



# PASTORAL SECTOR OVERVIEW

2009



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# ABOUT THE FARM MONITORING PROGRAMME

The Farm Monitoring Programme provides a short-term view of the financial and production status of a range of farm types throughout New Zealand. It examines revenue and expenditure for the past season and outlines what farmers are budgeting for the year ahead.

The Programme collects data from a range of farm types throughout New Zealand and is supplemented with farmer and industry expectations. One use of this data is to produce models. Each model is representative of a farm type in a given region and is modelled on how a real farm would operate, as opposed to using an average of results from the monitored farms. Each model is then augmented with feedback gathered from regional industry meetings and other information sources to best represent the current situation and expectations in each region.

In July 2009, the dairy and deer model budgets and supporting commentary were released on the Ministry of Agriculture and Forestry's (MAF's) website, and the sheep and beef models and commentaries followed in October 2009. The *Pastoral Sector Overview 2009* outlines the year just been and the year ahead for the pastoral sector and provides information on trends and issues facing the sector.

## FORMAT OF FARM MONITORING OUTPUTS

In 2009 MAF reviewed the farm monitoring publications. As a result, MAF now produces a suite of three products for each sector in the Farm Monitoring Programme.

- › Product 1: (data release): model data in downloadable excel tables and key points in HTML format published on MAF's website.
- › Product 2: (chapter release): printable PDFs containing model key points, tables, graphs and model commentary are published on MAF's website. Commentary-only chapters are also released as PDFs.
- › Product 3: *Pastoral Sector Overview 2009* published in printable PDF format on MAF's website and also available as a hard copy. The *Horticultural and Arable Sector Overview 2009* is published in printable PDF format on MAF's website.

Individual regional models are no longer published collectively in a hard copy report format. The models are available on MAF's website and can be downloaded in a printable PDF format from [www.maf.govt.nz/mafnet/rural-nz/statistics-and-forecasts/farm-monitoring/](http://www.maf.govt.nz/mafnet/rural-nz/statistics-and-forecasts/farm-monitoring/)

# PASTORAL SECTOR OVERVIEW

# 2

## DAIRY INCOMES PLUMMET BUT OTHER SECTORS FARE BETTER IN 2008/09

- › Dairy farm incomes fell sharply in 2008/09 from the record highs of 2007/08, with the farm profit before tax on the national dairy model dropping from \$384 000 to a loss of \$6300 in 2008/09. The dairy payout's dramatic slump mid-year from the early forecast of \$7 per kilogram of milksolids, to \$5.20, caused significant losses for most dairy farmers in 2008/09.
- › Variable and often unfavourable weather in 2008/09 and the carryover effects of drought reduced production on pastoral farms and limited the opportunity for sheep, beef and deer farmers to capitalise on improved prices.
- › Even so, the highest prices for venison this century and much improved prices for sheep and beef led to significant improvements in income for many pastoral farmers in 2008/09.
- › The national sheep and beef model farm profit before tax increased from just \$6100 in 2007/08 to \$62 400 in 2008/09. The increase in income was lower than the lift in prices as the carryover effect from the 2007/08 drought resulted in less stock on hand and decreased performance, particularly the lambing percentage.
- › Deer farmers' profitability continued to improve. The North Island deer farm model's profit before tax increased 74 percent to \$41 000 in 2008/09, while the South Island model's farm profit before tax increased 60 percent to \$81 300.
- › Early winter 2008 was generally cold and then became very wet and stormy in parts of New Zealand, compounding feed shortages arising from the 2008 autumn drought. Spring was settled for most areas, but the lack of rain led to severe soil moisture deficits developing by early summer on the east coast of the North Island.
- › Summer was sunny, very warm and dry. Rainfall in February saved most regions but a lack of follow-up rain in the east led to a drought being declared in the eastern regions of the North Island, North Canterbury and the Central Plateau/Taihape areas.

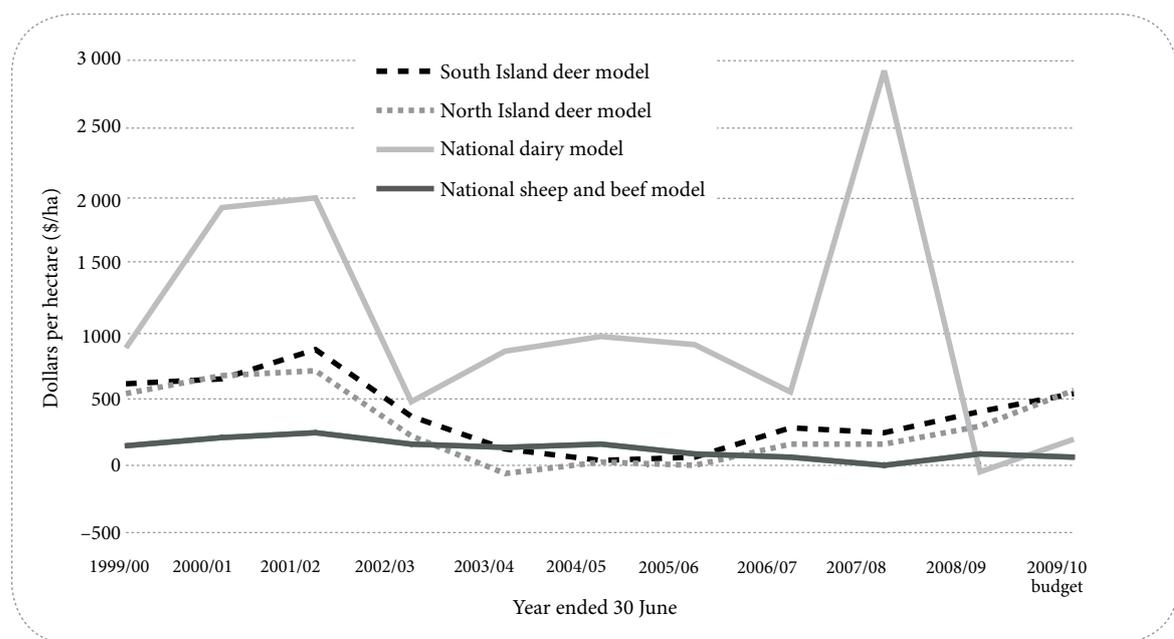
## IMPROVED PRODUCTION EXPECTED IN 2009/10 BUT LESS OPTIMISM AROUND RETURNS

- › Increased production is expected across the pastoral sector in 2009/10 assuming more favourable weather patterns prevail. Sheep and beef farmers are expecting lambing percentages to return to average and trading cattle numbers to increase. Dairy production is expected to improve with better early season conditions; and pregnancy rates in deer are higher than in 2008.
- › While production improves, prices are expected to fall. The strengthening exchange rate and reduced demand for some commodities is expected to mean reduced returns for sheep and beef farmers and lower cash operating surpluses in 2009/10.
- › Although deer farmers were hopeful of better velvet returns and venison prices remaining firm or even increasing slightly, net cash income in 2009/10 was expected to be down slightly on the North Island deer farm model as herds are rebuilt following consecutive droughts. However, farm profits on both models are expected to improve significantly.



- › Farmers are trying to restrain increases in expenditure by cutting inputs, where possible, in the face of steadily increasing costs.
- › Dairy farm model budgets were prepared when the initial forecast payout for 2009/10 was just \$4.55 per kilogram of milksolids. The improved payout announced in September 2009 adds approximately \$50 000 to the cash surplus on the national dairy model providing some cash for reinvestment on the average dairy farm, and moving farm profit before tax up towards the average of the past decade.
- › With the September 2009 revision in the milksolids payout, the dairy and deer models will generally have cash surpluses in 2009/10; however, most sheep and beef models will record a further round of cash deficits, increasing pressure on that sector.

»» FIGURE 2.1: FARM PROFIT BEFORE TAX PER HECTARE – TRENDS OVER THE DEER, DAIRY AND SHEEP AND BEEF SECTORS



### EMISSIONS TRADING SCHEME (ETS)

Many livestock farmers are still uncertain about what the ETS will mean in terms of additional costs on their business. Farmers remain supportive of more research around mitigation strategies and measuring their emissions.

### NATIONAL ANIMAL IDENTIFICATION AND TRACEABILITY (NAIT)

NAIT, an animal identification tracking system, is currently under development using a partnership approach between industry and Government.

At the time of MAF's farm monitoring meetings (June 2009), deer and cattle farmers were apprehensive about whether their concerns would be addressed. However, by early September 2009, NAIT announced some amendments to the

proposed scheme to address deer and cattle farmers' concerns and make farmer compliance to the scheme easier.

- › The mandatory use of the NAIT system for deer is now to follow one year later than the mandatory introduction for cattle. This will mean it will be mandatory for cattle to be included in the scheme from mid-2011 and deer from mid-2012. This postponement was initiated to address the lack of understanding on using RFID technology effectively.
- › All farmers will now have a three-year transition period to include existing capital stock which is staying on-farm, into the NAIT system.
- › The age by which new deer and cattle must be tagged and registered with NAIT will be extended to 180 days or first muster (whichever comes first). This provides double the original proposed time to comply. However, all animals irrespective of age leaving the farm will need to be tagged.



»» TABLE 2.1: COMPARISON OF SHEEP AND BEEF AND DAIRY INDUSTRIES, 2007/08–2009/10 BUDGET

	SHEEP AND BEEF INDUSTRY			DAIRY INDUSTRY		
	2007/08	2008/09	2009/10 BUDGET	2007/08	2008/09	2009/10 BUDGET <sup>4</sup>
National model hectares	706	716	716	131	135	135
National model stock units or cows milked	4 404	4 185	4 087	380	392	392
Net cash income (\$)	274 973	327 481	287 308	1 021 886	749 977	714 948
Farm working expenses (\$)	178 716	179 412	180 391	468 449	528 625	470 219
Cash operating surplus (\$)	96 258	148 069	106 918	553 438	221 351	244 729
Farm profit before tax (\$)	6 096	62 357	47 799	384 034	-6 329	27 787
Farm surplus for reinvestment <sup>1</sup> (\$)	-25 571	30 442	-17 972	263 472	-50 416	6 628
Farm assets (\$)	4 468 186	4 976 692	4 490 793	5 942 256	7 170 033	6 507 849
Farm debt (\$)	515 178	565 801	565 025	1 574 948	2 240 285	2 359 892
Equity ratio <sup>2</sup> (%)	88.5	88.6	87.4	73.5	68.8	63.7
Rate of return on equity <sup>3</sup> (%)	-0.3	-0.2	-0.6	7.0	-2.2	-1.5

**Notes**

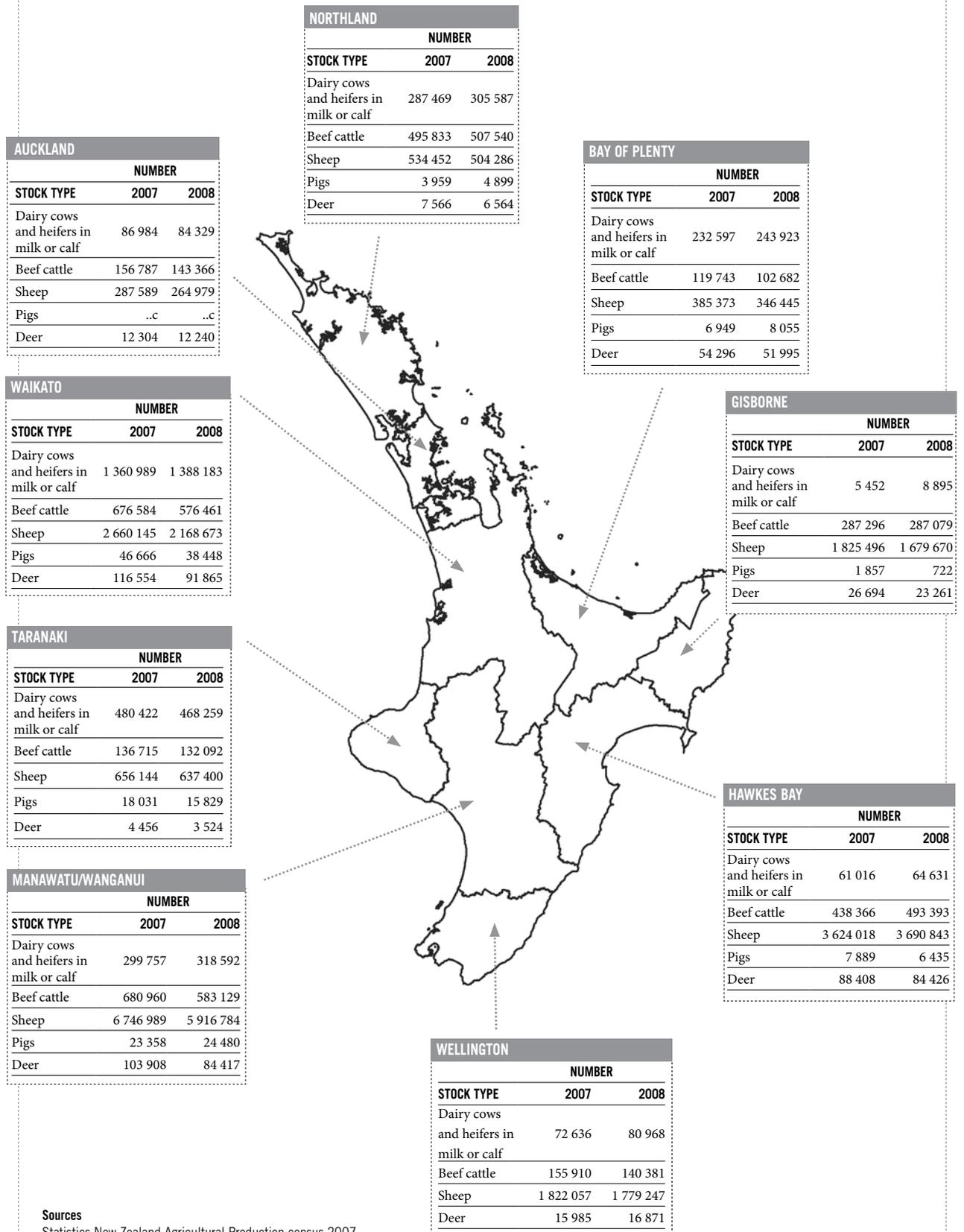
1 Farm surplus for reinvestment represents the cash available from the farming business, after meeting living costs, which is available for investment on farm or for principal repayments. It is calculated as discretionary cash less off-farm income and drawings.

2 Ratio of farm assets less debt (equity) to farm assets.

3 Economic farm surplus less interest and lease as a percentage of equity.

4 The 2009/10 budget figures were based on final total payout of \$4.55 per kilogram of milksolids.

»» FIGURE 2.2: NORTH ISLAND PASTORAL PRODUCTION STATISTICS, 2007 AND 2008



**Sources**

Statistics New Zealand Agricultural Production census 2007.  
Agriculture Production Survey 2008.

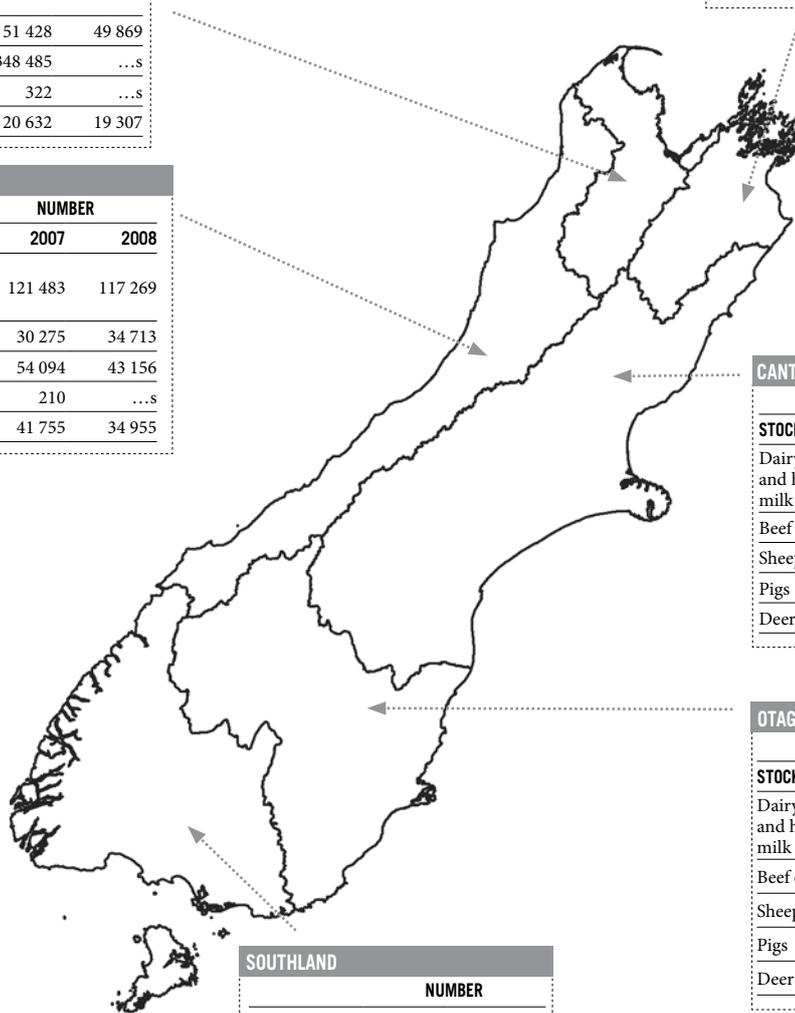
**Symbol**

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»» FIGURE 2.3: SOUTH ISLAND PASTORAL PRODUCTION STATISTICS, 2007 AND 2008

TASMAN		
NUMBER		
STOCK TYPE	2007	2008
Dairy cows and heifers in milk or calf	48 498	49 823
Beef cattle	51 428	49 869
Sheep	348 485	...
Pigs	322	...
Deer	20 632	19 307

WEST COAST		
NUMBER		
STOCK TYPE	2007	2008
Dairy cows and heifers in milk or calf	121 483	117 269
Beef cattle	30 275	34 713
Sheep	54 094	43 156
Pigs	210	...
Deer	41 755	34 955



MARLBOROUGH		
NUMBER		
STOCK TYPE	2007	2008
Dairy cows and heifers in milk or calf	...	27 100
Beef cattle	65 768	56 859
Sheep	578 805	517 526
Pigs	...	...
Deer	...	...

CANTERBURY		
NUMBER		
STOCK TYPE	2007	2008
Dairy cows and heifers in milk or calf	575 020	634 289
Beef cattle	584 806	533 665
Sheep	7 166 822	6 063 300
Pigs	202 008	177 306
Deer	394 833	340 882

OTAGO		
NUMBER		
STOCK TYPE	2007	2008
Dairy cows and heifers in milk or calf	168 918	180 453
Beef cattle	292 355	291 234
Sheep	6 031 166	5 343 380
Pigs	18 709	13 001
Deer	188 103	166 856

SOUTHLAND		
NUMBER		
STOCK TYPE	2007	2008
Dairy cows and heifers in milk or calf	345 443	372 657
Beef cattle	207 588	190 562
Sheep	5 662 387	4 739 003
Pigs	4 303	4 086
Deer	307 524	270 072

TOTAL NEW ZEALAND		
NUMBER		
STOCK TYPE	2007	2008
Dairy cows and heifers in milk or calf	4 167 121	4 347 657
Beef cattle	4 393 617	4 136 872
Sheep	38 460 477	34 087 864
Pigs	366 671	324 594
Deer	1 396 023	1 223 324

#### Sources

Statistics New Zealand Agricultural Production census 2007.  
Agriculture Production Survey 2008.

#### Symbol

...c Confidential.  
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# DAIRY SECTOR OVERVIEW

## CHALLENGING YEAR FOR DAIRY FARMERS

The 2008/09 season was a relatively forgettable one for the New Zealand dairying industry. If anything, it will be remembered more for being the year the forecast payout dropped by a quarter mid-season, than for the variable and often unfavourable weather conditions.

The season was difficult weather-wise. Winter and early spring were particularly wet and followed the severe drought of summer/autumn 2008, compounding the impact of feed shortages. Late spring/early summer turned dry again, but most regions were saved by good rain in February 2009, before the dry conditions returned.

The main feature of 2008/09 was the drop-off in the milksolids payout. Forecasts of a \$7.00 per kilogram of milksolids payout at the start of the season saw farmers spend freely, especially on supplementary feed needed because of the drought or wet winter situation. Farmers also spent money on fertiliser, even though prices had increased significantly. Predictions for the payout then started to drop, falling to \$5.20 by January 2009. By then, farmers had already spent significantly, or had commitments to do so. Expenditure tightened up considerably in the autumn, with very little fertiliser being applied. The end result was that the average farm recorded a significant financial loss in 2008/09, coming off a record profit year in 2007/08. The farm profit before tax on the national dairy model dropped from \$384 000 in 2007/08 to a loss of \$6300 in 2008/09.

The initial forecast payout for 2009/10 of \$4.55 per kilogram of milksolids at the start of the year, along with a long, very cold winter, considerably dampened morale.

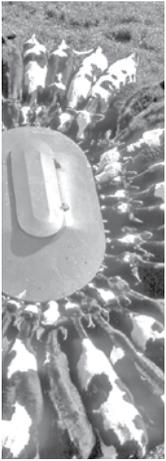
## 2009/10 OUTLOOK GETTING BETTER

The spring of 2009 has been good, with many farmers lifting production. The increase in the payout to \$5.10 per kilogram of milksolids announced in September 2009 has also buoyed morale. The increased payout is expected to add approximately \$50 000 to the average dairy farm's bottom line compared with budgets done at the start of the season. Despite this, farmers are concentrating very hard on reducing expenditure. Farm working expenses on the national weighted farm monitoring dairy model have increased by an average of 12.7 percent per year from 2002/03 through to 2008/09. This is a combination of both volume and unit price increases, but with on-farm price inflation of 2 to 3 times the Consumers Price Index over this period, domestically-driven inflation is slowly undermining the competitiveness of the sector.

Currently, the major debate within the industry (other than the payout) is the proposed capital restructuring by Fonterra, with the company looking to put this to a shareholder vote in November 2009.

## FISCAL PRESSURES FROM THE ECONOMIC RECESSION

At the start of the 2009/10 season, dairy farmers were "battening down the hatches" in order to ride out the economic conditions. The 2008/09 season had been a salutary lesson, where farmers, many in areas under pressure coming out of the 2008 drought, had been caught out by the slump in payout and, unable to reduce their expenditure, suffered large cash



deficits. The lower forecast payout for 2009/10, coupled with late deferred payments and a low initial advance payment, also put most farms under severe cashflow difficulties through the 2009 winter and spring.

The initially announced payout for 2009/10 of \$4.55 per kilogram of milksolids, coupled with relatively high debt servicing costs on many farms, saw farmers aggressively target farm working expenses. Monitored farmers were budgeting an 11 percent decrease in farm working expenses, down from \$3.86 to \$3.34 per kilogram of milksolids. Expenditure on feed and fertiliser were the two main items targeted. Those with higher debt servicing costs, above \$2 per kilogram of milksolids, are likely to need to make more substantial cuts to their expenditure on big items such as feed and fertiliser. The new paradigm is “cash is king” and the intention of budgets is to achieve a small surplus.

Some farmers may reduce the number of cows milking at the peak of the season and concentrate on higher per cow production as a means to lower their cost of production. Some high input systems are looking at lower input systems, along with dropping cow numbers, although this is not expected to be a major trend.

Dairy farmers reducing repairs and maintenance expenditure will have a big impact on the servicing industry and small rural towns. Industry commentators report farmers have been paying invoices from suppliers and service providers much slower than in the past. Many of the servicing industries do not have the ability to reduce their own costs, and a few farm supply outlets have closed.

The announcement lifting the forecast payout to \$5.10 per kilogram of milksolids at the end of September 2009 was very welcome, and means that the forecast payout is now above the “breakeven” level (covering farm working expenses, debt servicing, and living costs) for the average farm.

More financial information on income and expenditure at a national level across 2008/09 and 2009/10 can be found in the *National Dairy Model* report and *Dairy Sector Percentile Analysis* at [www.maf.govt.nz/mafnet/rural-nz/statistics-and-forecasts/farm-monitoring/2009/pastoral/](http://www.maf.govt.nz/mafnet/rural-nz/statistics-and-forecasts/farm-monitoring/2009/pastoral/)

Table 3.1 compares the regional dairy farm models on a variety of parameters based on a budgeted payout of \$4.55 per kilogram of milksolids for 2009/10. Despite the forecast payout being lower than in 2008/09, all models were budgeting for an improvement in farm profit before tax, ranging from a modest \$600 in Taranaki to almost \$62 000 in Southland. The September 2009 revision of the forecast payout will dramatically improve these figures.

»» TABLE 3.1: COMPARISON OF DAIRY MODEL FARM RESULTS, 2008/09 AND 2009/10 BUDGET

	NORTHLAND	WAIKATO BAY OF PLENTY	TARANAKI	LOWER NORTH ISLAND	CANTERBURY	SOUTHLAND
Effective area (hectares)	121	109	96	130	210	183
Cows wintered (head)	275	314	284	370	733	557
Cows milked 15th December (head)	274	309	267	360	705	510
Total milksolids (kg)	77 785	97 500	90 000	115 500	280 123	195 800
Milksolids per cow milked (kg per cow)	284	316	337	321	397	384
<b>FARM PROFIT BEFORE TAX (\$)</b>						
2008/09	22 800	-25 600	71 400	2 400	-45 500	3 400
2009/10 budget	37 900	23 900	72 000	40 700	-40 500	65 700
<b>2008/09 (\$ PER KILOGRAM OF MILKSOLIDS)</b>						
Cash operating surplus <sup>1</sup>	1.81	1.37	2.14	1.55	1.58	1.86
Farm profit before tax	0.29	-0.26	0.79	0.02	-0.16	0.02
Farm surplus for reinvestment <sup>2</sup>	-0.16	-0.63	0.12	-0.73	-0.27	-0.21
Farm working expenses plus interest	4.92	5.20	4.32	5.21	5.53	5.20
<b>2009/10 BUDGET (\$ PER KILOGRAM OF MILKSOLIDS)</b>						
Cash operating surplus <sup>1</sup>	1.95	1.69 <sup>1</sup>	1.98	1.83	1.55	1.96
Farm profit before tax	0.48	0.24	0.80	0.35	-0.14	0.33
Farm surplus for reinvestment <sup>2</sup>	-0.01	-0.04	0.40	0.28	-0.07	-0.11
Farm working expenses plus interest	4.44	4.38	4.00	4.55	4.96	4.47
<b>2008/09 ECONOMIC FARM SURPLUS (\$)</b>						
Per hectare	407	98	782	457	1354	1262
Per cow	180	35	281	165	403	453
Per kilogram of milksolids	0.63	0.11	0.83	0.51	1.02	1.18
<b>RATIOS 2008/09 (%)</b>						
Equity ratio <sup>3</sup>	65	74	83	74	58	67
Return on equity <sup>4</sup>	-2.2	-2.7	-0.3	-1.9	-1.8	-1.1
Return on assets <sup>5</sup>	1.4	0.2	1.3	1.0	2.3	2.1

**Notes**

1 Net cash income less farm working expenses.

2 Farm surplus for reinvestment represents the cash available from the farming business, after meeting living costs, which is available for investment on farm or for principal repayments. It is calculated as discretionary cash less off-farm income and drawings.

3 Ratio of farm assets less debt (equity) to farm assets.

4 Economic farm surplus less interest and lease as a percentage of equity.

5 Economic farm surplus divided by total assets.

Most regions budgeted to improve their cash operating surpluses in 2009/10. Across the board falls in farm working expenses plus interest show that dairy farmers are working very hard to contain expenditure and are benefiting from the reduced interest rates on their debt.

Farm working expenses plus interest in 2008/09 ranged from \$4.32 per kilogram of milksolids in Taranaki, to \$5.53 in Canterbury. In 2009/10, the range is expected to reduce to between \$4.00 in Taranaki and \$4.96 in Canterbury with the four other models averaging \$4.45. This gave very little leeway when the forecast payout was \$4.55. The range of figures for farm surplus for reinvestment in 2009/10 shows that the revised payout will provide some funds for capital and development and principal repayment which might have otherwise required further debt funding on most models.

# DAIRY INDUSTRY ISSUES AND DEVELOPMENTS

# 4

## FONTERRA RESTRUCTURE

Currently the major debate within the industry is Fonterra's proposed capital restructuring, with the company looking to put this to a shareholder vote in November 2009.

## LOWER PAYOUTS FOCUS ATTENTION ON CASHFLOWS AND COSTS

The significant reduction in payout announced midway through 2008/09, coupled with late deferred payments and a low initial 2009/10 advance payment, put most farms under severe cashflow pressure through the 2009 winter and spring.

The low starting payout for 2009/10 of \$4.55 per kilogram of milksolids, coupled with relatively high debt servicing costs on many farms, saw farmers aggressively target farm working expenses with budget revisions aimed at achieving a small surplus.

Some farmers are considering reducing the number of cows milking at the peak of the season to concentrate on higher per cow production, or moving to low input systems, as a means to lower their cost of production.

## DAIRY DEBT

The drop in the dairy payout has focused attention on debt levels in the dairy industry, which is reaching significant levels. Reserve Bank figures indicate a total agricultural sector debt of around \$44 billion with around \$27 billion of that being carried by dairy farms. This equates to an average of \$21 of debt per kilogram of milksolids. Reserve Bank figures show that approximately 20 percent of farms hold 80 percent of this debt.

The distribution of debt from the MAF farm monitoring sample of 200 farms is shown in Figure 6.1 on page 24. Note that the MAF sample of owner-operated farms under represents large corporate farms and newly-converted farms.

Analysis of the debt servicing data from the farm monitoring sample shows an average debt servicing in 2008/09 of \$1.50 per kilogram of milksolids, decreasing to \$1.41 per kilogram of milksolids in 2009/10 as interest rates begin to drop.

The reduced payout, coupled with general credit tightening as a result of the economic recession means that increasing pressure will come on debt and debt servicing on-farm. It is very likely that the industry will go through a period of de-leveraging. Pressure is also mounting on land values, with very few farm sales over the last six months.



## LABOUR

The reduced profitability leading into the 2009/10 season has led some farm owners to venture back into the milking shed to reduce farm expenditure. This, in turn, has raised the quality of farm managers available in the labour market, some of whom are prepared to accept salaries at reduced levels. Meanwhile, farm managers are tending to stay with their current employers for longer, in contrast to previous seasons where there tended to be a lot more labour movement at this level.

Sourcing farm labour has been less difficult due to the rise in unemployment as a result of the economic recession.

However, the pool of skilled and experienced dairy workers is still limited. There is an increasing level of overseas labour being brought into the country; most farmers who have taken this option have been very happy with the results and the calibre of staff.

## FERTILISER

Fertiliser application was below maintenance levels in 2008/09 and is likely to be even lower in 2009/10, particularly on heavily indebted properties. Many did not apply fertiliser in spring 2009 and will wait to see what the payout looks like later in the season before deciding on autumn applications. For many farms, a half maintenance level of fertiliser is likely to be applied.

Dairy farms in well developed areas generally have very good Olsen P levels in their soils, so below maintenance applications of phosphate, potassium and sulphur can be buffered for some time before total and seasonal dry matter production is affected. In noting this, farmers in many regions are finding they need to boost applications of sulphur in order to maintain dry matter production. Farmers are also looking at soil testing and nutrient budgeting more closely, as well as scrutinising the number of applications and timing of applications.

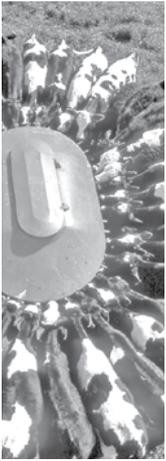
## DAIRY COMPANIES

Synlait's dairy factory near Dunsandel (Canterbury) started processing milk in spring 2008. Apart from a major problem initially with a fan for the drier, the factory has operated well.

New Zealand Dairies Ltd in Studholme, Waimate, had a trouble-free season but was down in production by around 7 percent due to the hard season.

A new dairy factory/company is being planned for operation for the 2011/12 season, to be located on the North Banks of the Waitaki River – within 10 minutes drive of the New Zealand Dairies factory.

Open Country Dairy Limited (OCDL) has opened a plant at Wanganui and has been recruiting supply from the Manawatu and Taranaki. OCDL has fully-subscribed milk from suppliers in Otago and Southland for the Awarua factory which opened in 2008. The company does not require any shareholding to supply milk, and this is an attractive proposition for Fonterra farmers who want to free up capital. Industry commentators have said reasons quoted for farmers leaving Fonterra include releasing capital from existing shareholding, or inability to finance the purchase of Fonterra shares.



A small organic milk processing company has also been set up in Taranaki, providing a potential alternative for some farms to supply.

A new factory/company has also been mooted for south Waikato, based near Awapuni. However, the economic recession was one reason a proposed milk processing plant at Gore was put on hold.

Westland Milk Products have reviewed their position on moving to an A2 herd, to one of maintaining a watching brief on international developments. European Food Safety Authority findings showed no definite link between A1 milk and any health issues, and as a result, there is currently no marketing advantage to having an A2 herd. The West Coast dairy herd is currently around 62 percent A2 and it is well poised to continue the move towards A2 should the market situation change.

### CONTRACT MILK

During 2008/09, Fonterra removed the option of contract milk production, which disappointed some farmers. All milk produced had to be covered by shareholding. This forced some farmers to purchase extra shares that were unbudgeted, placing greater financial pressure on businesses already struggling with cashflows. The share price also created a huge dilemma, as farmers would be producing milk earning only \$5.20 per kilogram of milksolids to buy shares at \$5.57 that would then drop in value to \$4.52, creating a negative cashflow.

### IRRIGATION

In the mid Canterbury area more farms have converted from border dyke to pivot irrigation. In combination with the pivots, on-farm storage ponds have been built to help increase the reliability of the irrigation. The level of this activity has slowed significantly with the lower payout and the overall tight financial position for dairy farmers.

The irrigation companies on the Waitaki River are continuing to put presentations to commissioners regarding the implementing of the Waitaki Water allocation plan. It is now four years on since the Waitaki Water Allocation Board had its hearings, and the money required for this work is putting pressure on the irrigation companies, which are largely run by farmers.

Central Plains Water Ltd (CPWL) was granted consent to take water from the Rakaia and Waimakariri Rivers. However, the current proposal for water storage was turned down by the commissioners. There are likely to be appeals from both CPWL and from groups opposing any irrigation development in the area, depending on the flow regime that CPWL will be required to operate within.

The Canterbury Water Management Strategy (CWMS) was developed during 2008 and 2009, with the final document released in November 2009. During the stakeholder consultation phases, useful inputs

were made by many concerned farmers, including many dairy farmers, to shape the final approach. The Strategy has developed a way to better manage Canterbury's water resources that will be enduring and satisfy the needs of all those with an interest in water. While there is much work to do to implement the strategy, there is general agreement that the CWMS represents a significant leap forward towards water management that integrates the development of new water infrastructure with sound allocation and water quality management approaches.

### **CONVERSIONS**

There were over 104 new suppliers to Clondeboye for the 2008/09 season putting huge pressures on the farm construction industry. A number of dairy sheds were not operational by the planned start of calving. This resulted in cows having to be milked in other farmers' dairy sheds. With the wet weather it was difficult to find farmers willing to milk extra cows.

For the 2009/10 season, there are 50 new sheds with about 30 new conversions. It is likely that all the sheds should be operational in time due to less demand this season.

A number of planned conversions which were partly underway had to be halted due to the financiers not agreeing to continue funding the project. This occurred from October 2008 as the forecast milk payout dropped and the world recession deepened.

It is estimated that there will be around 30 farms supplying new milk in the 2009/10 season throughout Otago and Southland.

### **SUPPLEMENTARY FEED**

The price of palm kernel decreased significantly throughout the 2008/09 season from around \$390 per tonne to \$240 per tonne, with some forward contracts being taken out over the summer at \$210 per tonne. This put downward pressure on the prices of other supplementary feed and farmers started to substitute away from palm kernel.

High yields due to warm temperatures, timely rainfall and an estimated increase of 30 percent in the planted area of maize silage in 2008/09 resulted in falling spot prices during the harvest period. Initially, maize was being contracted at around 33 to 35 cents per kilogram of dry matter (kgDM). However, with declining payout predictions, and less demand for supplementary feed, the spot price of maize silage in the late autumn dropped to between 10 to 22 cents per kgDM landed on farm. Some dairy farmers walked away from maize contracts as these became unaffordable.

This behaviour creates uncertainty. Dairy farmers, graziers and industry agree that a stable feed market with responsible long-term relationships between dairy farmers and graziers is the best for all concerned.

### **"NEW" FODDER CROP**

The search for a high energy and low cost supplementary feed has led a number of farmers to investigate fodder beet. The advantages of fodder beet are its potential for very high yields of good quality feed (22 to 33 tonnes of dry matter

recorded). However, it is technically more demanding to grow to achieve a good yield, more expensive to sow and husbandry is more complex than traditional brassica crops.

### STOCK

The demand for cows has generally been low, with virtually no budget cow market and better cows readily available for purchase. There has been a significant decline in the price of livestock, from \$2200 to \$2500 per cow in 2007/08 down to between \$1300 and \$1400 per cow in 2008/09. This has had a major impact on 50/50 sharemilkers, with many losing a large amount of equity.

### FARMER MORALE

At the start of the 2009/10 season there was a sombre mood within the dairy industry, given the significant decline in payouts and tight financial positions of many farmers. Morale lifted somewhat following the September 2009 announcement of a 55 cents per kilogram increase in the payout. Farmers are positively optimistic about the medium to longer-term outlook of the industry as they feel they have grappled with the worst of the economic crisis. However, a few individuals are concerned about their own short-term viability and expect to have to downsize their operations to reduce debt. Some are seriously evaluating very low input cost management systems.

### DROUGHT COST TO DAIRY SECTOR ESTIMATED AT OVER \$2 BILLION

The drought of 2007/08 cost the New Zealand economy \$2.8 billion; \$1.9 billion on-farm, and \$900 million off-farm. The dairy industry bore the bulk of this at \$2.18 billion (78 percent), with the Waikato region hit the hardest carrying 44 percent of the total cost. As noted last year, farmers were lucky with the \$7.62 payout which significantly helped to buffer the impact.



# NATIONAL DAIRY MODEL

# 5

The national dairy budget depicted below has been constructed via a weighted average of the MAF dairy farm monitoring models. The weighting is based on the number of dairy cows in each region from the 2008 *Livestock Improvement* survey. The weightings, on the model basis, are as follows:

› Northland	8.0%
› Waikato/Bay of Plenty	41.8%
› Taranaki	12.5%
› Lower North Island	10.2%
› Canterbury	15.5%
› Southland	11.9%

## KEY POINTS 2008/09

- › 2008/09 was a relatively forgettable year for dairying in New Zealand, coming on the back of variable weather, a significant decline in the payout throughout the 2008/09 season, and a forecast \$4.55 payout going into 2009/10.
- › Nationally, production was up by 9.8 percent compared with 2007/08, with most of this being a post-drought recovery from 2007/08.
- › Despite the increased production, net cash income dropped 27 percent compared with 2007/08 to \$750 000, very much as a result of the drop in the payout, from an original forecast of \$7.00 per kilogram of milksolids down to \$5.20.
- › Farm working expenses increased again in 2008/09 to an average of \$3.86 per kilogram milksolids, driven by increased feed expenses due to the variable weather, and increased prices pushing up fertiliser expenses.
- › The average dairy farm finished the year with a cash loss of \$58 500, a 141 percent drop on 2007/08. In the absence of off-farm income, new borrowing, and introduced funds, this loss would be \$130 600.

## KEY POINTS 2009/10

- › Farms in most areas of New Zealand went into the 2009 winter with less than desirable pasture covers and cow condition. While supplementary feed was readily available, the cash to buy it was not.
- › Despite this, farmers are budgeting for a 3 percent increase in production over 2008/09 levels. This helps somewhat to offset the drop in payout, with the result that net cash income decreases 5 percent to \$714 900 in 2009/10.
- › A significant feature of the 2009/10 budgets was farmers' expectation of decreasing their farm working expenses, which are budgeted to drop by 11 percent, to \$3.34 per kilogram milksolids. Major decreases are budgeted for feed, fertiliser, and repairs and maintenance expenses.
- › The average farm, as depicted by the model, still makes a cash loss of \$15 500 in 2009/10. In the absence of off-farm income, new borrowing, and introduced funds, this would grow to almost \$40 000.
- › As a result of the financial losses in 2008/09, the lower than expected payout of \$4.55 per kilogram of milksolids in 2009/10, and some uncertainty around the final payout price, farmer morale is subdued.

»» TABLE 5.1: NATIONAL DAIRY MODEL BUDGET<sup>1</sup>

	2008/09			2009/10 BUDGET			CHANGE BETWEEN 2008/09 AND 2009/10 (%)
	WHOLE FARM (\$)	PER COW (\$)	PER KG MILKSOLIDS (\$)	WHOLE FARM (\$)	PER COW (\$)	PER KG MILKSOLIDS (\$)	
<b>REVENUE</b>							
Milksolids	701 000	1 788	5.12	673 000	1 717	4.77	-4
Cattle	50 000	128	0.37	44 300	113	0.31	-11
Other farm income	5 800	15	0.04	4 300	11	0.03	-26
<b>LESS:</b>							
Cattle purchases	6 900	18	0.05	6 700	17	0.05	-3
<b>Net cash income</b>	<b>750 000</b>	<b>1 913</b>	<b>5.48</b>	<b>714 900</b>	<b>1 824</b>	<b>5.07</b>	<b>-5</b>
<b>Farm working expenses</b>	<b>528 600</b>	<b>1 349</b>	<b>3.86</b>	<b>470 200</b>	<b>1 200</b>	<b>3.34</b>	<b>-11</b>
<b>Cash operating surplus</b>	<b>221 400</b>	<b>565</b>	<b>1.62</b>	<b>244 700</b>	<b>624</b>	<b>1.74</b>	<b>11</b>
Interest	186 000	474	1.36	174 000	444	1.23	-6
Rent and/or leases	0	0	0.00	0	0	0.00	..
Stock value adjustment	3 700	10	0.03	2 300	6	0.02	-39
Minus depreciation	45 400	116	0.33	45 200	115	0.32	-1
<b>Farm profit before tax</b>	<b>-6 300</b>	<b>-16</b>	<b>-0.05</b>	<b>27 800</b>	<b>71</b>	<b>0.20</b>	<b>-539</b>
Taxation	18 600	47	0.14	2 200	6	0.02	-88
<b>Farm profit after tax</b>	<b>-24 900</b>	<b>-64</b>	<b>-0.18</b>	<b>25 600</b>	<b>65</b>	<b>0.18</b>	<b>-203</b>
Add back depreciation	45 400	116	0.33	45 200	115	0.32	-1
Reverse stock value adjustment	-3 700	-10	-0.03	-2 300	-6	-0.02	-39
Off-farm income	7 800	20	0.06	7 900	20	0.06	1
<b>Discretionary cash</b>	<b>24 600</b>	<b>63</b>	<b>0.18</b>	<b>76 400</b>	<b>195</b>	<b>0.54</b>	<b>211</b>
<b>APPLIED TO:</b>							
Net capital purchases	44 400	113	0.32	29 200	74	0.21	-34
Development	26 200	67	0.19	11 200	29	0.08	-57
Principal repayments	9 600	24	0.07	5 900	15	0.04	-38
Drawings	67 200	171	0.49	61 800	158	0.44	-8
New borrowings	55 700	142	0.41	2 800	7	0.02	-95
Introduced funds	8 600	22	0.06	13 400	34	0.10	56
<b>Cash surplus/deficit</b>	<b>-58 500</b>	<b>-149</b>	<b>-0.43</b>	<b>-15 500</b>	<b>-39</b>	<b>-0.11</b>	<b>-74</b>
<b>Farm surplus for reinvestment<sup>2</sup></b>	<b>-50 400</b>	<b>-129</b>	<b>-0.37</b>	<b>6 600</b>	<b>17</b>	<b>0.05</b>	<b>-113</b>
<b>ASSETS AND LIABILITIES</b>							
Farm, forest and building (opening)	5 645 700	14 402	41.25	5 136 400	13 103	36.44	-9
Plant and machinery (opening)	165 600	423	1.21	172 000	439	1.22	4
Stock valuation (opening)	566 400	1 445	4.14	570 200	1 455	4.05	1
Dairy company shares	786 000	2 005	5.74	629 200	1 605	4.46	-20
Other farm related investments (opening)	6 300	16	0.05	0	0	0.00	..
<b>Total farm assets</b>	<b>7 170 000</b>	<b>18 291</b>	<b>52.38</b>	<b>6 507 800</b>	<b>16 602</b>	<b>46.17</b>	<b>-9</b>
<b>Total liabilities (opening)</b>	<b>2 240 300</b>	<b>5 715</b>	<b>16.37</b>	<b>2 359 900</b>	<b>6 020</b>	<b>16.74</b>	<b>5</b>
<b>Total equity (assets-liabilities)</b>	<b>4 929 700</b>	<b>12 576</b>	<b>36.02</b>	<b>4 148 000</b>	<b>10 582</b>	<b>29.43</b>	<b>-16</b>

**Notes**

1 Figures may not add to totals due to rounding.

2 Farm surplus for reinvestment is the cash available from the farm business, after meeting living costs, which is available for investment on the farm or for principal repayments. It is calculated as discretionary cash less off-farm income and drawings.

**Symbol**

.. Not applicable.

»» TABLE 5.2: NATIONAL DAIRY MODEL EXPENDITURE<sup>1</sup>

	2008/09			2009/10 BUDGET			CHANGE BETWEEN 2008/09 AND 2009/10 (%)
	WHOLE FARM (\$)	PER COW (\$)	PER KG MILKSOLIDS (\$)	WHOLE FARM (\$)	PER COW (\$)	PER KG MILKSOLIDS (\$)	
<b>FARM WORKING EXPENSES</b>							
Permanent wages	70 800	181	0.52	70 100	179	0.50	-1
Casual wages	5 600	14	0.04	5 100	13	0.04	-8
ACC	1 700	4	0.01	2 000	5	0.01	18
<b>Total labour expenses</b>	<b>78 000</b>	<b>199</b>	<b>0.57</b>	<b>77 300</b>	<b>197</b>	<b>0.55</b>	<b>-1</b>
Animal health	28 700	73	0.21	27 900	71	0.20	-3
Breeding	16 000	41	0.12	15 300	39	0.11	-4
Dairy shed expenses	8 500	22	0.06	8 300	21	0.06	-2
Electricity	19 900	51	0.15	21 300	54	0.15	7
Feed (hay and silage)	53 900	138	0.39	43 500	111	0.31	-19
Feed (feed crops)	2 200	6	0.02	2 200	6	0.02	-1
Feed (grazing)	59 800	152	0.44	50 800	130	0.36	-15
Feed (other)	50 100	128	0.37	39 100	100	0.28	-22
Fertiliser	76 700	196	0.56	66 600	170	0.47	-13
Lime	3 000	8	0.02	2 600	7	0.02	-12
Freight (not elsewhere deducted)	4 900	12	0.04	4 600	12	0.03	-6
Regrassing costs	7 200	18	0.05	5 500	14	0.04	-24
Weed and pest control	3 900	10	0.03	3 800	10	0.03	-3
Fuel	11 800	30	0.09	11 300	29	0.08	-4
Vehicle costs (excluding fuel)	14 700	38	0.11	13 600	35	0.10	-7
Repairs and maintenance	38 500	98	0.28	31 000	79	0.22	-19
<b>Total other working expenses</b>	<b>399 900</b>	<b>1 020</b>	<b>2.92</b>	<b>347 500</b>	<b>886</b>	<b>2.47</b>	<b>-13</b>
Communication costs (phone and mail)	4 000	10	0.03	4 000	10	0.03	0
Accountancy	4 300	11	0.03	4 400	11	0.03	2
Legal and consultancy	3 800	10	0.03	3 100	8	0.02	-17
Other administration	4 527	12	0.03	5 200	13	0.04	14
Water charges (irrigation)	2 200	5	0.02	2 200	6	0.02	2
Rates	10 900	28	0.08	11 400	29	0.08	5
Insurance	6 700	17	0.05	6 900	18	0.05	3
Other expenditure <sup>2</sup>	14 200	36	0.10	8 200	21	0.06	-42
<b>Total overhead expenses</b>	<b>50 700</b>	<b>129</b>	<b>0.37</b>	<b>45 400</b>	<b>116</b>	<b>0.32</b>	<b>-10</b>
<b>Total farm working expenses</b>	<b>528 600</b>	<b>1 349</b>	<b>3.86</b>	<b>470 200</b>	<b>1 200</b>	<b>3.34</b>	<b>-11</b>
Wages of management	84 100	215	0.61	83 700	214	0.59	0
Depreciation	45 400	116	0.33	45 200	115	0.32	-1
<b>Total farm operating expenses</b>	<b>658 200</b>	<b>1 679</b>	<b>4.81</b>	<b>599 200</b>	<b>1 528</b>	<b>4.25</b>	<b>-9</b>
<b>CALCULATED RATIOS</b>							
Economic farm surplus (EFS <sup>3</sup> )	95 600	244	0.70	118 000	301	0.84	
Farm working expenses/NCI <sup>4</sup>	71%			65%			
EFS/total farm assets	1%			2%			
EFS less interest and lease/equity	-2%			-2%			
Interest+rent+lease/NCI	24%			24%			
EFS/NCI	10%			15%			
<b>PHYSICAL PARAMETERS</b>							
Effective area (ha)	135			135			
Cows milked	392			392			
Milksolids (kg)	136 873			140 941			

**Notes**

1 Figures may not add to totals due to rounding.

2 Includes Dairy NZ levy and Accident Compensation Corporation (ACC) employer levy.

3 EFS (or earnings before interest and tax) is calculated as follows: net cash income plus change in livestock values less farm working expenses less depreciation less wages of management (WOM). WOM is calculated as follows: \$38 000 allowance for labour input plus 1 percent of opening total farm assets to a maximum of \$85 000.

4 Net cash income.

»» TABLE 5.3: KEY PARAMETERS, FINANCIAL RESULTS AND BUDGET FOR THE NATIONAL DAIRY MODEL<sup>1</sup>

	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10 BUDGET
Total milksolids revenue/cow (\$)	1 400	1 405	1 488	2 538	1 788	1 717
Kg milksolids/ha	873	958	1 034	992	1 014	1 044
Kg milksolids/cow milked	327	346	361	342	349	360
Milksolids advance to end June (\$/kg)	3.95	3.60	3.65	6.62	4.15	3.77
Milksolids deferred payment (\$/kg)	0.5	0.64	0.50	0.81	1.00	1.05
Cattle income (\$)	38 000	42 900	40 000	55 900	50 000	44 300
Other farm income (\$)	1 200	1 700	2 300	2 700	5 800	4 300
Net cash income (\$)	486 200	536 700	577 900	1 021 900	750 000	714 900
Farm working expenses (\$)	286 000	326 500	369 000	468 400	528 600	470 200
Cash operating surplus	200 100	210 200	208 800	553 400	221 400	244 700
Farm profit before tax (\$)	111 900	110 400	70 000	384 000	-6 300	27 800
Farm surplus for reinvestment <sup>2</sup>	39 600	33 600	1 700	263 500	-50 400	6 600
EFS <sup>3</sup> per cow (\$)	302	302	300	1 175	244	301
Farm working expenses/NCI (%)	57	61	63	45	71	65
EFS/total farm assets (%)	3	3	2	8	1	2

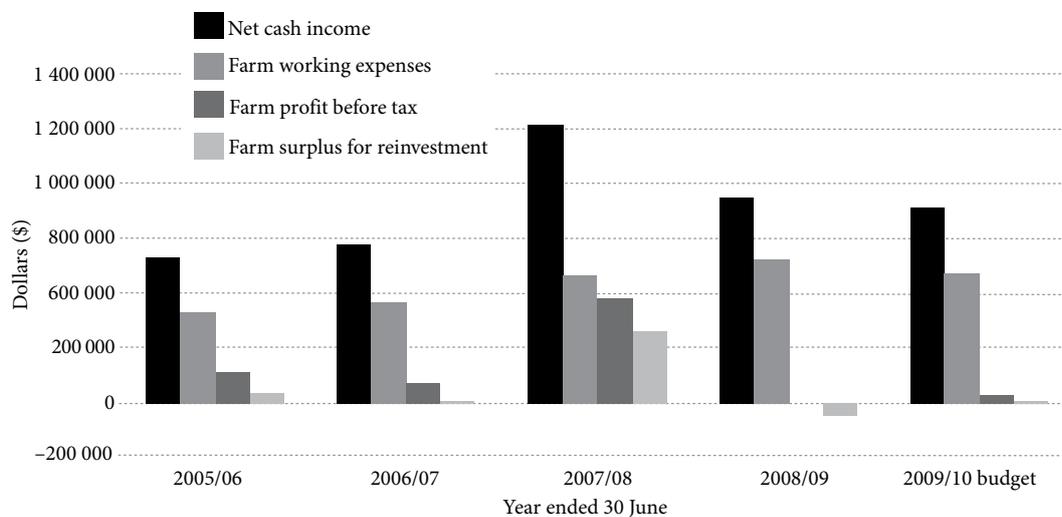
**Notes**

1 Figures may not add to totals due to rounding.

2 Farm surplus for reinvestment is the cash available from the farm business, after meeting living costs, which is available for investment on the farm or for principal repayments. It is calculated as discretionary cash less off-farm income and drawings.

3 EFS (or earnings before interest and tax) is calculated as follows: net cash income plus change in livestock values less farm working expenses less depreciation less wages of management (WOM). WOM is calculated as follows: \$38 000 allowance for labour input plus 1 percent of opening total farm assets to a maximum of \$85 000.

»» FIGURE 5.1: NATIONAL DAIRY MODEL PROFITABILITY TRENDS



# NATIONAL DAIRY PERCENTILE ANALYSIS

# 6

The following tables and graphs are based on an analysis of the total national sample of dairy farms monitored as part of the MAF monitoring programme. The analysis compares the bottom 10 percent of farms to the top 10 percent, based on their farm profit before tax per hectare for both 2008/09 and 2009/10.

»» TABLE 6.1: PERCENTILE ASSESSMENT OF FINANCIAL DATA FROM MONITORED DAIRY FARMS, 2008/09

	AVERAGE OF			MEAN (\$)	MEDIAN (\$)	AVERAGE OF		
	BOTTOM 10% (\$)	BOTTOM 25% (\$)	BOTTOM 25-50% (\$)			TOP 50-75% (\$)	TOP 25% (\$)	TOP 10% (\$)
<b>REVENUE</b>								
Milksolids	946 905	849 163	813 062	780 172	633 802	669 846	788 615	642 204
Cattle sales	59 790	56 088	65 662	61 030	48 396	58 886	63 485	51 602
Other revenue	4 917	10 656	12 339	10 320	1 457	3 774	14 513	3 592
Cattle purchases	8 265	14 956	12 779	10 121	1 775	7 157	5 590	4 059
<b>Net cash income</b>	<b>1 003 119</b>	<b>901 580</b>	<b>880 029</b>	<b>842 334</b>	<b>682 358</b>	<b>726 340</b>	<b>861 388</b>	<b>693 339</b>
<b>Farm working expenses</b>	<b>811 022</b>	<b>716 531</b>	<b>606 118</b>	<b>572 417</b>	<b>468 821</b>	<b>441 898</b>	<b>525 121</b>	<b>420 296</b>
<b>Cash operating surplus</b>	<b>192 098</b>	<b>185 049</b>	<b>273 911</b>	<b>269 917</b>	<b>215 152</b>	<b>284 441</b>	<b>336 267</b>	<b>273 042</b>
Rent	40 069	22 112	14 751	14 997	0	16 937	6 189	3 310
Interest	372 390	303 090	251 376	208 001	150 525	145 513	132 025	85 494
Stock value adjustment	57 482	60 251	14 213	10 966	2 490	-8 274	-22 327	-25 099
Depreciation	56 358	51 311	43 843	41 820	30 000	36 393	35 735	23 799
<b>Farm profit before tax</b>	<b>-334 201</b>	<b>-251 714</b>	<b>-50 271</b>	<b>-5 867</b>	<b>22 853</b>	<b>93 872</b>	<b>184 644</b>	<b>185 538</b>
Taxation	10 526	16 526	16 508	29 436	15 000	34 510	50 202	36 916
<b>Farm profit after tax</b>	<b>-344 727</b>	<b>-268 240</b>	<b>-66 780</b>	<b>-35 304</b>	<b>-7 394</b>	<b>59 363</b>	<b>134 443</b>	<b>148 622</b>
Add back depreciation	56 358	51 311	43 843	41 820	30 000	36 393	35 735	23 799
Reverse stock value adjustment	57 482	60 251	14 213	10 966	2 490	-8 274	-22 327	-25 099
Off-farm income	14 427	10 927	8 356	9 561	0	9 312	9 648	7 836
<b>Discretionary cash</b>	<b>-216 461</b>	<b>-145 752</b>	<b>-369</b>	<b>27 043</b>	<b>42 119</b>	<b>96 795</b>	<b>157 498</b>	<b>155 158</b>
Capital purchases	430 276	252 375	36 156	90 604	15 000	42 298	31 585	36 605
Development	207 726	94 812	56 336	58 010	0	30 583	50 309	11 273
Principal	9 778	9 946	12 929	19 745	3 398	27 642	28 464	30 897
Drawings	50 143	59 321	63 132	62 656	61 325	65 383	62 786	55 104
New borrowing	528 316	293 456	79 760	121 361	0	65 000	47 228	16 000
<b>Cash surplus/deficit</b>	<b>-412 147</b>	<b>-289 100</b>	<b>-100 265</b>	<b>-98 471</b>	<b>-69 669</b>	<b>-8 726</b>	<b>4 208</b>	<b>38 000</b>
<b>Farm surplus for reinvestment</b>	<b>-281 031</b>	<b>-215 999</b>	<b>-71 857</b>	<b>-45 173</b>	<b>-29 103</b>	<b>22 099</b>	<b>85 064</b>	<b>92 217</b>
Net farm profit before tax per hectare	-1 800	-1 286	-256	83	139	524	1 351	1 773
Proportion of farms with negative farm profit after tax	100%	100%	92%	55%	55%	12%	4%	0%
Proportion of farms with negative farm surplus for reinvestment	100%	94%	92%	66%	66%	46%	18%	10%

»» TABLE 6.2: PERCENTILE ASSESSMENT OF PRODUCTION DATA FROM MONITORED FARMS, 2008/09

	AVERAGE OF			MEAN (\$)	MEDIAN (\$)	AVERAGE OF		
	BOTTOM 10% (\$)	BOTTOM 25% (\$)	BOTTOM 25-50% (\$)			TOP 50-75% (\$)	TOP 25% (\$)	TOP 10% (\$)
<b>PHYSICAL PERFORMANCE DATA</b>								
Milking area (ha)	215	210	203	187	150	188	146	104
Opening cow numbers	534	492	457	436	363	386	409	329
Closing cow numbers	557	515	464	440	374	382	399	318
Total opening stock numbers	670	626	588	557	464	491	523	421
Total closing stock numbers	715	662	598	563	479	487	505	404
Cows in milk (15 December)	504	467	437	406	350	335	387	313
Total milksolids production (kg)	185 647	166 781	157 097	148 413	123 194	124 632	145 143	114 036
Milksolids per hectare (kg/ha)	925	862	832	852	835	710	1006	1059
Milksolids production per cow	390	361	351	346	349	314	359	351
Stocking rate (cows/ha)	2.5	2.4	2.4	2.4	2.4	1.9	2.8	3.0
Opening assets	8 069 881	7 673 643	8 194 999	7 281 529	6 261 121	6 113 930	7 143 542	5 541 373
Opening debt	4 149 820	3 625 133	3 180 790	2 608 193	1 883 532	1 975 687	1 651 162	1 302 921
Equity (%)	49%	53%	61%	64%	70%	68%	77%	76%
Farm working expenses per kilogram of milksolids	4.37	4.30	3.86	3.86	3.81	3.55	3.62	3.69
Debt servicing per kilogram of milksolids	2.22	1.95	1.69	1.50	1.22	1.30	0.95	0.78
Drawings per kilogram of milksolids	0.27	0.36	0.40	0.42	0.50	0.52	0.43	0.48

»» TABLE 6.3: PERCENTILE ASSESSMENT OF FINANCIAL DATA FROM MONITORED DAIRY FARMS, 2009/10

	AVERAGE OF			MEAN (\$)	MEDIAN (\$)	AVERAGE OF		
	BOTTOM 10% (\$)	BOTTOM 25% (\$)	BOTTOM 25-50% (\$)			TOP 50-75% (\$)	TOP 25% (\$)	TOP 10% (\$)
<b>REVENUE</b>								
Milksolids	657 675	716 132	931 650	805 338	642 326	794 383	779 189	766 858
Cattle sales	43 157	49 362	63 838	55 280	48 118	55 129	52 041	41 045
Other revenue	5 260	5 868	10 868	7 262	1 000	2 674	2 156	2 064
Cattle purchases	5 187	5 269	6 140	4 744	0	4 288	3 145	3 042
<b>Net cash income</b>	<b>705 057</b>	<b>767 750</b>	<b>1 002 833</b>	<b>864 810</b>	<b>676 958</b>	<b>849 806</b>	<b>838 853</b>	<b>806 925</b>
<b>Farm working expenses</b>	<b>487 826</b>	<b>519 583</b>	<b>604 346</b>	<b>515 122</b>	<b>427 966</b>	<b>486 913</b>	<b>449 645</b>	<b>413 367</b>
<b>Cash operating surplus</b>	<b>217 231</b>	<b>248 167</b>	<b>398 487</b>	<b>349 689</b>	<b>277 705</b>	<b>362 893</b>	<b>389 208</b>	<b>393 557</b>
Rent	21 083	13 520	16 623	15 069	0	17 473	12 661	6 715
Interest	276 910	260 308	275 361	206 916	145 918	178 914	113 081	102 887
Stock value adjustment	31 750	23 922	4 689	6 239	2 031	-7 812	4 156	-2 193
Depreciation	49 157	48 386	42 958	41 097	30 000	33 973	39 072	35 831
<b>Farm profit before tax</b>	<b>-161 669</b>	<b>-97 970</b>	<b>52 082</b>	<b>78 674</b>	<b>72 573</b>	<b>140 345</b>	<b>220 237</b>	<b>250 317</b>
Taxation	4 540	8 036	19 536	25 492	13 247	29 966	44 429	55 921
<b>Farm profit after tax</b>	<b>-166 208</b>	<b>-106 006</b>	<b>33 266</b>	<b>53 362</b>	<b>49 712</b>	<b>110 379</b>	<b>175 809</b>	<b>194 396</b>
Add back depreciation	49 157	48 386	42 958	41 097	30 000	33 973	39 072	35 831
Reverse stock value adjustment	31 750	23 922	4 689	6 239	2 031	-7 812	4 156	-2 193
Off-Farm income	2 690	7 887	9 487	8 561	0	9 025	7 845	8 021
<b>Discretionary cash</b>	<b>-82 612</b>	<b>-25 811</b>	<b>90 233</b>	<b>109 068</b>	<b>101 823</b>	<b>145 565</b>	<b>226 286</b>	<b>236 011</b>
Capital purchases	26 666	68 793	22 417	35 085	4 850	17 195	31 936	22 962
Development	8 538	7 135	18 473	15 573	0	20 010	16 673	1 750
Principal	6 030	8 214	21 861	21 151	2 798	28 618	25 913	26 387
Drawings	50 911	53 060	64 881	59 732	59 620	61 864	59 122	47 775
New borrowing	56 655	70 489	38 580	60 414	0	95 420	37 166	1 850
<b>Cash surplus/deficit</b>	<b>-112 434</b>	<b>-80 957</b>	<b>17 716</b>	<b>24 026</b>	<b>17 929</b>	<b>31 842</b>	<b>127 504</b>	<b>140 856</b>
<b>Farm surplus for reinvestment</b>	<b>-136 213</b>	<b>-86 758</b>	<b>15 866</b>	<b>40 776</b>	<b>29 423</b>	<b>74 676</b>	<b>159 319</b>	<b>180 215</b>
Net farm profit before tax per hectare	-1 161	- 644	238	505	465	736	1 688	2 297
Proportion of farms with negative farm profit after tax	100%	100%	16%	31%	31%	0%	0%	0%
Proportion of farms with negative farm surplus for reinvestment	95%	82%	52%	38%	38%	8%	2%	5%

»» TABLE 6.4: PERCENTILE ASSESSMENT OF PRODUCTION DATA FROM MONITORED FARMS, 2009/10

	AVERAGE OF			MEAN (\$)	MEDIAN (\$)	AVERAGE OF		
	BOTTOM 10% (\$)	BOTTOM 25% (\$)	BOTTOM 25-50% (\$)			TOP 50-75% (\$)	TOP 25% (\$)	TOP 10% (\$)
<b>PHYSICAL PERFORMANCE DATA</b>								
Milking area (ha)	156	184	238	186	150	186	136	104
Opening cow numbers	370	411	519	440	371	438	392	363
Closing cow numbers	389	423	525	445	374	440	392	363
Total opening stock numbers	472	522	672	562	470	552	501	457
Total closing stock numbers	487	536	675	566	479	550	505	453
Cows in milk (15 December)	342	388	483	414	350	410	376	344
Total milksolids production (kg)	138 145	147 088	185 131	157 502	128 809	153 726	144 061	133 864
Milksolids per hectare (kg/ha)	1 001	894	792	899	896	841	1 071	1 202
Milksolids production per cow	394	377	352	364	361	353	374	377
Stocking rate (cows/ha)	2.4	2.3	2.2	2.4	2.4	2.3	2.9	3.2
Opening assets	6 011 775	6 659 612	8 271 412	7 131 482	5 951 443	7 351 679	6 243 226	5 424 936
Opening debt	3 181 302	3 213 947	3 587 587	2 701 572	1 949 988	2 247 742	1 757 010	1 829 243
Equity (%)	47%	52%	57%	62%	67%	69%	72%	66%
Farm working expenses per kilogram of milksolids	3.53	3.53	3.26	3.27	3.32	3.17	3.12	3.09
Debt servicing per kilogram of milksolids	2.16	1.86	1.58	1.41	1.13	1.28	0.87	0.82
Drawings per kilogram of milksolids	0.37	0.36	0.35	0.38	0.46	0.40	0.41	0.36

## BREAKEVEN ANALYSIS

»» TABLE 6.5: BREAKEVEN ANALYSIS OF PRODUCTION DATA FROM MONITORED DAIRY FARMS (DOLLARS PER KILOGRAM OF MILKSOLIDS)

	2008/09		2009/10	
	MEAN	MEDIAN	MEAN	MEDIAN
Farm working expenses	3.86	3.81	3.27	3.32
Debt servicing	1.50	1.22	1.41	1.13
Drawings	0.42	0.50	0.38	0.46
<b>Total</b>	<b>5.78</b>	<b>5.53</b>	<b>5.06</b>	<b>4.91</b>
Bottom 10%	6.86		6.06	
Top 10%	4.95		4.26	

The above table shows the “breakeven” point (covering farm working expenses, debt servicing and personal drawings) for the mean and median farm for both 2008/09 and 2009/10. For both years, breakeven is well above the payout level. This also ignores any capital depreciation, which is worth 28 cents per kilogram of milksolids in 2008/09 and 26 cents per kilogram of milksolids in 2009/10.

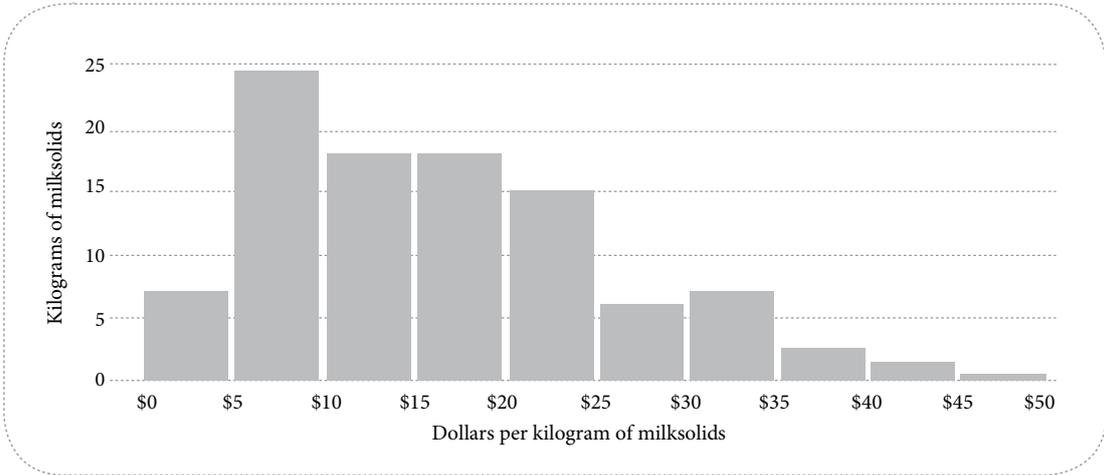
»» TABLE 6.6: COMPARISON BETWEEN LOW AND HIGH DECILE FARMS 2008/09

	AVERAGE OF BOTTOM 10%	AVERAGE OF TOP 10%
Milksolids per hectare (kg/ha)	925	1 059
Milksolids per cow (kg/cow)	390	351
Stocking rate (cow/ha)	2.5	3.0
Farm working expenses per cow (\$)	1 608	1 343
Interest costs per cow (\$)	738	273
Farm profit before tax per ha (\$)	-1 800	1 773

While the lower decile farms have a higher per cow production, a lower stocking rate results in a lower per hectare production. They also have higher farm working expenses and debt servicing, leading to a much lower farm profit before tax. It may well be that many of the lower decile farms are in a developing stage and therefore facing higher costs and lower production.

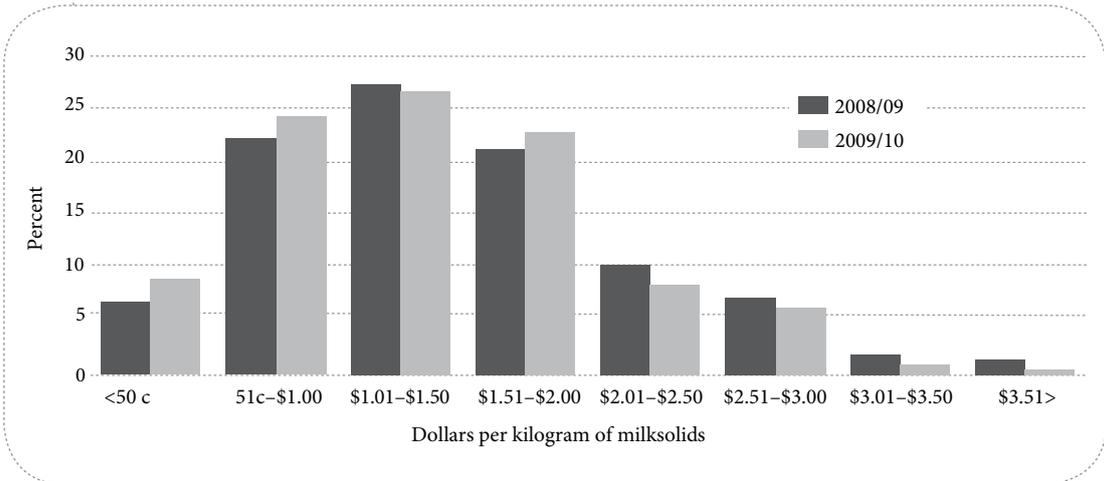
### DEBT AND DEBT SERVICING

»» FIGURE 6.1: DISTRIBUTION OF TOTAL DEBT BY DOLLARS PER KILOGRAM OF MILKSOLIDS



The above graph shows the distribution of debt for the 200 monitored farms, with a mean debt level of \$17.57 per kilogram of milksolids. This is less than the approximately \$21 per kilogram of milksolids as reported by the Reserve Bank. The difference arises in that the farms monitored by MAF are largely owner-operated farms, which do not include corporate farms, equity partnerships, and recent conversions.

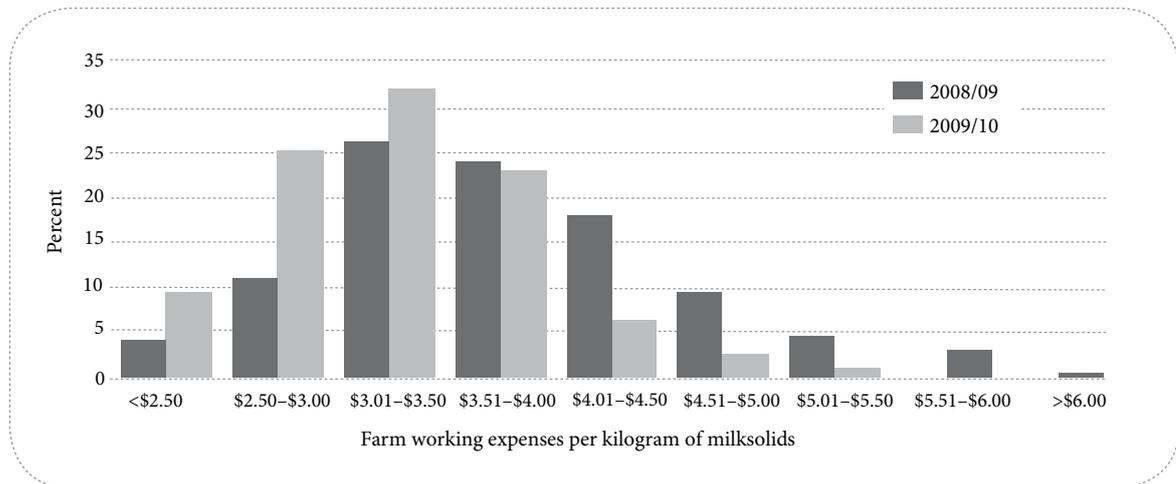
»» FIGURE 6.2: DEBT SERVICING DISTRIBUTION



This graph shows the debt servicing distribution for the 200 monitored farms, for the 2008/09 season and budget for 2009/10. While total debt levels have increased, the drop in interest rates is starting to take affect, with average debt servicing of \$1.50 per kilogram of milksolids in 2008/09, reducing to \$1.41 per kilogram of milksolids in 2009/10.

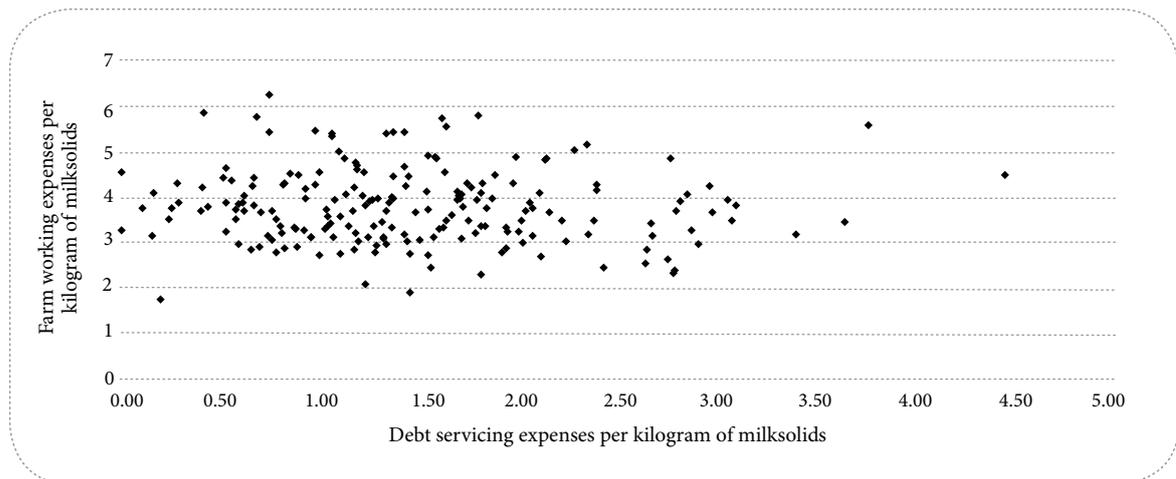
## FARM WORKING EXPENSES

»» FIGURE 6.3: FARM WORKING EXPENSES DISTRIBUTION



This graph shows a significant shift to lower farm working expenses on the 200 monitored farms, as farmers budget to reduce costs. Average farm working expenses dropped by 15 percent, from \$3.86 per kilogram of milksolids in 2008/09, to \$3.27 per kilogram of milksolids in 2009/10. The significant areas of reduced expenditure are repairs and maintenance (down 22 percent), feed (down 17 percent), and fertiliser (down 13 percent).

»» FIGURE 6.4: DEBT SERVICING EXPENSES VERSUS FARM WORKING EXPENSES



This scatter graph from the 200 monitored farms shows no relationship between debt servicing and farm working expenses. If a farm has high farm working expenses, it does not necessarily follow that they also have high debt servicing.



# DEER SECTOR OVERVIEW

## OVERALL A GOOD SEASON FOR DEER FARMERS

2008/09 was a good season for deer farmers. Deer farmers' profitability continued to improve in 2008/09 due to excellent prices for venison, despite disappointing velvet returns. The North Island deer model's farm profit before tax increased 74 percent to \$41 000 in 2008/09, while the South Island model's farm profit before tax increased 60 percent to \$81 300.

## VENISON PRICES SOAR

The 2008/09 venison schedule closed with an average schedule price of \$8.70 per kilogram. However, farmers selling at the peak of the schedule could have received around \$9.70 per kilogram for a 60 kilogram stag. The previous season closest to this average price was 2000/01, averaging at \$8.10 per kilogram.

The significant lift in the venison price contributed to much improved revenue for both the North and South Island deer models. Net cash income for the North and South Island deer models increased 43 percent and 22 percent respectively.

## VELVET CONTINUES TO DISAPPOINT

The volatility of velvet returns remains an issue for deer farmers. Many smaller operators, fed up with trying to predict velvet prices year on year, chose not to retain some of their velveting stags in favour of increasing their venison herds. This trend is not surprising considering deer representatives report that velvet farmers need an average of \$100 per kilogram to remain profitable long-term. This represents an ambitious target given the average for the North and South Island models over the last four years was just \$68 per kilogram.

Unlike other years, velvet farmers could rationalise the lower-than-expected velvet prices in 2008/09 as reflecting the impact of the world recession: reducing consumer spending in Korea, their main velvet market.

The velvet industry is pulling together to address this price volatility. A new velvet marketing structure has emerged, and velvet production from competitors is reportedly less than in 2008/09. With the Korean economy also showing signs of moving out of recession, velvet farmers are expecting a better season in 2009/10.

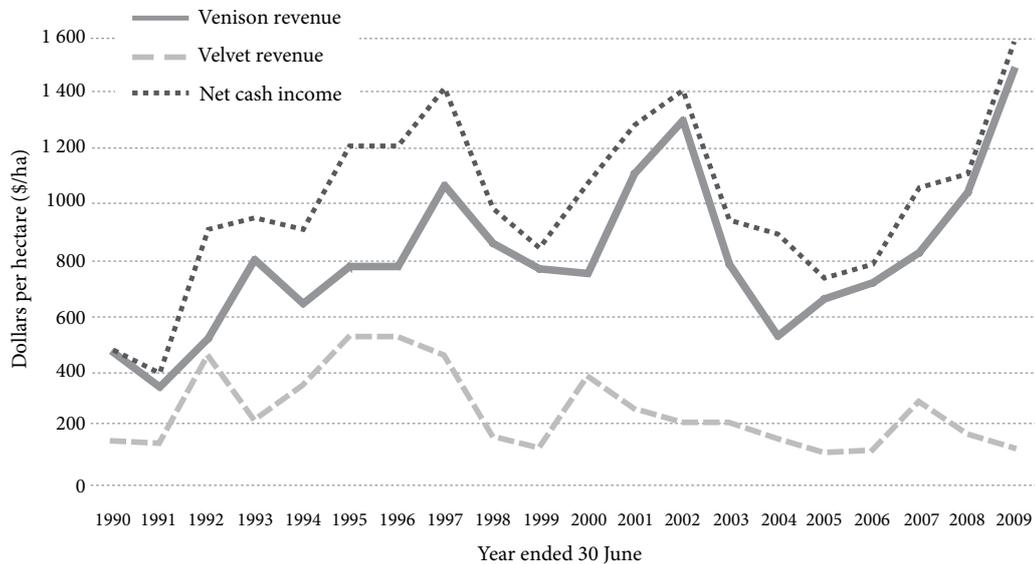
While velvet returns are important contributors to the deer farm models' profitability, the impact of high venison prices as seen in 2008/09 was the major driver of net cash income, as a comparison of the last 19 years of the North Island deer farm model shows.

## PRODUCTION AFFECTED BY DROUGHT

Physical production on both the North and South Island deer models was affected by drought. This was more significant in the North Island where consecutive droughts on the east coast reduced fawning percentages and carcass weights.

Variable kill weights were also noted by processors in the South Island, which was attributed to being a flow on effect from the previous season's drought. Despite this, overall the South Island's deer production was near average.

»» FIGURE 7.1: VENISON AND VELVET CONTRIBUTION TO NET CASH INCOME, 1990–2009



## EXPENDITURE

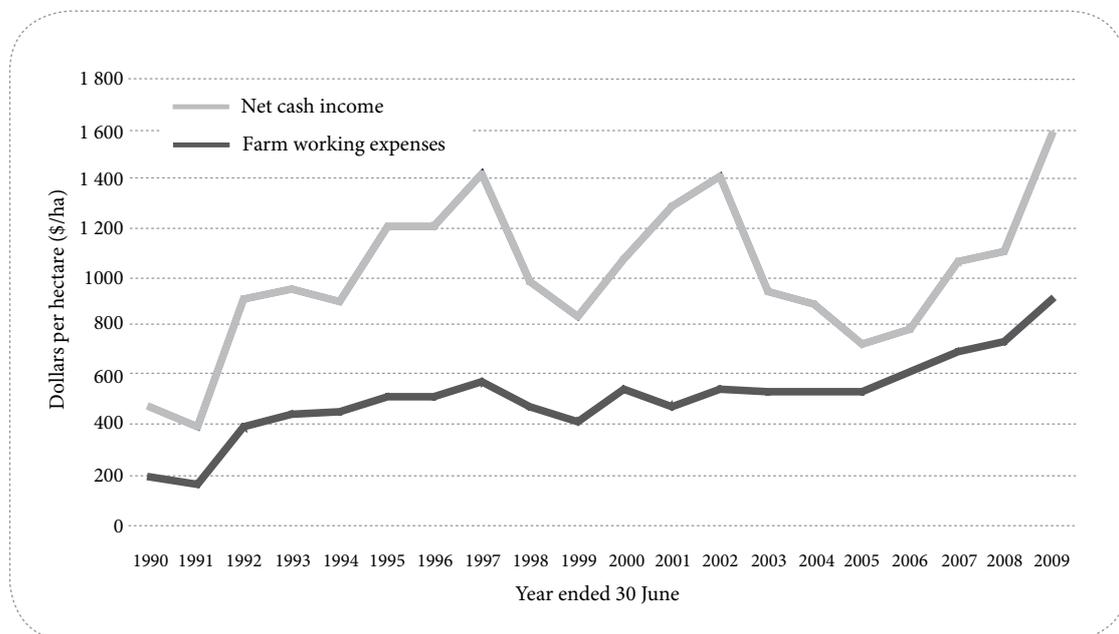
A constant theme that resonates with more than just the deer farmer is the increasing farm working expenditure. Following the trend of the past few years, farm working expenses rose in 2008/09. In part, this was due to the drought, which increased expenditure on feed and animal health. However, it also reflects farmers reinvesting in their business. Expenditure increases were noted by both models for weed and pest control and regrassing; both as part of catching up on deferred maintenance from previous seasons and due to improved venison prices making investment in better quality pastures worthwhile.

## ANOTHER GOOD YEAR EXPECTED

The dramatic fall in the venison price in 2002 seems to have provided a silver lining, galvanising those that remained in the industry to build a profitable, less volatile sector. However, if it is the people that make the industry a success, then the relative lack of interest by younger farmers in deer is of concern. The next few years are critical for the deer industry to prove that deer is an attractive and viable farming option.

Going into 2009/10, good deer pregnancy rates have been reported – a good sign for the season. Deer farmers were hopeful of better velvet returns and venison prices remaining firm or even increasing slightly in 2009/10. Although net cash income is expected to be down slightly in 2009/10 on the North Island deer farm model as herds are rebuilt following consecutive droughts, farm profit before tax is expected to increase by over 90 percent to \$78 700. On the South Island deer model, farm profit before tax is budgeted to increase by a third to \$107 900. Table 7.1 compares the two models on a range of parameters.

»» FIGURE 7.2: NORTH ISLAND DEER FARM MODEL REVENUE VERSUS EXPENDITURE, 1990–2009



»» TABLE 7.1: COMPARISON OF DEER MODEL FARM RESULTS, 2008/09 AND 2009/10 BUDGET

	NORTH ISLAND	SOUTH ISLAND
Effective area (hectares)	140	201
Deer stock units (at 1 July 2008)	2 198	2 748
<b>FARM PROFIT BEFORE TAX (\$)</b>		
2008/09	41 006	81 335
2009/10 budget	78 671	107 926
<b>2008/09 (\$ PER STOCK UNIT)</b>		
Cash operating surplus <sup>1</sup>	42.32	50.48
Farm profit before tax	18.66	29.60
Farm surplus for reinvestment <sup>2</sup>	14.52	9.01
<b>2009/10 BUDGET (\$ PER STOCK UNIT)</b>		
Cash operating surplus <sup>1</sup>	37.84	56.83
Farm profit before tax	38.31	39.04
Farm surplus for reinvestment <sup>2</sup>	1.54	13.53
<b>RATIOS 2008/09 (%)</b>		
Equity ratio <sup>3</sup>	93	89
Return on equity <sup>4</sup>	1.5	0.1
Return on assets <sup>5</sup>	2.0	1.0

**Notes**

1 Net cash income less farm working expenses.

2 Farm surplus for reinvestment represents the cash available from the farming business, after meeting living costs, which is available for investment on farm or for principal repayments. It is calculated as discretionary cash less off-farm income and drawings.

3 Ratio of farm assets less debt (equity) to farm assets.

4 Economic farm surplus less interest and lease as a percentage of equity.

5 Economic farm surplus divided by total assets.

# DEER INDUSTRY ISSUES AND DEVELOPMENTS

# 8

## FARMER RESPONSE TO THE VENISON SCHEDULE INCREASE

A higher, steadier venison schedule boosted deer farmers' profits in 2008/09. Deer farmers responded by retaining more rising two-year-old breeding hinds, rebuilding their venison production focus on-farm. However, the shift towards venison production was largely at the expense of the smaller operators' velveted herds. Uncertain velvet returns due to variability in pricing year-to-year, and grading, has contributed to this shift with these farmers deciding not to replace their velveted stags this season and instead building a larger venison herd.

## LOWER MARGINS FOR FINISHING FARMERS

Although most deer farmers were happy with the prices received in 2008/09, the demand for weaners pushed up their purchase price. This will negatively affect deer finishing farmers. Weaners purchased in 2008/09 at \$5 to \$6 per kilogram liveweight will produce margins lower than those that purchased in 2007/08, as similar or slightly lower returns are expected for venison in 2009/10.

## LONG-TERM PROSPECTS FOR THE INDUSTRY

### CONSTRAINTS ON GROWTH

Over recent years, the New Zealand deer industry has shrunk and there is some concern from industry commentators that the industry's profitability and ability to meet market demands will be constrained by the lack of breeding hinds and the reduced supply of weaners for finishing. Almost one-third fewer breeding hinds are on farms today than in 2001/02 – the year deer numbers peaked. This lack of breeding hinds was noticeable this 2008/09 season with the number of weaner deer for sale being reported as well down despite buoyant prices. Deer's lower calving percentages, averaging around 80 percent, will also constrain how quickly this industry can rebuild capital stock. Stock shortages are expected to remain for the next two years.

### PRODUCTION GAINS

When prices are good farmers can easily rationalise the extra effort to make gains in production. Boosting deer production through calving twins was a question raised at the 2009 North Island deer industry farm monitoring meeting. The question received a mixed response from attendees. Some felt twins were an effective way to boost production and something the industry should consider in the long-term, whereas others noted calvers of twins are often culled as all you get is two calves for the same weight as one. Improving calving percentages especially in young hinds remains a key opportunity for improving productivity. Better weight gains from weaning and earlier calving were also considered important areas of production gain for the future. On-farm productivity is included in the *Venison Industry Strategic Intent* for 2009–2014 and is a focus of deer research programmes.



## **BREEDING AND GENETIC IMPROVEMENT**

The use of artificial insemination in the deer industry is steady but is still at relatively low levels compared with the dairy sector. There is some debate amongst industry players about the level of gains over and above normal stag mating when cost is considered. Most deer farmers seek quality genetics to establish high weaner growth rates to ensure killing at the peak of the venison schedule can be achieved.

## **VENISON PRICES**

The venison schedule in 2009/10 is expected to be slightly down on 2008/09, remaining below \$9 per kilogram. A sharper drop in the schedule is also expected during December 2009 due to a tail off in the restaurant trade in the main markets, which have been affected by the recession, and wholesalers continuing to maintain low inventories due to the reduced availability of credit.

Continuing uncertainty in the world markets is causing difficulties in predicting prices. The exchange rate between the New Zealand dollar and the Euro also plays a significant part in deer returns received. Deer Industry New Zealand estimates that every 1 percent increase in the New Zealand dollar can remove up to 10 to 15 cents off the venison schedule received.

## **VELVET PRICES**

In 2008/09, 350 tonnes of velvet was exported and reports for the coming velvet season are that production will be back on 2008/09. There has been a lot of publicity about a new velvet marketing structure announced in August 2009. The new company will be called the New Zealand Velvet Marketing Company Ltd (NZVM) consisting of four equal shareholdings: PGG Wrightson, Tasman Velvet Producers, Veleco Co-operative Group Ltd and a new co-operative known as Velvet Suppliers Co-operative. NZVM will allow velvet farmers to have partial ownership in a marketing structure selling the vast majority of New Zealand's velvet crop. This coordinated approach is expected to help stabilise and boost velvet returns in the future. A recovering Korean economy and lower volumes are also expected to push the velvet price up in 2009/10.

## **CHANGING LAND USE**

It has been noticeable over the previous years that deer farming is moving off the plains and back into the hills. Dairy expansion has seen a lot of flat farms converted to dairy or dairy support which has taken out a lot of finishing land for deer. This will reduce the number of weaners available to be killed early in the season (October). Hill country properties are now trending towards retaining weaners and getting better at finishing stock themselves.

## **COMPLIANCE COSTS**

Compliance costs are an issue raised every year at deer monitoring meetings. At this year's farm monitoring meeting, deer farmers voiced their concern over the potential compliance costs involved with the proposed NAIT system and the ETS.



### ENVIRONMENTAL ISSUES

Environmental issues are still a focus, but are not receiving the same publicity and discussion as previous years. Farmers attending the South Island deer industry meeting felt most deer farmers have made the appropriate changes (fencing, waterways etc) in recent years. This is partly due to many deer farmers being aware of their environmentally savvy European market.

### IMPACT OF INTERNATIONAL CREDIT CRISIS

Farmers and bank representatives attending farm monitoring meetings noted that accessing finance is difficult for those who need extra cash. However, with the average age of the New Zealand deer farmer in their 50s, most have good equity in their farm business and have the ability to ride out the current economic downturn. This has been made easier due to the good returns received for venison in 2008/09.

Initially, New Zealand venison buffered the world recession well with exported frozen venison demand holding steady. This was mainly due to the falling supplies of New Zealand venison and gains made in recent years in diversifying customers. However, as “recession guilt” (as described by Deer Industry New Zealand) has taken hold, consumers in New Zealand’s main venison market, Germany, are spending less on restaurant meals and expensive proteins.

Trophy farms, although not monitored by MAF’s farm monitoring programme, have also reported feeling the pinch of a struggling American economy, which they rely on. Long-time trophy stag buyers reported selling half the number they sold during the 2007/08 season, despite the price paid being 30 percent less than the 10-year average.

The contraction of the Korean economy, due to the credit crisis, was also one explanation for the poor velvet returns received in 2008/09.

# SHEEP AND BEEF

## SECTOR OVERVIEW

### PRICES IMPROVED BUT DROUGHT EFFECTS LIMIT GAINS

In 2008/09, much improved sheep and beef prices and the effects of drought determined sheep and beef farm profitability. Prices for lamb, sheep and cattle improved dramatically and lifted net cash income and profitability in all of the sheep and beef models. However, drought during 2008/09 and the carryover effects of the 2007/08 drought reduced production and dragged down what could have been a very good year.

Typically lamb prices lifted by \$30 to average \$81 in 2008/09. Reduced sheep numbers and lambing percentages in 2008/09, following drought and movement away from sheep farming in many regions in 2007/08, led to strong demand for prime and store lambs throughout the year. This was particularly noticeable late in the season when tail-end lambs fetched as much as prime lambs had in the spring.

Prices for all classes of cattle also increased with strong demand for store stock throughout the year and for prime cattle, particularly early in the season.

On the national sheep and beef farm model, sheep income increased 36 percent to \$192 200 in 2008/09 and cattle income increased 5 percent to \$135 800. The relative increase in income was not as great as the lift in prices as many farmers had a carryover effect from the drought in 2007/08 and had lower stock numbers and lower performance particularly lambing percentages. In addition, in 2008/09 drought again struck the east coast of the North Island, North Canterbury and parts of central North Island and further reduced output.

Wool, unfortunately, fell a further 6 cents per kilogram in 2008/09 which, combined with a slight drop in volume, gave a 10 percent reduction in wool income to \$33 500 on the national sheep and beef model. Some farmers chose to carry some wool over rather than sell it at low prices. Wool now accounts for only 10 percent of net cash income following a long-term decline in wool prices.

### EXPENDITURE RESTRAINED BUT HIGHER PRICES INCREASE COSTS

At a national level, farm working expenses in 2008/09 were very similar to 2007/08. Where farmers' income was affected by drought they reduced spending by about 6 percent, but in other regions spending increased by a similar amount giving very little change in the national model. Farmers started the year restraining spending but inflation in many costs made this difficult.

Animal health and shearing expenses were down in total with lower stock numbers, but increased on a per stock unit basis. Farmers changed their management to reduce shearing costs by selling more sheep unshorn, increasing the interval between shearing and, in some cases, doing some shearing or crutching themselves. Feed costs increased slightly with increases in contracting costs as well as more feed required in drought areas and in areas rebuilding feed reserves after the 2007/08 drought. Areas not affected by drought were able to reduce feed costs somewhat.

Fertiliser spending fell 9 percent despite large increases in fertiliser prices during the season. Most farmers reduced the



volume of fertiliser applied to well below maintenance levels. It was common for farmers to increase lime applications as they thought this would help with the availability of the nutrients already in the soil and partially offset the reduction in fertiliser applications. Many were able to avoid the highest fertiliser prices during the season by buying early or deferring spending until very late in the season.

Repairs and maintenance expenditure has increased \$1200 to \$17 400 as farmers undertook more maintenance work once the lift in income became apparent.

While there has been a substantial drop in the Official Cash Rate this has not fed through into interest costs on farms, with interest rates typically only 0.5 to 1 percent lower than the previous year. Most farms have fixed term loans and only a proportion are renewed each year with most choosing not to break existing term loans. Following cash deficits on many farms in 2007/08 average borrowings increased \$47 600 with the result that interest expenses have fallen only 1 percent on the national model.

#### **FARM PROFIT INCREASES TEN FOLD**

With the net cash income on the national sheep and beef farm model increasing 19 percent to \$327 500 and expenditure being held almost constant, the cash operating surplus increased 54 percent in 2008/09, to \$148 100. Farm profit before tax increased from \$6100 to \$62 400 in 2008/09.

Personal drawings have increased 1 percent with farmers reporting increasing costs in many aspects of rural living. Spending on capital items and development increased 17 percent as farmers took advantage of their improved income.

#### **PRICES EXPECTED TO FALL IN 2009/10**

The outlook for 2009/10 is much less optimistic with prices for lamb, sheep, cattle and wool predicted to fall because of the combined effects of the higher exchange rate for the New Zealand dollar and, for some commodities, reduced market demand because of the international credit crisis and recession.

Net cash income on the national sheep and beef model is predicted to fall 12 percent to \$287 300 despite output being expected to lift with a return to more normal lambing percentages and trading cattle numbers. The model budgets were prepared in August 2009 and since then the New Zealand dollar has strengthened against other currencies. This may lead to lower farm gate prices than used in preparing the model budgets.

#### **FARMERS LIKELY TO HOLD EXPENDITURE BY REDUCING INPUTS**

Farmers are expected to hold farm working expenses at similar levels to 2008/09 but with inflation in many operating costs they will achieve this by reducing some key items of expenditure.

Fertiliser expenditure is expected to rise 5 percent. The tonnage of fertiliser applied will increase somewhat but will still be below what industry commentators consider to be normal maintenance. Fertiliser prices have declined from the high levels of 2008/09 and this partially offsets the increased tonnage. Some of the increase in tonnage is being driven by the realisation by farmers that production will suffer if they do not lift fertiliser applications; but they are still being very targeted in their approach and seeking best value for money. Many are also expected to defer fertiliser application until income levels for the year are known.

Feed costs are expected to fall slightly without the extra costs associated with drought in the previous year. Some farmers are expected to use lower cost feed options such as silage rather than baleage as a way of reducing expenditure.

Repairs and maintenance expenditure is expected to fall 3 percent to \$16 900 as a result of cutbacks in activity. Many overhead expenses are expected to increase 2 to 3 percent.

Interest expenditure is expected to fall 8 percent with the interest rates paid by farmers on term and current account finance expected to fall further and with many farmers having a lower debt level following 2008/09 cash surpluses.

Drawings are expected to continue increasing but capital and development spending is expected to be restrained with 20 percent reductions predicted.

### **FARM PROFIT EXPECTED TO FALL BY ONE-QUARTER**

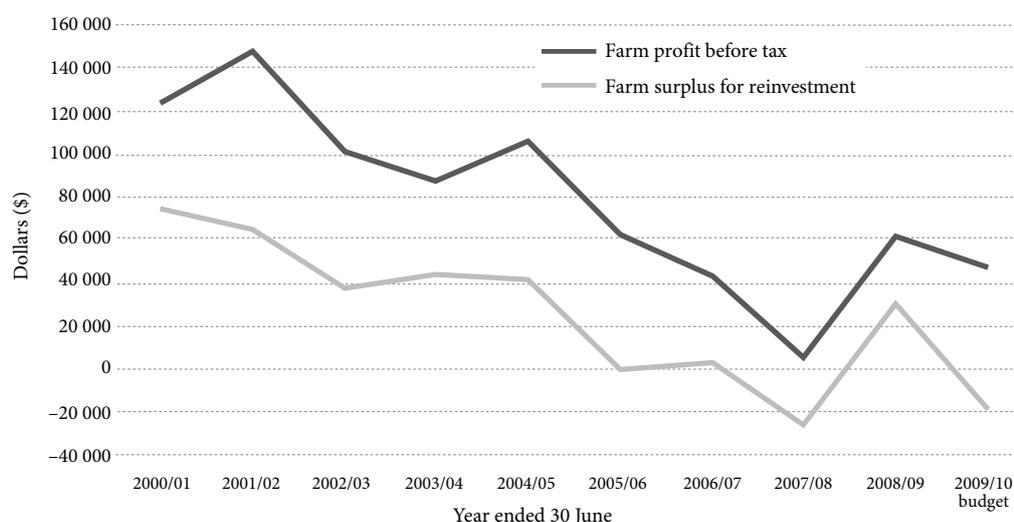
The restraint on spending is unlikely to offset the drop in income resulting from lower prices and consequently farm profit before tax is expected to fall 23 percent to \$47 800 on the national sheep and beef model. Overall, sheep and beef farmers are predicted to make an average cash loss of \$18 000 for the 2009/10 year. This will be challenging for many as financiers have already indicated they will be taking a more stringent approach to refinancing overdraft debt in the coming year and will be requiring farmers to demonstrate a return to profitability.

Figure 9.1 shows the difficult situation that sheep and beef farmers have been facing since 2000 with declining profitability in most years due either to impacts of price and exchange rates or drought.

There have been very few sales of sheep and beef farms during 2008/09 and this has made land price movement estimations very difficult. However, industry commentators in many regions assess prices as having fallen between 15 and 20 percent and this is reflected in an 11 percent decline in the 2009/10 opening value of land and buildings on the national sheep and beef farm model.

Two tables comparing the regional models on a range of parameters follow. Table 9.1 compares the intensive or smaller trading and finishing sheep and beef farm models while Table 9.2 compares the extensive or larger and mostly breeding sheep and beef farm models. Three of the intensive models were expecting falls in farm profit before tax by around one-quarter with more significant decreases expected in the Western lower North Island and Canterbury/Marlborough models. Similarly three of the extensive models were expecting falls in farm profit before tax of around 20 percent with larger drops facing the South Island high country and Canterbury/Marlborough hill country models.

»» FIGURE 9.1: NATIONAL SHEEP AND BEEF MODEL TRENDS IN PROFIT AND FARM SURPLUS FOR REINVESTMENT



»» TABLE 9.1: COMPARISON OF INTENSIVE SHEEP AND BEEF MODEL FARM RESULTS, 2008/09 AND 2009/10 BUDGET

	NORTHLAND	WAIKATO BAY OF PLENTY	EASTERN LOWER NORTH ISLAND	WESTERN LOWER NORTH ISLAND	CANTERBURY MARLBOROUGH	SOUTHLAND SOUTH OTAGO
Effective area (hectares)	314	300	347	220	369	194
Stock units (at 1 July 2008)	3 220	3 064	3 402	2 261	2 957	2 262
Sheep to cattle ratio (at 1 July 2008)	23:77	48:52	59:41	61:39	68:32	96:04
Lambing percentage (2008/09)	117	111	116	118	122	131
<b>FARM PROFIT BEFORE TAX (\$)</b>						
2008/09	40 355	66 526	60 313	47 811	29 086	58 083
2009/10 budget	39 703	49 924	44 191	20 939	10 373	43 950
<b>2008/09 (\$ PER KILOGRAM OF MILKSOLIDS)</b>						
Cash operating surplus <sup>1</sup>	36.02	43.01	54.35	40.03	34.60	50.79
Farm profit before tax	12.53	21.71	17.73	21.14	9.84	25.68
Farm surplus for reinvestment <sup>2</sup>	9.04	1.36	18.23	9.3	-0.38	6.87
<b>2009/10 BUDGET (\$ PER KILOGRAM OF MILKSOLIDS)</b>						
Cash operating surplus <sup>1</sup>	27.59	34.29	32.77	23.8	28.33	36.54
Farm profit before tax	12.95	16.51	14.53	9.20	3.54	19.44
Farm surplus for reinvestment <sup>2</sup>	-0.01	-5.44	-13.09	-12.82	-8.01	-10.52
<b>2008/09 ECONOMIC FARM SURPLUS (\$)</b>						
Per hectare	14	127	135	3	6	161
Per stock unit	1.35	12.40	13.81	0.29	0.73	13.8
<b>RATIOS 2008/09 (%)</b>						
Equity ratio <sup>3</sup>	91	90	87	93	91	90
Return on equity <sup>4</sup>	-0.8	-0.2	-0.3	-0.6	-0.9	-0.3
Return on assets <sup>5</sup>	0.1	0.8	0.8	0.0	0.0	0.8

**Notes**

1 Net cash income less farm working expenses.

2 Farm surplus for reinvestment represents the cash available from the farming business, after meeting living costs, which is available for investment on farm or for principal repayments. It is calculated as discretionary cash less off-farm income and drawings.

3 Ratio of farm assets less debt (equity) to farm assets.

4 Economic farm surplus less interest and lease as a percentage of equity.

5 Economic farm surplus divided by total assets.

»» TABLE 9.2: COMPARISON OF EXTENSIVE SHEEP AND BEEF MODEL FARM RESULTS, 2008/09 AND 2009/10 BUDGET

	CENTRAL NORTH ISLAND	GISBORNE	HAWKES BAY WAIRARAPA	SOUTH ISLAND HIGH COUNTRY	CANTERBURY MARLBOROUGH	OTAGO DRY HILL	SOUTHLAND SOUTH OTAGO
Effective area (hectares)	635	821	624	10 212	1 397	2 000	723
Stock units (at 1 July 2008)	4 931	7 233	5 401	10 540	5 468	5 741	5 603
Sheep to cattle ratio (at 1 July 2008)	62:38	55:45	71:29	78:22	61:39	85:15	83:17
Lambing percentage (2008/09)	107	115	111	89	111	117	126
<b>FARM PROFIT BEFORE TAX (\$)</b>							
2008/09	49 045	122 568	51 451	4 618	46 854	153 389	160 730
2009/10 budget	38 371	97 667	50 319	-33 467	20 537	126 775	143 266
<b>2008/09 (\$ PER STOCK UNIT)</b>							
Cash operating surplus <sup>1</sup>	26.79	37.99	35.18	13.27	25.43	34.87	40.66
Farm profit before tax	9.95	16.95	9.53	0.44	8.57	26.72	28.69
Farm surplus for reinvestment <sup>2</sup>	-0.22	16.89	12.14	-4.28	6.50	12.80	16.16
<b>2009/10 BUDGET (\$ PER STOCK UNIT)</b>							
Cash operating surplus <sup>1</sup>	21.23	22.72	23.02	11.67	16.56	29.33	36.23
Farm profit before tax	7.78	14.73	10.06	-3.1	3.89	20.95	25.10
Farm surplus for reinvestment <sup>2</sup>	-5.11	-1.41	-3.58	-6.72	-4.14	1.43	5.48
<b>2008/09 ECONOMIC FARM SURPLUS (\$)</b>							
Per hectare	63	141	76	4	15	67	191
Per stock unit	8.15	16.01	8.79	4.07	3.86	23.35	24.67
<b>RATIOS 2008/09 (%)</b>							
Equity ratio <sup>3</sup>	85	89	85	91	90	83	89
Return on equity <sup>4</sup>	-0.7	0.9	-0.6	-0.7	-0.6	2.2	1.6
Return on assets <sup>5</sup>	0.9	1.9	1.0	0.4	0.4	3.1	2.3

**Notes**

1 Net cash income less farm working expenses.

2 Farm surplus for reinvestment represents the cash available from the farming business, after meeting living costs, which is available for investment on-farm or for principal repayments. It is calculated as discretionary cash less off-farm income and drawings.

3 Ratio of farm assets less debt (equity) to farm assets.

4 Economic farm surplus less interest and lease as a percentage of equity.

5 Economic farm surplus divided by total assets.

# SHEEP AND BEEF ISSUES AND DEVELOPMENTS

# 10

## LOWER AVERAGE STOCKING RATE

At the start of the 2009/10 season, the average stocking rate is almost one stock unit per hectare lower than two years previously. Drought has forced farmers in many parts of the country to destock and many have decided to keep a lower stocking rate in order to have more flexibility in their farm system. They anticipate using any surplus feed to produce heavier carcass weight lambs and cattle, and to sell feed or trade more stock. It will be a challenge to utilise surplus feed at a profit as options for selling feed to the dairy industry have reduced and with lower sheep numbers a shortage of store stock may reduce trading margins.



## DROUGHT PREPARATION

Apart from lower stocking rates, farmers in drought-affected areas are implementing other drought management techniques. These include ensuring hay barns and silage pits are full, better supplementary feeding equipment, alternative fodder crops and, where possible, some irrigation.

## BIG LAMBS NOT WANTED

While farmers may be intending to produce heavier carcass weight lambs, industry commentators observe that big lambs heavier than 19 kilograms are not wanted in the market, due to low demand from the European Union. Consequently, there are limitations to increasing production through increased carcass weight, even though a number of farmers are looking to reduce work by running fewer breeding ewes, and taking lambs to heavier weights. If farmers want to produce lambs closer to the 19-kilogram target then it will involve additional drafting to select lambs into the narrower weight range.



## CHANGE IN LABOUR SUPPLY

Farmers have noticed an increase in the number of applicants applying for advertised jobs. This improvement is considered to be on the back of diminishing labour requirements in the dairy industry. This is a welcome change for sheep and beef farm owners as advertising costs are reducing and the quality of staff available is increasing.

## CONCERN ABOUT SUPPLY OF DAIRY BEEF CALVES

Beef finishing farmers are concerned that there are insufficient dairy beef calves being bred or reared. As the dairy industry moves to crossbred cows, the supply of Friesian calves is reducing. Meanwhile, fewer dairy farmers are using beef bulls over their later calving cows. Even where beef bulls are used the calves are often late and fail to meet liveweight targets and are therefore unattractive to the calf-rearers. In addition calf-rearers are finding their profit margins squeezed and are rearing fewer calves.

## LARGER TAX PAYMENTS DUE IN 2009/10

Farmers and their accountants are aware that following last year's improved profits larger tax payments may be due in 2009/10. Farmers need to plan to manage their tax liability through careful

forecasting, timing of deductible expenditure and other income smoothing mechanisms.

### **PASTURE CONDITION POOR AFTER DROUGHTS**

Pastures on many farms have not recovered from consecutive droughts and this may affect stocking rates for some time. Pastures in some areas such as Hawkes Bay and Wairarapa have had pasture pest problems as well, with increased incidence of porina and crickets. In the Waikato/Bay of Plenty black beetle affected many pastures.

### **MEAT INDUSTRY RESTRUCTURING**

A change in capital structure by Silver Fern Farms (SFF) has the potential to increase the capital expenditure on their shareholder's properties as they take up all or part of their share entitlements over the next three years. This will be related to the proportion of stock that the property sells as prime stock. Some farmers may have to make a trade off between buying shares in SFF and reducing debt levels.

### **MAIZE AREA INCREASED IN 2008/09 BUT PRICES FELL**

The area of maize silage in the Waikato/Bay of Plenty region increased significantly in 2008/09 with many crops not under contract. However, prices fell from contracted levels of 30 cents per kilogram dry matter to spot prices as low as 14 cents per kilogram dry matter. Industry commentators are concerned that there will be insufficient maize available in 2009/10 although demand from the dairy industry is expected to stay low. Demand and prices for store cattle may increase as farmers seek a profitable use of the land that would have been used for maize.

### **MEAT AND WOOL NEW ZEALAND REFERENDUM**

The Commodity Levies Act requires Meat & Wool New Zealand to seek renewed support from farmers every five years. A referendum was undertaken in 2009 and sheep and beef farmers voted to continue their investment in sheepmeat and beef activities through Meat & Wool New Zealand, but they have not supported the continuation of a wool or goatmeat levy.

The lack of support for the wool levy removes funded activities of \$6.4 million from the projected \$30 million income in the 2010/11 year. Additionally, there is the loss of approximately \$5 million that is leveraged from other funding sources for these activities. The goatmeat slaughter levy would have provided \$58 000 and the removal of both levies will require a restructure of Meat & Wool New Zealand.

The current levy orders for sheepmeat, beef, goatmeat and wool are in place until April 2010.

# NATIONAL SHEEP AND BEEF MODEL

# 11

The national sheep and beef budget depicted below has been constructed via a weighted average of the MAF sheep and beef farm monitoring models. The weighting is based on the number of farms each model represents. The weightings, on the model basis, are as follows:

- › Canterbury/Marlborough hill country 4 percent
- › Canterbury/Marlborough breeding and finishing 13 percent
- › Hawkes Bay/Wairarapa hill country 10 percent
- › Central North Island hill country 18 percent
- › Gisborne hill country 5 percent
- › Eastern lower North Island 7 percent
- › Western lower North Island 3 percent
- › Northland 8 percent
- › Otago dry hill 3 percent
- › South Island high country 2 percent
- › Southland/South Otago intensive 13 percent
- › Southland/South Otago hill country 6 percent
- › Waikato/Bay of Plenty intensive 8 percent



»» TABLE 11.1: KEY PARAMETERS, FINANCIAL RESULTS AND BUDGET FOR THE NATIONAL SHEEP AND BEEF FARM MODEL

YEAR ENDED 30 JUNE	2005/06	2006/07	2007/08 <sup>R</sup>	2008/09	2009/10 BUDGET
Effective area (ha)	673	708	706	716	716
Opening total stock units (su)	5 073	4 588	4 404	4 185	4 087
Stocking rate (su/ha)	7.5	6.5	6.2	5.8	5.7
Ewe lambing (%)	126	126	116	116	124
Average lamb price (\$/head)	52.82	50.55	51.51	82.08	74.98
Average wool price (\$/kg)	2.55	2.48	2.44	2.38	2.12
Total wool produced (kg)	16 075	15 923	14 311	13 263	13 798
Sheep income (\$)	190 748	154 314	141 523	192 214	177 276
Wool income (\$)	46 780	42 461	37 419	33 531	31 079
Cattle income (\$)	145 082	131 256	129 058	135 801	114 242
Net cash income (NCI) (\$)	320 766	293 543	274 973	327 481	287 308
Farm working expenses (FWE) (\$)	200 551	172 783	178 716	179 412	180 391
Cash operating surplus (\$)	120 215	120 760	96 258	148 069	106 918
Farm profit before tax (\$)	62 535	43 849	6 096	62 357	47 799
Discretionary cash (\$)	54 483	79 076	46 741	104 012	57 276
Farm surplus for reinvestment (\$) <sup>1</sup>	17	3 158	-25 571	30 442	-17 972
EFS <sup>2</sup> /ha (\$)	64	27	-20	65	33
EFS/su (\$)	8.49	4.11	-3.13	11.09	5.71
FWE/NCI (%)	63	59	65	55	63
EFS/Total farm assets (%)	1.1	0.5	-0.3	0.9	0.5

**Notes**

1 Farm surplus for reinvestment represents the cash available from the farming business, after meeting living costs, which is available for investment on-farm or for principal repayments. It is calculated as discretionary cash less off-farm income and drawings.

2 Economic farm surplus.

**Symbol**

R The model parameters have been revised so the data for 2007/08 will not match that published in the *Pastoral Monitoring Report 2008*.

»» TABLE 11.2: NATIONAL SHEEP AND BEEF FARM MODEL BUDGET

	2008/09			2009/10 BUDGET			CHANGE BETWEEN 2008/09 AND 2009/10 (%)
	WHOLE FARM (\$)	PER HECTARE (\$)	PER STOCK UNIT <sup>1</sup> (\$)	WHOLE FARM (\$)	PER HECTARE (\$)	PER STOCK UNIT <sup>1</sup> (\$)	
<b>REVENUE</b>							
Sheep	192 214	269	70.15	177 276	248	66.07	-8
Wool	33 531	47	23.36	31 079	43	11.58	-7
Cattle	135 801	190	94.60	114 242	160	81.96	-16
Grazing income (including hay and silage sales)	8 731	12	2.09	8 826	12	2.16	1
Other farm income	9 151	13	2.19	8 630	12	2.11	-6
<b>LESS:</b>							
Sheep purchases	10 610	15	3.87	11 822	17	2.89	11
Cattle purchases	41 337	58	28.80	40 923	57	10.01	-1
<b>Net cash income</b>	<b>327 481</b>	<b>458</b>	<b>4.37</b>	<b>287 308</b>	<b>401</b>	<b>70.29</b>	<b>-12</b>
<b>Farm working expenses</b>	<b>179 412</b>	<b>251</b>	<b>42.87</b>	<b>180 391</b>	<b>252</b>	<b>44.14</b>	<b>1</b>
<b>Cash operating surplus</b>	<b>148 069</b>	<b>207</b>	<b>35.38</b>	<b>106 918</b>	<b>149</b>	<b>26.16</b>	<b>-28</b>
Interest	48 632	68	11.62	44 759	63	10.95	-8
Rent and/or leases	5 849	8	1.40	5 799	8	1.42	-1
Stock value adjustment	-6 786	-9	-1.62	11 216	16	2.74	-265
Minus depreciation	19 873	28	4.75	19 777	28	4.84	0
<b>Farm profit before tax</b>	<b>62 357</b>	<b>87</b>	<b>14.90</b>	<b>47 799</b>	<b>67</b>	<b>11.69</b>	<b>-23</b>
Taxation	2 202	3	0.53	12 198	17	2.98	454
<b>Farm profit after tax</b>	<b>60 155</b>	<b>84</b>	<b>14.37</b>	<b>35 600</b>	<b>50</b>	<b>8.71</b>	<b>-41</b>
<b>ALLOCATION OF FUNDS</b>							
Add back depreciation	19 873	28	4.75	19 777	28	4.84	0
Reverse stock value adjustment	11 359	16	2.71	-11 216	-16	-2.74	-199
Income equalisation	0	0	0.00	0	0	0.00	0
Off-farm income	11 586	16	2.77	13 115	18	3.21	13
<b>Discretionary cash</b>	<b>104 012</b>	<b>145</b>	<b>24.85</b>	<b>57 276</b>	<b>80</b>	<b>14.01</b>	<b>-45</b>
<b>APPLIED TO:</b>							
Net capital purchases	20 148	28	4.81	17 334	24	4.24	-14
Development	4 934	7	1.18	3 648	5	0.89	-26
Principal repayments	2 090	3	0.50	662	1	0.16	-68
Drawings	60 944	85	14.56	62 134	87	15.20	2
New borrowings	5 035	7	1.20	10 430	15	2.55	107
Introduced funds	1 270	2	0.30	1 232	2	0.30	-3
<b>Cash surplus/deficit</b>	<b>22 201</b>	<b>31</b>	<b>5.30</b>	<b>-14 840</b>	<b>-21</b>	<b>-3.63</b>	<b>-167</b>
<b>Farm surplus for reinvestment<sup>2</sup></b>	<b>30 442</b>	<b>43</b>	<b>7.27</b>	<b>-17 972</b>	<b>-25</b>	<b>-4.40</b>	<b>-159</b>
<b>ASSETS AND LIABILITIES</b>							
Farm, forest and building (opening)	4 398 307	6 146	1 050.98	3 917 233	5 474	958.41	-11
Plant and machinery (opening)	92 279	129	22.05	98 106	137	24.00	6
Stock valuation (opening)	484 303	677	115.72	472 952	661	115.72	-2
Other produce on hand (opening)	1 802	3	0.43	2 502	3	0.61	39
<b>Total farm assets (opening)</b>	<b>4 976 692</b>	<b>6 954</b>	<b>1 189.18</b>	<b>4 490 793</b>	<b>6 275</b>	<b>1 098.74</b>	<b>-10</b>
<b>Total assets (opening)</b>	<b>5 143 737</b>	<b>7 188</b>	<b>1 229.10</b>	<b>4 642 627</b>	<b>6 487</b>	<b>1 135.89</b>	<b>-10</b>
Total liabilities (opening)	565 801	791	135.20	565 025	790	138.24	0
<b>Total equity (farm assets–liabilities)</b>	<b>4 410 891</b>	<b>6 163</b>	<b>1 053.98</b>	<b>3 925 767</b>	<b>5 486</b>	<b>960.50</b>	<b>-11</b>

**Notes**

1 Sheep stock units are used in the per stock calculation for sheep and wool income and sheep purchases. Cattle stock units are used for cattle income and purchases. The remainder of the time total stock units are used.

2 Farm surplus for reinvestment represents the cash available from the farming business, after meeting living costs, which is available for investment on-farm or for principal repayments. It is calculated as discretionary cash less off-farm income.

**Symbol**

... Not applicable.

»» TABLE 11.3: NATIONAL SHEEP AND BEEF FARM MODEL EXPENDITURE

	2008/09			2009/10 BUDGET			CHANGE BETWEEN 2008/09 AND 2009/10 (%)
	WHOLE FARM (\$)	PER HECTARE (\$)	PER STOCK UNIT <sup>1</sup> (\$)	WHOLE FARM (\$)	PER HECTARE (\$)	PER STOCK UNIT <sup>1</sup> (\$)	
<b>FARM WORKING EXPENSES</b>							
Permanent wages	8 480	12	2.03	8 544	12	2.09	1
Casual wages	8 679	12	2.07	8 648	12	2.12	0
ACC	558	1	0.13	581	1	0.14	4
<b>Total labour expenses</b>	<b>17 717</b>	<b>25</b>	<b>4.23</b>	<b>17 773</b>	<b>25</b>	<b>4.35</b>	<b>0</b>
Animal health	13 877	19	3.32	14 007	20	3.43	1
Breeding	694	1	0.17	669	1	0.16	-4
Electricity	3 208	4	0.77	3 388	5	0.83	6
Feed (hay and silage)	9 239	13	2.21	8 757	12	2.14	-5
Feed (feed crops)	1 523	2	0.36	1 517	2	0.37	0
Feed (grazing)	949	1	0.23	635	1	0.16	-33
Feed (other)	632	1	0.15	532	1	0.13	-16
Fertiliser	29 593	41	7.07	30 924	43	7.57	4
Lime	3 639	5	0.87	3 509	5	0.86	-4
Cash crop expenses	407	1	0.10	325	0	0.08	-20
Freight (not elsewhere deducted)	5 154	7	1.23	5 142	7	1.26	0
Regrassing costs	7 023	10	1.68	6 740	9	1.65	-4
Shearing expenses	16 612	23	6.06	16 978	24	6.33	2
Weed and pest control	5 455	8	1.30	5 421	8	1.33	-1
Fuel	10 294	14	2.46	9 751	14	2.39	-5
Vehicle costs (excluding fuel)	9 083	13	2.17	9 158	13	2.24	1
Repairs and maintenance	17 504	24	4.18	16 897	24	4.13	-3
<b>Total other working expenses</b>	<b>134 885</b>	<b>188</b>	<b>32.23</b>	<b>134 348</b>	<b>188</b>	<b>32.87</b>	<b>0</b>
Communication costs (phone and mail)	2 290	3	0.55	2 329	3	0.57	2
Accountancy	3 493	5	0.83	3 575	5	0.87	2
Legal and consultancy	1 910	3	0.46	1 945	3	0.48	2
Other administration	1 982	3	0.47	2 020	3	0.49	2
Water charges (irrigation)	696	1	0.17	711	1	0.17	2
Rates	9 276	13	2.22	9 720	14	2.38	5
Insurance	4 320	6	1.03	4 435	6	1.09	3
Other expenditure <sup>2</sup>	2 843	4	0.68	3 534	5	0.86	24
<b>Total overhead expenses</b>	<b>26 810</b>	<b>37</b>	<b>6.41</b>	<b>28 270</b>	<b>40</b>	<b>6.92</b>	<b>5</b>
<b>Total farm working expenses</b>	<b>179 412</b>	<b>251</b>	<b>42.87</b>	<b>180 391</b>	<b>252</b>	<b>44.14</b>	<b>1</b>
Wages of management <sup>3</sup>	75 000	105	17.92	75 000	105	18.35	0
Depreciation	19 873	28	4.75	19 777	28	4.84	0
<b>Total farm operating expenses<sup>4</sup></b>	<b>273 017</b>	<b>381</b>	<b>65.24</b>	<b>272 320</b>	<b>381</b>	<b>66.63</b>	<b>0</b>
<b>CALCULATED RATIOS</b>							
Economic farm surplus (EFS <sup>5</sup> )	46 410	65	11.09	23 356	33	5.71	
Farm working expenses/NCI <sup>6</sup>	55%			63%			
EFS/total farm assets	0.9%			0.5%			
EFS less interest and lease/equity	-0.2%			-0.6%			
Interest+rent+lease/NCI	17%			18%			
EFS/NCI	14%			8%			

**Notes**

1 Shearing expenses per stock unit based on sheep stock units.

2 Includes Accident Compensation Corporation (ACC) employer levy.

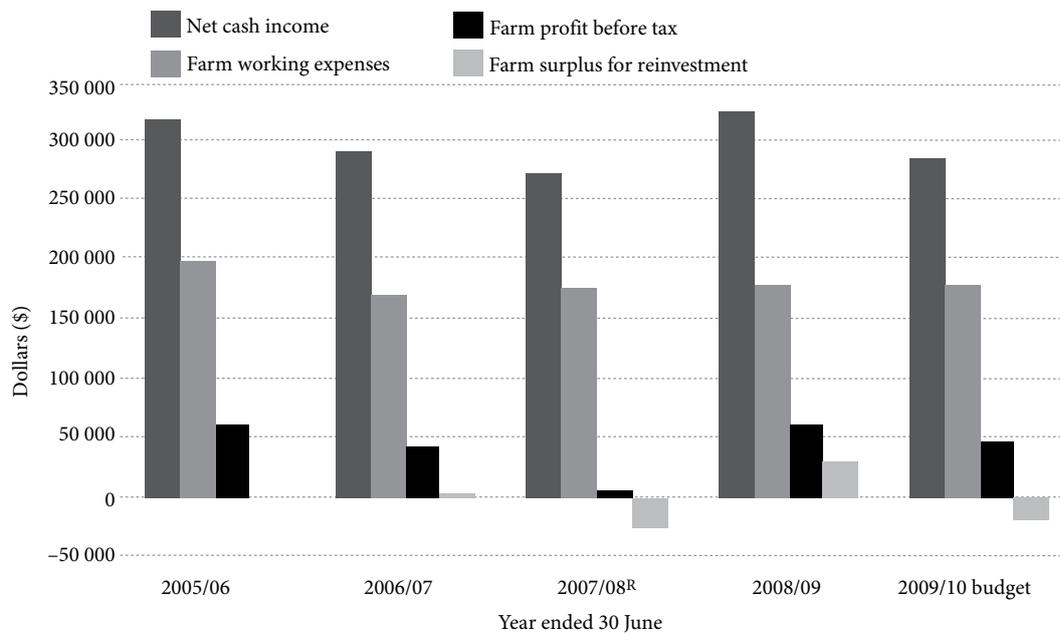
3 Wages of management (WOM) is calculated as follows: \$31 000 allowance for labour input plus 1 percent of opening total farm assets to a maximum of \$75 000. The WOM shown here is based on the national model asset value instead of the weighted average of the all the models WOM's. The values between the two methods differ due to the \$75 000 cap.

4 Total farm operating expenses is not a weighted average of all the models due to the non weighted WOM used.

5 EFS (or earnings before interest and tax) is calculated as follows: net cash income plus change in livestock values less farm working expenses less depreciation less wages of management (WOM). WOM is calculated as follows: \$31 000 allowance for labour input plus 1 percent of opening total farm assets to a maximum of \$75 000.

6 Net cash income.

»» FIGURE 11.1: NATIONAL SHEEP AND BEEF MODEL PROFITABILITY TRENDS



**Symbol**

R The model parameters have been revised so the data for 2007/08 will not match that published in the *Pastoral Monitoring Report 2008*.

# APPENDIX

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