Home grown feed costs for dairy farmers

South East Queensland 2026

DELIVERING FOR QUEENSLAND
Queensland Government

This publication has been compiled by Ray Murphy and Ross Warren of Animal Science, and Lucie Okill of Rural Economic Development, The Department of Primary Industries.

The Department of Primary Industries proudly acknowledges Aboriginal people and Torres Strait Islander people as the Traditional Custodians of Country. We recognise their continuing connection to land, sea, waters and sky. We pay our respects to them, their cultures and their Elders past and present, and commit to ongoing reconciliation.

The Queensland Government is committed to providing accessible services to Queenslanders from all culturally and linguistically diverse backgrounds. If you have difficulty in understanding the "Home grown feed costs for dairy farmers", you can contact us for assistance, and we will arrange an interpreter to communicate the report to you.

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Introduction

The Queensland Department of Primary Industries has compiled this collection of home grown feed costs, as part of the QDAS project, to assist dairy farmers in feed budgeting and assist in the modelling of Queensland dairy systems.

All the following costings are available in Excel format from https://northernaustraliandairyhub.com.au/ (go to “Resources”, then “Feedbase & Nutrition” and “Home Grown Feed Costs”). With these spreadsheets you can add your own data and calculate your own costing of feeds.

These costings have been developed after speaking to dairy farmers across south east Queensland to determine typical management practices for different crops and pastures. Inputs prices have been sourced from local rural merchandising outlets.

Machinery

Machinery costs are an estimation of fuel, oil, repairs and maintenance for machines typically used on dairy farms in south east Queensland. The cost of operating labour and the cost of owning this machinery are not included.

Irrigation

$120 per ML is assumed as the cost of irrigation and includes the cost of pumping and water licences. This cost varies on farm from $60 to $200 per ML depending on the efficiency of irrigation systems used.

Perennial crops and pastures

For perennial crops and pastures, the cost of establishment is averaged over the life of the crop or pasture. For instance, if the cost of establishing lucerne is $1,200 per ha and its life is 4 years, then $300 ($1,200 ÷ 4 years) is added to the annual cost of Lucerne. Perennial pastures such as kikuyu have been allocated a life of 10 years. In reality, if maintained, these pastures have a much longer life.

Feed utilisation

Feed production estimations, made as kilograms of dry mater per hectare (kg DM/ha), are achievable with good crop and pasture management. Utilisation percentages of 100% for silage and between 60% and 70% for grazing have been used. Feed utilisation (kg DM/ha), equals feed production multiplied by the feed utilisation percentage, and is the critical factor that you must be confident in. While silage has high utilisation percentages when being made, you must remember that they may suffer significant wastage during storage and feeding.

Cost of feed

The cost of feed ($/kg DM) is calculated by dividing the total annual costs by the feed utilisation (kg DM/ha). This result can be multiplied by 1,000 to show the cost of feed in $/t DM. For instance, $0.15/kg equals $150/t DM.

Risk

Tables at the bottom of each page show the effect changes in DM utilisation, irrigation costs and the quantity of irrigation used have on the cost of feed. In all cases changes in feed utilisation make a larger change to feed cost than irrigation cost or the quantity of irrigation.

The effect of fuel and fertiliser costs

At the time of printing this report, world fuel and fertiliser prices were fluctuating dramatically. These feed cost calculations were made using average fuel and fertiliser prices for the time. To take account of the chance of large increases in prices, the costs were calculated with a 50% increase in fuel costs and 50% increase in fertiliser costs.

The result was an increase in the cost of feed between 2c/kgDM and 6c/kgDM (11% and 42%) depending on the amount of fuel and fertiliser used and the proportion they made up of total costs. For instance, the cost of annual ryegrass is calculated at 21c/kgDM but is 27c/kgDM when the cost of fuel and fertilisers used are increased by 50%. No other costs are changed in this calculation.

Summary of costs

Annuals	Water Supply	Crop Use	Irrigation ML/ha	Cost $/ha	Production kgDM/ha	Utilisation %	Utilisation kgDM/ha	Cost $/kgDM
Barley	Irrigated	Silage	3.0	$2,011	11,500	100%	11,500	$0.17
Barley	Dryland	Grazed	0.0	$747	7,000	70%	4,900	$0.15
Barley	Dryland	Silage	0.0	$1,095	7,000	100%	7,000	$0.16
Brassica	Irrigated	Grazed	3.0	$1,048	11,000	70%	7,700	$0.14
Chickory, Plantain & Clover	Irrigated	Grazed	7.0	$1,990	14,000	70%	9,800	$0.20
Lab Lab	Dryland	Grazed	0.0	$493	7,000	60%	4,200	$0.12
Lab Lab	Irrigated	Grazed	2.0	$753	11,000	60%	6,600	$0.11
Maize	Irrigated	Silage	4.0	$5,478	17,000	100%	17,000	$0.32
Millet	Irrigated	Grazed	3.0	$1,269	12,000	70%	8,400	$0.15
Oats	Dryland	Grazed	0.0	$882	9,000	70%	6,300	$0.14
Oats & vetch	Dryland	Grazed	0.0	$915	10,000	70%	7,000	$0.13
Ryegrass (annual)	Irrigated	Grazed	6.0	$2,253	15,000	70%	10,500	$0.21
Sorghum - forage	Irrigated	Grazed	2.5	$1,410	17,000	60%	10,200	$0.14
Sorghum - forage	Irrigated	Silage	2.5	$2,574	17,000	100%	17,000	$0.15
Sorghum - forage	Dryland	Grazed	0.0	$576	9,000	60%	5,400	$0.11
Sorghum - forage	Dryland	Silage	0.0	$1,234	9,000	100%	9,000	$0.14
Sorghum - grain variety	Irrigated	Silage	2.0	$2,039	11,500	100%	11,500	$0.18
Soybean	Irrigated	Silage	2.0	$1,822	8,250	100%	8,250	$0.22
Triticale	Irrigated	Silage	2.0	$1,968	11,500	100%	11,500	$0.17
Wheat	Irrigated	Silage	2.0	$1,750	10,000	100%	10,000	$0.17
Wheat	Dryland	Silage	0.0	$1,066	6,500	100%	6,500	$0.16

Perenials	Water Supply	Crop Use	Irrigation ML/ha	Cost $/ha	Production kgDM/ha	Utilisation %	Utilisation kgDM/ha	Cost $/kgDM
Gatton panic	Irrigated	Grazed	4.0	$1,524	15,000	70%	10,500	$0.15
Kikuyu	Irrigated	Grazed	4.0	$1,609	17,000	70%	11,900	$0.14
Lucerne	Irrigated	Grazed	7.0	$1,426	16,000	70%	11,200	$0.13
Prarie grass	Irrigated	Grazed	7.0	$2,116	15,000	70%	10,500	$0.20
Rhodes grass	Irrigated	Grazed	4.0	$1,504	15,000	70%	10,500	$0.14

Barley – Irrigated and cut for silage

Assumptions			**Barley Irrigated Silage**
Machinery costs per ha include Fuel, oil, repairs and maintenance			
Irrigation costs	$120	/ML	

Operation	Month	Machinery $/ha	Inputs Units/ha	Unit	$/unit	$/ha	Total $/ha
Offset discs	May	34.35				0.00	34.35
Spray - Roundup	May	7.82	3	L	$6.80	20.40	28.22
Power harrows	May	52.22				0.00	52.22
Planting and seed using a combine	June	22.38	70	kg	$2.00	140.00	162.38
Fertiliser, DAP (with above)			125	kg	$1.40	175.00	175.00
Fertiliser, CK88 (with above)			250	kg	$1.10	275.00	275.00
						0.00	0.00
Harvest & ensile	Sep	→	33	t (wet)	$28.00	924.00	924.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
Irrigation	Various		3.0	ML	$120.00	360.00	360.00
Total annual cost (maintenance and establishment)							**2,011.17**

Feed production and utilisation			
Feed produced (kgDM/ha)			11,500
Feed utilisation (kgDM/ha)	Utilisation %	100%	**11,500**

Cost of feed ($/kgDM)			**$0.17**
Cost of feed ($/tonne as fed)	Dry Matter %	35%	**$60.94**

Risk assessment

Risk factors	**Risk inputs** High	Budgeted	Low	**$/kgDM** High	Budgeted	Low	**% change in $/kgDM** High	Budgeted	Low
DM utilised (kg/ha)	13,800	11,500	9,200	0.15	0.17	0.22	-17%	0%	25%
Irrigation cost ($/M)	$144	$120	$96	0.18	0.17	0.17	4%	0%	-4%
Irrigation use (ML/ha)	3.6	3.0	2.4	0.18	0.17	0.17	4%	0%	-4%

Cost per kgDM and the %changes show the effect of a change in 1 risk factor with the others remaining at the budgeted level

Cost per kg DM at varying amounts of utilisation and irrigation use

		Dry mater utilisation (kg/ha) 6,900	9,200	11,500	13,800	16,100
Irrigation use (ML/ha)	1.8	0.27	0.20	0.16	0.14	0.12
	2.4	0.28	0.21	0.17	0.14	0.12
	3.0	0.29	0.22	0.17	0.15	0.12
	3.6	0.30	0.23	0.18	0.15	0.13
	4.2	0.31	0.23	0.19	0.16	0.13

Barley – Dryland and grazed

Assumptions			Barley
Machinery costs include Fuel, oil, repairs and maintenance			Dryland
Rain events dictate fertiliser and grazing intervals			Grazed
Irrigation costs	$0	/ML	

Operation	Month	Machinery $/ha	Inputs Units/ha	Unit	$/unit	$/ha	Total $/ha
Offset discs	Mar	34.35				0.00	34.35
Spray - Roundup		7.82	3	L	$6.80	20.40	28.22
Planting and seed using a combine	Apr	22.38	55	kg	$2.00	110.00	132.38
Fertiliser, DAP (with above)			125	kg	$1.40	175.00	175.00
Fertiliser, Urea using spreader	Jun	5.56	100	kg	$1.20	120.00	125.56
Fertiliser, Urea using spreader	Aug	5.56	100	kg	$1.20	120.00	125.56
Fertiliser, Urea using spreader	Sep	5.56	100	kg	$1.20	120.00	125.56
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
Irrigation	Various		0.0	ML	$0.00	0.00	0.00
Total annual cost (maintenance and establishment)							**746.63**

Feed production and utilisation			
Feed produced (kgDM/ha)			7,000
Feed utilisation (kgDM/ha)	Utilisation %	70%	**4,900**

Cost of feed ($/kgDM)	**$0.15**

Risk assessment

Risk factors	Risk inputs			$/kgDM			% change in $/kgDM		
	High	Budgeted	Low	High	Budgeted	Low	High	Budgeted	Low
DM utilised (kg/ha)	5,880	4,900	3,920	0.13	0.15	0.19	-17%	0%	25%
Irrigation cost ($/M)	$0	$0	$0	0.15	0.15	0.15	0%	0%	0%
Irrigation use (ML/ha)	0.0	0.0	0.0	0.15	0.15	0.15	0%	0%	0%

Cost per kgDM and the %changes show the effect of a change in 1 risk factor with the others remaining at the budgeted level

Barley – Dryland and cut for silage

Assumptions			Barley Dryland Silage
Machinery costs per ha include Fuel, oil, repairs and maintenance			
Irrigation costs	$0	/ML	

Operation	Month	Machinery $/ha	Inputs Units/ha	Unit	$/unit	$/ha	Total $/ha
Offset discs	May	34.35				0.00	34.35
Spray - Roundup	May	7.82	3	L	$6.80	20.40	28.22
Planting and seed using a combine	Apr	22.38	55	kg	$2.00	110.00	132.38
Fertiliser, DAP (with above)			125	kg	$1.40	175.00	175.00
Fertiliser, CK88 (with above)			150	kg	$1.10	165.00	165.00
						0.00	0.00
						0.00	0.00
Harvest & ensile	Sep	→	20	t (wet)	$28.00	560.00	560.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
Irrigation	Various		0.0	ML	$0.00	0.00	0.00
Total annual cost (maintenance and establishment)							**1,094.95**

Feed production and utilisation			
Feed produced (kgDM/ha)			7,000
Feed utilisation (kgDM/ha)	Utilisation %	100%	**7,000**

Cost of feed ($/kgDM)			**$0.16**
Cost of feed ($/tonne as fed)	Dry Matter %	35%	**$54.75**

Risk assessment

Risk factors	Risk inputs High	Risk inputs Budgeted	Risk inputs Low	$/kgDM High	$/kgDM Budgeted	$/kgDM Low	% change in $/kgDM High	% change in $/kgDM Budgeted	% change in $/kgDM Low
DM utilised (kg/ha)	8,400	7,000	5,600	0.13	0.16	0.20	-17%	0%	25%
Irrigation cost ($/M)	$0	$0	$0	0.16	0.16	0.16	0%	0%	0%
Irrigation use (ML/ha)	0.0	0.0	0.0	0.16	0.16	0.16	0%	0%	0%

Cost per kgDM and the %changes show the effect of a change in 1 risk factor with the others remaining at the budgeted level

Brassica - Irrigated and grazed

Assumptions			**Brassica**
Machinery costs include Fuel, oil, repairs and maintenance			**Irrigated**
			Grazed
Irrigation costs	$120	/ML	

Operation	Month	Machinery $/ha	Inputs Units/ha	Unit	$/unit	$/ha	Total $/ha
Spray - Roundup	Feb	7.82	3	L	$6.80	20.40	28.22
Offset discs		34.35				0.00	34.35
Planting and seed using a spreader	Feb	5.56	4	kg	$13.60	54.40	59.96
Fertiliser, DAP (with above)			125	kg	$1.40	175.00	175.00
Diamond harrows	Feb	13.67				0.00	13.67
Fertiliser, Urea using spreader	Mar	5.56	100	kg	$1.20	120.00	125.56
Fertiliser, Urea using spreader	Apr	5.56	100	kg	$1.20	120.00	125.56
Fertiliser, Urea using spreader	May	5.56	100	kg	$1.20	120.00	125.56
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
Irrigation	Various		3.0	ML	$120.00	360.00	360.00
Total annual cost (maintenance and establishment)							**1,047.88**

Feed production and utilisation			
Feed produced (kgDM/ha)			11,000
Feed utilisation (kgDM/ha)	Utilisation %	70%	**7,700**

Cost of feed ($/kgDM)	**$0.14**

Risk assessment

Risk factors	**Risk inputs** High	Budgeted	Low	**$/kgDM** High	Budgeted	Low	**% change in $/kgDM** High	Budgeted	Low
DM utilised (kg/ha)	9,240	7,700	6,160	0.11	0.14	0.17	-17%	0%	25%
Irrigation cost ($/M)	$144	$120	$96	0.15	0.14	0.13	7%	0%	-7%
Irrigation use (ML/ha)	3.6	3.0	2.4	0.15	0.14	0.13	7%	0%	-7%

Cost per kgDM and the %changes show the effect of a change in 1 risk factor with the others remaining at the budgeted level

Cost per kg DM at varying amounts of utilisation and irrigation use

		Dry mater yield (kg/ha) 4,620	6,160	7,700	9,240	10,780
	1.8	0.20	0.15	0.12	0.10	0.08
Irrigation	2.4	0.21	0.16	0.13	0.11	0.09
use	3.0	0.23	0.17	0.14	0.11	0.10
(ML/ha)	3.6	0.24	0.18	0.15	0.12	0.10
	4.2	0.26	0.19	0.15	0.13	0.11

Chicory, Plantain & Clover - Irrigated and grazed

Assumptions			**Chicory, Plantain & Clover**
Machinery costs include Fuel, oil, repairs and maintenance			**Irrigated**
Chicory, Plantain, clover direct drilled into kikuyu after mulching			**Grazed**
Irrigation costs	$120	/ML	

Operation	Month	Machinery $/ha	Inputs Units/ha	Unit	$/unit	$/ha	Total $/ha
Mulching of Kikuyu	Mar	30.82				0.00	30.82
Planting with a direct drill	Apr	32.88				0.00	32.88
Seed Chicory (with above)			4	kg	$22.50	90.00	90.00
Seed Plantain (with above)			4	kg	$22.50	90.00	90.00
Seed Clover (with above)			5	kg	$7.50	37.50	37.50
Fertiliser, DAP (with above)			125	kg	$1.40	175.00	175.00
Fertiliser, CK88 using spreader	May	5.56	100	kg	$1.10	110.00	115.56
Fertiliser, CK88 using spreader	Jun	5.56	100	kg	$1.10	110.00	115.56
Fertiliser, CK88 using spreader	Jul	5.56	100	kg	$1.10	110.00	115.56
Fertiliser, CK88 using spreader	Aug	5.56	100	kg	$1.10	110.00	115.56
Fertiliser, CK88 using spreader	Sep	5.56	100	kg	$1.10	110.00	115.56
Fertiliser, CK88 using spreader	Nov	5.56	100	kg	$1.10	110.00	115.56
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
Irrigation	Various		7.0	ML	$120.00	840.00	840.00
Total annual cost (maintenance and establishment)							**1,989.56**

Feed production and utilisation			
Feed produced (kgDM/ha)			14,000
Feed utilisation (kgDM/ha)	Utilisation %	70%	**9,800**

Cost of feed ($/kgDM)	**$0.20**

Risk assessment

Risk factors	**Risk inputs** High	Budgeted	Low	**$/kgDM** High	Budgeted	Low	**% change in $/kgDM** High	Budgeted	Low
DM utilised (kg/ha)	11,760	9,800	7,840	0.17	0.20	0.25	-17%	0%	25%
Irrigation cost ($/M)	$144	$120	$96	0.22	0.20	0.19	8%	0%	-8%
Irrigation use (ML/ha)	8.4	7.0	5.6	0.22	0.20	0.19	8%	0%	-8%

Cost per kgDM and the %changes show the effect of a change in 1 risk factor with the others remaining at the budgeted level

Cost per kg DM at varying amounts of utilisation and irrigation use

		Dry mater utilisation (kg/ha)				
		5,880	7,840	9,800	11,760	13,720
Irrigation use (ML/ha)	4.2	0.28	0.21	0.17	0.14	0.12
	5.6	0.31	0.23	0.19	0.15	0.13
	7.0	0.34	0.25	0.20	0.17	0.15
	8.4	0.37	0.28	0.22	0.18	0.16
	9.8	0.40	0.30	0.24	0.20	0.17

Gatton panic - Irrigated and grazed

Assumptions			**Gatton panic**
Machinery costs include Fuel, oil, repairs and maintenance			**Irrigated**
Life of the crop (years)	10		**Grazed**
Irrigation costs	$120	/ML	

Establishment		Machinery	Inputs				Total
	Month	$/ha	Units/ha	Unit	$/unit	$/ha	$/ha
Offset discs	Oct	34.35				0.00	34.35
Spray - Roundup	Oct	7.82	3	L	6.80	20.40	28.22
Power harrows	Oct	52.22				0.00	52.22
Uncoated Seed with a spreader	Oct	5.56	5	kg	28.50	142.50	148.06
Roller	Oct	11.37				0.00	11.37
Fertiliser, CK88 using spreader	Oct	5.56	200	kg	1.10	220.00	225.56
						0.00	0.00
						0.00	0.00
Irrigation	Various		3	ML	120.00	360.00	360.00
Total establishment cost							**859.78**
Establishment cost averaged over the life of the crop							85.98

Annual maintenance		Machinery	Inputs				Total
	Month	$/ha	Units/ha	Unit	$/unit	$/ha	$/ha
Fertiliser, CK88 using spreader	Oct	5.56	200	kg	1.10	220.00	225.56
Fertiliser, Urea using spreader	Nov	5.56	100	kg	1.20	120.00	125.56
Fertiliser, Urea using spreader	Dec	5.56	100	kg	1.20	120.00	125.56
Fertiliser, Greentop K using spreader	Jan	5.56	150	kg	1.10	165.00	170.56
Fertiliser, Urea using spreader	Feb	5.56	100	kg	1.20	120.00	125.56
Fertiliser, Urea using spreader	Mar	5.56	150	kg	1.20	180.00	185.56
						0.00	0.00
Irrigation	Various		4	ML	120.00	480.00	480.00
Total annual maintenance cost							**1,438.36**
Total annual cost (maintenance and establishment)							**1,524.34**

Feed production and utilisation			
Feed produced (kgDM/ha)			15,000
Feed utilisation (kgDM/ha)	Utilisation %	70%	**10,500**

Cost of feed ($/kgDM)	**$0.15**

Risk assessment

Risk factors	**Risk inputs**			**$/kgDM**			**% change in $/kgDM**		
	High	Budgeted	Low	High	Budgeted	Low	High	Budgeted	Low
DM utilised (kg/ha)	25,000	10,500	17,500	0.06	0.15	0.09	-58%	0%	-40%
Irrigation cost ($/M)	$130	$120	$60	0.15	0.15	0.12	3%	0%	-17%
Irrigation use (ML/ha)	10.0	4.0	5.0	0.21	0.15	0.16	47%	0%	8%

Cost per kgDM and the %changes show the effect of a change in 1 risk factor with the others remaining at the budgeted level

Cost per kg DM at varying amounts of utilisation and irrigation use

		Dry mater utilisation (kg/ha)				
		6,300	8,400	10,500	12,600	14,700
	2.4	0.21	0.16	0.13	0.11	0.09
Irrigation	3.2	0.23	0.17	0.14	0.11	0.10
use	4.0	0.24	0.18	0.15	0.12	0.10
(ML/ha)	4.8	0.26	0.19	0.15	0.13	0.11
	5.6	0.27	0.20	0.16	0.14	0.12

Kikuyu - Irrigated and grazed

Assumptions			**Kikuyu**
Machinery costs include Fuel, oil, repairs and maintenance			**Irrigated**
Life of the crop (years)	10		**Grazed**
Irrigation costs	$120	/ML	

Establishment		Machinery	Inputs				Total
	Month	$/ha	Units/ha	Unit	$/unit	$/ha	$/ha
Offset discs	Mar	34.35				0.00	34.35
Spray - Roundup	Mar	7.82	3	L	$6.80	20.40	28.22
Power harrows	Mar	52.22				0.00	52.22
Seed with a spreader	Mar	5.56	5	kg	$55.00	275.00	280.56
Roller	Mar	11.37				0.00	11.37
Fertiliser, CK88 using spreader	May	5.56	200	kg	$1.10	220.00	225.56
Fertiliser, Greentop K using spreader	May	5.56	150	kg	$1.10	165.00	170.56
Fertiliser, Urea using spreader	Jun	5.56	100	kg	$1.20	120.00	125.56
Fertiliser, Urea using spreader	Jul	5.56	100	kg	$1.20	120.00	125.56
Fertiliser, Urea using spreader	Aug	5.56	100	kg	$1.20	120.00	125.56
Fertiliser, Greentop K using spreader	Sept	5.56	150	kg	$1.10	165.00	170.56
						0.00	0.00
Irrigation	Various		3	ML	120.00	360.00	360.00
Total establishment cost							**1,710.08**
Establishment cost averaged over the life of the crop							171.01

Annual maintenance		Machinery	Inputs				Total
	Month	$/ha	Units/ha	Unit	$/unit	$/ha	$/ha
Fertiliser, CK88 using spreader	Oct	5.56	200	kg	$1.10	220.00	225.56
Fertiliser, Urea using spreader	Nov	5.56	100	kg	$1.20	120.00	125.56
Fertiliser, Urea using spreader	Dec	5.56	100	kg	$1.20	120.00	125.56
Fertiliser, Greentop K using spreader	Jan	5.56	150	kg	$1.10	165.00	170.56
Fertiliser, Urea using spreader	Feb	5.56	100	kg	$1.20	120.00	125.56
Fertiliser, Urea using spreader	Mar	5.56	150	kg	$1.20	180.00	185.56
						0.00	0.00
Irrigation	Various		4	ML	120.00	480.00	480.00
Total annual maintenance cost							**1,438.36**
Total annual cost (maintenance and establishment)							**1,609.37**

Feed production and utilisation			
Feed produced (kgDM/ha)			17,000
Feed utilisation (kgDM/ha)	Utilisation %	70%	**11,900**

Cost of feed ($/kgDM)	**$0.14**

Risk assessment

Risk factors	**Risk inputs**			**$/kgDM**			**% change in $/kgDM**		
	High	Budgeted	Low	High	Budgeted	Low	High	Budgeted	Low
DM utilised (kg/ha)	25,000	11,900	17,500	0.06	0.14	0.09	-52%	0%	-32%
Irrigation cost ($/M)	$130	$120	$60	0.14	0.14	0.11	3%	0%	-16%
Irrigation use (ML/ha)	10.0	4.0	5.0	0.20	0.14	0.15	45%	0%	7%

Cost per kgDM and the %changes show the effect of a change in 1 risk factor with the others remaining at the budgeted level

Cost per kg DM at varying amounts of utilisation and irrigation use

		Dry mater utilisation (kg/ha)				
		7,140	9,520	11,900	14,280	16,660
Irrigation use (ML/ha)	2.4	0.20	0.15	0.12	0.10	0.09
	3.2	0.21	0.16	0.13	0.11	0.09
	4.0	0.23	0.17	0.14	0.11	0.10
	4.8	0.24	0.18	0.14	0.12	0.10
	5.6	0.25	0.19	0.15	0.13	0.11

Lab Lab - Dryland and grazed

Assumptions			**Lab Lab**
Machinery costs include Fuel, oil, repairs and maintenance			**Dryland**
			Grazed
Irrigation costs	$0	/ML	

Operation	Month	Machinery $/ha	Inputs Units/ha	Unit	$/unit	$/ha	Total $/ha
Offset discs	Nov	34.35				0.00	34.35
Spray - Roundup	Nov	7.82	3	L	$6.80	20.40	28.22
Power harrows	Nov	52.22				0.00	52.22
Planting and seed using a combine	Nov	22.38	25	kg	$4.00	100.00	122.38
Fertiliser, CK88 (with above)			100	kg	$1.10	110.00	110.00
Fertiliser, DAP using spreader	Feb	5.56	100	kg	$1.40	140.00	145.56
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
Irrigation	Various		0.0	ML	$0.00	0.00	0.00
Total annual cost (maintenance and establishment)							**492.73**

Feed production and utilisation			
Feed produced (kgDM/ha)			7,000
Feed utilisation (kgDM/ha)	Utilisation %	60%	**4,200**

Cost of feed ($/kgDM)	**$0.12**

Risk assessment

Risk factors	**Risk inputs** High	Budgeted	Low	**$/kgDM** High	Budgeted	Low	**% change in $/kgDM** High	Budgeted	Low
DM utilised (kg/ha)	5,040	4,200	3,360	0.10	0.12	0.15	-17%	0%	25%
Irrigation cost ($/M)	$0	$0	$0	0.12	0.12	0.12	0%	0%	0%
Irrigation use (ML/ha)	0.0	0.0	0.0	0.12	0.12	0.12	0%	0%	0%

Cost per kgDM and the %changes show the effect of a change in 1 risk factor with the others remaining at the budgeted level

Lab Lab - Irrigated and grazed

Assumptions			**Lab Lab**
Machinery costs include Fuel, oil, repairs and maintenance			**Irrigated**
			Grazed
Irrigation costs	$120	/ML	

Operation	Month	Machinery $/ha	Inputs Units/ha	Unit	$/unit	$/ha	Total $/ha
Offset discs	Nov	34.35				0.00	34.35
Spray - Roundup	Nov	7.82	3	L	$6.80	20.40	28.22
Power harrows	Nov	52.22				0.00	52.22
Planting and seed using a combine	Nov	22.38	30	kg	$4.00	120.00	142.38
Fertiliser, CK88 (with above)			100	kg	$1.10	110.00	110.00
Fertiliser, DAP using spreader	Jan	5.56	100	kg	$1.40	140.00	145.56
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
Irrigation	Various		2	ML	$120.00	240.00	240.00
Total annual cost (maintenance and establishment)							**752.73**

Feed production and utilisation			
Feed produced (kgDM/ha)			11,000
Feed utilisation (kgDM/ha)	Utilisation %	60%	**6,600**

Cost of feed ($/kgDM)	**$0.11**

Risk assessment

Risk factors	**Risk inputs** High	Budgeted	Low	**$/kgDM** High	Budgeted	Low	**% change in $/kgDM** High	Budgeted	Low
DM utilised (kg/ha)	7,920	6,600	5,280	0.10	0.11	0.14	-17%	0%	25%
Irrigation cost ($/M)	$144	$120	$96	0.12	0.11	0.11	6%	0%	-6%
Irrigation use (ML/ha)	2.4	2.0	1.6	0.12	0.11	0.11	6%	0%	-6%

Cost per kgDM and the %changes show the effect of a change in 1 risk factor with the others remaining at the budgeted level

Cost per kg DM at varying amounts of utilisation and irrigation use

		Dry mater utilisation (kg/ha) 3,960	5,280	6,600	7,920	9,240
Irrigation use (ML/ha)	1.2	0.17	0.12	0.10	0.08	0.07
	1.6	0.18	0.13	0.11	0.09	0.08
	2.0	0.19	0.14	0.11	0.10	0.08
	2.4	0.20	0.15	0.12	0.10	0.09
	2.8	0.21	0.16	0.13	0.11	0.09

Lucerne - Irrigated and grazed

Assumptions			**Lucerne**
Machinery costs include Fuel, oil, repairs and maintenance			**Irrigated**
Life of the crop (years)	4		**Grazed**
Irrigation costs	$120	/ML	

Establishment	Month	Machinery $/ha	Inputs Units/ha	Unit	$/unit	$/ha	Total $/ha
Spray - Roundup	Mar	7.82	3.0	L	6.80	20.40	28.22
Offset	April	34.35				0.00	34.35
Power harrow	April	52.22				0.00	52.22
Spray - Haloxyfop-R	April	7.82	0.075	kg	$78.68	5.90	13.72
Planting and seed using a combine	April	22.38	20	kg	$18.00	360.00	382.38
Fertiliser, Sulphate of Potash (with above)			100	kg	$1.10	110.00	110.00
Fertiliser, Super (with above)			200	kg	$0.90	180.00	180.00
Spreader - Gypsum	April	5.56	1,000	kg	$0.20	200.00	205.56
Roller	April	11.37				0.00	11.37
						0.00	0.00
Irrigation	Various		1.0	ML	120.00	120.00	120.00
Total establishment cost							**1,137.82**
Establishment cost averaged over the life of the crop							284.46

Annual maintenance	Month	Machinery $/ha	Inputs Units/ha	Unit	$/unit	$/ha	Total $/ha
Fertiliser, Super using spreader	April	5.56	200	kg	$0.90	180.00	185.56
Fertiliser, Sulphate of Potash using spreader	Aug	5.56	100	kg	$1.10	110.00	115.56
						0.00	0.00
						0.00	0.00
Irrigation (various times)			7.0	ML	120.00	840.00	840.00
Total annual maintenance cost							**1,141.12**
Total annual cost (maintenance and establishment)							**1,425.58**

Feed production and utilisation			
Feed produced (kgDM/ha)			16,000
Feed utilisation (kgDM/ha)	Utilisation %	70%	**11,200**

Cost of feed ($/kgDM)	**$0.13**

Risk assessment

Risk factors	**Risk inputs**			**$/kgDM**			**% change in $/kgDM**		
	High	Budgeted	Low	High	Budgeted	Low	High	Budgeted	Low
DM utilised (kg/ha)	25,000	11,200	17,500	0.06	0.13	0.08	-55%	0%	-36%
Irrigation cost ($/M)	$130	$120	$60	0.13	0.13	0.09	5%	0%	-31%
Irrigation use (ML/ha)	10.0	7.0	5.0	0.16	0.13	0.11	25%	0%	-17%

Cost per kgDM and the %changes show the effect of a change in 1 risk factor with the others remaining at the budgeted level

Cost per kg DM at varying amounts of utilisation and irrigation use

		Dry mater utilisation (kg/ha)				
		6,720	8,960	11,200	13,440	15,680
Irrigation use (ML/ha)	4.2	0.16	0.12	0.10	0.08	0.07
	5.6	0.19	0.14	0.11	0.09	0.08
	7.0	0.21	0.16	0.13	0.11	0.09
	8.4	0.24	0.18	0.14	0.12	0.10
	9.8	0.26	0.20	0.16	0.13	0.11

Maize - Irrigated and cut for silage

Assumptions			**Maize Irrigated Silage**
Machinery costs include Fuel, oil, repairs and maintenance			
Irrigation costs	$120	/ML	

Operation	Month	Machinery $/ha	Inputs Units/ha	Unit	$/unit	$/ha	Total $/ha
Offset discs	Sept	34.35				0.00	34.35
Spray	Sept	7.82				0.00	7.82
Primextra Gold (with above)			3.2	L	$17.50	56.00	56.00
Dual Gold (with above)			1.0	L	$10.50	10.50	10.50
Spreader	Sept	5.56					
Fertiliser, Urea (with above)			700	kg	$1.20	840.00	840.00
Fertiliser, Super (with above)			660	kg	$0.90	594.00	594.00
Fertiliser, Muriate of Potash (with above)			360	kg	$1.10	396.00	396.00
Power Harrows	Sept	52.22				0.00	52.22
Planting and seed with a 4 row planter	Sept	33.53	18	kg	$49.00	882.00	915.53
						0.00	0.00
Spray (Boomspray)	Oct	7.82				0.00	7.82
Intrepid Edge NEW			0.5	L	$528.00	264.00	264.00
Spray (drone)	Nov	→			$100.00	100.00	100.00
Intrepid Edge NEW			0.5	L	$528.00	264.00	264.00
Harvest & ensile	Dec	→	52	t (wet)	$28.00	1,456.00	1,456.00
						0.00	0.00
Irrigation	Various		4.0	ML	$120.00	480.00	480.00
Total annual cost (maintenance and establishment)							**5,478.24**

Feed production and utilisation			
Feed produced (kgDM/ha)			17,000
Feed utilisation (kgDM/ha)	Utilisation %	100%	**17,000**

Cost of feed ($/kgDM)			**$0.32**
Cost of feed ($/tonne as fed)	Dry Matter %	33%	**$105.35**

Risk assessment

Risk factors	**Risk inputs** High	Budgeted	Low	**$/kgDM** High	Budgeted	Low	**% change in $/kgDM** High	Budgeted	Low
DM utilised (kg/ha)	20,400	17,000	13,600	0.27	0.32	0.40	-17%	0%	25%
Irrigation cost ($/M)	$144	$120	$96	0.33	0.32	0.32	2%	0%	-2%
Irrigation use (ML/ha)	4.8	4.0	3.2	0.33	0.32	0.32	2%	0%	-2%

Cost per kgDM and the %changes show the effect of a change in 1 risk factor with the others remaining at the budgeted level

Cost per kg DM at varying amounts of utilisation and irrigation use

		Dry mater utilisation (kg/ha) 10,200	13,600	17,000	20,400	23,800
Irrigation use (ML/ha)	2.4	0.52	0.39	0.31	0.26	0.22
	3.2	0.53	0.40	0.32	0.26	0.23
	4.0	0.54	0.40	0.32	0.27	0.23
	4.8	0.55	0.41	0.33	0.27	0.23
	5.6	0.56	0.42	0.33	0.28	0.24

Millet - Irrigated and grazed

Assumptions			**Millet Irrigated Grazed**
Machinery costs include Fuel, oil, repairs and maintenance			
Irrigation costs	$120	/ML	

Operation	Month	Machinery $/ha	Inputs Units/ha	Unit	$/unit	$/ha	Total $/ha
Spray - Roundup	Oct	7.82	3	L	$6.80	20.40	28.22
Planting and seed using a direct drill	Oct	32.88	40	kg	$3.00	120.00	152.88
Fertiliser, CK88 using spreader	Oct	5.56	200	kg	$1.10	220.00	225.56
Fertiliser, Urea using spreader	Nov	5.56	100	kg	$1.20	120.00	125.56
Fertiliser, Urea using spreader	Dec	5.56	100	kg	$1.20	120.00	125.56
Fertiliser, Urea using spreader	Jan	5.56	100	kg	$1.20	120.00	125.56
Fertiliser, Urea using spreader	Feb	5.56	100	kg	$1.20	120.00	125.56
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
Irrigation	Various		3.0	ML	$120.00	360.00	360.00
Total annual cost (maintenance and establishment)							**1,268.90**

Feed production and utilisation			
Feed produced (kgDM/ha)			12,000
Feed utilisation (kgDM/ha)	Utilisation %	70%	**8,400**

Cost of feed ($/kgDM)	**$0.15**

Risk assessment

Risk factors	**Risk inputs** High	Budgeted	Low	**$/kgDM** High	Budgeted	Low	**% change in $/kgDM** High	Budgeted	Low
DM utilised (kg/ha)	10,080	8,400	6,720	0.13	0.15	0.19	-17%	0%	25%
Irrigation cost ($/M)	$144	$120	$96	0.16	0.15	0.14	6%	0%	-6%
Irrigation use (ML/ha)	3.6	3.0	2.4	0.16	0.15	0.14	6%	0%	-6%

Cost per kgDM and the %changes show the effect of a change in 1 risk factor with the others remaining at the budgeted level

Cost per kg DM at varying amounts of utilisation and irrigation use

		Dry mater utilisation (kg/ha) 5,040	6,720	8,400	10,080	11,760
Irrigation use (ML/ha)	1.8	0.22	0.17	0.13	0.11	0.10
	2.4	0.24	0.18	0.14	0.12	0.10
	3.0	0.25	0.19	0.15	0.13	0.11
	3.6	0.27	0.20	0.16	0.13	0.11
	4.2	0.28	0.21	0.17	0.14	0.12

Oats & Vetch - Dryland and grazed

Assumptions			**Oats & Vetch**
Machinery costs include Fuel, oil, repairs and maintenance			**Dryland**
			Grazed
Irrigation costs	$0	/ML	

Operation	Month	Machinery $/ha	Inputs Units/ha	Unit	$/unit	$/ha	Total $/ha
Offset discs	Mar	34.35				0.00	34.35
Spray - Roundup	Mar	7.82	3	L	$6.80	20.40	28.22
Planting using a direct drill	Apr	32.88				0.00	32.88
Oats seed (with above)			50	kg	$2.40	120.00	120.00
Vetch seed (with above)			10	kg	$4.25	42.50	42.50
Fertiliser, CK88 (with above)			125	kg	$1.10	137.50	137.50
Fertiliser, Urea using spreader	Jun	5.56	100	kg	$1.20	120.00	125.56
Fertiliser, CK88 using spreader	Jul	5.56	125	kg	$1.10	137.50	143.06
Fertiliser, Urea using spreader	Aug	5.56	100	kg	$1.20	120.00	125.56
Fertiliser, Urea using spreader	Sep	5.56	100	kg	$1.20	120.00	125.56
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
Irrigation	Various		0	ML	$0.00	0.00	0.00
Total annual cost (maintenance and establishment)							**915.19**

Feed production and utilisation			
Feed produced (kgDM/ha)			10,000
Feed utilisation (kgDM/ha)	Utilisation %	70%	**7,000**

Cost of feed ($/kgDM)	**$0.13**

Risk assessment

Risk factors	**Risk inputs** High	Budgeted	Low	**$/kgDM** High	Budgeted	Low	**% change in $/kgDM** High	Budgeted	Low
DM utilised (kg/ha)	8,400	7,000	5,600	0.11	0.13	0.16	-17%	0%	25%
Irrigation cost ($/M)	$0	$0	$0	0.13	0.13	0.13	0%	0%	0%
Irrigation use (ML/ha)	0.0	0.0	0.0	0.13	0.13	0.13	0%	0%	0%

Cost per kgDM and the %changes show the effect of a change in 1 risk factor with the others remaining at the budgeted level

Oats - Dryland and grazed

Assumptions			**Oats**
Machinery costs include Fuel, oil, repairs and maintenance			**Dryland**
			Grazed
Irrigation costs	$0	/ML	

Operation	Month	Machinery $/ha	Inputs Units/ha	Unit	$/unit	$/ha	Total $/ha
Offset discs	Mar	34.35				0.00	34.35
Spray - Roundup	Mar	7.82	3	L	$6.80	20.40	28.22
Planting and seed using a combine	Apr	22.38	50	kg	$2.40	120.00	142.38
Fertiliser, DAP (with above)			125	kg	$1.40	175.00	175.00
Fertiliser, Urea using spreader	Jun	5.56	100	kg	$1.20	120.00	125.56
Fertiliser, Urea using spreader	Jul	5.56	100	kg	$1.20	120.00	125.56
Fertiliser, Urea using spreader	Aug	5.56	100	kg	$1.20	120.00	125.56
Fertiliser, Urea using spreader	Sep	5.56	100	kg	$1.20	120.00	125.56
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
Irrigation	Various		0	ML	$0.00	0.00	0.00
Total annual cost (maintenance and establishment)							**882.19**

Feed production and utilisation			
Feed produced (kgDM/ha)			9,000
Feed utilisation (kgDM/ha)	Utilisation %	70%	**6,300**

Cost of feed ($/kgDM)	**$0.14**

Risk assessment

Risk factors	**Risk inputs**			**$/kgDM**			**% change in $/kgDM**		
	High	Budgeted	Low	High	Budgeted	Low	High	Budgeted	Low
DM utilised (kg/ha)	7,560	6,300	5,040	0.12	0.14	0.18	-17%	0%	25%
Irrigation cost ($/M)	$0	$0	$0	0.14	0.14	0.14	0%	0%	0%
Irrigation use (ML/ha)	0.0	0.0	0.0	0.14	0.14	0.14	0%	0%	0%

Cost per kgDM and the %changes show the effect of a change in 1 risk factor with the others remaining at the budgeted level

Prairie grass - Irrigated and grazed

Assumptions			**Prairie grass**
Machinery costs include Fuel, oil, repairs and maintenance			**Irrigated**
Life of the crop (years)	10		**Grazed**
Irrigation costs	$120	/ML	
Fertiliser applied during establishment is recorded in the annual maintenance section as fertiliser applied in March			

Year 1		Machinery	Inputs				Total
	Month	$/ha	Units/ha	Unit	$/unit	$/ha	$/ha
Offset discs	Mar	34.35				0.00	34.35
Spray - Roundup	Mar	7.82	3	L	6.80	20.40	28.22
Power harrows	Mar	52.22				0.00	52.22
Planting and seed with a combine	Mar	22.38	40	kg	$14.00	560.00	582.38
						0.00	0.00
Irrigation	Various		1.0	ML	120.00	120.00	120.00
Total establishment cost							**817.17**
Establishment cost averaged over the life of the crop							81.72

Annual maintenance		Machinery	Inputs				Total
	Month	$/ha	Units/ha	Unit	$/unit	$/ha	$/ha
Fertiliser, CK88 using spreader	Mar	5.56	200	kg	1.10	220.00	225.56
Fertiliser, Urea using spreader	May	5.56	100	kg	1.20	120.00	125.56
Fertiliser, Urea using spreader	Jun	5.56	100	kg	1.20	120.00	125.56
Fertiliser, Urea using spreader	Jul	5.56	100	kg	1.20	120.00	125.56
Fertiliser, Greentop K using spreader	Aug	5.56	150	kg	1.10	165.00	170.56
Fertiliser, Greentop K using spreader	Sept	5.56	150	kg	1.10	165.00	170.56
Fertiliser, Urea using spreader	Oct	5.56	100	kg	1.20	120.00	125.56
Fertiliser, Urea using spreader	Dec	5.56	100	kg	1.20	120.00	125.56
						0.00	0.00
Irrigation	Various		7.0	ML	120.00	840.00	840.00
Total annual maintenance cost							**2,034.48**
Total annual cost (maintenance and establishment)							**2,116.20**

Feed production and utilisation			
Feed produced (kgDM/ha)			15,000
Feed utilisation (kgDM/ha)	Utilisation %	70%	**10,500**

Cost of feed ($/kgDM)	**$0.20**

Risk assessment

Risk factors	**Risk inputs**			**$/kgDM**			**% change in $/kgDM**		
	High	Budgeted	Low	High	Budgeted	Low	High	Budgeted	Low
DM utilised (kg/ha)	25,000	10,500	17,500	0.08	0.20	0.12	-58%	0%	-40%
Irrigation cost ($/M)	$130	$120	$60	0.21	0.20	0.16	3%	0%	-20%
Irrigation use (ML/ha)	10.0	7.0	5.0	0.24	0.20	0.18	17%	0%	-11%

Cost per kgDM and the %changes show the effect of a change in 1 risk factor with the others remaining at the budgeted level

Cost per kg DM at varying amounts of utilisation and irrigation use

		Dry mater utilisation (kg/ha)				
		6,300	8,400	10,500	12,600	14,700
Irrigation use (ML/ha)	4.2	0.28	0.21	0.17	0.14	0.12
	5.6	0.31	0.23	0.19	0.15	0.13
	7.0	0.34	0.25	0.20	0.17	0.14
	8.4	0.36	0.27	0.22	0.18	0.16
	9.8	0.39	0.29	0.23	0.19	0.17

Rhodes grass – Irrigated and grazed

Assumptions			**Rhodes grass Irrigated Grazed**
Machinery costs include Fuel, oil, repairs and maintenance			
Life of the crop (years)	10		
Irrigation costs	$120	/ML	
Note: Bare seed price			

Establishment	Month	Machinery $/ha	Inputs Units/ha	Unit	$/unit	$/ha	Total $/ha
Offset discs	Oct	34.35				0.00	34.35
Spray - Roundup	Oct	7.82	3.0	L	6.80	20.40	28.22
Power harrows	Oct	52.22				0.00	52.22
Seed with a spreader	Oct	5.56	5.0	kg	12.50	62.50	68.06
Roller	Oct	11.37				0.00	11.37
Fertiliser, CK88 using spreader	Oct	5.56	200.0	kg	1.10	220.00	225.56
						0.00	0.00
Irrigation	Various		2.0	ML	120.00	240.00	240.00
Total establishment cost							**659.78**
Establishment cost averaged over the life of the crop							65.98

Annual maintenance	Month	Machinery $/ha	Inputs Units/ha	Unit	$/unit	$/ha	Total $/ha
Fertiliser, CK88 using spreader	Oct	5.56	200.0	kg	1.10	220.00	225.56
Fertiliser, Urea using spreader	Nov	5.56	100.0	kg	1.20	120.00	125.56
Fertiliser, Urea using spreader	Dec	5.56	100.0	kg	1.20	120.00	125.56
Fertiliser, Greentop K using spreader	Jan	5.56	150.0	kg	1.10	165.00	170.56
Fertiliser, Urea using spreader	Feb	5.56	100.0	kg	1.20	120.00	125.56
Fertiliser, Urea using spreader	Mar	5.56	150.0	kg	1.20	180.00	185.56
						0.00	0.00
Irrigation	Various		4.0	ML	120.00	480.00	480.00
Total annual maintenance cost							**1,438.36**
Total annual cost (maintenance and establishment)							**1,504.34**

Feed production and utilisation			
Feed produced (kgDM/ha)			15,000
Feed utilisation (kgDM/ha)	Utilisation %	70%	**10,500**

Cost of feed ($/kgDM)	**$0.14**

Risk assessment

Risk factors	**Risk inputs** High	Budgeted	Low	**$/kgDM** High	Budgeted	Low	**% change in $/kgDM** High	Budgeted	Low
DM utilised (kg/ha)	25,000	10,500	17,500	0.06	0.14	0.09	-58%	0%	-40%
Irrigation cost ($/M)	$130	$120	$60	0.15	0.14	0.12	3%	0%	-17%
Irrigation use (ML/ha)	10.0	4.0	5.0	0.21	0.14	0.15	48%	0%	8%

Cost per kgDM and the %changes show the effect of a change in 1 risk factor with the others remaining at the budgeted level

Cost per kg DM at varying amounts of utilisation and irrigation use

		Dry mater utilisation (kg/ha)				
		6,300	8,400	10,500	12,600	14,700
Irrigation use (ML/ha)	2.4	0.21	0.16	0.12	0.10	0.09
	3.2	0.22	0.17	0.13	0.11	0.10
	4.0	0.24	0.18	0.14	0.12	0.10
	4.8	0.25	0.19	0.15	0.13	0.11
	5.6	0.27	0.20	0.16	0.13	0.12

Ryegrass (annual) - Irrigated and grazed

Assumptions			**Ryegrass**
Machinery costs include Fuel, oil, repairs and maintenance			**Irrigated**
Ryegrass direct drilled into kikuyu after mulching			**Grazed**
Irrigation costs	$120	/ML	

Operation	Month	Machinery $/ha	Inputs Units/ha	Unit	$/unit	$/ha	Total $/ha
Mulching of kikuyu	Mar	30.82				0.00	30.82
Planting and seed using a direct drill	Apr	32.88	65	kg	$5.00	325.00	357.88
Fertiliser, DAP (with above)			125	kg	$1.40	175.00	175.00
Fertiliser, Urea using spreader	May	5.56	100	kg	$1.20	120.00	125.56
Fertiliser, Urea using spreader	Jun	5.56	100	kg	$1.20	120.00	125.56
Fertiliser, Greentop K using spreader	Jul	5.56	150	kg	$1.10	165.00	170.56
Fertiliser, Urea using spreader	Aug	5.56	100	kg	$1.20	120.00	125.56
Fertiliser, Urea using spreader	Sep	5.56	100	kg	$1.20	120.00	125.56
Fertiliser, Greentop K using spreader	Oct	5.56	150	kg	$1.10	165.00	170.56
Fertiliser, Urea using spreader	Nov	5.56	100	kg	$1.20	120.00	125.56
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
Irrigation	Various		6.0	ML	$120.00	720.00	720.00
Total annual cost (maintenance and establishment)							**2,252.62**

Feed production and utilisation			
Feed produced (kgDM/ha)			15,000
Feed utilisation (kgDM/ha)	Utilisation %	70%	**10,500**

Cost of feed ($/kgDM)	**$0.21**

Risk assessment

Risk factors	**Risk inputs** High	Budgeted	Low	**$/kgDM** High	Budgeted	Low	**% change in $/kgDM** High	Budgeted	Low
DM utilised (kg/ha)	12,600	10,500	8,400	0.18	0.21	0.27	-17%	0%	25%
Irrigation cost ($/M)	$144	$120	$96	0.23	0.21	0.20	6%	0%	-6%
Irrigation use (ML/ha)	7.2	6.0	4.8	0.23	0.21	0.20	6%	0%	-6%

Cost per kgDM and the %changes show the effect of a change in 1 risk factor with the others remaining at the budgeted level

Cost per kg DM at varying amounts of utilisation and irrigation use

		Dry mater utilisation (kg/ha) 6,300	8,400	10,500	12,600	14,700
	3.6	0.31	0.23	0.19	0.16	0.13
Irrigation	4.8	0.33	0.25	0.20	0.17	0.14
use	6.0	0.36	0.27	0.21	0.18	0.15
(ML/ha)	7.2	0.38	0.29	0.23	0.19	0.16
	8.4	0.40	0.30	0.24	0.20	0.17

Sorghum (forage) - Irrigated and grazed

Assumptions			**Forage sorghum**
Machinery costs include Fuel, oil, repairs and maintenance			**Irrigated**
			Grazed
Irrigation costs	$120	/ML	

Operation	Month	Machinery $/ha	Inputs Units/ha	Unit	$/unit	$/ha	Total $/ha
Offset discs	Oct	34.35				0.00	34.35
Spray - Roundup	Oct	7.82	3.0	L	$6.80	20.40	28.22
Spray - Atrazine (now dry formulation)	Oct	7.82	1.5	kg	$7.30	10.95	18.77
Power harrows	Oct	52.22				0.00	52.22
Planting and seed using a combine	Oct	22.38	12	kg	$9.00	108.00	130.38
Fertiliser, CK88 (with above)			200	kg	$1.36	272.00	272.00
Muriate of Potash (with above)			60	kg	$1.20	72.00	72.00
Fertiliser, Urea using spreader	Nov	5.56	100	kg	$1.20	120.00	125.56
Fertiliser, Urea using spreader	Dec	5.56	100	kg	$1.20	120.00	125.56
Fertiliser, Urea using spreader	Jan	5.56	100	kg	$1.20	120.00	125.56
Fertiliser, Urea using spreader	Feb	5.56	100	kg	$1.20	120.00	125.56
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
Irrigation	Various		2.5	ML	$120.00	300.00	300.00
Total annual cost (maintenance and establishment)							**1,410.18**

Feed production and utilisation			
Feed produced (kgDM/ha)			17,000
Feed utilisation (kgDM/ha)	Utilisation %	60%	**10,200**

Cost of feed ($/kgDM)	**$0.14**

Risk assessment

Risk factors	**Risk inputs** High	Budgeted	Low	**$/kgDM** High	Budgeted	Low	**% change in $/kgDM** High	Budgeted	Low
DM utilised (kg/ha)	12,240	10,200	8,160	0.12	0.14	0.17	-17%	0%	25%
Irrigation cost ($/M)	$144	$120	$96	0.14	0.14	0.13	4%	0%	-4%
Irrigation use (ML/ha)	3.0	2.5	2.0	0.14	0.14	0.13	4%	0%	-4%

Cost per kgDM and the %changes show the effect of a change in 1 risk factor with the others remaining at the budgeted level

Cost per kg DM at varying amounts of utilisation and irrigation use

		Dry mater utilisation (kg/ha) 6,120	8,160	10,200	12,240	14,280
Irrigation use (ML/ha)	1.5	0.21	0.16	0.13	0.11	0.09
	2.0	0.22	0.17	0.13	0.11	0.09
	2.5	0.23	0.17	0.14	0.12	0.10
	3.0	0.24	0.18	0.14	0.12	0.10
	3.5	0.25	0.19	0.15	0.13	0.11

Sorghum (forage) - Irrigated and cut for silage

Assumptions			**Forage sorghum**
Machinery costs include Fuel, oil, repairs and maintenance			**Irrigated**
			Silage
Irrigation costs	$120	/ML	

Operation	Month	Machinery $/ha	Inputs Units/ha	Unit	$/unit	$/ha	Total $/ha
Offset discs	Oct	34.35				0.00	34.35
Spray - Roundup	Oct	7.82	3.0	L	$6.80	20.40	28.22
Spray - Atrazine (now dry form)	Oct	7.82	1.5	kg	$7.30	10.95	18.77
Power harrows	Oct	52.22				0.00	52.22
Planting and seed using a combine	Oct	22.38	12	kg	$9.00	108.00	130.38
Fertiliser, CK88 (with above)			200	kg	$1.36	272.00	272.00
Muriate of Potash (with above)			60	kg	$1.20	72.00	72.00
Fertiliser, Urea (with above)			100	kg	$1.20	120.00	120.00
						0.00	0.00
Cut and ensile	Dec-Jan	→	35	t (wet)	$26.00	910.00	910.00
Fertiliser, Urea using spreader	Dec	5.56	200	kg	$1.20	240.00	245.56
						0.00	0.00
Cut and ensile	Mar	→	15	t (wet)	$26.00	390.00	390.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
Irrigation	Various		2.5	ML	$120.00	300.00	300.00
Total annual cost (maintenance and establishment)							**2,573.50**

Feed production and utilisation			
Feed produced (kgDM/ha)			17,000
Feed utilisation (kgDM/ha)	Utilisation %	100%	**17,000**

Cost of feed ($/kgDM)			**$0.15**
Cost of feed ($/tonne as fed)	Dry Matter %	34%	**$51.47**

Risk assessment

Risk factors	**Risk inputs** High	Budgeted	Low	**$/kgDM** High	Budgeted	Low	**% change in $/kgDM** High	Budgeted	Low
DM utilised (kg/ha)	20,400	17,000	13,600	0.13	0.15	0.19	-17%	0%	25%
Irrigation cost ($/M)	$144	$120	$96	0.15	0.15	0.15	2%	0%	-2%
Irrigation use (ML/ha)	3.0	2.5	2.0	0.15	0.15	0.15	2%	0%	-2%

Cost per kgDM and the %changes show the effect of a change in 1 risk factor with the others remaining at the budgeted level

Cost per kg DM at varying amounts of utilisation and irrigation use

		Dry mater utilisation (kg/ha) 10,200	13,600	17,000	20,400	23,800
Irrigation use (ML/ha)	1.5	0.24	0.18	0.14	0.12	0.10
	2.0	0.25	0.18	0.15	0.12	0.11
	2.5	0.25	0.19	0.15	0.13	0.11
	3.0	0.26	0.19	0.15	0.13	0.11
	3.5	0.26	0.20	0.16	0.13	0.11

Sorghum (forage) - Dryland and grazed

Assumptions			**Forage sorghum**
Machinery costs include Fuel, oil, repairs and maintenance			**Dryland**
			Grazed
Irrigation costs	$0	/ML	

Operation	Month	Machinery $/ha	Inputs Units/ha	Unit	$/unit	$/ha	Total $/ha
Offset discs	Oct	34.35				0.00	34.35
Spray - Roundup	Oct	7.82	3.0	L	$6.80	20.40	28.22
Spray - Atrazine (now dry form)	Oct	7.82	1.5	kg	$7.30	10.95	18.77
Power harrows	Oct	52.22				0.00	52.22
Planting and seed using a combine	Oct	22.38	10	kg	$9.00	90.00	112.38
Fertiliser, CK88 (with above)			150	kg	$1.36	204.00	204.00
						0.00	0.00
Fertiliser, Urea using spreader	Dec	5.56	100	kg	$1.20	120.00	125.56
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
Irrigation	Various		0.0	ML	$0.00	0.00	0.00
Total annual cost (maintenance and establishment)							**575.50**

Feed production and utilisation			
Feed produced (kgDM/ha)			9,000
Feed utilisation (kgDM/ha)	Utilisation %	60%	**5,400**

Cost of feed ($/kgDM)	**$0.11**

Risk assessment

Risk factors	**Risk inputs** High	Budgeted	Low	**$/kgDM** High	Budgeted	Low	**% change in $/kgDM** High	Budgeted	Low
DM utilised (kg/ha)	6,480	5,400	4,320	0.09	0.11	0.13	-17%	0%	25%
Irrigation cost ($/M)	$0	$0	$0	0.11	0.11	0.11	0%	0%	0%
Irrigation use (ML/ha)	0.0	0.0	0.0	0.11	0.11	0.11	0%	0%	0%

Cost per kgDM and the %changes show the effect of a change in 1 risk factor with the others remaining at the budgeted level

Cost per kg DM at varying amounts of utilisation and irrigation use

		Dry mater utilisation (kg/ha)				
		3,240	4,320	5,400	6,480	7,560
	0.0	0.18	0.13	0.11	0.09	0.08
Irrigation	0.0	0.18	0.13	0.11	0.09	0.08
use	0.0	0.18	0.13	0.11	0.09	0.08
(ML/ha)	0.0	0.18	0.13	0.11	0.09	0.08
	0.0	0.18	0.13	0.11	0.09	0.08

Sorghum (forage) – Dryland and cut for silage

Assumptions			**Forage sorghum**
Machinery costs include Fuel, oil, repairs and maintenance			**Dryland**
			Silage
Irrigation costs	$0	/ML	

Operation	Month	Machinery $/ha	Inputs Units/ha	Unit	$/unit	$/ha	Total $/ha
Offset discs	Oct	34.35				0.00	34.35
Spray - Roundup	Oct	7.82	3.0	L	$6.80	20.40	28.22
Spray - Atrazine	Oct	7.82	1.5	kg	$7.30	10.95	18.77
Diamond harrows	Oct	13.67				0.00	13.67
Planting and seed using a combine	Oct	22.38	10	kg	$9.00	90.00	112.38
Fertiliser, CK88 (with above)			150	kg	$1.10	165.00	165.00
Muriate of Potash (with above)			60	kg	$1.10	66.00	66.00
Fertiliser, Urea (with above)			80	kg	$1.20	96.00	96.00
						0.00	0.00
Cut and ensile	Jan	→	25	t (wet)	$28.00	700.00	700.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
Irrigation			0.0	ML	$0.00	0.00	0.00
Total annual cost (maintenance and establishment)							**1,234.39**

Feed production and utilisation			
Feed produced (kgDM/ha)			9,000
Feed utilisation (kgDM/ha)	Utilisation %	100%	**9,000**

Cost of feed ($/kgDM)			**$0.14**
Cost of feed ($/tonne as fed)	Dry Matter %	36%	**$49.38**

Risk assessment

Risk factors	**Risk inputs** High	Budgeted	Low	**$/kgDM** High	Budgeted	Low	**% change in $/kgDM** High	Budgeted	Low
DM utilised (kg/ha)	10,800	9,000	7,200	0.11	0.14	0.17	-17%	0%	25%
Irrigation cost ($/M)	$0	$0	$0	0.14	0.14	0.14	0%	0%	0%
Irrigation use (ML/ha)	0.0	0.0	0.0	0.14	0.14	0.14	0%	0%	0%

Cost per kgDM and the %changes show the effect of a change in 1 risk factor with the others remaining at the budgeted level

Sorghum (grain) - Irrigated and cut for silage

Assumptions			**Grain sorghum**
Machinery costs include Fuel, oil, repairs and maintenance			**Irrigated**
			Silage
Irrigation costs	$120	/ML	

Operation	Month	Machinery $/ha	Inputs Units/ha	Unit	$/unit	$/ha	Total $/ha
Offset discs	Oct	34.35				0.00	34.35
Spray - Roundup	Oct	5.56	3.0	L	$6.80	20.40	25.96
Spray - Atrazine	Oct	5.56	1.5	L	$7.30	10.95	16.51
Power harrows	Oct	52.22				0.00	52.22
Planting and seed using a combine	Oct	22.38	6.0	kg	$26.25	157.50	179.88
Fertiliser, CK88 (with above)			200	kg	$1.10	220.00	220.00
Muriate of Potash (with above)			100	kg	$1.10	110.00	110.00
Fertiliser, Urea (with above)			150	kg	$1.20	180.00	180.00
						0.00	0.00
Cut and ensile	Jan	→	35	t (wet)	$28.00	980.00	980.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
Irrigation	Various		2.0	ML	$120.00	240.00	240.00
Total annual cost (maintenance and establishment)							**2,038.92**

Feed production and utilisation			
Feed produced (kgDM/ha)			11,500
Feed utilisation (kgDM/ha)	Utilisation %	100%	**11,500**

Cost of feed ($/kgDM)			**$0.18**
Cost of feed ($/tonne as fed)	Dry Matter %	33%	**$58.25**

Risk assessment

Risk factors	**Risk inputs** High	Budgeted	Low	**$/kgDM** High	Budgeted	Low	**% change in $/kgDM** High	Budgeted	Low
DM utilised (kg/ha)	13,800	11,500	9,200	0.15	0.18	0.22	-17%	0%	25%
Irrigation cost ($/M)	$144	$120	$96	0.18	0.18	0.17	2%	0%	-2%
Irrigation use (ML/ha)	2.4	2.0	1.6	0.18	0.18	0.17	2%	0%	-2%

Cost per kgDM and the %changes show the effect of a change in 1 risk factor with the others remaining at the budgeted level

Cost per kg DM at varying amounts of utilisation and irrigation use

		Dry mater utilisation (kg/ha) 6,900	9,200	11,500	13,800	16,100
Irrigation use (ML/ha)	1.2	0.28	0.21	0.17	0.14	0.12
	1.6	0.29	0.22	0.17	0.14	0.12
	2.0	0.30	0.22	0.18	0.15	0.13
	2.4	0.30	0.23	0.18	0.15	0.13
	2.8	0.31	0.23	0.19	0.15	0.13

Soybean - Irrigated and cut for silage

Assumptions			**Soybean Irrigated Silage**
Machinery costs include Fuel, oil, repairs and maintenance			
Irrigation costs	$120	/ML	

Operation	Month	Machinery $/ha	Inputs Units/ha	Inputs Unit	Inputs $/unit	Inputs $/ha	Total $/ha
Spray - Haloxyfop-R	Nov	7.82	0.075	kg	$78.68	5.90	13.72
Offset discs	Nov	34.35				0.00	34.35
Spray - Roundup	Nov	7.82	3.0	L	$6.80	20.40	28.22
Power Harrows	Nov	52.22				0.00	52.22
Planting and seed using a combine	Nov	22.38	75	kg	$3.20	240.00	262.38
Fertiliser, CK88 using spreader	Nov	5.56	150.0	kg	$1.10	165.00	170.56
Spray - Intrepid Edge	Jan	7.82	0.5	L	525.00	262.50	270.32
						0.00	0.00
						0.00	0.00
Harvest & ensile		→	25.0	t (wet)	$30.00	750.00	750.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
Irrigation	Various		2.0	ML	$120.00	240.00	240.00
Total annual cost (maintenance and establishment)							**1,821.77**

Feed production and utilisation			
Feed produced (kgDM/ha)			8,250
Feed utilisation (kgDM/ha)	Utilisation %	100%	**8,250**

Cost of feed ($/kgDM)			**$0.22**
Cost of feed ($/tonne as fed)	Dry Matter %	33%	**$72.87**

Risk assessment

Risk factors	**Risk inputs**			**$/kgDM**			**% change in $/kgDM**		
	High	Budgeted	Low	High	Budgeted	Low	High	Budgeted	Low
DM utilised (kg/ha)	9,900	8,250	6,600	0.18	0.22	0.28	-17%	0%	25%
Irrigation cost ($/M)	$144	$120	$96	0.23	0.22	0.22	3%	0%	-3%
Irrigation use (ML/ha)	2.4	2.0	1.6	0.23	0.22	0.22	3%	0%	-3%

Cost per kgDM and the %changes show the effect of a change in 1 risk factor with the others remaining at the budgeted level

Cost per kg DM at varying amounts of utilisation and irrigation use

		Dry mater utilisation (kg/ha)				
		4,950	6,600	8,250	9,900	11,550
Irrigation use (ML/ha)	1.2	0.35	0.26	0.21	0.17	0.15
	1.6	0.36	0.27	0.22	0.18	0.15
	2.0	0.37	0.28	0.22	0.18	0.16
	2.4	0.38	0.28	0.23	0.19	0.16
	2.8	0.39	0.29	0.23	0.19	0.17

Triticale - Irrigated and cut for silage

Assumptions			**Triticale Irrigated Silage**
Machinery costs per ha include Fuel, oil, repairs and maintenance			
Irrigation costs	$120	/ML	

Operation	Month	Machinery $/ha	Inputs Units/ha	Unit	$/unit	$/ha	Total $/ha
Offset discs	May	34.35				0.00	34.35
Spray - Roundup	May	7.82	3.0	L	$6.80	20.40	28.22
Power harrows	May	52.22				0.00	52.22
Planting and seed using a combine	June	22.38	70	kg	$2.30	161.00	183.38
Fertiliser, DAP (with above)			125	kg	$1.40	175.00	175.00
Fertiliser, CK88 (with above)			250	kg	$1.10	275.00	275.00
						0.00	0.00
Harvest & ensile	Sep	→	35	t (wet)	$28.00	980.00	980.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
Irrigation	Various		2.0	ML	$120.00	240.00	240.00
Total annual cost (maintenance and establishment)							**1,968.17**

Feed production and utilisation			
Feed produced (kgDM/ha)			11,500
Feed utilisation (kgDM/ha)	Utilisation %	100%	**11,500**

Cost of feed ($/kgDM)			**$0.17**
Cost of feed ($/tonne as fed)	Dry Matter %	33%	**$56.23**

Risk assessment

Risk factors	**Risk inputs** High	Budgeted	Low	**$/kgDM** High	Budgeted	Low	**% change in $/kgDM** High	Budgeted	Low
DM utilised (kg/ha)	13,800	11,500	9,200	0.14	0.17	0.21	-17%	0%	25%
Irrigation cost ($/M)	$144	$120	$96	0.18	0.17	0.17	2%	0%	-2%
Irrigation use (ML/ha)	2.4	2.0	1.6	0.18	0.17	0.17	2%	0%	-2%

Cost per kgDM and the %changes show the effect of a change in 1 risk factor with the others remaining at the budgeted level

Cost per kg DM at varying amounts of utilisation and irrigation use

		Dry mater utilisation (kg/ha) 6,900	9,200	11,500	13,800	16,100
Irrigation use (ML/ha)	1.2	0.27	0.20	0.16	0.14	0.12
	1.6	0.28	0.21	0.17	0.14	0.12
	2.0	0.29	0.21	0.17	0.14	0.12
	2.4	0.29	0.22	0.18	0.15	0.13
	2.8	0.30	0.22	0.18	0.15	0.13

Wheat – Irrigated and cut for silage

Assumptions			**Wheat Irrigated Silage**
Machinery costs per ha include Fuel, oil, repairs and maintenance			
Irrigation costs	$120	/ML	

Operation	Month	Machinery $/ha	Inputs Units/ha	Unit	$/unit	$/ha	Total $/ha
Offset discs	May	34.35				0.00	34.35
Spray - Roundup	May	7.82	3.0	L	$6.80	20.40	28.22
Power harrows	May	52.22				0.00	52.22
Planting and seed using a combine	June	22.38	70	kg	$1.35	94.50	116.88
Fertiliser, DAP (with above)			125	kg	$1.40	175.00	175.00
Fertiliser, Muriate of Potash (with above)			125	kg	$1.10	137.50	137.50
Fertiliser, Urea using spreader	Jul	5.56	100	kg	$1.20	120.00	125.56
						0.00	0.00
Harvest & ensile	Sep	→	30	t (wet)	$28.00	840.00	840.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
Irrigation	Various		2.0	ML	$120.00	240.00	240.00
Total annual cost (maintenance and establishment)							**1,749.73**

Feed production and utilisation			
Feed produced (kgDM/ha)			10,000
Feed utilisation (kgDM/ha)	Utilisation %	100%	**10,000**

Cost of feed ($/kgDM)			**$0.17**
Cost of feed ($/tonne as fed)	Dry Matter %	33%	**$58.32**

Risk assessment

Risk factors	**Risk inputs** High	Budgeted	Low	**$/kgDM** High	Budgeted	Low	**% change in $/kgDM** High	Budgeted	Low
DM utilised (kg/ha)	12,000	10,000	8,000	0.15	0.17	0.22	-17%	0%	25%
Irrigation cost ($/M)	$144	$120	$96	0.18	0.17	0.17	3%	0%	-3%
Irrigation use (ML/ha)	2.4	2.0	1.6	0.18	0.17	0.17	3%	0%	-3%

Cost per kgDM and the %changes show the effect of a change in 1 risk factor with the others remaining at the budgeted level

Cost per kg DM at varying amounts of utilisation and irrigation use

		Dry mater utilisation (kg/ha) 6,000	8,000	10,000	12,000	14,000
Irrigation use (ML/ha)	1.2	0.28	0.21	0.17	0.14	0.12
	1.6	0.28	0.21	0.17	0.14	0.12
	2.0	0.29	0.22	0.17	0.15	0.12
	2.4	0.30	0.22	0.18	0.15	0.13
	2.8	0.31	0.23	0.18	0.15	0.13

Wheat – Dryland and cut for silage

Assumptions			**Wheat Dryland Silage**
Machinery costs per ha include Fuel, oil, repairs and maintenance			
Irrigation costs	$0	/ML	

Operation	Month	Machinery $/ha	Inputs Units/ha	Unit	$/unit	$/ha	Total $/ha
Offset discs	May	34.35				0.00	34.35
Spray - Roundup	May	7.82	3.0	L	$6.80	20.40	28.22
Planting and seed using a combine	Apr	22.38	60	kg	$1.35	81.00	103.38
Fertiliser, DAP (with above)			125	kg	$1.40	175.00	175.00
Fertiliser, CK88 (with above)			150	kg	$1.10	165.00	165.00
						0.00	0.00
						0.00	0.00
Harvest & ensile	Sep	→	20	t (wet)	$28.00	560.00	560.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
						0.00	0.00
Irrigation	Various		0.0	ML	$0.00	0.00	0.00
Total annual cost (maintenance and establishment)							**1,065.95**

Feed production and utilisation			
Feed produced (kgDM/ha)			6,500
Feed utilisation (kgDM/ha)	Utilisation %	100%	**6,500**

Cost of feed ($/kgDM)			**$0.16**
Cost of feed ($/tonne as fed)	Dry Matter %	33%	**$53.30**

Risk assessment

Risk factors	**Risk inputs** High	Budgeted	Low	**$/kgDM** High	Budgeted	Low	**% change in $/kgDM** High	Budgeted	Low
DM utilised (kg/ha)	7,800	6,500	5,200	0.14	0.16	0.20	-17%	0%	25%
Irrigation cost ($/M)	$0	$0	$0	0.16	0.16	0.16	0%	0%	0%
Irrigation use (ML/ha)	0.0	0.0	0.0	0.16	0.16	0.16	0%	0%	0%

Cost per kgDM and the %changes show the effect of a change in 1 risk factor with the others remaining at the budgeted level