IRRIGATED LUCERNE - Maintenance

Farm Enterprise Budget Series - Murrumbidgee Valley/Murray Valley

Summer 2009/2010

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

				Standard Budget $/ha
INCOME:				
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.....		$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	On Farm Price				
t/ha	$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	On Farm Price				
t/ha	$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

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

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CALENDAR OF OPERATIONS:		Machinery			Inputs			**Total**
			Cost	Total		Cost	Total	**Cost**
Operation	Month	hrs/ha	$/hour	$/ha	Rate/ha		$/ha	**$/ha**
Control broadleaf & grass weeds - **boom spray e.g. Sprayseed® (paraquat + diquat) and**	Jun/Jul	0.05	41.38	$2.23	2.40 L/ha	$12.00/L	$28.80	**$31.03**
Diuron		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**

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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 economicaly 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. - Baling and mowing prices are based on contract small bale prices.
Economics	- Cost of establishment should be spread over life of the stand
More information	See I&I NSW publications: "Lucerne for Pasture and Fodder", "Weed Control in Lucerne and Pastures" and "Insect & Mite Control in field crops".

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