



DRYLAND WHEAT (Short Fallow, No Till)

Farm Enterprise Budget Series - North East NSW

Winter 2009

1. GROSS MARGIN BUDGET:

* Additional wheat yield attributed to disease/weed break/remaining moisture

<u>After</u>	INCOME:		Previous Crop
Wheat	2.50 tonnes/ha@	\$271.00 /tonne (PH, on farm)	
Chickpeas*	3.00 tonnes/ha@	\$271.00 /tonne (PH, on farm)	
Canola*	3.00 tonnes/ha@	\$271.00 /tonne (PH, on farm)	

WHEAT Budget \$/ha	CHICKPEAS Budget \$/ha	CANOLA Budget \$/ha	Your Budget \$/ha
\$677.50			
	\$813.00		
		\$813.00	

Crop prices were correct at the time of writing (Mar 17 2009), world market volatility makes estimation of future pricing impractical.

A. TOTAL INCOME \$/ha:	\$677.50	\$813.00	\$813.00	
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VARIABLE COSTS:

See following page for detail

Sowing.....	\$56.97	\$56.97	\$56.97	
Fertiliser.....	\$264.10	\$210.93	\$264.10	
Herbicide.....	\$61.78	\$61.78	\$61.78	
Insecticide.....	\$27.04	\$27.04	\$27.04	
Fungicide.....	\$21.11	\$21.11	\$21.11	
Contract harvesting.....	\$52.72	\$62.32	\$62.32	
Levies.....	\$6.91	\$8.29	\$8.29	
Insurance.....	\$13.89	\$16.67	\$16.67	

B. TOTAL VARIABLE COSTS \$/ha:	\$504.52	\$465.11	\$518.28	
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C. GROSS MARGIN (A-B) \$/ha:	\$172.98	\$347.89	\$294.72	
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Water use efficiency example (based on 100 year averages)

Growing season rainfall (ie in-crop): mm	317	317	317	
Stored fallow moisture: mm (25% of rainfall in fallow period assumed)	75	75	75	
Early crop water use: mm	110	110	110	
Total crop water use mm	282	282	282	
Gross margin per mm	\$0.61	\$1.23	\$1.05	
kg of grain per mm	8.9	10.6	10.6	

Please refer to the "Water Use Efficiency in Northern NSW Winter Crop Enterprise Budgets" summary for more information on water use efficiency assumptions used at right.

AGRONOMIC REQUIREMENTS:

Sowing Time: Sowing at the optimum time for the selected variety is critical for maximum yield. There is a 4% to 7% yield loss for each weeks delay past the optimum sowing time. Optimum sowing time needs to be balanced with risk of frost. There is a risk of frost damage if wheat is sown too early. Refer to NSW DPI "Winter Crop Variety Sowing Guide 2009" for sowing guidelines. Growers should assess soil moisture profiles and fertility levels to assist with yield estimates. Stored fallow moisture varies according to rainfall timing and intensity.

Weed Control: Weed control, if required, should be timely to be cost effective.

Herbicides: Check with your agronomist before applying herbicides in unsuitable conditions, particularly where there are sensitive crops in the area.

Metsulfuron methyl is one option for post emergent broadleaf weeds, this product may limit rotation options due to plantback periods, consult the label for details.

Fenoxaprop-p-ethyl has been included for wild oat control, but control by crop rotation is preferable.

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

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 NSW DPI.

Based on the above yields, we have assumed 100 kg stored soil nitrogen/ha after chickpeas, 120-140kg nitrogen/ha after wheat or canola present in the soil profile for this budget. Your paddock nutrient requirements should be assessed with soil tests, strip trials and paddock records.

Disease: Crop rotation is necessary to minimise loss of yield due to disease. Effective grass weed control is also essential to control diseases such as crown rot. Variety selection also plays a role in minimising the impact of disease on yield and quality. An optional stripe rust control is used, but other control and preventative measures are available also. Check the NSW DPI Disease Management Guide "Stripe Rust: Understanding the disease in wheat" for more information.

Fertiliser: Adequate phosphorus is essential before applying extra nitrogenous fertiliser.

Harvest: Yields over 2.5 t/ha are assumed to cost a further \$1.48 per extra 100kg of grain harvested.

MACHINERY ASSUMPTIONS:

Tractor: pto power: 130 kW (175HP); engine power: 146 kW (196 HP)

Contract harvesting costs include \$4.72/ha worth of fuel.

Machinery costs refer only to variable costs (running costs), not overhead costs.

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

After wheat	YIELD	Price				
	tonnes/ha	\$171 /tonne	\$221 /tonne	\$271 /tonne	\$321 /tonne	\$371 /tonne
	1.0	-\$297	-\$248	-\$200	-\$152	-\$103
	1.5	-\$214	-\$141	-\$69	\$4	\$77
	2.0	-\$131	-\$34	\$63	\$160	\$257
	2.5	-\$48	\$73	\$194	\$315	\$436
	3.5	\$98	\$268	\$437	\$607	\$777
	4.5	\$245	\$463	\$681	\$899	\$1,117
	5.5	\$391	\$658	\$924	\$1,191	\$1,458
After chickpeas	YIELD	Price				
	tonnes/ha	\$171 /tonne	\$221 /tonne	\$271 /tonne	\$321 /tonne	\$371 /tonne
	1.0	-\$244	-\$195	-\$147	-\$98	-\$50
	1.7	-\$133	-\$52	\$28	\$109	\$190
	2.3	-\$23	\$90	\$203	\$317	\$430
	3.0	\$78	\$224	\$369	\$514	\$660
	4.0	\$225	\$419	\$612	\$806	\$1,000
	5.0	\$371	\$614	\$856	\$1,098	\$1,341
	6.0	\$518	\$809	\$1,099	\$1,390	\$1,681
After canola	YIELD	Price				
	tonnes/ha	\$171 /tonne	\$221 /tonne	\$271 /tonne	\$321 /tonne	\$371 /tonne
	1.0	-\$297	-\$248	-\$200	-\$152	-\$103
	1.7	-\$186	-\$106	-\$25	\$56	\$137
	2.3	-\$76	\$37	\$150	\$263	\$376
	3.0	\$25	\$170	\$316	\$461	\$607
	4.0	\$172	\$365	\$559	\$753	\$947
	5.0	\$318	\$560	\$803	\$1,045	\$1,287
	6.0	\$465	\$755	\$1,046	\$1,337	\$1,628

CALENDAR OF OPERATIONS		Machinery		Inputs			Total	
Operation	Month	hrs /ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	Total Cost \$/ha
broadleaf and grass weed control eg: glyphosate 450 g/L	Dec	0.05	45.64	2.28	1.2 L	7.43/L	8.92	11.20
broadleaf weed control eg: 2,4-D amine 300 g/L	Dec	with above			1.8 L	4.23/L	7.61	7.61
wetting agent	Dec	with above			0.25 L	8.84/L	2.21	2.21
broadleaf and grass weed control eg: glyphosate 450 g/L	Jan	0.05	45.64	2.28	1.8 L	7.43/L	13.37	15.66
wetting agent	Jan	with above			0.25 L	8.84/L	2.21	2.21
nitrogen fertiliser after cereal or canola eg. anhydrous ammonia	Mar	0.17	45.91	7.80	171 kg	1.09/kg	186.10	193.90
nitrogen fertiliser after chickpeas eg. anhydrous ammonia	Mar	0.17	45.91	7.80	122 kg	1.09/kg	132.93	140.73
broadleaf and grass weed control eg: glyphosate 450 g/L	May	0.05	45.64	2.28	1.0 L	7.43/L	7.43	9.71
wetting agent	May	with above			0.25 L	8.84/L	2.21	2.21
sowing	May	0.17	66.34	11.28	50 kg	0.92/kg	45.90	57.18
Fertiliser (Starter 12Z)	May	with above			60 kg	1.17/kg	70.20	70.20
blue oat mite control (1 year in 4)	May	0.05	45.64	2.28	90 ml	#REF!	#REF!	#REF!
broadleaf weed control eg metsulfuron-methyl	Jun	0.05	45.64	2.28	5 g	0.20/g	1.00	3.28
wild oat control (1 year in 4)	Jun	0.04	45.64	1.83				0.46
eg fenoxaprop-p-ethyl	Jun	with above			0.35 L	82.67/L	28.93	7.23
fungicide for stripe rust ψ eg. Propiconazole	Aug	aerial spray		14.50	0.25 L	26.42/L	6.61	21.11
contract harvest- after cereal	Nov	contract		52.72				52.72
canola	Nov	contract		62.32				62.32
levies - after cereal	Nov			1.020%	of on-farm value			6.91
levies - after chickpeas or canola	Nov			1.020%	of on-farm value			8.29
crop insurance - after cereal				2.050%	of on-farm value			13.89
crop insurance - after chickpeas or canola				2.050%	of on-farm value			16.67

Input prices were correct at the time of writing (Mar 17 2009). Current fertiliser and chemical market uncertainty makes estimation of future pricing impractical.



DRYLAND WHEAT (Long Fallow, No Till, After Sorghum)
Farm Enterprise Budget Series - North East NSW

Winter 2009

1. GROSS MARGIN BUDGET:

INCOME:

3.50 tonnes/ha@ \$244.00 /tonne (AH12, on farm)

Sample Budget \$/ha	Your Budget \$/ha
\$854.00	

This estimated yield figure is for unconstrained better soils and due to a full moisture profile from long fallow. Crop prices were correct at the time of writing (Mar 17 2009), world market volatility makes estimation of future pricing impractical.

A. TOTAL INCOME \$/ha:

\$854.00	
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VARIABLE COSTS:

See next page for detail

Sowing.....	\$57.18	
Fertiliser.....	\$210.93	
Herbicide.....	\$75.26	
Fungicide.....	\$21.11	
Contract harvesting.....	\$71.92	
Levies.....	\$8.71	
Insurance.....	\$17.51	

B. TOTAL VARIABLE COSTS \$/ha:

\$462.61	
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C. GROSS MARGIN (A-B) \$/ha:

\$391.39	
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Water use efficiency example

Growing season rainfall (ie in-crop): mm

Stored fallow moisture: mm (25% of rainfall in fallow period assumed)

Early crop water use: mm

Total crop water use mm

Gross margin per mm

kg of grain per mm

317	
154	
110	
361	
\$1.08	
9.69	

Please refer to the "Water Use Efficiency in Northern NSW Winter Crop Enterprise Budgets" summary for more information on water use efficiency assumptions used at right.

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

YIELD tonnes/ha	On Farm Price				
	\$144 /tonne	\$194 /tonne	\$244 /tonne	\$294 /tonne	\$344 /tonne
1.5	-\$208	-\$135	-\$62	\$10	\$83
2.2	-\$115	-\$10	\$95	\$200	\$305
2.8	-\$28	\$109	\$247	\$384	\$521
3.5	\$52	\$222	\$391	\$561	\$731
4.3	\$152	\$362	\$572	\$782	\$992
5.2	\$253	\$503	\$754	\$1,004	\$1,254
6.0	\$353	\$644	\$935	\$1,225	\$1,516

Gross margin is zero when income is reduced by 46%
 or variable costs are increased by 85%

DRYLAND WHEAT (Long Fallow, No Till, After Sorghum)

Farm Enterprise Budget Series - North East NSW

Winter 2009

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost \$/ha
Operation	Month	hrs /ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	
harvest sorghum* (dessicated)	Mar-08							
# broadleaf and grass weed control eg: glyphosate 450 g/L	Jun-08	0.05	45.64	2.28	0.60 L	7.43/L	4.46	6.74
broadleaf weed control eg. dicamba 700g/kg	Jun-08	with above			150 g	0.05/g	8.23	8.23
# broadleaf and grass weed control eg: glyphosate 450 g/L	Aug-08	0.05	45.64	2.28	1.20 L	7.43/L	8.92	11.20
wetting agent	Aug-08	with above			0.25 L	8.84/L	2.21	2.21
broadleaf weed control eg 2,4-D amine 300g/L	Nov-08	0.05	45.64	2.28	0.60 L	4.23/L	2.54	4.82
broadleaf and grass weed control eg: glyphosate 450 g/L	Nov-08	with above			1.50 L	7.43/L	11.15	11.15
wetting agent	Nov-08	with above			0.25 L	8.84/L	2.21	2.21
nitrogen fertiliser (anhydrous ammonia)	Feb-09	0.17	45.91	7.80	122 kg	1.09/kg	132.93	140.73
pre-sowing weed control eg. glyphosate 450g/L	May	0.05	45.64	2.28	1.20 L	7.43/L	8.92	11.20
wetting agent	May	with above			0.25 L	8.84/L	2.21	2.21
sowing	May	0.17	66.34	11.28	50 kg	0.92/kg	45.90	57.18
fertiliser (Starter 12Z)	May	with above			60 kg	1.17/kg	70.20	70.20
broadleaf weed control eg. MCPA LVE	Jun	0.05	45.64	2.28	1.0 L	9.74/L	9.74	12.02
broadleaf weed control eg metsulfuron- methyl	Jun	0.05	45.64	2.28	5 g	0.20/g	1.00	3.28
fungicide for stripe rust ψ eg. propiconazole	Aug	aerial spray		14.50	0.25 L	26.42/L	6.61	21.11
harvest (contract)	Nov			71.92				71.92
levies	Nov			1.020%				8.71
crop insurance				2.050%	of on-farm value			17.51

Input prices were correct at the time of writing (Mar 17 2009). Current fertiliser and chemical market uncertainty makes estimation of future pricing impractical.

AGRONOMIC REQUIREMENTS:

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

Sowing Time: Sowing at the optimum time for the selected variety is critical for maximum yield. There is a 4% to 7% yield loss for every weeks delay past the optimum sowing time. Refer to NSW DPI "Winter Crop Variety Sowing Guide 2009" for sowing guidelines.

Fertiliser: Adequate phosphorus is essential before applying extra nitrogenous fertiliser. Nutrient requirements should be assessed with soil tests, strip trials and records.

Disease: Crop rotation is necessary to minimise loss of yield due to disease. Effective grass weed control is also essential to control diseases such as crown rot. Variety selection also plays a role in minimising the impact of disease on yield and quality. ψ An optional stripe rust control is used, but other control and preventative measures are available also. Check the NSW DPI Disease Management Guide "Stripe Rust: Understanding the disease in wheat" for more information.

Harvest: Yields over 2.5 t/ha are assumed to cost a further \$1.48 per extra 100kg of grain harvested.

Long fallow: *In this example, sorghum is dessicated prior to harvest, if there is a frost this may not be needed. In a long fallow situation winter cropping cannot be carried out annually. Fallow sprays allow weed control and moisture conservation.

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.

Efficacy of dessicant herbicide can be reduced in cold conditions, check with your agronomist. Refer to the NSW DPI booklet "Weed Control in Winter Crops 2009" for options. **Check with your agronomist before applying herbicides in unsuitable conditions, particularly where there are sensitive crops in the area.

- 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 NSW DPI.

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

According to the above operations, labour required is 0.59hrs/ha. Then multiplying this by 1.25 to allow for machinery repair time etc, and using a labour cost of \$19/hr, the cost of labour is \$13.65/ha, reducing the gross margin to \$377.74/ha.

MACHINERY ASSUMPTIONS:

Tractor:

- pto power: 130 kW (175 HP); engine power: 146 kW (196 HP)

Contract harvesting costs include \$4.72/ha worth of fuel.

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 BARLEY (No Till, Malting)
Farm Enterprise Budget Series - North East NSW

Winter 2009

1. GROSS MARGIN BUDGET:

INCOME:

2.80 tonnes/ha@ \$200.00 /tonne (malting, on farm)

Sample Budget \$/ha	Your Budget \$/ha
\$560.00	

Crop prices were correct at the time of writing (Mar 17 2009), world market volatility makes estimation of future pricing impractical.

A. TOTAL INCOME \$/ha:

\$560.00	
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VARIABLE COSTS:

See next page for detail

Sowing.....	\$64.43	
Fertiliser.....	\$127.63	
Herbicide.....	\$74.85	
Insecticides.....	\$4.18	
Fungicide.....	\$6.95	
Contract harvesting.....	\$60.48	
Levies.....	\$5.71	
Insurance.....	\$11.48	

B. TOTAL VARIABLE COSTS \$/ha:

\$355.71	
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C. GROSS MARGIN (A-B) \$/ha:

\$204.29	
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Water use efficiency example

Growing season rainfall (ie in-crop): mm	317	
Stored fallow moisture: mm (25% of rainfall in fallow period assumed)	75	
Early crop water use: mm	90	
Total crop water use mm	302	
Gross margin per mm	\$0.68	
kg of grain per mm	9.27	

Please refer to the "Water Use Efficiency in Northern NSW Winter Crop Enterprise Budgets" summary for more information on water use efficiency assumptions used at right.

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

YIELD tonnes/ha	On Farm Price				
	\$100 /tonne	\$150 /tonne	\$200 /tonne	\$250 /tonne	\$300 /tonne
1.5	- \$187	- \$115	- \$42	\$31	\$103
1.9	- \$145	- \$52	\$42	\$136	\$229
2.4	- \$103	\$11	\$126	\$241	\$355
2.8	- \$67	\$69	\$204	\$340	\$476
3.9	\$36	\$224	\$411	\$598	\$786
4.9	\$140	\$379	\$618	\$857	\$1,096
6.0	\$243	\$534	\$825	\$1,115	\$1,406

Gross margin is zero when income is reduced by 36%
 or variable costs are increased by 57%

DRYLAND BARLEY (No Till, Malting)

Farm Enterprise Budget Series - North East NSW

Winter 2009

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total
Operation	Month	hrs /ha	Cost	Total	Rate/ha	Cost	Total	Total Cost \$/ha
			\$/hour	\$/ha		\$	\$/ha	
broadleaf and grass weed control eg: glyphosate 450 g/L	Dec	0.05	45.64	2.28	1.2 L	7.43/L	8.92	11.20
broadleaf weed control eg 2,4-D amine 300g/L	Dec	with above			1.80 L	4.23/L	7.61	7.61
wetting agent	Dec	with above			0.25 L	8.84/L	2.21	2.21
broadleaf and grass weed control eg: glyphosate 450 g/L	Jan	0.05	45.64	2.28	1.8 L	7.43/L	13.37	15.66
wetting agent	Jan	with above			0.25 L	8.84/L	2.21	2.21
nitrogen fertiliser eg. anhydrous ammonia	Feb	0.17	45.91	7.80	67 kg	1.09/kg	73.03	80.83
broadleaf and grass weed control eg: glyphosate 450 g/L	May	0.05	45.64	2.28	0.8 L	7.43/L	5.94	8.23
wetting agent	May	with above			0.25 L	8.84/L	2.21	2.21
sowing	May	0.17	66.34	11.28	50 kg	1.06/kg	53.15	64.43
starter Z Fertiliser	May	with above			40 kg	1.17/kg	46.80	46.80
herbicide	Jun	0.05	45.64	2.28				2.28
broadleaf weed control eg. MCPA 500g/L	Jun	with above			0.7 L	6.78/L	4.75	4.75
broadleaf weed control eg metsulfuron methyl 600g/kg	Jun	with above			5 g	0.20/g	1.00	1.00
herbicide (1 in 2 years)	Jun	0.05	45.64	2.28				1.14
grass weed control eg tralkoxydim adjuvant eg Supercharge*	Jun	with above			400 g	0.077/g	30.95	15.47
fungicide eg. triadimefon (1 in 3 years)	Jun	with above			1.00 L	1.76/L	1.76	0.88
insect control (1 in 4 years)	Aug	aerial spray		14.50	1.00 L	6.36/L	6.36	6.95
contract harvest	Sep	aerial spray		14.50	240 ml	0.009/ml	2.22	4.18
levies	Nov			60.48				60.48
crop insurance	Nov			1.020%				5.71
				2.050%	of on-farm value			11.48

Input prices were correct at the time of writing (Mar 17 2009). Current fertiliser and chemical market uncertainty makes estimation of future pricing impractical.

AGRONOMIC REQUIREMENTS:

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

Sowing Time: Ideally May. However, barley is more adapted to late plantings than wheat.

Refer to NSW Department of Primary Industries "Winter Crop Variety Sowing Guide 2009" for sowing guidelines.

Rotation place: Barley will respond to good soil fertility.

Barley is a crown rot host.

Crop rotation is essential to minimise yield loss due to diseases such as net blotch.

An example fungicide is used in the budget in case of powdery mildew and net blotch.

Herbicides: Refer to the NSW DPI booklet "Weed Control in Winter Crops 2009" for options.

* Check the label to match correct rates of mineral oil additives with water application rate.

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

#Check with your agronomist before applying herbicides in hot, dry conditions where there are sensitive crops in the area.

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 NSW DPI.

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

According to the above operations, labour required is 0.54hrs/ha. Then multiplying this by 1.25 to allow for machinery repair time etc, and using a labour cost of \$19/hr, then the cost of labour is \$12.49/ha, reducing the gross margin to \$191.79/ha.

MACHINERY ASSUMPTIONS:

Tractor: - pto power: 130 kW (175 HP); engine power: 146 kW (196 HP)

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



DRYLAND BARLEY (No Till, Feed)

Farm Enterprise Budget Series - North East NSW

Winter 2009

1. GROSS MARGIN BUDGET:

INCOME:

3.20 tonnes/ha@ \$170.00 /tonne (feed, on farm)

Sample Budget	Your Budget
\$/ha	\$/ha
\$544.00	

Crop prices were correct at the time of writing (Mar 17 2009), world market volatility makes estimation of future pricing impractical.

A. TOTAL INCOME \$/ha:

\$544.00	
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VARIABLE COSTS:

See next page for detail

Sowing.....	\$64.83	
Fertiliser.....	\$162.40	
Herbicide.....	\$76.33	
Insecticides.....	\$4.18	
Fungicide.....	\$6.95	
Contract harvesting.....	\$68.16	
Levies.....	\$5.55	
Insurance.....	\$11.15	

B. TOTAL VARIABLE COSTS \$/ha:

\$399.56	
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C. GROSS MARGIN (A-B) \$/ha:

\$144.44	
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Water use efficiency example

Growing season rainfall (ie in-crop): mm	317	
Stored fallow moisture: mm (25% of rainfall in fallow period assumed)	75	
Early crop water use: mm	90	
Total crop water use mm	302	
Gross margin per mm	\$0.48	
kg of grain per mm	10.60	

Please refer to the "Water Use Efficiency in Northern NSW Winter Crop Enterprise Budgets" summary for more information on water use efficiency assumptions used at right.

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

YIELD tonnes/ha	On Farm Price				
	\$70 /tonne	\$120 /tonne	\$170 /tonne	\$220 /tonne	\$270 /tonne
1.5	-\$268	-\$195	-\$122	-\$50	\$23
2.1	-\$229	-\$129	-\$29	\$71	\$171
2.6	-\$193	-\$66	\$62	\$190	\$317
3.2	-\$166	-\$11	\$144	\$300	\$455
4.1	-\$120	\$80	\$280	\$481	\$681
5.1	-\$75	\$171	\$416	\$662	\$907
6.0	-\$30	\$261	\$552	\$843	\$1,134

Gross margin is zero when income is reduced by 27%
or variable costs are increased by 36%

DRYLAND BARLEY (No Till, Feed)

Farm Enterprise Budget Series - North East NSW

Winter 2009

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total
Operation	Month	hrs /ha	Cost	Total	Rate/ha	Cost	Total	Cost \$/ha
			\$/hour	\$/ha		\$	\$/ha	
broadleaf and grass weed control eg: glyphosate 450 g/L	Dec	0.05	45.64	2.28	1.2 L	7.43/L	8.92	11.20
broadleaf weed control eg 2,4-D amine 300g/L	Dec	with above			1.80 L	4.23/L	7.61	7.61
wetting agent	Dec	with above			0.25 L	8.84/L	2.21	2.21
broadleaf and grass weed control eg: glyphosate 450 g/L	Jan	0.05	45.64	2.28	1.80 L	7.43/L	13.37	15.66
wetting agent	Jan	with above			0.25 L	8.84/L	2.21	2.21
nitrogen fertiliser eg. anhydrous ammonia	Feb	0.17	45.91	7.80	100 kg	1.09/kg	109.00	116.80
broadleaf and grass weed control eg: glyphosate 450 g/L	Apr	0.05	45.64	2.28	1.0 L	7.43/L	7.43	9.71
wetting agent	Apr	with above			0.25 L	8.84/L	2.21	2.21
sowing	May	0.17	66.34	11.28	50 kg	1.07/kg	53.55	64.83
starter Fertiliser eg. DAP	May	with above			40 kg	1.14/kg	45.60	45.60
herbicide	Jun	0.05	45.64	2.28				2.28
broadleaf weed control eg. MCPA 500g/kg	Jun	with above			0.7 L	6.78/L	4.75	4.75
broadleaf weed control eg metsulfuron methyl	Jun	with above			5 g	0.20/g	1.00	1.00
herbicide (1 year in 2)	Jun	0.05	45.64	2.28				1.14
grass weed control eg tralkoxydim	Jun	with above			400 g	0.077/g	30.95	15.47
adjuvant eg Supercharge*	Jun	with above			1.00 L	1.76/L	1.76	0.88
fungicide eg. triadimefon (1 in 3 years)	Aug	aerial spray		14.50	1.00 L	6.36/L	6.36	6.95
insect control (1 in 4 years)	Sep	aerial spray		14.50	240 ml	0.009/ml	2.22	4.18
contract harvest	Nov			68.16				68.16
levies	Nov			1.020%				5.55
crop insurance				2.050%	of on-farm value			11.15

Input prices were correct at the time of writing (Mar 17 2009). Current fertiliser and chemical market uncertainty makes estimation of future pricing impractical.

AGRONOMIC REQUIREMENTS:

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

Sowing Time:

Ideally May. However, barley is more adapted to late plantings than wheat.

Fertiliser:

Similar nitrogen rates to wheat can be applied to barley without greatly affecting the quality for feed.

Rotation place:

Barley will respond to good soil fertility.

Barley is a crown rot host.

Crop rotation is essential to minimise yield loss due to diseases such as net blotch.

Herbicides:

Refer to the NSW DPI booklet "Weed Control in Winter Crops 2009" for options.

* Check the label to match correct rates of mineral oil additives with water application rate.

Check with your agronomist before applying herbicides in hot, dry conditions where there are sensitive crops in the area.

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

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 NSW DPI.

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

According to the above operations, labour required is 0.54hrs/ha. Then multiplying this by 1.25 to allow for machinery repair time etc, and using a labour cost of \$19/hr, then the cost of labour is \$12.49/ha, reducing the gross margin to \$131.95/ha.

MACHINERY ASSUMPTIONS:

Tractor:

- pto power: 130 kW (175 HP); engine power: 146 kW (196 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 DURUM WHEAT (Short Fallow, No Till)

Farm Enterprise Budget Series - North East NSW

Winter 2009

1. GROSS MARGIN BUDGET:

INCOME:

2.75 tonnes/ha@ \$321.00 /tonne (DR1 on farm)

Crop prices were correct at the time of writing (Mar 17 2009), world market volatility makes estimation of future pricing impractical.

Sample Budget \$/ha	Your Budget \$/ha
\$882.75	

A. TOTAL INCOME \$/ha:

\$882.75	
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VARIABLE COSTS:

See next page for detail

Sowing.....	\$77.88	
Fertiliser.....	\$241.50	
Herbicide.....	\$106.28	
Insecticide.....	\$0.00	
Contract harvesting.....	\$57.52	
Levies.....	\$9.00	
Insurance.....	\$18.10	
B. TOTAL VARIABLE COSTS \$/ha:	\$510.29	

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

\$372.46	
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Water use efficiency example

Growing season rainfall (ie in-crop): mm	317	
Stored fallow moisture: mm (25% of rainfall in fallow period assumed)	75	
Early crop water use: mm	110	
Total crop water use mm	282	
Gross margin per mm	\$1.32	
kg of grain per mm	9.75	

Please refer to the "Water Use Efficiency in Northern NSW Winter Crop Enterprise Budgets" summary for more information on water use efficiency assumptions used at right.

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

YIELD tonnes/ha	\$221 /tonne	\$271 /tonne	\$321 /tonne	\$371 /tonne	\$421 /tonne
1.0	- \$243	- \$195	- \$146	- \$98	- \$49
1.6	- \$118	- \$41	\$35	\$112	\$189
2.2	\$7	\$112	\$217	\$322	\$427
2.8	\$127	\$260	\$393	\$527	\$660
3.5	\$273	\$443	\$612	\$782	\$952
4.2	\$419	\$625	\$831	\$1,037	\$1,243
5.0	\$566	\$808	\$1,050	\$1,293	\$1,535

Gross margin is zero when income is reduced by 42%
or variable costs are increased by 73%

DRYLAND DURUM WHEAT (Short Fallow, No Till)

Farm Enterprise Budget Series - North East NSW

Winter 2009

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost \$/ha
Operation	Month	hrs /ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	
harvest previous crop	Nov							
broadleaf and grass weed control eg: glyphosate 450 g/L	Dec	0.05	45.64	2.28	1.2 L	7.43/L	8.92	11.20
broadleaf weed control eg 2,4-D amine 300g/L	Dec	with above			1.80 L	4.23/L	7.61	7.61
wetting agent	Dec	with above			0.25 L	8.84/L	2.21	2.21
broadleaf and grass weed control eg: glyphosate 450 g/L	Jan	0.05	45.64	2.28	0.60 L	7.43/L	4.46	6.74
broadleaf weed control eg. dicamba 700g/kg	Jan	with above			150 g	0.05/g	8.23	8.23
wetting agent	Jan	with above			0.25 L	8.84/L	2.21	2.21
broadleaf and grass weed control eg: glyphosate 450	Feb	0.03	45.23	1.36	1.0 L	7.43/L	7.43	8.79
broadleaf weed control eg 2,4-D amine 300g/L	Feb	with above			1.2 L	4.23/L	5.08	5.08
wetting agent	Feb	with above			0.25 L	8.84/L	2.21	2.21
nitrogen fertiliser eg. anhydrous ammonia	Mar	0.17	45.91	7.80	150 kg	1.09/kg	163.50	171.30
broadleaf and grass weed control eg: glyphosate 450 g/L	Apr	0.05	45.64	2.28	1.2 L	7.43/L	8.92	11.20
wetting agent	Apr	with above			0.25 L	8.84/L	2.21	2.21
broadleaf and grass weed control eg: glyphosate 450 g/L	May	0.05	45.64	2.28	1.00 L	7.43/L	7.43	9.71
wetting agent	May	with above			0.25 L	8.84/L	2.21	2.21
sowing *	June	0.17	66.34	11.28	60 kg	1.11/kg	66.60	77.88
fertiliser (Starter 12Z)	June	with above			60 kg	1.17/kg	70.20	70.20
wild oat control (1 year in 2)	Jun	0.05	45.64	2.28				1.14
wild oat control eg Fenoxaprop-p-ethyl	Jun	with above			0.35 L	82.67/L	28.93	14.47
broadleaf weed control eg. MCPA LVE	Jul	0.05	45.64	2.28	0.8 L	9.74/L	7.79	10.07
broadleaf weed control eg metsulfuron-methy	Jul	with above			5 g	0.20/g	1.00	1.00
contract harvest	Nov			57.52				57.52
levies	Nov			1.020%				9.00
crop insurance				2.050%	of on-farm value			18.10

Input prices were correct at the time of writing (Mar 17 2009). Current fertiliser and chemical market uncertainty makes estimation of future pricing impractical.

AGRONOMIC REQUIREMENTS:

Sowing Time: Refer to NSW DPI "Winter Crop Variety Sowing Guide 2009" for sowing guidelines.

* Seed purchase costs vary widely with variety and whether growers have kept their own seed from previous seasons. Growers should assess soil moisture profiles and fertility levels to assist with yield estimates.

Weed Control: All volunteer barley and bread wheat plants should be eliminated during summer fallow.

Fertiliser: Adequate phosphorus is essential before applying extra nitrogenous fertiliser. Nutrient requirements should be assessed with soil tests, strip trials and paddock records.

Herbicides: Durum varieties have a low safety margin to some chemicals: eg. chlorsulfuron, tri-allate. A low safety margin means that an application rate above that recommended will cause crop damage. Refer to the NSW DPI booklet "Weed Control in Winter Crops 2009" for options.

Fenoxaprop-p-ethyl has been included for wild oats, control by rotation is preferable.

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

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 NSW DPI.

Disease: Crop rotation is necessary to minimise loss of yield due to disease. Effective grass weed control is also essential to control diseases such as crown rot. Current durum varieties are more sensitive to crown rot than most bread wheats. Check varieties for differences in quality.

Harvest: Care needs to be taken when threshing, since the hard grain has a greater tendency to fracture than bread wheats. Yields over 2.5 t/ha are assumed to cost a further \$1.92 per extra 100kg of grain harvested.

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

According to the above operations, labour required is 0.59hrs/ha. Then multiplying this by 1.25 to allow for machinery repair time etc, and using a labour cost of \$19/hr, then the cost of labour is \$13.65/ha, reducing the gross margin to \$358.81/ha.

MACHINERY ASSUMPTIONS:

- Tractor:
 - pto power: 130 kW (175HP); engine power: 146 kW (196 HP)
 - machinery costs refer only to variable costs (running costs), not overhead costs.



DRYLAND OATS (No Till)

Farm Enterprise Budget Series - North East NSW

Winter 2009

1. GROSS MARGIN BUDGET:

INCOME:

2.00 tonnes/ha@ \$230.00 /tonne (Milling Oats)

Sample Budget \$/ha	Your Budget \$/ha
\$460.00	

Crop prices were correct at the time of writing (Mar 17 2009), world market volatility makes estimation of future pricing impractical.

A. TOTAL INCOME \$/ha:

\$460.00	
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VARIABLE COSTS:

See next page for detail

Cultivation.....	\$0.00	
Sowing.....	\$72.58	
Fertiliser.....	\$139.04	
Herbicide.....	\$47.09	
Contract harvesting.....	\$54.72	
Levies.....	\$4.69	

B. TOTAL VARIABLE COSTS \$/ha:

\$318.12	
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C. GROSS MARGIN (A-B) \$/ha:

\$141.88	
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Water use efficiency example

Growing season rainfall (ie in-crop): mm	317	
Stored fallow moisture: mm (25% of rainfall in fallow period assumed)	75	
Early crop water use: mm	90	
Total crop water use mm	302	
Gross margin per mm	\$0.47	
kg of grain per mm	6.62	

Please refer to the "Water Use Efficiency in Northern NSW Winter Crop Enterprise Budgets" summary for more information on water use efficiency assumptions used at right.

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

YIELD tonnes/ha	On Farm Price				
	\$130 /tonne	\$180 /tonne	\$230 /tonne	\$280 /tonne	\$330 /tonne
1.0	-\$185	-\$135	-\$86	-\$36	\$13
1.3	-\$142	-\$76	-\$10	\$56	\$122
1.7	-\$99	-\$16	\$66	\$148	\$231
2.0	-\$56	\$43	\$142	\$241	\$340
3.0	\$63	\$211	\$360	\$508	\$657
4.0	\$172	\$370	\$568	\$766	\$964
5.0	\$282	\$529	\$777	\$1,024	\$1,272

Gross margin is zero when income is reduced by 31%
or variable costs are increased by 45%

DRYLAND OATS (No Till)

Farm Enterprise Budget Series - North East NSW

Winter 2009

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost \$/ha
Operation	Month	hrs /ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	
harvest previous crop	Dec							
broadleaf and grass weed control eg: glyphosate 450 g/L	Dec	0.05	45.64	2.28	1.2 L	7.43/L	8.92	11.20
broadleaf weed control eg 2,4-D amine 300g/L	Dec	with above			1.80 L	4.23/L	7.61	\$7.61
wetting agent	Dec	with above			0.25 L	8.84/L	2.21	2.21
nitrogen fertiliser eg. anhydrous ammonia	Feb	0.17	45.91	7.80	56 kg	1.09/kg	61.04	68.84
broadleaf and grass weed control eg: glyphosate 450 g/L	Apr	0.05	45.64	2.28	1.0 L	7.43/L	7.43	9.71
wetting agent	Apr	with above			0.25 L	8.84/L	2.21	2.21
sowing	May	0.17	66.34	11.28	50 kg	1.23/kg	61.30	72.58
Fertiliser eg. starter 12Z	May	with above			60 kg	1.17/kg	70.20	70.20
broadleaf and grass weed control eg: chlorsulfuron 750g + wetter	Jun	0.05	45.64	2.28	20 g	0.14/g	2.80	5.08
broadleaf weed control eg. MCPA 500	Aug	0.05	45.64	2.28	1.0 L	6.78/L	6.78	9.06
contract harvest	Nov			54.72				54.72
levies	Nov			1.020%	of farm gate value			4.69

Input prices were correct at the time of writing (Mar 17 2009). Current fertiliser and chemical market uncertainty makes estimation of future pricing impractical.

AGRONOMIC REQUIREMENTS:

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

Rotation Place: Very useful as a first crop after the pasture phase to break disease cycles such as "take all" in wheat.

Soil Type: Oats are more suited to the light sandy acid soils than wheat or barley.

Herbicides: When oats are used as a disease break crop, annual grass weeds must be controlled with a herbicide.

Chlorsulfuron is used early post emergence for annual phalaris and wireweed control. Glyphosate CT is for fallow weed control.

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

Refer to the NSW DPI booklet "Weed Control in Winter Crops 2009" for options.

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

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

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

According to the above operations, labour required is 0.54hrs/ha. Then multiplying this by 1.25 to allow for machinery repair time etc, and using a labour cost of \$19/hr, the cost of labour is \$12.49/ha, reducing the gross margin to \$129.38/ha.

MACHINERY ASSUMPTIONS:

Tractor: - pto power: 130 kW (175 HP); engine power: 146 kW (196 HP)

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



DRYLAND TRITICALE (Short fallow, no till)

Farm Enterprise Budget Series - North East NSW

Winter 2009

1. GROSS MARGIN BUDGET:

INCOME:

3.00 tonnes/Ha@ \$173.00 /tonne (on farm)

Standard Budget \$/Ha	Your Budget \$/Ha
\$519.00	

Crop prices were correct at the time of writing (Mar 17 2009), world market volatility makes estimation of future pricing impractical.

VARIABLE COSTS:

See next page for detail

A. TOTAL INCOME \$/Ha:

\$519.00	
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Sowing.....	\$57.60	
Fertiliser.....	\$157.48	
Herbicide.....	\$77.20	
Contract harvesting.....	\$64.32	
Levies.....	\$5.29	
Crop Insurance.....	\$10.64	

B. TOTAL VARIABLE COSTS \$/Ha:

\$372.53	
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C. GROSS MARGIN (A-B) \$/Ha:

\$146.47	
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Water use efficiency example

Growing season rainfall (ie in-crop): mm
 Stored fallow moisture: mm (25% of rainfall in fallow period assumed)

Early crop water use: mm
 Total crop water use mm
 Gross margin per mm
 kg of grain per mm

317	
75	
90	
302	
\$0.48	
9.93	

Please refer to the "Water Use Efficiency in Northern NSW Winter Crop Enterprise Budgets" summary for more information on water use efficiency assumptions used at right.

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

YIELD tonnes/Ha	ON FARM PRICE (\$/tonne)				
	\$73 /t	\$123 /t	\$173 /t	\$223 /t	\$273 /t
1.50	-\$220	-\$147	-\$74	-\$2	\$71
2.00	-\$184	-\$88	\$9	\$106	\$203
2.50	-\$149	-\$28	\$93	\$214	\$336
3.00	-\$123	\$22	\$167	\$313	\$458
3.50	-\$98	\$72	\$242	\$411	\$581
4.00	-\$72	\$122	\$316	\$510	\$704
4.50	-\$46	\$172	\$390	\$608	\$826
5.00	-\$20	\$222	\$464	\$707	\$949

Gross margin is zero when income is reduced by 28%
 or variable costs are increased by 39%

DRYLAND TRITICALE (Short fallow, no till)

Farm Enterprise Budget Series - North East NSW

Winter 2009

CALENDAR OF OPERATIONS:

Operation	Month	Machinery*			Inputs			Total Cost \$/Ha
		hrs/Ha	Cost \$/hour	Total \$/Ha	Rate/Ha	Cost \$	Total \$/Ha	
broadleaf and grass weed control eg: glyphosate 450 g/L	Dec	0.05	45.64	2.28	1.2 L	7.43/L	8.92	\$11.20
broadleaf weed control eg 2,4-D amine 300g/L	Dec	with above			1.80 L	4.23/L	7.61	\$7.61
wetting agent	Dec	with above			0.25 L	8.84/L	2.21	\$2.21
broadleaf and grass weed control eg: glyphosate 450 g/L	Jan	0.05	45.64	2.28	1.80 L	7.43/L	13.37	\$15.66
wetting agent	Jan	with above			0.25 L	8.84/L	2.21	2.21
nitrogen fertiliser eg: Urea	Mar	0.17	66.34	11.28	100 kg	0.76/kg	76.00	\$87.28
broadleaf and grass weed control eg: glyphosate 450 g/L	Apr	0.05	45.64	2.28	1.00 L	7.43/L	7.43	\$9.71
wetting agent	Apr	with above			0.25 L	8.84/L	2.21	2.21
sowing	May	0.17	66.34	11.28	60 kg	0.77/kg	46.32	\$57.60
starter Fertiliser 12Z	May	with above			60 kg	1.17/kg	70.20	\$70.20
grass weed control eg: diclofop-methyl 500g/L	Jun	0.05	45.64	2.28	1.00 L	16.32/L	16.32	\$18.60
broadleaf weed control eg: MCPA LVE	Jul	with above			0.80 L	9.74/L	7.79	\$7.79
contract harvest	Dec	contract		64.32				\$64.32
levies					1.02%	of on-farm value		\$5.29
crop insurance					2.05%	of on-farm value		\$10.64

Input prices were correct at the time of writing (Mar 17 2009). Current fertiliser and chemical market uncertainty makes estimation of future pricing impractical.

NOTES:

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

Soil type: Adapted to a wide range of soil types but is a suitable crop for growing on light acid soils with moderate to high aluminium levels.

Seed: Seed price used above is for purchased seed; if using retained seed adjust budget accordingly.

Rotation place: Can be grown in rotation with oats or a legume crop such as lupins.

Refer to NSW Department of Primary Industries "Winter Crop Variety Sowing Guide 2009" for detail on varieties.

Weed control: Weed control, if required, should be implemented within 6-8 weeks of sowing to avoid yield loss.

Glyphosate 450g/L for fallow weed control. MCPA LVE for broadleaf winter weeds, and diclofop for ryegrass/ wild oats control. A wide range of herbicides can be used.

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

Refer to the NSW DPI booklet "Weed Control in Winter Crops 2009" for options.

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

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

***Machinery** A tractor with 130 kW (175 HP) pto power and 146kW (196 HP) engine power is assumed
Machinery costs refer only to variable costs: fuel, oil, filters, tyres, batteries & repairs.
Contract harvesting include an estimated fuel cost of \$3.24/ha (9m front).

Labour The labour required for machinery operations is 0.34 Hrs/Ha
Using a labour cost of \$18.51/hr, an additional \$15.62 can be deducted from the budget

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 WINTER WHEAT (long season, grazing & grain)

Northern Zone- East

Winter 2009

1. GROSS MARGIN BUDGET:

INCOME:

Grain 2.50 tonnes/Ha@ \$176.00 /tonne (feed wheat)

Sample Budget \$/Ha	Your Budget \$/Ha
\$440.00	

Crop prices were correct at the time of writing (Mar 17 2009), world market volatility makes estimation of future pricing impractical.

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

3000 kg dry matter / 12.9 kg /steer/day = 233 steer grazing days

therefore 233 / 80 days = 2.9 steers/ha fattened

2.9 hd/ha @ 1.00 kg/day x 80 days x \$1.80/kg live
i.e. sell steers @ 360 kg/hd @ \$648/hd

\$1,879.20	
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A. TOTAL INCOME \$/Ha:

\$2,319.20	
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VARIABLE COSTS:

Cultivation.....
Sowing.....
Fertiliser.....
Herbicide.....
Insecticide.....
Contract harvesting.....
Levies.....
Insurance.....
Purchase store steers, 280kg @\$1.90/kg=\$532/hd.....

\$0.00	
\$84.72	
\$215.90	
\$39.46	
\$8.26	
\$52.72	
\$4.49	
\$9.02	
\$1,542.80	

B. TOTAL VARIABLE COSTS \$/Ha:

\$1,957.37	
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C. GROSS MARGIN (A-B) \$/Ha:

\$361.83	
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2. Effect of wheat yield and price on gross margin per hectare (includes livestock income above)

Grain yield tonnes/Ha	Grain Price				
	\$146 /tonne	\$161 /tonne	\$176 /tonne	\$196 /tonne	\$216 /tonne
1.0	\$77	\$91	\$106	\$125	\$145
1.5	\$148	\$169	\$191	\$220	\$249
2.0	\$218	\$247	\$277	\$315	\$354
2.5	\$289	\$325	\$362	\$410	\$459
3.0	\$350	\$394	\$438	\$496	\$554
3.5	\$411	\$462	\$513	\$581	\$649

For detailed livestock budgets see the NSW DPI "Beef Gross Margins" and "Sheep Gross Margins"

at www.dpi.nsw.gov.au/agriculture/farm-business/budgets

3. Effect of livestock prices on gross margin per hectare

Purchase Price \$/kg	Selling Price				
	\$1.60 /kg	\$1.70 /kg	\$1.80 /kg	\$1.90 /kg	\$2.00 /kg
1.60	\$397	\$501	\$605	\$710	\$814
1.70	\$315	\$420	\$524	\$629	\$733
1.80	\$234	\$339	\$443	\$547	\$652
1.90	\$153	\$257	\$362	\$466	\$571
2.00	\$72	\$176	\$281	\$385	\$489
2.10	-\$9	\$95	\$199	\$304	\$408

4. Effect of dry matter/ha and weight gain on gross margin per hectare

Weight Gain kg/day	Dry matter/ha					Steer sale weight kg/hd
	2,000	2,500	3,000	3,500	4,000	
0.70	\$164	\$200	\$237	\$273	\$309	336
0.80	\$191	\$235	\$278	\$322	\$366	344
0.90	\$218	\$269	\$320	\$371	\$422	352
1.00	\$246	\$304	\$362	\$420	\$478	360
1.10	\$273	\$338	\$404	\$469	\$534	368
1.20	\$301	\$373	\$445	\$518	\$590	376
Steers/ha	1.90	2.40	2.90	3.40	3.90	

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 WINTER WHEAT (long season, grazing & grain)

Northern Zone- East

Winter 2009

CALENDAR OF OPERATIONS:		Machinery*			Inputs			Total Cost \$/Ha
Operation	Month	hrs /Ha	Cost \$/hour	Total \$/Ha	Rate/Ha	Cost \$	Total \$/Ha	
broadleaf and grass weed control eg: glyphosate 450 g/L	Sept/Oct	0.05	45.64	2.28	1.5 L	7.43/L	11.15	13.43
wetting agent	Sept/Oct	with above			0.25 L	8.84/L	2.21	2.21
broadleaf and grass weed control eg: glyphosate 450	Dec	0.05	45.64	2.28	1.2 L	7.43/L	8.92	11.20
broadleaf weed control eg 2,4-D amine 300g/L	Dec	with above			1.80 L	4.23/L	7.61	7.61
wetting agent	Dec	with above			0.25 L	8.84/L	2.21	2.21
nitrogen fertiliser eg. anhydrous ammonia	Jan	0.17	45.91	7.80	60 Kg	1.09/kg	65.40	73.20
sowing	Feb/Mar	0.17	66.34	11.28	80 Kg	0.92/Kg	73.44	84.72
broadleaf and grass weed control eg: chlosulfuron*	Feb/Mar	with above			20 g	0.14/g	2.80	2.80
Fertiliser starter 12Z	Feb/Mar	with above			70 Kg	1.17/Kg	81.90	81.90
insect control eg. Omethoate	Apr/May	0.05	45.64	2.28	100 ml	0.06/ml	5.98	8.26
nitrogen fertiliser eg.urea	July/Aug	0.17	66.34	11.28	80 Kg	0.76/Kg	60.80	60.80
contract harvest	Nov/Dec			52.72				52.72
crop insurance				2.050%	of on-farm value			9.02
levies				1.020%	of on-farm value			4.49

Input prices were correct at the time of writing (Mar 17 2009). Current fertiliser and chemical market uncertainty makes estimation of future pricing impractical.

AGRONOMIC REQUIREMENTS: # this budget assumes the paddock is coming out of pasture.	
	Growers should assess soil moisture profiles and fertility levels to assist with yield estimates.
Approved Varieties:	See "Winter Crop Variety Sowing Guide 2009" NSW Department of Primary Industries
Sowing Time:	Earlier sowing facilitates annual grass (eg <i>vulpia</i>) control.
Weed Control:	In-crop weed control, if required, should be implemented up to 4 weeks after sowing time to avoid yield loss. Ideally weed control should be undertaken as part of the rotation. Weed control should be done in the previous Sept/Oct before winter weed seed set. * Consider likely following crops before using residual herbicides. To reduce problems caused by herbicide resistance, rotate herbicide groups and weed management techniques. Refer to the NSW DPI booklet "Weed Control in Winter Crops 2009" for options.
Insect control:	Watch for blue oat mites, army worms which may reduce yields.
Disease:	Successive winter wheat crops can lead to a build up of wheat diseases eg crown rot. - Always read the label 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 NSW DPI.
Fertiliser:	Nutrient requirements should be assessed on an individual paddock basis. Nitrogen (N) and phosphorus (P) requirements are linked, insufficient P may affect response to applied N and vice versa. Topdressing with urea is in July/Aug after grazing completed.
Grazing:	Examine plant growth points to judge when to cease grazing. Grazing should cease before the growing point (ie crown) reaches 3-4cm (about 1 inch) above the soil surface. Grazing should finish around late July to give maximum chance of grain recovery.
Further information : "Productive Dual Purpose Winter Wheats" NSW Agriculture 2002	
Harvesting:	Yields over 2.5 t/ha are assumed to cost a further \$1.92 per extra 100kg/ha grain.
LABOUR REQUIREMENTS:	
Labour:	- labour is not costed in this budget. If we assume a labour cost of \$18.51 per hour the total labour cost would be \$10.18/hectare, reducing the gross margin to \$351.65/ha.
*MACHINERY REQUIREMENTS:	
Tractor:	130 kW (175 HP) pto power and 146kW (196 HP) engine power is assumed - machinery costs refer only to variable costs (running costs), not overhead costs.

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 OATS Grazing/Grain (Short Fallow)

Farm Enterprise Budget Series - North East NSW Winter 2009

1. GROSS MARGIN BUDGET:

Standard Budget \$/Ha	Your Budget \$/Ha
\$380.00	

INCOME:

Grain - Oats: 2.00 tonnes/Ha @ \$190.00 (on farm) (feed)

Crop prices were correct at the time of writing (Mar 17 2009), world market volatility makes estimation of future pricing impractical.

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

3000 kg dry matter / 12.9 kg /steer/day = 233 steer grazing days therefore 233 / 80 days = 2.9 steers/ha fattened

2.9 hd/ha @ 1.00 kg/day x 80 days x \$1.80/kg live
360 kg/hd @ \$648/hd

\$1,879.20	
\$2,259.20	

A. TOTAL INCOME \$/Ha:

VARIABLE COSTS:

See next page for detail

Cultivation.....	\$0.00	
Sowing.....	\$49.88	
Fertiliser.....	\$249.48	
Herbicide.....	\$41.74	
Insecticide.....	\$0.00	
Contract harvesting.....	\$54.72	
Levies.....	\$3.88	
Crop Insurance.....	\$7.79	
Purchase store steers, 280kg @ \$1.90/kg=\$532/hd.....	\$1,542.80	

B. TOTAL VARIABLE COSTS \$/Ha:

\$1,950.29	
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C. GROSS MARGIN (A-B) \$/Ha:

\$308.91	
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2. EFFECT OF YIELD AND PRICE ON GROSS MARGIN PER HECTARE:

Grain yield tonnes/Ha	ON FARM PRICE (\$/tonne)				
	\$150 /t	\$170 /t	\$190 /t	\$210 /t	\$230 /t
1.00	\$86	\$105	\$125	\$144	\$164
1.50	\$159	\$188	\$217	\$246	\$275
2.00	\$231	\$270	\$309	\$348	\$386
2.50	\$304	\$353	\$401	\$449	\$498
3.00	\$367	\$425	\$483	\$542	\$600
3.50	\$430	\$498	\$566	\$634	\$702

For detailed livestock budgets see the NSW DPI "Beef Gross Margins" and "Sheep Gross Margins" at www.dpi.nsw.gov.au/agriculture/farm-business/budgets

3. Effect of livestock prices on gross margin per hectare

Purchase Price \$/kg	Selling Price				
	\$1.60 /kg	\$1.70 /kg	\$1.80 /kg	\$1.90 /kg	\$2.00 /kg
1.60	\$344	\$448	\$553	\$657	\$761
1.70	\$263	\$367	\$471	\$576	\$680
1.80	\$181	\$286	\$390	\$495	\$599
1.90	\$100	\$205	\$309	\$413	\$518
2.00	\$19	\$123	\$228	\$332	\$437
2.10	-\$62	\$42	\$147	\$251	\$355

4. Effect of dry matter/ha and weight gain on gross margin per hectare

Weight Gain kg/day	Dry matter/ha					Steer sale weight kg/hd
	2,000	2,500	3,000	3,500	4,000	
0.85	\$152	\$199	\$246	\$293	\$341	348
0.90	\$166	\$216	\$267	\$318	\$369	352
0.95	\$179	\$234	\$288	\$342	\$397	356
1.00	\$193	\$251	\$309	\$367	\$425	360
1.10	\$220	\$285	\$351	\$416	\$481	368
1.20	\$248	\$320	\$392	\$465	\$537	376
Steers/ha	1.90	2.40	2.90	3.40	3.90	

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 OATS Grazing/Grain (Short Fallow)

Farm Enterprise Budget Series - North East NSW

Winter 2009

CALENDAR OF OPERATIONS:

Operation	Month	Machinery*			Inputs			Total Cost \$/Ha
		hrs/Ha	Cost \$/hour	Total \$/Ha	Rate/Ha	Cost \$	Total \$/Ha	
broadleaf and grass weed control eg: glyphosate 450	Dec	0.05	45.64	2.28	1.2 L	7.43/L	8.92	11.20
broadleaf weed control eg 2,4-D amine 300g/L	Dec	with above			1.80 L	4.23/L	7.61	7.61
wetting agent	Dec	with above			0.25 L	8.84/L	2.21	2.21
broadleaf and grass weed control eg: glyphosate 450 g/L	Feb	0.05	45.64	2.28	1.50 L	7.43/L	11.15	\$13.43
wetting agent	Feb	with above			0.25 L	8.84/L	2.21	2.21
nitrogen fertiliser eg: Urea	Mar	0.17	45.91	7.80	100 kg	0.76/kg	76.00	\$83.80
sowing	Mar	0.17	66.34	11.28	50 kg	0.77/kg	38.60	\$49.88
starter Fertiliser eg 12Z	Mar	with above			80 kg	1.17/kg	93.60	\$93.60
broadleaf and grass weed control eg: Chlorsulfuron	Apr	0.05	45.64	2.28	20 g	0.14/g	2.80	\$5.08
nitrogen fertiliser eg: Urea*	Jul/Aug	0.17	66.34	11.28	80 kg	0.76/kg	60.80	\$72.08
contract harvest	Nov	contract		54.72				\$54.72
levies					1.02%	of on-farm value		\$3.88
crop insurance					2.05%	of on-farm value		\$7.79

Input prices were correct at the time of writing (Mar 17 2009). Current fertiliser and chemical market uncertainty estimation of future pricing impractical.

NOTES:

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

Place in Rotation: Provides some break from root disease build-up provided annual grasses are controlled.

Paddock Selection: More tolerant of acidic soils than wheat or barley.

Seed: Seed price used above is for purchased seed; if using retained seed adjust budget accordingly.

Varieties: Refer to NSW Department of Primary Industries "Winter Crop Variety Sowing Guide 2009" for varieties.

Fertiliser: *Topdressing of urea (July/Aug) to increase leaf and grain production, but there is a risk of losing nitrogen from urea when topdressing unless significant rainfall occurs within 24 hours.

Herbicides: Rotate herbicide groups to avoid herbicide resistance developing.

Refer to the NSW DPI booklet "Weed Control in Winter Crops 2009" for options.

- Always read the label 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 NSW DPI.

Machinery A tractor with 130 kW (175 HP) pto power and 146kW (196 HP) engine power is assumed
Machinery costs refer only to variable costs: fuel, oil, filters, tyres, batteries & repairs.
Contract harvesting include an estimated fuel cost of \$3.24/ha (9m front).

Labour The labour required for machinery operations is 0.83 Hrs/Ha
Using a labour cost of \$18.51/hr, an additional \$15.27 can be deducted from the budget



DRYLAND FORAGE OATS

Farm Enterprise Budget Series - North East NSW Winter 2009

GUIDE TO DRY MATTER PRODUCTION AND CONSUMPTION

Assumptions:

- * In reasonable seasons, expect around 3,500 kg of usable dry matter production over a 5 month grazing period.
- * Store lambs consume around 1.5 kg/day of dry matter and put on around 200 gm/day liveweight gain.
- * Store steers at 250kg consume an average of around 12.4 kg/day of dry matter (including losses) and put on around 1.0 kg/day liveweight gain.

1. GROSS MARGIN BUDGET:

INCOME:

A. Lambs 3500 kg dry matter / 1.5 kg /lamb/day = 2333 lamb grazing days

therefore 2333 / 100 days = 23 lambs/ha fattened

estimated return/ha = 23 lambs x \$75* head =

Sample	Your Budget
\$1,725.00	

B. Steers 3500 kg dry matter / 12.9 kg /steer/day = 272 steer grazing days

therefore 272 / 100 days = 2.7 steers/ha fattened

estimated return/ha = 2.7 steers x 1kg daily weight gain

x 100 days grazing x \$1.80* kg live=

\$1,860.48	
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* returns are net of selling, transport and veterinary costs.

Sample Costs	Your Costs
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VARIABLE COSTS:

See next page for detail

Cultivation.....	\$0.00	
Sowing.....	\$54.78	
Fertiliser.....	\$152.20	
Herbicide.....	\$31.48	
Insecticide.....	\$0.75	
Harvesting.....	\$0.00	
Purchase store lambs (35kg/hd @\$50/hd) or.....	\$1,150.00	
Purchase store steers (300kg @\$1.90/kg=\$532/hd).	\$1,447.04	

Oats VARIABLE COSTS \$/ha:

\$239.21	
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A: TOTAL VARIABLE COSTS (lambs) \$/ha:

\$1,389.21	
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B: TOTAL VARIABLE COSTS (steers) \$/ha:

\$1,686.25	
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A: GROSS MARGIN (lambs) \$/ha:

\$335.79	
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B: GROSS MARGIN (steers) \$/ha:

\$174.23	
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For detailed livestock budgets see the NSW DPI "Beef Gross Margins" and "Sheep Gross Margins" at www.dpi.nsw.gov.au/agriculture/farm-business/budgets

DRYLAND FORAGE OATS

Farm Enterprise Budget Series - North East NSW

Winter 2009

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost \$/ha
Operation	Month	hrs /ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	
harvest previous crop	Dec							
broadleaf and grass weed control eg: glyphosate 450 g/L	Dec	0.05	45.64	2.28	2.0 L	7.43/L	14.86	17.14
broadleaf weed control eg 2,4-D amine 300g/L	Dec	with above			1.80 L	4.23/L	7.61	7.61
wetter - non-ionic surfactant	Dec	with above			0.12 L	6.86/L	0.82	0.82
Fertiliser (Urea)	Feb	0.17	45.91	7.80	100 kg	0.76/kg	76.00	83.80
sowing	Mar	0.17	66.34	11.28	50 kg	0.87/kg	43.50	54.78
Fertiliser (Starter DAP)	Mar	with above			60 kg	1.14/kg	68.40	68.40
herbicide	May	0.05	45.64	2.28				2.28
spray (chlorsulfuron)	May	with above			20 g	0.14/g	2.80	2.80
insecticide (omethoate 1 yr in 4)	May	with above			0.05 L	59.80/L	2.99	0.75
wetter - non-ionic surfactant	May	with above			0.12 L	6.86/L	0.82	0.82

Input prices were correct at the time of writing (Mar 17 2009). Current fertiliser and chemical market uncertainty make estimation of future pricing impractical.

AGRONOMIC REQUIREMENTS:

- Rotation place:** Very useful as a first crop after the pasture phase to break disease cycles such as "take all" in wheat.
- Soil type:** Oats are more suited to the light sandy acid soils than wheat or barley.
- Fertiliser:** Urea can be topdressed after the first grazing if moisture is adequate. But there is a risk of losing nitrogen from urea when topdressing unless significant rainfall occurs within 24 hours.
- Grain recovery:** Refrain from grazing after July to allow for grain recovery. Growers should assess soil moisture profiles and fertility levels to assist with yield estimates.
- Management:** Returns depend on several factors including time of sowing, seasonal conditions, livestock prices and management skills. Skill in grazing management can affect the outcome significantly, eg rotational or strip grazing can reduce spoilage and extend crop performance. Soil damage (especially in wet conditions) and overgrazing can reduce crop performance.
- Herbicides:** To reduce the likelihood of herbicide resistance, rotate herbicide groups and weed management techniques.

- 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 NSW DPI.

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

According to the above machinery operations, labour required is 0.44hrs/ha. Then multiplying this by 1.25 to allow for machinery repair time etc, and using a labour cost of \$19/hr, the cost of labour is \$10.18/ha, reducing the gross margin to \$325.61/ha for lambs and \$164.05/ha for steers. This doesn't include livestock management.

MACHINERY ASSUMPTIONS:

- Tractor: - pto power: 130 kW (175 HP); engine power: 146 kW (196 HP)
 machinery costs refer to variable costs of: fuel, oil, filters, tyres, batteries and repairs.



DRYLAND CHICKPEAS (No Till)

Farm Enterprise Budget Series - North East NSW

Winter 2009

1. GROSS MARGIN BUDGET:

INCOME:

1.50 tonnes/ha@ \$450.00 /tonne (on farm)

Sample Budget \$/ha	Your Budget \$/ha
\$675.00	

Crop prices were correct at the time of writing (Mar 17 2009), world market volatility makes estimation of future pricing impractical.

A. TOTAL INCOME \$/ha:

\$675.00	
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VARIABLE COSTS:

See next page for detail

Sowing.....	\$95.71	
Fertiliser.....	\$58.50	
Herbicide.....	\$121.68	
Insecticides.....	\$33.19	
Fungicides.....	\$37.56	
Contract harvesting.....	\$69.72	
Levies.....	\$6.89	
Crop Insurance.....	\$17.28	

B. TOTAL VARIABLE COSTS \$/ha:

\$440.54	
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C. GROSS MARGIN (A-B) \$/ha:

\$234.46	
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Water use efficiency example

Growing season rainfall (ie in-crop): mm	317	
Stored fallow moisture: mm (25% of rainfall in fallow period assumed)	75	
Early crop water use: mm	130	
Total crop water use mm	262	
Gross margin per mm	\$0.89	
kg of grain per mm	5.73	

Please refer to the "Water Use Efficiency in Northern NSW Winter Crop Enterprise Budgets" summary for more information on water use efficiency assumptions used at right.

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

YIELD tonnes/ha	On Farm Price				
	\$350 /tonne	\$400 /tonne	\$450 /tonne	\$500 /tonne	\$550 /tonne
0.9	-\$113	-\$69	-\$26	\$18	\$61
1.1	-\$45	\$8	\$61	\$114	\$167
1.3	\$22	\$85	\$148	\$210	\$273
1.5	\$90	\$162	\$234	\$307	\$379
2.0	\$259	\$355	\$451	\$548	\$644
2.5	\$427	\$548	\$668	\$789	\$909
3.0	\$596	\$741	\$885	\$1,030	\$1,175

Gross margin is zero when income is reduced by 35% or variable costs are increased by 53%

DRYLAND CHICKPEAS (No Till)

Farm Enterprise Budget Series - North East NSW

Winter 2009

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost \$/ha
Operation	Month	hrs /ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	
broadleaf and grass weed control eg: glyphosate 450 g/L	Dec	0.05	45.64	2.28	1.2 L	7.43/L	8.92	11.20
broadleaf weed control eg 2,4-D amine 300g/L	Dec	with above			1.80 L	4.23/L	7.61	7.61
wetting agent	Dec	with above			0.25 L	8.84/L	2.21	2.21
broadleaf and grass weed control eg: glyphosate 450 g/L	Feb	0.05	45.64	2.28	1.5 L	7.43/L	11.15	13.43
broadleaf and grass weed control eg: glyphosate 450 g/L	Mar	0.05	45.64	2.28	1.2 L	7.43/L	8.92	11.20
wetting agent	Mar	with above			0.25 L	8.84/L	2.21	2.21
sowing (inoculated seed)	May/June	0.17	66.34	11.28	65 kg	1.22/kg	79.24	90.51
P-Pickle T seed treatment	May/June	with above			130 ml	0.04/ml	5.20	5.20
Fertiliser (Starter Z)	May/June	with above			50 kg	1.17/kg	58.50	58.50
PSPE broadleaf weed control eg **isoxaflutole 750 g/kg	May/June	0.05	45.64	2.28	100 g	0.31/g	31.00	33.28
fungus control eg.mancozeb ¹	Jul	0.05	45.64	2.28	1 kg	8.25/kg	8.25	10.53
grass weed control eg haloxyfop-R 520g/L	Jul	with above			75 ml	0.164/ml	12.27	12.27
crop oil	Jul	with above			0.50 L	6.35/L	3.18	3.18
fungus control eg.mancozeb	Sep	0.05	45.64	2.28	1 kg	8.25/kg	8.25	10.53
insect control eg. Indoxacarb ²	Oct	aerial		14.50	0.30 L	62.30/L	18.69	33.19
fungus control eg.mancozeb	Oct	with above			2 kg	8.25/kg	16.50	16.50
dessicant-eg. glyphosate 540 g/L ³	Nov	aerial		14.50	1.00 L	9.60/L	9.60	24.10
dessicant-eg. metsulfuron methyl ³	Nov	with above			5 g	0.20/g	1.00	1.00
contract harvest ⁴	Nov			69.72				69.72
levies	Nov			1.020%				6.89
crop insurance				2.560%	of on-farm value			17.28

Input prices were correct at the time of writing (Mar 17 2009). Current fertiliser and chemical market uncertainty makes estimation of future pricing impractical.

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

Inoculation: With group N inoculum is essential.

Nutrient requirements should be assessed with soil tests and previous strip trial results.

Insects: Heliothis must be monitored from flowering through to podding.

² Indoxacarb used as example, but must be used within approved window, check permits.

Herbicides: Weed control is critical and a pre-emergent broadleaf weed herbicide is important.

Balance[®] (isoxaflutole) is **not recommended for use with the chickpea variety Yorker. Application of Balance[®] post-sowing pre-emergence (PSPE) to crops of Yorker variety chickpeas can result in unacceptable crop damage and may result in yield loss. Chickpeas in general are highly sensitive to sulfonyl urea herbicide residues.

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

³ Dessicants: Examples given only, check current permits before applying.

Disease: Ascochyta blight, botrytis grey mould, sclerotinia and phytophthora can all cause damage.

See variety management packages for disease management strategies on the Pulse Australia website <http://www.pulseaus.com.au/>

Check current permits & registrations prior to using fungicides.

¹ Seasonal conditions, especially rainfall events, and varietal resistance will affect fungicides required.

Crop rotation is essential to minimise loss of yield due to disease.

Controlled traffic: Chickpeas grown on wide rows in a controlled traffic layout may be band sprayed with fungicides and insecticides. This may reduce the chemical cost to half and may reduce the application cost from an aerial spray to a ground spray.

Harvest: ⁴ Grading may be required, extra cost approx. \$17/t (not included in budget).

If using a dessicant before harvest (may be required in some seasons), ensure withholding periods are adhered to.

- **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 NSW DPI.

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

According to the above operations, labour required is 0.47hrs/ha. Then multiplying this by 1.25 to allow for machinery repair time etc, and using a labour cost of \$19/hr, the cost of labour is \$10.87/ha, reducing the gross margin to \$223.59/ha.

MACHINERY ASSUMPTIONS:

Tractor: - pto power: 130 kW (175 HP); engine power: 146 kW (196 HP)

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



DRYLAND FABABEANS (No Till)

Farm Enterprise Budget Series - North East NSW

Winter 2009

1. GROSS MARGIN BUDGET:

INCOME:

Small grain 2.20 tonnes/ha@ \$300.00 /tonne (on farm)

* Small grain is for stockfeed and is the more common grade achieved. Budget on stockfeed prices.

Crop prices were correct at the time of writing (Mar 17 2009), world market volatility makes estimation of future pricing impractical.

Sample Budget	Your Budget
\$/ha	\$/ha
\$660.00	

A. TOTAL INCOME \$/ha:

\$660.00

VARIABLE COSTS:

See next page for detail

Sowing.....	\$98.48	
Fertiliser.....	\$57.50	
Herbicide.....	\$78.44	
Insecticides/Fungicides.....	\$50.11	
Contract harvesting.....	\$79.72	
Levies.....	\$6.73	
Crop Insurance.....	\$20.33	

B. TOTAL VARIABLE COSTS \$/ha:

\$391.31

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

\$268.69

Water use efficiency example

Growing season rainfall (ie in-crop): mm 317
 Stored fallow moisture: mm (25% of rainfall in fallow period assumed) 75

Early crop water use: mm 130
 Total crop water use mm 262
 Gross margin per mm **\$1.03**
 kg of grain per mm 8.40

Please refer to the "Water Use Efficiency in Northern NSW Winter Crop Enterprise Budgets" summary for more information on water use efficiency assumptions used at right.

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

YIELD t/ha	On Farm Price				
	\$250 /tonne	\$275 /tonne	\$300 /tonne	\$350 /tonne	\$400 /tonne
1.3	-\$53	-\$21	\$10	\$72	\$134
1.6	\$19	\$58	\$96	\$173	\$250
1.9	\$91	\$137	\$182	\$273	\$365
2.2	\$163	\$216	\$269	\$374	\$480
2.4	\$211	\$269	\$326	\$441	\$556
2.6	\$259	\$321	\$384	\$508	\$633
2.8	\$307	\$374	\$441	\$576	\$710

Gross margin is zero when income is reduced by 41%
 or variable costs are increased by 69%

DRYLAND FABABEANS (No Till)

Farm Enterprise Budget Series - North East NSW

Winter 2009

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost \$/ha
Operation	Month	hrs /ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	
broadleaf and grass weed control eg: glyphosate 450 g/L	Dec	0.05	45.64	2.28	1.2 L	7.43/L	8.92	11.20
broadleaf weed control eg 2,4-D amine 300g/L	Dec	with above			1.80 L	4.23/L	7.61	7.61
wetting agent	Dec	with above			0.25 L	8.84/L	2.21	2.21
broadleaf and grass weed control eg: glyphosate 450 g/L	Feb	0.05	45.64	2.28	1.80 L	7.43/L	13.37	15.66
broadleaf and grass weed control eg: glyphosate 450 g/L	Apr	0.05	45.64	2.28	0.60 L	7.43/L	4.46	6.74
wetting agent	Apr	with above			0.25 L	8.84/L	2.21	2.21
broadleaf and grass weed control eg. simazine 500g/L	Apr	0.05	45.64	2.28	2.00 L	7.99/L	15.98	18.26
sowing inc. inoculant #	Apr/May	0.17	66.34	11.28	80 kg	1.09/kg	87.20	98.48
Fertiliser (Starter Z)	Apr/May	with above			50 kg	1.15/kg	57.50	57.50
grass weed control eg haloxyfop-R 520g/L	May/June	0.05	45.64	2.28	75 ml	0.164/ml	12.27	14.55
fungus control eg.mancozeb	May/June	with above			1 kg	8.25/kg	8.25	8.25
crop oil	May/June	with above			0.50 L	6.35/L	3.18	3.18
fungus control eg.mancozeb	Aug	0.05	45.64	2.28	1 kg	8.25/kg	8.25	10.53
fungus control eg.mancozeb	Sep	aerial spray		14.50	1 kg	8.25/kg	8.25	22.75
insect control eg. lambda-cyhalothrin	Sep	with above			36 ml	0.15/ml	5.40	5.40
contract harvest	Nov			79.72				79.72
levies	Nov			1.02%				6.73
crop insurance				3.080%	of on-farm value			20.33

Input prices were correct at the time of writing (Mar 17 2009). Current fertiliser and chemical market uncertainty makes estimation of future pricing impractical.

AGRONOMIC REQUIREMENTS:

Rotation place: Useful as a break crop later in cereal rotations for disease control, weed control and nitrogen benefits for the following crops. See "Fababean" Agfact P4.2.7, second edition for detailed information.

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

Sowing time: Northern areas: Mid to late April. Liverpool Plains: mid-April to mid-May.

Significant yield reductions if sown later than the 2nd week of May.

Disease: Crop rotation is essential to minimise loss of yield due to disease.

Chocolate spot and rust can cause significant yield losses, use fungicides as a preventative measure.

See Pulse Australia website (http://www.pulseaus.com.au/crops/faba_beans) for disease management strategies.

Check current permits & registrations prior to using fungicides.

Inoculation: # With fababean (*Vicia faba*) inoculant, Group E, Strain WSM1455.

Soils: Must be grown on the better loam, clay loam and heavy self mulching clay soils.

Nutrient requirements should be assessed with soil tests and previous strip trial results.

Insects: Heliothis must be monitored from flowering through to podding.

Autumn aphid flights may transmit viral diseases causing potential yield loss.

Herbicides: Weed control is critical and a pre-emergent broadleaf weed control herbicide is important.

Fababeans are sensitive to sulfonyl urea herbicide residues.

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

- 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 NSW Department of Primary Industries.

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

According to the above operations, labour required is 0.47hrs/ha. Then multiplying this by 1.25 to allow for machinery repair time etc, and using a labour cost of \$19/hr, the cost of labour is \$10.87/ha, reducing the gross margin to \$257.82/ha.

MACHINERY ASSUMPTIONS:

Tractor:

- pto power: 130 kW (175 HP); engine power: 146 kW (196 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.



NSW DEPARTMENT OF PRIMARY INDUSTRIES

DRYLAND FIELD PEAS (No Till, after wheat)

Farm Enterprise Budget Series - North East NSW

Winter 2009

1. GROSS MARGIN BUDGET:

INCOME:

1.50 tonnes/Ha@ \$300.00 /tonne (on farm)

Standard Budget \$/Ha	Your Budget \$/Ha
\$450.00	

Crop prices were correct at the time of writing (Mar 17 2009), world market volatility makes estimation of future pricing impractical.

A. TOTAL INCOME \$/Ha: **\$450.00**

VARIABLE COSTS:

See next page for detail

Sowing.....	\$99.28	
Fertiliser.....	\$58.50	
Herbicide.....	\$59.46	
Insecticide.....	\$23.51	
Contract harvesting.....	\$69.72	
Levies.....	\$4.59	
Crop Insurance.....	\$16.16	

Please refer to the "Water Use Efficiency in Northern NSW Winter Crop Enterprise Budgets" summary for more information on water use efficiency assumptions used at right.

B. TOTAL VARIABLE COSTS \$/Ha: **\$331.21**

C. GROSS MARGIN (A-B) \$/Ha: **\$118.79**

Water use efficiency example

Growing season rainfall (ie in-crop): mm	317	
Stored fallow moisture: mm (25% of rainfall in fallow period assumed)	75	
Early crop water use: mm	130	
Total crop water use mm	262	
Gross margin per mm	\$0.45	
kg of grain per mm	5.73	

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

YIELD tonnes/Ha	ON FARM PRICE (\$/tonne)				
	\$250 /t	\$275 /t	\$300 /t	\$325 /t	\$350 /t
0.90	-\$96	-\$74	-\$53	-\$31	-\$10
1.10	-\$48	-\$22	\$4	\$31	\$57
1.30	\$0	\$31	\$62	\$93	\$124
1.50	\$47	\$83	\$119	\$155	\$190
1.80	\$119	\$162	\$205	\$248	\$290
2.10	\$190	\$240	\$290	\$341	\$391
2.50	\$286	\$345	\$405	\$465	\$524

Gross Margin (\$/Ha)

Gross margin is zero when income is reduced by 26%
or variable costs are increased by 36%

DRYLAND FIELD PEAS (No Till, after wheat)

Farm Enterprise Budget Series - North East NSW

Winter 2009

CALENDAR OF OPERATIONS:

Operation	Month	Machinery*			Inputs			Total Cost \$/Ha
		hrs/Ha	Cost \$/hour	Total \$/Ha	Rate/Ha	Cost \$	Total \$/Ha	
broadleaf and grass weed control eg: glyphosate 450 g/L	Dec	0.05	45.64	2.28	1.2 L	7.43/L	8.92	\$11.20
broadleaf weed control eg 2,4-D amine 300g/L	Dec	with above			1.80 L	4.23/L	7.61	\$7.61
wetting agent	Dec	with above			0.25 L	8.84/L	2.21	\$2.21
broadleaf and grass weed control eg: glyphosate 450	Jan	0.05	45.64	2.28	1.60 L	7.43/L	11.89	\$14.17
broadleaf and grass weed control eg: glyphosate 450	Apr	0.05	45.64	2.28	1.00 L	7.43/L	7.43	\$9.71
sowing - inoculated	May	0.17	66.34	11.28	100kg	0.88/kg	88.00	\$99.28
Fertiliser - Starter Z	May	with above			50kg	1.17/kg	58.50	\$58.50
grass weed control eg haloxyfop-R 52l	May	0.05	45.64	2.28	75 ml	0.164/ml	12.27	\$14.55
insect control eg. Decis Options®	Sep	with above			0.50 L	21.23/L	10.62	\$10.62
insect control eg. Decis Options®	Oct	0.05	45.64	2.28	0.50 L	21.23/L	10.62	\$12.90
contract harvest	Nov	contract		69.72				\$69.72
levies				1.02%	of on-farm value			\$4.59
crop insurance				3.590%	of on-farm value			\$16.16

Input prices were correct at the time of writing (Mar 17 2009). Current fertiliser and chemical market uncertainty makes estimation of future pricing impractical.

NOTES:

Soils:	Suitable for the lighter textured soils through to the heavier clay soils.
Rotation place:	Useful as a break crop in cereal rotations for disease control, weed control and nitrogen benefits at the lower fertility end of the rotation.
Inoculation:	with group E inoculum is essential.
Fertiliser:	Single super is one of many available alternatives, adequate levels of phosphorus and sulphur should be applied.
Seed source:	Seed should be obtained from northern areas and preferably certified growers, because of the pea weevil threat.
Disease:	Some varieties are susceptible to powdery mildew and luteovirus. Field peas are also susceptible to bacterial blight.
Sowing time:	see the NSW DPI "Winter Crop Variety Sowing Guide 2009"
Insects:	Heliothis and pea weevil must be monitored from flowering through to podding.
Herbicides:	Haloxyfop-R for grass weed control. To reduce the likelihood of herbicide resistance, rotate herbicide groups and weed management techniques.
Harvest:	Paddock should be free of sticks and stones for harvesting. Best harvested with lifters or a pea front.

For more information see the NSW Department of Primary Industries "Winter Crop Variety Sowing Guide 2009" and Pulse Point 13 "Strategies to minimise bacterial blight in field peas " NSW DPI

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

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

***Machinery** Tractor - 130 kW (175 HP) pto power and 146kW (196 HP) engine power assumed
Machinery costs refer only to variable costs: fuel, oil, filters, tyres, batteries & repairs.

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

The labour required for machinery operations is 0.4 Hrs/Ha

- Using a labour cost of \$15/hr, an additional \$6.00 can be deducted from the budget



DRYLAND CANOLA (No Till)

Farm Enterprise Budget Series - North East NSW

Winter 2009

1. GROSS MARGIN BUDGET:

INCOME:

1.60 tonnes/ha@ \$490.00 /tonne (on farm)

Oil bonuses and discounts may also need to be considered in canola pricing.

Crop prices were correct at the time of writing (Mar 17 2009), world market volatility makes estimation of future pricing impractical.

Sample Budget \$/ha	Your Budget \$/ha
\$784.00	

VARIABLE COSTS:

See next page for detail

A. TOTAL INCOME \$/ha:

\$784.00	
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Sowing.....	\$38.28	
Fertiliser.....	\$241.50	
Herbicide.....	\$45.81	
Insecticide.....	\$42.98	
Contract harvesting.....	\$79.72	
Levies.....	\$8.00	
Insurance.....	\$28.15	

B. TOTAL VARIABLE COSTS \$/ha:

\$484.44	
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C. GROSS MARGIN (A-B) \$/ha:

\$299.56	
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Water use efficiency example

Growing season rainfall (ie in-crop): mm
 Stored fallow moisture: mm (25% of rainfall in fallow period assumed)

Please refer to the "Water Use Efficiency in Northern NSW Winter Crop Enterprise Budgets" summary for more information on water use efficiency assumptions used at right.

Growing season rainfall (ie in-crop): mm	317	
Stored fallow moisture: mm (25% of rainfall in fallow period assumed)	75	
Early crop water use: mm	110	
Total crop water use mm	282	
Gross margin per mm	\$1.06	
kg of grain per mm	5.67	

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

YIELD tonnes/ha	On Farm Price				
	\$390 /tonne	\$440 /tonne	\$490 /tonne	\$540 /tonne	\$590 /tonne
0.5	-\$262	-\$238	-\$215	-\$191	-\$167
0.9	-\$113	-\$71	-\$28	\$15	\$58
1.3	\$35	\$97	\$159	\$221	\$283
1.6	\$147	\$223	\$300	\$376	\$452
2.0	\$296	\$391	\$487	\$582	\$677
2.4	\$445	\$559	\$673	\$788	\$902
2.9	\$624	\$762	\$900	\$1,039	\$1,177

Gross margin is zero when income is reduced by 38%
 or variable costs are increased by 62%

DRYLAND CANOLA (No Till)

Farm Enterprise Budget Series - North East NSW

Winter 2009

CALENDAR OF OPERATIONS:		Machinery			Inputs			Total Cost \$/ha
Operation	Month	hrs /ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	
harvest previous crop	Nov							
broadleaf and grass weed control eg: glyphosate 450 g/L	Dec	0.05	45.64	2.28	1.2 L	7.43/L	8.92	11.20
broadleaf weed control eg 2,4-D amine 300g/L	Dec	with above			1.80 L	4.23/L	7.61	7.61
wetting agent	Dec	with above			0.25 L	8.84/L	2.21	2.21
nitrogen fertiliser eg. anhydrous ammonia	Mar	0.17	45.91	7.80	150 kg	1.09/kg	163.50	171.30
broadleaf and grass weed control eg: glyphosate 450 g/L	Apr	0.05	45.64	2.28	1.00 L	7.43/L	7.43	4.86
wetting agent	Apr	with above			0.25 L	8.84/L	2.21	2.21
sowing	May	0.17	66.34	11.28	3 kg	9.00/kg	27.00	38.28
Fertiliser - Starter Z	May	with above			60 kg	1.17/kg	70.20	70.20
grass weed control eg haloxyfop-R 520g/L	Jul	0.05	45.64	2.28	75 ml	0.164/ml	12.27	14.55
crop oil	Jul	with above			0.50 L	6.35/L	3.18	3.18
aerial spray (1 year in 2)	Aug			14.50				7.25
insect control eg Pirimicarb®	Aug	with above			1 kg	55.40/kg	55.40	27.70
aerial spray (1 year in 4)	Oct			14.50				3.63
insect control eg. methomyl	Oct	with above			1.5 L	11.75/L	17.63	4.41
harvest (contract-windrowed)	Dec			79.72				79.72
levies	Nov			1.020%	of income			8.00
crop insurance				3.590%	of on-farm value			28.15

Input prices were correct at the time of writing (Mar 17 2009). Current fertiliser and chemical market uncertainty makes estimation of future pricing impractical.

AGRONOMIC REQUIREMENTS:

Paddock selection: Only plant canola on country with high levels of soil moisture and fertility.

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

Canola can benefit a winter cereal rotation by reducing cereal root diseases.

However, canola can reduce VAM levels which are required by summer crops.

Ensure that the seedbed is reasonably fine and firm. Select a paddock relatively free of broadleaf weeds.

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

Fertilisers: Canola needs more nitrogen than wheat does. N should be applied well in advance of planting. Apply very little or no N in contact with the seed since fertiliser burn may result.

Phosphorus is critical for canola and trials in the north have shown large responses on alkaline soils. Canola also requires high levels of available sulphur.

Sowing time: Sow mid-maturing varieties from early May and early maturing varieties from mid May.

Finish sowing about June 1 at Moree and June 15 south of Gunnedah.

Refer to NSW DPI "Winter Crop Variety Sowing Guide 2009" for sowing guidelines.

Insects: Aphids need to be monitored from early flowering, when isolated colonies begin to spread. Control may be needed. Check for heliothis post flowering. Check for beneficial biological control agents such as ladybird larvae, hover fly larvae and fungal diseases.

For more information, refer to the agnote "Canola in northern NSW" or contact your local district agronomist.

Herbicides: Refer to the NSW DPI booklet "Weed Control in Winter Crops 2009" 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 NSW DPI.

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

According to the above operations, labour required is 0.49hrs/ha. Then multiplying this by 1.25 to allow for machinery repair time etc, and using a labour cost of \$19/hr, the cost of labour is \$11.34/ha, reducing the gross margin to \$288.22/ha.

MACHINERY ASSUMPTIONS:

Tractor: - pto power: 130 kW (175HP); engine power: 146 kW (196 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 SAFFLOWER (No Till, after wheat)

Farm Enterprise Budget Series - North East NSW

Winter 2009

1. GROSS MARGIN BUDGET:

INCOME:

1.50 tonnes/Ha@ \$375.00 /tonne (on farm)

Standard Budget \$/Ha	Your Budget \$/Ha
\$562.50	

Usually only grown under contract, see notes section.

Crop prices were correct at the time of writing (Mar 17 2009), world market volatility makes estimation of future pricing impractical.

VARIABLE COSTS:

See next page for detail

A. TOTAL INCOME \$/Ha:

\$562.50	
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Sowing.....	\$16.24	
Fertiliser.....	\$120.80	
Herbicide.....	\$56.68	
Insecticide.....	\$25.12	
Contract harvesting.....	\$49.22	
Levies.....	\$5.74	
Crop Insurance.....	\$14.40	

B. TOTAL VARIABLE COSTS \$/Ha:

\$288.20	
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C. GROSS MARGIN (A-B) \$/Ha:

\$274.30	
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Water use efficiency example

Growing season rainfall (ie in-crop): mm
 Stored fallow moisture: mm (25% of rainfall in fallow period assumed)

317	
75	
110	
282	
\$0.97	
5.32	

Please refer to the "Water Use Efficiency in Northern NSW Winter Crop Enterprise Budgets" summary for more information on water use efficiency assumptions used at right.

Early crop water use: mm
 Total crop water use mm
 Gross margin per mm
 kg of grain per mm

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

YIELD tonnes/Ha	ON FARM PRICE (\$/tonne)				
	\$275 /t	\$325 /t	\$375 /t	\$425 /t	\$475 /t
0.75	-\$69	-\$33	\$3	\$39	\$75
1.00	-\$3	\$45	\$94	\$142	\$190
1.25	\$63	\$124	\$184	\$244	\$304
1.50	\$130	\$202	\$274	\$347	\$419
1.75	\$196	\$280	\$365	\$449	\$533
2.00	\$262	\$359	\$455	\$552	\$648
2.25	\$329	\$437	\$545	\$654	\$762

Gross margin is zero when income is reduced by 49%
 or variable costs are increased by 95%

DRYLAND SAFFLOWER (No Till, after wheat)

Farm Enterprise Budget Series - North East NSW

Winter 2009

Operation	Month	Machinery*			Inputs			Total Cost \$/Ha
		hrs /Ha	Cost \$/hour	Total \$/Ha	Rate/Ha	Cost \$	Total \$/Ha	
broadleaf and grass weed control eg: glyphosate 450 g/L	Dec	0.05	45.64	2.28	1.2 L	7.43/L	8.92	\$11.20
broadleaf weed control eg 2,4-D amine 300g/L	Dec	with above			1.80 L	4.23/L	7.61	\$7.61
wetting agent	Dec	with above			0.25 L	8.84/L	2.21	\$2.21
broadleaf and grass weed control eg: glyphosate 450 g/L	Jan	0.05	45.64	2.28	1.60 L	7.43/L	11.89	\$14.17
broadleaf and grass weed control eg: glyphosate 450 g/L	Apr	0.05	45.64	2.28	1.00 L	7.43/L	7.43	\$9.71
nitrogen fertiliser eg. anhydrous ammonia	May	0.17	45.91	7.80	50 Kg	1.09/kg	54.50	\$62.30
sowing	Jun	0.17	66.34	11.28	8 Kg	0.62/Kg	4.96	\$16.24
fertiliser -starter Z	Jun	with above			50 Kg	1.17/Kg	58.50	\$58.50
early post emerg. weed control eg. metsulfuron-methyl	Jun	0.05	45.64	2.28	7 g	0.20/g	1.40	\$3.68
early post emerg. grass weed control eg. Propaquizafop 100g/L	Jun	0.05	45.64	2.28	0.30 L	17.09/L	5.13	\$7.41
wetter - non-ionic surfactant	Jun	with above			0.10 L	6.86/L	0.69	\$0.69
aerial spray for heliothis	Oct	contract		14.50				\$14.50
insect control eg. deltamethrin	Oct	with above			0.50 L	21.23/L	10.62	\$10.62
contract harvest	Nov/Dec			49.22				\$49.22
levies				1.020%				\$5.74
crop insurance				2.560%	of on-farm value			\$14.40

Input prices were correct at the time of writing (Mar 17 2009). Current fertiliser and chemical market uncertainty makes estimation of future pricing impractical.

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

Soil type: Suited to the deep heavy cracking clay soils with good moisture holding capacity. However, safflower requires well drained soils since it's waterlogging tolerance is low.

Rotation place: Suitable crop for breaking crop disease cycles in western areas.

Sowing time: A good crop for extending the sowing time of winter crops into the late winter.

Insects: Control of insect pests at budding is essential.

Herbicides: Glyphosate CT used for fallow weed control.

Trifluralin may be needed if annual phalaris is a problem weed.

Early post emerg. weed control eg. metsulfuron-methyl at 4 to 6 leaf stage

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

Refer to the NSW DPI booklet "Weed Control in Winter Crops 2009" for options.

Marketing: A specialist market, contracts should be sourced (usually by March) before growing safflower.

The main birdseed markets are Australia and the Netherlands. The total Japanese oil market is 20,000 to 30,000 t/year with some seed imports as well, but export levels from Australia will depend on the amount grown. India is a key grain (for oil) market.

There is also an oil market to Germany and Switzerland, and a growing market for organic safflower products.

Safflower meal is used in the dairy industry due to a good protein content.

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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 NSW Department of Primary Industries.

Machinery - pto power: 130 kW (175HP); engine power: 146 kW (196 HP)

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

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

According to the above operations, labour required is 0.49hrs/ha. Then multiplying this by 1.25 to allow for machinery repair time etc, and using a labour cost of \$19/hr, the cost of labour is \$11.34/ha, reducing the gross margin to \$262.97/ha.



DRYLAND LINSEED (No Till)

Farm Enterprise Budget Series - North East NSW

Winter 2009

1. GROSS MARGIN BUDGET:

INCOME:	1.20 tonnes/Ha	
Edible grain	1.02 tonnes/Ha@	\$800.00 /tonne (on farm)
Meal	0.18 tonnes/Ha@	\$150.00 /tonne (on farm)

Standard Budget \$/Ha	Your Budget \$/Ha
\$816.00	
\$27.00	

Usually only grown under contract, see notes section.

Crop prices were correct at the time of writing (Mar 17 2009), world market volatility makes estimation of future pricing impractical.

A. TOTAL INCOME \$/Ha:

\$843.00	
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VARIABLE COSTS:

See next page for detail

Sowing.....	\$53.28	
Fertiliser.....	\$199.28	
Herbicide.....	\$71.94	
Insecticide.....	\$50.23	
Contract harvesting.....	\$79.72	
Levies.....	\$8.32	
Crop Insurance.....	\$30.26	
Cartage, grading & bagging.....	\$0.00	

B. TOTAL VARIABLE COSTS \$/Ha:

\$493.04	
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C. GROSS MARGIN (A-B) \$/Ha

\$349.96	
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Water use efficiency example

Growing season rainfall (ie in-crop): mm
 Stored fallow moisture: mm (25% of rainfall in fallow period assumed)

Early crop water use: mm
 Total crop water use mm
 Gross margin per mm
 kg of grain per mm

317	
75	
110	
282	
\$1.24	
4.26	

Please refer to the "Water Use Efficiency in Northern NSW Winter Crop Enterprise Budgets" summary for more information on water use efficiency assumptions used at right.

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

YIELD	tonnes/Ha	ON FARM PRICE (\$/tonne)				
		\$640 /t	\$720 /t	\$800 /t	\$880 /t	\$960 /t
Gradings		\$120 /t	\$135 /t	\$150 /t	\$165 /t	\$180 /t
0.07	0.41	-\$197	-\$165	-\$133	-\$101	-\$68
0.11	0.61	-\$68	-\$20	\$28	\$76	\$125
0.14	0.82	\$60	\$125	\$189	\$253	\$318
0.18	1.02	\$189	\$269	\$350	\$430	\$511
0.27	1.53	\$511	\$631	\$752	\$872	\$993
0.36	2.04	\$832	\$993	\$1,154	\$1,315	\$1,475
0.45	2.55	\$1,154	\$1,355	\$1,556	\$1,757	\$1,958

Gross margin is zero when income is reduced by 42%
 or variable costs are increased by 71%

DRYLAND LINSEED (No Till)

Farm Enterprise Budget Series - North East NSW

Winter 2009

CALENDAR OF OPERATIONS:		Machinery*			Inputs			Total
Operation	Month							Total Cost \$/Ha
		hrs/Ha	Cost \$/hour	Total \$/Ha	Rate/Ha	Cost \$	Total \$/Ha	
harvest previous crop	Nov							
broadleaf and grass weed control eg: glyphosate 450 g/L	Dec	0.05	45.64	2.28	1.2 L	7.43/L	8.92	\$11.20
broadleaf weed control eg 2,4-D amine 300g/L	Dec	with above			1.80 L	4.23/L	7.61	\$7.61
wetting agent	Dec	with above			0.25 L	8.84/L	2.21	\$2.21
broadleaf and grass weed control eg: glyphosate 450 g/L	Feb	0.05	45.64	2.28	1.75 L	7.43/L	13.00	\$15.28
nitrogen fertiliser eg. anhydrous ammonia	Mar	0.17	45.91	7.80	122 kg	1.09/kg	132.98	\$140.78
broadleaf and grass weed control eg: glyphosate 450 g/L	May	0.05	45.64	2.28	1.25 L	7.43/L	9.29	\$11.57
broadleaf weed control eg. MCPA 500g/kg	May	with above			0.70 L	6.78/L	4.75	\$4.75
sowing	May	0.17	66.34	11.28	35kg	1.20/kg	42.00	\$53.28
Fertiliser - Starter Z	May	with above			50kg	1.17/kg	58.50	\$58.50
broadleaf weed control eg. Tordon 242®	Jun	0.05	45.64	2.28	0.75 L	22.71/L	17.03	\$19.31
**insect control eg. Decis Options®	Sept	aerial spray		14.50	0.50 L	21.23/L	10.62	\$25.12
**insect control eg. Decis Options®	Oct	aerial spray		14.50	0.50 L	21.23/L	10.62	\$25.12
contract harvest	Nov			79.72				\$79.72
levies				1.02%	of on-farm value			\$8.32
crop insurance				3.590%	of on-farm value			\$30.26

Input prices were correct at the time of writing (Mar 17 2009). Current fertiliser and chemical market uncertainty makes estimation of future pricing impractical.

NOTES:

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

Rotation place: Good crop to undersow with pasture, but growers need to allow for extra nitrogen at the end of the rotation. This also reduces the stubble handling problem.

Good break crop for cereal diseases and particularly when root lesion nematode is a problem.

Soil type: Suited to heavier textured wheat soils with good fertility.

Nutrition: Ensure adequate levels of N, P and Zn are applied or are present in the soil as linseed is highly VAM dependent.

Seed: Seed price used above is for purchased seed; if using retained seed adjust budget accordingly.

Herbicides: To reduce the likelihood of herbicide resistance, rotate herbicide groups and weed management techniques. Refer to the NSW DPI booklet "Weed Control in Winter Crops 2009" for options.

****Insecticides:** Heliothis control is critical. More than one spray may be needed from budding. Consult your local agronomist for heliothis control measures.

Linseed Marketing: Austrgrains Moree supply the seed with the contract, phone 6752 2300. Most linseed grown in the north is aimed at the human consumption market.

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

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

Machinery pto power: 130 kW (175HP); engine power: 146 kW (196 HP). Machinery costs refer to variable costs of: fuel, oil, filters, tyres, batteries and repairs. Contract harvesting does not include the cost of fuel.

Labour According to the above operations, labour required is 0.49hrs/ha. Then multiplying this by 1.25 to allow for machinery repair time etc, and using a labour cost of \$19/hr, the cost of labour is \$11.34/ha, reducing the gross margin to \$338.63/ha.