



RICE - LONG GRAIN (aerial sown)

Farm Enterprise Budget Series - Murrumbidgee Valley

Summer 2011/2012

1. GROSS MARGIN BUDGET:

INCOME:

9.25 t/ha @ \$265.00 /t (on farm)

Standard Budget \$/ha	Your Budget \$/ha
\$2,451	

A. TOTAL INCOME \$/ha:

\$2,451	
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VARIABLE COSTS:

See following page for detail

Cultivation.....	\$19	
Sowing.....	\$96	
Fertilizer.....	\$341	
Herbicide.....	\$318	
Insecticide.....	\$1	
Aerial Image.....	\$4	
Irrigation.....	\$173	
Harvest.....	\$245	
Cartage.....	\$111	
Levies & Insurance.....	\$68	
B. TOTAL VARIABLE COSTS \$/ha:	\$1,376	

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

\$1,075	
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D. GROSS MARGIN \$/ML:

\$83	
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SENSITIVITY TABLES

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

YIELD t/ha	On Farm Price				
	\$205 /t	\$235 /t	\$265 /t	\$295 /t	\$325 /t
6.85	\$141	\$344	\$546	\$748	\$950
7.65	\$271	\$496	\$722	\$948	\$1,174
8.45	\$400	\$649	\$899	\$1,148	\$1,397
9.25	\$529	\$802	\$1,075	\$1,348	\$1,621
10.05	\$659	\$955	\$1,252	\$1,548	\$1,845
10.85	\$788	\$1,108	\$1,428	\$1,748	\$2,068
11.65	\$917	\$1,261	\$1,605	\$1,948	\$2,292

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

YIELD t/ha	On Farm Price				
	\$205 /t	\$235 /t	\$265 /t	\$295 /t	\$325 /t
6.85	\$11	\$26	\$42	\$58	\$73
7.65	\$21	\$38	\$56	\$73	\$90
8.45	\$31	\$50	\$69	\$88	\$107
9.25	\$41	\$62	\$83	\$104	\$125
10.05	\$51	\$73	\$96	\$119	\$142
10.85	\$61	\$85	\$110	\$134	\$159
11.65	\$71	\$97	\$123	\$150	\$176

RICE - LONG GRAIN (aerial sown)

Farm Enterprise Budget Series - Murrumbidgee Valley

Summer 2011/2012

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost	
Operation	Month	hrs/ha	Cost \$/hour	% of area	Total \$/ha	Rate/ha	Cost	Total \$/ha	Total Cost \$/ha
Chisel plough	Aug	0.22	48.80		\$10.89				\$10.89
<i>Broadcast phosphorus fertiliser eg: broadcast Superfect®</i>	Sept	0.10	18.61		\$1.77	125kg/ha	\$347/t	\$43.38	\$45.15
<i>Apply nitrogen fertiliser eg: drill urea</i>	Sep/Oct	0.28	46.71		\$13.08	250kg/ha	\$677/t	\$169.25	\$182.33
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			\$22.20	3.75 L/ha	\$23.25/L	\$87.19	\$109.39
<i>Aquatic weed control eg: aerial spray Benzofenap (Taipan®)</i>	Oct	with above				2.00 L/ha	\$66.19/L	\$132.38	\$132.38
<i>Bloodworm control eg: aerial spray chlorpyrifos</i>		with above				0.15 L/ha	\$9.45/L	\$1.42	\$1.42
Sow	Oct	contract			\$37.00	150kg/ha	\$0.39/kg	\$58.50	\$95.50
<i>Aquatic weed control eg: aerial spray Basagran M60</i>	Nov/Dec	contract			\$26.00	2.50 L/ha	\$20.00/L	\$50.00	\$76.00
<i>Aerial image of crop</i>	Dec				\$3.85				\$3.85
<i>Topdress nitrogen fertiliser eg: aerial topdress urea</i>	January	contract			\$29.00	125kg/ha	\$677.00/t	\$84.63	\$113.63
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	\$13.27/ML	\$172.51	\$172.51
Cartage						9.25 t/ha	\$12.00/t	\$111.00	\$111.00
Research levy (farm gate value)						9.25 t/ha	\$3.00/t	\$27.75	\$27.75
Crop insurance (estimated crop value)						\$2,451	1.65%	\$40.45	\$40.45

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 2011</i>
Price	<ul style="list-style-type: none"> - Indications are that the medium grain price will be around \$230 per tonne for the C2012 pool. - The premium for C2012 long grain will be 15% above medium grain to a maximum of \$40 per tonne above the medium grain pool price.
Rotation	<ul style="list-style-type: none"> - This is the first crop following a winter cereal or a previous rice crop.
Varieties	<ul style="list-style-type: none"> - Langi. Other long grain varieties required for year 2011 are Doongara (5% to a maximum of \$10 /t premium) and Kyeema (30% about medium grain to a maximum of \$75/t premium) above medium grain prices. - Sow varieties on time. Recommendations for <i>Rice Variety Selection 2011</i> are on the web.
Weed Control	<ul style="list-style-type: none"> - Herbicides used in the budget are based on program 1 in the 'Rice Crop protection Guide 2011'. Seek advice when using alternative programs and refer to the Rice Crop Protection Guide 2011. 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. Alphacypermethrin (Dominex Duo[®]) and Fipronil (Cosmos[®]) seed dressing are alternatives to chlorpyrifos. The 'Rice Crop Protection Guide 2011' outlines the alternatives for bloodworm control. It is recommended to use chlorpyrifos first and Alpha-cypermethrin for second application, if necessary. Snail control is not included in this budget.
Other Pests	<ul style="list-style-type: none"> - Ducks may also need to be controlled, especially in the more western areas. Duck control is not included in this budget. Monitor mice populations during the season.
Pesticide Residues	<ul style="list-style-type: none"> - Drainage water containing pesticides must be retained on-farm for at least 28 days for the MIA 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 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	<ul style="list-style-type: none"> - 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	<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 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 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 growing more sensitive varieties. - The MIA variable water costs are used in the budget. The budget is based on the assumption of 50% water allocation. For water costs in other irrigation districts or river pumpers, check Murrumbidgee irrigation web site. For water costs in the CIA, please go to the web site for the appropriate irrigation authority.
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"> - See Production of Quality Rice in South East Australia. Also Rice Crop Production Guide 2011. Rice Variety Selection for 2011, Ricecheck Recommendation Guide 2011 and Using Groundwater for rice production, DPI 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 - MEDIUM GRAIN (aerial sown)

Farm Enterprise Budget Series - Murrumbidgee Valley

Summer 2011/2012

1. GROSS MARGIN BUDGET:

INCOME:

10.00 t/ha @ \$230.00 /t (on farm)

Standard Budget \$/ha	Your Budget \$/ha
\$2,300	

A. TOTAL INCOME \$/ha:

\$2,300	
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VARIABLE COSTS:

See following page for detail

Cultivation.....	\$19	
Sowing.....	\$88	
Fertiliser.....	\$341	
Herbicide.....	\$385	
Insecticide.....	\$3	
Irrigation.....	\$186	
Aerial image.....	\$4	
Levies & Insurance.....	\$68	
Harvest.....	\$264	
Cartage	\$120	
B. TOTAL VARIABLE COSTS \$/ha:	\$1,478	

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

\$822	
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D. GROSS MARGIN \$/ML:

\$59	
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SENSITIVITY TABLES

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

YIELD t/ha	On Farm Water Price				
	\$180 /t	\$205 /t	\$230 /t	\$255 /t	\$280 /t
7.00	-\$81	\$92	\$264	\$436	\$608
8.50	\$125	\$334	\$543	\$752	\$961
10.00	\$331	\$576	\$822	\$1,068	\$1,314
11.50	\$536	\$819	\$1,102	\$1,384	\$1,667
13.00	\$742	\$1,061	\$1,381	\$1,701	\$2,020

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

YIELD t/ha	On Farm Price				
	\$180 /t	\$205 /t	\$230 /t	\$255 /t	\$280 /t
7.00	-\$6	\$7	\$19	\$31	\$43
8.50	\$9	\$24	\$39	\$54	\$69
10.00	\$24	\$41	\$59	\$76	\$94
11.50	\$38	\$58	\$79	\$99	\$119
13.00	\$53	\$76	\$99	\$121	\$144

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RICE - MEDIUM GRAIN (aerial sown)

Farm Enterprise Budget Series - Murrumbidgee Valley

Summer 2011/2012

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
Broadcast phosphorus fertiliser <i>eg: broadcast Superfect®</i>	Sept	0.10	16.61		\$1.58	125kg/ha	\$347.00/t	\$43.38	\$44.96
Apply nitrogen fertiliser <i>eg: drill urea</i>	Sep/Oct	0.28	46.71		\$13.08	250kg/ha	\$677.00/t	\$169.25	\$182.33
Reform banks	Sep/Oct	1.18	21.15	4%	\$1.00				\$1.00
Rolling	Sep/Oct	0.20	38.55		\$7.56				\$7.56
Grass weed control <i>eg: aerial spray molinate</i>	Oct	contract			\$22.20	1.50 L/ha	\$23.25/L	\$34.88	\$57.08
Aquatic weed control <i>eg: aerial spray benzofenap (Taipan®)</i>	Oct	with above				2.00 L/ha	\$66.19/L	\$132.38	\$132.38
Bloodworm control <i>eg: aerial spray chlorpyrifos</i>	Oct	with above				0.15 L/ha	\$9.45/L	\$1.42	\$1.42
Aerial sow	Oct	contract			\$37.00	150kg/ha	\$0.34/kg	\$51.00	\$88.00
Aquatic weed control <i>eg: aerial spray thiobencarb (Saturn®)</i>	Oct/Nov	contract			\$22.20	3.75kg/ha	\$25.90/kg	\$97.13	\$119.33
Bloodworm control <i>eg: aerial spray alpha cypermethrin (Dominex Duo®)</i>	Oct/Nov	with above				0.10 L/ha	\$13.43/L	\$1.34	\$1.34
Aquatic weed control <i>eg: aerial spray Basagran M60</i>	Nov/Dec	contract			\$26.00	2.50 L/ha	\$20.00/L	\$50.00	\$76.00
Aerial Image	Dec				\$3.85				\$3.85
Topdress Nitrogen fertiliser <i>eg: aerial topdress urea</i>	Jan	contract			\$29.00	125kg/ha	\$677.00/t	\$84.63	\$113.63
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*						14.0ML/ha	\$13.27/ML	\$185.78	\$185.78
Cartage						10.0 t/ha	\$12.00/t	\$120.00	\$120.00
Research levy (farm gate value)						10.0 t/ha	\$3.00	\$30.00	\$30.00
Crop insurance (estimated crop value)						\$2,300	1.65%	\$37.95	\$37.95

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AGRONOMIC NOTES	See RICECHECK Recommendations and Rice Crop Protection Guide 2011. Note that average yield in the past 5 years for Amaroo in the MIA is 10t/ha.
Price	- Indications are that the medium grain price will be around \$230 per tonne for the C2012 pool. This budget is based on Reiziq. Costs may vary for other varieties.
Varieties	- Reiziq is now the standard medium grain variety. Other medium grain varieties include Sherpa & Quest for mid-late October sowing,
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 2011'. 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 2011). Other Pests: Ducks may need controlling, especially in the more western areas. Duck control is not included in this budget. Mice populations also need monitoring and may require control late in the season. Snail control is not included in these budgets
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 \$106.50 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 medium grain varieties eg. 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 grain varieties. It is suggested that growers monitor and very carefully manage water salinity levels if growing more sensitive varieties. - The MIA variable water costs are used in the budget. The budget is based on the assumption of 50% water allocation. For water costs in other irrigation districts or river pumpers, check Murrumbidgee irrigation web site. For water costs in the CIA, please go to the web site for the appropriate irrigation authority.
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 available from your District Agronomist. Also Rice Crop Production Guide, Choose a Rice Variety, Ricecheck and Using Groundwater for rice production, DPI 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 2011/2012

1. GROSS MARGIN BUDGET:

INCOME:

10.00 t/ha @ \$230.00 /t (on farm)

Standard Budget \$/ha	Your Budget \$/ha
\$2,300	

A. TOTAL INCOME \$/ha:

\$2,300	
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VARIABLE COSTS:

See following page for detail

Cultivation.....	\$1	
Sowing.....	\$71	
Fertiliser.....	\$229	
Herbicide.....	\$185	
Insecticide.....	\$0	
Aerial image.....	\$4	
Irrigation.....	\$173	
Levies & Insurance.....	\$68	
Harvest.....	\$264	
Cartage.....	\$120	
B. TOTAL VARIABLE COSTS \$/ha:	\$1,114	

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

\$1,186	
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D. GROSS MARGIN \$/ML:

\$91	
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SENSITIVITY TABLES

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

YIELD t/ha	On Farm Price				
	\$180 /t	\$205 /t	\$230 /t	\$255 /t	\$280 /t
7.00	\$283	\$455	\$627	\$799	\$971
8.50	\$488	\$697	\$906	\$1,115	\$1,324
10.00	\$694	\$940	\$1,186	\$1,431	\$1,677
11.50	\$899	\$1,182	\$1,465	\$1,748	\$2,030
13.00	\$1,105	\$1,424	\$1,744	\$2,064	\$2,383

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

YIELD t/ha	On Farm Price				
	\$180 /t	\$205 /t	\$230 /t	\$255 /t	\$280 /t
7.00	\$22	\$35	\$48	\$61	\$75
8.50	\$38	\$54	\$70	\$86	\$102
10.00	\$53	\$72	\$91	\$110	\$129
11.50	\$69	\$91	\$113	\$134	\$156
13.00	\$85	\$110	\$134	\$159	\$183

RICE - MEDIUM GRAIN (sod sown)

Farm Enterprise Budget Series - Murrumbidgee Valley

Summer 2011/2012

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost \$/ha	
Operation	Month	hrs/ha	Cost \$/hour	% of area	Total \$/ha	Rate/ha	Cost		Total \$/ha
<i>Broadleaf & grass weed control eg: boom spray glyphosate 450</i>	Sep	0.05	41.38		\$2.23	1.00 L/ha	\$3.64/L	\$3.64	\$5.87
Reform banks		1.18	18.06	4%	\$0.85				\$0.85
Sow	Sep/Oct	0.28	46.71		\$13.08	170kg/ha	\$0.34/kg	\$57.80	\$70.88
Apply starter fertiliser eg: <i>DAP</i>		with above				70kg/ha	\$848.00/t	\$59.36	\$59.36
Grass weed control eg: <i>Cyhalofop (Barnstorm®)</i>		0.05	41.38		\$2.23	1.00 L/ha	\$90.04/L	\$90.04	\$92.27
<i>Grass weed control eg: molinate</i>		Drip				3.75 L/ha	\$23.25/L	\$87.19	\$87.19
Broadcast urea	Oct/Nov	0.10	18.61		\$1.77	80kg/ha	\$677.00/t	\$54.16	\$55.93
Aerial image	Dec				\$3.85				\$3.85
<i>Topdress nitrogen fertiliser eg: aerial topdress urea</i>	Jan	contract			\$29.00	125kg/ha	\$677.00/t	\$84.63	\$113.63
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	\$13.27/ML	\$172.51	\$172.51
Cartage						10.0 t/ha	\$12.00/t	\$120.00	\$120.00
Research levy (farm gate value)						10.0 t/ha	\$3.00/t	\$30.00	\$30.00
Crop insurance (estimated crop value)						\$2,300	1.65%	\$37.95	\$37.95

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 2011.</i>
Price	- Indications are that the medium grain price will be around \$230 per tonne for the C2012 pool. This budget is based on Reiziq. Costs may vary for other varieties.
Rotation	- This is the first crop following a 3 year sub clover pasture.
Varieties	- Reiziq is the standard medium grain variety. Other medium grain varieties include Quest and Sherpa for late October sowing. Sow varieties on time. (See <i>Choosing a Rice Variety for 2011 on the web</i>)
Weed Control	- Aim for a stable seed bed with knockdown herbicides - 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 2011</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 herbicides.
Insect Control	The budget does not include an insecticide application. - In cooler seasons control of bloodworms and leaf miner may be required following permanent water. Carefully monitor mice populations as drill sown crops will be at risk of damage.
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. - Total nitrogen rate depends on paddock history (ie: how good was the pasture) and seasonal conditions.
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. - Apply phosphorus where Colwell soil P is less than 20mg/kg.
Costs	- 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 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 growing more sensitive varieties. - The MIA variable water costs are used in the budget. The budget is based on the assumption of 50% water allocation. For water costs in other irrigation districts or river pumpers, check Murrumbidgee irrigation web site. For water costs in the CIA, please go to the web site for the appropriate irrigation authority.
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 <i>Production of Quality Rice in South East Australia</i> . Also <i>Rice Crop Production Guide 2010</i> , - <i>Choose a Rice Variety for 2010</i> , <i>Ricecheck recommendation Guide 2010</i> and <i>Using Groundwater for rice production</i> , DPI NSW website

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MAIZE - GRIT (rows / beds)

Farm Enterprise Budget Series - Murrumbidgee Valley/Lachlan valley

Summer 2011/2012

1. GROSS MARGIN BUDGET:

INCOME:

11.00 t/ha @ \$330.00 /t (on farm)

Standard Budget \$/ha	Your Budget \$/ha
\$3,630	

A. TOTAL INCOME \$/ha:

\$3,630	
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VARIABLE COSTS:

See following page for detail

Cultivation.....	\$43	
Sowing.....	\$261	
Fertilizer.....	\$545	
Herbicide.....	\$55	
Insecticide.....	\$26	
Irrigation.....	\$119	
Levies & Insurance.....	\$91	
Harvest.....	\$190	
B. TOTAL VARIABLE COSTS \$/ha:	\$1,331	

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

\$2,299	
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D. GROSS MARGIN \$/ML:

\$255	
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SENSITIVITY TABLES

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

YIELD t/ha	On Farm Price				
	\$310 /t	\$320 /t	\$330 /t	\$340 /t	\$350 /t
8.00	\$1,230	\$1,306	\$1,381	\$1,457	\$1,533
9.50	\$1,660	\$1,750	\$1,840	\$1,930	\$2,020
11.00	\$2,090	\$2,194	\$2,299	\$2,403	\$2,507
12.50	\$2,520	\$2,638	\$2,757	\$2,876	\$2,994
14.00	\$2,950	\$3,083	\$3,216	\$3,349	\$3,481

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

YIELD t/ha	On Farm Price				
	\$310 /t	\$320 /t	\$330 /t	\$340 /t	\$350 /t
8.00	\$137	\$145	\$153	\$162	\$170
9.50	\$184	\$194	\$204	\$214	\$224
11.00	\$232	\$244	\$255	\$267	\$279
12.50	\$280	\$293	\$306	\$320	\$333
14.00	\$328	\$343	\$357	\$372	\$387

MAIZE - GRIT (rows / beds)

Farm Enterprise Budget Series - Murrumbidgee Valley/Lachlan valley

Summer 2011/2012

Operation	Month	Machinery			Inputs			Total Cost \$/ha	
		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 eg: aerial spray glyphosate 450</i>	August	contract			\$15.00	0.80 L/ha	\$3.64/L	\$2.91	\$17.91
<i>Apply nitrogen fertiliser eg: apply urea</i>	Aug/Sep	0.28	46.71		\$13.08	350kg/ha	\$677.00/t	\$236.95	\$250.03
<i>Apply starter fertiliser eg: MAP</i>	Aug/Sep	with above				185kg/ha	\$848/t	\$156.88	\$156.88
<i>Pre emergent weed control eg: boom spray s-metolachlor + atrazine (Primextra Gold®)</i>	Sep/Oct	0.05	41.38		\$2.23	3.20 L/ha	\$11.02/L	\$35.26	\$37.49
<i>Apply zinc fertiliser eg: boom spray zinc hepta hydrate</i>		with above				3kg/ha	\$1.05/kg	\$3.15	\$3.15
Incorporate/Shape beds	Sep	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	\$260.82
<i>Wireworm control eg: apply terbufos (Counter150 G®)</i>		with above				2kg/ha	\$12.81/kg	\$25.62	\$25.62
<i>Apply nitrogen fertiliser eg: water run urea</i>	Nov/Dec/Jan					200kg/ha	\$677.00/t	\$135.40	\$135.40
Inter row cultivate	Nov/Jan	0.17	45.05		\$7.71				\$7.71
Harvest	Mar/Apr/May	contract				11.0 t/ha	\$16.00/t	\$176.00	\$176.00
Chaser bin		0.32	45.05		\$14.19				\$14.19
Irrigation*						9.0ML/ha	\$13.27/ML	\$119.43	\$119.43
Crop levy (farm gate value)						\$3,630	0.70%	\$25.41	\$25.41
Crop insurance (estimated crop value)						\$3,630	1.82%	\$66.07	\$66.07

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 I&I NSW</i>
Prices -	- The contracted price for maize varies each season. Contracts become available in July / August and are normally filled quickly by long term maize growers.
Rotation -	- Commonly grown as the first crop in the rotation or in a maize - fallow - cotton rotation or maize-wheat rotation.
Varieties	- 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	- 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	- Application of terbufos (Counter 150 G®) is for the control of wireworms. - Mice could be a major threat to establishing maize crops. Monitor crops and apply registered baits if required.
Irrigation	- The MIA variable water costs are used in the budget. The budget is based on the assumption of 50% water allocation. For water costs in other irrigation districts or river pumpers, check Murrumbidgee irrigation web site. For water costs in the CIA, please go to the web site for the appropriate irrigation authority.
Drying	- May not be required on short to medium season hybrids if sown early. Drying costs are not included in this budget but should be factored in one year in five.
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 Maize, Growth and Development, Procrop Publication, NSW Bookshop. - Maize Association of Australia website www.maizeaustralia.com.au , (Industry contacts).

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 2011/2012

1. GROSS MARGIN BUDGET:

INCOME:		Standard Budget \$/ha	Your Budget \$/ha
3.75 t/ha @	600 /t (on farm; edible price)	\$2,250	
A. TOTAL INCOME \$/ha:		\$2,250	
VARIABLE COSTS:			
See following page for detail			
Cultivation.....		\$34	
Sowing.....		\$116	
Fertilizer.....		\$70	
Herbicide.....		\$41	
Insecticide.....		\$61	
Irrigation.....		\$106	
Harvest.....		\$99	
Levies & Insurance.....		\$83	
B. TOTAL VARIABLE COSTS \$/ha:		\$609	
C. GROSS MARGIN (A-B) \$/ha:		\$1,641	
D. GROSS MARGIN \$/ML:		\$205	

SENSITIVITY TABLES

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

YIELD t/ha	On Farm Price				
	\$560 /t	\$580 /t	\$600 /t	\$620 /t	\$640 /t
2.25	\$687	\$730	\$774	\$817	\$860
3.00	\$1,092	\$1,149	\$1,207	\$1,265	\$1,323
3.75	\$1,496	\$1,568	\$1,641	\$1,713	\$1,785
4.50	\$1,901	\$1,987	\$2,074	\$2,161	\$2,247
5.25	\$2,305	\$2,406	\$2,507	\$2,609	\$2,710

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

YIELD t/ha	On Farm Price				
	\$560 /t	\$580 /t	\$600 /t	\$620 /t	\$640 /t
2.25	\$86	\$91	\$97	\$102	\$108
3.00	\$136	\$144	\$151	\$158	\$165
3.75	\$187	\$196	\$205	\$214	\$223
4.50	\$238	\$248	\$259	\$270	\$281
5.25	\$288	\$301	\$313	\$326	\$339

SOYBEANS (edible) - ROWS/BEDS

(Fallow crop)

Summer 2011/2012

Farm Enterprise Budget Series - Murrumbidgee Valley

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost \$/ha
Operation	Month	Cost hrs/ha	% of \$/hour area	Total \$/ha	Rate/ha	Cost	Total \$/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: grain legume super or sulfos</i>	Sep	0.14	38.80	\$5.39	150kg/ha	\$375/t	\$56.25	\$61.64
<i>Apply molybdenum fertiliser eg: sodium molybdate</i>		with above			0.125kg/ha	\$63.00/kg	\$7.88	\$7.88
Prewater & spray glyphosate	Oct/Nov	0.05	31.23	\$1.68	1.20 L/ha	\$3.64/L	\$4.37	\$6.05
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		with above			84kg/ha	\$0.12/kg	\$10.08	\$10.08
Inter row cultivate	Dec/Jan	0.17	51.89	\$8.72				\$8.72
<i>Control grass & broadleaf weeds eg: boom spray imazethapyr (Spinnaker 700WDG[®]; 1 yr in 2)</i>	Dec/Jan	0.05	42.58	\$2.29	0.14kg/ha	\$233/kg	\$32.61	\$34.90
<i>Heliothis control eg: aerial spray Larvin</i>	Feb	contract		\$21.00	0.40 L/ha	\$31.13/L	\$12.45	\$33.45
<i>Heliothis and GVB control eg: aerial spray deltamethrin (Decis options[®])</i>	Feb/Mar	contract		\$21.00	0.50 L/ha	\$13.85/L	\$6.93	\$27.93
Harvest	Apr/May	contract		\$88.00				\$88.00
Chaser bin		0.32	34.56	\$10.89				\$10.89
Irrigation*					8.0ML/ha	\$13.27/ML	\$106.16	\$106.16
Research levy (farm gate value)					\$2,250	1.00%	\$22.50	\$22.50
Crop insurance (estimated crop value)					\$2,250	2.68%	\$60.30	\$60.30

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 2011-12 DPI NSW</i>
Prices	- Prices are estimated and GST-exclusive. - For higher quality grain, price could be up to 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 herbicides 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 faba beans 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.
Other pests	- Monitor mice populations and control with registered baits if required.
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 the assumption of 50% water allocation. For water costs in other irrigation districts or river pumpers, check Murrumbidgee irrigation web site. For water costs in the CIA, please go to the web site for the appropriate irrigation authority.
Drying	- Drying may be required in wet autumn or late harvest that involve an additional cost of \$15/tonne of drying costs.
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 - www.australianoilseeds.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) - PERMANENT BEDS (Double crop)

Farm Enterprise Budget Series - Murrumbidgee Valley

Summer 2011/2012

1. GROSS MARGIN BUDGET:

INCOME:

3.25 t/ha @ \$600.00 /t (on farm; full fat)

Standard Budget \$/ha	Your Budget \$/ha
\$1,950	

A. TOTAL INCOME \$/ha:

\$1,950	
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VARIABLE COSTS:

See following page for detail

Cultivation.....	\$2	
Sowing.....	\$139	
Fertilizer.....	\$64	
Herbicide.....	\$17	
Insecticide.....	\$61	
Irrigation.....	\$93	
Harvest.....	\$99	
Levies & Insurance.....	\$72	

B. TOTAL VARIABLE COSTS \$/ha:

\$547	
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C. GROSS MARGIN (A-B) \$/ha:

\$1,403	
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D. GROSS MARGIN \$/ML:

\$200	
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SENSITIVITY TABLES

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

YIELD t/ha	On Farm Price				
	\$560 /t	\$580 /t	\$600 /t	\$620 /t	\$640 /t
1.75	\$469	\$503	\$536	\$570	\$604
2.50	\$874	\$922	\$970	\$1,018	\$1,066
3.25	\$1,278	\$1,341	\$1,403	\$1,466	\$1,529
4.00	\$1,683	\$1,760	\$1,837	\$1,914	\$1,991
4.75	\$2,087	\$2,179	\$2,270	\$2,362	\$2,453

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

YIELD t/ha	On Farm Price				
	\$560 /t	\$580 /t	\$600 /t	\$620 /t	\$640 /t
1.75	\$67	\$72	\$77	\$81	\$86
2.50	\$125	\$132	\$139	\$145	\$152
3.25	\$183	\$192	\$200	\$209	\$218
4.00	\$240	\$251	\$262	\$273	\$284
4.75	\$298	\$311	\$324	\$337	\$350

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 2011/2012

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost
Operation	Month	hrs/ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost	Total \$/ha	Total Cost \$/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	3.64/L	\$4.37	\$5.93
Sow	Dec	0.29	24.81	\$7.21	100kg/ha	\$1.20/kg	\$120.00	\$127.21
Seed inoculation		with above			100kg/ha	\$0.12/kg	\$12.00	\$12.00
<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	\$63.00/kg	\$7.88	\$7.88
<i>Control grass weeds eg: boom spray haloxyfop-r (Verdict520®)</i>	Jan	0.05	42.58	\$2.29	0.15 L/ha	\$55.88/L	\$8.38	\$10.68
<i>Heliothis control eg: aerial spray Larvin</i>	Feb	contract		\$21.00	0.40 L/ha	\$31.13/L	\$12.45	\$33.45
<i>Heliothis and GVB control eg: aerial spray deltamethrin (Decis options®)</i>	Feb/Mar	contract		\$21.00	0.50 L/ha	\$13.85/L	\$6.93	\$27.93
Harvest	Apr/May	contract					\$88.00	\$88.00
Chaser bin		0.32	34.56	\$10.89				\$10.89
Irrigation*					7.0ML/ha	\$13.27/ML	\$92.89	\$92.89
Research levy (farm gate value)					\$1,950	1.00%	\$19.50	\$19.50
Crop insurance (estimated crop value)					\$1,950	2.68%	\$52.26	\$52.26

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 2011-12 DPI 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.
Other pests	<ul style="list-style-type: none"> - Monitor mice populations and control with registered baits if required.
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 the assumption of 50% water allocation. For water costs in other irrigation districts or river pumpers, check Murrumbidgee irrigation web site. For water costs in the CIA, please go to the web site for the appropriate irrigation authority.
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.
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 - www.australianoilseeds.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



FLOOD IRRIGATED LUCERNE - Establishment

Farm Enterprise Budget Series - Murrumbidgee Valley/Murray Valley

Summer 2011/2012

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.....	\$165
Fertiliser.....	\$104
Herbicide.....	\$51
Fungicide.....	\$6
Insecticide.....	\$7
Irrigation.....	\$106
Levies.....	\$0
Cut, Rake and Bale.....	\$640
Cartage and Stack.....	\$384
B. TOTAL VARIABLE COSTS \$/ha:	\$1,510

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

\$990

D. GROSS MARGIN \$/ML:

\$124

* 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	\$60	\$360	\$660	\$960	\$1,260
7.00	\$151	\$501	\$851	\$1,201	\$1,551
8.00	\$241	\$641	\$990	\$1,441	\$1,841
9.00	\$332	\$782	\$1,232	\$1,682	\$2,132
10.00	\$423	\$923	\$1,423	\$1,923	\$2,423

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	\$7	\$45	\$82	\$120	\$157
7.00	\$19	\$63	\$106	\$150	\$194
8.00	\$30	\$80	\$124	\$180	\$230
9.00	\$42	\$98	\$154	\$210	\$267
10.00	\$53	\$115	\$178	\$240	\$303

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

FLOOD IRRIGATED LUCERNE - Establishment

Farm Enterprise Budget Series - Murrumbidgee Valley/Murray Valley
Summer 2011/2012

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total
Operation	Month	hrs/ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost	Total \$/ha	Cost \$/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
<i>Control grass weeds - boom spray e.g. trifluralin</i>	Apr	0.05	41.38	\$2.23	1.70 L/ha	\$6.18/L	\$10.51	\$12.74
Harrow	Apr	0.20	68.05	\$13.32			\$0.00	\$13.32
Sow	Apr/May	0.28	46.71	\$13.08	15kg/ha	\$10.00/kg	\$150.00	\$163.08
Seed inoculation		with above			15kg/ha	\$0.12/kg	\$1.80	\$1.80
Apply fungicide <i>e.g. metalaxyl (Apron®)</i>		with above			100 mL/100kg seed	\$0.38/mL	\$5.72	\$5.72
Apply single super phosphate fertiliser <i>e.g. Superfect®</i>		with above			300kg/ha	\$347.00/t	\$104.10	\$104.10
<i>Mite control boom spray - e.g. bifenthrin (Talstar® 100EC)</i>	May	0.05	41.38	\$2.07	0.10 L/ha	\$45.70/L	\$4.57	\$6.64
<i>Control broadleaf weeds - boom spray e.g. 2,4DB (Buttress®)</i>	May/Jun	0.05	41.38	\$2.07	2.10 L/ha	\$17.43/L	\$36.60	\$38.67
Irrigation	Sept-March				8.0ML/ha	\$13.27/ML	\$106.16	\$106.16
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:	See DPI NSW publications: "Lucerne for Pasture and Fodder", "Weed Control in Lucerne and Pastures" & "Insect and Mite Control in Field crops".
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. - 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	Hay can be made from spring to late autumn, depending upon the whether 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 1:000 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. - Seedlings are tiny, so minimise weed competition to ensure good establishment.
Weed Control	<ul style="list-style-type: none"> - 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. - Talstar is used for mite control but other insecticides are also available.
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 the assumption of 50% water allocation. For water costs in other irrigation districts or river pumpers, check Murrumbidgee irrigation web site. For water costs in the CIA, please go to the web site for the appropriate irrigation authority.
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	- Cost of establishment should be spread over life of the stand

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



FLOOD IRRIGATED LUCERNE - Maintenance

Farm Enterprise Budget Series - Murrumbidgee Valley/Murray Valley

Summer 2011/2012

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

INCOME:			Standard Budget \$/ha
9.00 t/ha	@	\$350.00 /t (on farm)	\$3,150
6.00 t/ha	@	\$250.00 /t (on farm)	\$1,500
15.00 t/ha		\$310.00 /t (on farm)*	
(5 cuts @ 3 t/ha/cut)			
A. TOTAL INCOME \$/ha:			\$4,650

VARIABLE COSTS:

See following page for detail

Cultivation and Sowing.....	\$0
Fertiliser.....	\$123
Herbicide.....	\$36
Insecticide.....	\$4
Irrigation.....	\$173
Levies.....	\$0
Cut, Rake and Bale.....	\$1,200
Cartage and Stack.....	\$720
B. TOTAL VARIABLE COSTS \$/ha:	\$2,256

C. GROSS MARGIN (A-B) \$/ha:	\$2,394
D. GROSS MARGIN \$/ML:	\$184

* 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	\$636	\$1,186	\$1,736	\$2,286	\$2,836
13.00	\$813	\$1,463	\$2,113	\$2,763	\$3,413
15.00	\$990	\$1,740	\$2,394	\$3,240	\$3,990
17.00	\$1,167	\$2,017	\$2,867	\$3,717	\$4,567
19.00	\$1,344	\$2,294	\$3,244	\$4,194	\$5,144

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	\$49	\$91	\$134	\$176	\$218
13.00	\$63	\$113	\$163	\$213	\$263
15.00	\$76	\$134	\$184	\$249	\$307
17.00	\$90	\$155	\$221	\$286	\$351
19.00	\$103	\$176	\$250	\$323	\$396

FLOOD IRRIGATED LUCERNE - Maintenance

Farm Enterprise Budget Series - Murrumbidgee Valley/Murray Valley

Summer 2011/2012

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	\$9.26/L	\$22.22	\$24.45
		with above			1.00kg/ha	\$11.95/kg	\$11.95	\$11.95
Topdress with single super phosphate fertiliser e.g. Superfect®	Aug	0.10	16.61	\$1.58	350kg/ha	\$347.00/t	\$121.45	\$123.03
Mite/Aphid control - boom spray e.g. dimethoate	Sept	0.05	41.38	\$2.23	0.15 L/ha	\$12.40/L	\$1.86	\$4.09
Irrigation					13.0ML/ha	\$13.27/ML	\$172.51	\$172.51
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

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AGRONOMIC NOTES:	<p>See DPI NSW publications: "Lucerne for Pasture and Fodder", "Weed Control in Lucerne and Pastures" and "Insect & Mite Control in field crops".</p> <p>Manage stand well for best production, quality and persistence</p>
Prices	<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - Expected productive stand life 3 - 4 years. - Terminate stand when no longer economically viable (i.e. less than 50 plants/m²) or weedy or thinning. Rotate with cereals to reduce disease and insect problems.
Weed Control	<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - Regularly monitor for insects. Cut, graze or spray when necessary to control insect pests.
Irrigation	<ul style="list-style-type: none"> - 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 the assumption of 50% water allocation. For water costs in other irrigation districts or river pumpers, check Murrumbidgee irrigation web site. For water costs in the CIA, please go to the web site for the appropriate irrigation authority.
Fertiliser	<ul style="list-style-type: none"> - High inputs of phosphorus fertiliser are needed to replace nutrients removed by highly productive hay stands.
Production	<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - 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	<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.
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. - Baling and mowing prices are based on contract small bale prices.
Economics	<ul style="list-style-type: none"> - Cost of establishment should be spread over life of the stand

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WATER COSTS: Murrumbidgee Valley Water Costs

MIA - WATER PRICE - Assumed average size of 220 ha (for 50% allocation)

Total water entitlement 1500ML

FIXED WATER COSTS (ie. unrelated to volume of water used)

- Fixed connection charges		\$1,058.46 /farm
- Rice environment monitoring charge		\$145.00 /farm
- Fixed charges per Outlet	- large wheel	\$367.19 / Outlet
- Envirowise Levy		\$145.19 /farm

	Based on 100% allocation	For customers growing rice and using 50% of allocation
- Total Allocation Charges		
- Facilities charges - Fixed		
Tier1 0 - 50ML	\$12.36 /ML	\$12.36 /ML
Tier2 51 -250ML	\$8.83 /ML	\$8.83 /ML
Tier3 251-1500ML	\$5.89 /ML	\$5.89 /ML
weighted Average for 1500 ML	\$6.50 /ML	\$13.00 /ML

- Bulk Water Charge - Fixed Per ML of Entitlements

Licence	\$2.68 /ML
Conveyance	\$0.29 /ML

Total bulk water charge - Fixed \$2.90 /ML

VARIABLE WATER COSTS (ie. related to volume of water used)

- Water Usage Price	\$8.67 /ML
Based on Area/District water use of 750,000ML at	50% of Allocation
- Bulk Water Charge - Usage	\$4.39 /ML
- Conveyance	\$0.21 /ML

Total variable Water Costs \$13.27 /ML

TYPICAL ACCOUNT

For customer growing rice and using 50% of Allocation

Allocation Fixed Charges	\$6.50 /ML	1500 ML	\$9,746.50
- Bulk Water Charge - Fixed	\$2.90 /ML	1500 ML	\$4,350.00
Connection Fee and Rice EMC			\$1,203.46
Asset Levy for 2 large wheels			\$734.38
Envirowise Levy			\$145.19
Usage Charge	\$8.67 /ML	750 ML	\$6,502.50
Bulk Water usage Charge	\$4.39 /ML	750 ML	\$3,292.50
Conveyance charges	\$0.21	750 ML	\$157.50
TOTAL CHARGES			\$26,132.03 /farm

Total Water Costs \$34.84 /ML

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