



DRYLAND CHICKPEAS (no till)

Farm Enterprise Budget Series - North West NSW

Winter 2012

1. GROSS MARGIN BUDGET:

INCOME:

1.30 tonnes/ha@ \$440.00 /tonne (on farm)

Crop prices were correct at the time of writing (Feb 2012), world market volatility makes estimation of future pricing impractical.

Sample Budget \$/ha	Your Budget \$/ha
\$572.00	

A. TOTAL INCOME \$/ha:

\$572.00	
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VARIABLE COSTS:

See next page for detail

Sowing.....	\$79.41	
Fertiliser.....	\$37.80	
Herbicide.....	\$100.20	
Insecticides.....	\$20.75	
Fungicides.....	\$53.88	
Contract harvesting.....	\$81.24	
Levies.....	\$5.83	
Insurance.....	\$16.99	

B. TOTAL VARIABLE COSTS \$/ha:

\$396.09	
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C. GROSS MARGIN (A-B) \$/ha:

\$175.91	
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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)

Early crop water use: mm

Total crop water use mm

Gross margin per mm

kg of grain per mm

189	
69	
130	
128	
\$0.98	
10.1	

Please refer to the NSW DPI webpage
["About gross margin budgets"](#)
 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				
	\$340 /tonne	\$390 /tonne	\$440 /tonne	\$490 /tonne	\$540 /tonne
0.5	- \$210	- \$186	- \$162	- \$138	- \$114
0.8	- \$112	- \$74	- \$35	\$3	\$41
1.0	- \$47	\$1	\$49	\$97	\$145
1.3	\$51	\$114	\$176	\$238	\$301
1.7	\$182	\$263	\$345	\$426	\$508
2.1	\$312	\$413	\$514	\$615	\$715
2.5	\$443	\$563	\$683	\$803	\$923

Gross margin is zero when income is reduced by 31%
 or variable costs are increased by 44%

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CALENDAR OF OPERATIONS:		Machinery			Inputs			Total
Operation	Month	hrs /ha	Cost \$/hour	Total \$/ha	Rate/ha	Cost \$	Total \$/ha	Total Cost \$/ha
harvest previous crop	Nov							
broadleaf and grass weed control eg: glyphosate 450 g/L	Dec	0.03	56.21	1.69	1.2 L	4.67/L	5.60	7.29
broadleaf weed control eg 2,4-D amine 475 g/L	Dec	with above			1.2 L	5.82/L	6.98	6.98
wetter - non-ionic surfactant	Dec	with above			0.04 L	6.77/L	0.27	0.27
broadleaf and grass weed control eg: glyphosate 450 g/L	Jan	0.03	56.21	1.69	1.0 L	4.67/L	4.67	6.36
broadleaf weed control eg triclopyr 6l	Jan	with above			0.12 L	19.57/L	2.35	2.35
wetter - non-ionic surfactant	Jan	with above			0.04 L	6.77/L	0.27	0.27
broadleaf and grass weed control eg: glyphosate 450 g/L	Feb	0.03	56.21	1.69	1.0 L	4.67/L	4.67	6.36
broadleaf weed control eg 2,4-D amine 475 g/L	Feb	with above			1.2 L	5.82/L	6.98	6.98
wetter - non-ionic surfactant	Feb	with above			0.04 L	6.77/L	0.27	0.27
broadleaf and grass weed control eg: glyphosate 450 g/L	Mar	0.03	56.21	1.69	1.0 L	4.67/L	4.67	6.36
wetter - non-ionic surfactant	Mar	with above			0.04 L	6.77/L	0.27	0.27
broadleaf and grass weed control eg paraquat+diquat	May	0.03	56.21	1.69	2.0 L	10.93/L	21.86	23.55
wetting agent	May	with above			0.25 L	7.47/L	1.87	1.87
sowing	May	0.12	78.21	9.39	60 kg	1.17/kg	70.02	79.41
fertiliser (Starter Z)	May	with above			35 kg	1.08/kg	37.80	37.80
PSPE broadleaf and grass weed control eg. simazine	May	0.03	56.21	1.69	1.0 L	7.26/L	7.26	8.95
PSPE broadleaf weed control eg. isoxaflutole	May	with above			50 g	0.25/g	12.50	12.50
disease control eg.mancozeb	Jun	0.03	56.21	1.69	1 kg	9.21/kg	9.21	10.90
grass weed control eg haloxyfop-R 520 g/L	Jul	0.03	56.21	1.69	0.06 L	99.00/L	5.94	7.63
crop oil	Jul	with above			0.5 L	3.91/L	1.96	1.96
disease control eg.mancozeb	Jul	with above			1 kg	9.21/kg	9.21	9.21
disease control eg.chlorothalonil	Aug	0.03	56.21	1.69	1.0 L	15.20/L	15.20	16.89
disease control eg.chlorothalonil	Oct	0.03	56.21	1.69	1.0 L	15.20/L	15.20	16.89
insect control eg. indoxacarb*	Oct	with above			0.3 L	69.15/L	20.75	20.75
harvest (contract)**	Nov			81.24				81.24
crop levies	Nov			1.020%	of on-farm value			5.83
crop insurance				2.970%	of on-farm value			16.99

Input prices were correct at the time of writing (Feb 2012). Current fertiliser and chemical market uncertainty makes estimation of future pricing impractical.

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AGRONOMIC REQUIREMENTS:

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

Stored soil moisture at sowing reduces the risk of crop failure due to variable in crop rainfall. To reduce this risk, crops should be sown with the maximum amount of stored soil moisture. Soils in the North West can store approximately 150-200 mm in the rooting zone, this can be roughly measured at sowing using a push probe.

Inoculation: With Group N inoculum is essential.

Soils: Performs best on well drained loam, clay loam and self mulching clay soils.

Be aware of and monitor sub-soil constraints that could limit yield potential.

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

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

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

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

Isoxaflutole is **not recommended** for use with the chickpea variety Yorker. Application of isoxaflutole post-sowing pre-emergence to crops of Yorker chickpeas can result in unacceptable crop damage and may result in yield loss.

Chickpeas are highly sensitive to sulfonylurea herbicide residues.

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

Refer to the NSW DPI booklet *Weed Control in winter crops 2012* for options.

Disease: Ascochyta blight, phytophthora root rot, botrytis grey mould and Sclerotinia can all reduce yield.

Seasonal conditions, especially rainfall events, and varietal resistance will affect the number and type of fungicides required.

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.

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

Chlorothalonil (720 g/L) applied in October to cover pod-fill stage when all varieties are susceptible, but before 14-day harvest WHP guidelines as per label requirements.

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 by half and may reduce the application cost from an aerial spray to a ground spray.

Harvest: ** Grading may be required, extra cost not included in budget.

- *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 0.42hrs/ha. Then multiplying this by 1.25 to allow for machinery repair time etc, and using a labour cost of \$21/hr, the cost of labour is \$11.03/ha, reducing the gross margin to \$164.88/ha.

MACHINERY ASSUMPTIONS:

Tractor: 170 KW PTO (230 HP) and 200 KW engine (265 HP)

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