010

1. GROSS MARGIN BUDGET:

INCOME:

3.75 t/ha @ 700 /t (on farm; edible price)

Standard Budget \$/ha	Your Budget \$/ha
\$2,625	

A. TOTAL INCOME \$/ha:

\$2,625	
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VARIABLE COSTS:

See following page for detail

Cultivation.....	\$34	
Sowing.....	\$115	
Fertilizer.....	\$69	
Herbicide.....	\$71	
Insecticide.....	\$82	
Irrigation.....	\$127	
Harvest.....	\$99	
Levies & Insurance.....	\$97	

B. TOTAL VARIABLE COSTS \$/ha:

\$694	
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C. GROSS MARGIN (A-B) \$/ha:

\$1,931	
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D. GROSS MARGIN \$/ML:

\$241	
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SENSITIVITY TABLES

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

YIELD t/ha	On Farm Price				
	\$660 /t	\$680 /t	\$700 /t	\$720 /t	\$740 /t
2.25	\$833	\$877	\$920	\$963	\$1,007
3.00	\$1,310	\$1,368	\$1,426	\$1,483	\$1,541
3.75	\$1,787	\$1,859	\$1,931	\$2,004	\$2,076
4.50	\$2,264	\$2,350	\$2,437	\$2,524	\$2,610
5.25	\$2,740	\$2,842	\$2,943	\$3,044	\$3,145

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

YIELD t/ha	On Farm Price				
	\$660 /t	\$680 /t	\$700 /t	\$720 /t	\$740 /t
2.25	\$104	\$110	\$115	\$120	\$126
3.00	\$164	\$171	\$178	\$185	\$193
3.75	\$223	\$232	\$241	\$250	\$259
4.50	\$283	\$294	\$305	\$315	\$326
5.25	\$343	\$355	\$368	\$380	\$393

SOYBEANS (edible) - ROWS/BEDS

(Fallow crop)

Summer 2009/2010

Farm Enterprise Budget Series - Murrumbidgee Valley

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total	
Operation	Month	hrs/ha	Cost \$/hour	% of area	Total \$/ha	Rate/ha	Cost	Total \$/ha	Total Cost \$/ha
Deep rip	Feb	0.22	35.06		\$7.83				\$7.83
Bed up		0.26	32.56		\$8.48				\$8.48
<i>Apply phosphorus fertiliser eg:</i>	Sep	0.14	38.80		\$5.39	150kg/ha	\$375/t	\$56.25	\$61.64
<i>grain legume super or sulfos</i>									
<i>Apply molybdenum fertiliser eg:</i>						0.125kg/ha	\$62.00/kg	\$7.75	\$7.75
<i>sodium molybdate</i>									
Prewater & spray glyphosate	Oct/Nov	0.05	31.23		\$1.68	1.20 L/ha	\$4.65/L	\$5.58	\$7.26
Incorporate / or Shape beds		0.26	32.56		\$8.48				\$8.48
Sow	Nov/Early Dec	0.14	38.80		\$5.39	84kg/ha	\$1.20/kg	\$100.80	\$106.19
Seed inoculation						84kg/ha	\$0.10/kg	\$8.40	\$8.40
Inter row cultivate	Dec/Jan	0.17	51.89		\$8.72				\$8.72
<i>Control grass & broadleaf weeds</i>	Dec/Jan	0.05	42.58		\$2.29	0.14kg/ha	\$440/kg	\$61.60	\$63.89
<i>eg: boom sprayer imazethapyr</i>									
<i>(Spinnaker 700WDG[®] ; 1 yr in 2)</i>									
<i>Heliothis control eg: aerial spray</i>	Feb				contract	0.40 L/ha	\$67.00/L	\$26.80	\$47.80
<i>(Steward[®])</i>									
<i>Heliothis and GVB control eg:</i>	Feb/Mar				contract	0.50 L/ha	\$27.00/L	\$13.50	\$34.50
<i>aerial spray deltamethrin (Decis</i>									
<i>options[®])</i>									
Harvest	Apr/May				contract				\$88.00
Chaser bin		0.32	34.56		\$10.89				\$10.89
Irrigation*						8.0ML/ha	\$15.90/ML	\$127.20	\$127.20
Research levy (farm gate value)						\$2,625	1.00%	\$26.25	\$26.25
Crop insurance (estimated crop value)						\$2,625	2.68%	\$70.35	\$70.35

The budget is ONLY A GUIDE and should be altered for movements in crop and input prices, changes in seasonal conditions and the farm characteristics. Estimated prices are GST - exclusive

AGRONOMIC NOTES:	See <i>Summer Crop Guide 2009-10 DII NSW</i>
Prices	- Prices are estimated and GST-exclusive. - For higher quality grain, price could be upto or beyond \$1100/tonne.
Rotation	- Commonly the first crop after a rice fallow grown on hills or raised beds. - Keeping a weed free fallow over winter will help reduce water use when pre-watering
Varieties & Marketing	- Human consumption: Djakal and Snowy. Budget prices are for human consumption Higher value (niche) markets may also exist.
Weed Control	- Trifluralin is applied for barnyard grass control. Broadleaf weed control may be needed depending on paddock history and crop end use. Inter row spraying with non-selective herbicide is a cost effective way to control weeds post emergence. Banding a selective herbicide on the plant row will reduce costs significantly.
Disease Control	- Crop rotation will assist in disease control. If growing more than two consecutive soybean crops, diseases should be closely monitored. eg. Sclerotinia and rhizoctonia. Growing soybeans in rotation with fababeans and canola increases disease risk.
Insect Control	- Deltamethrin (Decis Options) and thiodicarb (Larvin [®]) are used in the budget. Seek advice on alternatives. The level of resistance in heliothis caterpillars will require more attention to pest monitoring, spray timing and the use of alternative chemistry including softer biological insecticides. Follow the Insecticide Resistance Management Strategy. Planting into canola stubble may increase spray frequency and disease risk and consequent pest problems. Damaging mite populations can develop as a consequence of early application of pyrethroid/carbamate insecticides.
Pesticide Residues	- Drainage water containing pesticides must be retained on-farm for at least 28 days after application.
Fertiliser	- Molybdenum is required for successful nodulation of soybeans. Plant in low N paddocks
Irrigation	- Schedule irrigations according to plant water use. *The MIA variable water costs are used in the budget. The budget is based on 25% of water allocations. for costs in other areas and districts, refer to the water costs section.
Drying	- Drying may be required in wet autumn or late harvest that involve an additional cost of \$15/tonne of drying costs.
Capital	- Row cropping may require additional \$2,000-\$20,000 in equipment capital investment. Contractors are commonly used.
Machinery	- Machinery costs include variable costs only for the tractor and implements. Two tractors: of 57 kW (77 HP) PTO and 66 kW (90 HP) engine; and of 141 kW (190 HP) PTO and 148 kW (225 HP) engine are assumed.
More information	- Australian Oilseeds Federation website

The budget is ONLY A GUIDE and should be altered for movements in crop and input prices, changes in seasonal conditions and the farm characteristics. Estimated prices are GST - exclusive



SOYBEANS (edible) - PERMANENT BEDS (Double crop)

Farm Enterprise Budget Series - Murrumbidgee Valley

Summer 2009/2010

1. GROSS MARGIN BUDGET:

INCOME:

3.25 t/ha @ \$700.00 /t (on farm; full fat)

Standard Budget \$/ha	Your Budget \$/ha
\$2,275	

A. TOTAL INCOME \$/ha:

\$2,275	
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VARIABLE COSTS:

See following page for detail

Cultivation.....	\$2	
Sowing.....	\$137	
Fertilizer.....	\$64	
Herbicide.....	\$114	
Insecticide.....	\$82	
Irrigation.....	\$111	
Harvest.....	\$99	
Levies & Insurance.....	\$84	

B. TOTAL VARIABLE COSTS \$/ha:

\$693	
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C. GROSS MARGIN (A-B) \$/ha:

\$1,582	
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D. GROSS MARGIN \$/ML:

\$226	
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SENSITIVITY TABLES

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

YIELD t/ha	On Farm Price				
	\$660 /t	\$680 /t	\$700 /t	\$720 /t	\$740 /t
1.75	\$503	\$537	\$570	\$604	\$638
2.50	\$980	\$1,028	\$1,076	\$1,124	\$1,172
3.25	\$1,457	\$1,519	\$1,582	\$1,644	\$1,707
4.00	\$1,933	\$2,010	\$2,087	\$2,165	\$2,242
4.75	\$2,410	\$2,502	\$2,593	\$2,685	\$2,776

\$0.00

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

YIELD t/ha	On Farm Price				
	\$660 /t	\$680 /t	\$700 /t	\$720 /t	\$740 /t
1.75	\$72	\$77	\$81	\$86	\$91
2.50	\$140	\$147	\$154	\$161	\$167
3.25	\$208	\$217	\$226	\$235	\$244
4.00	\$276	\$287	\$298	\$309	\$320
4.75	\$344	\$357	\$370	\$384	\$397

The budget is ONLY A GUIDE and should be altered for movements in crop and input prices, changes in seasonal conditions and the farm characteristics. Estimated prices are GST - exclusive

SOYBEANS (edible) - PERMANENT BEDS (Double crop)

Farm Enterprise Budget Series - Murrumbidgee Valley

Summer 2009/2010

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total
Operation	Month	Cost		Total	Rate/ha	Cost		Total
		hrs/ha	\$/hour	\$/ha		\$/ha	\$/ha	
Burn	Dec	0.10	18.61	\$1.79				\$1.79
Prewater & spray glyphosate	Dec	0.05	31.23	\$1.56	1.20 L/ha	79.00/L	\$94.80	\$96.36
Sow	Dec	0.29	24.81	\$7.21	100kg/ha	\$1.20/kg	\$120.00	\$127.21
Seed inoculation		with above			100kg/ha	\$0.10/kg	\$10.00	\$10.00
<i>Apply phosphorus fertiliser eg: grain legume super or sulfos</i>		with above			150kg/ha	\$375.00/t	\$56.25	\$56.25
<i>Apply molybdenum fertiliser eg: sodium molybdate</i>		with above			0.125kg/ha	\$62.00/t	\$7.75	\$7.75
<i>Control grass weeds eg: boom spray haloxyfop-r (Verdict520®)</i>	Jan	0.05	42.58	\$2.29	0.15 L/ha	\$102.26/L	\$15.34	\$17.63
<i>Heliothis control eg: aerial spray (Steward®)</i>	Feb	contract		\$21.00	0.40 L/ha	\$67.00/L	\$26.80	\$47.80
<i>Heliothis and GVB control eg: aerial spray deltamethrin (Decis options®)</i>	Feb/Mar	contract		\$21.00	0.50 L/ha	\$27.00/L	\$13.50	\$34.50
Harvest	Apr/May	contract					\$88.00	\$88.00
Chaser bin		0.32	34.56	\$10.89				\$10.89
Irrigation*					7.0ML/ha	\$15.90/ML	\$111.30	\$111.30
Research levy (farm gate value)					\$2,275	1.00%	\$22.75	\$22.75
Crop insurance (estimated crop value)					\$2,275	2.68%	\$60.97	\$60.97

The budget is ONLY A GUIDE and should be altered for movements in crop and input prices, changes in seasonal conditions and the farm characteristics. Estimated prices are GST - exclusive

AGRONOMIC NOTES:	See <i>Summer Crop Guide 2009-10 DII NSW</i>
Prices	<ul style="list-style-type: none"> - Prices are estimated and GST-exclusive. - For higher quality grain, price could be up to or beyond \$1100/tonne.
Rotation	<ul style="list-style-type: none"> - Commonly direct drilled into barley stubble where double cropping yield may be 0.5t/ha lower.
Varieties & Marketing	<ul style="list-style-type: none"> - Human consumption: Djakal and Snowy. Budget prices are for human consumption. - Higher value (niche) markets may also exist. Some high value markets also exist for crushing varieties. Market prices for crushing varieties are determined by world oilseed production.
Weed Control	<ul style="list-style-type: none"> - Broadleaf weed control may be needed depending on paddock history and crop end use.
Disease Control	<ul style="list-style-type: none"> - Crop rotation will help in disease control. If growing more than two consecutive soybean crops, diseases must be closely monitored. eg. phytophthora, sclerotinia and rhizoctonia. - Growing soybeans in rotation with fababeans and canola increases disease risk.
Insect Control	<ul style="list-style-type: none"> - Deltamethrin (Decis Options) and thiodicarb (Larvin®) are used in the budget. Seek advice on alternatives. The level of resistance in heliothis caterpillars will require more attention to pest monitoring, spray timing and the use of alternative chemistry including softer biological insecticides. Follow the Insecticide Resistance Management Strategy. Planting into canola stubble may increase spray frequency and disease risk and consequent pest problems. - Damaging mite populations can develop as a consequence of early application of pyrethroid/carbamate insecticides.
Pesticide Residues	<ul style="list-style-type: none"> - Drainage water containing pesticides must be retained on-farm for at least 28 days after application.
Fertiliser	<ul style="list-style-type: none"> - Molybdenum is required for successful nodulation of soybeans.
Irrigation	<ul style="list-style-type: none"> - Schedule irrigations according to plant water use. *The MIA variable water costs are used in the budget. The budget is based on 25% of water allocations.
Drying	<ul style="list-style-type: none"> - Drying may be required in wet autumn or late harvest that involve an additional cost of \$15/tonne of drying costs.
Capital	<ul style="list-style-type: none"> - Row cropping may require additional \$2,000-\$20,000 in equipment capital investment.
Machinery	<ul style="list-style-type: none"> - Machinery costs include variable costs only for the tractor and implements. - Two tractors: of 57 kW (77 HP) PTO and 66 kW (90 HP) engine; and of 141 kW (190 HP) PTO and 148 kW (225 HP) engine are assumed.
More information	<ul style="list-style-type: none"> - Australian Oilseeds Federation website

The budget is ONLY A GUIDE and should be altered for movements in crop and input prices, changes in seasonal conditions and the farm characteristics. Estimated prices are GST - exclusive



IRRIGATED LUCERNE - Establishment

Farm Enterprise Budget Series - Murrumbidgee Valley/Murray Valley
Summer 2009/2010

1. GROSS MARGIN BUDGET: Based on small bale production

INCOME:

5.00 t/ha	@	\$350.00 /t (on farm)
3.00 t/ha	@	\$250.00 /t (on farm)
8.00 t/ha		\$312.50 /t (on farm)*

(4 cuts @ 2 t/ha/cut)

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

A. TOTAL INCOME \$/ha:

\$2,500

VARIABLE COSTS:

See following page for detail

Cultivation.....	\$47
Sowing.....	\$116
Fertiliser.....	\$111
Herbicide.....	\$40
Fungicide.....	\$3
Insecticide.....	\$4
Irrigation.....	\$127
Levies.....	\$0
Cut, Rake and Bale.....	\$640
Cartage and Stack.....	\$384
B. TOTAL VARIABLE COSTS \$/ha:	\$1,473

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

\$1,027

D. GROSS MARGIN \$/ML:

\$128

* weighted average price used

SENSITIVITY TABLES

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

YIELD t/ha	On Farm Price				
	\$213 /t	\$263 /t	\$313 /t	\$363 /t	\$413 /t
6.00	\$96	\$396	\$696	\$996	\$1,296
7.00	\$187	\$537	\$887	\$1,237	\$1,587
8.00	\$278	\$678	\$1,027	\$1,478	\$1,878
9.00	\$369	\$819	\$1,269	\$1,719	\$2,169
10.00	\$460	\$960	\$1,460	\$1,960	\$2,460

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

YIELD t/ha	On Farm Price				
	\$213 /t	\$263 /t	\$313 /t	\$363 /t	\$413 /t
6.00	\$12	\$50	\$87	\$125	\$162
7.00	\$23	\$67	\$111	\$155	\$198
8.00	\$35	\$85	\$128	\$185	\$235
9.00	\$46	\$102	\$159	\$215	\$271
10.00	\$57	\$120	\$182	\$245	\$307

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IRRIGATED LUCERNE - Establishment

Farm Enterprise Budget Series - Murrumbidgee Valley/Murray Valley
Summer 2009/2010

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total
Operation	Month	Cost		Total	Rate/ha	Cost		Total Cost \$/ha
		hrs/ha	\$/hour	\$/ha		Cost	Total	
						\$/ha		
Chisel plough	Dec	0.22	48.80	\$10.89				\$10.89
Off-set disc	Jan	0.35	42.85	\$14.88				\$14.88
Scarify	Feb/Mar	0.17	45.05	\$7.71				\$7.71
Control grass weeds - boom spray <i>e.g. trifluralin</i>	Apr	0.05	41.38	\$2.23	1.70 L/ha	\$8.90/L	\$15.13	\$17.36
Harrow	Apr	0.20	68.05	\$13.32			\$0.00	\$13.32
Sow	Apr/May	0.28	46.71	\$13.08	12kg/ha	\$8.50/kg	\$102.00	\$115.08
Seed inoculation		with above			12kg/ha	\$0.10/kg	\$1.20	\$1.20
Apply fungicide <i>e.g. metalaxyl</i> <i>(Apron®)</i>		with above			100 mL/100kg seed	\$0.28/mL	\$3.37	\$3.37
Apply single super phosphate fertiliser <i>e.g. Superfect®</i>		with above			300kg/ha	\$371.00/t	\$111.30	\$111.30
Mite control boom spray - <i>e.g. bifenthrin (Talstar® 100EC)</i>	May	0.05	41.38	\$2.07	0.10 L/ha	\$21.00/L	\$2.10	\$4.17
Control broadleaf weeds - boom spray <i>e.g. 2,4DB (Buttress®)</i>	May/June	0.05	41.38	\$2.07	2.10 L/ha	\$9.75/L	\$20.48	\$22.54
Irrigation	Sept-March				8.0ML/ha	\$15.90/ML	\$127.20	\$127.20
Cut, rake and bale		contract			320 bales	\$2.00/bale	\$640.00	\$640.00
Cartage + stacking		contract			320 bales	\$1.20/bale	\$384.00	\$384.00

The budget is ONLY A GUIDE and should be altered for movements in crop and input prices, changes in seasonal conditions and the farm characteristics. Estimated prices are GST - exclusive

AGRONOMIC NOTES:	- Good establishment is key to manage stand well for best production, quality and persistence
Prices	<ul style="list-style-type: none"> - Prices are estimated and GST-exclusive. - Domestic hay prices fluctuate widely depending on supply and demand. - Prices are based on small 25 kg bales - price per bale basis (between \$8-\$15 /bale). Small bales often receive higher returns than larger bales on a \$ per tonne basis. Larger bales are cheaper to bale and transport. During drought years prices for hay rise significantly and these prices reflect the current drought. - Higher prices are generally achieved during early winter. Adequate covered storage helps to achieve better prices.
Sowing time	<ul style="list-style-type: none"> - Sow lucerne in autumn (or early spring, if irrigation water is available) when temperatures are mild. - Avoid sowing in very cold or hot conditions.
Hay making	<ul style="list-style-type: none"> - Hay can be made from spring to late autumn, depending upon the weather conditions.
Rotation	<ul style="list-style-type: none"> - Expected productive stand life of 3 - 4 years.
Layouts	<ul style="list-style-type: none"> - Slopes of 1: 750 to 1:1000 are preferred to ensure good drainage for flood irrigation. Avoid waterlogging
Varieties	<ul style="list-style-type: none"> - Use adapted, root-rot resistant varieties (Semi-dormant to highly winter active).
Inoculation	<ul style="list-style-type: none"> - Inoculate with correct strain of rhizobia (AL) to ensure good nodulation for nitrogen fixation.
Weed Control	<ul style="list-style-type: none"> - Seedlings are tiny, so minimise weed competition to ensure good establishment. - Pre-emergent herbicide controls grasses and wireweed during establishment. - Post-emergent herbicide applied for broadleaf weed control (2,4-DB) is used in this budget, but other options are available.
Disease Control	<ul style="list-style-type: none"> - Varieties with root rot resistance are crucial for flood irrigation. - Treat seed with a fungicide to prevent damping off e.g. Apron®)
Insect Control	<ul style="list-style-type: none"> - Seedlings are very susceptible to insect damage, particularly earth mites and aphids. - Regularly monitor establishing crops and take necessary remedial action. - Consider seed treatment or preventative bare earth sprays in high risk situations.
Production	<ul style="list-style-type: none"> - Assume four cuts are made during the first season. Assume that 1 tonne = 40 small square bales. - Assume 5 t is high quality and 3 t is downgraded by weather, weeds, etc.
Fertiliser	<ul style="list-style-type: none"> -If soil pH < 5.2 (CaCl₂), lime should be incorporated 3 months before sowing. This cost is not included in the budget. - Phosphorus fertiliser banded beneath the seed at sowing helps establishment and early growth. - Molybdenised super at sowing aids nodulation. Apply gypsum to sodic or crusting soils to improve soil permeability, reduce crusting and improve establishment.
Irrigation	<ul style="list-style-type: none"> - *The MIA variable water costs are used in the budget. The budget is based on 25% of water allocations
Risk	<ul style="list-style-type: none"> - The production of good quality lucerne hay involves significant risk (mainly weather) which potential growers should take into account. Thus, some of hay is sold at a lower price.
Machinery	<ul style="list-style-type: none"> - Machinery costs include variable costs only for the tractor and implements. Two tractors: of 57 kW (77 HP) PTO and 66 kW (90 HP) engine; and of 141 kW (190 HP) PTO and 148 kW (225 HP) engine are assumed.
Economics	<ul style="list-style-type: none"> - Cost of establishment should be spread over life of the stand.
More information	<ul style="list-style-type: none"> See II NSW publications: "Lucerne for Pasture and Fodder", "Weed Control in Lucerne and Pastures" & "Insect and Mite Control in Field crops".

The budget is ONLY A GUIDE and should be altered for movements in crop and input prices, changes in seasonal conditions and the farm characteristics. Estimated prices are GST - exclusive



IRRIGATED LUCERNE - Maintenance

Farm Enterprise Budget Series - Murrumbidgee Valley/Murray Valley

Summer 2009/2010

1. GROSS MARGIN BUDGET: Based on small bale production.

INCOME:

9.00 t/ha	@	\$350.00 /t (on farm)
6.00 t/ha	@	\$250.00 /t (on farm)
15.00 t/ha		\$310.00 /t (on farm)*

(5 cuts @ 3 t/ha/cut)

Standard Budget \$/ha
\$3,150
\$1,500

A. TOTAL INCOME \$/ha: \$4,650

VARIABLE COSTS:

See following page for detail

Cultivation and Sowing.....	\$0
Fertiliser.....	\$131
Herbicide.....	\$39
Insecticide.....	\$4
Irrigation.....	\$207
Levies.....	\$0
Cut, Rake and Bale.....	\$1,200
Cartage and Stack.....	\$720
B. TOTAL VARIABLE COSTS \$/ha:	\$2,301

C. GROSS MARGIN (A-B) \$/ha: \$2,349

D. GROSS MARGIN \$/ML: \$181

* weighted average price used

SENSITIVITY TABLES

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

YIELD t/ha	On Farm Price				
	\$210 /t	\$260 /t	\$310 /t	\$360 /t	\$410 /t
11.00	\$592	\$1,142	\$1,692	\$2,242	\$2,792
13.00	\$768	\$1,418	\$2,068	\$2,718	\$3,368
15.00	\$945	\$1,695	\$2,349	\$3,195	\$3,945
17.00	\$1,122	\$1,972	\$2,822	\$3,672	\$4,522
19.00	\$1,299	\$2,249	\$3,199	\$4,149	\$5,099

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

YIELD t/ha	On Farm Price				
	\$210 /t	\$260 /t	\$310 /t	\$360 /t	\$410 /t
11.00	\$46	\$88	\$130	\$172	\$215
13.00	\$59	\$109	\$159	\$209	\$259
15.00	\$73	\$130	\$181	\$246	\$303
17.00	\$86	\$152	\$217	\$282	\$348
19.00	\$100	\$173	\$246	\$319	\$392

IRRIGATED LUCERNE - Maintenance

Farm Enterprise Budget Series - Murrumbidgee Valley/Murray Valley

Summer 2009/2010

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total
Operation	Month	hrs/ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost	Total \$/ha	Cost \$/ha
Control broadleaf & grass weeds - boom spray e.g. Sprayseed® (paraquat + diquat) and Diuron	Jun/Jul	0.05	41.38	\$2.23	2.40 L/ha	\$12.00/L	\$28.80	\$31.03
		with above			1.00kg/ha	\$7.75/kg	\$7.75	\$7.75
Topdress with single super phosphate fertiliser e.g. Superfect®	Aug	0.10	16.61	\$1.58	350kg/ha	\$371.00/t	\$129.85	\$131.43
Mite/Aphid control - boom spray e.g. dimethoate	Sept	0.05	41.38	\$2.23	0.15 L/ha	\$10.50/L	\$1.58	\$3.80
Irrigation					13.0ML/ha	\$15.90/ML	\$206.70	\$206.70
Cut rake and bale		contract			600 bales	\$2.00/bale	\$1,200.00	\$1,200.00
Cartage + stacking		to farm shed			600 bales	\$1.20/bale	\$720.00	\$720.00

The budget is ONLY A GUIDE and should be altered for movements in crop and input prices, changes in seasonal conditions and the farm characteristics. Estimated prices are GST - exclusive

AGRONOMIC NOTES:	- Manage stand well for best production, quality and persistence
Prices	- Prices are estimated and GST-exclusive. Hay prices are highly sensitive to supply and demand. Higher quality can improve returns. - Prices based on small (25kg) bales - Price per bale basis (between \$8-\$15/bale)
Rotation	- Expected productive stand life 3 - 4 years. - Terminate stand when no longer economically viable (i.e. less than 50 plants/m ²) or weedy or thinning. Rotate with cereals to reduce disease and insect problems.
Weed Control	- Apply herbicides to dormant lucerne in winter after cutting or grazing to control broadleaf and grass weeds (consult "Weed control in Lucerne and Pastures").
Insect Control	- Regularly monitor for insects. Cut, graze or spray when necessary to control insect pests.
Irrigation	- Good irrigation management is critical for high yields and persistence. Fast irrigation is essential on flood layouts. - Irrigation scheduling allows efficient water use and helps to avoid waterlogging. - *The MIA variable water costs are used in the budget. The budget is based on 25% of water allocations
Fertiliser	- High inputs of phosphorus fertiliser are needed to replace nutrients removed by highly productive hay stands.
Production	- Five cuts are made during the season (6-7 possible). Assume 1 tonne=40 small square bales. - Assume 9 t is high quality and 6 t is downgraded by weather, weeds, etc.
Cutting Management	- For stand persistence under flood irrigation allow 2 cm regrowth before the next irrigation to avoid scald. To avoid damage to crown buds, do not cut stems below 7cm.
Risk	- The production of good quality lucerne hay involves significant risk (mainly weather) which potential growers should take into account.
Machinery	- Machinery costs include variable costs only for the tractor and implements. - Two tractors: of 57 kW (77 HP) PTO and 66 kW (90 HP) engine; and of 141 kW (190 HP) PTO and 148 kW (225 HP) engine are assumed.
Economics	- Baling and mowing prices are based on contract small bale prices.
More information	- Cost of establishment should be spread over life of the stand See I&I NSW publications: "Lucerne for Pasture and Fodder", "Weed Control in Lucerne and Pastures" and "Insect & Mite Control in field crops".

The budget is ONLY A GUIDE and should be altered for movements in crop and input prices, changes in seasonal conditions and the farm characteristics. Estimated prices are GST - exclusive