

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

After Cereal

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)				
	231.00	251.00	\$271.00	\$291.00	\$311.00
0.60	-\$164	-\$152	-\$141	-\$129	-\$117
1.10	-\$51	-\$29	-\$8	\$14	\$35
1.60	\$62	\$93	\$125	\$156	\$188
2.10	\$175	\$216	\$258	\$299	\$340
2.60	\$287	\$338	\$389	\$440	\$491

Gross
Margin
(\$/ha)

After Canola

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)				
	\$231 /t	\$251 /t	\$271 /t	\$291 /t	\$311 /t
0.40	-\$209	-\$202	-\$194	-\$186	-\$178
0.90	-\$96	-\$79	-\$61	-\$43	-\$26
1.40	\$17	\$44	\$72	\$99	\$127
1.90	\$130	\$167	\$204	\$242	\$279
2.40	\$243	\$290	\$337	\$384	\$431
2.90	\$351	\$408	\$465	\$522	\$579
3.40	\$459	\$525	\$592	\$658	\$725

Gross
Margin
(\$/ha)

After Pulses

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)				
	\$231 /t	\$251 /t	\$271 /t	\$291 /t	\$311 /t
0.50		-\$96	-\$87	-\$77	-\$67
1.00	\$7	\$27	\$46	\$66	\$85
1.50	\$120	\$149	\$179	\$208	\$238
2.00	\$233	\$272	\$312	\$351	\$390
2.50	\$346	\$395	\$444	\$493	\$542
3.00	\$454	\$512	\$571	\$630	\$689
3.50	\$561	\$629	\$698	\$766	\$835

Gross
Margin
(\$/ha)

PRODUCT TRADE NAMES

The product trade names in this publication are supplied on the understanding that no preference between equivalent products is intended and that the inclusion of a product does not imply endorsement by NSW Department of Primary Industries over any other equivalent product from another manufacturer.

Wheat: Short Fallow

Central Zone - West

Winter 2009

CALENDAR OF OPERATIONS:

Operation	Month	Machinery			Inputs			Total Cost \$/ha
		hrs /ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	
Weed control eg: glyphosate 450 g/litre	Dec/Jan	0.03	79.73	\$2.61	1.20 L	\$7.38/L	\$8.85	\$11.46
Weed control eg: Garlon®	Dec/Jan	with above			0.10 L	\$29.93/L	\$2.99	\$2.99
Weed control eg: glyphosate 450 g/litre	Feb/Mar	0.03	79.73	\$2.61	1.00 L	\$7.38/L	\$7.38	\$9.98
Weed control eg: 2,4-D amine (Surpass®)	Feb/Mar	with above			1.00 L	\$6.22/L	\$6.22	\$6.22
Cultivation	Mar	0.10	78.17	\$8.01				\$8.01
Nitrogen Fertiliser- After Canola eg: Urea	May	0.12	107.73	\$12.62	80 kg	\$0.85/kg	\$68.00	\$80.62
Nitrogen Fertiliser- After Cereal eg: Urea	May	0.12	107.73	\$12.62	80 kg	\$0.85/kg	\$68.00	\$80.62
Nitrogen Fertiliser- After Pulses eg: Urea	May	0.00	0.00	\$0.00	0 kg	\$0.85/kg	\$0.00	\$0.00
Sowing	May	0.12	107.73	\$12.62	35 kg	\$0.92/kg	\$32.13	\$44.75
Starter fertiliser eg: MAP	May	with above			60 kg	\$0.98/kg	\$58.50	\$58.50
Grass weed control eg: Diclofop-methyl (Hoegrass®)	Jun	0.03	79.73	\$2.61	1.00 L	\$17.33/L	\$17.33	\$19.94
Broadleaf weed control eg: MCPA LVE®	Jul	0.03	79.73	\$2.61	0.70 L	\$9.81/L	\$6.86	\$9.47
Contract-harvest - After Canola	Nov	contract		\$48.00				\$48.00
Contract-harvest - After Cereal	Nov	contract		\$48.00				\$48.00
Contract-harvest - After Pulses	Nov			\$48.00				\$48.00
Crop Levies - After Canola					1.02%	of on-farm value		\$5.25
Crop Levies - After Cereal					1.02%	of on-farm value		\$4.42
Crop Levies - After Pulses					1.02%	of on-farm value		\$5.53
Crop Insurance - After Canola					1.03%	of on-farm value		\$5.28
Crop Insurance - After Cereal					1.03%	of on-farm value		\$4.44
Crop Insurance - After Pulses					1.03%	of on-farm value		\$5.56

*** Input and crop prices are correct at the time of writing (March 2009). Market uncertainty makes estimation of future pricing impractical.

NOTES:

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 week delay past the optimum sowing time.
- Seed price used above is for purchased seed; if using retained seed adjust budget accordingly.

Place in rotation:

- Short fallow wheat crops perform differently depending on the previous crop.
- Pulse and canola crops provide an effective disease break and yield benefit for the following wheat crop. Additionally, a pulse crop improves soil nitrogen reducing the amount of fertilisers required to achieve PH quality.
- Short Fallow: Fallow or weed free period of 5-6 months between harvest of one crop and sowing of the next crop. For example, canola harvested in November would be under a 5-6 month fallow until sowing in May of the following year.

Weed control:

- Timing of fallow herbicide applications vary according to rainfall
- Weed control, if required, should be implemented either pre-emergent or within 6 to 8 weeks after sowing time to limit yield loss.
- An additional knockdown herbicide application (i.e. Glyphosate 450® 1.0L/ha) should be considered if weeds are present at the time of sowing.

Fertiliser:

- Rotate herbicide groups and use other non-chemical methods to delay herbicide resistance.
- Adequate phosphorus is essential before applying extra nitrogen fertiliser.
- To achieve PH quality, wheat must have a protein level of 13% or higher.
- Seasonal conditions will also have a large effect on grain size and protein percentage.
- Nitrogen fertiliser applications may be split i.e. some applied presowing and some applied in the mid to late vegetative stage (2nd node flag leaf emergence) .
- The later nitrogen fertiliser is applied to a crop, the greater its effect on raising protein percentage, and the less effect it has on increasing yield.

Machinery:

- A tractor with 203 kW (272 HP) pto power and 242kW (325 HP) engine power is assumed.
- Machinery costs refer only to variable costs: fuel, oil, filters, tyres, batteries & repairs.
- Contract-harvesting does not include the cost of fuel.

Labour:

- The labour required for machinery operations is 0.73 hrs/ha
- Using a labour cost of \$14/hr, an additional \$10.23 can be deducted from the budget
- These gross margins are only a guide. They do not include overhead costs.

Important notes:

- **Use your own figures and price assumptions to estimate your own gross margin.**
- Use of a particular brand name does NOT imply recommendation of that brand

by NSW Department of Primary Industries

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NSW DEPARTMENT OF PRIMARY INDUSTRIES

Wheat: Long Fallow Central Zone - West

Winter 2009

1. GROSS MARGIN BUDGET:

INCOME:

2.40 tonnes/ha @ \$271.00 /tonne (on farm) (PH)

A. TOTAL INCOME \$/ha:

VARIABLE COSTS:

See opposite page for detail

	Standard Budget \$/Ha	Your Budget \$/Ha
	\$650.40	
A. TOTAL INCOME \$/ha:	\$650.40	
Cultivation.....	\$20.38	
Sowing.....	\$49.34	
Fertiliser.....	\$68.25	
Herbicide.....	\$63.82	
Insecticide.....	\$0.00	
Contract-harvesting.....	\$48.00	
Levies.....	\$6.63	
Crop Insurance.....	\$6.67	
Cartage, grading & bagging.....	\$0.00	

B. TOTAL VARIABLE COSTS \$/ha:

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

\$387.32

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

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)					Gross Margin (\$/ha)
	231	251	271	291	311	
1.40	\$67	\$94	\$122	\$149	\$177	
1.80	\$158	\$193	\$228	\$263	\$299	
2.20	\$248	\$291	\$334	\$377	\$420	
2.40	\$293	\$340	\$387	\$434	\$481	
2.80	\$380	\$435	\$490	\$545	\$600	
3.30	\$487	\$552	\$617	\$681	\$746	
3.80	\$594	\$669	\$743	\$818	\$892	

PRODUCT TRADE NAMES

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Wheat: Long Fallow

Central Zone - West

Winter 2009

CALENDAR OF OPERATIONS:

Operation	Month	Machinery			Inputs			Total Cost \$/ha
		hrs /ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	
Weed control eg: glyphosate 450 g/litre	Aug/Sept	0.03	79.73	\$2.61	1.20 L	\$7.38/L	\$8.85	\$11.46
Weed control eg: glyphosate 450 g/litre	Dec/Jan	0.03	79.73	\$2.61	1.20 L	\$7.38/L	\$8.85	\$11.46
Weed control eg: Garlon®	Dec/Jan	with above			0.10 L	\$29.93/L	\$2.99	\$2.99
Chisel Plough	Feb	0.14	89.48	\$12.37				\$12.37
Cultivation	Apr	0.10	78.17	\$8.01				\$8.01
Weed control eg: glyphosate 450 g/litre	Apr/May	0.03	79.73	\$2.61	0.80 L	\$7.38/L	\$5.90	\$8.51
Sowing	May	0.12	107.73	\$12.62	40 kg	\$0.92/kg	\$36.72	\$49.34
Starter fertiliser eg: MAP	May	with above			70 kg	\$0.98/kg	\$68.25	\$68.25
Grass weed control eg: Diclofop-methyl (Hoegrass®)	Jun	0.03	79.73	\$2.61	1.00 L	\$17.33/L	\$17.33	\$19.94
Broadleaf weed control eg: MCPA LVE®	Jul	0.03	79.73	\$2.61	0.70 L	\$9.81/L	\$6.86	\$9.47
Contract-harvest	Nov	contract		\$48.00				\$48.00
Crop Levies					1.02%	of on-farm value		\$6.63
Crop Insurance					1.03%	of on-farm value		\$6.67

*** Input and crop prices are correct at the time of writing (March 2009). Market uncertainty makes estimation of future pricing impractical.

NOTES:

Long fallow:

- Country coming out of lucerne or pasture is usually fallowed.
- Fallow is usually commenced in Aug-Sept to conserve moisture and stop weeds setting seed. Preferably a spray is substituted for the opening cultivation, allowing extended grazing time, weed control and moisture conservation.
- For Gross Margin comparisons NOTE: in a long fallow situation winter cropping cannot be carried out annually.

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

Weed control:

- Timing of fallow herbicide applications will vary according to rainfall.
- Weed control, if required, should be implemented either pre-emergent or within 6 to 8 weeks after sowing to avoid yield loss.
- An additional knockdown herbicide application (i.e. Glyphosate® 450 @ 1.0 L/ha) should be considered if weeds are present at the time of sowing.
- Rotate herbicide groups and use other non-chemical methods to delay herbicide resistance.

Fertiliser:

- Good nitrogen fertility is required to produce high yields and high protein percentage.
- To achieve PH quality, wheat must have a protein level of 13% or higher.
- Adequate phosphorus is essential before applying extra nitrogen fertiliser.

Wheat Price:

- Higher protein wheat is likely to be grown on fallow country with a good legume history.

Machinery:

- A tractor with 203 kW (272 HP) pto power and 242kW (325 HP) engine power is assumed.
- Machinery costs refer only to variable costs: fuel, oil, filters, tyres, batteries & repairs.
- Contract-harvesting does not include the cost of fuel.

Labour:

- Using a labour cost of \$14/hr, an additional \$9.12 can be deducted from the budget

Important notes:

- These gross margins are only a guide. They do not include overhead costs.
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Barley: Short Fallow [No-till] Central Zone - West

Winter 2009

1. GROSS MARGIN BUDGET:

INCOME:

Feed Barley	1.90 tonnes/ha @	\$176.00 /tonne (on farm) (feed)
Malt Barley	1.70 tonnes/ha @	\$200.00 /tonne (on farm) (malt)

VARIABLE COSTS:

See opposite page for detail

A. TOTAL INCOME \$/ha:

Cultivation.....	\$0.00
Sowing.....	\$60.81
Fertiliser.....	\$68.25
Herbicide.....	\$58.92
Insecticide.....	\$0.00
Contract-harvesting.....	\$48.00
Levies.....	\$6.00
Crop Insurance.....	\$3.49
Cartage, grading & bagging.....	\$0.00

B. TOTAL VARIABLE COSTS \$/ha:

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

Malt Standard Budget \$/Ha	Feed Standard Budget \$/Ha	Your 2006 Budget \$/Ha
	\$334.40	
\$340.00		
\$340.00	\$334.40	
\$0.00	\$0.00	
\$60.81	\$60.81	
\$68.25	\$68.25	
\$58.92	\$58.92	
\$0.00	\$0.00	
\$48.00	\$48.00	
\$6.00	\$6.24	
\$3.49	\$3.43	
\$0.00	\$0.00	
\$245.47	\$245.65	
\$94.53	\$88.75	

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

Malt Barley

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)				
	\$160 /t	\$180 /t	\$200 /t	\$220 /t	\$240 /t
1.20	-\$50	-\$26	-\$3	\$21	\$44
1.40	-\$19	\$9	\$36	\$64	\$91
1.60	\$12	\$44	\$75	\$106	\$138
1.70	\$28	\$61	\$95	\$128	\$161
2.00	\$74	\$114	\$153	\$192	\$231
2.20	\$106	\$149	\$192	\$235	\$278
2.40	\$137	\$184	\$231	\$278	\$325

Gross Margin (\$/ha)

Feed Barley

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)				
	\$136 /t	\$156 /t	\$176 /t	\$196 /t	\$216 /t
1.40	-\$52	-\$24	\$3	\$31	\$58
1.60	-\$25	\$6	\$37	\$69	\$100
1.80	\$1	\$36	\$72	\$107	\$142
1.90	\$14	\$52	\$89	\$126	\$163
2.20	\$54	\$97	\$140	\$183	\$226
2.40	\$80	\$127	\$174	\$221	\$268
2.60	\$105	\$156	\$207	\$258	\$309

Gross Margin (\$/ha)

PRODUCT TRADE NAMES

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Barley: Short Fallow [No-till]

Central Zone - West

Winter 2009

CALENDAR OF OPERATIONS:

Operation	Month	Machinery			Inputs			Total Cost \$/ha
		hrs /ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	
Weed control eg: glyphosate 450 g/litre	Dec/Jan	0.03	79.73	\$2.61	1.20 L	\$7.38/L	\$8.85	\$11.46
Weed control eg: Garlon®	Dec/Jan	with above			0.10 L	\$29.93/L	\$2.99	\$2.99
Weed control eg: glyphosate 450 g/litre	Feb/Mar	0.03	79.73	\$2.61	1.20 L	\$7.38/L	\$8.85	\$11.46
Weed control eg: 2,4-D amine (Surpass®)	Feb/Mar	with above			1.00 L	\$6.22/L	\$6.22	\$6.22
Sowing seed	May	0.12	107.73	\$12.62	45 kg	\$1.07/kg	\$48.20	\$60.81
Starter fertiliser eg: MAP	May	with above			70 kg	\$0.98/kg	\$68.25	\$68.25
Grass weed control eg: Diclofop-methyl (Hoegrass®)	Jul	0.03	79.73	\$2.61	1.00 L	\$17.33/L	\$17.33	\$19.94
Broadleaf weed control eg: MCPA LVE®	Jul	with above			0.70 L	\$9.81/L	\$6.86	\$6.86
Contract-harvest	Nov	contract		\$48.00				\$48.00
Crop Levies - 2 row feed					\$1.50/tonne + 1.02% of on-farm value			\$6.24
Crop Levies - malt					\$1.50/tonne + 1.02% of on-farm value			\$6.00
Crop Insurance - 2 row feed					1.03% of on-farm value			\$3.43
Crop Insurance - malt					1.03% of on-farm value			\$3.49

*** Input and crop prices are correct at the time of writing (March 2009). Market uncertainty makes estimation of future pricing impractical.

NOTES:

Sowing time:

- Sowing at the optimum time for the selected variety is critical for maximum yield.
- Seed price used above is for purchased seed; if using retained seed adjust budget accordingly.

Place in rotation:

- Barley is a useful crop to follow wheat in the rotation.
- Barley will respond to good soil fertility, however it is better adapted to lower nitrogen fertility situations than wheat.
- Select lower nitrogen paddocks for malting barley.
- Tulla & Yambla are more tolerant to acid soils.
- Barley is a useful break crop where root lesion nematode is a problem.
- Short Fallow: Fallow or weed free period of 5-6 months between harvest of one crop and sowing of the next crop. For example, canola harvested in November would be under a 5-6 month fallow until sowing in the following May.

Variety:

- Feed varieties will usually yield around 10 -15% more than the malting variety Schooner.

Weed control:

- Timing of fallow herbicide applications will vary according to rainfall.
- Barley is generally more competitive than wheat in relation to weeds.
- An additional knockdown herbicide application (i.e. Glyphosate 450® @ 1.0 L/ha) should be considered if weeds are present at the time of sowing.
- Rotate herbicide groups and use other non-chemical methods to delay herbicide resistance.

Machinery:

- A tractor with 203 kW (272 HP) pto power and 242kW (325 HP) engine power is assumed.
- Machinery costs refer only to variable costs: fuel, oil, filters, tyres, batteries & repairs.
- Contract-harvesting does not include the cost of fuel.

Labour:

- The labour required for machinery operations is 0.23 hrs/ha

Important notes:

- These gross margins are only a guide. They do not include overhead costs.
- **Use your own figures and price assumptions to estimate your own gross margin.**
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Canola: Short Fallow (No-till) Central Zone - West

Winter 2009

1. GROSS MARGIN BUDGET:

INCOME:

1.20 tonnes/ha @ \$480.00 /tonne (on farm)

A. TOTAL INCOME \$/ha:

VARIABLE COSTS:

See opposite page for detail

Cultivation.....	\$0.00
Sowing.....	\$39.62
Fertiliser.....	\$175.50
Herbicide.....	\$30.83
Insecticide.....	\$42.69
Contract windrowing & harvesting.....	\$125.00
Levies.....	\$7.65
Crop Insurance.....	\$10.04
Cartage, grading & bagging.....	\$0.00

B. TOTAL VARIABLE COSTS \$/ha:

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

Standard Budget \$/Ha	Your Budget \$/Ha
\$576.00	
\$576.00	
\$0.00	
\$39.62	
\$175.50	
\$30.83	
\$42.69	
\$125.00	
\$7.65	
\$10.04	
\$0.00	
\$431.31	
\$144.69	

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

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)					Gross Margin (\$/ha)
	\$400 /t	\$440 /t	\$480 /t	\$520 /t	\$560 /t	
0.60	- \$181	- \$158	- \$134	- \$111	- \$88	
0.80	- \$104	- \$73	- \$41	- \$10	\$21	
1.00	- \$26	\$13	\$52	\$91	\$129	
1.20	\$51	\$98	\$145	\$191	\$238	←
1.40	\$129	\$183	\$238	\$292	\$347	
1.80	\$284	\$354	\$424	\$494	\$564	
2.00	\$361	\$439	\$517	\$595	\$672	

PRODUCT TRADE NAMES

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Canola: Short Fallow (No-till)

Central Zone - West

Winter 2009

CALENDAR OF OPERATIONS:

Operation	Month	Machinery			Inputs			Total Cost \$/ha
		hrs /ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	
Weed control eg: glyphosate 450 g/litre	Dec/Jan	0.03	79.73	\$2.61	1.20 L	\$7.38/L	\$8.85	\$11.46
Weed control eg: Garlon®	Dec/Jan	with above			0.10 L	\$29.93/L	\$2.99	\$2.99
Weed control eg: glyphosate 450 g/litre	Feb/Mar	0.03	79.73	\$2.61	1.20 L	\$7.38/L	\$8.85	\$11.46
Weed control eg: 2,4-D amine (Surpass®)	Feb/Mar	with above			1.00 L	\$6.22/L	\$6.22	\$6.22
Weed control eg: glyphosate 450 g/litre	Apr	0.03	79.73	\$2.61	1.00 L	\$7.38/L	\$7.38	\$9.98
Sowing - treated seed	Apr/May	0.12	107.73	\$12.62	3.00 kg	\$9.00/kg	\$27.00	\$39.62
Nitrogen and Sulfur fertiliser eg: Extra Sul®	Apr/May	with above			100 kg	\$0.78/kg	\$78.00	\$78.00
Starter fertiliser eg: MAP	Apr/May	with above			100 kg	\$0.98/kg	\$97.50	\$97.50
Mite control eg: omethoate (Le-mat®)	May	0.03	79.73	\$2.61	0.10 L	\$33.67/L	\$3.37	\$5.97
Grass weed control eg: Verdict®	Jul				0.05 L	\$96.88/L	\$4.84	\$4.84
Broadleaf weed control eg: Clopyralid (Lontrel®)	Aug	0.03	79.73	\$2.61	0.30 L	\$44.67/L	\$13.40	\$16.01
Heliothis control eg: alpha-cypermethrin (Fastac Duo)	Sept	contract		\$18.15	0.30 L	\$10.50/L	\$3.15	\$21.30
Aphid control (1 year in 2) eg: Pirimicarb (Pirimor WG®)	Sept	contract		\$18.15	0.5 kg	\$25.35/kg	\$12.68	\$15.41
Contract Windrow	Oct	contract		\$75.00				\$75.00
Contract-Harvest	Nov			\$50.00				\$50.00
Crop Levies					\$1.50/tonne + 1.02% of on-farm value			\$7.65
Crop Insurance					1.74% of on-farm value			\$10.04

*** Input and crop prices are correct at the time of writing (March 2009). Market uncertainty makes estimation of future pricing impractical.

Notes:	
Soil type:	- Suitable for all high fertility wheat soils. Avoid acid soils containing high aluminium.
Place in rotation	- Best grown first after a good legume pasture. - Short Fallow: Fallow or weed free period of 5-6 months between harvest of one crop and sowing of the next crop. For example, wheat harvested in November would be under a 5-6 month fallow until sowing in the following May.
Sowing time:	- Sow on the first sufficient rains after mid-April (10% yield loss/week after early May). - Seed price used above is for purchased seed.
Fertiliser:	- Canola needs 30% more nitrogen than wheat. The majority of nitrogen should be applied at sowing. Avoid applying high levels of nitrogen in direct contact with the seed. - A Fertiliser with sulfur such as extra sul and starter 15, or gypsum should also be used.
Weed control:	- Timing of fallow herbicide applications will vary according to rainfall. - An additional knockdown herbicide application (i.e. Glyphosate 450® @ 1.0 L/ha) should be considered if weeds are present at the time of sowing. - Trifluralin for grass weeds and wireweed /fumitory control. - Clopyralid for capeweed, skeleton weed and saffron thistle control. - Verdict® for grass weeds unless high levels of wireweed or fumitory are likely; use trifluralin if this is the case.
Insect control:	- Earthmite control is essential in most years. - Aphids need to be monitored from early budding. When colonies begin to spread control may be needed. - Monitor for heliothis post flowering.
Windrowing:	- Windrowing is strongly recommended for earlier harvest and to reduce shattering losses.
Machinery:	- A tractor with 149 kW (200 HP) pto power and 177 kW (240 HP) engine power is assumed. - Machinery costs refer only to variable costs: fuel, oil, filters, tyres, batteries & repairs.
Labour:	- Contract-harvesting does not include the cost of fuel. - The labour required for machinery operations is 0.27 hrs/ha - Using a labour cost of \$14/hr, an additional \$3.76 can be deducted from the budget
Important notes:	- These gross margins are only a guide. They do not include overhead costs. - Use your own figures and price assumptions to estimate your own gross margin. - Use of a particular brand name does NOT imply a recommendation of that brand by NSW Department of Primary Industries.

This budget is ONLY A GUIDE and should be altered for movements in crop and input prices, changes in seasonal conditions and the farm characteristics.



Oats-grain: Short Fallow [No-till] Central Zone - West

Winter 2009

1. GROSS MARGIN BUDGET:

INCOME:

1.60 tonnes/ha @ \$190.00 /tonne (on farm) (feed)

A. TOTAL INCOME \$/ha:

VARIABLE COSTS:

See opposite page for detail

Cultivation..... \$0.00
Sowing..... \$67.79
Fertiliser..... \$58.50
Herbicide..... \$0.00
Insecticide..... \$4.96
Contract-harvesting..... \$48.00
Levies..... \$3.09
Crop Insurance..... \$3.12
Cartage, grading & bagging..... \$0.00

B. TOTAL VARIABLE COSTS \$/ha:

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

Standard Budget \$/Ha	Your Budget \$/Ha
\$304.00	
\$304.00	
\$0.00	
\$67.79	
\$58.50	
\$0.00	
\$4.96	
\$48.00	
\$3.09	
\$3.12	
\$0.00	
\$185.44	
\$118.56	

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

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)					Gross Margin (\$/ha)
	\$150 /t	\$170 /t	\$190 /t	\$210 /t	\$230 /t	
0.80	- \$62	- \$46	- \$30	- \$15	\$1	
1.00	- \$32	- \$13	\$7	\$26	\$46	
1.20	- \$3	\$21	\$44	\$68	\$91	
1.60	\$56	\$87	\$119	\$150	\$181	←
2.00	\$115	\$154	\$193	\$232	\$271	
2.60	\$196	\$247	\$297	\$348	\$399	
3.00	\$250	\$308	\$367	\$426	\$485	

PRODUCT TRADE NAMES

The product trade names in this publication are supplied on the understanding that no preference between equivalent products is intended and that the inclusion of a product does not imply endorsement by NSW Department of Primary Industries over any other equivalent product from another manufacturer.

Oats-grain: Short Fallow [No-till]

Central Zone - West

Winter 2009

CALENDAR OF OPERATIONS:

Operation	Month	Machinery			Inputs			Total Cost \$/ha
		hrs /ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	
Weed control eg: glyphosate 450 g/litre	Dec/Jan	0.03	79.73	\$2.61	1.20 L	\$7.38/L	\$8.85	\$11.46
Weed control eg: Garlon®	Dec/Jan	with above			0.12 L	\$29.93/L	\$3.59	\$3.59
Weed control eg: glyphosate 450 g/litre	Dec/Jan	0.03	79.73	\$2.61	1.20 L	\$7.38/L	\$8.85	\$11.46
Weed control eg: 2,4-D amine (Surpass®)	Dec/Jan	with above			1.00 L	\$6.22/L	\$6.22	\$6.22
Nitrogen fertiliser eg: Urea	May	0.12	107.73	\$12.62	40 kg	\$0.85/kg	\$34.00	\$46.62
Sowing	May	0.12	107.73	\$12.62	45 kg	\$1.23/kg	\$55.17	\$67.79
Starter fertiliser eg: MAP	May	with above			60 kg	\$0.98/kg	\$58.50	\$58.50
Early post-emergent weed control eg: (Glean®)	Jne	0.03	79.73	\$2.61	20 g	0.12 /g	\$2.35	\$4.96
Contract-harvest	Nov	contract		\$48.00				\$48.00
Crop Levies					1.02%	of on-farm value		\$3.09
Crop Insurance					1.03%	of on-farm value		\$3.12

*** Input and crop prices are correct at the time of writing (March 2009). Market uncertainty makes estimation of future pricing impractical.

NOTES:

Soil type:

- Oats is more suited to the light sandy acid soils than wheat or barley (except Coolabah).

Seed:

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

Place in rotation:

- Useful acid soil tolerant cereal crop.

- Short Fallow: Fallow or weed free period of 5-6 months between harvest of one crop and sowing of the next crop. For example, canola harvested in November would be under a 5-6 month fallow until sowing in the next May.

Weed control:

- Timing of fallow herbicide applications will vary according to rainfall.

- Many grassweed control options available in wheat and barley are not able to be used in oats.

- An additional knockdown herbicide application (i.e. Glyphosate 450® @ 1.0 L/ha) should be considered if weeds are present at the time of sowing.

- Chlorsulfuron (i.e. Glean®) however, can be used (post emergent) to control annual ryegrass.

- Chlorsulfuron also controls some broadleaf weeds.

- Rotate herbicide groups and use other non-chemical methods to delay herbicide resistance.

Machinery:

- A tractor with 203 kW (272 HP) pto power and 242kW (325 HP) engine power is assumed.

- Machinery costs refer only to variable costs: fuel, oil, filters, tyres, batteries & repairs.

Labour:

- The labour required for machinery operations is 0.19 hrs/ha

- Using a labour cost of \$14/hr, an additional \$2.62 can be deducted from the budget

Important notes:

- These gross margins are only a guide. They do not include overhead costs.

- **Use your own figures and price assumptions to estimate your own gross margin.**

- Use of a particular brand name does NOT imply a recommendation of that brand

by NSW Department of Primary Industries.



Durum Wheat: Long Fallow Central Zone - West

Winter 2009

1. GROSS MARGIN BUDGET:

2.40 tonnes/ha @ \$284.00 /tonne (on farm) (DR2)

A. TOTAL INCOME \$/ha:

VARIABLE COSTS:

See opposite page for detail

Cultivation.....	\$20.38
Sowing.....	\$68.12
Fertiliser.....	\$113.62
Herbicide.....	\$63.82
Insecticide.....	\$0.00
Contract-harvesting.....	\$48.00
Levies.....	\$6.95
Crop Insurance.....	\$6.99
Cartage, grading & bagging.....	\$0.00

B. TOTAL VARIABLE COSTS \$/ha:

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

Standard Budget \$/Ha	Your Budget \$/Ha
\$681.60	
\$681.60	
\$20.38	
\$68.12	
\$113.62	
\$63.82	
\$0.00	
\$48.00	
\$6.95	
\$6.99	
\$0.00	
\$327.87	
\$353.73	

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

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)					Gross Margin (\$/ha)
	\$244	\$264	\$284	\$304	\$324	
1.40	\$21	\$48	\$76	\$103	\$130	
1.80	\$116	\$152	\$187	\$222	\$257	
2.10	\$188	\$229	\$270	\$311	\$353	
2.40	\$260	\$307	\$354	\$401	\$448	
2.70	\$329	\$382	\$435	\$488	\$541	
3.30	\$465	\$530	\$595	\$659	\$724	
3.80	\$579	\$653	\$728	\$802	\$876	

PRODUCT TRADE NAMES

The product trade names in this publication are supplied on the understanding that no preference between equivalent products is intended and that the inclusion of a product does not imply endorsement by NSW Department of Primary Industries over any other equivalent product from another manufacturer.

Durum Wheat: Long Fallow

Central Zone - West

Winter 2009

CALENDAR OF OPERATIONS:

Operation	Month	Machinery			Inputs			Total Cost \$/ha
		hrs /ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	
Weed control eg: glyphosate 450 g/litre	Aug/Sept	0.03	79.73	\$2.61	1.20 L	\$7.38/L	\$8.85	\$11.46
Weed control eg: glyphosate 450 g/litre	Dec/Jan	0.03	79.73	\$2.61	1.20 L	\$7.38/L	\$8.85	\$11.46
Weed control eg: Garlon®	Dec/Jan	with above			0.10 L	\$29.93/L	\$2.99	\$2.99
Chisel Plough	Feb	0.14	89.48	\$12.37				\$12.37
Cultivation	Apr	0.10	78.17	\$8.01				\$8.01
Weed control eg: glyphosate 450 g/litre	May	0.03	79.73	\$2.61	0.80 L	\$7.38/L	\$5.90	\$8.51
Nitrogen fertiliser eg: Urea	May	0.12	107.73	\$12.62	50 kg	\$0.85/kg	\$42.50	\$55.12
Sowing	May	0.12	107.73	\$12.62	50 kg	\$1.11/kg	\$55.50	\$68.12
Starter fertiliser eg: MAP	May	with above			60 kg	\$0.98/kg	\$58.50	\$58.50
Grass weed control eg: Diclofop-methyl (Hoegrass®)	Jun	0.03	79.73	\$2.61	1.00 L	\$17.33/L	\$17.33	\$19.94
Broadleaf weed control eg: MCPA LVE®	Jul	0.03	79.73	\$2.61	0.70 L	\$9.81/L	\$6.86	\$9.47
Contract-harvest	Nov	contract		\$48.00				\$48.00
Crop Levies					1.02%	of on-farm value		\$6.95
Crop Insurance					1.03%	of on-farm value		\$6.99

*** Input and crop prices are correct at the time of writing (March 2009). Market uncertainty makes estimation of future pricing impractical.

NOTES:

General:	<ul style="list-style-type: none"> - Only consider DURUM if soil fertility is high and crown rot is controlled through good crop/pasture rotation. - Durum varieties are more prone to black point than bread wheats.
Long fallow:	<ul style="list-style-type: none"> - Country coming out of lucerne or pasture is usually fallowed. - Fallow is usually commenced in Aug- Sept to conserve moisture and stop weeds setting seed. Preferably a spray is substituted for the opening cultivation, allowing extended grazing time, weed control and moisture conservation. - For Gross Margin comparisons NOTE: in a long fallow situation winter cropping cannot be carried out annually.
Sowing time:	<ul style="list-style-type: none"> - 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. - Seed price used above is for purchased seed, if using retained seed adjust budget accordingly.
Weed control:	<ul style="list-style-type: none"> - Timing of fallow herbicide applications will vary according to rainfall. - Weed control, if required, should be implemented either pre-emergent or within 6 to 8 weeks after sowing to avoid yield loss. - An additional knockdown herbicide application (i.e. Glyphosate 450® @ 1.0 L/ha) should be considered if weeds are present at the time of sowing. - Rotate herbicide groups and use other non-chemical methods to delay herbicide resistance.
Fertiliser:	<ul style="list-style-type: none"> - Good nitrogen fertility is required to produce high yields and high protein percentage. - Adequate phosphorus is essential before applying extra nitrogen fertiliser.
Wheat Price:	<ul style="list-style-type: none"> - Higher protein wheat is likely to be grown on fallow country with a good legume history. - DR2: between 11.5% and 13% protein. - DR3: between 10% and 11.5% protein. - Feed: below 10% protein, durum is classed as feed wheat.
Machinery:	<ul style="list-style-type: none"> - A tractor with 203 kW (272 HP) pto power and 242kW (325 HP) engine power is assumed. - Contract-harvesting does not include the cost of fuel.
Labour:	<ul style="list-style-type: none"> - The labour required for machinery operations is 0.8 hrs/ha - Using a labour cost of \$14/hr, an additional \$11.17 can be deducted from the budget
Important notes:	<ul style="list-style-type: none"> - These gross margins are only a guide. They do not include overhead costs. - Use your own figures and price assumptions to estimate your own gross margin. - Use of a particular brand name does NOT imply a recommendation of that brand by NSW Department of Primary Industries.

This budget is ONLY A GUIDE and should be altered for movements in crop and input prices, changes in seasonal conditions and the farm characteristics.



Narrowleaf and Albus Lupins: Short Fallow (No-till) Central Zone - West

Winter 2009

1. GROSS MARGIN BUDGET:

INCOME:
 Narrowleaf 1.00 tonnes/ha @ \$350.00 /tonne (on farm)
 Albus 1.40 tonnes/ha @ \$480.00 /tonne (on farm)

A. TOTAL INCOME \$/ha:

VARIABLE COSTS:

See opposite page for detail

Cultivation..... \$0.00
 Sowing..... \$103.62
 Fertiliser..... \$58.50
 Herbicide..... \$51.03
 Insecticide..... \$10.65
 Contract-harvesting..... \$50.00
 Levies..... \$6.82
 Crop Insurance..... \$8.61
 Cartage, grading & bagging..... \$0.00

B. TOTAL VARIABLE COSTS \$/ha:

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

ALBUS Standard Budget \$/Ha	NARR. LEAF Standard Budget \$/Ha	Your Budget \$/Ha
	\$350.00	
\$672.00		
\$672.00	\$350.00	
\$0.00	\$0.00	
\$103.62	\$76.32	
\$58.50	\$58.50	
\$51.03	\$51.03	
\$10.65	\$10.65	
\$50.00	\$50.00	
\$6.82	\$3.55	
\$8.61	\$4.48	
\$0.00	\$0.00	
\$289.23	\$254.54	
\$382.77	\$95.46	

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

Albus Variety

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)				
	\$400 /t	\$440 /t	\$480 /t	\$520 /t	\$560 /t
0.80	\$39	\$70	\$101	\$133	\$164
1.00	\$117	\$156	\$195	\$234	\$273
1.20	\$195	\$242	\$289	\$336	\$383
1.40	\$273	\$328	\$383	\$437	\$492
1.70	\$391	\$457	\$523	\$590	\$656
2.00	\$508	\$586	\$664	\$742	\$820
2.20	\$586	\$672	\$758	\$844	\$930

Gross Margin (\$/ha)

Narrowleaf Variety

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)				
	\$270 /t	\$310 /t	\$350 /t	\$390 /t	\$430 /t
0.40	-\$141	-\$125	-\$110	-\$94	-\$78
0.60	-\$88	-\$65	-\$41	-\$18	\$6
0.80	-\$35	-\$4	\$27	\$58	\$90
1.00	\$17	\$56	\$95	\$135	\$174
1.30	\$96	\$147	\$198	\$249	\$300
1.60	\$176	\$238	\$301	\$363	\$426
1.80	\$228	\$299	\$369	\$439	\$510

Gross Margin (\$/ha)

PRODUCT TRADE NAMES

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This budget is ONLY A GUIDE and should be altered for movements in crop and input prices, changes in seasonal conditions and the farm characteristics.

Narrowleaf and Albus Lupins: Short Fallow (No-till)

Central Zone - West

Winter 2009

CALENDAR OF OPERATIONS:

Operation	Month	Machinery			Inputs			Total Cost \$/ha
		hrs /ha	Cost	Total	Rate/ha	Cost	Total	
			\$/hour	\$/ha		\$	\$/ha	
Weed control eg: glyphosate 450 g/litre	Dec/Jan	0.03	79.73	\$2.61	1.20 L	\$7.38/L	\$8.85	\$11.46
Weed control eg: Garlon®	Dec/Jan	with above			0.10 L	\$49.00/L	\$4.90	\$4.90
Weed control eg: glyphosate 450 g/litre	Feb/Mar	0.03	79.73	\$2.61	1.20 L	\$7.38/L	\$8.85	\$11.46
Broadleaf weed control eg: 2,4-D amine 300g/L (Surpass®)	Feb/Mar	with above			1.00 L	\$6.22/L	\$6.22	\$6.22
Sowing Narrowleaf variety	Apr/May	0.12	107.73	\$12.62	70 kg	\$0.91/kg	\$63.70	\$76.32
Sowing Albus variety	Apr/May	0.12	107.73	\$12.62	100 kg	\$0.91/kg	\$91.00	\$103.62
Starter fertiliser eg: MAP	Apr/May	with above			60 kg	\$0.98/kg	\$58.50	\$58.50
Weed control eg: Simazine 500®	May	0.03	79.73	\$2.61	1.50 L	\$9.60/L	\$14.40	\$17.01
Heliothis control (1 year in 2) eg: Fastac Duo®	Oct	contract		\$18.15	0.30 L	\$10.50/L	\$3.15	\$10.65
Contract-harvest	Nov	contract		\$50.00				\$50.00
Crop Levies - Albus variety					1.02%	of on-farm value		\$6.82
Crop Insurance - Albus variety					1.28%	of on-farm value		\$8.61
Crop Levies - Narrowleaf variety					1.02%	of on-farm value		\$3.55
Crop Insurance - Narrowleaf variety					1.28%	of on-farm value		\$4.48

*** Input and crop prices are correct at the time of writing (March 2009). Market uncertainty makes estimation of future pricing impractical.

NOTES:

Soil type:

- Adapted for rotations in sandy acid soils and loamy soils.
- Avoid very acid soils with Albus lupins.
- Soils **must** be well drained for Albus lupins.
- The above estimates assume Albus lupins are usually grown on less acid and better drained soils.

Place in rotation:

- Suitable in rotation with cereals to break disease and weed cycles and improve soil nitrogen.
- Ideally can be no-tilled into cereal stubble using wide row spacings.
- Short Fallow: Fallow or weed free period of 5-6 months between harvest of one crop and sowing of the next crop. For example, wheat harvested in November would be under a 5-6 month fallow until sowing in the next May.

Inoculation:

- With Group G inoculum is essential.

Fertiliser:

- Adequate levels of phosphorus and sulfur should be applied.

Sowing time:

- Early April to mid-May is optimal.
- Seed price used above is for purchased seed; if using retained seed adjust budget accordingly.

Weed control:

- Timing of fallow herbicide applications will vary according to rainfall.
- Weeds are a major problem as lupins lack competitive vigour.
- Use Simazine/ Trifluralin (pre-emergent) to control several broadleaf and grass weeds.
- An additional knockdown herbicide application (i.e. Glyphosate 450® @ 1.0 L/ha) should be considered if weeds are present at the time of sowing.
- Rotate herbicide groups and use other non-chemical methods to delay herbicide resistance.

Insect control:

- Monitor heliothis from flowering through to pod fill.
- Monitor thrips from budding to pod fill.

Machinery:

- A tractor with 149 kW (200 HP) pto power and 177 kW (240 HP) engine power is assumed.
- Machinery costs refer only to variable costs: fuel, oil, filters, tyres, batteries & repairs.
- Contract-harvesting does not include the cost of fuel.

Labour:

- The labour required for machinery operations is 0.42 hrs/ha
- Using a labour cost of \$14/hr, an additional \$5.81 can be deducted from the budget

Important notes:

- These gross margins are only a guide. They do not include overhead costs.
- **Use your own figures and price assumptions to estimate your own gross margin.**
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Chickpeas: Short Fallow (No-till) Central Zone - West

Winter 2009

1. GROSS MARGIN BUDGET:

INCOME:

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

A. TOTAL INCOME \$/ha:

VARIABLE COSTS:

See opposite page for detail

	No-Till Standard Budget \$/Ha	Your Budget \$/Ha
	\$540.00	
A. TOTAL INCOME \$/ha:	\$540.00	
Sowing.....	\$92.77	
Fertiliser.....	\$78.00	
Herbicide.....	\$112.05	
Fungicide.....	\$38.49	
Insecticide.....	\$21.30	
Contract-harvesting.....	\$50.00	
Levies.....	\$5.48	
Crop Insurance.....	\$6.92	
Cartage, grading & bagging.....	\$0.00	
B. TOTAL VARIABLE COSTS \$/ha:	\$405.00	
C. GROSS MARGIN (A-B) \$/ha:	\$135.00	

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

No-Till

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)					Gross Margin (\$/ha)
	\$350 /t	\$400 /t	\$450 /t	\$500 /t	\$550 /t	
0.60	- \$187	- \$158	- \$129	- \$99	- \$70	
0.80	- \$119	- \$80	- \$41	- \$2	\$37	
1.00	- \$51	- \$2	\$47	\$96	\$145	
1.20	\$18	\$76	\$135	\$194	\$252	←
1.40	\$86	\$155	\$223	\$291	\$360	
1.80	\$223	\$311	\$399	\$487	\$575	
2.00	\$291	\$389	\$487	\$584	\$682	

PRODUCT TRADE NAMES

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Chickpeas: Short Fallow (No-till)

Central Zone - West

Winter 2009

CALENDAR OF OPERATIONS:

Operation	Month	Machinery			Inputs			Total Cost \$/ha
		hrs /ha	Cost	Total	Rate/ha	Cost	Total	
			\$/hour	\$/ha		\$	\$/ha	
Weed control eg: glyphosate 450 g/litre	Dec/Jan	0.03	79.73	\$2.61	1.20 L	\$7.38/L	\$8.85	\$11.46
Weed control eg: Garlon®	Dec/Jan	with above			0.10 L	\$29.93/L	\$2.99	\$2.99
Weed control eg: glyphosate 450 g/litre	Feb/Mar	0.03	79.73	\$2.61	1.20 L	\$7.38/L	\$8.85	\$11.46
Broadleaf weed control eg: 2,4-D amine 300g/L (Surpass®)	Feb/Mar	with above			1.20 L	\$6.22/L	\$7.46	\$7.46
Sowing	May	0.12	107.73	\$12.62	70 kg	\$1.15/kg	\$80.15	\$92.77
Phosphorus fertiliser eg: MAP	May	with above			80 kg	\$0.98/kg	\$78.00	\$78.00
Weed control eg: Simazine®	May	0.03	79.73	\$2.61	1.50 L	\$9.60/L	\$14.40	\$17.01
Broadleaf weed control eg: Balance®	May	with above			50 g	\$0.34/g	\$16.88	\$16.88
Post emergent grass weed control eg: Verdict®	Jul	0.03	79.73	\$2.61	0.05 L	\$96.88/L	\$4.84	\$7.45
Disease control eg: Mancozeb ®	Aug	0.03	56.03	\$1.83	1.00 kg	\$11.00/L	\$11.00	\$12.83
Disease control eg: Mancozeb ®	Sep	0.03	56.03	\$1.83	1.00 kg	\$11.00/L	\$11.00	\$12.83
Disease control eg: Mancozeb ®	Oct	0.03	56.03	\$1.83	1.00 kg	\$11.00/L	\$11.00	\$12.83
Heliathis control eg: Fastac Duo®	Oct	contract		\$18.15	0.30 L	\$10.50/L	\$3.15	\$21.30
Pre-harvest desiccation eg: Glyphosate 540 (Roundup PowerMax®)	Nov	contract		\$18.15	1.80 L	\$10.67/L	\$19.20	\$37.35
Contract-harvest	Nov			\$50.00				\$50.00
Crop Levies					1.02%	of on-farm value		\$5.48
Crop Insurance					1.28%	of on-farm value		\$6.92

*** Input and crop prices are correct at the time of writing (March 2009). Market uncertainty makes estimation of future pricing impractical.

NOTES:

Soil:	- Must be grown on the better loam, clay loam and heavy self-mulching clay soils with good water holding capacity. - All soils must be well drained.
Place in rotation	- Useful as a break crop later in cereal rotations for disease control, weed control and nitrogen benefits for following cereal crops. - Ideally should be no-tilled into cereal stubbles using wider row spacings of 30 to 50 cm. - Short Fallow: Fallow or weed free period of 5-6 months between harvest of one crop and sowing of the next crop. For example, wheat harvested in November would be under a 5-6 month fallow until sowing in the next May.
Seed:	- Seed price used above is for purchased seed; if using retained seed adjust budget accordingly.
Inoculation:	- With Group N inoculum is essential.
Weed control:	- Numerous grass weed control options are available. - Weed control is critical and a pre-emergent broadleaf herbicide is preferable. - An additional knockdown herbicide application (i.e. Glyphosate 450® @ 1.0 L/ha) should be considered if weeds are present at the time of sowing. - Rotate herbicide groups and use other non-chemical methods to delay herbicide resistance.
Fertiliser:	- Adequate levels of phosphorus and sulfur should be applied.
Fungicide:	- Fungicide program required to control the disease Ascochyta in older varieties. crops or crop residues for feed.
Insect control:	- Heliathis must be monitored from flowering through podding.
Machinery:	- A tractor with 203 kW (272 HP) pto power and 242kW (325 HP) engine power is assumed. - Machinery costs refer only to variable costs: fuel, oil, filters, tyres, batteries & repairs. - Contract-harvesting does not include the cost of fuel.
Labour:	- Using a labour cost of \$14/hr, an additional \$2.62 can be deducted from the budget
Important notes:	- These gross margins are only a guide. They do not include overhead costs. - Use your own figures and price assumptions to estimate your own gross margin. - Use of a particular brand name does NOT imply a recommendation of that brand by NSW Department of Primary Industries.



**Field Peas: Short Fallow (No-till)
Central Zone - West**

Winter 2009

1. GROSS MARGIN BUDGET:

INCOME:

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

A. TOTAL INCOME \$/ha:

VARIABLE COSTS:

See opposite page for detail

Cultivation.....	\$0.00
Sowing.....	\$100.62
Fertiliser.....	\$68.25
Herbicide.....	\$96.27
Insecticide.....	\$21.30
Contract-harvesting.....	\$50.00
Levies.....	\$4.57
Crop Insurance.....	\$7.84
Cartage, grading & bagging.....	\$0.00

B. TOTAL VARIABLE COSTS \$/ha:

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

No-Till Standard Budget \$/Ha	Your Budget \$/Ha
\$450.00	
\$450.00	
\$0.00	
\$100.62	
\$68.25	
\$96.27	
\$21.30	
\$50.00	
\$4.57	
\$7.84	
\$0.00	
\$348.84	
\$101.16	

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

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)				
	\$240 /t	\$270 /t	\$300 /t	\$330 /t	\$360 /t
0.60	- \$196	- \$179	- \$161	- \$144	- \$126
0.90	- \$126	- \$100	- \$74	- \$48	- \$21
1.20	- \$56	- \$21	\$14	\$49	\$84
1.50	\$14	\$57	\$101	\$145	\$189
1.80	\$84	\$136	\$189	\$241	\$294
2.10	\$154	\$215	\$276	\$337	\$399
2.40	\$224	\$294	\$364	\$434	\$504

Gross Margin (\$/ha)

PRODUCT TRADE NAMES

The product trade names in this publication are supplied on the understanding that no preference between equivalent products is intended and that the inclusion of a product does not imply endorsement by NSW Department of Primary Industries over any other equivalent product from another manufacturer.

Field Peas: Short Fallow (No-till)

Central Zone - West

Winter 2009

CALENDAR OF OPERATIONS:

Operation	Month	Machinery			Inputs			Total Cost \$/ha
		hrs /ha	Cost	Total	Rate/ha	Cost	Total	
			\$/hour	\$/ha		\$	\$/ha	
Weed control eg: glyphosate 450 g/litre	Dec/Jan	0.03	79.73	\$2.61	1.20 L	\$7.38/L	\$8.85	\$11.46
Weed control eg: Garlon®	Dec/Jan with above				0.10 L	\$29.93/L	\$2.99	\$2.99
Weed control eg: glyphosate 450 g/litre	Feb/Mar	0.03	79.73	\$2.61	1.20 L	\$7.38/L	\$8.85	\$11.46
Broadleaf weed control eg: 2,4-D amine 300g/L (Surpass®)	Feb/Mar with above				1.20 L	\$6.22/L	\$7.46	\$7.46
Sowing seed	May	0.12	107.73	\$12.62	100 kg	\$0.88/kg	\$88.00	\$100.62
Fertiliser eg: MAP	May	with above			70 kg	\$0.98/kg	\$68.25	\$68.25
Broadleaf weed control eg: Metribuzin (Sencor 750®)	May	0.03	79.73	\$2.61	0.30 kg	\$60.35/kg	\$18.11	\$20.71
Grass weed control eg. Verdict®	July	with above			0.05 L	\$96.88/kg	\$4.84	\$4.84
Desiccation eg: Roundup PowerMax®	Oct	contact		\$18.15	1.80 L	\$10.67/L	\$19.20	\$37.35
Heliothis control eg: (Fastac Duo®)	Oct	contract		\$18.15	0.30 L	\$10.50/L	\$3.15	\$21.30
Contract-harvest	Nov	contract		\$50.00				\$50.00
Crop Levies					1.02%	of on-farm value		\$4.57
Crop Insurance					1.74%	of on-farm value		\$7.84

*** Input and crop prices are correct at the time of writing (March 2009). Market uncertainty makes estimation of future pricing impractical.

NOTES:

Soils:	- Suitable for lighter textured soils through to the heavier clay soils. Paddocks should be free of sticks and stones for harvesting. Best harvested with crop lifters or a pea front.
Place in rotation	- Useful as a break crop in cereal rotations for disease control, weed control and nitrogen benefits at the lower fertility end of the rotation. - Short Fallow: Fallow or weed free period of 5-6 months between harvest of one crop and sowing of the next crop. For example, wheat harvested in November would be under a 5-6 month fallow until sowing in the next May.
Inoculation:	- With Group E inoculum is essential.
Seed source:	- Seed should be obtained from central and northern areas and preferably certified growers, to minimise the risk of introducing pea weevil. - Seed price used above is for purchased seed; if using retained seed adjust budget accordingly.
Fertiliser:	- Adequate levels of phosphorus and sulfur should be applied.
Sowing time:	- Ideally mid-May to June.
Weed control:	- Broader spectrum of broadleaf herbicides available than for other pulse crops. - Timing of fallow herbicide application will vary according to rainfall. - Trifluralin for grass weed control if wireweed is present, if not post emergent options like Verdict®. - Sencor® is used for broadleaf weed control. - An additional knockdown herbicide application (i.e. Glyphosate 450® @ 1.0 L/ha) should be considered if weeds are present at the time of sowing - Rotate herbicide groups and use other non-chemical methods to delay herbicide resistance.
Insect control:	- Crops must be monitored from flowering for pea weevil and heliothis.
Desiccation:	- Desiccation may be required in seasons with wet springs to ensure even ripening. Use Roundup PowerMax® where seed is not being retained for sowing. If retaining seed for sowing consider Reglone®.
Machinery:	- A tractor with 203 kW (272 HP) pto power and 242kW (325 HP) engine power is assumed. - Machinery costs refer only to variable costs: fuel, oil, filters, tyres, batteries & repairs. - Contract-harvesting does not include the cost of fuel.
Labour:	- Using a labour cost of \$14/hr, an additional \$2.62 can be deducted from the budget
Important notes:	- These gross margins are only a guide. They do not include overhead costs. - Use your own figures and price assumptions to estimate your own gross margin. - Use of a particular brand name does NOT imply a recommendation of that brand by NSW Department of Primary Industries.

Faba Beans: Short Fallow (No-till)

Central Zone - West

Winter 2009

CALENDAR OF OPERATIONS:

Operation	Month	Machinery			Inputs			Total Cost \$/ha
		hrs /ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	
Weed control eg: glyphosate 450 g/litre	Dec/Jan	0.03	79.73	\$2.61	1.20 L	\$7.38/L	\$8.85	\$11.46
Weed control eg: Garlon®	Dec/Jan	with above			0.10 L	\$29.93/L	\$2.99	\$2.99
Weed control eg: glyphosate 450 g/litre	Feb/Mar	0.03	79.73	\$2.61	1.20 L	\$7.38/L	\$8.85	\$11.46
Broadleaf weed control eg: 2,4-D amine 300g/L (Surpass®)	Feb/Mar	with above			1.20 L	\$6.22/L	\$7.46	\$7.46
Weed control eg: glyphosate 450 g/litre	Apr	0.03	79.73	\$2.61	1.20 L	\$7.38/L	\$8.85	\$11.46
Grass weed control eg: (Verdict® 520)	June	0.03	79.73	\$2.61	0.05 L	\$96.88/L	\$4.84	\$7.45
Sowing	May	0.12	107.73	\$12.62	100 kg	\$1.09/kg	\$109.00	\$121.62
Starter fertiliser eg: MAP	May	with above			100 kg	\$0.98/kg	\$97.50	\$97.50
Weed control eg: Simazine 500®	May	0.03	79.73	\$2.61	2.00 L	\$9.60/L	\$10.00	\$12.61
Disease control eg: mancozeb	July	0.03	79.73	\$2.61	2.00 kg	\$11.00/kg	\$22.00	\$24.61
Disease control eg: mancozeb	Aug/Sept	0.03	79.73	\$2.61	2.00 kg	\$11.00/kg	\$22.00	\$24.61
Heliathis control eg: Fastac Duo®	Oct	contract		\$18.15	0.30 L	\$10.50/L	\$3.15	\$21.30
Contract-harvest	Nov	contract		\$50.00				\$50.00
Crop Levies					1.02%	of on-farm value		\$4.28
Crop Insurance					3.08%	of on-farm value		\$12.92

*** Input and crop prices are correct at the time of writing (March 2009). Market uncertainty makes estimation of future pricing impractical.

NOTES:

Soils:	- Must be grown on the better clay loam and heavy self mulching clay soils. - Ideally soils should be well drained although faba beans are much more tolerant than chickpeas to waterlogging.
Rotation place:	- Useful as a break crop in cereal rotations for disease control, weed control and nitrogen benefits for following cereal crops. - Short Fallow: Fallow or weed free period of 5-6 months between harvest of one crop and sowing of the next crop. For example, wheat harvested in November would be under a 5-6 month fallow until sowing in the next May.
Inoculation:	- With Group F inoculum is essential.
Fertiliser:	- Single super is one of many available alternatives, adequate levels of phosphorus and sulfur should be applied.
Seed:	- Seed price used above is for purchased seed; if using retained seed adjust budget accordingly.
Insect control:	- Heliathis must be monitored from flowering through to podding.
Weed control:	- Timing of fallow herbicide application will vary according to rainfall. - Weed control is critical and a pre-emergent broadleaf weed control herbicide is essential. - An additional knockdown herbicide application (i.e. Glyphosate 450® @ 1.0 L/ha) should be considered if weeds are present at the time of sowing. - Rotate herbicide groups and use other non-chemical methods to delay herbicide resistance.
Fungicide:	- Fungicide is used to control chocolate spot and rust. Variety Fiesta has best tolerance to chocolate spot.
Machinery:	- A tractor with 203 kW (272 HP) pto power and 242kW (325 HP) engine power is assumed. - Machinery costs refer only to variable costs: fuel, oil, filters, tyres, batteries & repairs.
Labour:	- Contract-harvesting does not include the cost of fuel. - Using a labour cost of \$14/hr, an additional \$6.05 can be deducted from the budget
Important notes:	- These gross margins are only a guide. They do not include overhead costs. - Use your own figures and price assumptions to estimate your own gross margin. - Use of a particular brand name does NOT imply a recommendation of that brand by NSW Department of Primary Industries.



NSW DEPARTMENT OF PRIMARY INDUSTRIES

Safflower: Short Fallow [No-till] Central Zone - West

Winter 2009

1. GROSS MARGIN BUDGET:

INCOME:

0.50 tonnes/ha @ \$375.00 /tonne (on farm)

A. TOTAL INCOME \$/ha:

VARIABLE COSTS:

See opposite page for detail

Cultivation.....	\$0.00
Sowing.....	\$17.58
Fertiliser.....	\$105.12
Herbicide.....	\$15.76
Insecticide.....	\$0.00
Contract-harvesting.....	\$50.00
Levies.....	\$1.91
Crop Insurance.....	\$2.40
Cartage, grading & bagging.....	\$0.00

B. TOTAL VARIABLE COSTS \$/ha:

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

Standard Budget \$/Ha	Your Budget \$/Ha
\$187.50	
\$187.50	
\$0.00	
\$17.58	
\$105.12	
\$15.76	
\$0.00	
\$50.00	
\$1.91	
\$2.40	
\$0.00	
\$192.77	
(\$5.27)	

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

YIELD tonnes/ha	ON FARM PRICE (\$/tonne)					Gross Margin (\$/ha)
	\$295 /t	\$335 /t	\$375 /t	\$415 /t	\$455 /t	
0.10	-\$160	-\$156	-\$152	-\$148	-\$144	
0.20	-\$131	-\$123	-\$115	-\$107	-\$100	
0.30	-\$102	-\$90	-\$79	-\$67	-\$55	
0.50	-\$44	-\$25	-\$5	\$14	\$34	←
0.70	\$13	\$41	\$68	\$95	\$123	
0.90	\$71	\$106	\$141	\$176	\$212	
1.10	\$129	\$172	\$215	\$258	\$301	

PRODUCT TRADE NAMES

The product trade names in this publication are supplied on the understanding that no preference between equivalent products is intended and that the inclusion of a product does not imply endorsement by NSW Department of Primary Industries over any other equivalent product from another manufacturer.

Safflower: Short Fallow [No-till]

Central Zone - West

Winter 2009

CALENDAR OF OPERATIONS:

Operation	Month	Machinery			Inputs			Total Cost \$/ha
		hrs /ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	
Weed control eg: glyphosate 450 g/litre	Dec/Jan	0.03	79.73	\$2.61	1.20 L	\$7.38/L	\$8.85	\$11.46
Weed control eg: Garlon®	Dec/Jan	with above			0.10 L	\$29.93/L	\$2.99	\$2.99
Weed control eg: glyphosate 450 g/litre	Jan/Feb	0.03	79.73	\$2.61	1.20 L	\$7.38/L	\$8.85	\$11.46
Weed control eg: 2,4-D amine (Surpass®)	Jan/Feb	with above			1.00 L	\$6.22/L	\$6.22	\$6.22
Nitrogen fertiliser eg: Urea	May	0.12	107.73	\$12.62	40 kg	\$0.85/kg	\$34.00	\$46.62
Sowing	Jun	0.12	107.73	\$12.62	8 kg	\$0.62/kg	\$4.96	\$17.58
Starter fertiliser eg: MAP	Jun	with above			60 kg	\$0.98/kg	\$58.50	\$58.50
Early post emergent grass weed control eg: Correct®	Oct	0.03	79.73	\$2.61	0.30 L	\$41.65/L	\$12.50	\$15.10
Early post emergent broadleaf control eg: Ally®	Oct	with above			5.00 g	\$0.13/g	\$0.66	\$0.66
Contract-harvest	Jan	contract		\$50.00				\$50.00
Crop Levies					1.02%	of on-farm value		\$1.91
Crop Insurance					1.28%	of on-farm value		\$2.40

*** Input and crop prices are correct at the time of writing (March 2009). Market uncertainty makes estimation of future pricing impractical.

NOTES:

Soil type:

- Suited to the deep heavy cracking clay soils with good moisture holding capacity.
- Safflower requires well drained soils.

Place in rotation

- Suitable crop for breaking cereal disease cycles in western areas.
- Short Fallow: Fallow or weed free period of 5-6 months between harvest of one crop and sowing of the next crop. For example, wheat harvested in November would be under a 5-6 month fallow until sowing in the following May.

Sowing time:

- A good crop for extending the sowing time of winter crops into the late winter.
- Seed price used above is for purchased seed; if using retained seed adjust budget accordingly.

Weed control:

- Timing of fallow herbicide applications will vary according to rainfall.
- An additional knockdown herbicide application (i.e. Glyphosate 450® @ 1.0L/ha) should be considered if weeds are present at the time of sowing.

Insect control:

- Rotate herbicide groups and use other non-chemical methods to delay herbicide resistance.
- Monitoring for Rutherglen bugs at budding is essential and control will usually be required.
- Monitor for cutworms at establishment.

Machinery:

- A tractor with 203 kW (272 HP) pto power and 242kW (325 HP) engine power is assumed.
- Machinery costs refer only to variable costs: fuel, oil, filters, tyres, batteries & repairs.
- Contract-harvesting does not include the cost of fuel.

Labour:

- Using a labour cost of \$14/hr, an additional \$4.1 can be deducted from the budget

Important notes:

- These gross margins are only a guide. They do not include overhead costs.
- **Use your own figures and price assumptions to estimate your own gross margin.**
- Use of a particular brand name does NOT imply a recommendation of that brand by NSW Department of Primary Industries.

This budget is ONLY A GUIDE and should be altered for movements in crop and input prices, changes in seasonal conditions and the farm characteristics.