

**IN THE MATTER** of the Resource Management Act  
1991

**AND**

**IN THE MATTER** of the Proposed Canterbury Land  
and Water Regional Plan

**STATEMENT OF EVIDENCE OF GEOFFREY BUTCHER FOR THE GROUP TWO  
HEARING**

**1. INTRODUCTION**

1.1 My name is Geoffrey Vernon Butcher. I am director of Butcher Partners Ltd, an economic consultancy with office in Christchurch. I have the qualifications and experience set out in my statement of evidence presented to the Committee for the Group 1 hearing in relation to the Proposed Canterbury Land and Water

1.2 I have read and am familiar with the Code of Conduct for Expert Witnesses outlined in the Environment Court's Practice Note 1 November 2011 and although this is a Regional Council hearing, I have complied with it in preparing this evidence. I also agree to follow the Code when presenting evidence to the Hearing Committee. I confirm that the issues addressed in this brief of evidence are within my area of expertise and I have not omitted to consider material facts known to me that might alter or detract from my expressed opinions.

**2. SCOPE OF EVIDENCE**

2.1 I have been asked by Dairy New Zealand and Fonterra to discuss:

- (a) The economic impacts and benefits associated with changes in land use and in particular conversion to irrigated dairy farming;
- (b) The implications of not converting 1,000 Ha per year in the Temuka and Waimakariri zones to dairy farming, and of continuing that policy for five

years, and discussing the relevance of these results to Fonterra's proposed changes to policies and rules related to changes in land use (policy 4.31 and rules 5.39 – 5.49);

- (c) The implications for economic efficiency of not permitting the completion of dairy conversions which have already begun.

### **3. POTENTIAL GROWTH IN DAIRY FARMING IN CANTERBURY**

- 3.1 Canterbury land in dairy production has increased by an average of 8.4 % per year over the last 13 years. Over that same period the production of milk solids has increased by an average of 12.6 % per annum. This demonstrates the economic efficiency, from a commercial perspective, of using the land resource for dairying. Efficiency from a wider economic perspective needs to take into account any impact of various land uses on the environment.
- 3.2 The area in dairying in Canterbury has increased by an average of 11,000 Ha per year over the last decade, and 14,000 Ha per year over the last five years. There is enormous potential for further growth provided that:
  - (a) sufficient additional land can be irrigated and that environmental constraints do not prevent further conversion to dairying; and
  - (b) the transaction costs of converting land to dairying do not unduly discourage change.
- 3.3 Ms Hayward refers in her evidence<sup>1</sup> to areas of land in Temuka and Ashley-Waimakariri zones where, in her view, a change in land use could occur without creating environmental problems of the sort which rule 5.45 is intended to prevent<sup>2</sup>. She estimates that there is currently approximately 22,000 Ha of irrigated dairying in these zones, and that there is a further 36,000 Ha of currently irrigated land which I note could potentially be converted to dairy. I understand that probably<sup>3</sup> a variation to the irrigation consents to set N limits for

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1. Hayward, S.A. Statement of Evidence for the Group 2 Hearing.

2. "The data for these zones indicate that there is potential assimilative capacity in areas of these zones that could allow some further development, providing appropriate measures are put in place as would be likely required for a land use change consent in an 'orange' zone". *Ibid*, section 7.3

3. See Environment Canterbury Advice Note "Proposed Land and Water Regional Plan: Nutrient Provisions Update – 20 November 2012. The note repeats a common question

that 36,000 Ha could be sought, although the N limit set will be that of the original activity for which the consent was granted. If the irrigation consents do not have and are unable to get associated N limits suitable for dairying, conversion of that land to dairying will not comply with rule 5.42 and cannot occur as of right.

- 3.4 Ms Hayward estimates that there is a further 54,000 Ha of potentially irrigable land in Temuka and Ashley-Waimakariri which I note could be converted to dairying provided irrigation is available<sup>4</sup>, but this will also fall under rule 5.45 and conversion to dairying under the proposed Plan will be a non-complying activity. Hence there is in total 88,000 Ha which could potentially be converted to dairying.

**Table 1. Potential for Dairy Conversion in Ashley-Waimakariri and Temuka Zones**

	Irrigable Area in Red Zone	Currently Irrigated (excludes Central Plains Irrigation Scheme)			Potentially irrigable	Total Potential for Dairy
		Total	Currently Dairy	Potential for conversion	Potential dairying	
	A	B	C	D = B - C	E = A-B	F = D + E
Ashley-Waimakariri	85,000	36,000	13,600	20,400	49,000	71,400
Temuka	27,000	22,000	8,600	13,400	5,000	18,400
<b>Combined</b>	112,000	58,000	22,200	35,800	54,000	89,800

Source: *ibid.* Appendix 2

- 3.5 Fonterra is requesting that either the land be zoned orange, meaning that conversion becomes a discretionary activity under the proposed Plan, or that the recommendation of the s42A report, that the status of land use change on red zoned land become discretionary rather than non-complying, be implemented. In the following paragraphs I demonstrate the economic benefits and impacts associated with changing the status of a “change in land use” which allows this land to be used for dairying in appropriate circumstances.

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summarised as *Can I apply under s.127 of the RMA to add a nitrogen leaching condition to an existing water permit, to make a change in land use a permitted activity if the conditions of rule 5.42 are met?* The note continues “*The answer is yes, you can apply under s.127 of the RMA to vary the condition limiting the use of water. However, the maximum amount of nitrogen that may be leached will be that of the original activity for which the consent was granted.*”

4. I understand that there is significant water available in the Temuka zone, and ground water available in the Ashley – Waimakariri zone, albeit at considerable depth.

3.6 While there is considerable uncertainty about the amount of land in the Temuka and Ashley - Waimakariri zones that will convert to dairying if a change in land use is permitted, it seems likely that in the absence of rules limiting land use change perhaps 1,000<sup>5</sup> Ha per year would be converted. I am advised that the policy framework in the proposed Plan is such that obtaining a non-complying activity consent for conversion of these lands would be very difficult.

3.7 I note that in my evidence for the Group 1 hearing, I commented on the Council's proposed policy of only granting any such consent for a maximum of five years. For the reasons I discussed in that evidence such a short term would make most new consents uneconomic to use.

#### **4. IMPACTS AND COSTS OF REDUCED CONVERSION**

4.1 As I outlined in my previous evidence, conversion of land from one use to another can generate significant financial benefits. Net farm cash flow rises significantly with irrigation, even after allowances for the off-farm costs of irrigation, and the need to meet the interest cost on the significant additional investment. The results are shown in the right hand columns of Tables 2 & 3. Conversion from dryland sheep to irrigated dairying generates a net benefit of \$1,220 / Ha / year. Conversion from irrigated Sheep to irrigated dairying generates a benefit of \$527 / Ha / yr.

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5. Recent experience has been conversion of 10 – 15,000 Ha per year in Canterbury. I have been unable to find information on rates of conversion in the Temuka and Waimakariri zones. A total of 12,000 Ha is currently in dairying, and if the Canterbury average growth of 8.4 % per annum applies to this area, then the conversion will be about 1,000 Ha per year.

**Table 2 Farm Surplus by Land Use, and Benefits of Conversion from Dryland Sheep to Irrigated Farming (\$/Ha/yr)**

	Net Cash Surplus (\$/Ha/yr)		Net increase from Irrigation compared to dryland sheep (\$/Ha/yr)	On-farm Investment Costs and Required Returns @ 8 % (rounded)		Net Benefits of Irrigation c.f. dryland Sheep (\$/Ha/yr) rounded	Return on marginal Investment (% / yr)
	A	B	C=B (land use)-A(dryland sheep)	D	E=Dx8%	F=C-D	G = C / D
	Before off-farm irrig costs	After off-farm irrig costs *		Investment (\$ / Ha)	Required Return on capital (\$ / Ha / yr)	\$ / Ha / yr	
<b>Dryland</b>							
Arable	497	497					
Sheep	253	253					
Dairy Support	1,020	1,020					
<b>Irrigated</b>							
Dairy	3,688	3,158	2,905	21,000	1,680	1,220	14 %
Arable	1,288	758	506	3,400	270	240	15 %
Sheep	1,850	1,320	1,067	3,600	286	780	37 %
Finishing Dairy Support	2,204	1,674	1,421	3,100	246	1,170	50 %

Note: Specific situations may vary significantly from these broad averages depending on soil types, contour, rainfall, management regimes and specific crops. Arable refers to grain crops rather than more intensive horticultural crops such as potatoes. Irrigation off-farm costs are assumed to cost \$535 / Ha / year. In many cases costs will be significantly less, and in some cases will be more.

4.2 Returns to additional capital investment are about 14 % for dairy and arable farming and are much higher for sheep finishing at 37 % and dairy support at 54 %. The reason for the very high returns in the latter cases is the comparatively low investment. The actual increases in returns per Ha are significantly less for sheep finishing than for dairying, and the high returns from dairy support can only occur in conjunction with development of dairy farms, which require that support.

**Table 3 Change in Surplus and Benefit by Change in Irrigated Land Use**

	Operating Surplus (\$/Ha/yr)	Increase in annual surplus (\$/Ha/yr)		Additional On-farm Investment Costs and Annual cost @ 8 %				Net Benefit (\$/Ha/yr)	
		From Irrigated Arable	From Irrigated Sheep	From Arable		From Sheep		From Irrigated Arable	From Irrigated Sheep
				Capital	\$ / yr	Capital	\$ / yr		
A	B = A-A <sub>2</sub>	C = A-A <sub>3</sub>	D	E = D x8%	F	G = F x8%	H = B-E	I = C - G	
<b>To Irrigated</b>									
Dairy	3,158	2,400	1,838	17,600	1,410	16,400	1,311	990	527
Arable	758	--	-561	--	--	550	44	--	-605
Sheep	1,320	561	--	1,240	100	--	--	462	--
Finishing	1,674	915	354	740	60	-50	-4	856	358
Dairy Support									

Note: Figures will vary according to specific situations.

- 4.3 Using the economic impacts per Ha from Table 1 and the financial benefits from Tables 2 & 3 I have estimated the regional economic impacts, and the pure financial benefits, of conversion to dairying of 1,000 Ha per year. The figures are indicative only since they depend on whether the land was previously irrigated, and what the previous land use was.
- 4.4 The economic impacts of converting 1,000 Ha of dryland sheep, dryland cropping, irrigated sheep and irrigated cropping (250 Ha each) to irrigated dairying would be to increase total on-farm value added by \$4 million per year (including \$1.2 million / year of earned household income) and to increase on-farm employment by 24 jobs. The regional impacts would be an increase in regional GDP of \$9 million per year, including earned household income of \$4 million per year, and an additional 74 jobs in the region. After five years of such conversion, the economic impacts would be to increase regional GDP by \$46 million per year including \$20 million per year of earned household income, and to generate an additional 370 jobs.
- 4.5 As described earlier, if farming and supporting industries did not expand, then the capital and labour would have been available for use elsewhere. Whether other activities would have increased to absorb those resources, and whether they would have increased within the Canterbury Region cannot be reliably predicted.

**Table 4 Economic Impacts of conversion of 1,000 Ha per year to dairying.**

	On-Farm Impacts				Total Regional Impacts including Processing			
	Output	Jobs	Value Added	Earned Hhold Income	Output	Jobs	Value Added	Earned Hhold Income
	\$m/yr	FTE	\$m/yr	\$m/yr	\$m/yr	FTE	\$m/yr	\$m/yr
Loss of 250 Ha Dryland Arable	-0.4	-2	-0.1	-0.1	-5	-4	-0.4	-0.2
Loss of 250 Ha Dryland Sheep	-0.3	-1	-0.1	-0.0	-1	-5	-0.5	-0.3
Loss of 250 Ha Irrigated Arable	-1.0	-2	-0.5	-0.1	-2	-7	-1.0	-0.4
Loss of 250 Ha Irrigated Sheep	-1.5	-2	-0.6	-0.1	-5	-14	-1.9	-0.8
Gain of 1,000 Ha Irrigated Dairy	+11	+30	+5.3	+1.5	+38	+105	+13.0	+5.8
<b>Total after one year</b>	<b>+7.4</b>	<b>+24</b>	<b>+4.0</b>	<b>+1.2</b>	<b>+24</b>	<b>+74</b>	<b>+9.2</b>	<b>4.0</b>
<b>Total per year after five years</b>	<b>+37</b>	<b>+120</b>	<b>+20</b>	<b>+6</b>	<b>-121</b>	<b>+370</b>	<b>+46</b>	<b>+20</b>

4.6 I estimate that the conversion of 1,000 Ha from mixed land used to irrigated dairying will generate annual benefits of \$0.9 million per year if the opportunity cost of capital is assumed to be 8 % (see Table 5). Reducing the cost of capital to 5 % increases the net benefits to \$1.5 million per year.

4.7 After 5 years of converting 1,000 Ha per year, the net commercial benefits would be \$5 – 8 million per year, depending on the opportunity cost of capital. This estimate of benefits assumes that in the absence of the expansion of farming, the resources used in farming and support activities would have been used elsewhere and would have generated benefits equal to the payments made for those resources by farming and supporting activities. That is, there is no commercial economic benefit attributed to the additional economic activity off the farm. This is a very conservative viewpoint to take, given that District Plans for many councils have specific objectives of increased employment and economic activity, presumably because they see this as being of benefit to the community and do not think that the market will automatically adjust to provide employment to all who want it.

**Table 5 Economic Benefits of conversion of 1,000 Ha per year to Dairying**

	Benefits / Ha		Benefits of 250 Ha (\$m / yr)	
	8% cost of capital	5 % cost of capital	8% cost of capital	5 % cost of capital
Conversion of Dryland Arable to Irrigated Dairy	977	1,600	0.24	0.40
Conversion of Dryland Sheep to Irrigated Dairy	1,222	1,850	0.31	0.46
Conversion of Irrigated Arable to Irrigated Dairy	990	1,520	0.25	0.38
Conversion of Irrigated Sheep to Irrigated Dairy	527	1,020	0.13	0.25
Total after one year for 1,000 Ha Assumes equal conversion from land types			0.93	1.5
Total after five years			4.6	7.5

- 4.8 Rule 5.45, in concert with several of the policies of the proposed Plan (particularly policies 4.1, 4.2, 4.31, 4.32, 4.34 and 4.76), is likely to effectively prevent changes in land use which would achieve these outcomes. The rule change proposed by Fonterra, which would make land use changes in the Ashley-Waimakariri and Temuka zones discretionary, would very probably increase the amount of land being converted to dairying and hence would enable some portion of these benefits and employment impacts to be generated.
- 4.9 The purpose of the Plan rules is to avoid the costs which are believed to be associated with higher nitrates and hence a reduction in water quality. The question is whether the higher nitrates associated with land use changes will impose significant costs in terms of lower water quality, and whether these will outweigh the benefits and impacts I have estimated. I understand that the evidence of Ms Hayward is that there are areas within the Temuka and Ashley-Waimakariri Zones where higher nitrates may not cause significant environmental costs. In those areas it may be appropriate to allow land use changes because of the associated benefits.
- 4.10 If land use change were to be discretionary rather than non-complying, then the council could consider on a case-by-case basis whether a change in land use would have significant costs, and in particular whether those costs would outweigh the benefits.
- 4.11 A change to rule 5.45 to make changes in land use discretionary would also decrease the transactions costs associated with farmers seeking consent for a



land use change. I am advised that if land use change is “non-complying”, then a consent application would require a much more extensive and detailed case to be made than if the status were discretionary, and there would be a lower probability of consent being granted. This is not simply because of the environmental effects, but because the status of “non complying” itself brings in an additional statutory test and means that a proposal may receive resource consent only if its effects are no more than minor or if it is not contrary to the objectives and policies of the Plan. Given the objectives and policies of this Plan, passing the latter threshold test seems implausible. I am advised that a hearing is likely, and that total application costs are likely to be substantially higher than for an application classified as discretionary.

4.12 I have read the s32 analysis of these rules, and while there is discussion of the costs of obtaining consents<sup>6</sup>, I found no discussion of the likely costs of the rules in terms of lost benefits, nor of whether a discretionary status, such as is proposed by Fonterra, would be equally effective in achieving the objectives of staying within nutrient limits as well as more efficient in potentially enabling greater benefits where appropriate.

4.13 In my opinion the proposed non complying status is an effective way of ensuring that there is no increase in nitrate. However, I doubt that it is an efficient use of resources in all cases, taking into account both financial benefits and impacts on employment and household incomes in the wider community. I consider that changing the status of the activity to discretionary would enhance the probability of an efficient use of resources and of enabling communities to provide for their social and economic wellbeing.

## **5. EFFECTS OF NOT PERMITTING CONVERSIONS TO BE COMPLETED**

5.1 I am told that land conversion from other lower N-leaching uses to dairy which is underway but not completed by 11 August 2012 will be considered a “Change of Land Use” under the rules of the proposed Plan. Mr Griffiths<sup>7</sup> estimates that 13,000 Ha of land is currently in conversion to dairying, implies that 65<sup>8</sup> per cent of this is in the red zone, and informs me that and 55 per cent of these (16

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6. S32 Analysis. Table, p 67

7. Griffiths, Statement of evidence to Group 2 Hearing

8. Capital costs on all farms \$236 million; capital costs in the Red Zone \$154 million.

properties totalling 4,700 Ha)<sup>9</sup> are likely to be considered a “change” under the Plan. The annual production from those 16 properties is expected to reach \$45 million<sup>10 11</sup> per year at full production.

- 5.2 The loss of net benefits (benefits less costs) associated with non-conversion have already been described earlier in my evidence. However, farms which have already incurred conversion costs will suffer a pure loss per Ha since they will have incurred costs and will get no benefit. Fonterra is able to provide only limited information on the average level of costs that has been incurred to date. The costs will comprise some mix of consenting costs (professional fees and charges and farmer time planning for the proposed change) and spending on farm conversion. These costs will in large part be unrecoverable. Whereas the cost (lost benefit) of not undertaking conversion from dryland sheep to irrigated dairying is estimated to be \$1,222 per year, the cost of undertaking conversion but then getting no benefit from a change in land use is up to \$21,000 / Ha (see Table 2 above) of which perhaps \$8,000 / Ha could be non-recoverable<sup>12</sup>.
- 5.3 If all of the estimated 4,700 Ha (in conversion but unable to complete) had got to this stage, then the sunk cost would be \$38 million. On the other hand it could be as little as \$1 – 2 million if the application had not got beyond the planning and consenting stage and if contracts for construction had not yet been let.

## **6. CONCLUSION**

- 6.1 There are significant areas in the Ashley-Waimakariri and Temuka zones which could be converted to dairying if the associated land use change was changed from non-complying to discretionary. This is land which Ms Hayward believes has potential assimilative capacity to allow some further development.
- 6.2 Changing the status of this land to enable dairying on appropriate sites could generate significant financial net benefits as well as additional jobs and household income. If the growth in dairying in this area continues at the average 8.4 % per annum growth rate experienced by Canterbury in recent

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9. Griffiths; pers. comm.

10. Assuming a long term average price of \$6.40 / kg milk solids.

11. Griffiths, pers. comm.

12. Livestock, dairy company shares and some machinery can readily be sold again.

years, then there could be an additional 1,000 Ha of dairying per year. After five years, the net benefits of this would be \$5 - 8 million per year. At the regional level, taking into account on farm activity, processing and support industries for farming and processing, there would be an additional 370 jobs, and an additional \$20 million per year of earned household income.

- 6.3 An estimated 16 farms are in conversion in the Red Zone and may not be permitted to complete conversion under the rules. These farms would suffer a pure loss equivalent to any unrecoverable investment which they have made to date. The loss will depend on the stage to which these farms have got in their investment, but could be anything from \$1 – 2 million to \$20 – 30 million depending on the stage to which their conversions have got. If the conversion of those farms proceeds, then annual production of milk is expected to increase by \$45 million per annum in due course. This benefits and impacts of this is roughly equivalent<sup>13</sup> to the 5-year figures given in paragraph 6.2 above. That is, benefits could be of the order of \$5 – 8 million per year, and there could be an additional 370 jobs and \$20 million per year of earned household income.

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13. The area is somewhat less, but the productivity per Ha is expected to be significantly greater.

## APPENDIX 1

### FARM BUDGETS FOR THIS ANALYSIS

The following budgets have been used in this analysis. They are indicative only. Differences in soils, contour, rainfall and farming systems mean that individual budgets will vary widely from this.

ARABLE		\$ / Ha	Total / farm	SHEEP FINISHING		\$ / Ha	Total / farm	DAIRY SUPPORT		\$ / Ha	Total / farm
REVENUE				REVENUE				REVENUE			
25%	Wheat	656						Price	0.23	1,840.00	
25%	Barley	480		Ewe Breeding	85%	913					
50%	Livestock	537		Cattle	15%	148					
		-									
<b>GROSS FARM REVENUE</b>		<b>1,673</b>	<b>334,664</b>	<b>GROSS FARM REVENUE</b>		<b>1,061</b>	<b>212,276</b>	<b>TOTAL REVENUE</b>		<b>1,840</b>	<b>368,000</b>
<b>FARM WORKING EXPENSES</b>				<b>FARM WORKING EXPENSES</b>				<b>FARM WORKING EXPENSES</b>			
				11.64 SU/Ha	per SU						
Livestock Purchases		45		Livestock Purchases	9.43	110		Livestock Purchases			
Wages		54		Wages	4.00	47		Wages		50	
Animal Health		18		Animal Health	3.73	43		Animal Health		45	
Breeding		-		Breeding	-	-		Breeding			
Shed Expenses		-		Shed Expenses		-		Shed Expenses			
Electricity		7		Electricity	0.80	9		Electricity		9	
Feed		15		Feed	2.52	29		Feed		200	
Fertiliser		250		Fertiliser	11.36	132		Fertiliser		132	
Freight		18		Freight	1.08	13		Freight		13	
Seeds		50		Seeds	1.70	20		Seeds		31	
Shearing		26		Shearing	5.70	66		Shearing			
Weed and Pest		150		Weed and Pest	2.85	33		Weed and Pest		33	
Fuel		54		Fuel	3.55	41		Fuel		41	
Vehicle		40		Vehicle	2.80	33		Vehicle		33	
Repairs & Maint		50		Repairs & Maint	2.00	23		Repairs & Maint		23	
Rates		15		Rates		11		Rates		11	
Communication		7		Communication		5		Communication		5	
Insurance		12		Insurance		9		Insurance		9	
Acct, Legal,Cons		9		Acct, Legal,Cons		10		Acct, Legal,Cons		10	
Administration		5		Administration		4		Administration		4	
Other		3		Other		2		Other		2	
Irrigation	Off Farm			Irrigation	Off Farm			Irrigation	Off Farm	-	
	On Farm				On Farm				On Farm	-	
<b>CASH FARM EXPENDITURE</b>		<b>828</b>	<b>165,600</b>	<b>CASH FARM EXPENDITURE</b>		<b>641</b>	<b>128,101</b>	<b>CASH FARM EXPENDITURE</b>		<b>652</b>	<b>130,327</b>
<b>CASH FARM SURPLUS</b>		<b>845</b>	<b>169,064</b>	<b>CASH FARM SURPLUS</b>		<b>421</b>	<b>84,175</b>	<b>CASH FARM SURPLUS</b>		<b>1,188</b>	<b>237,673</b>

IRRIGATED SHEEP FINISHING					IRRIGATED DAIRY SUPPORT								
					\$ / Ha	Total							
REVENUE					REVENUE								
90%	Lamb Finishing	\$ 955	\$ 6	\$ 5,643			Price	\$ 0	\$ 3,795				
0%	Ewe Breeding	\$ -	\$ 92	\$ -									
10%	Beef Finishing	\$ 73	\$ 4	\$ 300									
GROSS FARM REVENUE					\$ 5,943	\$ 1,188,627	TOTAL REVENUE					\$ 3,795	\$ 759,000
FARM WORKING EXPENSES					FARM WORKING EXPENSES								
\$ 27	SU/Ha	per SU											
	Livestock Purchases	\$ 2,539	\$ 2,539				Livestock Purchases	\$ -					
	Wages	\$ 7	\$ 183				Wages	\$ 50					
	Animal Health	\$ 4	\$ 101				Animal Health	\$ 45					
	Breeding	\$ -	\$ -				Breeding	\$ -					
	Shed Expenses	\$ -	\$ -				Shed Expenses	\$ -					
	Electricity	\$ 2	\$ 45				Electricity	\$ 42					
	Feed	\$ 1	\$ 27				Feed	\$ 400					
	Fertiliser	\$ 11	\$ 307				Fertiliser	\$ 290					
	Freight	\$ 2	\$ 59				Freight	\$ 13					
	Seeds	\$ 3	\$ 94				Seeds	\$ 90					
	Shearing	\$ 2	\$ 41				Shearing	\$ -					
	Weed and Pest	\$ 3	\$ 89				Weed and Pest	\$ 84					
	Fuel	\$ 4	\$ 96				Fuel	\$ 45					
	Vehicle	\$ 2	\$ 64				Vehicle	\$ 38					
	Repairs & Maint	\$ 2	\$ 54				Repairs & Maint	\$ 100					
	Rates	\$ 20	\$ 20				Rates	\$ 20					
	Communication	\$ 8	\$ 8				Communication	\$ 8					
	Insurance	\$ 25	\$ 25				Insurance	\$ 25					
	Acct, Legal,Cons	\$ 13	\$ 13				Acct, Legal,Cons	\$ 13					
	Administration	\$ 7	\$ 7				Administration	\$ 7					
	Other	\$ 4	\$ 4				Other	\$ 4					
	Irrigation	Off Farm	Excluded	\$ -			Irrigation	Excluded	\$ -				
		On Farm		\$ 75				On Farm	\$ 75				
CASH FARM EXPENDITURE					\$ 3,851	\$ 770,212	CASH FARM EXPENDITURE					\$ 1,349	\$ 269,800
CASH FARM SURPLUS					\$ 2,092	\$ 418,415	CASH FARM SURPLUS					\$ 2,446	\$ 489,200