

## SURFACE IRRIGATED LUCERNE - Established stand

### Farm Enterprise Budget Series - Northern Zone

Summer 2009-2010

#### 1. GROSS MARGIN BUDGET:

INCOME:			Sample Budget	Your Budget
7 cuts per season @ 1.90 t/ha per cut			\$/ha	\$/ha
Total Yield =	<b>13.30 tonnes per hectare</b>			
	@ 40 bales per tonne (25 kg bales)			
60% AFIA Grade A1	320 bales/ha@	\$7.50 / bale	\$2,400	
20% AFIA Grade B2	106 bales/ha@	\$6.00 / bale	\$636	
20% AFIA Grade C3	106 bales/ha@	\$4.00 / bale	\$424	
<b>A. TOTAL INCOME \$/ha:</b>			<b>\$3,460</b>	

See [http://www.afia.org.au/quality/national\\_grades/](http://www.afia.org.au/quality/national_grades/) for more details on hay grades used.

#### VARIABLE COSTS:

see following page(s) for details

Depreciation of establishment cost.....	\$90.50
Fertilizer.....	\$356.79
Herbicide.....	\$71.97
Insecticide.....	\$3.32
Irrigation.....	\$327.70
Mow, rake & bale (contract).....	\$1,353.80
Twine @ \$0.113/bale.....	\$60.29
Cart and stack 100% of hay (\$60/t).....	\$798.00
<b>B. TOTAL VARIABLE COSTS \$/ha:</b>	<b>\$3,062.37</b>

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

<b>\$397.63</b>
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**D. GROSS MARGIN \$/MI:**

<b>\$39.76</b>
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#### SENSITIVITY TABLES

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

Yield Cuts	tonnes/ha	Grade A1 \$5.50	Grade A1 \$6.50	Grade A1 \$7.50	Grade A1 \$9.50	Grade A1 \$11.50
		Grade B2 \$4.00	Grade B2 \$5.00	Grade B2 \$6.00	Grade B2 \$8.00	Grade B2 \$10.00
		Grade C3 \$2.00	Grade C3 \$3.00	Grade C3 \$4.00	Grade C3 \$5.00	Grade C3 \$6.00
		\$180 /tonne	\$220 /tonne	\$260 /tonne	\$332 /tonne	\$404 /tonne
4 cuts	5.8	-\$952	-\$720	-\$488	-\$70	\$348
5 cuts	8.3	-\$857	-\$525	-\$193	\$405	\$1,003
6 cuts	10.8	-\$762	-\$330	\$102	\$880	\$1,658
<b>7 cuts</b>	<b>13.3</b>	-\$666	-\$134	<b>\$398</b>	\$1,356	\$2,314
8 cuts	15.8	-\$571	\$61	\$693	\$1,831	\$2,969
9 cuts	18.3	-\$476	\$256	\$988	\$2,306	\$3,624
10 cuts	20.8	-\$381	\$451	\$1,283	\$2,781	\$4,279

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

Yield Cuts	tonnes/ha	Grade A1 \$5.50	Grade A1 \$6.50	Grade A1 \$7.50	Grade A1 \$9.50	Grade A1 \$11.50
		Grade B2 \$4.00	Grade B2 \$5.00	Grade B2 \$6.00	Grade B2 \$8.00	Grade B2 \$10.00
		Grade C3 \$2.00	Grade C3 \$3.00	Grade C3 \$4.00	Grade C3 \$5.00	Grade C3 \$6.00
		\$180 /tonne	\$220 /tonne	\$260 /tonne	\$332 /tonne	\$404 /tonne
4 cuts	5.8	-\$95	-\$72	-\$49	-\$7	\$35
5 cuts	8.3	-\$86	-\$52	-\$19	\$41	\$100
6 cuts	10.8	-\$76	-\$33	\$10	\$88	\$166
7 cuts	13.3	-\$67	-\$13	<b>\$40</b>	\$136	\$231
8 cuts	15.8	-\$57	\$6	\$69	\$183	\$297
9 cuts	18.3	-\$48	\$26	\$99	\$231	\$362
10 cuts	20.8	-\$38	\$45	\$128	\$278	\$428

# SURFACE IRRIGATED LUCERNE - Established stand

Farm Enterprise Budget Series - Northern Zone

(diesel pump from river-regulated)

Summer 2009-2010

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost \$/ha
		Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha		
Operation	Month	hrs/ha						
Spray - paraquat + diquat	Jul	0.10	17.05	1.71	2.5 L	12.32/L	30.80	<b>32.51</b>
Spray - diuron	Jul	with above			2.5 L	9.20/L	23.00	<b>23.00</b>
Apply Single Super	Aug	0.42	17.01	7.14	125kg	0.42/kg	52.50	<b>59.64</b>
Spray aphids -dimethoate	Aug	0.10	17.05	1.71	0.37 L	4.37/L	1.62	<b>3.32</b>
Fertiliser- #Muriate of Potash	Aug	0.42	17.01	7.14	250kg	1.16/kg	290.00	<b>297.14</b>
Irrigate	Oct				1.25 MI	32.77/MI	40.96	<b>40.96</b>
Irrigate	Nov				1.25 MI	32.77/MI	40.96	<b>40.96</b>
Mow, rake 3 times and bale	Nov	contract		193.40				<b>193.40</b>
Cart and stack hay in shed	Nov	\$1.50	per bale @ 76 bales/ha per cut					<b>114.00</b>
Irrigate	Nov				1.25 MI	32.77/MI	40.96	<b>40.96</b>
Mow, rake 3 times and bale	Dec	contract		193.40				<b>193.40</b>
Cart and stack hay in shed	Dec	\$1.50	per bale @ 76 bales/ha per cut					<b>114.00</b>
Irrigate	Dec				1.25 MI	32.77/MI	40.96	<b>40.96</b>
Mow, rake 3 times and bale	Dec	contract		193.40				<b>193.40</b>
Cart and stack hay in shed	Dec	\$1.50	per bale @ 76 bales/ha per cut					<b>114.00</b>
Herbicide (haloxyfop-R)	Dec	0.10	17.05	1.71	0.1 L	147.59/L	14.76	<b>16.46</b>
Irrigate	Feb				1.25 MI	32.77/MI	40.96	<b>40.96</b>
Mow, rake 3 times and bale	Feb	contract		193.40				<b>193.40</b>
Cart and stack hay in shed	Feb	\$1.50	per bale @ 76 bales/ha per cut					<b>114.00</b>
Irrigate	Mar				1.25 MI	32.77/MI	40.96	<b>40.96</b>
Mow, rake 3 times and bale	Mar	contract		193.40				<b>193.40</b>
Cart and stack hay in shed	Mar	\$1.50	per bale @ 76 bales/ha per cut					<b>114.00</b>
Irrigate	Apr				1.25 MI	32.77/MI	40.96	<b>40.96</b>
Mow, rake 3 times and bale	Apr	contract		193.40				<b>193.40</b>
Cart and stack hay in shed	Apr	\$1.50	per bale @ 76 bales/ha per cut					<b>114.00</b>
Irrigate	May				1.25 MI	32.77/MI	40.96	<b>40.96</b>
Mow, rake 3 times and bale	May	contract		193.40				<b>193.40</b>
Cart and stack hay in shed	May	\$1.50	per bale @ 76 bales/ha per cut					<b>114.00</b>

## AGRONOMIC NOTES:

**Herbicides:** paraquat + diquat and diuron applied to established stands to clean up weeds.

To reduce the likelihood of herbicide resistance, rotate herbicide groups and weed management techniques.

**Fertilisers:** # In areas of long term irrigated hay production, there is a possibility that higher rates of potash may be required to correct chronic potassium deficiency.

**Hay storage:** The assumption is made that all of the hay is stored on farm prior to selling.

**Hay Grades:** The Australian Fodder Industry Association (AFIA) has developed a national grading system for legume and cereal hays. It is based on digestible dry matter, crude protein content and metabolisable energy.

AFIA (Incorporated in 1996) is the peak body for the hay and silage industries. Further information and a fodder vendor declaration form is available from AFIA. Phone: 03 9890 6855 Website: [www.afia.org.au](http://www.afia.org.au)

*Use of a particular brand name does NOT imply recommendation of that brand by I&I NSW.*

*Always read chemical labels and follow directions, as it is your legal responsibility to do so.*

**LABOUR REQUIREMENTS:** Labour for carting hay from the paddock to the shed is accounted for in this budget.

Labour to apply fertiliser or spray is not costed. If we assume a labour cost of \$20/hr the total labour cost would be \$28.50/hectare, reducing the gross margin to \$369/ha.

This does not include labour required to irrigate since this is more likely to be an overhead cost.

## MACHINERY ASSUMPTIONS:

Tractor: pto power: 57 KW (76 HP)

Machinery costs refer to variable costs of: fuel, oil, filters, tyres, batteries and repairs.

Mow, Rake, Bale costs: If you use your own machinery for mowing, raking and baling then substitute this cost in your budget.

**Irrigation Costs:** Estimated water usage charge of \$22.66 per ML assumed, your charges may be different.

Estimated water pumping cost of \$10.11 per ML assumed, your costs may be different.

**Water use assumed:** 10.00 MI/Ha

Costs calculated using a flood/furrow system with diesel powered pumping from surface supply.

This budget should be used as a GUIDE ONLY and should be changed by the grower to take account of movements in crop and input prices, changes in seasonal conditions and individual farm characteristics. Estimated prices are GST-exclusive.