Department of Primary Industries

RICE - MEDIUM GRAIN (aerial sown)

Farm Enterprise Budget Series - Murray Valley

Summer 2011/2012

1. GROSS MARGIN BUDGET:

		Standard Budget $/ha
INCOME:		
9.00 t/ha @	$230.00 /t (on farm)	$2,070
	A. TOTAL INCOME $/ha:	**$2,070**
VARIABLE COSTS:		
See following page for detail		
	Cultivation	$38
	Sowing	$88
	Fertiliser	$402
	Herbicide	$436
	Insecticide	$3
	Irrigation	$232
	Aerial image	$4
	Levies & Insurance	$61
	Harvest	$239
	Cartage	$108
	B. TOTAL VARIABLE COSTS $/ha:	**$1,610**
	C. GROSS MARGIN (A-B) $/ha:	**$460**
	D. GROSS MARGIN $/ML:	**$35**

SENSITIVITY TABLES

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

YIELD	On Farm Water Price				
t/ha	$180 /t	$205 /t	**$230 /t**	$255 /t	$280 /t
6.00	-$394	-$246	-$99	$49	$196
7.50	-$188	-$4	$180	$365	$549
9.00	$17	$238	**$460**	$681	$902
10.50	$223	$481	$739	$997	$1,255
12.00	$428	$723	$1,018	$1,313	$1,608

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

YIELD	On Farm Price				
t/ha	$180 /t	$205 /t	**$230 /t**	$255 /t	$280 /t
6.00	-$30	-$19	-$8	$4	$15
7.50	-$14	$0	$14	$28	$42
9.00	$1	$18	**$35**	$52	$69
10.50	$17	$37	$57	$77	$97
12.00	$33	$56	$78	$101	$124

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CALENDAR OF OPERATIONS:		Machinery				Inputs			**Total**
Operation	Month	hrs/ha	Cost $/hour	% of area	Total $/ha	Rate/ha	Cost	Total $/ha	**Cost $/ha**
Knockdown spray eg boom spray Glyphossate 450	June/July	0.05	41.38		$2.23	1.00 L/ha	$3.64/L	$3.64	**$5.87**
Offset plough	Sept	0.35	42.85		$14.88				**$14.88**
Levelling	Sept	0.78	18.06		$14.16				**$14.16**
Reform banks	Sept	1.18	21.15	4%	$1.00				**$1.00**
Apply nitrogen fertiliser ***eg: drill urea***	Sep/Oct	0.28	46.71		$13.08	250kg/ha	$677.00/t	$169.25	**$182.33**
Apply Phosphorus fertiliser eg drill MAP		with above				125kg/ha	$848.00/t	$106.00	**$106.00**
Ridge Roll	Sept/ Oct	0.20	38.55		$7.56				**$7.56**
Sow	Oct	contract			$37.00	150kg/ha	$0.34/kg	$51.00	**$88.00**
Grass and broadleaf weed control ***eg: aerial spray Viper***	Oct	contract			$22.20	5.00 L/ha	$43.89/L	$219.45	**$241.65**
Bloodworm control ***eg: aerial spray chlorpyrifos***		with above				0.15 L/ha	$9.45/L	$1.42	**$1.42**
Grass weed control **eg:** ***aerial spray Barnstorm®***	Oct/Nov	contract			$22.20	1.50 L/ha	$90.04/L	$135.06	**$157.26**
Bloodworm control **eg:** ***aerial spray alpha cypermethrin (Dominex Duo®)***		with above				0.10 L/ha	$12.81/L	$1.28	**$1.28**
Aquatic weed control ***eg: aerial spray MCPA 250***	Nov/Dec	contract			$22.20	2.70 L/ha	$5.50/L	$14.85	**$37.05**
Aerial Image	Dec				$3.85				**$3.85**
Topdress Nitrogen fertiliser ***eg: aerial topdress urea***	Jan	contract			$29.00	125kg/ha	$677.00/t	$84.63	**$113.63**
Harvest	Apr/May	contract				9.0 t/ha	$25.00/t	$225.00	**$225.00**
Chaser bin		0.32	45.05		$14.19				**$14.19**
Irrigation*						13.0ML/ha	$17.84/ML	$231.93	**$231.93**
Cartage						9.0 t/ha	$12.00/t	$108.00	**$108.00**
Research levy (farm gate value)						9.0 t/ha	$3.00	$27.00	**$27.00**
Crop insurance (estimated crop value)						$2,070	1.65%	$34.16	**$34.16**

AGRONOMIC NOTES	**See *RICECHECK Recommendation*s and *Rice Crop Protection Guide 2011.*** Note that the average yield for Reiziq in the MV is 9t/ha.
Price	- Indications are that the medium grain price will be arround $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 and is for early October sowing only. - Other medium grain varieties include Sherpa & Quest for mid-late October sowing.
Rotation	- This is the first crop following a winter cereal. - If a fallow has been maintained it may be possible to direct drill Urea and reduce ground preparation costs.
Weed Control	- Herbicides used in the budget are based on Viper (Program 5), programs based on molinate provide cheaper alternatives - 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.
Pesticide Residues	- Drainage water containing pesticides must be retained on-farm for at least 28 days after application
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.
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 MV variable water costs are used in the budget. - If using saline ground water keep water salinity as low as possible during early seedling development and the PI to microspore stage. - Varieties differ in their tolerance with long grains being the most susceptible to slanity damage. - Reiziq and Illabong are the most susceptible of the medium grain varieties to salinity damage
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 Agronomost. Also Rice Crop Production Guide, Rice Variety Guide - 2011, Ricecheck and Using Groundwater for rice production, DPI NSW website