RUATANIWHA DAIRY CONVERSION FEASIBILITY STUDY

CASE STUDY

ANDERSONAG PROPERTY – ASHLEY FARM HAWKES BAY

Prepared by Chris Lewis & Stefan Bryant
Baker & Associates Ltd
P O Box 900
MASTERTON
Stefan – Mobile – 027 478 1534

PURPOSE

To analyse physical, financial and environmental performance of AndersonAg's dairy grazing and cropping operation compared with an irrigated dairy conversion on the same property.

EXECUTIVE SUMMARY

To assist the uptake of the irrigation scheme by landholders the Hawkes Bay Regional Council commissioned Baker & Associates to perform a case study with Graham & Craig Anderson of AndersonAg. This high level study looked into what physical, financial and environmental performance could be achieved from a dairy conversion on one of AndersonAg's properties.

Three AndersonAg properties were visited and it was decided to model their 219 ha property on Balfour Road, Tukituki currently being run as a dairy support farm. On this property three centre pivots could be built to irrigate a total of 160 ha.

For the purposes of this study it was assumed the current land owned by AndersonAg was freehold and all conversion costs were funded through debt. It was also assumed that the conversions would be fully shared up with Fonterra shares – see appendix for detail.

Milksolids production from the 600 cow conversion was 1144kgsMS/ha, the 650 cow conversion was 1429kgsMS/ha and the 300ha conversion was 1590kgMS/ha.

AndersonAg properties are all run to a very high standard and performance would be considered upper quartile. Current EBIT is $623/ha compared to the Beef and Lamb Economic Service Data 2012/13 of $315/ha for intensive East Coast finishing class.

Three dairy conversion models were constructed using the farm modelling tool Farmax Dairy. The three conversion models were built to show a Dairy NZ system 3 type conversion peak milking 600 cows and a system 4 type peak milking 650 cows on the AndersonAg property. A fully irrigated larger scale system 4 type model on a generic 300 ha Hawkes Bay property peak milking 1047 cows was also modelled to explore possible economies of scale.

Cash forecast and cash flow budgets were developed from the physical data that came out of the Farmax models. EBIT, return on assets and equity were calculated. Sensitivity analyses were calculated to determine the potential impact changing milk prices, milksolids production, interest rates, water charges and conversion costs would have on bottom line performance.

The financial results from the analysis show that by converting the dairy support block at Balfour Road to irrigated dairy, there is potential to improve physical, financial and environmental performance.

Environmental impacts of the systems were analysed by inputting physical data from the Farmax models into the Overseer version 6.1 nutrient modelling program. The current system had a nitrogen loss to water of 37 kg N / ha. The nitrogen losses to water for the three dairy conversion models ranged from 29 – 31 kg N / ha.

EBIT / ha was improved from $623 / ha under the current regime to a range between $2268 and $2927 / ha for the conversion models. Return on assets was increased from the current system of 3.54% to 5.02% for the 600 cow conversion, 5.85% for the 650 cow conversion and 5.8% for the 300 ha conversion.

Once conversion costs were accounted for and interest payments on debt calculated, the cash surplus result was $128,622 for the 600 cow conversion, $205,983 for the 650 cow conversion and $286,168 for the 300 ha conversion. This compares with a cash surplus for the current system of $130,880.

The financial performance of the dairy conversions was put through sensitivity analyses. While irrigation will lessen physical sensitivity from climatic conditions, the financial results are highly sensitive to milksolid price, interest rates, conversion costs and somewhat sensitive to water price. All these factors will need to be considered by landholders who are planning for conversion to dairy.

Sensitivity to differing levels of pasture utilisation rates were tested and analysed. Farm systems that achieve high levels of pasture utilisation will be more profitable than those that don't.

The proposed Ruataniwha Irrigation Scheme creates an opportunity for farms in the Ruataniwha basin to convert to dairy. Operators will need to target above average physical performance, efficient water use and best practise environmental management to generate a sustainable competitive return on assets and cash surplus.

This study gives a high level view of what AndersonAg could achieve on their Balfour Road property if they converted the farm to dairy. It was identified that if Graham & Craig decided to convert one of their farms to dairy they would pursue a high performance system. The model delivering favourable returns for this property was a System 4 operation peak milking 650 cows achieving 460 kg MS/cow.

It should be noted that this study has been commissioned at a high level and is not necessarily describing optimal or the maximum achievable performance. Capital and operating expenditure assumptions have been driven out of information made available to Baker & Associates by clients on the East Coast of the North Island.

SUMMARY TABLE

The following table is a summary of the case study findings.

Farm System	Cropping & Dairy Support	Dairy 600 cows	Dairy 650 cows	300 ha Dairy
MS Production		240,240	300,000	477,000
MS / ha		1,144	1,429	1,590
Pasture Harvest TDM / ha	6.65	10.94	11.37	11.97
Gross Revenue	$328,780	$1,631,560	$2,024,789	$3,198,325
Operating Expenses	$177,900	$1,084,504	$1,331,147	$2,176,148
Depreciation	$20,000	$70,750	$84,250	$144,200
EBIT	$130,880	$476,306	$609,392	$877,977
Debt Servicing (Int only)		$347,684	$403,409	$591,809
Cash Surplus (pre-tax & drawings)	$130,880	$128,622	$205,983	$286,168
Return on Assets	3.54%	5.02%	5.85%	5.80%
N loss to water kg/ha	37	29	29	31

PROCESS

Three properties belonging to AndersonAg were visited and assessed for their suitability of irrigation and conversion to dairy. The property chosen to model is on Balfour Road and is 219 ha in size. This property was chosen because the scale and soil type was deemed more typical for the district.

The soil type is Takapau silt loam which is a free draining soil. Annual rainfall is 900 mm per annum. Factors that limit pasture production on the farm are grass grub and regular droughts.

The property has a central race with 47 paddocks, water in every paddock and would be relatively easy to convert. Fences are of a high standard and are mainly 7 wire with 2 electric. There is a 4 bedroom house that would be suitable for a farm manager. There are sufficient sheds for calf rearing, hay storage, implements and vehicles that would be used post conversion, helping to reduce capital expenditure in these areas.

There is a row of pine trees running the full length of the boundary that will need to be removed to allow for centre pivot irrigation.

It was determined that 160 ha could be irrigated under three centre pivots, and a further 42 ha would be suitable for dryland dairy. An 8ha block which is not conveniently located to a cowshed site was modelled as a fodder beet block for winter grazing. It was assumed that 9 ha was a non-effective area and included houses, cowshed, races, effluent storage and trees, leaving 210 Ha as an effective dairy farming area. The farm map with irrigation blocks is in Appendix One.

The current system was modelled using long term physical and financial data provided by Graham & Craig Anderson. The dairy conversions were modelled using Farmax Dairy to gather physical and financial outcomes. Thomas Taylor from Ravensdown then used this information and modelled the predicted nutrient losses using Overseer version 6.1.

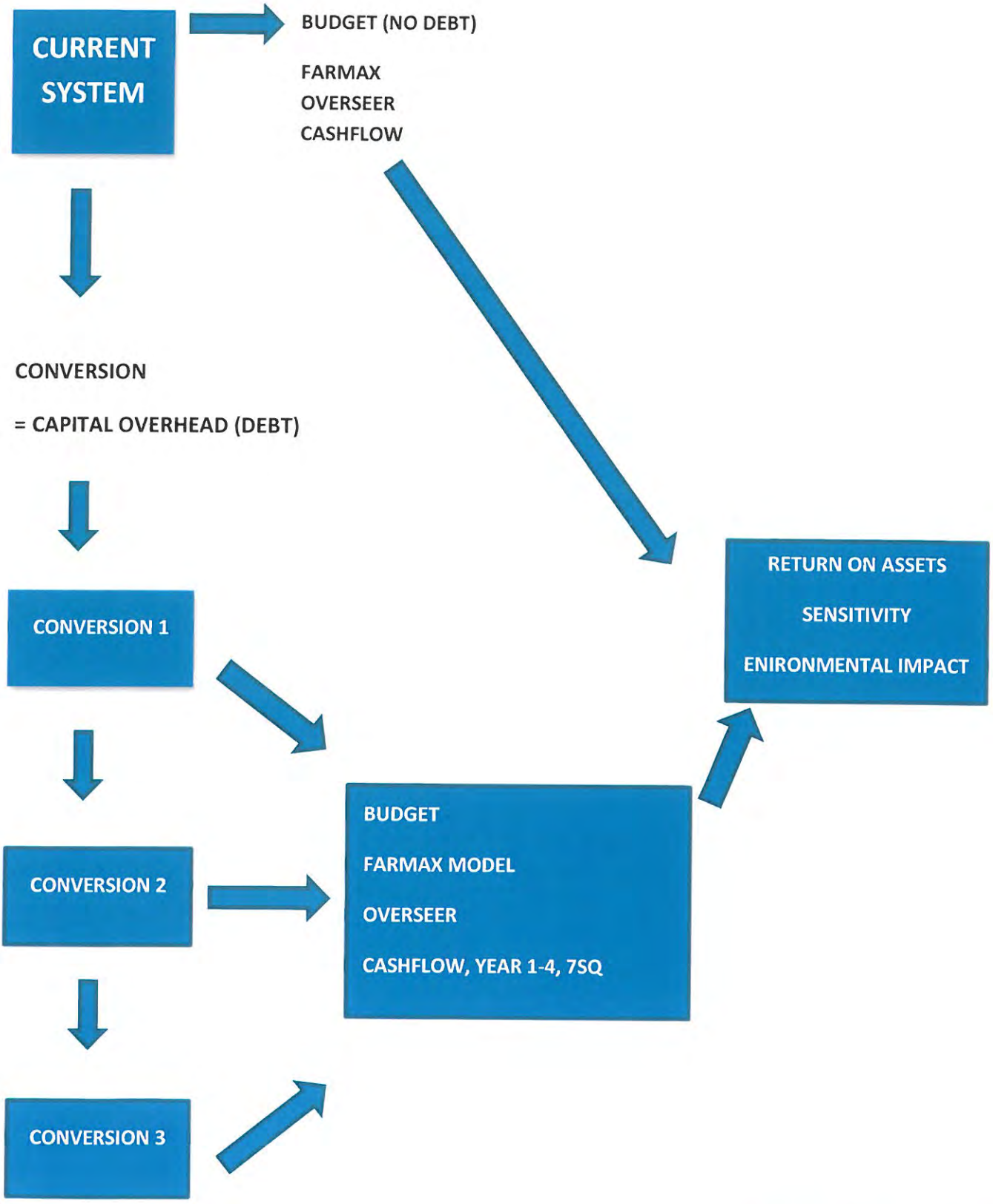
Cashflow and return on asset forecasts were then developed and sensitivity analyses for the dairy conversions were calculated to show the impact of changes in various factors including milksolids price and production, interest rates, water charges and capital cost of conversion.

No consideration has been given to personal drawings and taxation.

A fully irrigated block of 300 ha was also modelled to show potential gains of total farm irrigation in search of economies of scale.

PROCESS DIAGRAM

The following diagram shows the process used in the project.



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PHYSICAL DESCRIPTION OF FARM MODELS

Status Quo current system – cropping and dairy support

- Cropping 40 ha of barley annually, harvesting 6 T grain / ha @ $ 400 / T grain plus selling half of straw.
- Cropping 37 ha of kale annually, winter grazing on average 600 cows for 8 weeks @ $25 / head / week.
- Winter grazing 200 R2 dairy heifers for 4 weeks @ $18 / head / week.
- Grazing 300 R1 dairy heifers for 52 weeks May till May @ $9 / head / week.
- Grazing 100 weaner dairy calves from Dec till May @ $7 / head / week.

Dairy Conversion model 1

- 210 ha with 160 ha irrigated, 42 ha non irrigated and 8 ha in fodder beet.
- Peak milking 600 cows.
- Milk production 240,000 kgMS.
- Dairy NZ System 3 using maize silage and hay.
- No feed pad.
- 50 bale rotary cowshed.

Dairy Conversion model 2

- 210 ha with 160 ha irrigated, 42 ha non irrigated and 8 ha in fodder beet.
- Peak milking 650 cows.
- Milk production 300,000 kgMS.
- Dairy NZ System 4 using maize silage, barley, palm kernel and hay.
- In shed feeding.
- Feed pad.
- 50 bale rotary cowshed.

Dairy Conversion model 3

- 300 ha fully irrigated.
- Peak milking 1047 cows.
- Milk production 477,000 kg MS.
- Dairy NZ System 4 using maize silage, barley, palm kernel and hay.
- In shed feeding.
- Feed pad & 50 bale rotary cowshed.

PHYSICAL OUTCOMES

The physical outcomes of the farm models are shown in the table below.

Farm System	Cropping & Dairy Support	Dairy 600 cows	Dairy 650 cows	300 ha Dairy
Area ha	**210**	**210**	**210**	**300**
MS Production		240,240	300,000	477,000
MS / ha		1144	1429	1590
Dairy NZ System Type		3	4	4
Pasture Grown TDM / ha*	8.1	13.8	14.3	15.1
Pasture Consumed TDM / ha	6.65	10.94	11.37	11.97
Supplement Consumed TDM / ha	2.9	3.6	5.6	6.2
Cow Liveweight kg / ha	767	1371	1485	1675

* please note pasture grown is calculated over total area, and is higher when cropped ground is excluded.

The 600 cow system 3 model produced 1144 kg MS / ha with 10.94 T DM of pasture harvested and 3.6 TDM of supplement consumed. The 650 cow system 4 model produced 1429 kg MS / ha with 11.4 TDM of pasture harvested and 5.6 TDM of supplement consumed. The larger scale fully irrigated model had the highest production of 1563 kg MS / ha with 11.97 T TM of pasture harvested and 6.2 TDM supplement consumed.

This difference in milksolids production results between the two system 4 farms is due to the larger scale farm being fully irrigated and therefore more pasture available to be consumed over the summer dry period by a slightly higher stocking rate.

ENVIRONMENTAL IMPACTS

All scenarios including the current situation were modelled in Overseer version 6.1 to determine the expected nutrient losses that would come from each system. The Overseer reports are in Appendix 4 and have been developed by Thomas Taylor from Ravensdown. The two nutrients of interest are nitrogen and phosphorus.

	Cropping & Dairy Support	Dairy 600 cows	Dairy 650 cows	300 ha Dairy
N loss to water kg/ha	37	29	29	31
N use efficiency	43%	27%	26%	33%
P loss to water kg / ha	0.1	0.4	0.4	0.5
Total P lost from blocks kg/annum	17	24	24	24

The modelled nitrogen losses for the status quo model were 37 kg N / ha to water. This is mainly driven from the high stocking rate over the winter period, with winter grazing on crops and also the use of cultivation for cropping. Phosphorus losses were minimal at 17 kg P / year.

The physical outcomes from the Farmax models were entered into Overseer to predict the nutrient losses coming from the dairy conversions. All dairy conversions reduced the nitrogen losses from the system when compared to the current farming operation. Phosphorus losses increased under the dairy conversion models to 24 kg P / year.

In addition to block losses Overseer accounts for block transfers to non-productive parts of the farm, such as farm races and tracks. This value increased from 8kgP / year on the dairy support operation to 70kgP / year on the 650 cow system. This is due to animals spending proportionately more time on non-productive areas of the farm. This amount of P is a potential loss risk but is not considered to be a direct loss to waterways and can be easily managed to avoid losses to water though an appropriate farm nutrient management plan.

The 600 and 650 cow dairy conversions were modelled with most cows wintered on, 87 cows off for the 600 cow model and 160 cows off for the 650 cow model. In these two models 325 cows were wintered on the dryland part of the farm which was planted in fodder beet and supplemented with baleage.

The 650 cow model introduced a feed pad into the system which helped to reduce the nitrogen losses over the autumn period. This system had the best result for N losses with 29 kg N / ha lost per year.

The 300 ha dairy model had the highest N losses of all the dairy models at 31 kg N / ha. This is primarily a stocking rate effect. The 300 ha model had 779 cows wintered off and 295 cows wintered on the dairy platform.

All dairy conversions were modelled with young stock off farm as weaner calves and returning 18 months later on June 1st as rising two year olds.

All dairy conversions were allocated sufficient capital to build adequate dairy effluent systems to a high standard. The two conversions with feed pads were assumed to have solids separation in place.

It was assumed that all waterways were fenced off in accordance with the Sustainable Dairying Water Accord.

Mitigation options to decrease N losses in the models included little and often N fertiliser use, best practise effluent storage and application rates, improved timing of N fertiliser, use of a feedpad, low protein feeds such as maize silage and barley and winter off farm grazing.

To minimise P losses from the farm the use of riparian strips, timing, placement and form of phosphate fertiliser and the use of high resolution soil testing to optimise Olsen P should be encouraged. Through the use of these mitigations, phosphorus losses from the 650 cow model were reduced close to that of the dairy support model across the productive blocks.

This study did not explore every avenue for nutrient loss reduction. Further wintering off, more intensive use of the feedpad and adoption of new technology and knowledge over time would see further reductions in nutrient loss.

FINANCIAL OUTCOMES

The financial performance of the models has been assessed by calculating EBIT, return on assets, return on equity and cash surplus.

EBIT

Farm System	Cropping & Dairy Support	Dairy 600 cows	Dairy 650 cows	Dairy 300 ha
Gross Revenue	$ 328,780	$ 1,631,560	$ 2,024,789	$ 3,198,325
Operating Expenses	$ 177,900	$ 1,084,504	$ 1,331,147	$ 2,176,148
Operating Expenses / kgMS (incl water)		$ 4.51	$ 4.44	$ 4.56
Water charges		$ 0.53	$ 0.43	$ 0.50
Depreciation	$ 20,000	$ 70,750	$ 84,250	$ 144,200
EBIT	$ 130880	$ 476,306	$ 609,392	$ 877,977
EBIT / ha	$ 623	$ 2,268	$ 2,902	$ 2,927

Current EBIT is $623/ha compared to the Beef and Lamb Economic Service Data 2012/13 of $315/ha for intensive East Coast finishing class

Gross revenue increased with each system intensification. Operating costs including water were between $4.44 and $4.56 for the three farms. These operating expenses are consistent with figures from Baker & Associates Dairy Systems Monitoring service which includes fully and partially irrigated farms in the Wairarapa, Manawatu and Canterbury regions.

EBIT / ha increased from the current $628 / ha to $2,268 for the 600 cow dairy conversion and $2,902 and $2,927 for the 650 cow and 300 ha dairy conversions. EBIT has been calculated as earnings before interest and tax but including depreciation. A full depreciation schedule can be found in Appendix Two.

Conversion Costs

The following table lists the amount of capital employed for each farm system and conversion.

CAPITAL EMPLOYED	Cropping & Dairy Support	Dairy 600 cows	Dairy 650 cows	300 ha Dairy
Land ($17,600/Ha)	$3,700,000	$3,700,000	$3,700,000	$5,285,000
Conversion Cost		$2,855,000	$3,275,000	$4,390,000
Fonterra Shares ($7/share)		$1,680,000	$2,100,000	$3,339,000
Sub-Total – L,B & S	$3,700,000	$8,235,000	$9,075,000	$13,014,000
		$ 34.28	$ 30.25	$ 27.28
Livestock		$1,251,000	$1,341,000	$2,119,500
Total Capital Employed	$3,700,000	$9,486,000	$10,416,000	$15,133,500
Conversion cost $ / kg MS		$ 39.49	$ 34.72	$ 31.73

The total conversion cost (funding required for this case study) ranged from $39.49 / kg MS for the 600 cow conversion, $34.72 / kg MS for the 650 cow conversion and $31.73 / kg MS for the 300 ha conversion.

Excluding livestock the Land, Buildings and Shares conversion cost ranged from $34.28 / kg MS for the 600 cow conversion, $30.25/ kg MS for the 650 cow conversion and $27.28 / kg MS for the 300 ha conversion.

Return on Assets & Equity

The following table shows the calculated return on assets, marginal return on extra capital and return on equity for each scenario.

	Cropping & Dairy Support	Dairy 600 cows	Dairy 650 cows	300 ha Dairy
Return on Assets (ROA)	3.54%	5.02%	5.85%	5.80%
Marginal Return on Extra Capital		5.72%	6.91%	7.44%
Return on Equity	3.54%	3.48%	5.57%	5.41%

The calculation used for return on assets was EBIT / opening asset value. Return on assets for the current operation was a healthy 3.54%. The result for the dairy conversions was between 5.02 – 5.85 %. The marginal return on extra capital employed was 5.72% for the 600 cow conversion, 6.91% for the 650 cow conversion and 7.44% for the 300 ha conversion.

The calculation for return on equity was (EBIT – interest cost) / equity (land value in this case). Return on equity for the status quo was 3.54% as the assumption was no debt. The result for the dairy conversions was 3.48% for the 600 cow conversion, 5.57% for the 650 cow conversion and 5.41% for the 300 ha conversion.

Cash Surplus

The following table shows the cash surplus result for each scenario.

	Cropping & Dairy Support	Dairy 600 cows	Dairy 650 cows	300 ha Dairy
EBIT	$ 130,880	$ 476,306	$ 609,392	$ 877,977
Debt Servicing (Interest only)		$ 347,684	$ 403,409	$ 591,809
Cash Surplus (pre-tax & drawings)	$ 130,880	$ 128,622	$ 205,983	$ 286,168

Cash surplus before tax and drawings was $128,622 for the 600 cow operation, $205,983 for the 650 cow operation and $286,168 for the 300 ha conversion. This case study suggests scale will deliver a higher cash result but only consistent with scale, the return on assets is very similar.

Cashflow

Cashflow budgets were prepared for the current system, irrigated cropping and dairy support and all dairy conversions to show the short term overdraft requirements. The cashflow budgets can be found in Appendix 3.

The 300 ha conversion was cashflow positive in year 3 while the 600 and 650 cow conversions were cashflow positive in year 2. The current system has positive cashflow all year.

This cashflow is helped by the sharing up option that was chosen and currently available to new conversions supplying Fonterra.

A Year 7 cashflow when the farms are fully shared up was also calculated. These show (assuming the business had a zero balance at July 1st) a negative cashflow from July to September and then becoming positive in October.

An allowance has been made for capital expenditure and development in year 4 cashflow (210 Ha models only) and in the year 7 status quo operation to align with the provisions for depreciation.

For the Case Study overdraft facilities of $45-55,000 would be required for the 600 and 650 cow farms and $85-90,000 for the 300 ha farm.

SENSITIVITY ANALYSIS – DAIRY CONVERSIONS

Sensitivity analyses were performed for the dairy conversions on the effect of changing milk price, production, water price, interest rates and cost of conversion.

600 cow model – Milk price and production

Sensitivity to changes in milk price (including dividend payment) was calculated as well as changes in milksolids production. The following table shows the effect on EBIT and ROA.

EBIT	$ 5.50	$ 6.00	Milk $ 6.50	Price $ 7.00	$ 7.50	$ 8.00
210000	$69,746	$174,746	$279,746	$384,746	$489,746	$594,746
225000	$152,246	$264,746	$377,246	$489,746	$602,246	$714,746
240240	$236,066	$356,186	$476,306	$596,426	$716,546	$836,666
255000	$317,246	$444,746	$572,246	$699,746	$827,246	$954,746

ROA	$ 5.50	$ 6.00	$ 6.50	$ 7.00	$ 7.50	$ 8.00
210000	0.74%	1.84%	2.95%	4.06%	5.16%	6.27%
225000	1.60%	2.79%	3.98%	5.16%	6.35%	7.53%
240240	2.49%	3.75%	5.02%	6.29%	7.55%	8.82%
255000	3.34%	4.69%	6.03%	7.38%	8.72%	10.06%

Milk price and production had a significant impact on EBIT and ROA. A shift of milk price by $0.50 / kg MS had an effect of $120,000 on EBIT and a change of 1.27% for ROA. This was when compared to the models 240,240 kg MS produced and $6.50 milk price.

A 15,240 kg MS shift in production had an effect of $99,000 on EBIT and a 1.04% change in ROA at a milk price of $6.50 / kg MS. This assumed that no changes were made to farm working expenses.

650 cow model – Milk price and production

EBIT	$ 5.50	$ 6.00	$ 6.50	$ 7.00	$ 7.50	$ 8.00
260000	$ 89,353	$219,353	$349,353	$479,353	$609,353	$739,353
280000	$199,353	$339,353	$479,353	$619,353	$759,353	$899,353
300000	$309,353	$459,353	$609,353	$759,353	$909,353	$1,059,353
320000	$419,353	$579,353	$739,353	$899,353	$1,059,353	$1,219,353

ROA	$ 5.50	$ 6.00	$ 6.50	$ 7.00	$ 7.50	$ 8.00
260000	0.86%	2.11%	3.35%	4.60%	5.85%	7.10%
280000	1.91%	3.26%	4.60%	5.95%	7.29%	8.63%
300000	2.97%	4.41%	5.85%	7.29%	8.73%	10.17%
320000	4.03%	5.56%	7.10%	8.63%	10.17%	11.71%

Milk price and production had a significant impact on EBIT and ROA for the 650 cow model. A shift in milk price of $0.50 had an effect of $150,000 on EBIT and a shift on ROA of 1.44%.

A decrease in milk production of 20,000 kg MS had an effect of $130,000 on EBIT and 1.25% change for ROA on the model using 300,000 kg MS and $6.50 milk price.

300 ha model – Milk price & production

EBIT	$ 5.50	$ 6.00	$6.50	$7.00	$7.50	$8.00
425000	$114,977	$327,477	$539,977	$752,477	$964,977	$1,177,477
455000	$279,977	$507,477	$734,977	$962,477	$1,189,977	$1,417,477
477000	$400,977	$639,477	$877,977	$1,116,477	$1,354,977	$1,593,477
500000	$527,477	$777,477	$1,027,477	$1,277,477	$1,527,477	$1,777,477

ROA	$5.50	$6.00	$6.50	$7.00	$7.50	$8.00
425000	0.76%	2.16%	3.57%	4.97%	6.38%	7.78%
455000	1.85%	3.35%	4.86%	6.36%	7.86%	9.37%
477000	2.65%	4.23%	5.80%	7.38%	8.95%	10.53%
500000	3.49%	5.14%	6.79%	8.44%	10.09%	11.75%

The 300 ha model showed the greatest sensitivity to milk price and production changes. A $0.50 change in milk price at production of 477,000 kg MS has an effect on EBIT of $238,500 and altered the ROA by approximately 1.6%.

A decrease in milk production of 22,000 kgMS from the modelled 477,000 kg MS had a negative effect on EBIT of $143,000 and reduced the ROA 0.9%.

With irrigation present and operating efficiently there should be low variability of milksolids production, so there is more risk of sensitivity around milk price for the irrigated dairy conversions.

The sensitivity tables assume that farm expenses are kept the same under each sensitivity scenario. Of course this doesn't reflect the ability of an operator to adapt to a changing milk price by reducing costs for example.

What it does show is how sensitive the systems are to production and milk price fluctuations and the importance for the farm systems to meet production targets and adapt to changing market conditions.

Sensitivity to Water Pricing

WATER PRICE $/M³		$ 0.20	$ 0.22	$ 0.24	$ 0.25	$ 0.30
$6.50 milk price						
	EBIT	$476,306	$463,506	$450,706	$444,306	$412,306
600 cow model	ROA	5.02%	4.89%	4.75%	4.68%	4.35%
	Cash Surplus	$128,622	$115,822	$103,022	$96,622	$64,622
	EBIT	$609,392	$596,592	$583,792	$577,392	$545,392
650 cow model	ROA	5.85%	5.73%	5.60%	5.54%	5.24%
	Cash Surplus	$205,983	$193,183	$180,383	$173,983	$141,983
	EBIT	$877,977	$853,977	$829,977	817,977	$757,977
300 ha model	ROA	5.80%	5.64%	5.48%	5.41%	5.01%
	Cash Surplus	$286,168	$262,168	$238,168	$226,168	$166,168

The table above shows sensitivity to water price at the water use rates of 640,000 m3 for the 600 and 650 cow model and 1,200,000m3 for the 300 ha model.

An increase in water price from $0.20 to $0.25 decreases EBIT by $32,000 and ROA by 0.34% and 0.31% for the 600 and 650 cow models respectively. It has a greater effect on cash surplus after interest costs.

For the 300 ha model an increase from $0.2 to $0.25 per m3 of water reduces EBIT by $60,000 and ROA by 0.39%. It has a greater effect on cash surplus after interest costs.

This shows that early adopters of the irrigation scheme will have the benefit of a lower water price and a potential for greater cash returns than later adopters of the scheme. It also shows the importance of operating efficient irrigation systems.

Sensitivity to interest rates

The interest rates on borrowings used in the case study were 6%. The sensitivity table below has been calculated on cash surplus after interest payments and at a $6.50 milksolids price.

	5.0%	6.0%	6.5%	7.0%	8.0%	9.0%	10.0%
600 cow model	$187,006	$129,146	$100,216	$ 71,286	$ 13,426	-$ 44,434	-$102,294
650 cow model	$273,592	$206,432	$172,852	$139,272	$72,112	$4,952	-$ 62,208
300 ha model	$385,552	$287,067	$237,825	$188,582	$ 90,097	-$ 8,388	-$106,873

The interest rate has a large influence on cash surplus results. A change in interest rates from 6% to 6.5% effects cash surplus by $28,900 for the 600 cow model, $33,600 for the 650 cow model and $49,200 for the 300 ha model.

This shows the importance of negotiating interest rates with the banks and the importance of deciding on the risk profile of the lending with regard to fixing and floating interest rates.

The case study assumed that all extra capital was funded by debt and not by equity partnership. No consideration was given to the bankability of the conversions as this was not in the scope of the project.

Conversion Cost Control

The sensitivity of conversion cost and the impact that had on cash surplus due to extra or less borrowing was investigated. The following table shows the impact of conversion cost changes at a $6.50 milksolids payout and a 6% interest rate. This doesn't include change in land cost as the assumption was made that land is debt free.

Conv. Cost Change	-30%	-20%	-10%	10%	20%	30%
600 cow model	$232,770	$198,054	$163,338	$93,906	$59,190	$24,474
650 cow model	$326,871	$286,575	$246,279	$165,687	$125,391	$85,095
300 ha model	$463,441	$404,350	$345,259	$227,077	$167,986	$108,895

The cash surplus is highly sensitive to changes in conversion costs. For every 10% change in conversion cost there is an effect of 27% for the 600 cow model, 19.5% for the 650 cow model and 20.6% for the 300 ha model.

It will be important to have accurate budgets and forecasts around conversion costing's as cost blowouts will have a large impact on borrowing or required capital levels.

One factor that will be harder to forecast is share price (if any are purchased), as share prices are now driven by supply and demand. The farm business will need to decide on an action plan for share purchases.

Fonterra have different methods for conversions to accumulate shares including agreed share pricing and selling economic rights on a percentage of shares. This gives a new supplier some choice around share purchases. Some dairy companies have no share requirements so that can be considered as well if they become present in the Hawkes Bay.

PASTURE UTILISATION SENSITIVITY

Consideration was given to the sensitivity of pasture utilised per hectare. The correlation between pasture harvested and profitability is known to be high in the dairy industry. By changing the amount of pasture harvested in each dairy conversion model with the use of Farmax the change in milk production can be modelled and the effect on profit calculated.

The sensitivity test was modelled on decreasing pasture harvested by 0.5TDM / ha and increasing pasture harvested by 0.5 TDM / ha and 1 TDM / ha.

The approach used was to change the amount of pasture consumed in each model and leave the supplements fed the same as in the status quo models. This was done so that only one input was changing at once (pasture) and therefore giving the most consistent results across models and eliminating possible subjectivity around changing supplementary feeding levels.

600 cow conversion

The impacts of pasture utilisation changes for the 600 cow conversion are shown in the table below.

Pasture Harvested TDM / HA	-0.5 TDM	10.93 SQ	+0.5TDM	+1TDM
MS Produced (kgMS)	225,542	240,240	254,950	266,660
Gross Revenue	$1,536,023	$1,631,560	$1,727,175	$1,803,290
Operating Expenses	$1,084,504	$1,084,504	$1,084,504	$1,084,504
Operating Expenses / kgMS	$4.81	$4.51	$4.25	$4.07
Depreciation	$70,750	$70,750	$70,750	$70,750
EBIT	$380,769	$476,306	$571,921	$648,036
EBIT /ha	$1,813	$2,268	$2,723	$3,086
Change in Shares Reqd @$7	-$102,886	0	$102,970	$184,940
Change in Debt Servicing	-$6,173	0	$6,178	$11,096
Cash Surplus	$39,259	$128,622	$218,059	$289,256
Return on Assets	4.06%	5.02%	5.96%	6.70%

A 0.5TDM / ha increase in pasture utilisation had an increase in EBIT of $95,615 and cash surplus of $89,437 after taking into account the interest cost on the extra shares required. A 1TDM / ha increase in pasture utilisation resulted in an increase in EBIT of $171,730 and cash surplus of $160,634.

A decrease in pasture utilised by 0.5TDM / ha had a negative result on the EBIT of $95,537 and cash surplus of 89,363. Return on assets increased from 5.02% to 5.96% and 6.7% with each 0.5TDM shift and decreased to 4.06% when pasture utilised decreased by 0.5TDM.

Payout Sensitivity

The changes in pasture harvested were also put through milksolids payout sensitivity and the effect on EBIT / ha, ROA and cash surplus are shown below.

EBIT / ha						
Milksolids Payout	**$5.50**	**$6.00**	**$6.50**	**$7.00**	**$7.50**	**$8.00**
-0.5TDM/ha	$739	$1,276	$1,813	$2,350	$2,887	$3,424
10.93 SQ	$1,124	$1,696	$2,268	$2,840	$3,412	$3,984
+0.5 TDM/ha	$1,509	$2,116	$2,723	$3,330	$3,937	$4,545
+1 TDM/ha	$1,816	$2,451	$3,086	$3,721	$4,356	$4,991

Return on Assets						
	$ 5.50	**$ 6.00**	**$ 6.50**	**$ 7.00**	**$ 7.50**	**$ 8.00**
-0.5 TDM / ha	1.65%	2.86%	4.06%	5.26%	6.46%	7.66%
10.93 (SQ)	2.49%	3.75%	5.02%	6.29%	7.55%	8.82%
+0.5 TDM / ha	3.31%	4.63%	5.96%	7.29%	8.62%	9.95%
+1 TDM / ha	3.94%	5.32%	6.70%	8.08%	9.46%	10.84%

Cash Surplus	**$ 5.50**	**$ 6.00**	**$ 6.50**	**$ 7.00**	**$ 7.50**	**$ 8.00**
-0.5 TDM / ha	- $186,283	- $73,512	$39,259	$152,030	$264,801	$377,572
10.93 (SQ)	- $111,618	$8,502	$128,622	$248,742	$368,862	$488,982
+0.5 TDM / ha	- $36,891	$90,584	$218,059	$345,534	$473,009	$600,484
+ 1 TDM / ha	$22,596	$155,926	$289,256	$422,586	$555,916	$689,246

650 cow conversion

The impacts of pasture utilisation changes for the 650 cow conversion are shown in the table below.

Pasture Harvested TDM / HA	-0.5 TDM / ha	11.37 (SQ)	11.87	12.37
MS Produced kgMS	280,080	300,000	315,758	326,699
Gross Revenue	$1,895,309	$2,024,789	$2,127,216	$2,198,332
Operating Expenses	$1,331,147	$1,331,147	$1,331,147	$1,331,147
Operating Expenses / kgMS	$4.75	$4.44	$4.22	$4.07
Depreciation	$84,250	$84,250	$84,250	$84,250
EBIT	$479,912	$609,392	$711,819	$782,936
EBIT /ha	$2,285	$2,902	$3,390	$3,728
Change in Shares Reqd	-$139,440	0	$110,306	$186,893
Change in Debt Servicing	-$8,366	0	$6,618	$11,214
Cash Surplus	$84,869	$205,983	$301,792	$368,313
Return on Assets	4.67%	5.85%	6.76%	7.38%

A 0.5TDM / ha increase in pasture utilisation had an increase in EBIT of $102,427 and cash surplus of $95,809 after taking into account the interest cost on the extra shares required. A 1TDM / ha increase in pasture utilisation resulted in an increase in EBIT of $173,544 and cash surplus of $162,330.

A decrease in pasture utilised by 0.5TDM / ha had a negative result on the EBIT of $129,480 and cash surplus of 121,114. Return on assets increased from 5.85% to 6.76% and 7.38% with each 0.5TDM shift and decreased to 4.67% when pasture utilised decreased by 0.5TDM.

Payout Sensitivity

The changes in pasture harvested were also put through milksolids payout sensitivity and the effect on EBIT / ha, ROA and cash surplus are shown below.

EBIT / ha						
	$5.50	**$6.00**	**$6.50**	**$7.00**	**$7.50**	**$8.00**
-0.5TDM / ha	$951	$1,618	$2,285	$2,952	$3,619	$4,286
11.37 (SQ)	$1,473	$2,187	$2,902	$3,616	$4,330	$5,045
+0.5TDM / ha	$1,886	$2,638	$3,389	$4,141	$4,893	$5,645
+1TDM / ha	$2,172	$2,950	$3,728	$4,506	$5,284	$6,062

Return on Assets						
	$5.50	$6.00	$6.50	$7.00	$7.50	$8.00
-0.5 TDM / ha	1.94%	3.31%	4.67%	6.03%	7.40%	8.76%
11.37 (SQ)	2.97%	4.41%	5.85%	7.29%	8.73%	10.17%
+0.5TDM / ha	3.76%	5.26%	6.76%	8.26%	9.76%	11.26%
+1TDM / ha	4.30%	5.84%	7.38%	8.92%	10.47%	12.01%

Cash Surplus	$ 5.50	$ 6.00	$6.50	$ 7.00	$ 7.50	$ 8.00
-0.5 TDM / ha	-$195,250	-$55,210	$84,830	$224,870	$364,910	$504,950
11.37 (SQ)	-$94,056	$55,944	$205,944	$355,944	$505,944	$655,944
+0.5TDM / ha	-$10,439	$147,440	$305,319	$463,198	$621,077	$778,956
+ 1 TDM / ha	$44,515	$207,864	$371,214	$534,563	$697,913	$861,262

300 ha model

The impacts of pasture utilisation changes for the 300 ha conversion are shown in the table below.

300 ha model	Pasture Harvest TDM / ha		Status Quo = 11.97 TDM / ha	
Pasture Harvested TDM / HA	**- 0.5 TDM / ha**	**11.97 (SQ)**	**+0.5 TDM / ha**	**+1 TDM / ha**
MS Produced (kgMS)	460,100	477,000	501,224	519,941
Gross Revenue	$3,088,475	$3,198,325	$3,355,781	$3,477,441
Operating Expenses	$2,176,148	$2,176,148	$2,176,148	$2,176,148
Operating Expenses / kgMS	$4.73	$4.56	$4.34	$4.19
Depreciation	$144,200	$144,200	$144,200	$144,200
EBIT	$768,127	$877,977	$1,035,433	$1,157,093
EBIT /ha	$2,560	$2,927	$3,451	$3,857
Change in Shares Reqd	-$118,300	$0	$169,568	$300,587
Change in Debt Servicing	-$7,098	$0	$10,174	$18,035
Cash Surplus	$183,416	$286,168	$433,449	$547,249
Return on Assets	5.12%	5.80%	6.77%	7.50%

A 0.5TDM / ha increase in pasture utilisation had an increase in EBIT of $157,456 and cash surplus of $147,281 after taking into account the interest cost on the extra shares required. A 1TDM / ha increase in pasture utilisation resulted in an increase in EBIT of $279,116 and cash surplus of $261,081. A decrease in pasture utilised by 0.5TDM / ha had a negative result on the EBIT of $109,850 and cash surplus of 102,750. Return on assets increased from 5.8% to 6.77% and 7.5% with each 0.5TDM shift and decreased to 5.12% when pasture utilised decreased by 0.5TDM.

Payout Sensitivity

The changes in pasture harvested were also put through milksolids payout sensitivity and the effect on EBIT / ha, ROA and cash surplus are shown below.

EBIT / ha						
	$ 5.50	$6.00	$6.50	$7.00	$7.50	$8.00
-0.5 TDM / ha	$1,027	$1,794	$2,560	$3,327	$4,094	$4,861
11.97 (SQ)	$1,337	$2,132	$2,927	$3,722	$4,517	$5,312
+0.5 TDM / ha	$1,781	$2,616	$3,451	$4,287	$5,122	$5,958
+1 TDM / ha	$2,124	$2,990	$3,857	$4,724	$5,590	$6,457

Return on Assets						
	$ 5.50	$ 6.00	$ 6.50	$ 7.00	$ 7.50	$ 8.00
-0.5 TDM / ha	2.05%	3.58%	5.12%	6.65%	8.18%	9.71%
11.97 (SQ)	2.65%	4.23%	5.80%	7.38%	8.95%	10.53%
+0.5 TDM / ha	3.49%	5.13%	6.77%	8.40%	10.04%	11.68%
+1 TDM / ha	4.13%	5.81%	7.50%	9.18%	10.87%	12.55%

Cash Surplus						
	$ 5.50	$ 6.00	$ 6.50	$ 7.00	$ 7.50	$ 8.00
-0.5 TDM / ha	-$269,586	-$39,536	$190,514	$420,564	$650,614	$880,664
11.37 (SQ)	-$190,832	$47,668	$286,168	$524,668	$763,168	$1,001,668
+0.5 TDM / ha	-$67,774	$182,838	$433,450	$684,062	$934,674	$1,185,286
+1 TDM / ha	$27,308	$287,279	$547,249	$807,220	$1,067,190	$1,327,161

These pasture sensitivities demonstrate the impact of growing and harvesting as much pasture as possible under irrigation and the importance of excellent pasture management. The impact on the economic performance of the business is highly related to total pasture harvested per hectare.

PASTURE UTILISATION VS SUPPLEMENTS

A test was also completed on the 650 cow Farmax model to see what improvements in profit could be achieved in the dairy conversion if increases in pasture utilisation could be achieved alongside decreases in the amount of supplements consumed per cow.

The model was set up to similar production as the status quo model with the same quantity of cows and decreasing supplements fed to milkers to the level of 600 kg DM supplement per cow. This is comparable to a typical Canterbury model irrigated dairy farm.

The following table shows the physical feed components fed per ha and per cow of the Farmax model compared to the status quo 650 cow model. The change in supplements fed changed the System type as defined by Dairy NZ from a System 4 farm to a System 3 farm.

Pasture utilised in the new model increased from 11.37 TDM / ha to 13.02 TDM / ha. Pasture consumed per cow increased from 3.66 TDM / cow to 4.2 TDM / cow whilst supplement consumed per cow decreased from 1.3 TDM / cow to 0.6 TDM / cow. Total milksolids production achieved was similar to the status quo with less total feed per cow. This is due to a higher proportion of high quality pasture being consumed relative to supplements consumed.

Farm System Physical Outcomes	Dairy 650 cows	Increased pasture + less supplement
Area ha	**210**	**210**
MS Production	300,000	299,900
MS / ha	1429	1428
Dairy System Type	4	3
Pasture Grown / ha	14.3	16.2
Pasture Harvested / ha	11.37	13.02
Supplements / ha to milkers	4.03	1.82
Supplements as % of pasture consumed	35%	14%
Pasture Consumed / cow	3.66	4.2
Supplements Consumed / cow	1.3	0.6
Total Feed Consumed / cow	4.96	4.8

Note – the feed consumed figures do not include outsourced winter grazing or fodder beet crop grown on farm.

Profitability

The following table shows the change in profit that could be achieved through increasing pasture consumed per ha while at the same time dropping out supplements from the system at a $6.50 milksolids payout. While milksolids revenue stayed similar, the operating expenses decreased by $172,900 due to less supplements being purchased. This decreased the operating costs per kg of MS produced from $4.44 to $3.86 per kg MS.

This lifted return on assets from 5.85% to 7.50% which is a significant lift. The change had a major impact on cash surplus with a lift from $205, 983 to $378,233 or a change of 83%. This shows the power of being able to harvest large quantities of pasture and providing an efficient level of supplements for a given farm system.

Farm System Financial Outcomes	Status Quo 650 cow model	Increased pasture + less supplement
MS Produced	300,000	299,900
Gross Revenue	$2,024,789	$2,024,139
Operating Expenses	$1,331,147	$1,158,247
Operating Expenses / kgMS	$4.44	$3.86
Depreciation	$84,250	$84,250
EBIT	$609,392	$781,642
EBIT /ha	$2,902	$3,722
Cash Surplus	$205,983	$378,233
Return on Assets	5.85%	7.50%

To achieve the modelled level of pasture harvested and quantities of supplementation will require high levels of skill, monitoring and discipline from a farm manager and advisory team, but the opportunities are certainly there to achieve this.

Further Pasture Utilisation Work

Fully Irrigated Model – 300 ha

The same exercise was done on the fully irrigated model but instead the model was investigated to increase the amount of pasture utilised to 14 T DM / ha to see what influence that had on bottom line performance.

The following table shows the physical feed components fed per ha and per cow of the Farmax model compared to the status quo 300 ha model. The change in supplements fed changed the System type as defined by Dairy NZ from a System 4 farm to a System 3 farm. Pasture utilised in the new model increased from 11.97 TDM / ha to 14 TDM / ha. Pasture consumed per cow increased from 4.3 TDM / cow to 4.9 TDM / cow whilst supplement consumed per cow decreased from 1.3 TDM / cow to 0.7 TDM / cow. Total milksolids production achieved was higher to the status quo with similar total feed per cow. This is due to a higher proportion of high quality pasture being consumed relative to supplements consumed.

Farm System	Status Quo	Inc pasture + less supp
Area ha	300	300
MS Production	477,000	500,000
MS / ha	1,590	1,667
Dairy System Type	4	3
Pasture Grown / ha	15.1	17
Pasture Utilised / ha	11.97	14
Supplements / ha to milkers	4.55	3.1
Supps as % of pasture consumed	30%	18%
Pasture Consumed / cow	4.3	4.9
Supplements Consumed / cow	1.3	0.7
Total Feed Consumed / cow	5.6	5.6

Profitability

The following table shows the change in profit that could be achieved through increasing pasture consumed per ha while at the same time dropping out supplements from the system at a $6.50 milksolids payout. Milksolids revenue increased by $163,700 and operating expenses decreased by $197,000 due to less supplements being purchased. This decreased the operating costs per kg of MS produced from $4.56 to $3.96 per kg MS.

Pasture Harvested TDM / HA	Status Quo	Inc pasture + less supp
MS Produced	477,000	500,000
Gross Revenue	$ 3,198,325	$ 3,361,900
Operating Expenses	$ 2,176,148	$ 1,979,399
Operating Expenses / kgMS	$ 4.56	$ 3.96
Depreciation	$ 144,200	$ 144,200
EBIT	$ 877,977	$ 1,238,301
EBIT /ha	$ 2,927	$ 4,128
Cash Surplus	$ 286,168	$ 637,191
Return on Assets	5.80%	8.1%

This lifted the return on assets from 5.8% to 8.1%, which is a significant lift. The change had a major impact on cash surplus with a lift from $286,168 to $637,191 or a change of 122%. This shows the power of being able to harvest large quantities of pasture and providing an efficient level of supplements for a given farm system.

CONCLUSION

The proposed Ruataniwha Irrigation Scheme creates an opportunity for farms in the Ruataniwha basin to convert to dairy. Operators will need to target above average physical performance, efficient water use and best practise environmental management to generate a sustainable competitive return on assets and cash surplus.

This study gives a high level view of what AndersonAg could achieve on their Balfour Road property if they converted the farm to dairy. It was identified that if Graham decided to convert one of his farms to dairy he would pursue a high performance system. The model delivering favourable returns for this property was a System 4 operation peak milking 650 cows achieving 460 kg MS/cow.

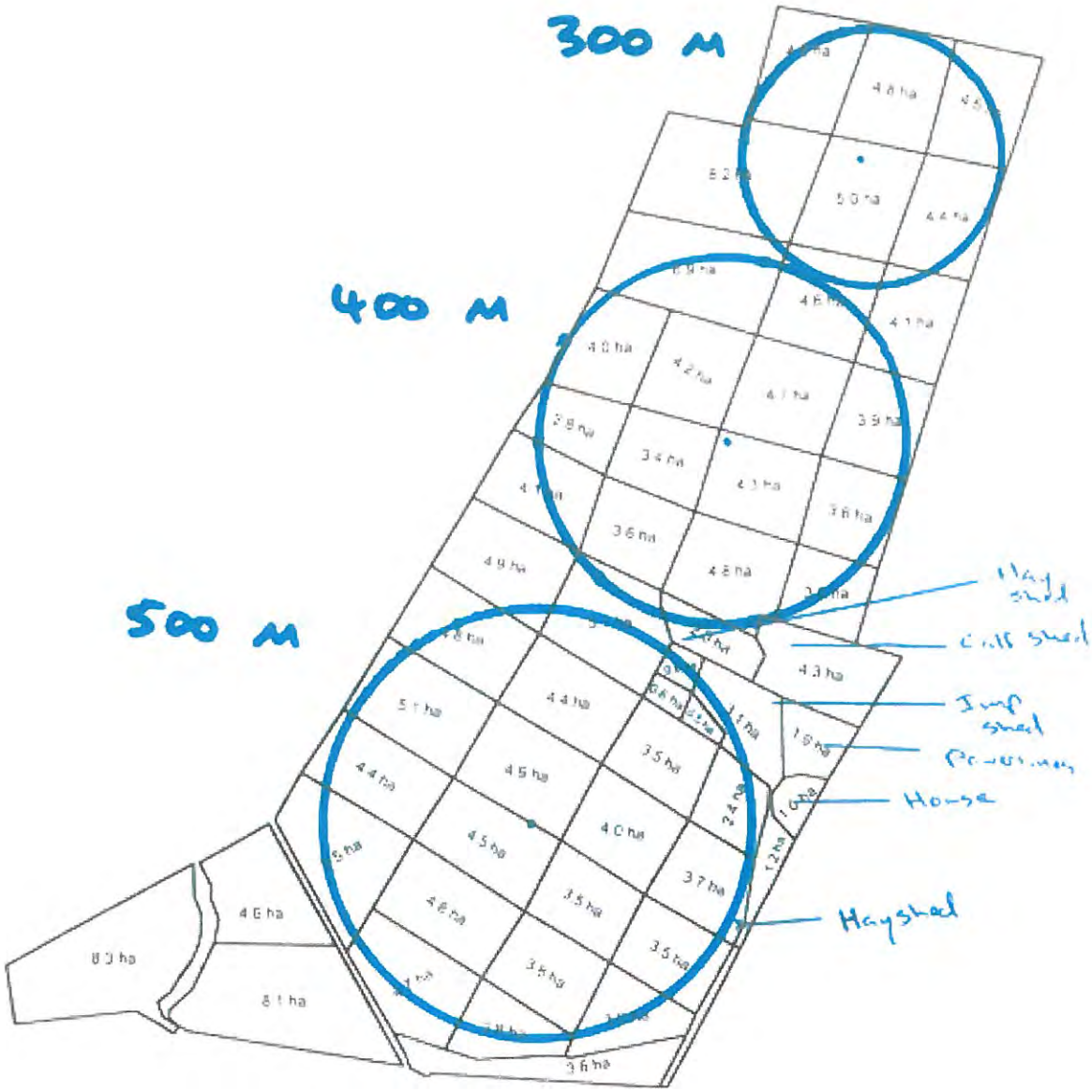
A winter milk option was not investigated as part of this case study. There currently is the opportunity for a winter milk premium in the Hawkes Bay area. If property owners want to investigate this possibility they will need to analyse if their expected pasture growth curve under irrigation will best fit the pasture demand required under a winter milking operation. A detailed investigation into the profitability and environmental oucomes of the winter milk option would be recommended before proceeding down this direction.

Farm systems that can capture the benefit of the potential pasture production that is possible under irrigation in the Ruataniwha basin can achieve high levels of physical performance and profitability.

It should be noted that this study has been commissioned at a high level and is not necessarily describing optimal or the maximum achievable performance. Capital and operating expenditure assumptions have been driven out of information made available to Baker & Associates by clients on the East Coast of the North Island.

APPENDIX 1

Farm Map with Proposed Centre Pivot Irrigation



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APPENDIX 2

General Assumptions for Dairy Conversion Models

It was assumed that in the year prior to conversion 50% of the dry stock farm was sown down in barley and then sown into permanent tetraploid pasture after harvest and irrigated.

Supplements required for winter and spring in year one were purchased and on hand at start of year one.

- All conversions assumed no debt on existing land.
- 100% debt on all costs of conversion.
- For this project it was assumed that milk supply would be to Fonterra.
- Milksolids payment schedule used in the models is in the table below. The advance payment refers to when the payment is made and relates to the previous month's milksolids production.

Month of payment	Advance	Deferred	Dividend
August	$ 4.00	$ 0.25	
September	$ 4.00	$ 0.25	
October	$ 4.00	$ 0.25	$ 0.15
November	$ 4.00		
December	$ 4.00		
January	$ 4.20		
February	$ 4.40		
March	$ 4.60		
April	$ 4.80		$ 0.15
May	$ 5.00		
June	$ 5.20		
July		$ 0.25	

- Shares were purchased as per new conversion allowances and built up as slow as is currently allowed by Fonterra.
- Shares were purchased as follows.
  - No shares purchased for 3 years apart from the minimum of 1000 shares to become a Fonterra supplier.
  - Year 4 - one third of shares purchased by December 1st.
  - Year 5 - one third of shares purchased by December 1st.
  - Year 6 - one third of shares purchased by December 1st.
  - Dividend on shares paid out as shares are purchased from year 4 – 6.
  - It should be noted that only 80 % of shares are required to be fully shared up but for this project it has been assumed that the farm is fully shared up by year 7.

Conversion Costs (not including land)

	240 K MS	300 K MS	300 ha
Cowshed	$ 1,500,000	$ 1,500,000	$1,500,000
Irrigation	$ 700,000	$ 700,000	$ 1,200,000
Effluent	$ 175,000	$ 225,000	$ 300,000
Plant & Machinery	$ 50,000	$ 50,000	$ 200,000
Livestock	$ 1,251,000	$ 1,341,000	$ 2,119,500
Feed System		$ 120,000	$ 140,000
House	$ 300,000	$ 300,000	$ 450,000
Feed Pad		$ 250,000	$ 350,000
Races Fences Trees	$ 130,000	$ 130,000	$ 250,000
Shares	$ 1,680,000	$ 2,100,000	$ 3,339,000
TOTAL	**$ 5,786,000**	**$ 6,716,000**	**$ 9,848,500**

Depreciation Schedules

600 cow model	Historical Cost	Depn Rate	Annual Depn Cost
Cowshed	$1,500,000	2%	$30,000
Irrigation	$700,000	2%	$14,000
Effluent	$175,000	3%	$5,250
Plant & Machinery	$50,000	25%	$12,500
House	$300,000	2%	$6,000
Trees	$30,000	0%	0
Races & Fences	$100,000	3%	$3,000
TOTAL	**$2,855,000**		**$70,750**

650 cow model	Historical Cost	Depn Rate	Annual Depn Cost
Cowshed	$1,500,000	2%	$30,000
Irrigation	$700,000	2%	$14,000
Effluent	$225,000	3%	$6,750
Plant & Machinery	$50,000	25%	$12,500
Feed System	$120,000	3%	$3,600
House	$300,000	2%	$6,000
Pad	$250,000	3%	$7,500
Races Fences Trees	$130,000	3%	$3,900
TOTAL	**$3,275,000**		**$84,250**

300 ha model	Historical Cost	Depn Rate	Annual Depn Cost
Cowshed	$1,500,000	2%	$30,000
Irrigation	$1,200,000	2%	$24,000
Effluent	$300,000	3%	$9,000
Plant & Machinery	$200,000	25%	$50,000
Feed System	$140,000	3%	$4,200
House	$450,000	2%	$9,000
Pad	$350,000	3%	$10,500
Races Fences Trees	$250,000	3%	$7,500
TOTAL	**$4,390,000**		**$144,200**

Stock Number Summary Table

Farm Scenario	240 K MS	300 K MS	300 ha
MA cows at dairy farm June 1st	408	375	80
MA cows wintered off June 1st	87	160	779
R2 heifers at home June 1st	123	134	216
Peak no cows milked Dec 1st	602	650	1047
R 1 heifers at June 1st	123	134	216

Table of Supplements Used

Farm Scenario	Feed Prices Used in Models	240 K MS	300 K MS	300 ha
Maize silage TDM	30 c / kgDM	405	302	504
Barley T	$400 / T		455	744
Palm kernel T	$320 / T		106	157
Hay (bales)	$55 / bale	277	253	400
Baleage (bales)	$70 / bale	320	320	
Winter Off Farm Grazing T DM	$25 / head / week	44	94	458
Total Brought In – T DM		582	1,028	1,872
Fodder Beet – t DM		160	160	-
Supplement Total T DM		742	1,188	1,872
Total T DM / ha		3.6	5.6	6.2
Total T DM / cow		1.2	1.8	1.8
T DM fed to Milkers		0.7	1.3	1.3
T DM fed winter & transition		0.5	0.5	0.5
Pasture Grown per Cow T DM		4.5	4.4	4.3

APPENDIX 3

Cash Flows and Budgets

MACFARLANE RURAL BUSINESS LTD BUDGET SUMMARY		Su or Ha	
	TOTAL $		TOTAL $
WAGES	32,000	SHEEP	
ANIMAL HEALTH	7,800	WOOL	
STOCKFEED PURCHASED		CATTLE	
OTHER STOCK EXPENSES		MILK	
FEED CONSERVATION	30,400	DEER	
CONTRACTING	84,560	VELVET	
CARTAGE		GRAIN AND PULSE PRODUCE	
FERTILISER & PROGIBB	28,500	Previous Yr Sales	
SEEDS & TREATMENT	24,000	Current Yr Sales	102,900
SACKS & SEED DRESSING		Unsold At Year End	
WEED & PEST CONTROL	3,000	SMALL SEED PRODUCE	
REPAIRS & MAINTENANCE	5,000	Previous Yr Sales	
VEHICLE EXPENSES	6,000	Current Yr Sales	
ELECTRICITY	1,200	Unsold At Year End	
OTHER WORKING EXPS		MISCELLANEOUS INCOME	288,440
ADMINISTRATION	6,000		
STANDING CHARGES	12,000	STOCK PURCHASES	
		Sheep	
		Cattle	
		Deer	
		Other	
CASH FARM WORKING EXPENSES	240,460	**CASH FARM INCOME**	391,340
CASH FARM WORKING PROFIT	150,880		
DEBT SERVICING			
Mortgage			
Term Interest			
Current Account			
Rent			
Other			
CASH OPERATING EXPENSES	240,460	**CASH OPERATING INCOME**	391,340
CASH OPERATING SURPLUS/DEFICIT	150,880		
PERSONAL DRAWINGS		NON OPERATING INCOME	
OTHER PERSONAL			
TAXATION			
CAPITAL PURCHASES & PAYMENTS		INVESTMENT INCOME	
INVESTMENTS			
UNPAID ACCOUNTS			
TOTAL CASH EXPENDITURE	240,460	**TOTAL CASH INCOME**	391,340
TOTAL CASH SURPLUS/DEFICIT	150,880		
Change in value of stock on hand			
Change in value of produce on hand			
Depreciation	20,000		
TRUE SURPLUS/DEFICIT	130,880		

MACFARLANE RURAL BUSINESS LTD CASHFLOW BUDGET

INCOME	TOTAL	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Barley	96,000								96,000				
Other Grain & Pulse	6,900								6,900				
Grazing Winter cow	90,000	45,000	45,000										
Grazing Winter cow	22,500		22,500										
Grazing Winter cow	7,500			7,500									
Grazing weaner	14,000							2,800	2,800	2,800	2,800	2,800	
Grazing heifers May to	129,600	11,781	11,781	11,781	11,781	11,781	11,781	11,781	11,781	11,781	11,781	11,790	
Grazing heifers May to	10,440												10,440
Winter heifer grazing	14,400												14,400
TOTAL INCOME	391,340	56,781	79,281	19,281	11,781	11,781	11,781	14,581	117,481	14,581	14,581	14,590	24,840
EXPENDITURE	**TOTAL**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
Wages													
- Farm Staff	32,000	5,333	5,333	1,334	1,334	1,334	1,334	1,334	1,334	1,334	1,334	5,333	5,333
- Shearing													
- Rations/Store/Other													
Animal Health	7,800	650	650	650	650	650	650	650	650	650	650	650	650
Feed Conservation	30,400					20,000	10,400						
Contracting	84,560			34,360	6,500	24,700			19,000				
Cartage													
Fertiliser & Progibb	28,500			3,000		3,000					19,500	3,000	
Seed and Treatment	24,000									24,000			
Weed & Pest Control	3,000		2,000				1,000						
Repairs and Mainten.	5,000	418	418	416	416	417	417	417	417	417	417	417	417
Vehicle Expenses	6,000	1,000	1,000	250	250	250	250	250	250	250	250	1,000	1,000
Electricity	1,200	100	100	100	100	100	100	100	100	100	100	100	100
Administration	6,000	500	500	500	500	500	500	500	500	500	500	500	500
Standing Charge	12,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Debt Servicing													
TOTAL EXPENSES	240,460	9,001	11,001	41,610	10,750	51,950	15,650	4,250	23,250	28,250	23,750	12,000	9,000
		Jul	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
MONTHLY BALANCE	150,880	47,780	68,280	-22,329	1,032	-40,169	-3,869	10,331	94,231	-13,669	-9,169	2,591	15,841
CLOSING BALANCE		47,780	116,060	93,732	94,763	54,594	50,725	61,056	155,287	141,618	132,449	135,040	150,880
GST IN	48,918	7,098	9,910	2,410	1,473	1,473	1,473	1,823	14,685	1,823	1,823	1,824	3,105
GST OUT	-30,058	-1,125	-1,375	-5,201	-1,344	-6,494	-1,956	-531	-2,906	-3,531	-2,969	-1,500	-1,125
NET GST	18,860			-14,508		2,662		5,505		-13,070		2,855	
GST INCL. BALANCE		53,753	130,568	90,940	92,101	49,573	45,220	62,347	168,357	139,909	129,594	135,363	153,184

600 cow Year 1

MACFARLANE RURAL BUSINESS LTD BUDGET SUMMARY

	TOTAL $	Su or Ha	TOTAL $
WAGES	207,000	SHEEP	
ANIMAL HEALTH	51,000	WOOL	
STOCKFEED PURCHASED	245,760	CATTLE	90,700
OTHER STOCK EXPENSES	27,000	MILK	1,143,998
FEED CONSERVATION	10,000	DEER	
CONTRACTING		VELVET	
CARTAGE		GRAIN AND PULSE PRODUCE	
FERTILISER & PROGIBB	113,457	Previous Yr Sales	
SEEDS & TREATMENT	23,800	Current Yr Sales	
SACKS & SEED DRESSING		Unsold At Year End	
WEED & PEST CONTROL	4,000	SMALL SEED PRODUCE	
REPAIRS & MAINTENANCE	80,000	Previous Yr Sales	
VEHICLE EXPENSES	35,000	Current Yr Sales	
ELECTRICITY	54,800	Unsold At Year End	
ENVIRONMENTAL	2,500	MISCELLANEOUS INCOME	
ADMINISTRATION	17,900		
STANDING CHARGES	159,791	STOCK PURCHASES	
		Sheep	
		Cattle	-20,700
		Deer	
		Other	
CASH FARM WORKING EXPENSES	1,032,008	**CASH FARM INCOME**	1,213,998
CASH FARM WORKING PROFIT	181,990		
DEBT SERVICING			
Mortgage	246,360		
Term Interest			
Current Account	10,197		
Rent			
Other			
CASH OPERATING EXPENSES	1,288,565	**CASH OPERATING INCOME**	1,213,998
CASH OPERATING SURPLUS/DEFICIT	-74,567		
PERSONAL DRAWINGS		NON OPERATING INCOME	
OTHER PERSONAL			
TAXATION			
CAPITAL PURCHASES & PAYMENTS		INVESTMENT INCOME	
INVESTMENTS			
UNPAID ACCOUNTS			
TOTAL CASH EXPENDITURE	1,288,565	**TOTAL CASH INCOME**	1,213,998
TOTAL CASH SURPLUS/DEFICIT	-74,567		
Change in value of stock on hand			
Change in value of produce on hand			
Depreciation	70,750		
TRUE SURPLUS/DEFICIT	-145,317		

MACFARLANE RURAL BUSINESS LTD — CASHFLOW BUDGET YEAR 1

INCOME	TOTAL	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
CATTLE SALES													
Cows	63,000				4,000						10,000	49,000	
Heifers	4,500											4,500	
Heifer Calves	1,050			800	250								
Male Calves	6,000			4,000	2,000								
Bulls	16,150								16,150				
CATTLE PURCH.	-20,700					-20,700							
DAIRY SALES													
Base Milk Sales	1,143,998			45,000	125,000	135,000	115,000	110,000	100,000	125,000	135,000	130,000	123,998
Final Payout													
Other Milk Sales													
TOTAL INCOME	1,213,998			49,800	131,250	114,300	115,000	110,000	116,150	125,000	145,000	183,500	123,998
EXPENDITURE	**TOTAL**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
Wages													
- Farm Staff	207,000	17,250	17,250	17,250	17,250	17,250	17,250	17,250	17,250	17,250	17,250	17,250	17,250
Animal Health	51,000		7,000	5,000	5,000	7,000	6,000	3,650	3,500	3,350	3,500	3,500	3,500
Stock Feed	245,760	14,100	14,100	6,600	6,600	6,600	11,360	11,360	11,360	22,695	11,360	118,265	11,360
Other Stock Exp.	27,000					10,000	17,000						
Feed Conservation	10,000					5,000	5,000						
Fertiliser & Progibb	113,457		14,000	4,000		33,500	24,000	10,000	7,000	3,000	10,000	7,957	
Seed and Treatment	23,800				6,800	10,000	7,000						
Weed & Pest Control	4,000	1,000				2,000				1,000			
Repairs and Mainten.	80,000	4,000	4,000	4,000	6,000	6,000	4,000	4,000	4,000	4,000	4,000	20,000	16,000
Vehicle Expenses	35,000	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,935
Electricity	54,800	500	500	4,500	6,000	6,000	6,000	6,000	6,000	6,000	6,000	4,000	3,300
Other Working Exp.	2,500										2,500		
Administration	17,900	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,400
Standing Charge	159,791	2,850	2,850	2,850	2,850	23,691	23,800	23,800	23,800	23,800	23,800	2,850	2,850
Debt Servicing													
- Mortgage	246,360	20,530	20,530	20,530	20,530	20,530	20,530	20,530	20,530	20,530	20,530	20,530	20,530
- Current Account	10,197		468	1,089	1,134	706	1,040	1,265	1,166	1,019	924	601	787
TOTAL EXPENSES	1,288,565	64,645	85,113	70,234	76,579	152,692	147,395	102,270	99,021	107,059	104,279	199,368	79,912
		Jul	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
MONTHLY BALANCE		-64,645	-85,113	-20,434	54,671	-38,392	-32,395	7,730	17,129	17,941	40,721	-15,868	44,086
CLOSING BALANCE		-64,645	-149,758	-170,191	-115,520	-153,911	-186,307	-178,577	-161,448	-143,507	-102,786	-118,654	-74,567
GST IN	151,750			6,225	16,406	14,288	14,375	13,750	14,519	15,625	18,125	22,938	15,500
GST OUT	-129,001	-5,514	-8,014	-6,077	-6,864	-16,432	-15,728	-10,059	-9,666	-10,689	-10,353	-22,280	-7,324
NET GST	22,749			13,529		-9,690		3,498		-8,544		-12,708	
GST INCL. BALANCE		-70,159	-163,286	-170,043	-105,830	-156,056	-189,804	-174,887	-152,904	-138,571	-90,078	-117,996	-65,734

MACFARLANE RURAL BUSINESS LTD BUDGET SUMMARY

	TOTAL $		Su or Ha	TOTAL $
WAGES	211,800	SHEEP		
ANIMAL HEALTH	52,275	WOOL		
STOCKFEED PURCHASED	245,760	CATTLE		90,700
OTHER STOCK EXPENSES	27,000	MILK		1,416,208
FEED CONSERVATION	10,000	DEER		
CONTRACTING		VELVET		
CARTAGE		GRAIN AND PULSE PRODUCE		
FERTILISER & PROGIBB	113,457	Previous Yr Sales		
SEEDS & TREATMENT	23,800	Current Yr Sales		
SACKS & SEED DRESSING		Unsold At Year End		
WEED & PEST CONTROL	4,000	SMALL SEED PRODUCE		
REPAIRS & MAINTENANCE	80,000	Previous Yr Sales		
VEHICLE EXPENSES	35,000	Current Yr Sales		
ELECTRICITY	54,800	Unsold At Year End		
OTHER WORKING EXPS		MISCELLANEOUS INCOME		
ADMINISTRATION	17,900			
STANDING CHARGES	154,599	STOCK PURCHASES		
			Sheep	
			Cattle	-20,700
			Deer	
			Other	
CASH FARM WORKING EXPENSES	**1,030,391**	**CASH FARM INCOME**		**1,486,208**
CASH FARM WORKING PROFIT	**455,817**			
DEBT SERVICING				
Mortgage	246,360			
Term Interest				
Current Account	1,817			
Rent				
Other				
CASH OPERATING EXPENSES	**1,278,568**	**CASH OPERATING INCOME**		**1,486,208**
CASH OPERATING SURPLUS/DEFICIT	**207,640**			
PERSONAL DRAWINGS		NON OPERATING INCOME		
OTHER PERSONAL				
TAXATION				
CAPITAL PURCHASES & PAYMENTS		INVESTMENT INCOME		
INVESTMENTS				
UNPAID ACCOUNTS				
TOTAL CASH EXPENDITURE	**1,278,568**	**TOTAL CASH INCOME**		**1,486,208**
TOTAL CASH SURPLUS/DEFICIT	**207,640**			
Change in value of stock on hand				
Change in value of produce on hand				
Depreciation	70,750			
TRUE SURPLUS/DEFICIT	**136,890**			

MACFARLANE RURAL BUSINESS LTD CASHFLOW BUDGET YEAR 2

INCOME	TOTAL	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
CATTLE SALES													
Cows	63,000				4,000						10,000	49,000	
Heifers	4,500											4,500	
Heifer Calves	1,050			800	250								
Male Calves	6,000			4,000	2,000								
Bulls	16,150								16,150				
CATTLE PURCH.	-20,700					-20,700							
DAIRY SALES													
Base Milk Sales	1,196,208			45,000	130,000	138,000	130,000	120,000	105,000	128,000	135,000	135,000	130,208
Final Payout	220,000	55,000	55,000	55,000	55,000								
TOTAL INCOME	1,486,208	55,000	55,000	104,800	191,250	117,300	130,000	120,000	121,150	128,000	145,000	188,500	130,208
EXPENDITURE	**TOTAL**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
Wages													
- Farm Staff	211,800	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650	17,650
Animal Health	52,275		5,000	4,000	4,000	7,000	7,000	6,000	6,000	3,000	3,000	3,775	3,500
Stock Feed	245,760	14,100	14,100	6,600	6,600	6,600	11,360	11,360	11,360	22,695	11,360	118,265	11,360
Other Stock Exp.	27,000					10,000	17,000						
Feed Conservation	10,000					5,000	5,000						
Fertiliser & Progibb	113,457		14,000	4,000		33,500	24,000	10,000	7,000	3,000	10,000	7,957	
Seed and Treatment	23,800				6,800	10,000	7,000						
Weed & Pest Control	4,000	1,000				2,000				1,000			
Repairs and Mainten.	80,000	4,000	4,000	4,000	6,000	6,000	4,000	4,000	4,000	4,000	4,000	20,000	16,000
Vehicle Expenses	35,000	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,935
Electricity	54,800	500	500	4,500	4,500	4,500	6,000	6,000	7,000	6,000	6,000	6,000	3,300
Administration	17,900	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,400
Standing Charge	154,599	2,500	2,500	2,500	2,500	22,000	23,500	23,500	23,500	23,500	23,500	2,500	2,599
Debt Servicing													
- Mortgage	246,360	20,530	20,530	20,530	20,530	20,530	20,530	20,530	20,530	20,530	20,530	20,530	20,530
- Term Loan Interest													
- Current Account	1,817			551	745	462			60				
TOTAL EXPENSES	1,278,568	64,695	83,246	68,940	73,457	149,195	147,455	103,515	101,455	105,790	100,455	201,092	79,274
		Jul	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
MONTHLY BALANCE		-9,695	-28,246	35,860	117,793	-31,895	-17,455	16,485	19,695	22,210	44,545	-12,592	50,934
CLOSING BALANCE		-75,429	-103,675	-67,815	49,978	18,083	628	17,114	36,809	59,019	103,564	90,972	141,906
GST IN	185,776	6,875	6,875	13,100	23,906	14,663	16,250	15,000	15,144	16,000	18,125	23,563	16,276
GST OUT	-128,799	-5,521	-7,771	-5,958	-6,558	-16,083	-15,866	-10,366	-10,116	-10,658	-9,991	-22,570	-7,343
NET GST	56,977	-8,557		-459		-24,490		1,036		-9,663		-13,477	
GST INCL. BALANCE		-82,632	-111,773	-69,230	65,911	8,106	-8,965	13,191	37,914	55,804	108,484	83,407	143,274

MACFARLANE RURAL BUSINESS LTD BUDGET SUMMARY

Su or Ha

	TOTAL $		TOTAL $
WAGES	216,720	SHEEP	
ANIMAL HEALTH	53,568	WOOL	
STOCKFEED PURCHASED	245,760	CATTLE	90,700
OTHER STOCK EXPENSES	27,000	MILK	1,479,560
FEED CONSERVATION	10,000	DEER	
CONTRACTING		VELVET	
CARTAGE		GRAIN AND PULSE PRODUCE	
FERTILISER & PROGIBB	113,457	Previous Yr Sales	
SEEDS & TREATMENT	23,800	Current Yr Sales	
SACKS & SEED DRESSING		Unsold At Year End	
WEED & PEST CONTROL	4,000	SMALL SEED PRODUCE	
REPAIRS & MAINTENANCE	80,000	Previous Yr Sales	
VEHICLE EXPENSES	35,000	Current Yr Sales	
ELECTRICITY	54,800	Unsold At Year End	
ENVIRONMENTAL	2,500	MISCELLANEOUS INCOME	
ADMINISTRATION	17,900		
STANDING CHARGES	154,599	STOCK PURCHASES	
		Sheep	
		Cattle	-20,700
		Deer	
		Other	
CASH FARM WORKING EXPENSES	1,039,104	**CASH FARM INCOME**	1,549,560
CASH FARM WORKING PROFIT	510,456		
DEBT SERVICING			
Mortgage	246,360		
Term Interest			
Current Account			
Rent			
Other			
CASH OPERATING EXPENSES	1,285,464	**CASH OPERATING INCOME**	1,549,560
CASH OPERATING SURPLUS/DEFICIT	264,096		
PERSONAL DRAWINGS		NON OPERATING INCOME	
OTHER PERSONAL			
TAXATION			
CAPITAL PURCHASES & PAYMENTS		INVESTMENT INCOME	
INVESTMENTS			
UNPAID ACCOUNTS			
TOTAL CASH EXPENDITURE	1,285,464	**TOTAL CASH INCOME**	1,549,560
TOTAL CASH SURPLUS/DEFICIT	264,096		
Change in value of stock on hand			
Change in value of produce on hand			
Depreciation	70,750		
TRUE SURPLUS/DEFICIT	193,346		

MACFARLANE RURAL BUSINESS LTD CASHFLOW BUDGET YEAR 3

INCOME	TOTAL	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
CATTLE SALES													
Cows	63,000				4,000						10,000	49,000	
Heifers	4,500											4,500	
Heifer Calves	1,050			800	250								
Male Calves	6,000			4,000	2,000								
Bulls	16,150								16,150				
CATTLE PURCH.	-20,700					-20,700							
DAIRY SALES													
Base Milk Sales	1,249,560			55,000	136,552	142,000	130,000	128,000	115,000	135,000	138,000	137,000	133,008
Final Payout	230,000	57,500	57,500	57,500	57,500								
TOTAL INCOME	1,549,560	57,500	57,500	117,300	200,302	121,300	130,000	128,000	131,150	135,000	148,000	190,500	133,008
EXPENDITURE	**TOTAL**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
Wages													
- Farm Staff	216,720	18,060	18,060	18,060	18,060	18,060	18,060	18,060	18,060	18,060	18,060	18,060	18,060
Animal Health	53,568		5,200	4,200	4,200	7,500	7,200	6,000	6,000	3,000	3,000	3,775	3,493
Stock Feed	245,760	14,100	14,100	6,600	6,600	6,600	11,360	11,360	11,360	22,695	11,360	118,265	11,360
Other Stock Exp.	27,000					10,000	17,000						
Feed Conservation	10,000					5,000	5,000						
Fertiliser & Progibb	113,457		14,000	4,000		33,500	24,000	10,000	7,000	3,000	10,000	7,957	
Seed and Treatment	23,800				6,800	10,000	7,000						
Weed & Pest Control	4,000	1,000				2,000				1,000			
Repairs and Mainten.	80,000	4,000	4,000	4,000	6,000	6,000	4,000	4,000	4,000	4,000	4,000	20,000	16,000
Vehicle Expenses	35,000	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,935
Electricity	54,800	500	500	4,500	4,500	4,500	6,000	6,000	7,000	6,000	6,000	6,000	3,300
Environmental	2,500										2,500		
Administration	17,900	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,400
Standing Charge	154,599	2,500	2,500	2,500	2,500	22,000	23,500	23,500	23,500	23,500	23,500	2,500	2,599
Debt Servicing													
- Mortgage	246,360	20,530	20,530	20,530	20,530	20,530	20,530	20,530	20,530	20,530	20,530	20,530	20,530
TOTAL EXPENSES	1,285,464	65,105	83,305	68,805	73,605	150,105	148,065	103,865	101,865	106,200	103,365	201,502	79,677
		Jul	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
MONTHLY BALANCE		-7,605	-25,805	48,495	126,697	-28,805	-18,065	24,135	29,285	28,800	44,635	-11,002	53,331
CLOSING BALANCE		135,669	109,864	158,359	285,056	256,251	238,186	262,321	291,606	320,406	365,041	354,039	407,370
GST IN	193,695	7,188	7,188	14,663	25,038	15,163	16,250	16,000	16,394	16,875	18,500	23,813	16,626
GST OUT	-129,888	-5,572	-7,847	-6,034	-6,634	-16,197	-15,942	-10,417	-10,167	-10,709	-10,354	-22,622	-7,393
NET GST	63,807	-8,933		-956		-27,032		726		-11,810		-14,312	
GST INCL. BALANCE		128,352	101,887	158,054	303,155	246,284	228,527	258,971	294,483	317,639	370,420	346,297	408,861

MACFARLANE RURAL BUSINESS LTD BUDGET SUMMARY			
		Su or Ha	
	TOTAL $		TOTAL $
WAGES	216,720	SHEEP	
ANIMAL HEALTH	53,568	WOOL	
STOCKFEED PURCHASED	245,760	CATTLE	90,700
OTHER STOCK EXPENSES	27,000	MILK	1,499,460
FEED CONSERVATION	10,000	DEER	
CONTRACTING		VELVET	
CARTAGE		GRAIN AND PULSE PRODUCE	
FERTILISER & PROGIBB	113,457	Previous Yr Sales	
SEEDS & TREATMENT	23,800	Current Yr Sales	
SACKS & SEED DRESSING		Unsold At Year End	
WEED & PEST CONTROL	4,000	SMALL SEED PRODUCE	
REPAIRS & MAINTENANCE	80,000	Previous Yr Sales	
VEHICLE EXPENSES	35,000	Current Yr Sales	
ELECTRICITY	54,800	Unsold At Year End	
ENVIRONMENTAL	5,000	MISCELLANEOUS INCOME	
ADMINISTRATION	17,900		
STANDING CHARGES	154,599	STOCK PURCHASES	
		Sheep	
		Cattle	-20,700
		Deer	
		Other	
CASH FARM WORKING EXPENSES	**1,041,604**	**CASH FARM INCOME**	**1,569,460**
CASH FARM WORKING PROFIT	**527,856**		
DEBT SERVICING			
Mortgage	263,160		
Term Interest			
Current Account			
Rent			
Other			
CASH OPERATING EXPENSES	**1,304,764**	**CASH OPERATING INCOME**	**1,569,460**
CASH OPERATING SURPLUS/DEFICIT	**264,696**		
PERSONAL DRAWINGS		NON OPERATING INCOME	
OTHER PERSONAL			
TAXATION			
CAPITAL PURCHASES & PAYMENTS	70,750	INVESTMENT INCOME	
INVESTMENTS			
UNPAID ACCOUNTS			
TOTAL CASH EXPENDITURE	**1,375,514**	**TOTAL CASH INCOME**	**1,569,460**
TOTAL CASH SURPLUS/DEFICIT	**193,946**		
Change in value of stock on hand			
Change in value of produce on hand			
Depreciation	70,750		
TRUE SURPLUS/DEFICIT	**123,196**		

MACFARLANE RURAL BUSINESS LTD CASHFLOW BUDGET YEAR 4

INCOME	TOTAL	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
CATTLE SALES													
Cows	63,000				4,000						10,000	49,000	
Heifers	4,500											4,500	
Heifer Calves	1,050			800	250								
Male Calves	6,000			4,000	2,000								
Bulls	16,150								16,150				
CATTLE PURCH.	-20,700					-20,700							
DAIRY SALES													
Base Milk Sales	1,249,560			55,000	136,552	142,000	130,000	128,000	115,000	135,000	138,000	137,000	133,008
Final Payout	240,300	60,000	60,000	60,000	60,300								
Dividend	9,600										9,600		
TOTAL INCOME	1,569,460	60,000	60,000	119,800	203,102	121,300	130,000	128,000	131,150	135,000	157,600	190,500	133,008
EXPENDITURE	**TOTAL**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
Wages													
- Farm Staff	216,720	18,060	18,060	18,060	18,060	18,060	18,060	18,060	18,060	18,060	18,060	18,060	18,060
Animal Health	53,568		5,200	4,200	4,200	7,500	7,200	6,000	6,000	3,000	3,000	3,775	3,493
Stock Feed	245,760	14,100	14,100	6,600	6,600	6,600	11,360	11,360	11,360	22,695	11,360	118,265	11,360
Other Stock Exp.	27,000					10,000	17,000						
Feed Conservation	10,000					5,000	5,000						
Fertiliser & Progibb	113,457		14,000	4,000		33,500	24,000	10,000	7,000	3,000	10,000	7,957	
Seed and Treatment	23,800				6,800	10,000	7,000						
Weed & Pest Control	4,000	1,000				2,000				1,000			
Repairs and Mainten.	80,000	4,000	4,000	4,000	6,000	6,000	4,000	4,000	4,000	4,000	4,000	20,000	16,000
Vehicle Expenses	35,000	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,935
Electricity	54,800	500	500	4,500	4,500	4,500	6,000	6,000	7,000	6,000	6,000	6,000	3,300
Environmental	5,000									2,500	2,500		
Administration	17,900	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,400
Standing Charge	154,599	2,500	2,500	2,500	2,500	22,000	23,500	23,500	23,500	23,500	23,500	2,500	2,599
Debt Servicing													
- Mortgage	263,160	20,530	20,530	20,530	20,530	20,530	20,530	23,330	23,330	23,330	23,330	23,330	23,330
Capital Purchases	70,750											70,750	
TOTAL EXPENSES	1,375,514	65,105	83,305	68,805	73,605	150,105	148,065	106,665	104,665	111,500	106,165	275,052	82,477
		Jul	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
MONTHLY BALANCE		-5,105	-23,305	50,995	129,497	-28,805	-18,065	21,335	26,485	23,500	51,435	-84,552	50,531
CLOSING BALANCE		403,756	380,451	431,446	560,943	532,138	514,073	535,408	561,893	585,393	636,828	552,276	602,807
GST IN	196,183	7,500	7,500	14,975	25,388	15,163	16,250	16,000	16,394	16,875	19,700	23,813	16,626
GST OUT	-139,044	-5,572	-7,847	-6,034	-6,634	-16,197	-15,942	-10,417	-10,167	-11,021	-10,354	-31,465	-7,393
NET GST	57,138	-10,500		-1,581		-27,694		726		-11,810		-15,199	
GST INCL. BALANCE		395,184	371,532	429,887	578,137	520,604	502,847	530,491	563,203	580,747	641,527	534,123	593,887

MACFARLANE RURAL BUSINESS LTD BUDGET SUMMARY			
		Su or Ha	
	TOTAL $		TOTAL $
WAGES	231,000	SHEEP	
ANIMAL HEALTH	53,568	WOOL	
STOCKFEED PURCHASED	274,380	CATTLE	90,700
OTHER STOCK EXPENSES	27,000	MILK	1,561,560
FEED CONSERVATION	10,000	DEER	
CONTRACTING		VELVET	
CARTAGE		GRAIN AND PULSE PRODUCE	
FERTILISER & PROGIBB	113,457	Previous Yr Sales	
SEEDS & TREATMENT	23,800	Current Yr Sales	
SACKS & SEED DRESSING		Unsold At Year End	
WEED & PEST CONTROL	4,000	SMALL SEED PRODUCE	
REPAIRS & MAINTENANCE	80,000	Previous Yr Sales	
VEHICLE EXPENSES	35,000	Current Yr Sales	
ELECTRICITY	54,800	Unsold At Year End	
OTHER WORKING EXPS	5,000	MISCELLANEOUS INCOME	
ADMINISTRATION	17,900		
STANDING CHARGES	154,599	STOCK PURCHASES	
		Sheep	
		Cattle	-20,700
		Deer	
		Other	
CASH FARM WORKING EXPENSES	**1,084,504**	**CASH FARM INCOME**	**1,631,560**
CASH FARM WORKING PROFIT	**547,056**		
DEBT SERVICING			
Mortgage	347,160		
Term Interest			
Current Account	524		
Rent			
Other			
CASH OPERATING EXPENSES	**1,432,188**	**CASH OPERATING INCOME**	**1,631,560**
CASH OPERATING SURPLUS/DEFICIT	**199,372**		
PERSONAL DRAWINGS		NON OPERATING INCOME	
OTHER PERSONAL			
TAXATION			
CAPITAL PURCHASES & PAYMENTS	70,750	INVESTMENT INCOME	
INVESTMENTS			
UNPAID ACCOUNTS			
TOTAL CASH EXPENDITURE	**1,502,938**	**TOTAL CASH INCOME**	**1,631,560**
TOTAL CASH SURPLUS/DEFICIT	**128,622**		
Change in value of stock on hand			
Change in value of produce on hand			
Depreciation	70,750		
TRUE SURPLUS/DEFICIT	**57,872**		

MACFARLANE RURAL BUSINESS LTD — CASHFLOW BUDGET YEAR 4

INCOME	TOTAL	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
CATTLE SALES													
Cows	63,000				4,000						10,000	49,000	
Heifers	4,500											4,500	
Heifer Calves	1,050			800	250								
Male Calves	6,000			4,000	2,000								
Bulls	16,150								16,150				
CATTLE PURCH.	-20,700					-20,700							
DAIRY SALES													
Base Milk Sales	1,249,560			55,000	115,000	142,000	140,000	139,552	115,000	135,000	138,000	137,000	133,008
Final Payout	240,000	60,000	60,000	60,000	60,000								
Dividend	72,000				36,000						36,000		
TOTAL INCOME	1,631,560	60,000	60,000	119,800	217,250	121,300	140,000	139,552	131,150	135,000	184,000	190,500	133,008
EXPENDITURE	**TOTAL**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
- Farm Staff	231,000	18,060	19,660	19,645	19,645	19,645	19,645	19,645	19,645	19,645	19,645	18,060	18,060
Animal Health	53,568		5,200	4,200	4,200	7,500	7,200	6,000	6,000	3,000	3,000	3,775	3,493
Stock Feed	274,380	12,500	12,500	7,500	7,500	7,500	20,000	20,000	15,105	22,695	11,360	126,360	11,360
Other Stock Exp.	27,000					10,000	17,000						
Feed Conservation	10,000					5,000	5,000						
Fertiliser & Progibb	113,457		14,000	4,000		33,500	24,000	10,000	7,000	3,000	10,000	7,957	
Seed and Treatment	23,800				6,800	10,000	7,000						
Weed & Pest Control	4,000	1,000				2,000				1,000			
Repairs and Mainten.	80,000	4,000	4,000	4,000	6,000	6,000	4,000	4,000	4,000	4,000	4,000	20,000	16,000
Vehicle Expenses	35,000	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,935
Electricity	54,800	500	500	4,500	4,500	4,500	6,000	6,000	7,000	6,000	6,000	6,000	3,300
Environmental	5,000									2,500	2,500		
Administration	17,900	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,400
Standing Charge	154,599	2,500	2,500	2,500	2,500	22,000	23,500	23,500	23,500	23,500	23,500	2,500	2,599
Debt Servicing													
- Mortgage	347,160	28,930	28,930	28,930	28,930	28,930	28,930	28,930	28,930	28,930	28,930	28,930	28,930
- Current Account	524		135	350	39								
Capital Purchases	70,750											70,750	
TOTAL EXPENSES	1,502,938	71,905	91,840	80,040	84,529	160,990	166,690	122,490	115,595	118,685	113,350	288,747	88,077
		Jul	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
MONTHLY BALANCE		-11,905	-31,840	39,760	132,721	-39,690	-26,690	17,062	15,555	16,315	70,650	-98,247	44,931
CLOSING BALANCE		-11,905	-43,745	-3,985	128,736	89,046	62,356	79,418	94,973	111,288	181,938	83,691	128,622
GST IN	203,945	7,500	7,500	14,975	27,156	15,163	17,500	17,444	16,394	16,875	23,000	23,813	16,626
GST OUT	-144,407	-5,372	-7,847	-6,345	-6,945	-16,508	-17,220	-11,695	-10,833	-11,219	-10,553	-32,477	-7,393
NET GST	59,538	-10,500		-1,781		-28,841		1,065		-11,310		-18,103	
GST INCL. BALANCE		-20,277	-52,464	-5,855	147,077	77,201	50,791	74,667	95,783	106,444	189,541	64,526	118,690

MACFARLANE RURAL BUSINESS LTD BUDGET SUMMARY			
		Su or Ha	
	TOTAL $		TOTAL $
WAGES	229,500	SHEEP	
ANIMAL HEALTH	65,000	WOOL	
STOCKFEED PURCHASED	452,850	CATTLE	97,750
OTHER STOCK EXPENSES	29,250	MILK	1,460,160
FEED CONSERVATION	10,000	DEER	
CONTRACTING		VELVET	
CARTAGE		GRAIN AND PULSE PRODUCE	
FERTILISER & PROGIBB	128,522	Previous Yr Sales	
SEEDS & TREATMENT	23,800	Current Yr Sales	
SACKS & SEED DRESSING		Unsold At Year End	
WEED & PEST CONTROL	4,000	SMALL SEED PRODUCE	
REPAIRS & MAINTENANCE	85,000	Previous Yr Sales	
VEHICLE EXPENSES	35,000	Current Yr Sales	
ELECTRICITY	57,500	Unsold At Year End	
OTHER WORKING EXPS	2,500	MISCELLANEOUS INCOME	
ADMINISTRATION	17,900		
STANDING CHARGES	162,200	STOCK PURCHASES	
		Sheep	
		Cattle	-23,000
		Deer	
		Other	
CASH FARM WORKING EXPENSES	1,303,022	**CASH FARM INCOME**	1,534,910
CASH FARM WORKING PROFIT	231,888		
DEBT SERVICING			
Mortgage	276,960		
Term Interest			
Current Account	11,293		
Rent			
Other			
CASH OPERATING EXPENSES	1,591,275	**CASH OPERATING INCOME**	1,534,910
CASH OPERATING SURPLUS/DEFICIT	-56,365		
PERSONAL DRAWINGS		NON OPERATING INCOME	
OTHER PERSONAL			
TAXATION			
CAPITAL PURCHASES & PAYMENTS		INVESTMENT INCOME	
INVESTMENTS			
UNPAID ACCOUNTS			
TOTAL CASH EXPENDITURE	1,591,275	**TOTAL CASH INCOME**	1,534,910
TOTAL CASH SURPLUS/DEFICIT	-56,365		
Change in value of stock on hand			
Change in value of produce on hand			
Depreciation	84,250		
TRUE SURPLUS/DEFICIT	-140,615		

MACFARLANE RURAL BUSINESS LTD CASHFLOW BUDGET

INCOME	TOTAL	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
CATTLE SALES													
Cows	67,500				4,000						14,500	49,000	
Heifers	4,500											4,500	
Heifer Calves	1,200			950	250								
Male Calves	6,500			4,500	2,000								
Bulls	18,050								18,050				
CATTLE PURCH.	-23,000					-23,000							
DAIRY SALES													
Base Milk Sales	1,460,160			60,000	150,000	170,000	160,000	160,000	140,000	150,000	160,000	165,160	145,000
TOTAL INCOME	1,534,910			65,450	156,250	147,000	160,000	160,000	158,050	150,000	174,500	218,660	145,000
EXPENDITURE	**TOTAL**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
Wages													
- Farm Staff	229,500	16,000	16,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	17,500
Animal Health	65,000		7,500	7,000	6,000	8,000	7,000	5,000	5,000	5,000	5,000	5,000	4,500
Stock Feed	452,850	19,000	19,000	28,600	28,600	28,600	33,000	33,000	33,000	45,000	30,000	138,225	16,825
Other Stock Exp.	29,250					19,250	10,000						
Feed Conservation	10,000					5,000	5,000						
Fertiliser & Progibb	128,522		14,000	6,000	5,000	35,000	26,000	12,000	8,000	4,500	10,000	8,022	
Seed and Treatment	23,800				6,800	10,000	7,000						
Weed & Pest Control	4,000	1,000				2,000				1,000			
Repairs and Mainten.	85,000	4,000	4,000	4,000	6,000	6,000	5,000	5,000	5,000	5,000	5,000	20,000	16,000
Vehicle Expenses	35,000	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,935
Electricity	57,500	500	500	5,000	6,500	6,500	6,500	6,500	6,200	6,000	6,000	4,000	3,300
Environmental	2,500										2,500		
Administration	17,900	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,400
Standing Charge	162,200	3,100	3,200	3,200	3,200	23,500	24,000	24,000	24,000	24,000	24,000	3,000	3,000
Debt Servicing													
- Mortgage	276,960	23,080	23,080	23,080	23,080	23,080	23,080	23,080	23,080	23,080	23,080	23,080	23,080
- Current Account	11,293		514	1,186	1,346	986	1,353	1,426	1,206	974	957	610	734
TOTAL EXPENSES	1,591,275	71,095	92,209	102,481	110,941	192,331	172,348	134,421	129,901	138,969	130,952	226,352	89,274
		Jul	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
MONTHLY BALANCE	-56,365	-71,095	-92,209	-37,031	45,309	-45,331	-12,348	25,579	28,149	11,031	43,548	-7,692	55,726
CLOSING BALANCE		-71,095	-163,304	-200,335	-155,026	-200,357	-212,706	-187,126	-158,977	-147,946	-104,398	-112,091	-56,365
GST IN	191,864			8,181	19,531	18,375	20,000	20,000	19,756	18,750	21,813	27,333	18,125
GST OUT	-162,878	-6,002	-8,577	-9,777	-10,814	-21,033	-18,489	-13,739	-13,202	-14,364	-13,364	-25,333	-8,183
NET GST	28,986			14,579		-7,121		1,148		-12,815		-12,834	
GST INCL. BALANCE		-77,097	-177,883	-201,930	-147,905	-203,015	-213,853	-180,866	-146,162	-143,561	-91,565	-110,091	-44,423

MACFARLANE RURAL BUSINESS LTD BUDGET SUMMARY			
		Su or Ha	
	TOTAL $		TOTAL $
WAGES	234,300	SHEEP	
ANIMAL HEALTH	66,625	WOOL	
STOCKFEED PURCHASED	452,850	CATTLE	97,750
OTHER STOCK EXPENSES	29,250	MILK	1,788,832
FEED CONSERVATION	10,000	DEER	
CONTRACTING		VELVET	
CARTAGE		GRAIN AND PULSE PRODUCE	
FERTILISER & PROGIBB	128,522	Previous Yr Sales	
SEEDS & TREATMENT	23,800	Current Yr Sales	
SACKS & SEED DRESSING		Unsold At Year End	
WEED & PEST CONTROL	4,000	SMALL SEED PRODUCE	
REPAIRS & MAINTENANCE	85,000	Previous Yr Sales	
VEHICLE EXPENSES	35,000	Current Yr Sales	
ELECTRICITY	57,500	Unsold At Year End	
ENVIRONMENTAL	2,500	MISCELLANEOUS INCOME	
ADMINISTRATION	17,900		
STANDING CHARGES	162,200	STOCK PURCHASES	
		Sheep	
		Cattle	-23,000
		Deer	
		Other	
CASH FARM WORKING EXPENSES	**1,309,447**	**CASH FARM INCOME**	**1,863,582**
CASH FARM WORKING PROFIT	**554,135**		
DEBT SERVICING			
Mortgage	276,960		
Term Interest			
Current Account	971		
Rent			
Other			
CASH OPERATING EXPENSES	**1,587,378**	**CASH OPERATING INCOME**	**1,863,582**
CASH OPERATING SURPLUS/DEFICIT	**276,204**		
PERSONAL DRAWINGS		NON OPERATING INCOME	
OTHER PERSONAL			
TAXATION			
CAPITAL PURCHASES & PAYMENTS		INVESTMENT INCOME	
INVESTMENTS			
UNPAID ACCOUNTS			
TOTAL CASH EXPENDITURE	**1,587,378**	**TOTAL CASH INCOME**	**1,863,582**
TOTAL CASH SURPLUS/DEFICIT	**276,204**		
Change in value of stock on hand			
Change in value of produce on hand			
Depreciation	84,250		
TRUE SURPLUS/DEFICIT	**191,954**		

MACFARLANE RURAL BUSINESS LTD CASHFLOW BUDGET

INCOME	TOTAL	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
CATTLE SALES													
Cows	67,500				4,000						14,500	49,000	
Heifers	4,500											4,500	
Heifer Calves	1,200			950	250								
Male Calves	6,500			4,500	2,000								
Bulls	18,050								18,050				
CATTLE PURCH.	-23,000					-23,000							
DAIRY SALES													
Base Milk Sales	1,508,832			65,000	155,000	175,000	165,000	165,000	145,000	155,000	165,000	170,000	148,832
Final Payout	280,000	70,000	70,000	70,000	70,000								
TOTAL INCOME	1,863,582	70,000	70,000	140,450	231,250	152,000	165,000	165,000	163,050	155,000	179,500	223,500	148,832
EXPENDITURE	**TOTAL**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
- Farm Staff	234,300	16,400	16,400	20,400	20,400	20,400	20,400	20,400	20,400	20,400	20,400	20,400	17,900
Animal Health	66,625		7,700	7,500	6,300	8,300	7,300	5,025	5,000	5,000	5,000	5,000	4,500
Stock Feed	452,850	14,100	14,100	28,600	28,600	40,000	40,000	35,125	33,000	45,000	30,000	127,500	16,825
Other Stock Exp.	29,250					19,250	10,000						
Feed Conservation	10,000					5,000	5,000						
Fertiliser & Progibb	128,522		14,000	6,000	5,000	35,000	26,000	12,000	8,000	4,500	10,000	8,022	
Seed and Treatment	23,800				6,800	10,000	7,000						
Weed & Pest Control	4,000	1,000				2,000				1,000			
Repairs and Mainten.	85,000	4,000	4,000	4,000	6,000	6,000	5,000	5,000	5,000	5,000	5,000	20,000	16,000
Vehicle Expenses	35,000	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,935
Electricity	57,500	500	500	5,000	6,500	6,500	6,500	6,500	6,200	6,000	6,000	4,000	3,300
Environmental	2,500										2,500		
Administration	17,900	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,400
Standing Charge	162,200	3,100	3,200	3,200	3,200	23,500	24,000	24,000	24,000	24,000	24,000	3,000	3,000
Debt Servicing													
- Mortgage	276,960	23,080	23,080	23,080	23,080	23,080	23,080	23,080	23,080	23,080	23,080	23,080	23,080
- Current Account	971		340	454	177								
TOTAL EXPENSES	1,587,378	66,595	87,735	102,649	110,472	203,445	178,695	135,545	129,095	138,395	130,395	215,417	88,940
		Jul	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
MONTHLY BALANCE	276,204	3,405	-17,735	37,801	120,778	-51,445	-13,695	29,455	33,955	16,605	49,105	8,083	59,892
CLOSING BALANCE		-41,018	-58,753	-20,952	99,826	48,381	34,686	64,141	98,096	114,701	163,806	171,889	231,781
GST IN	232,948	8,750	8,750	17,556	28,906	19,000	20,625	20,625	20,381	19,375	22,438	27,938	18,604
GST OUT	-163,681	-5,439	-8,039	-9,889	-10,902	-22,546	-19,452	-14,058	-13,252	-14,414	-13,414	-24,042	-8,233
NET GST	69,267	-13,300		-4,021		-25,671		2,373		-13,696		-13,984	
GST INCL. BALANCE		-51,007	-68,032	-26,585	112,197	31,536	19,014	57,408	98,492	106,362	164,490	162,485	232,748

MACFARLANE RURAL BUSINESS LTD BUDGET SUMMARY			
		Su or Ha	
	TOTAL $		TOTAL $
WAGES	239,220	SHEEP	
ANIMAL HEALTH	66,625	WOOL	
STOCKFEED PURCHASED	452,850	CATTLE	97,750
OTHER STOCK EXPENSES	29,250	MILK	1,850,039
FEED CONSERVATION	10,000	DEER	
CONTRACTING		VELVET	
CARTAGE		GRAIN AND PULSE PRODUCE	
FERTILISER & PROGIBB	128,522	Previous Yr Sales	
SEEDS & TREATMENT	23,800	Current Yr Sales	
SACKS & SEED DRESSING		Unsold At Year End	
WEED & PEST CONTROL	4,000	SMALL SEED PRODUCE	
REPAIRS & MAINTENANCE	85,000	Previous Yr Sales	
VEHICLE EXPENSES	35,000	Current Yr Sales	
ELECTRICITY	57,500	Unsold At Year End	
ENVIRONMENTAL	2,500	MISCELLANEOUS INCOME	
ADMINISTRATION	17,900		
STANDING CHARGES	162,200	STOCK PURCHASES	
		Sheep	
		Cattle	-23,000
		Deer	
		Other	
CASH FARM WORKING EXPENSES	**1,314,367**	**CASH FARM INCOME**	**1,924,789**
CASH FARM WORKING PROFIT	**610,422**		
DEBT SERVICING			
Mortgage	276,960		
Term Interest			
Current Account			
Rent			
Other			
CASH OPERATING EXPENSES	**1,591,327**	**CASH OPERATING INCOME**	**1,924,789**
CASH OPERATING SURPLUS/DEFICIT	**333,462**		
PERSONAL DRAWINGS		NON OPERATING INCOME	
OTHER PERSONAL			
TAXATION			
CAPITAL PURCHASES & PAYMENTS		INVESTMENT INCOME	
INVESTMENTS			
UNPAID ACCOUNTS			
TOTAL CASH EXPENDITURE	**1,591,327**	**TOTAL CASH INCOME**	**1,924,789**
TOTAL CASH SURPLUS/DEFICIT	**333,462**		
Change in value of stock on hand			
Change in value of produce on hand			
Depreciation	84,250		
TRUE SURPLUS/DEFICIT	**249,212**		

MACFARLANE RURAL BUSINESS LTD CASHFLOW BUDGET

INCOME	TOTAL	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
CATTLE SALES													
Cows	67,500				4,000						14,500	49,000	
Heifers	4,500											4,500	
Heifer Calves	1,200			950	250								
Male Calves	6,500			4,500	2,000								
Bulls	18,050								18,050				
CATTLE PURCH.	-23,000					-23,000							
DAIRY SALES													
Base Milk Sales	1,560,039			70,000	160,000	180,000	170,000	170,000	150,000	160,000	170,000	175,000	155,039
Final Payout	290,000	72,500	72,500	72,500	72,500								
TOTAL INCOME	1,924,789	72,500	72,500	147,950	238,750	157,000	170,000	170,000	168,050	160,000	184,500	228,500	155,039
EXPENDITURE	**TOTAL**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
- Farm Staff	239,220	16,810	16,810	20,810	20,810	20,810	20,810	20,810	20,810	20,810	20,810	20,810	18,310
Animal Health	66,625		7,700	7,500	6,300	8,300	7,300	5,025	5,000	5,000	5,000	5,000	4,500
Stock Feed	452,850	19,000	19,000	28,600	28,600	28,600	33,000	33,000	33,000	45,000	30,000	138,225	16,825
Other Stock Exp.	29,250					19,250	10,000						
Feed Conservation	10,000					5,000	5,000						
Fertiliser & Progibb	128,522		14,000	6,000	5,000	35,000	26,000	12,000	8,000	4,500	10,000	8,022	
Seed and Treatment	23,800				6,800	10,000	7,000						
Weed & Pest Control	4,000	1,000				2,000				1,000			
Repairs and Mainten.	85,000	4,000	4,000	4,000	6,000	6,000	5,000	5,000	5,000	5,000	5,000	20,000	16,000
Vehicle Expenses	35,000	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,935
Electricity	57,500	500	500	5,000	6,500	6,500	6,500	6,500	6,200	6,000	6,000	4,000	3,300
Environmental	2,500										2,500		
Administration	17,900	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,400
Standing Charge	162,200	3,100	3,200	3,200	3,200	23,500	24,000	24,000	24,000	24,000	24,000	3,000	3,000
Debt Servicing													
- Mortgage	276,960	23,080	23,080	23,080	23,080	23,080	23,080	23,080	23,080	23,080	23,080	23,080	23,080
TOTAL EXPENSES	1,591,327	71,905	92,705	102,605	110,705	192,455	172,105	133,830	129,505	138,805	130,805	226,552	89,350
		Jul	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
MONTHLY BALANCE	333,462	595	-20,205	45,345	128,045	-35,455	-2,105	36,170	38,545	21,195	53,695	1,948	65,689
CLOSING BALANCE		245,607	225,402	270,747	398,792	363,337	361,232	397,402	435,947	457,142	510,837	512,785	578,474
GST IN	240,599	9,063	9,063	18,494	29,844	19,625	21,250	21,250	21,006	20,000	23,063	28,563	19,380
GST OUT	-164,296	-6,103	-8,703	-9,941	-10,953	-21,172	-18,628	-13,844	-13,303	-14,466	-13,466	-25,434	-8,284
NET GST	76,303	-13,300		-3,319		-27,444		-1,075		-15,109		-15,131	
GST INCL. BALANCE		235,266	215,421	266,000	412,936	348,490	349,007	391,508	437,756	449,376	512,668	502,614	579,399

MACFARLANE RURAL BUSINESS LTD BUDGET SUMMARY

	TOTAL $		Su or Ha TOTAL $
WAGES	239,220	SHEEP	
ANIMAL HEALTH	66,625	WOOL	
STOCKFEED PURCHASED	452,850	CATTLE	97,750
OTHER STOCK EXPENSES	29,250	MILK	1,875,039
FEED CONSERVATION	10,000	DEER	
CONTRACTING		VELVET	
CARTAGE		GRAIN AND PULSE PRODUCE	
FERTILISER & PROGIBB	128,522	Previous Yr Sales	
SEEDS & TREATMENT	23,800	Current Yr Sales	
SACKS & SEED DRESSING		Unsold At Year End	
WEED & PEST CONTROL	4,000	SMALL SEED PRODUCE	
REPAIRS & MAINTENANCE	85,000	Previous Yr Sales	
VEHICLE EXPENSES	35,000	Current Yr Sales	
ELECTRICITY	57,500	Unsold At Year End	
OTHER WORKING EXPS	2,500	MISCELLANEOUS INCOME	
ADMINISTRATION	17,900		
STANDING CHARGES	162,200	STOCK PURCHASES	
		Sheep	
		Cattle	-23,000
		Deer	
		Other	
CASH FARM WORKING EXPENSES	**1,314,367**	**CASH FARM INCOME**	**1,949,789**
CASH FARM WORKING PROFIT	**635,422**		
DEBT SERVICING			
Mortgage	297,960		
Term Interest			
Current Account			
Rent			
Other			
CASH OPERATING EXPENSES	**1,612,327**	**CASH OPERATING INCOME**	**1,949,789**
CASH OPERATING SURPLUS/DEFICIT	**337,462**		
PERSONAL DRAWINGS		NON OPERATING INCOME	
OTHER PERSONAL			
TAXATION			
CAPITAL PURCHASES & PAYMENTS	84,250	INVESTMENT INCOME	
INVESTMENTS			
UNPAID ACCOUNTS			
TOTAL CASH EXPENDITURE	**1,696,577**	**TOTAL CASH INCOME**	**1,949,789**
TOTAL CASH SURPLUS/DEFICIT	**253,212**		
Change in value of stock on hand			
Change in value of produce on hand			
Depreciation	84,250		
TRUE SURPLUS/DEFICIT	**168,962**		

MACFARLANE RURAL BUSINESS LTD CASHFLOW BUDGET

INCOME	TOTAL	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
CATTLE SALES													
Cows	67,500				4,000						14,500	49,000	
Heifers	4,500											4,500	
Heifer Calves	1,200			950	250								
Male Calves	6,500			4,500	2,000								
Bulls	18,050								18,050				
CATTLE PURCH.	-23,000					-23,000							
DAIRY SALES													
Base Milk Sales	1,560,039			70,000	160,000	180,000	170,000	170,000	150,000	160,000	170,000	175,000	155,039
Final Payout	300,000	75,000	75,000	75,000	75,000								
Dividend	15,000										15,000		
TOTAL INCOME	1,949,789	75,000	75,000	150,450	241,250	157,000	170,000	170,000	168,050	160,000	199,500	228,500	155,039
EXPENDITURE	**TOTAL**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
- Farm Staff	239,220	16,810	16,810	20,810	20,810	20,810	20,810	20,810	20,810	20,810	20,810	20,810	18,310
Animal Health	66,625		7,700	7,500	6,300	8,300	7,300	5,025	5,000	5,000	5,000	5,000	4,500
Stock Feed	452,850	19,000	19,000	28,600	28,600	28,600	33,000	33,000	33,000	45,000	30,000	138,225	16,825
Other Stock Exp.	29,250					19,250	10,000						
Feed Conservation	10,000					5,000	5,000						
Fertiliser & Progibb	128,522		14,000	6,000	5,000	35,000	26,000	12,000	8,000	4,500	10,000	8,022	
Seed and Treatment	23,800				6,800	10,000	7,000						
Weed & Pest Control	4,000	1,000				2,000				1,000			
Repairs and Mainten.	85,000	4,000	4,000	4,000	6,000	6,000	5,000	5,000	5,000	5,000	5,000	20,000	16,000
Vehicle Expenses	35,000	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,935
Electricity	57,500	500	500	5,000	6,500	6,500	6,500	6,500	6,200	6,000	6,000	4,000	3,300
Other Working Exp.	2,500										2,500		
Administration	17,900	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,400
Standing Charge	162,200	3,100	3,200	3,200	3,200	23,500	24,000	24,000	24,000	24,000	24,000	3,000	3,000
Debt Servicing													
- Mortgage	297,960	23,080	23,080	23,080	23,080	23,080	23,080	26,580	26,580	26,580	26,580	26,580	26,580
Capital Purchases	84,250										84,250		
TOTAL EXPENSES	1,696,577	71,905	92,705	102,605	110,705	192,455	172,105	137,330	133,005	142,305	218,555	230,052	92,850
		Jul	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
MONTHLY BALANCE	253,212	3,095	-17,705	47,845	130,545	-35,455	-2,105	32,670	35,045	17,695	-19,055	-1,552	62,189
CLOSING BALANCE		582,494	564,789	612,634	743,179	707,724	705,619	738,289	773,334	791,029	771,974	770,422	832,611
GST IN	243,724	9,375	9,375	18,806	30,156	19,625	21,250	21,250	21,006	20,000	24,938	28,563	19,380
GST OUT	-174,827	-6,103	-8,703	-9,941	-10,953	-21,172	-18,628	-13,844	-13,303	-14,466	-23,997	-25,434	-8,284
NET GST	68,897	-13,300		-3,944		-28,069		-1,075		-15,109		-6,475	
GST INCL. BALANCE		572,466	555,433	608,200	757,948	692,877	693,394	732,395	775,143	783,263	765,149	760,251	833,536

MACFARLANE RURAL BUSINESS LTD BUDGET SUMMARY			
		Su or Ha	
	TOTAL $		TOTAL $
WAGES	253,500	SHEEP	
ANIMAL HEALTH	66,625	WOOL	
STOCKFEED PURCHASED	452,850	CATTLE	97,750
OTHER STOCK EXPENSES	29,250	MILK	1,950,039
FEED CONSERVATION	10,000	DEER	
CONTRACTING		VELVET	
CARTAGE		GRAIN AND PULSE PRODUCE	
FERTILISER & PROGIBB	128,522	Previous Yr Sales	
SEEDS & TREATMENT	23,800	Current Yr Sales	
SACKS & SEED DRESSING		Unsold At Year End	
WEED & PEST CONTROL	4,000	SMALL SEED PRODUCE	
REPAIRS & MAINTENANCE	85,000	Previous Yr Sales	
VEHICLE EXPENSES	35,000	Current Yr Sales	
ELECTRICITY	57,500	Unsold At Year End	
ENVIRONMENTAL	5,000	MISCELLANEOUS INCOME	
ADMINISTRATION	17,900		
STANDING CHARGES	162,200	STOCK PURCHASES	
		Sheep	
		Cattle	-23,000
		Deer	
		Other	
CASH FARM WORKING EXPENSES	1,331,147	**CASH FARM INCOME**	2,024,789
CASH FARM WORKING PROFIT	693,642		
DEBT SERVICING			
Mortgage	402,960		
Term Interest			
Current Account	449		
Rent			
Other			
CASH OPERATING EXPENSES	1,734,556	**CASH OPERATING INCOME**	2,024,789
CASH OPERATING SURPLUS/DEFICIT	290,233		
PERSONAL DRAWINGS		NON OPERATING INCOME	
OTHER PERSONAL			
TAXATION			
CAPITAL PURCHASES & PAYMENTS	84,250	INVESTMENT INCOME	
INVESTMENTS			
UNPAID ACCOUNTS			
TOTAL CASH EXPENDITURE	1,818,806	**TOTAL CASH INCOME**	2,024,789
TOTAL CASH SURPLUS/DEFICIT	205,983		
Change in value of stock on hand			
Change in value of produce on hand			
Depreciation	84,250		
TRUE SURPLUS/DEFICIT	121,733		

MACFARLANE RURAL BUSINESS LTD CASHFLOW BUDGET

INCOME	TOTAL	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
CATTLE SALES													
Cows	67,500				4,000						14,500	49,000	
Heifers	4,500											4,500	
Heifer Calves	1,200			950	250								
Male Calves	6,500			4,500	2,000								
Bulls	18,050								18,050				
CATTLE PURCH.	-23,000					-23,000							
DAIRY SALES													
Base Milk Sales	1,560,039			70,000	140,000	180,000	180,000	180,000	150,000	160,000	170,000	175,000	155,039
Final Payout	300,000	75,000	75,000	75,000	75,000								
Dividend	90,000				45,000						45,000		
TOTAL INCOME	2,024,789	75,000	75,000	150,450	266,250	157,000	180,000	180,000	168,050	160,000	229,500	228,500	155,039
EXPENDITURE	**TOTAL**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
- Farm Staff	253,500	16,810	16,810	22,395	22,395	22,395	22,395	22,395	22,395	22,395	22,395	22,395	18,325
Animal Health	66,625		7,700	7,500	6,300	8,300	7,300	5,025	5,000	5,000	5,000	5,000	4,500
Stock Feed	452,850	19,000	19,000	28,600	28,600	28,600	33,000	33,000	33,000	45,000	30,000	138,225	16,825
Other Stock Exp.	29,250					19,250	10,000						
Feed Conservation	10,000					5,000	5,000						
Fertiliser & Progibb	128,522		14,000	6,000	5,000	35,000	26,000	12,000	8,000	4,500	10,000	8,022	
Seed and Treatment	23,800				6,800	10,000	7,000						
Weed & Pest Control	4,000	1,000				2,000				1,000			
Repairs and Mainten.	85,000	4,000	4,000	4,000	6,000	6,000	5,000	5,000	5,000	5,000	5,000	20,000	16,000
Vehicle Expenses	35,000	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,915	2,935
Electricity	57,500	500	500	5,000	6,500	6,500	6,500	6,500	6,200	6,000	6,000	4,000	3,300
Other Working Exp.	5,000									2,500	2,500		
Administration	17,900	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,400
Standing Charge	162,200	3,100	3,200	3,200	3,200	23,500	24,000	24,000	24,000	24,000	24,000	3,000	3,000
Debt Servicing													
- Mortgage	402,960	33,580	33,580	33,580	33,580	33,580	33,580	33,580	33,580	33,580	33,580	33,580	33,580
- Current Account	449		116	301	33								
Capital Purchases	84,250											84,250	
TOTAL EXPENSES	1,818,806	82,405	103,321	114,991	122,823	204,540	184,190	145,915	141,590	153,390	142,890	322,887	99,865
		Jul	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
MONTHLY BALANCE	205,983	-7,405	-28,321	35,459	143,427	-47,540	-4,190	34,085	26,460	6,610	86,610	-94,387	55,174
CLOSING BALANCE		-7,405	-35,726	-267	143,161	95,621	91,431	125,516	151,976	158,586	245,196	150,809	205,983
GST IN	253,099	9,375	9,375	18,806	33,281	19,625	22,500	22,500	21,006	20,000	28,688	28,563	19,380
GST OUT	-176,925	-6,103	-8,703	-10,139	-11,151	-21,370	-18,826	-14,042	-13,501	-14,976	-13,664	-36,163	-8,286
NET GST	76,174	-13,300		-3,944		-30,798		-1,929		-15,963		-20,048	
GST INCL. BALANCE		-17,433	-45,082	-4,899	160,658	80,576	80,059	120,674	154,639	150,309	251,943	129,908	196,176

MACFARLANE RURAL BUSINESS LTD BUDGET SUMMARY

	TOTAL $	Su or Ha	TOTAL $
WAGES	397,500	SHEEP	
ANIMAL HEALTH	107,625	WOOL	
STOCKFEED PURCHASED	815,440	CATTLE	130,025
OTHER STOCK EXPENSES	47,250	MILK	2,210,000
FEED CONSERVATION	15,000	DEER	
CONTRACTING		VELVET	
CARTAGE		GRAIN AND PULSE PRODUCE	
FERTILISER & PROGIBB	192,783	Previous Yr Sales	
SEEDS & TREATMENT	25,500	Current Yr Sales	
SACKS & SEED DRESSING		Unsold At Year End	
WEED & PEST CONTROL	6,000	SMALL SEED PRODUCE	
REPAIRS & MAINTENANCE	105,000	Previous Yr Sales	
VEHICLE EXPENSES	52,500	Current Yr Sales	
ELECTRICITY	98,250	Unsold At Year End	
ENVIRONMENTAL	7,500	MISCELLANEOUS INCOME	
ADMINISTRATION	20,400		
STANDING CHARGES	285,400	STOCK PURCHASES	
		Sheep	
		Cattle	-32,200
		Deer	
		Other	
CASH FARM WORKING EXPENSES	2,176,148	**CASH FARM INCOME**	2,307,825
CASH FARM WORKING PROFIT	131,677		
DEBT SERVICING			
Mortgage	383,070		
Term Interest			
Current Account	21,520		
Rent			
Other			
CASH OPERATING EXPENSES	2,580,738	**CASH OPERATING INCOME**	2,307,825
CASH OPERATING SURPLUS/DEFICIT	-272,913		
PERSONAL DRAWINGS		NON OPERATING INCOME	
OTHER PERSONAL			
TAXATION			
CAPITAL PURCHASES & PAYMENTS		INVESTMENT INCOME	
INVESTMENTS			
UNPAID ACCOUNTS			
TOTAL CASH EXPENDITURE	2,580,738	**TOTAL CASH INCOME**	2,307,825
TOTAL CASH SURPLUS/DEFICIT	-272,913		
Change in value of stock on hand			
Change in value of produce on hand			
Depreciation	144,200		
TRUE SURPLUS/DEFICIT	-417,113		

MACFARLANE RURAL BUSINESS LTD CASHFLOW BUDGET

INCOME	TOTAL	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
CATTLE SALES													
Cows	81,000				4,000						18,000	59,000	
Heifers	4,500											4,500	
Bobby calves	18,875		6,000	8,000	4,875								
Bulls	25,650								25,650				
CATTLE PURCH.	-32,200					-32,200							
DAIRY SALES													
Base Milk Sales	2,210,000			95,000	275,000	290,000	300,000	225,000	205,000	205,000	200,000	225,000	190,000
TOTAL INCOME	2,307,825		6,000	103,000	283,875	257,800	300,000	225,000	230,650	205,000	218,000	288,500	190,000
EXPENDITURE	**TOTAL**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
Wages													
- Farm Staff	397,500	20,250	20,250	37,415	37,415	37,415	37,415	37,415	37,415	37,415	37,415	37,415	20,265
Animal Health	107,625		12,500	12,500	12,000	16,625	12,000	7,000	7,000	7,000	7,000	7,000	7,000
Stock Feed	815,440	62,000	62,000	48,000	62,000	62,000	65,000	62,000	57,440	60,000	50,000	200,000	25,000
Other Stock Exp.	47,250					28,000	15,000	4,250					
Feed Conservation	15,000					10,000	5,000						
Fertiliser & Progibb	192,783		19,000	8,000	8,000	55,000	38,000	16,000	12,000	7,500	15,000	12,000	2,283
Seed and Treatment	25,500					15,000	10,500						
Weed & Pest Control	6,000	1,500				2,500				2,000			
Repairs and Mainten.	105,000	6,000	6,000	6,000	8,000	8,000	7,000	7,000	7,000	7,000	7,000	20,000	16,000
Vehicle Expenses	52,500	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375
Electricity	98,250	1,000	1,000	8,000	8,500	11,000	12,500	12,500	10,500	10,250	10,000	8,000	5,000
Environmental	7,500									2,500	5,000		
Administration	20,400	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700
Standing Charge	285,400	5,100	5,100	5,100	5,100	42,550	42,550	42,550	42,550	42,550	42,050	5,100	5,100
Debt Servicing													
- Mortgage	383,070	31,923	31,923	31,923	31,923	31,923	31,923	31,923	31,923	31,923	31,923	31,923	31,923
- Current Account	21,520		977	2,141	2,389	1,592	2,179	2,039	2,049	1,895	2,018	1,956	2,286
TOTAL EXPENSES	2,580,738	133,848	164,825	165,154	181,401	327,679	285,141	228,751	213,951	216,108	213,480	329,468	120,931
		Jul	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
MONTHLY BALANCE	-272,913	-133,848	-158,825	-62,154	102,474	-69,879	14,859	-3,751	16,699	-11,108	4,520	-40,968	69,069
CLOSING BALANCE		-133,848	-292,672	-354,826	-252,352	-322,231	-307,372	-311,124	-294,425	-305,533	-301,014	-341,982	-272,913
GST IN	288,478		750	12,875	35,484	32,225	37,500	28,125	28,831	25,625	27,250	36,063	23,750
GST OUT	-272,019	-12,741	-16,491	-16,386	-18,386	-36,771	-31,380	-24,349	-22,498	-22,786	-22,443	-36,949	-10,840
NET GST	16,460			28,481		-13,587		-1,574		-10,110		-7,646	
GST INCL. BALANCE		-146,588	-321,154	-358,337	-238,765	-326,777	-305,798	-307,347	-284,315	-302,694	-293,367	-342,868	-260,890

MACFARLANE RURAL BUSINESS LTD BUDGET SUMMARY			
		Su or Ha	
	TOTAL $		TOTAL $
WAGES	406,500	SHEEP	
ANIMAL HEALTH	107,625	WOOL	
STOCKFEED PURCHASED	815,440	CATTLE	130,025
OTHER STOCK EXPENSES	47,250	MILK	2,791,000
FEED CONSERVATION	15,000	DEER	
CONTRACTING		VELVET	
CARTAGE		GRAIN AND PULSE PRODUCE	
FERTILISER & PROGIBB	192,783	Previous Yr Sales	
SEEDS & TREATMENT	25,500	Current Yr Sales	
SACKS & SEED DRESSING		Unsold At Year End	
WEED & PEST CONTROL	6,000	SMALL SEED PRODUCE	
REPAIRS & MAINTENANCE	105,000	Previous Yr Sales	
VEHICLE EXPENSES	52,500	Current Yr Sales	
ELECTRICITY	98,250	Unsold At Year End	
ENVIRONMENTAL	7,500	MISCELLANEOUS INCOME	
ADMINISTRATION	20,400		
STANDING CHARGES	285,760	STOCK PURCHASES	
		Sheep	
		Cattle	-32,200
		Deer	
		Other	
CASH FARM WORKING EXPENSES	2,185,508	**CASH FARM INCOME**	2,888,825
CASH FARM WORKING PROFIT	703,317		
DEBT SERVICING			
Mortgage	383,070		
Term Interest			
Current Account	8,940		
Rent			
Other			
CASH OPERATING EXPENSES	2,577,518	**CASH OPERATING INCOME**	2,888,825
CASH OPERATING SURPLUS/DEFICIT	311,307		
PERSONAL DRAWINGS		NON OPERATING INCOME	
OTHER PERSONAL			
TAXATION			
CAPITAL PURCHASES & PAYMENTS		INVESTMENT INCOME	
INVESTMENTS			
UNPAID ACCOUNTS			
TOTAL CASH EXPENDITURE	2,577,518	**TOTAL CASH INCOME**	2,888,825
TOTAL CASH SURPLUS/DEFICIT	311,307		
Change in value of stock on hand			
Change in value of produce on hand			
Depreciation	144,200		
TRUE SURPLUS/DEFICIT	167,107		

MACFARLANE RURAL BUSINESS LTD CASHFLOW BUDGET

INCOME	TOTAL	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
CATTLE SALES													
Cows	81,000				4,000						18,000	59,000	
Heifers	4,500											4,500	
Bobby calves	18,875		6,000	8,000	4,875								
Bulls	25,650								25,650				
CATTLE PURCH.	-32,200					-32,200							
DAIRY SALES													
Base Milk Sales	2,366,000			105,000	295,000	310,000	315,000	245,000	235,000	225,000	210,000	228,000	198,000
Final Payout	425,000	106,250	106,250	106,250	106,250								
TOTAL INCOME	2,888,825	106,250	112,250	219,250	410,125	277,800	315,000	245,000	260,650	225,000	228,000	291,500	198,000
EXPENDITURE	**TOTAL**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
Wages													
- Farm Staff	406,500	20,250	20,250	38,415	38,415	38,415	38,415	38,415	38,415	38,415	38,415	38,415	20,265
Animal Health	107,625		12,500	12,500	12,000	16,625	12,000	7,000	7,000	7,000	7,000	7,000	7,000
Stock Feed	815,440	62,000	62,000	48,000	62,000	62,000	65,000	62,000	57,440	60,000	50,000	200,000	25,000
Other Stock Exp.	47,250					28,000	15,000	4,250					
Feed Conservation	15,000					10,000	5,000						
Fertiliser & Progibb	192,783		19,000	8,000	8,000	55,000	38,000	16,000	12,000	7,500	15,000	12,000	2,283
Seed and Treatment	25,500					15,000	10,500						
Weed & Pest Control	6,000	1,500				2,500				2,000			
Repairs and Mainten.	105,000	6,000	6,000	6,000	8,000	8,000	7,000	7,000	7,000	7,000	7,000	20,000	16,000
Vehicle Expenses	52,500	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375
Electricity	98,250	1,000	1,000	8,000	8,500	11,000	12,500	12,500	10,500	10,250	10,000	8,000	5,000
Environmental	7,500									2,500	5,000		
Administration	20,400	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700
Standing Charge	285,760	5,100	5,100	5,100	5,100	42,910	42,550	42,550	42,550	42,550	42,050	5,100	5,100
Debt Servicing													
- Mortgage	383,070	31,923	31,923	31,923	31,923	31,923	31,923	31,923	31,923	31,923	31,923	31,923	31,923
- Current Account	8,940		2,010	2,384	1,946	206	845	591	476	95	103		285
TOTAL EXPENSES	2,577,518	133,848	165,857	166,396	181,958	327,654	284,807	228,303	213,379	215,307	212,565	328,513	118,931
		Jul	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
MONTHLY BALANCE	311,307	-27,598	-53,607	52,854	228,167	-49,854	30,193	16,697	47,271	9,693	15,435	-37,013	79,069
CLOSING BALANCE		-288,488	-342,095	-289,241	-61,074	-110,928	-80,735	-64,039	-16,767	-7,074	8,360	-28,652	50,417
GST IN	361,103	13,281	14,031	27,406	51,266	34,725	39,375	30,625	32,581	28,125	28,500	36,438	24,750
GST OUT	-273,189	-12,741	-16,491	-16,511	-18,511	-36,941	-31,505	-24,474	-22,623	-22,911	-22,568	-37,074	-10,840
NET GST	87,915	-13,535		1,919		-43,649		-5,654		-16,110		-11,146	
GST INCL. BALANCE		-301,482	-357,549	-291,881	-30,960	-126,679	-88,616	-71,422	-14,192	-15,396	5,972	-42,823	50,155

MACFARLANE RURAL BUSINESS LTD BUDGET SUMMARY

	TOTAL $		Su or Ha	TOTAL $
WAGES	415,740	SHEEP		
ANIMAL HEALTH	107,625	WOOL		
STOCKFEED PURCHASED	815,440	CATTLE		130,025
OTHER STOCK EXPENSES	47,250	MILK		2,935,400
FEED CONSERVATION	15,000	DEER		
CONTRACTING		VELVET		
CARTAGE		GRAIN AND PULSE PRODUCE		
FERTILISER & PROGIBB	192,783	Previous Yr Sales		
SEEDS & TREATMENT	25,500	Current Yr Sales		
SACKS & SEED DRESSING		Unsold At Year End		
WEED & PEST CONTROL	6,000	SMALL SEED PRODUCE		
REPAIRS & MAINTENANCE	105,000	Previous Yr Sales		
VEHICLE EXPENSES	52,500	Current Yr Sales		
ELECTRICITY	98,250	Unsold At Year End		
ENVIRONMENTAL	7,500	MISCELLANEOUS INCOME		
ADMINISTRATION	20,400			
STANDING CHARGES	286,130	STOCK PURCHASES		
			Sheep	
			Cattle	-32,200
			Deer	
			Other	
CASH FARM WORKING EXPENSES	2,195,118	**CASH FARM INCOME**		3,033,225
CASH FARM WORKING PROFIT	838,107			
DEBT SERVICING				
Mortgage	383,070			
Term Interest				
Current Account	199			
Rent				
Other				
CASH OPERATING EXPENSES	2,578,387	**CASH OPERATING INCOME**		3,033,225
CASH OPERATING SURPLUS/DEFICIT	454,838			
PERSONAL DRAWINGS		NON OPERATING INCOME		
OTHER PERSONAL				
TAXATION				
CAPITAL PURCHASES & PAYMENTS		INVESTMENT INCOME		
INVESTMENTS				
UNPAID ACCOUNTS				
TOTAL CASH EXPENDITURE	2,578,387	**TOTAL CASH INCOME**		3,033,225
TOTAL CASH SURPLUS/DEFICIT	454,838			
Change in value of stock on hand				
Change in value of produce on hand				
Depreciation	144,200			
TRUE SURPLUS/DEFICIT	310,638			

MACFARLANE RURAL BUSINESS LTD CASHFLOW BUDGET

INCOME	TOTAL	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
CATTLE SALES													
Cows	81,000				4,000						18,000	59,000	
Heifers	4,500											4,500	
Bobby calves	18,875		6,000	8,000	4,875								
Bulls	25,650								25,650				
CATTLE PURCH.	-32,200					-32,200							
DAIRY SALES													
Base Milk Sales	2,480,400			115,000	302,000	320,000	325,000	255,000	255,000	245,000	225,000	235,000	203,400
Final Payout	455,000	113,750	113,750	113,750	113,750								
TOTAL INCOME	3,033,225	113,750	119,750	236,750	424,625	287,800	325,000	255,000	280,650	245,000	243,000	298,500	203,400
EXPENDITURE	**TOTAL**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
- Farm Staff	415,740	20,500	20,500	39,305	39,305	39,305	39,305	39,305	39,305	39,305	39,305	39,305	21,000
Animal Health	107,625		12,500	12,500	12,000	16,625	12,000	7,000	7,000	7,000	7,000	7,000	7,000
Stock Feed	815,440	62,000	62,000	48,000	62,000	62,000	65,000	62,000	57,440	60,000	50,000	200,000	25,000
Other Stock Exp.	47,250					28,000	15,000	4,250					
Feed Conservation	15,000					10,000	5,000						
Fertiliser & Progibb	192,783		19,000	8,000	8,000	55,000	38,000	16,000	12,000	7,500	15,000	12,000	2,283
Seed and Treatment	25,500					15,000	10,500						
Weed & Pest Control	6,000	1,500				2,500				2,000			
Repairs and Mainten.	105,000	6,000	6,000	6,000	8,000	8,000	7,000	7,000	7,000	7,000	7,000	20,000	16,000
Vehicle Expenses	52,500	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375
Electricity	98,250	1,000	1,000	8,000	8,500	11,000	12,500	12,500	10,500	10,250	10,000	8,000	5,000
Environmental	7,500									2,500	5,000		
Administration	20,400	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700
Standing Charge	286,130	5,200	5,200	5,200	5,170	42,910	42,550	42,550	42,550	42,550	42,050	5,100	5,100
Debt Servicing													
- Mortgage	383,070	31,923	31,923	31,923	31,923	31,923	31,923	31,923	31,923	31,923	31,923	31,923	31,923
- Current Account	199			199									
TOTAL EXPENSES	2,578,387	134,198	164,198	165,201	180,972	328,337	284,852	228,602	213,792	216,102	213,352	329,402	119,381
		Jul	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
MONTHLY BALANCE	454,838	-20,448	-44,448	71,549	243,653	-40,537	40,148	26,398	66,858	28,898	29,648	-30,902	84,020
CLOSING BALANCE		29,708	-14,740	56,809	300,462	259,925	300,073	326,471	393,329	422,227	451,875	420,973	504,992
GST IN	379,153	14,219	14,969	29,594	53,078	35,975	40,625	31,875	35,081	30,625	30,375	37,313	25,425
GST OUT	-274,390	-12,784	-16,534	-16,635	-18,631	-37,052	-31,616	-24,585	-22,734	-23,022	-22,679	-37,185	-10,932
NET GST	104,763	-15,000		131		-47,406		-7,932		-19,638		-15,299	
GST INCL. BALANCE		16,142	-29,871	54,768	332,868	243,848	293,005	318,761	397,966	414,829	452,174	406,100	504,613

MACFARLANE RURAL BUSINESS LTD BUDGET SUMMARY			
		Su or Ha	
	TOTAL $		TOTAL $
WAGES	397,500	SHEEP	
ANIMAL HEALTH	107,625	WOOL	
STOCKFEED PURCHASED	815,440	CATTLE	130,025
OTHER STOCK EXPENSES	47,250	MILK	3,100,500
FEED CONSERVATION	15,000	DEER	
CONTRACTING		VELVET	
CARTAGE		GRAIN AND PULSE PRODUCE	
FERTILISER & PROGIBB	192,783	Previous Yr Sales	
SEEDS & TREATMENT	25,500	Current Yr Sales	
SACKS & SEED DRESSING		Unsold At Year End	
WEED & PEST CONTROL	6,000	SMALL SEED PRODUCE	
REPAIRS & MAINTENANCE	105,000	Previous Yr Sales	
VEHICLE EXPENSES	52,500	Current Yr Sales	
ELECTRICITY	98,250	Unsold At Year End	
ENVIRONMENTAL	7,500	MISCELLANEOUS INCOME	
ADMINISTRATION	20,400		
STANDING CHARGES	285,400	STOCK PURCHASES	
		Sheep	
		Cattle	-32,200
		Deer	
		Other	
CASH FARM WORKING EXPENSES	**2,176,148**	**CASH FARM INCOME**	**3,198,325**
CASH FARM WORKING PROFIT	**1,022,177**		
DEBT SERVICING			
Mortgage	590,910		
Term Interest			
Current Account	899		
Rent			
Other			
CASH OPERATING EXPENSES	**2,767,957**	**CASH OPERATING INCOME**	**3,198,325**
CASH OPERATING SURPLUS/DEFICIT	**430,368**		
PERSONAL DRAWINGS		NON OPERATING INCOME	
OTHER PERSONAL			
TAXATION			
CAPITAL PURCHASES & PAYMENTS	144,200	INVESTMENT INCOME	
INVESTMENTS			
UNPAID ACCOUNTS			
TOTAL CASH EXPENDITURE	**2,912,157**	**TOTAL CASH INCOME**	**3,198,325**
TOTAL CASH SURPLUS/DEFICIT	**286,168**		
Change in value of stock on hand			
Change in value of produce on hand			
Depreciation	144,200		
TRUE SURPLUS/DEFICIT	**141,968**		

MACFARLANE RURAL BUSINESS LTD CASHFLOW BUDGET

INCOME	TOTAL	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
CATTLE SALES													
Cows	81,000				4,000						18,000	59,000	
Heifers	4,500											4,500	
Bobby calves	18,875		6,000	8,000	4,875								
Bulls	25,650								25,650				
CATTLE PURCH.	-32,200					-32,200							
DAIRY SALES													
Base Milk Sales	2,480,400			110,000	195,000	355,000	355,000	315,000	250,400	240,000	240,000	225,000	195,000
Final Payout	477,000	119,250	119,250	119,250	119,250								
Dividend	143,100				71,550						71,550		
TOTAL INCOME	3,198,325	119,250	125,250	237,250	394,675	322,800	355,000	315,000	276,050	240,000	329,550	288,500	195,000
EXPENDITURE	**TOTAL**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
- Farm Staff	397,500	20,250	20,250	37,415	37,415	37,415	37,415	37,415	37,415	37,415	37,415	37,415	20,265
Animal Health	107,625		12,500	12,500	12,000	16,625	12,000	7,000	7,000	7,000	7,000	7,000	7,000
Stock Feed	815,440	62,000	62,000	48,000	62,000	62,000	65,000	62,000	57,440	60,000	50,000	200,000	25,000
Other Stock Exp.	47,250					28,000	15,000	4,250					
Feed Conservation	15,000					10,000	5,000						
Fertiliser & Progibb	192,783		19,000	8,000	8,000	55,000	38,000	16,000	12,000	7,500	15,000	12,000	2,283
Seed and Treatment	25,500					15,000	10,500						
Weed & Pest Control	6,000	1,500				2,500				2,000			
Repairs and Mainten.	105,000	6,000	6,000	6,000	8,000	8,000	7,000	7,000	7,000	7,000	7,000	20,000	16,000
Vehicle Expenses	52,500	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375
Electricity	98,250	1,000	1,000	8,000	8,500	11,000	12,500	12,500	10,500	10,250	10,000	8,000	5,000
Environmental	7,500									2,500	5,000		
Administration	20,400	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700
Standing Charge	285,400	5,100	5,100	5,100	5,100	42,550	42,550	42,550	42,550	42,550	42,050	5,100	5,100
Debt Servicing													
- Mortgage	590,910	49,243	49,243	49,243	49,243	49,243	49,243	49,243	49,243	49,243	49,243	49,243	49,243
- Current Account	899		198	578	123								
Capital Purchases	144,200										144,200		
TOTAL EXPENSES	2,912,157	151,168	181,366	180,911	196,455	343,408	300,283	244,033	229,223	231,533	372,983	344,833	135,966
		Jul	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
MONTHLY BALANCE	286,168	-31,918	-56,116	56,339	198,220	-20,608	54,718	70,968	46,828	8,468	-43,433	-56,333	59,035
CLOSING BALANCE		-31,918	-88,033	-31,694	166,526	145,918	200,636	271,603	318,431	326,898	283,466	227,133	286,168
GST IN	399,791	14,906	15,656	29,656	49,334	40,350	44,375	39,375	34,506	30,000	41,194	36,063	24,375
GST OUT	-290,044	-12,741	-16,491	-16,386	-18,386	-36,771	-31,380	-24,349	-22,498	-22,786	-40,468	-36,949	-10,840
NET GST	109,747			-1,331		-44,218		-16,574		-27,035		-7,940	
GST INCL. BALANCE		-29,752	-86,702	-18,424	210,744	149,498	217,210	286,630	345,466	334,112	291,406	226,247	298,816

APPENDIX 4

Overseer Reports

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ANDERSON AG LTD

Thomas Taylor
RAVENSDOWN

Client reference: 60814924

Farm name: ASHLEY FARM DRY STOCK (2013)

Farm Nutrient Budget - Whole farm

OVERSEER

	N	P	K	S	Ca	Mg	Na
	(kg/ha/yr)						
Nutrients added							
Fertiliser, lime & other	71	37	10	3	2	0	0
Rain/clover N fixation	76	0	2	3	2	4	15
Irrigation	0	0	0	0	0	0	0
Supplements imported	0	0	0	0	0	0	0
Nutrients removed							
As products	90	20	9	10	34	2	2
Exported effluent	0	0	0	0	0	0	0
As crop residues	8	1	22	2	5	1	1
To atmospheric	25	0	0	0	0	0	0
To water	34	0.1	5	8	46	5	14
Change in internal pools							
Plant material	-38	-6	-43	0	-2	-3	1
Organic pool	-48	6	0	-13	0	0	0
Inorganic mineral	0	11	-8	0	-3	-5	-5
Inorganic soil pool	76	5	28	0	-75	4	3

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ANDERSON AG LTD - INGLIS FARM

Thomas Taylor

Client reference: 60814924

Farm name: ANDERSON AG LTD - INGLIS FARM _ASHLEY FARM
DAIRY 240000 (Copy)_ (2014)

Farm Nutrient Budget - Whole farm

OVERSEER

	N	P	K	S	Ca	Mg	Na
	(kg/ha/yr)						
Nutrients added							
Fertiliser, lime & other	190	37	40	2	0	2	3
Rain/clover N fixation	70	0	2	4	2	4	19
Irrigation	6	0	4	6	24	6	24
Supplements imported	32	5	28	3	6	3	3
Nutrients removed							
As products	84	15	19	5	20	2	6
Exported effluent	0	0	0	0	0	0	0
As supplements	0	0	0	0	0	0	0
To atmospheric	59	0	0	0	0	0	0
To water	29	0.5	8	10	32	8	19
Change in internal pools							
Plant material	-1	0	-5	1	0	0	0
Organic pool	121	15	3	0	1	0	0
Inorganic mineral	0	19	-16	0	-2	-4	-4
Inorganic soil pool	7	-6	65	0	-18	25	29

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ANDERSON AG LTD - INGLIS FARM

Thomas Taylor

Client reference: 60814924

Farm name: ANDERSON AG LTD - INGLIS FARM _ASHLEY FARM
DAIRY 300000 (Copy) (2014)

Farm Nutrient Budget - Whole farm

OVERSEER

	N	P	K	S	Ca	Mg	Na
	(kg/ha/yr)						
Nutrients added							
Fertiliser, lime & other	254	37	40	2	0	2	3
Rain/clover N fixation	46	0	2	4	2	4	19
Irrigation	6	0	4	6	24	6	24
Supplements imported	75	15	39	8	7	6	4
Nutrients removed							
As products	105	18	24	6	25	2	7
Exported effluent	0	0	0	0	0	0	0
As supplements	0	0	0	0	0	0	0
To atmospheric	70	0	0	0	0	0	0
To water	28	0.4	8	10	32	8	19
Change in internal pools							
Plant material	-1	0	-5	1	0	0	0
Organic pool	173	19	4	3	1	1	0
Inorganic mineral	0	13	-16	0	-2	-4	-4
Inorganic soil pool	7	1	70	0	-22	28	29

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ANDERSON AG LTD - INGLIS FARM

Thomas Taylor

Client reference: 60814924

Farm name: ANDERSON AG LTD - INGLIS FARM _ASHLEY FARM
DAIRY 300 ha model (2014)

Farm Nutrient Budget - Whole farm

OVERSEER

	N	P	K	S	Ca	Mg	Na
	(kg/ha/yr)						
Nutrients added							
Fertiliser, lime & other	231	38	41	2	0	0	1
Rain/clover N fixation	49	0	2	4	2	5	20
Irrigation	8	0	5	8	31	7	32
Supplements imported	81	16	37	8	7	6	4
Nutrients removed							
As products	121	21	28	7	29	2	8
Exported effluent	0	0	0	0	0	0	0
As supplements	0	0	0	0	0	0	0
To atmospheric	70	0	0	0	0	0	0
To water	31	0.5	8	9	34	9	20
Change in internal pools							
Plant material	0	0	0	0	0	0	0
Organic pool	147	13	4	6	1	1	0
Inorganic mineral	0	15	-18	0	-2	-4	-4
Inorganic soil pool	0	5	63	0	-21	28	33

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APPENDIX 5

Pasture Yield

Since publication of the Macfarlane Rural Business Report there has been questions over the pasture yields expected under pivot irrigation. These questions do highlight the lack of known validated data for pasture production in the Ruataniwha district.

It is important that the pasture yield expectations are reported and as follows is comparative data that is available to Baker & Associates at the time of preparing this case study. Four Wairarapa properties are provided for comparison purposes, last three actual seasons with various irrigation systems and differing soil types.

MRB Study; Ruataniwha Light Soil

MRB Study; Ruataniwha Heavy Soil

B&A Case Study: AndersonAg Case study Property

Masterton Pivot Irrigated, high N use, Light Soil

Pirinoa Pivot + Rotorainer Irrigated Moderate N Use, heavy soil

Kahutara Pivot + Gun Irrigated Moderate N Use, heavy soil

Masterton Gun Irrigated Low N Use, mixed soils – tending heavy

Summary Table of Pasture Eaten – as modelled by UDDER 10/11 & 11/12 and Farmax 12/13

	2010-2011	2011-2012	2012-2013	3 year Average
Ruataniwha Light				14.0 UDDER
Ruataniwha Heavy				13.8 UDDER
Anderson Case Study				10.9-12.0 Farmax
Masterton Light	13.4	16.7	15.1	15.1
Pirinoa Heavy	12.7	15.8	12.8	13.7
Kahautara Heavy	12.9	14.4	12.8	13.4
Masterton Mixed	11.2	13.7	11.5	12.1

As these computer models (UDDER and Farmax) provide confidence around pasture eaten (or harvested for supplements) this still leaves the question of what is the total pasture grown. This will vary according to utilisation rates, which in turn are most affected by managerial skill, soils and climate.

The following table provides a guide on utilisation rates and how this might influence total pasture growth requirements.

	3 yr Average	Pasture grown at 75% utilisation	80%	85%
Ruataniwha Light	14.0 UDDER	18.7	17.5	16.5
Ruataniwha Heavy	13.8 UDDER	18.4	17.25	16.2
Anderson Case Study	10.9-12.0 Farmax	14.5 – 16.0	13.6 – 15.0	12.8 – 14.1
Masterton Light	15.1	20.1	18.9	17.8
Pirinoa Heavy	13.7	18.3	17.1	16.1
Kahautara Heavy	13.4	17.9	16.75	15.8
Masterton Mixed	12.1	16.1	15.1	14.2

Pattern of Pasture Yield as modelled versus actual for 2012/2013 season, ML, PH, KH and MM.

	RL	RH	GA-CS	ML	PH	KH	MM
June	16	17	8	30	27	25	7
July	16	16	17	35	17	32	13
August	35	28	30	65	47	49	42
September	50	43	42	77	63	64	42
October	64	58	54	105	65	64	67
November	70	64	52	93	69	67	61
December	61	63	55	89	63	66	61
January	49	59	54	78	67	58	61
February	40	47	49	81	68	63	57
March	45	48	50	87	72	74	57
April	45	46	43	87	67	68	52
May	31	33	24	60	56	51	38

Milksolids Production per Hectare (Status Quo for Model, Case Study Farm @ 660 cows, B&A Comparator Farms)

	RL	RH	GA-CS	ML	PH	KH	MM
MS / Ha	1,627	1,533	1,429	2,036	1,509	1,558	1,397