

ESTABLISHING DRYLAND LUCERNE STAND

Northern Zone

Summer 2010-11

** this budget is for the establishment of lucerne only.*

INCOME:

0.00 tonnes/ha@ \$0.00 /tonne (on farm)

Sample Budget \$/ha	Your Budget \$/ha
\$0.00	

A. TOTAL INCOME \$/ha:

\$0.00	
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VARIABLE COSTS:

See next page for detail

Land preparation.....	\$17.48	
Sowing.....	\$30.37	
Fertiliser.....	\$105.00	
Herbicide.....	\$53.91	
Insecticide.....	\$2.50	
Contract harvesting.....	\$0.00	

B. TOTAL VARIABLE COSTS \$/ha:

\$209.27	
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ESTABLISHING DRYLAND LUCERNE STAND

Northern Zone

Summer 2010-11

CALENDAR OF OPERATIONS:								
Operation	Month	Machinery			Inputs			Total Cost \$/ha
		hrs/ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	
<i>Type & timing of fallow weed control required will depend on previous crop type and weeds present.</i>								
broadleaf and grass weed control eg: glyphosate 450 g/L	Jan	0.10	17.05	1.71	1.2 L	4.51/L	5.41	7.12
wetter - non-ionic surfactant	Jan	with above			0.12 L	7.01	0.84	0.84
disc harrows	Feb	0.58	17.82	10.34				10.34
scarify	Mar	0.42	17.01	7.14				7.14
broadleaf and grass weed control eg: glyphosate 450 g/L	Mar	0.10	17.05	1.71	1.2 L	4.51/L	5.41	7.12
wetter - non-ionic surfactant	Mar	with above			0.12 L	7.01	0.84	0.84
pre-emergent broadleaf and grass weed control e.g.: trifluralin	Apr	0.42	17.01	7.14	2.1 L	10.95/L	23.00	30.14
seed + inoculant	May	0.29	21.97	6.37	4kg	6.00/kg	24.00	30.37
fertiliser- Single Super	May	with above			250kg	0.42/kg	105.00	105.00
insecticide - dimethoate 400g EC	Jun	0.10	17.05	1.71	0.090 L	8.87/L	0.80	2.50
grass weed control e.g.. haloxyfop-R	Jun	with above			0.075 L	78.68/L	5.90	5.90
+ crop oil	Jun	with above			0.50 L	3.91/L	1.96	1.96

NOTES:	The lucerne is assumed to last 4 years and hence 1/4 of the establishment costs are charged to the annual gross margin.
Soils:	Growers should assess soil pH and conduct soil tests to ensure the soil does not have aluminium and manganese toxicities. Check for other trace mineral toxicities as well prior to sowing lucerne in a new paddock.
Herbicides:	To reduce the likelihood of herbicide resistance, rotate herbicide groups and weed management techniques. Generally, good weed control is essential from the spring before sowing.
	For more information, refer to the I&I NSW Management Guide "Weed Control in Pastures and Lucerne 2010"
Insecticide:	Used to control blue oat mite and/or red legged earth mite.
	<i>- Always read chemical labels and follow directions, as it is your legal responsibility to do so.</i>
	<i>Use of a particular brand name does NOT imply recommendation of that brand by I&I NSW.</i>
LABOUR REQUIREMENTS: - labour is not costed in this budget.	
	According to the above operations, labour required is 2.39hrs/ha. Then multiplying this by 1.25 to allow for machinery repair time etc, and using a basic labour cost of \$21.00/hr, the cost of labour is \$62.67/ha, increasing the costs to \$271.94/ha.
MACHINERY ASSUMPTIONS:	
Tractor:	PTO power: 57kW (76 HP)
	machinery costs refer to variable costs of: fuel, oil, filters, tyres, batteries and repairs.

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.

ESTABLISHING DRYLAND LUCERNE STAND: No-till

Northern Zone

Summer 2010-11

** this budget is for the establishment of lucerne only.*

INCOME:

0.00 tonnes/ha@ \$0.00 /tonne (on farm)

Sample Budget \$/ha	Your Budget \$/ha
\$0.00	

A. TOTAL INCOME \$/ha:

\$0.00	
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VARIABLE COSTS:

See next page for detail

Sowing.....	\$30.37	
Fertiliser.....	\$105.00	
Herbicide.....	\$35.00	
Insecticide.....	\$2.50	
Contract harvesting.....	\$0.00	

B. TOTAL VARIABLE COSTS \$/ha:

\$172.87	
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ESTABLISHING DRYLAND LUCERNE STAND: No-till

Northern Zone

Summer 2010-11

CALENDAR OF OPERATIONS:								
Operation	Month	Machinery			Inputs			Total Cost \$/ha
		hrs/ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	
<i>Type & timing of fallow weed control required will depend on previous crop type and weeds present.</i>								
broadleaf and grass weed control eg: glyphosate 450 g/L	Jan	0.10	17.05	1.71	1.2 L	4.51/L	5.41	7.12
wetter - non-ionic surfactant	Jan	with above			0.12 L	7.01	0.84	0.84
broadleaf and grass weed control eg: glyphosate 450	Feb	0.10	17.05	1.71	1.0 L	4.51/L	4.51	6.22
broadleaf weed control eg 2,4-D amine 300g/L	Feb	with above			1.2 L	3.94/L	4.73	4.73
wetter - non-ionic surfactant	Feb	with above			0.04 L	7.01/L	0.28	0.28
broadleaf and grass weed control eg: glyphosate 450 g/L	Mar	0.10	17.05	1.71	1.2 L	4.51/L	5.41	7.12
wetter - non-ionic surfactant	Mar	with above			0.12 L	7.01	0.84	0.84
If annual grass weed control has been effective you may not need a pre-sowing herbicide								
seed + inoculant	May	0.29	21.97	6.37	4kg	6.00/kg	24.00	30.37
fertiliser- Single Super	May	with above			250kg	0.42/kg	105.00	105.00
insecticide - dimethoate 400g EC	Jun	0.10	17.05	1.71	0.090 L	8.87/L	0.80	2.50
grass weed control e.g.. haloxyfop-R	Jun	with above			0.075 L	78.68/L	5.90	5.90
+ crop oil	Jun	with above			0.50 L	3.91/L	1.96	1.96

NOTES:	The lucerne is assumed to last 4 years and hence 1/4 of the establishment costs are charged to the annual gross margin.
Soils:	Growers should assess soil pH and conduct soil tests to ensure the soil does not have aluminium and manganese toxicities. Check for other trace mineral toxicities as well prior to sowing lucerne in a new paddock.
Herbicides:	To reduce the likelihood of herbicide resistance, rotate herbicide groups and weed management techniques. Generally, good weed control is essential from the spring before sowing. ANNUAL GRASS WEED CONTROL IN SUMMER AND WINTER Prior to lucerne es
	For more information, refer to the I&I NSW Management Guide "Weed Control in Pastures and Lucerne 2010"
Insecticide:	Used to control blue oat mite and/or red legged earth mite. <i>- Always read chemical labels and follow directions, as it is your legal responsibility to do so. Use of a particular brand name does NOT imply recommendation of that brand by I&I NSW.</i>
LABOUR REQUIREMENTS: - labour is not costed in this budget.	
	According to the above operations, labour required is 0.74hrs/ha. Then multiplying this by 1.25 to allow for machinery repair time etc, and using a labour cost of \$21.00/hr, the cost of labour is \$19.36/ha, increasing the costs to \$192.23/ha.
MACHINERY ASSUMPTIONS:	
Tractor:	PTO power: 57kW (76 HP) machinery costs refer to variable costs of: fuel, oil, filters, tyres, batteries and repairs.

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.



DRYLAND WHEAT (Undersown with lucerne)
Farm Enterprise Budget Series - North East NSW

2010

1. GROSS MARGIN BUDGET:

INCOME:

2.00 tonnes/ha@ \$185.00 /tonne (AH12, on farm)

Sample Budget \$/ha	Your Budget \$/ha
\$370.00	

Note: Competition for moisture from undersown lucerne may result in reduced grain yield and high screenings.

A. TOTAL INCOME \$/ha:

\$370.00	
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VARIABLE COSTS:

See next page for detail

Sowing.....	\$62.99	
Fertiliser.....	\$86.00	
Herbicide.....	\$64.78	
Contract harvesting.....	\$64.94	
Levies.....	\$3.77	
Insurance.....	\$7.59	

B. TOTAL VARIABLE COSTS \$/ha:

\$290.07	
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C. GROSS MARGIN (A-B) \$/ha:

\$79.93	
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2. EFFECT OF YIELD AND PRICE ON GROSS MARGIN PER HECTARE:

YIELD tonnes/ha	On Farm Price				
	\$145 /tonne	\$165 /tonne	\$185 /tonne	\$205 /tonne	\$225 /tonne
1.1	-124	-103	-81	-60	-39
1.4	-82	-55	-28	-1	27
1.7	-40	-7	26	59	92
2.0	2	41	80	119	157
2.3	45	89	134	178	223
2.6	86	136	187	237	287
2.9	125	181	237	294	350

Gross margin is zero when income is reduced by 22%
 or variable costs are increased by 28%

DRYLAND WHEAT (Undersown with lucerne)

Farm Enterprise Budget Series - North East NSW

2010

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost \$/ha
Operation	Month	hrs /ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	
<i>Type & timing of fallow weed control required will depend on previous crop type and weeds present.</i>								
broadleaf and grass weed control eg: glyphosate 450 g/L	Jan	0.04	47.19	1.89	1.50 L	4.51/L	6.77	8.65
wetting agent	Jan	with above			0.25 L	8.08/L	2.02	2.02
broadleaf and grass weed control eg: trifluralin	Apr	0.42	17.01	7.14	1.0 L	10.95/L	10.95	18.09
sowing-wheat seed	May	0.17	67.89	11.54	30 kg	0.92/kg	27.45	38.99
sowing-lucerne seed + inoculant					4 kg	6.00/kg	24.00	24.00
fertiliser (DAP sulphur)	May	with above			100 kg	0.86/kg	86.00	86.00
broadleaf weed control* (2,4-DB 500g/L)	Jun	0.04	47.19	1.89	2.10 L	16.25/L	34.13	36.01
harvest (contract)	Nov			64.94				64.94
levies	Nov			1.020%				3.77
crop insurance				2.050%	on-farm value			7.59

AGRONOMIC REQUIREMENTS:

Growers should assess soil moisture profiles and fertility levels to assist with yield estimates.

Sowing : Sowing at the optimum time for the selected variety is critical for maximum wheat yield. There is a 4- 7% yield loss for every week delayed past the optimum sowing time.

Refer to I&I NSW "Winter Crop Variety Sowing Guide" for wheat sowing guidelines and I&I NSW "Current Lucerne Varieties 2009" Primefact 705, for lucerne variety information. Accurate lucerne seed placement depth can assist good germination.

Fertiliser: Nutrient requirements should be assessed with soil tests, strip trials and paddock history records. Growers should assess soil pH and conduct soil tests to ensure the soil does not have aluminium and manganese toxicities. Check for other trace mineral toxicities as well prior to sowing lucerne in a new paddock.

Weed Control: Weed control, if required, should be timely to be cost effective. To reduce the likelihood of herbicide resistance, rotate herbicide groups and weed management techniques.

* 2,4-D B 500g/L used for broadleaf weed control as example only, appropriate chemicals and label rates differ for different weeds with undersown legumes so refer to the I&I NSW booklet "Weed Control in Winter Crops" for options.

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

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

LABOUR REQUIREMENTS: - labour is not costed in this budget.

According to the above operations, labour required is 0.84hrs/ha. Then multiplying this by 1.25 to allow for machinery repair time etc, and using a basic labour cost of \$21/hr, the cost of labour is \$21.98/ha, reducing the gross margin to \$57.95/ha.

MACHINERY ASSUMPTIONS:

Tractor: PTO power: 130 kW (175 HP); engine power: 146 kW (196 HP)
Contract harvesting costs include \$4.94/ha worth of fuel.
Machinery costs refer to variable costs of: fuel, oil, filters, tyres, batteries and repairs.

DRYLAND LUCERNE HAY

Northern Zone

Summer 2010-11

1. GROSS MARGIN BUDGET:

INCOME: Assumes most bales are prime hay quality.

2 cuts per season @ 2.00 t/ha per cut

Total Yield = **4.00** tonnes per hectare

@ 40 bales per tonne (25 kg bales)

Sample Budget	Your Budget
\$/ha	\$/ha

60% AFIA Grade A1	96 bales/ha@	\$8.50 / bale	\$816	
20% AFIA Grade B2	32 bales/ha@	\$6.50 / bale	\$208	
20% AFIA Grade C3	32 bales/ha@	\$4.00 / bale	\$128	

See http://www.afia.org.au/quality/national_grades/ for more details on hay grades used.

A. TOTAL INCOME \$/ha:

\$1,152	
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VARIABLE COSTS:

see following pages(s) for details

Depreciation of establishment cost (over 4 years).....	\$52.32	
Fertiliser.....	\$125.00	
Herbicide.....	\$17.96	
Insecticide.....	\$0.00	
Mow, rake & bale (contract).....	\$524.40	
Twine @ \$0.113/bale.....	\$18.13	
Cart and stack 100% of hay (\$10.68/t).....	\$42.72	

B. TOTAL VARIABLE COSTS \$/ha:

\$780.52	
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C. GROSS MARGIN (A-B) \$/ha:

\$371.48	
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SENSITIVITY TABLE

EFFECT OF HAY YIELD AND PRICE ON GROSS MARGIN PER HECTARE

Yield Cuts	Total tonnes/ha	Grade A1 \$6.50	Grade A1 \$7.50	Grade A1 \$8.50	Grade A1 \$10.50	Grade A1 \$12.50
		Grade B2 \$4.50	Grade B2 \$5.50	Grade B2 \$6.50	Grade B2 \$8.50	Grade B2 \$10.50
		Grade C3 \$2.00	Grade C3 \$3.00	Grade C3 \$4.00	Grade C3 \$5.00	Grade C3 \$6.00
		\$208 /tonne	\$248 /tonne	\$288 /tonne	\$360 /tonne	\$432 /tonne
1 cuts	2.0	-72	8	88	232	376
2 cuts	3.0	-53	67	187	403	619
2 cuts	3.5	-1	139	279	531	783
2 cuts	4.0	51	211	371	659	947
3 cuts	5.0	70	270	470	830	1,190
3 cuts	6.0	175	415	655	1,087	1,519
4 cuts	8.0	298	618	938	1,514	2,090

DRYLAND LUCERNE HAY

Northern Zone

Summer 2010-11

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost \$/ha
Operation	Month	hrs/ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	
Spray - 2,4-DB 500g/L	Jul	0.10	17.05	1.71	1.0 L	16.25/L	16.25	17.96
Apply Single Super	Aug	contract		20.00	250kg	0.42/kg	105.00	125.00
Mow, rake 3 times and bale	Oct	contract		262.20				262.20
Cart and stack hay in shed	Oct	\$0.27	per bale @ 80 bales/ha per cut					21.36
Mow, rake 3 times and bale	Jan	contract		262.20				262.20
Cart and stack hay in shed	Jan	\$0.27	per bale @ 80 bales/ha per cut					21.36

AGRONOMIC NOTES:

Herbicides: 2,4-DB applied to established stands to clean up weeds.

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

For more information, refer to the I&I NSW Management Guide "Weed Control in Pastures and Lucerne 2010"

Establishment: This budget assumes a stand life of four years, so depreciation of establishment cost is the cost of establishment divided by four.

This budget should be looked at in conjunction with the budget for establishment of a dryland lucerne stand.

Fertilisers: Nutrient requirements should be assessed with soil tests, strip trials and paddock history records.

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 percentage and metabolisable energy.

Profitability: Profitability may vary widely depending on dry matter yield and hay prices.

Please refer to the sensitivity table and factor in the seasonal and market risks in your planning activities.

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

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 REQUIREMENT Labour for carting hay from the paddock to the shed is accounted for in this budget at \$1.50 per bale.

MACHINERY ASSUMPTIONS:

Tractor: PTO power: 57kW (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 own budget.

DRYLAND LUCERNE: HAY AND CATTLE

1. Data-Cattle

Summer 2010-11

Steers purchase weight and price

\$2.00 per kg live @ 320 kg = \$640.00 per head

Steers finished weight and price

\$2.10 per kg live @ 400 kg = \$840.00 per head

Dry matter 2000
Steers/ha 1.4

2. GROSS MARGIN BUDGET:

INCOME - HAY

Assumes most bales are prime hay quality.

1 cut per season @ 2.00 t/ha per cut

Total Yield = 2.00 tonnes per hectare

@ 40 bales per tonne (25 kg bales)

			Sample Budget	Your Budget
			\$/ha	\$/ha
60% AFIA Grade A1	48 bales/ha@	\$8.50 / bale	\$408	
20% AFIA Grade B2	16 bales/ha@	\$6.50 / bale	\$104	
20% AFIA Grade C3	16 bales/ha@	\$4.00 / bale	\$64	

See http://www.afia.org.au/quality/national_grades/ for more details on hay grades used.

INCOME - GRAZING

Grazing (will vary substantially depending on stock type, seasonal conditions, crop growth & grazing period)

1.4 hd/ha @ 0.90 kg/day x \$2.10/kg liveweight

i.e. 400 kg/hd @ \$840/hd

\$1,176.00

A. TOTAL INCOME \$/ha:

\$1,752

VARIABLE COSTS:

see following pages(s) for details

Hay variable costs	Depreciation of establishment cost (over 4 years).....		\$52.32	
	Fertiliser.....		\$125.00	
	Herbicide.....		\$0.00	
	Insecticide.....		\$0.00	
	Mow, rake & bale (contract).....		\$262.20	
	Twine @ \$0.113/bale.....		\$9.07	
Cattle Variable costs	Cart and stack 100% of hay (\$10.68/t).....		\$21.36	
	Purchase store steers, 320kg @ \$2.00/kg=\$640/hd.....		\$896.00	
	Drench, vaccine [#] , bloat capsules..	20.00 /hd	\$28.00	
	Supplement*.....			
	Commission.....	5.0% of cattle sales	\$58.80	
	Industry Levies.....	5.50 \$/hd	\$7.70	
	Yard Dues.....	3.00 \$/hd	\$4.20	
	Freight.....	20.00 \$/hd	\$28.00	

[#] A second 5-in-1 booster may be required for pulpy kidney protection.

Bloat capsules may need to be administered at least 7 days before grazing risky pasture, refer to NSW DPI Primefact 416, "Bloat"

* Supplementary grass pasture or roughage hay may be required during periods of lush lucerne growth.

B. TOTAL VARIABLE COSTS \$/ha:

\$1,492.64

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

\$259.36

SENSITIVITY TABLE

EFFECT OF HAY YIELD AND PRICE ON GROSS MARGIN PER HECTARE

Yield Cuts	tonnes/ha	Grade A1 \$4.50	Grade A1 \$6.50	Grade A1 \$8.50	Grade A1 \$10.50	Grade A1 \$12.50
		Grade B2 \$2.50	Grade B2 \$4.50	Grade B2 \$6.50	Grade B2 \$8.50	Grade B2 \$10.50
		Grade C3 \$0.00	Grade C3 \$2.00	Grade C3 \$4.00	Grade C3 \$5.00	Grade C3 \$6.00
		\$128 /tonne	\$208 /tonne	\$288 /tonne	\$360 /tonne	\$432 /tonne
1 cuts	1.0	-173	-93	-13	59	131
1 cuts	1.5	-117	3	123	231	339
1 cuts	2.0	-61	99	259	403	547
1 cuts	2.5	-4	196	396	576	756
2 cuts	3.0	-210	30	270	486	702
2 cuts	3.5	-154	126	406	658	910
2 cuts	4.0	-97	223	543	831	1,119

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.

DRYLAND LUCERNE: HAY AND CATTLE

Northern Zone

Summer 2010-11

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost \$/ha
Operation	Month	hrs/ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	
Apply Single Super	Aug	contract		20.00	250kg	0.42/kg	105.00	125.00
Mow, rake 3 times and bale	Nov	contract		262.20				262.20
Cart and stack hay in shed	Nov	\$0.27	per bale @ 80 bales/ha per cut					21.36

AGRONOMIC NOTES:

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

For more information, refer to the I&I NSW Management Guide "Weed Control in Pastures and Lucerne 2010"

Establishment: This budget assumes a stand life of 4 years, so depreciation of establishment cost is the cost of establishment divided by four.

Fertilisers: Nutrient requirements should be assessed with soil tests, strip trials and paddock history records.

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

GRAZING MANAGEMENT: AGNOTE DPI-198 "**Grazing management of lucerne**": Lucerne needs a period of spelling or recovery alternated with a period of grazing. Rotational grazing and spelling are the keys to lucerne management. The rest period allows the plant to renew root reserves.

Continuous stocking can cause rapid decline in plant numbers and shorten the stand life and density. The heavier the stocking rate, the more rapid plant death, as constant removal of new shoots depletes root reserves, especially if growing conditions are unfavourable.

When grazing, aim to preserve basal buds and preferably some leaf. This allows rapid regrowth. As a general rule, remove stock when lucerne is 5 cm high. Avoid any grazing of lucerne crown growth points. Bloat issues need to be considered and managed while grazing cattle on lucerne. For more detailed information see **AGNOTE DPI-198 "Grazing management of lucerne"** at <http://www.dpi.nsw.gov.au/agriculture/field/pastures-and-rangelands/management/grazing-management/grazing-management-of-lucerne> and **Agfact P2.2.25 "Lucerne for Pasture and fodder"**

Profitability: Profitability can vary greatly due to a number of factors including the margin between purchase price and sale price per head, the total dry matter available and therefore potential stocking rate, meeting target weight gains and therefore target sale categories and prices, requirements for supplementary feeds such as straw. Please refer to the sensitivity table for an example and factor in the seasonal and market risks in your planning activities.

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, spray or for livestock management is not costed.

MACHINERY ASSUMPTIONS:

Tractor: PTO power: 57kW (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 own budget.

DRYLAND LUCERNE: Weaner cattle or trade steers

1. Data-Cattle

Summer 2010-11

Steers purchase weight and price

\$2.00 per kg live @ 320 kg = \$640.00 per head

Steers finished weight and price

\$2.10 per kg live @ 400 kg = \$840.00 per head

Dry matter 4000
Steers/ha* 2.90

* Stocking rate assumed could be 2 grazings at 1.45 steers/ha

2. GROSS MARGIN BUDGET:

INCOME - GRAZING

Grazing (will vary substantially depending on stock type, seasonal conditions, crop growth & grazing period)

2.87 hd/ha** @ 0.90 kg/day x \$2.10/kg liveweight

** 1% mortality rate assumed

i.e. 400 kg/hd @ \$840/hd

A. TOTAL INCOME \$/ha:

Sample Budget	Your Budget
\$/ha	\$/ha

\$2,411.64	
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\$2,412	
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VARIABLE COSTS:

see following pages(s) for details

Lucerne variable costs	Depreciation of establishment cost (over 4 years).....		\$52.32	
	Fertiliser.....		\$125.00	
	Herbicide.....		\$38.19	
	Insecticide.....		\$0.00	
Cattle Variable costs	Purchase store steers, 320kg @ \$2.00/kg=\$640/hd.....		\$1,856.00	
	Drench, vaccine [#] , bloat capsules.....	\$20.00 /hd	\$58.00	
	Supplement*.....			
	Commission.....	5.0% of cattle sales	\$120.58	
	Industry Levies.....	\$5.00 /hd	\$14.50	
	Yard Dues.....	\$4.00 /hd	\$11.60	
	Freight.....	\$20.00 /hd	\$58.00	

[#] A second 5-in-1 booster may be required for pulpy kidney protection.

Bloat capsules may need to be administered at least 7 days before grazing risky pasture, refer to NSW DPI Primefact 416, "Bloat"

* Supplementary grass pasture or roughage hay may be required during periods of lush lucerne growth.

B. TOTAL VARIABLE COSTS \$/ha:

\$2,334.18	
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C. GROSS MARGIN (A-B) \$/ha:

\$77.46	
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D. GROSS MARGIN (A-B) \$/head:

\$26.71	
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SENSITIVITY TABLE:

Effect of livestock prices on gross margin per hectare

Purchase Price \$/kg	Selling Price				
	\$1.90 /kg	\$2.00 /kg	\$2.10 /kg	\$2.20 /kg	\$2.30 /kg
1.70	138	247	356	465	574
1.80	45	154	263	372	481
1.90	-48	61	170	279	388
2.00	-141	-32	77	187	296
2.10	-234	-124	-15	94	203
2.20	-326	-217	-108	1	110
2.30	-419	-310	-201	-92	17

DRYLAND LUCERNE: Weaner cattle or trade steers

Northern Zone

Summer 2010-11

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost \$/ha
Operation	Month	hrs/ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	
Spray - paraquat + diquat	Jul	0.10	17.05	1.71	2.4 L	10.45/L	25.08	26.79
Spray - diuron	Jul	with above			1.0 L	11.40/kg	11.40	11.40
Apply Single Super	Aug	contract		20.00	250kg	0.42/kg	105.00	125.00

AGRONOMIC NOTES:

To reduce the likelihood of herbicide resistance, rotate herbicide groups and weed management techniques.
For more information, refer to the I&I NSW Management Guide "Weed Control in Pastures and Lucerne 2010"

Fertilisers: Nutrient requirements should be assessed with soil tests, strip trials and paddock history records.

Establishment: This budget assumes a stand life of 4 years, so depreciation of establishment cost is the cost of establishment divided by four.

GRAZING MANAGEMENT: AGNOTE DPI-198 "Grazing management of lucerne": Lucerne needs a period of spelling or recovery alternated with a period of grazing. Rotational grazing and spelling are the keys to lucerne management. The rest period allows the plant to renew root reserves.
Continuous stocking can cause rapid decline in plant numbers. The heavier the stocking rate, the more rapid plant death, as constant removal of new shoots depletes root reserves, especially if growing conditions are unfavourable.
When grazing, aim to preserve basal buds and preferably some leaf. This allows rapid regrowth. As a general rule, remove stock when lucerne is 5 cm high. Avoid any grazing of lucerne crown growth points.
Ideally stock would be rotated through paddocks to utilise forage produced and manage lucerne satisfactorily.
For more detailed information see **AGNOTE DPI-198 "Grazing management of lucerne"**
<http://www.agric.nsw.gov.au/reader/past-management/dpi198.htm> and **Agfact P2.2.25 "Lucerne for Pasture and fodder"**

Profitability: Profitability can vary greatly due to a number of factors including the margin between purchase price and sale price per head, the total dry matter available and therefore potential stocking rate, meeting target weight gains and therefore target sale categories and prices, requirements for supplementary feeds such as straw. Please refer to the sensitivity table for an example and factor in the seasonal and market risks in your planning activities.

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 to apply fertiliser, spray or for livestock management is not costed.

MACHINERY ASSUMPTIONS:
Tractor: PTO power: 57kW (76 HP)
Machinery costs refer to variable costs of: fuel, oil, filters, tyres, batteries and repairs.

DRYLAND LUCERNE: HAY AND PRIME LAMBS

1. Data-Lambs

Summer 2010-11

Lambs purchase weight and price	30 kg =	\$100.00	per head
Lambs finished weight and price	45 kg =	\$140.00	per head
	Dry matter	2000	kg/ha
	Wether lambs/ha	15.0	

If lambs gain 250g/head/day, they would need to be grazed for 60 days to gain 15 kg/head.

2. GROSS MARGIN BUDGET:

INCOME - HAY

Assumes most bales are prime hay quality.

1 cut per season @ 2.00 t/ha per cut
 Total Yield = 2.00 tonnes per hectare
 @ 40 bales per tonne (25 kg bales)

	Sample Budget	Your Budget
	\$/ha	\$/ha
60% AFIA Grade A1	48 bales/ha@ \$8.50 / bale	\$408
20% AFIA Grade B2	16 bales/ha@ \$6.50 / bale	\$104
20% AFIA Grade C3	16 bales/ha@ \$4.00 / bale	\$64

See http://www.afia.org.au/quality/national_grades/ for more details on hay grades used.

INCOME - GRAZING

Grazing (will vary substantially depending on stock type, seasonal conditions, crop growth & grazing period)

14.7 hd/ha @ \$140.00 per head
 2% losses assumed

Wool

1.50 kg wool/head @ \$2.00 /kg

\$2,058.00	
\$45.00	
\$2,679	

A. TOTAL INCOME \$/ha:

VARIABLE COSTS:

see following pages(s) for details

Lucerne variable costs	Depreciation of establishment cost (over 4 years).....	\$52.32
	Fertiliser.....	\$387.20
	Herbicide.....	\$38.19
	Insecticide.....	\$0.00
	Mow, rake & bale (contract).....	\$262.20
	Twine @ \$0.113/bale.....	\$9.04
	Cart and stack 100% of hay (\$10.68/t).....	\$21.36
Sheep Variable costs	Purchase store lambs @ \$100/hd.....	\$1,500.00
	Drench & vaccine \$0.30 /head	\$4.50
	Shearing..... \$3.00 /head	\$45.00
	Commission 5.0% of stock sales	\$102.90
	Industry Levies..... \$1.50 /hd	\$22.05
	Yard Dues..... \$1.00 /hd	\$14.70
	Freight..... \$1.50 /hd	\$22.05

B. TOTAL VARIABLE COSTS \$/ha:

\$2,481.50

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

\$197.50

SENSITIVITY TABLE:

Effect of livestock prices on gross margin per hectare

Purchase Price \$/hd	Selling Price				
	\$120/hd	\$130/hd	\$140/hd	\$150/hd	\$160/hd
85.00	142	282	421	561	701
90.00	67	207	346	486	626
95.00	-8	132	271	411	551
100.00	-83	57	196	336	476
105.00	-158	-18	121	261	401
110.00	-233	-93	46	186	326

DRYLAND LUCERNE: HAY AND PRIME LAMBS

Northern Zone

Summer 2010-11

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost \$/ha
Operation	Month	hrs/ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	
Spray - paraquat + diquat	Jul	0.10	17.05	1.71	2.4 L	10.45/L	25.08	26.79
Spray - diuron	Jul	with above			1.0 L	11.40/kg	11.40	11.40
Apply Single Super	Aug	contract		20.00	250kg	0.42/kg	105.00	125.00
Mow, rake 3 times and bale	Nov	contract		262.20				262.20
Cart and stack hay in shed	Nov	\$0.27	per bale @ 80 bales/ha per cut					21.36

AGRONOMIC NOTES:

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

For more information, refer to the I&I NSW Management Guide "Weed Control in Pastures and Lucerne 2010"

Establishment: This budget assumes a stand life of 4 years, so depreciation of establishment cost is the cost of establishment divided by four.

Fertilisers: Nutrient requirements should be assessed with soil tests, strip trials and paddock history records.

GRAZING MANAGEMENT: AGNOTE DPI-198 "Grazing management of lucerne": Lucerne needs a period of spelling or recovery alternated with a period of grazing. Rotational grazing and spelling are the keys to lucerne management. The rest period allows the plant to renew root reserves.

Continuous stocking can cause rapid decline in plant numbers. The heavier the stocking rate, the more rapid plant death, as constant removal of new shoots depletes root reserves, especially if growing conditions are unfavourable.

When grazing, aim to preserve basal buds and preferably some leaf. This allows rapid regrowth.

As a general rule, remove stock when lucerne is 5 cm high. Avoid any grazing of lucerne crown growth points.

For more detailed information see **AGNOTE DPI-198 "Grazing management of lucerne"**

<http://www.agric.nsw.gov.au/reader/past-management/dpi198.htm> and **Agfact P2.2.25 "Lucerne for Pasture and fodder"**

Profitability: Profitability can vary greatly due to a number of factors including the margin between purchase price and sale price per head, the total dry matter available and therefore potential stocking rate, meeting target weight gains and therefore target sale categories and prices, or mortality rates. Please refer to the sensitivity table for an example and factor in the seasonal and market risks in your planning activities.

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 to apply fertiliser, spray or for livestock management is not costed.

MACHINERY ASSUMPTIONS:

Tractor: PTO power: 57kW (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 own budget.

DRYLAND LUCERNE: Grazing Prime Lambs

1. Data-Lambs

Lambs purchase weight and price	30 kg =	\$100.00	per head
Lambs finished weight and price	45 kg =	\$140.00	per head
	Dry matter	4000	kg/ha
	Wether lambs/ha	30.0	

Summer 2010-11

2. GROSS MARGIN BUDGET:

INCOME - GRAZING

Grazing (will vary substantially depending on stock type, seasonal conditions, crop growth & grazing period)

29.4 hd/ha @ \$140.00 per head

2% losses assumed

Wool 1.50 kg wool/head @ \$2.00 /kg

Sample Budget	Your Budget
\$/ha	\$/ha

\$4,116.00	
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\$90.00	
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A. TOTAL INCOME \$/ha:

\$4,206	
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VARIABLE COSTS:

see following pages(s) for details

Lucerne variable costs	Depreciation of establishment cost (over 4 years).....		\$52.32	
	Fertiliser.....		\$125.00	
	Herbicide.....		\$38.19	
Sheep Variable costs	Purchase store wether lambs @ \$100/hd.....		\$3,000.00	
	Drench & vaccine	\$0.30 /head	\$9.00	
	Shearing.....	\$3.00 /head	\$90.00	
	Commission	5.0%	\$205.80	
	Industry Levies.....	\$1.50 /hd	\$44.10	
	Yard Dues.....	\$1.00 /hd	\$29.40	
	Freight.....	\$1.50 /hd	\$44.10	

\$52.32	
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\$125.00	
----------	--

\$38.19	
---------	--

\$3,000.00	
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\$9.00	
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\$90.00	
---------	--

\$205.80	
----------	--

\$44.10	
---------	--

\$29.40	
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\$44.10	
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B. TOTAL VARIABLE COSTS \$/ha:

\$3,637.90	
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C. GROSS MARGIN (A-B) \$/ha:

\$568.10	
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D. GROSS MARGIN (A-B) \$/head:

\$18.94	
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SENSITIVITY TABLE: Effect of livestock prices on gross margin per hectare

Purchase Price \$/hd	Selling Price				
	\$120/hd	\$130/hd	\$140/hd	\$150/hd	\$160/hd
85.00	459	739	1,018	1,297	1,577
90.00	309	589	868	1,147	1,427
95.00	159	439	718	997	1,277
100.00	9	289	568	847	1,127
105.00	-141	139	418	697	977
110.00	-291	-11	268	547	827

Number of lambs	Selling Price				
	\$120/hd	\$130/hd	\$140/hd	\$150/hd	\$160/hd
15	-103	37	176	316	456
20	-66	121	307	493	679
25	-28	205	437	670	903
30	9	289	568	847	1,127
32	24	322	620	918	1,216
35	47	373	699	1,025	1,350

DRYLAND LUCERNE: Grazing Prime Lambs

Northern Zone

Summer 2010-11

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost \$/ha
Operation	Month	hrs/ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	
Spray - paraquat + diquat	Jul	0.10	17.05	1.71	2.4 L	10.45/L	25.08	26.79
Spray - diuron	Jul	with above			1.0 L	11.40/kg	11.40	11.40
Apply Single Super	Aug	contract			250kg	0.42/kg	105.00	125.00

AGRONOMIC NOTES:

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

For more information, refer to the I&I NSW Management Guide "Weed Control in Pastures and Lucerne 2010"

Establishment: This budget assumes a stand life of 4 years, so depreciation of establishment cost is the cost of establishment divided by four.

Fertilisers: Nutrient requirements should be assessed with soil tests, strip trials and paddock history records.

Livestock: Wether lambs are capable of gaining weight faster than female stock due to a higher tendency to gain muscle weight.

GRAZING MANAGEMENT: AGNOTE DPI-198 "Grazing management of lucerne": Lucerne needs a period of spelling or recovery alternated with a period of grazing. Rotational grazing and spelling are the keys to lucerne management. The rest period allows the plant to renew root reserves. Continuous stocking can cause rapid decline in plant numbers. The heavier the stocking rate, the more rapid plant death, as constant removal of new shoots depletes root reserves, especially if growing conditions are unfavourable. When grazing, aim to preserve basal buds and preferably some leaf. This allows rapid regrowth.

As a general rule, remove stock when lucerne is 5 cm high. Avoid any grazing of lucerne crown growth points.

For more detailed information see **AGNOTE DPI-198 "Grazing management of lucerne"**

<http://www.agric.nsw.gov.au/reader/past-management/dpi198.htm> and Agfact P2.2.25 "Lucerne for Pasture and fodder"

Profitability: Profitability can vary greatly due to a number of factors including the margin between purchase price and sale price per head, the total dry matter available and therefore potential stocking rate, meeting target weight gains and therefore target sale categories and prices, or mortality rates. Please refer to the sensitivity tables for examples and factor in the seasonal and market risks in your planning activities.

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

LABOUR REQUIREMENTS:

Labour to apply fertiliser, spray or for livestock management is not costed.

MACHINERY ASSUMPTIONS:

Tractor: PTO power: 57kW (76 HP)

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