



# Dairy Industry Farm Monitor Project

Annual Report  
2009/10

## Acknowledgments

The cooperation, patience and goodwill of the farmers who willingly supplied their farm information, either for the first time or forth consecutive year, is gratefully acknowledged.

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This report has been produced in conjunction with Dairy Australia.

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## Notes on the presentation of data in this report

This section of the report provides notes and explanations behind some of the calculations used and the reason for the data presented in the way that it is. It briefly discusses the different parts of the report and also lists the number of participant farms from the three dairying regions.

This section is not to be confused with II. Farm Monitor Method which discusses the methodology for the farm data analysis.

This report is presented in the following parts;

- Executive Summary
- Farm Monitor Method
- Statewide overview
- North region overview
- South West region overview
- Gippsland region overview
- Business confidence survey
- Greenhouse report
- Appendices

The report presents visual descriptions of the data for the 2009/10 year. Data is presented for individual farms, regional averages and regional top 25% of farms ranked on earnings before interest and tax per hectare. Reported averages are calculated as the mean. These averages should in no way be considered averages for the population of farms in that region given the small sample size and farms are not randomly selected.

The top 25% of farms are presented as striped bars in the regional overview graphs. Earnings before interest and tax per hectare has been used as the determinate of the top producers due to the subjective nature of asset valuation resulting in return on assets being a less certain figure for identifying top performing farms.

The Q1 - Q3 data range for key indicators is also presented in the tables to give an indication of the variation in the data. The Q1 value is the quartile 1 value. That is, the value of which one quarter (25%) of data in that range is *less* than. The Q3 value is the quartile 3 value. That is, the value of which one quarter (75%) of data in that range is *greater* than. This means that the middle 50% of data sits between the Q1-Q3 data range. Given the differences in variation in the regional data, caution is highly recommended when comparing one region to another.

To reduce wordiness, this report will often refer to the group of participating farms in each region by their regional name;

- The 22 participating farms in the Northern Victoria region are referred to as 'the North'.
- The 25 participating farms in the South Western Victoria region are referred to as 'the South West'.
- The 24 participating farms in the Gippsland region are referred to as 'Gippsland'.

The appendices include detailed data tables, a list of abbreviations and a glossary of terms.

Milk production data is presented in kilograms of milk solids as farms are paid according to milk solids.

The report will focus on measures on a per hectare basis, with occasional referral to measure on a per kilogram of milk solids sold or per cow basis. The appendix tables contain the majority of financial information in a per kilogram of milk solids basis. This is done to give a broader range of information and to ensure that data is presented in the format relevant to the discussion.

The methodology used is a combination of that used in the South West Farm Monitor Project, Taking Stock and various other referenced sources. Attention should be paid to methodology when directly comparing figures from this report with those generated via other means. More detail on the methodology is provided in Part II.

Percentage differences are calculated as  $[(\text{new value} - \text{original value}) / \text{original value}] \times 100$ . For example 'costs went from \$80/ha to \$120/ha, a 50% increase';  $[(120-80)/80] \times 100 = 50\%$ , unless otherwise stated.

Top 25% consists of 6 farms from each of North, South West and Gippsland regions and 18 farms on a statewide basis. The 18 farms in the statewide top 25% are taken by considering all 71 as the one sample and not from combining the top farms from each region.

Discussion on 'last year' refers to the 2008/09 Dairy Industry Farm Monitor Project report. It must be noted that not all of the participants from the 2008/09 report are in the 2009/10 report and that there are also new participants in this year's dataset, which have not been in previous years. It is important to keep this in mind when comparing datasets between years. Farms that were included in last years sample are noted at the start of each regional chapter.

Please note that text around explanations of terms will be repeated within the different chapters.

## What's new in 2010!

The Dairy Industry Farm Monitor Report for 2009/10 includes a number of changes since last years' report. The following highlights the most significant of those.

- A new section has been added to the report titled 'Farm Monitor Method'. This section explains how the financial figures in the project are calculated and helps put farm business economic terminology into context.
- The value of imputed labour or imputed labour rate has been increased from \$15/hr to \$20/hr. This means that, when comparing imputed people costs to those in the 2008/09 report, the data will need to be converted. To do this multiply last year's results by 1.33 or alternatively multiply this year's results by 0.75.
- Figures in the regional chapters have been extended to include the average data from the 2008/09 report where applicable.
- Some terms have been updated in the appendix tables to enable greater consistency throughout the report. Specifically 'Other income' is now 'All other income' and 'Total income' is now 'Gross farm income'.
- Some minor adjustments have been made to the appendix tables. Care should be taken if comparing sets of data from one year to the next. Also, the glossary has been extended.

Keep an eye on the project website for further reports and updates on the project, including the 2009/10 Dairy Industry Farm Monitor Project Feature Article. The feature article, to be released online on September 30, will examine the influence different calving patterns have on milk price received, cost of production and overall business profitability.

Visit the project website at [www.dpi.vic.gov.au/dairyfarmmonitor](http://www.dpi.vic.gov.au/dairyfarmmonitor)

Keep an eye on the project website for further reports and updates on the project, including the 2009/10 Dairy Industry Farm Monitor Project Feature Article at [www.dpi.vic.gov.au/dairyfarmmonitor](http://www.dpi.vic.gov.au/dairyfarmmonitor)



# I. Executive Summary

# Executive summary

This is the fourth year of the Dairy Industry Farm Monitor Project in Victoria. The project aims to provide the Victorian dairy industry with valuable farm level data relating to profitability and productivity performance of dairy farm businesses in Victoria.

Data was collected from 71 farms across three regions of Victoria; Northern Victoria, South West Victoria and Gippsland. Participants have been selected with the objective of representing a distribution of farm sizes, herd sizes and geographical locations within each region. The results published in this report should not be taken to represent population averages as the participant farms were not selected via random population sampling.

2009/10 started slowly with opening prices low compared to the previous two years as milk companies reflected nervously on the 2008/09 global financial crisis, during which time global dairy commodity prices fell significantly forcing a reduction in farm gate milk prices. As the year progressed however confidence in the industry slowly returned and milk companies announced several step-ups which saw the milk price finish in the range of \$4.20/kg MS to \$4.50/kg MS for most farms in this study. In addition to the increase in milk prices, more competitive grain and input prices as well as favourable seasonal conditions and irrigation allocations across Victoria enabled farmers to increase production relative to inputs and decrease their overall cost of production.

Despite the improved milk prices and climatic conditions and perceived recovery of general market conditions in the latter part of the year, this did not translate to an immediate return to profitability for dairy farmers. Instead the flow on effect of the 2008/09 season, which included the milk price step down and high input prices as well as the lingering drought, meant that many farms continued to struggle financially in 2009/10. Average profitability across the participant farms was \$0.65 per kilogram of milk solids sold or \$507 per hectare. This is a reduction of 37% and 36% respectively on levels recorded in the 2008/09 Dairy Industry Farm Monitor Project Report and a fall of 71% and 65% from the record highs recorded in 2007/08. Similarly the return on assets across the state fell from 3.8% to 2.2% year on year.

Regionally in Victoria, the majority of farms in the South West and Gippsland remained profitable with over 80% of participant farms in these regions recording positive earnings before interest and tax, while in the North this figure was closer to 66%. The impact of the volatility experienced over the past two seasons is highlighted by the fact that of the 71 farms participating in the survey, over 50% recorded a negative return to equity during 2009/10. This means that in net terms they are worth less now than a year ago. This indicates that the interest and lease costs associated with accessing additional capital have exceeded the returns generated by this capital. Hardest hit in this area was the North where over 70% of participant farms made a negative return on equity.

Highlighted in this year's business confidence survey was the positive outlook for the dairy industry with farmers almost universally expecting an improvement in farm business returns for 2010/11. This, coupled with the expected increase in both milk price and production, as well as the stability of feed prices has seen farmers the most optimistic facing the coming year since the inception of the Dairy Industry Farm Monitor Project. Similar to last year, milk price and climate and water availability are the greatest challenges participant farms see themselves facing over the next 12 months. Over the longer term, succession planning is the biggest issue facing farmers while climate and water availability remains a major concern to be addressed.

A greenhouse gas emission audit was conducted using the Australian National Greenhouse Gas Inventory method. The average level of greenhouse gases emitted remained relatively stable at 10.2 tonnes per tonne of milk solids produced compared to previous year's emission of 10.4 in 2008/09, 10.8 in 2007/08 and 10.3 in 2006/07.

**Average profitability across the participant farms was \$0.65 per kilogram of milk solids sold or \$507 per hectare.**



## II. Farm monitor method

# Farm monitor method

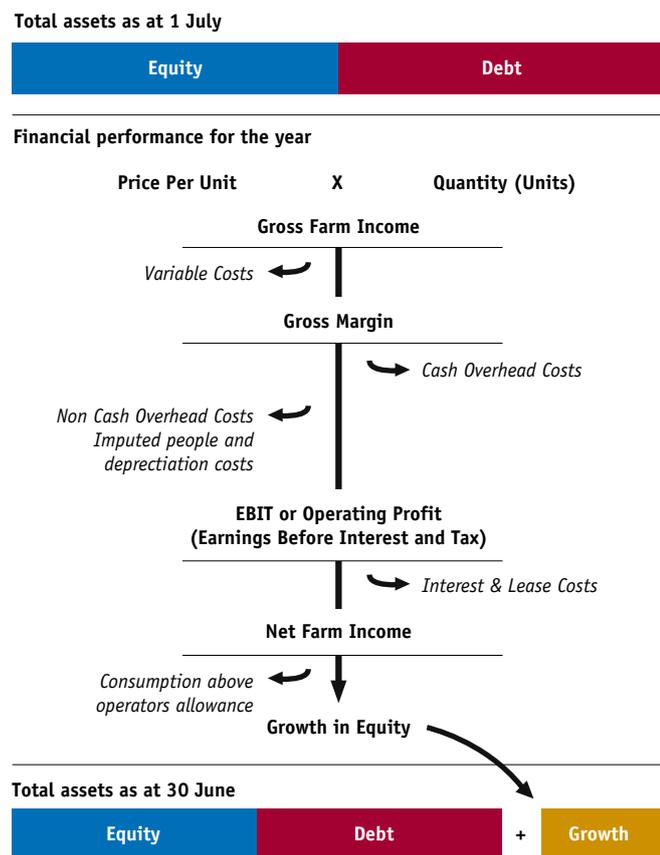
In this section of the report the method by which figures in the Dairy Industry Farm Monitor Project (DIFMP) are calculated, and what they mean, are explained.

The method employed to generate the profitability and productivity data in this report was adapted from The Farming Game (Malcolm *et al.* 2005) and is consistent with the approach used in previous DIFMP reports. Readers should be aware that different benchmarking programs often use different methods and terms for farm financial reporting. Allocation of items such as lease costs, overhead costs or imputed people costs against the farm enterprises is consistent with farm economic theory, but is not always done well. Standard dollar values for things such as stock and feed on hand and imputed labour rates may also vary. For this reason, the results from different benchmarking programs should be regarded with care.

Figure 1 demonstrates how all of the different farm business components come together and are calculated. The diagram shows profitability measures as certain costs are deducted from total income. It also discusses capital and growth.

Growth is increase in wealth or equity. It is achieved by investing in assets which generate income greater than the costs of production and interest on debt. These assets can be owned with equity (one's own capital) and debt (borrowed capital), as shown in Figure 1 above. In order for the assets to generate income they need to be farmed and managed, which involves incurring costs. The amount of growth depends on the relationship between income, operating costs and interest costs.

**FIGURE 1: DAIRY INDUSTRY FARM MONITOR PROJECT METHOD**



## Gross farm income

The dairy farming business generates a total farm income which can be income from milk cash income (net) or non-cash changes in inventory of livestock or stocks of other output such as feed produced and conserved. Milk is the main source of income and is calculated by multiplying price received per unit by the number of units; for example, dollars per kilogram milk solids multiplied by kilograms of milk solids. Subtracting certain costs from total income gives different measures of performance.

## Variable costs

Variable costs are costs that are specific to an enterprise, such as herd, shed and feed costs, and vary directly in relation to the size of the enterprise. Subtracting variable costs from total income, only for the dairy enterprise, gives a gross margin. Gross margins are a common method for comparing between similar enterprises and are commonly used in broad acre cropping and livestock enterprises. Enterprise gross margins are not generally referred to in economic analysis of dairy farming businesses because the dairying is usually a single enterprise business.

## Overhead costs

Overhead costs are costs that are not directly related to the output of an activity as they are expenses incurred through the general operating of the business, and do not vary directly as output varies. The DIFMP separates overheads into cash overheads and non cash overheads, to distinguish cash flows of the business from measures of profit in which all costs, both cash and non-cash, must be counted. Cash overheads are those fixed costs such as permanent labour, rates, insurances, administration, for which a cash payment must be made. Non cash overheads include costs that are not actual cash expenditure; for example the depreciation on a piece of equipment. Imputed costs of the owner-operator and family labour not paid a market wage are also treated as non cash overheads that must be costed and deducted from income if a realistic estimate of costs, profit and the return on the capital of the business is to be obtained. The owner-operator is paid the equivalent of a market wage for running a business of this type, even though they may not draw this amount fully as cash wages.

## Earnings Before Interest and Tax

Earnings Before Interest and Tax (EBIT) or Operating Profit is calculated by subtracting overhead costs from the total farm gross margin. This is the return to all the assets (own and debt and leased assets) used in the business, and indicates how well all the farm resources under the control of the manager are being used, ie efficiency of the business. Assets are also referred to as capital.

In the DIFMP, EBIT is the final financial measure used to gauge the profitability of a farming business as it ignores how the operation is financed, enabling comparison of whole farm performance to be made between different farming businesses.

## Net farm income

Net farm income is EBIT minus the financing costs of interest and lease costs and is the return to the farmers own capital. Interest and lease costs are costs of borrowed money or leased land.

Net farm income after income tax represents growth in equity (once adjustment is made for any consumption out of cash flow that exceeds operator's allowance). Growth adds to starting equity either by direct reinvestment or the repayment of debt.

## Return on assets and return on equity

Two commonly used economic indicators of whole farm performance are Return on Assets (RoA) and Return on Equity (RoE). They measure the return to their respective asset bases of total asset and own asset.

Return on Assets (RoA) indicates the overall earning of the total farm assets, irrespective of capital structure of the business. It is EBIT or operating profit expressed as a percentage of the total amount assets managed in the farm business, including the value of leased assets. EBIT or Operating Profit expressed as a return on total assets is the return from farming. There is also a further return to the asset from any increase in the value of the assets over the year, such as land value. If land value goes up 5% over the year, this is added to the return from farming to give total return to the investment. This return to total assets can be compared with the performance of alternative investments with similar risk in the economy.

In Figure 1 total assets are visually represented by debt and equity. The debt:equity ratio, or equity % of total capital varies depending on the detail of individual farm business and the situation of the owners, including their attitude towards risk.

Return on Equity (RoE) measures the owner's rate of return on their own capital investment in the business. It is net profit expressed as a percentage of total equity (one's own capital). The DIFMP reports RoE with and without capital appreciation. This is to distinguish between productivity gains (RoE without capital appreciation) and capital gains (RoE with capital appreciation).

**In the DIFMP, EBIT is the final financial measure used to gauge the profitability of a farming business.**





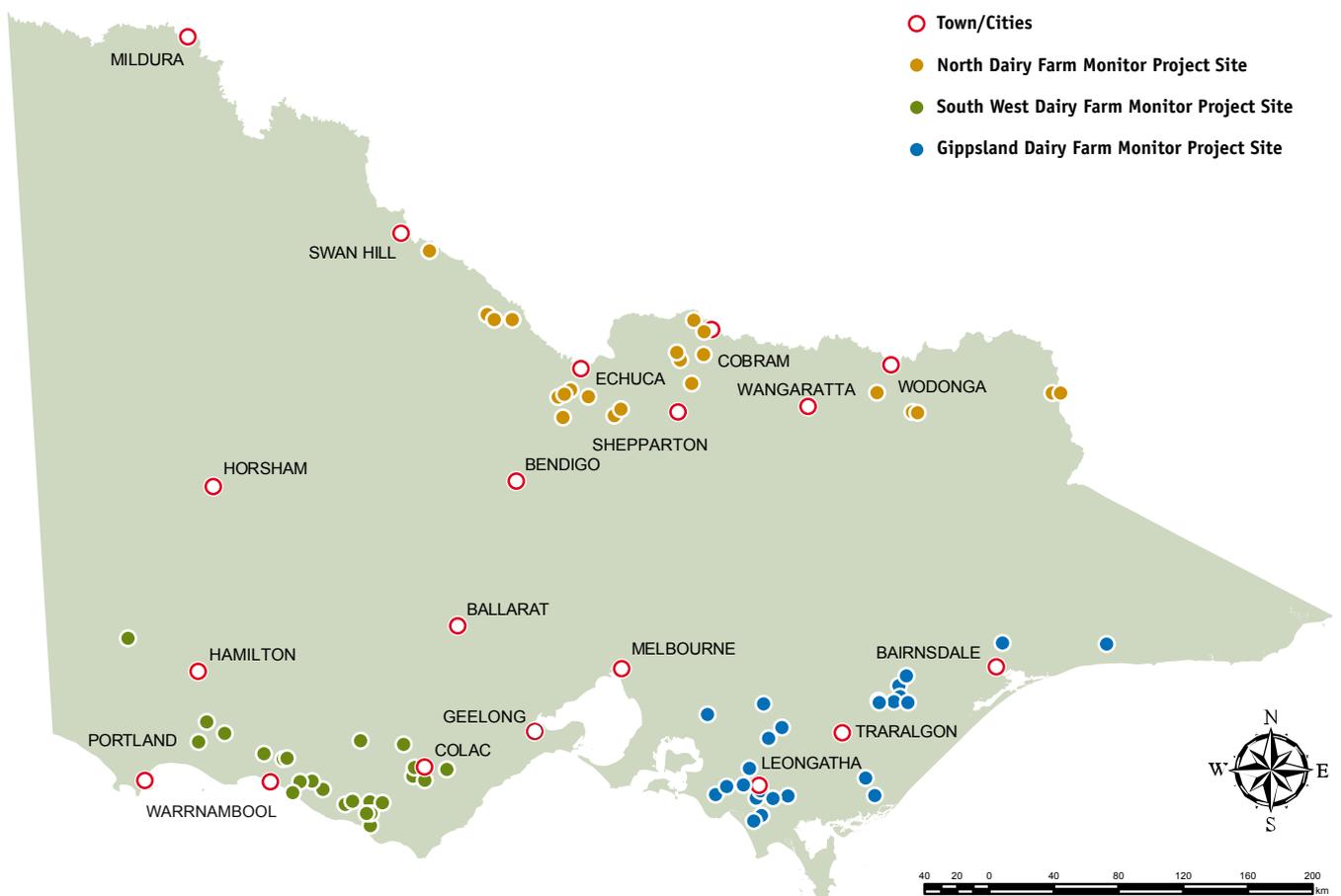
# Part One: Statewide Overview

# Statewide Overview

This section of the report compares the average performance, in a range of physical and financial indicators for all participant farms across Victoria, with the averages from the North, South West and Gippsland regions reported.

The approximate location of the participating farms is shown in Figure 2.

**FIGURE 2: DISTRIBUTION OF PARTICIPANT FARMS ACROSS VICTORIA**



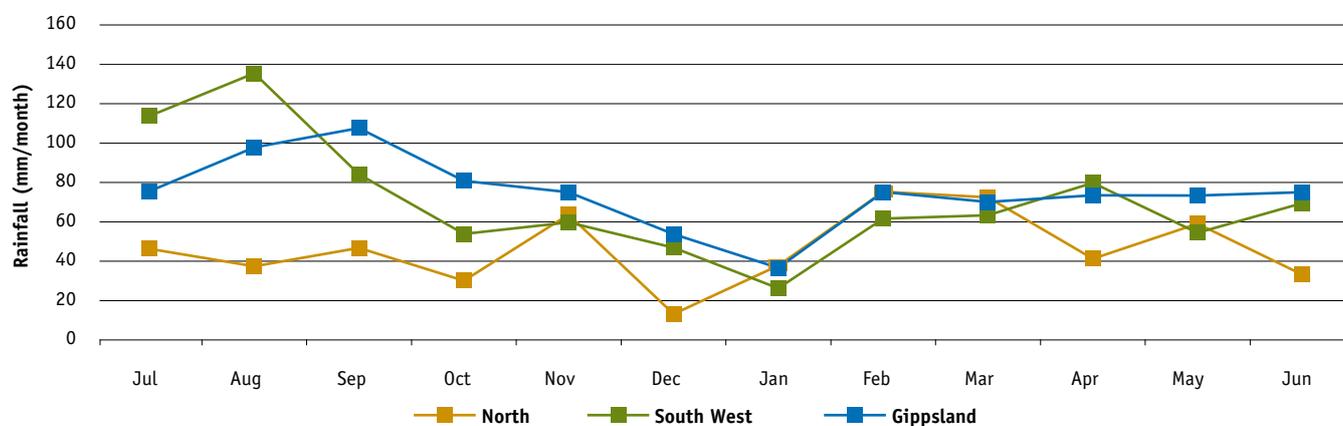
## 2009/10 Seasonal conditions

The average rainfall across the farms in each region was above the long term averages. The North received 556mm over the year, approximately 107% of the long term average for these farms of 519mm. Farms in the South West received on average 849mm, or 104% of their long term average rainfall of 816mm.

Gippsland received an average of 894mm, which is equivalent to 103% of their long term average rainfall of 871mm. Figure 3 shows the rainfall pattern during the year and the wide variation that occurred.

The regional chapters provide more detail on the 2009/10 seasonal conditions.

FIGURE 3: 2009/10 MONTHLY RAINFALL



## Whole farm analysis

On average, farms in the South West ran the largest herds over the largest area. Gippsland had a much smaller average useable area compared to the other two regions at 172 hectares, but a higher average stocking rate of 1.7 cows per hectare. Cows in the North had the highest average milk production across the year on both a per cow and per hectare basis at 515 kg MS and 806 kg MS respectively.

Total water use per hectare was similar between the North and South West in part driven by the return of higher allocations in the northern irrigation region. The two main systems, the Murray and the Goulburn, closed at 100% and 71% allocation of high reliability water shares respectively for the year. The Macalister Irrigation District in Gippsland also recorded a 100% allocation of high reliability water shares for the year in addition to a 45% allocation of low reliability water shares. Table 1 suggests that double the amount of water was used for irrigation per hectare farms in the North compared to farms in Gippsland during 2009/10.

Average people productivity was similar between the regions.

Table 1 presents the average of some farm characteristics for each region. Further details can be found in Appendix Tables 2 for each region.

TABLE 1: FARM PHYSICAL DATA – STATE OVERVIEW

FARM PHYSICAL PARAMETERS	STATEWIDE	NORTH	SOUTH WEST	GIPPSLAND
Number of farms in sample	71	22	25	24
Herd size (max no. milker for at least 3 months)	307	282	366	268
Annual rainfall 09/10	773	556	849	894
Water used (irrigation + rainfall) (mm/ha)	903	811	868	1,022
Total useable area (hectares)	232	216	302	172
Stocking rate (milking cows per useable hectares)	1.5	1.6	1.3	1.7
Milk sold (kg MS /cow)	496	515	503	472
Milk sold (kg MS /ha)	752	806	665	792
Milk price received (\$/kg MS)	\$4.46	\$4.46	\$4.55	\$4.38
People productivity (milking cows / FTE)	94	92	96	95
People productivity (kg MS / FTE)	46,620	46,880	48,392	44,537

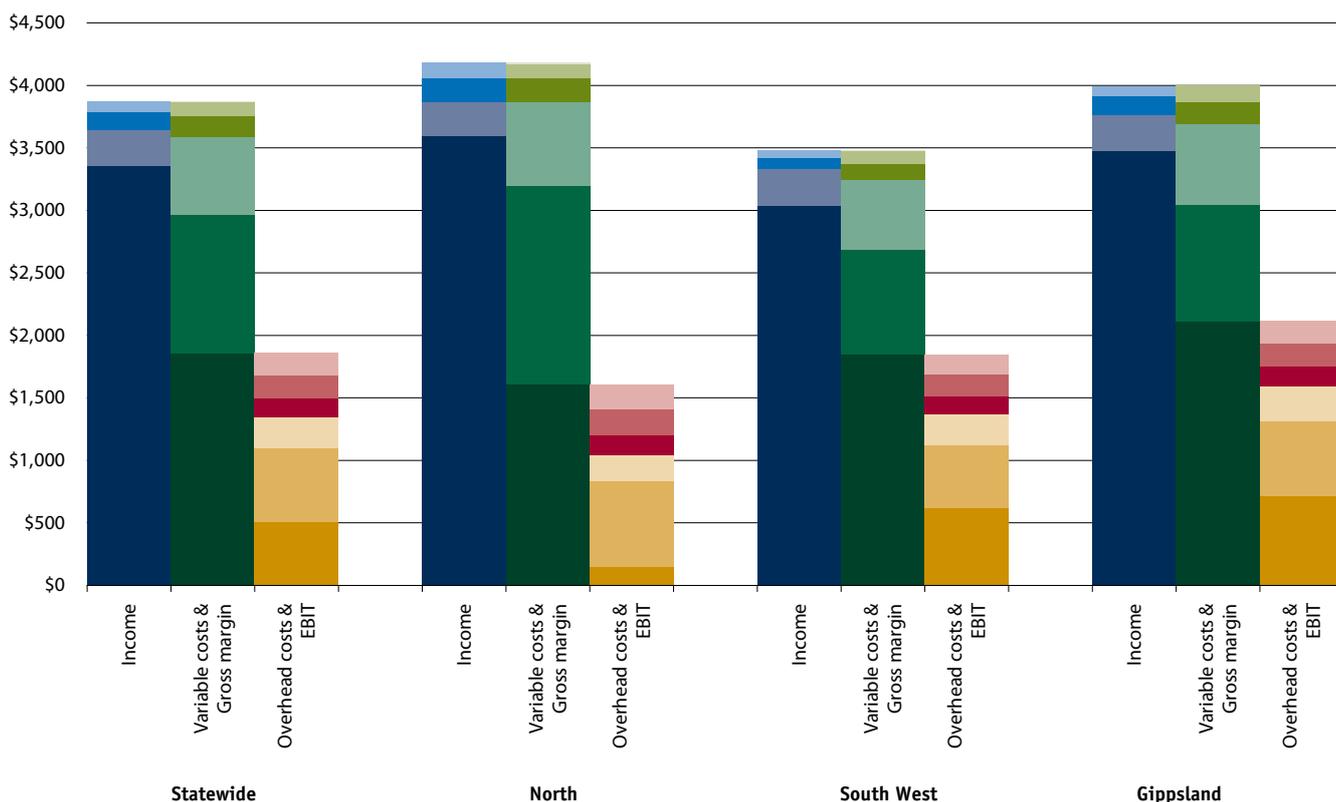
Figure 4 provides a visual representation of the average farm financial performance. The *blue* colours represent income per hectare added vertically to give gross income. From gross income, we can subtract the *green* variable costs, to give the *grey* gross margin values. From the gross margin, we subtract the *red/orange* overhead costs to give us the *yellow* earnings before interest and tax. The legend for Figure 4 and the values for category can be found in Table 2.

## Gross farm income

Gross farm income includes all farm income, whether that is income from milk sales, an increase in inventories of stock or feed or cash income from livestock trading. Income from sources such as farm owned shares, interest from bank accounts and rebates or grants is included in other income.

The variation in gross farm income per hectare between the regions closely reflects the milk solids production per hectare of the three regions. While Figure 4 shows just how much milk income dominates gross income, other sources are still important to the farm business. In the North, income from sources other than milk totalled \$587 per hectare, which is almost four times greater than the average earnings before interest and tax of \$153 per hectare.

**FIGURE 4: AVERAGE FARM FINANCIAL PERFORMANCE PER HECTARE**



See Table 2 for the legend on Figure 4.

In the North, income from sources other than milk totalled \$587 per hectare, which is almost four times greater than the average earnings before interest and tax of \$153 per hectare.

## Variable costs

Variable costs are costs directly associated with production. Examples include animal health, contract services, supplementary feeding, agistment and pasture costs. Figure 4 shows the large cost of purchased feed and agistment (seen as dark green), particularly in the North. Home grown feed was the other major variable cost. The cost of feed accounted for around 84% of total variable costs in all regions, although it was slightly higher in the North. See Appendix Tables 6 for a breakdown of variable costs as a percentage of total costs in each region.

The gross margin is equal to gross income minus total variable costs. While commonly used to compare enterprises that can use a similar capital structure like sheep or beef, it can be a useful measure in dairy to analyse changes on farm that don't require capital investment. The statewide average gross margin was \$1,862/ha, down 7% from 2,007/ha, last year and 24% from \$2,457/ha recorded in 2007/08.

## Overhead costs

Overhead costs or fixed costs are relatively unresponsive to small changes in the scale of operation of a business. Examples include depreciation, administration, repairs and maintenance, and the cost of people's time. Imputed people cost is an estimate of the cost of the time spent in the business by people with a share in the business such as the owner, the owner's family or a sharefarmer that owns assets in the business. The imputed people cost is calculated as the greater of \$400 per cow less paid labour (the method used in Taking Stock) or \$20 per hour of imputed people time. This is an increase from \$15 per hour which has been the hourly rate in all previous editions of the Dairy Industry Farm Monitor Project.

Table 2 shows that participants in the North had a higher average imputed people and lower average employed people costs per hectare than those in the other two regions suggesting that owner/operators in that region perform the majority of tasks on their farms. The South West incurred lower total overhead costs per hectare than the other two regions, thanks mainly to lower imputed people and repairs and maintenance costs. Conversely on a per kilogram of milk solids basis (see Appendix Tables 5), the South West had the highest overhead costs suggesting that their lower per hectare costs are due predominantly to their larger farm sizes.

**TABLE 2: AVERAGE FARM FINANCIAL PERFORMANCE PER HECTARE - STATEWIDE**

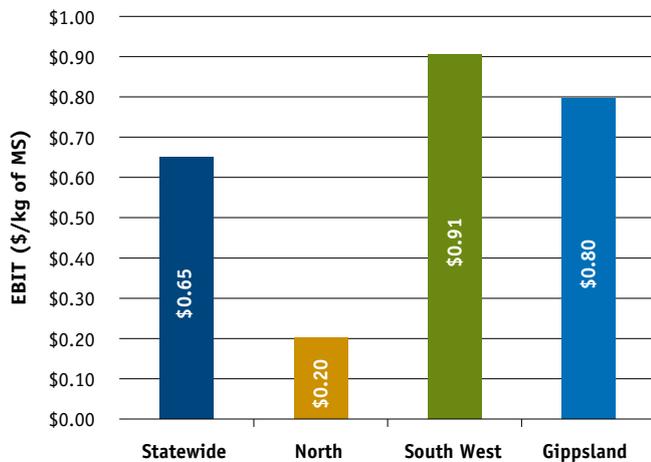
FARM INCOME AND COST CATEGORY	STATEWIDE	NORTH	SOUTH WEST	GIPPSLAND
<b>INCOME</b>				
Feed inventory gain	\$84	\$123	\$62	\$73
Other farm income	\$144	\$196	\$86	\$156
Livestock trading	\$284	\$268	\$296	\$288
Milk income (net)	\$3,358	\$3,596	\$3,036	\$3,475
<b>TOTAL INCOME</b>	<b>\$3,872</b>	<b>\$4,184</b>	<b>\$3,480</b>	<b>\$3,994</b>
<b>VARIABLE COSTS</b>				
Livestock trading loss	\$4	\$12	\$1	\$0
Shed cost	\$117	\$119	\$105	\$128
Herd cost	\$162	\$187	\$132	\$170
Home grown feed cost	\$625	\$672	\$557	\$652
Purchased feed, inventory loss and agistment	\$1,102	\$1,589	\$839	\$930
<b>TOTAL VARIABLE COSTS</b>	<b>\$2,010</b>	<b>\$2,578</b>	<b>\$1,634</b>	<b>\$1,879</b>
<b>GROSS MARGIN</b>				
per hectare	\$1,862	\$1,606	\$1,846	\$2,114
<b>OVERHEAD COSTS</b>				
Other overheads	\$177	\$197	\$153	\$183
Repairs and maintenance	\$187	\$205	\$179	\$178
Depreciation	\$152	\$158	\$143	\$157
Employed people	\$248	\$210	\$251	\$280
Imputed people cost	\$591	\$683	\$498	\$603
<b>TOTAL OVERHEAD COSTS</b>	<b>\$1,355</b>	<b>\$1,453</b>	<b>\$1,223</b>	<b>\$1,401</b>
<b>EARNINGS BEFORE INTEREST AND TAX</b>				
per hectare	\$507	\$153	\$622	\$713

## Earnings Before Interest and Tax

Earnings before interest and tax (EBIT) is the gross income, less variable costs and overhead costs including imputed costs. As this figure excludes tax and interest and lease costs, it can be used to analyse the operational efficiency of the whole farm business.

Average EBIT is positive in all three dairying region, when expressed as per kilogram of milk solids (Figure 5) and as per hectare (Table 2). Similar to 2008/09, EBIT per hectare has again declined from levels recorded in the previous year with reductions in EBIT per hectare of 66%, 31% and 38% recorded for the North, the South West and Gippsland respectively. Further compounding this reduction in EBIT is the fact that interest and lease charges, yet to be accounted for still need to be paid, further reducing net farm income. Figures 18, 29 and 40 in the regional chapters provide a visual representation of the reduction in EBIT between the samples this year and last.

**FIGURE 5: AVERAGE EARNINGS BEFORE INTEREST & TAX PER KILOGRAM OF MILK SOLIDS SOLD**

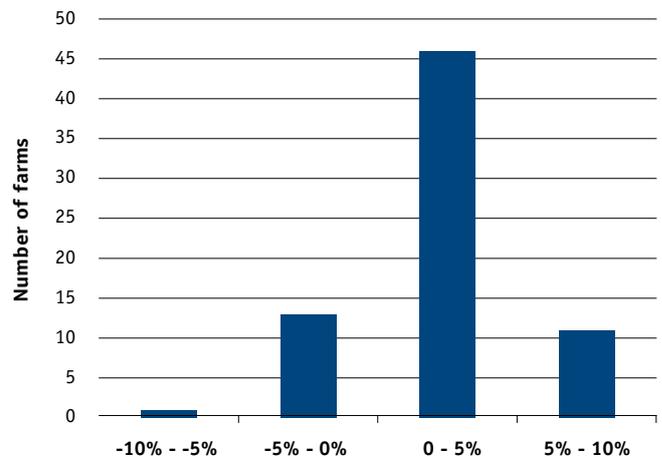


## Return on assets and on equity

The return on assets is the earnings before interest and tax expressed as a percentage of total farm assets and hence is an indicator of the earning power of total assets, irrespective of capital structure. Similarly, it can be considered as an indicator of the overall efficiency of use of the resources that are involved in this production system and not elsewhere in the economy. Return on assets is sometimes referred to return on capital.

The average return on assets for participants across the state was 2.2%, with a range from -7.6% to 8.8% and a median of 2.4% (Figure 6 and Appendix Tables 1). The effect of a lower average than the median means more farms sit towards the lower end of the range dragging the average lower. Fifty seven of the 71 participant farms had a positive return on assets, while 14 farms returned a negative EBIT and thus return on assets in this economic analysis.

**FIGURE 6: DISTRIBUTION OF FARMS BY RETURN ON ASSETS**

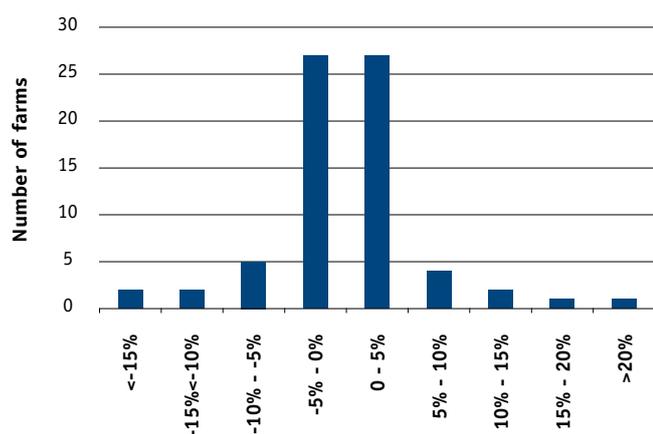


Return on equity is the net farm income (earnings before interest and tax less interest and lease charges) expressed as a percentage of owner equity. Items not accounted for in net farm income are loan principle repayments and tax. Return on equity is a measure of the owner's rate of return on their investment.

The average return on equity for the 71 farms during 2009/10 was -0.3%. Figure 7 shows that 36 of all 71 participants, over half, had a negative return on equity in this analysis. Of these farms that recorded a negative return on equity, 32 lost between 0% and 10% equity while 4 lost more than 10% of their equity during the year. Of the farms that recorded a positive return on asset, 31 recorded returns on equity of between 0% and 10%, while only 4 farms recorded returns on equity of greater than 10%.

Further discussion of return on assets and return on equity occur overleaf in the risk section and later in the regional chapters. Appendix Tables 1 present all the return on assets and return on equity for the individual farms.

**FIGURE 7: DISTRIBUTION OF FARMS BY RETURN ON EQUITY**



## Risk

*“Risk is conventionally classified into two types: business risk and financial risk. Business risk is the risk any business faces regardless of how it is financed. It comes from production and price risk, uncertainty and variability. ‘Business risk’ refers to variable yields of crops, reproduction rates, disease outbreaks, climatic variability, unexpected changes in markets and prices, fluctuations in inflation and interest rates, and personal mishap....Financial risk derives from the proportion of other people’s money that is used in the business relative to the proportion of owner-operator’s capital...”<sup>1</sup>*

Table 3 presents some risk ratios. Refer to Appendix E for the definition of terms used in Table 3.

**TABLE 3: RISK RATIOS - STATEWIDE**

	STATEWIDE	NORTH	SOUTH WEST	GIPPSLAND
Cost structure	87%	95%	83%	84%
Debt services ratio (finance costs as a percentage of income)	13%	10%	15%	14%
Debt per cow	\$3,734	\$3,259	\$4,513	\$3,358
Equity percentage (ownership of total assets managed)	64%	58%	66%	68%
Percentage of feed imported (as a % of total ME)	34%	49%	29%	27%

Exposure to risk in business is entirely rational if not unavoidable. It is through managing risk that greater profits can be made. It is also the case that by accepting a level of risk in one area of business, a greater risk in another area can be avoided. With the example of feed sources, dairy farmers are generally better at dairy farming than they are at grain production. By allowing someone who is experienced in producing grain to supply them, they lessen the production and other business risks as well as the financial risks they would have exposed themselves to by including extensive cropping in their business. The trade-off is that they are exposed to price and supply risks, which historically have been lower.

The trade-off between perceived risk and expected profitability will dictate the level of risk the individual is willing to take. It thus holds that in regions where risk is higher, less risk is taken. While in good times this will result in lower returns, in bad times it will lessen the losses.

The North has a much greater exposure to fluctuations in prices and supply in the market for feed given the greater use of imported feed stuffs. This is concerning given the level of equity in the region has dropped from 67% last year to 58% this year, however it should be noted that the turnover of participant farms in the project would have impacted all equity figures. This lower equity percentage suggests that farms are borrowing more money to pay for purchased feed. Lower equity levels also mean greater exposure to changes in interest rates.

The benefit of taking some risks and borrowing money can be seen when farm incomes yield a higher return on equity than on their return on assets. In 2007/08, 68% of participant’s were able to borrow money and generate a return on equity greater than their return on assets; a good result. In 2008/09, that number fell to 28% with only 19 of 68 farms able to generate a return from the extra capital greater than the cost of accessing that capital. In 2009/10, this number fell again, this time to 10%. Of 71 participant farms, only 7 were able to borrow money or lease land and make a return off the extra available capital beyond the cost of having access to it, ie interest or lease charges. All regions were affected by these high finance costs.

The ratios in Table 3 can be found in Appendix Tables 1, 3 and 8 for each region. The higher the ratio (or lower with equity %), the greater the exposure to the risk of a shock in those areas of the business. Further, the data in Appendix Tables 4 and 5 are in cost per kilograms of milk solids sold. This data is best used as risk ratios, given it is measured against the product produced and sold currently and not the capital invested.

<sup>1</sup> Malcolm, L.R., Makeham, J.P. and Wright, V. (2005), *The Farming Game*, Agricultural Management and Marketing, Cambridge University Press, New York. p.180

# Physical measures

## Feed consumption

Figure 8 presents the contribution of different feed sources to the total metabolisable energy (ME) consumed on the farm. This includes feed consumed by dry cows and young stock.

While grazed pasture was the major component of the average cows' diet in all regions, the dependence of the North on outside sources of feed in 2009/10 is clear. In the North 49% of ME was sourced from bought in feed, compared to 29% in the South West and 27% in Gippsland. This is a reduction from the amount of bought in feed required in 2008/09, an indication of the more favourable climatic conditions that occurred during the year. All regions are dependent on concentrates with average proportion of ME sourced from concentrates at 29%, 24% and 22% respectively.

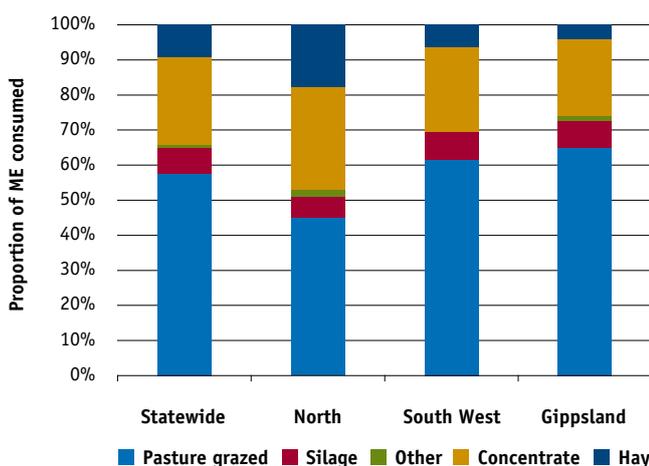
Appendix Tables 3 give further information on purchased feed.

Figure 9 shows the average estimated home grown feed production per hectare. Both Figures 8 and 9 were estimated using an Energetics method. This involves a calculation of the total energy required on the farm, which is a factor of stock numbers held on the farm, the stock weights, distance the stock walks to the dairy on average and also milk production. From the total energy requirements for the farm over the year, the energy imported to the farm as feed is subtracted. This leaves the estimate for total energy produced on farm, which is then divided into grazed and conserved feed depending on the amount of fodder production recorded.

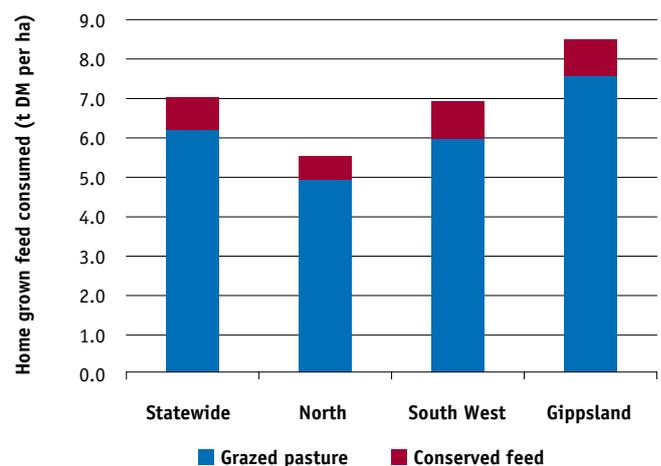
The amount of home grown feed produced per hectare will be dependent on numerous factors, with water availability, fertiliser application rates and grazing management being central. The lack of total water allocations in the North will have had a marked affect on the group's average ability to grow feed. The average estimates were, as grazed feed and conserved feed, 5.0t/ha and 0.6t/ha for the North, 6.0t/ha and 1.0t/ha for the South West and 7.6t/ha and 0.9 t/ha for Gippsland.

Appendix Tables 2 give estimates of individual tonnes of home grown feed produced per hectare.

**FIGURE 8: SOURCES OF WHOLE FARM METABOLISABLE ENERGY**



**FIGURE 9: ESTIMATED TONNES OF HOME GROWN FEED CONSUMED PER HECTARE**



## Fertiliser application

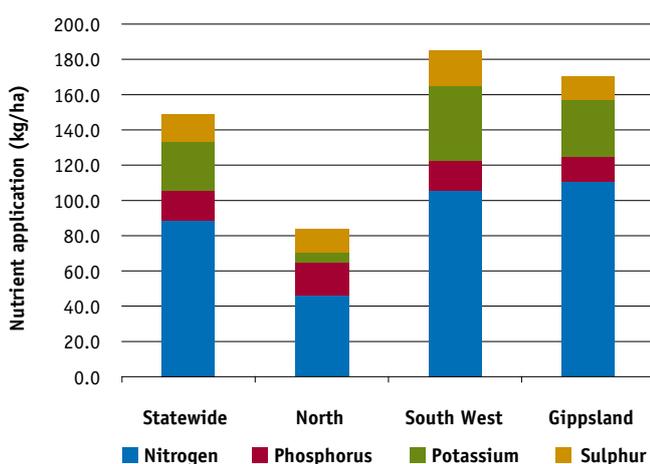
Figures 9 and 10 do not show a reasonably strong relationship between estimated home grown feed produced and fertiliser applied per hectare. It should also be noted however that water availability, pasture species, soil type, pasture management, seasonal variation in response rates to fertilisers, variations in long-term fertiliser strategies and other factors will all influence pasture growth and fertiliser application strategies. All regions spread similar amounts of phosphorus and sulphur, however farms in the North applied less than half the nitrogen that was applied in the South West and Gippsland. Potassium application varied the greatest across the regions with farms in the North, South West and Gippsland applying 5kg/ha, 43kg/ha and 32kg/ha respectively. Farms in the North applied approximately 70% of nutrients spread to the irrigated portion of their total useable area in 2009/10.

Appendix Tables 2 give further information on fertiliser application.

## Milk production

Average distribution of milk production in all regions saw the main production peak in spring, but only the North saw another small peak in autumn 2010. As expected these distributions mimic pasture growth, however the additional factors of calving pattern and payment schemes also have an impact on milk supply. Gippsland farms on average experienced the most rapid increase in production coming into the 2009 spring, going from 4.0% of total production in July to 11.5% by October. The South West had a smoother distribution pattern with production spread across winter and spring.

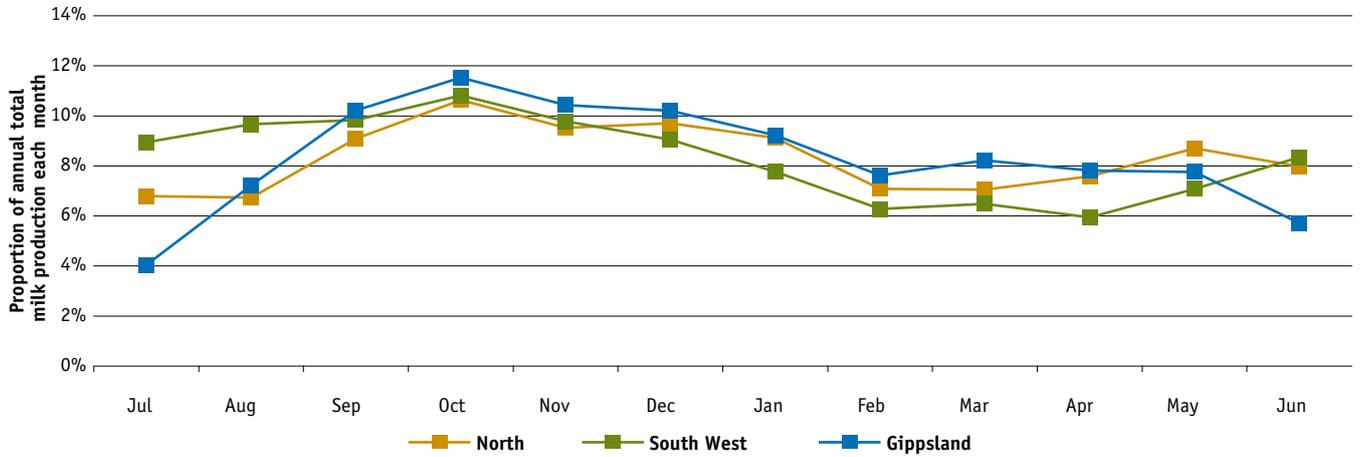
FIGURE 10: NUTRIENT APPLICATION PER HECTARE



*The digestion of feed in the rumen and the use of fertiliser are major sources of greenhouse gases on dairy farms. A summary of greenhouse gas emissions can be found on page 48 of this report.*

In the North 49% of ME was sourced from bought in feed, compared to 29% in the South West and 27% in Gippsland.

**FIGURE 11: MONTHLY DISTRIBUTION OF MILK PRODUCTION**

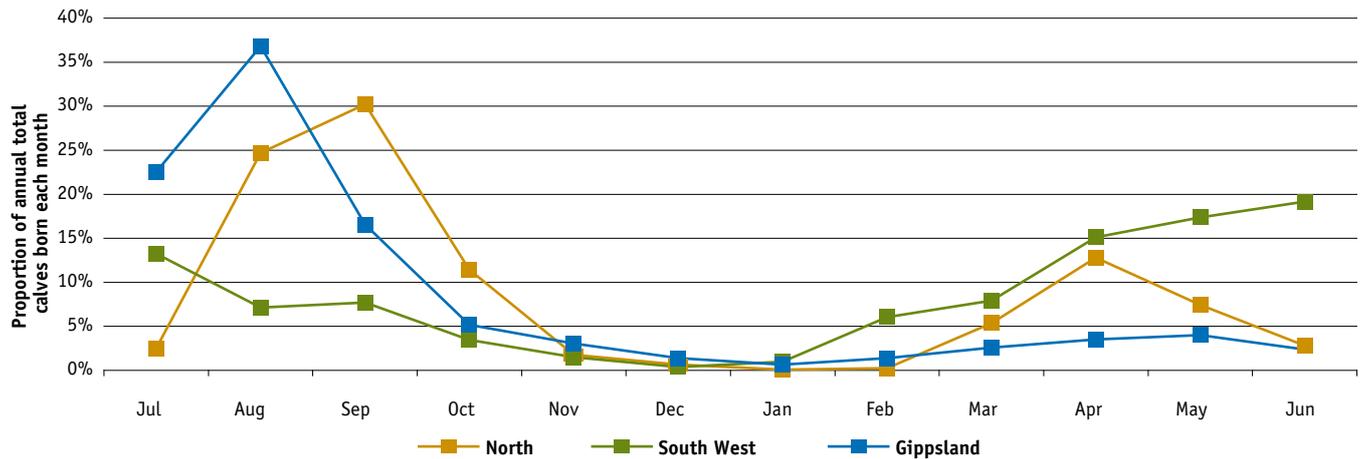


## Calving Pattern

The milk production shown in Figure 11 follows a similar pattern to the calving pattern shown in Figure 12 below, with a two to three month delay between calving and peak lactation. This can be seen best in the peak production and peak calving times.

Gippsland had a very concentrated calving pattern, with over one-third of all calves born in August and 76% born from July to September. Less than 4% of calves were born in Gippsland during the summer months. The North achieved a similarly concentrated calving pattern, with 30% of calves born in September and 66% between August and October. The smoother milk production curve of the South West throughout winter mirrors the smoother calving pattern.

**FIGURE 12: MONTHLY DISTRIBUTION OF CALVES BORN**





# Part Two: North

# North

Farms N0001 – N0032 were also included in last year’s report.  
 Farms N0033-N0037 are new to the sample this year.  
 Please refer to page 5 for notes on the presentation of data.

## 2009/10 Seasonal conditions

Difficult climatic conditions were again experienced by participants across the North during the 2009/10 year. Despite average annual rainfall ranging between 80% and 100% of individual long term average rainfall for most farms, the timing of these rain events did not favour producers.

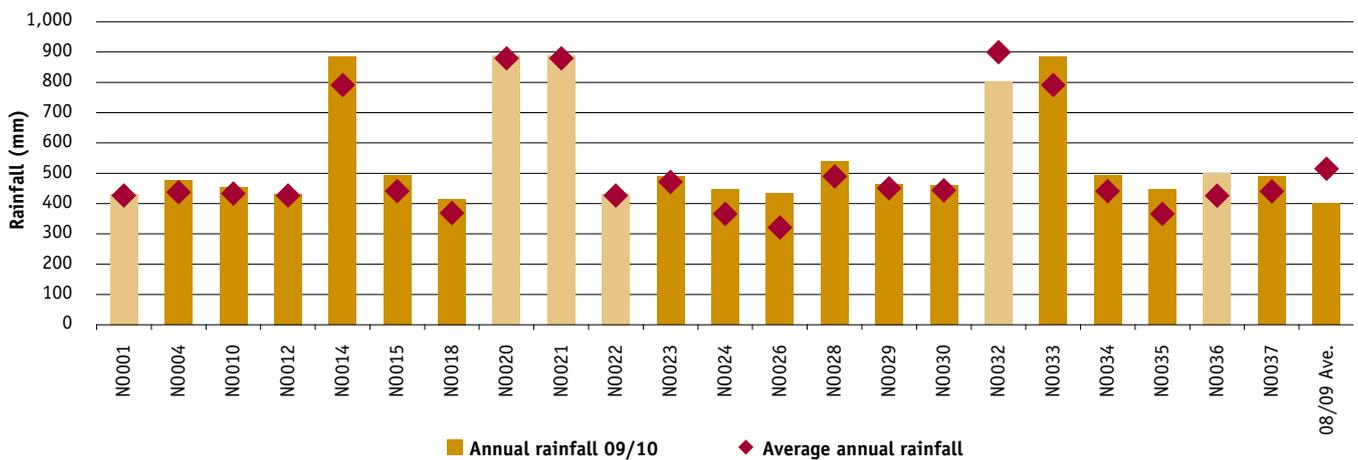
After a favourable early winter, conditions soon started to dry out again as the days began to lengthen in August. The irrigation season began with a 0% allocation across all systems and it wasn’t until early September for the Murray system and mid September for the Goulburn system that the first very low irrigation allocations were received. Coupled with the lack of rainfall, pastures and crops across the region spent the peak growing season ranging from stressed to very stressed by the lack of moisture and most farmers missed out on capitalising fully on the critical spring growing period. A good rainfall event occurred in late September, which provided a good jump in the irrigation allocations and revived some pastures, but many were too far gone by this stage. This meant that most of the irrigation water could not be used in the spring

and was instead utilised growing summer crops or germinating autumn sowings.

A large rainfall event in early March, combined with reasonable water allocations in both the Murray and Goulburn systems which closed the year at 100% and 71% respectively, meant that large areas of pastures and crops were irrigated from March onwards. The autumn conditions combined with the irrigation allocations meant that many farmers experienced a good autumn as far as pasture/crop growth goes however it should be noted that not all farmers have been able to capitalise on the favourable autumn conditions due to poor cash flow preventing them from being able to sow and irrigate large enough pasture areas.

Top 25% \* - The top 25% are shown as the lighter bars in all graphs as ranked by earnings before interest and tax per hectare.

**FIGURE 13: 2009/10 ANNUAL RAINFALL AND LONG TERM AVERAGE RAINFALL – NORTH**



The top 25% of farms only had a slightly higher gross income at \$4,256 compared with the average at \$4,184.

# Whole farm analysis

Key whole farm physical parameters for the North are presented below in Table 4. The Q1 – Q3 range shows the band in which the middle 50% of farms for each parameter sit.

The top 25% of farms ranked on earnings before interest and tax per hectare had higher annual rainfall, greater total useable area in hectares and grew more home grown feed as % of ME consumed. However the average recorded higher milk production as measured by milk solids per hectare and per cow.

**TABLE 4: FARM PHYSICAL DATA – NORTH**

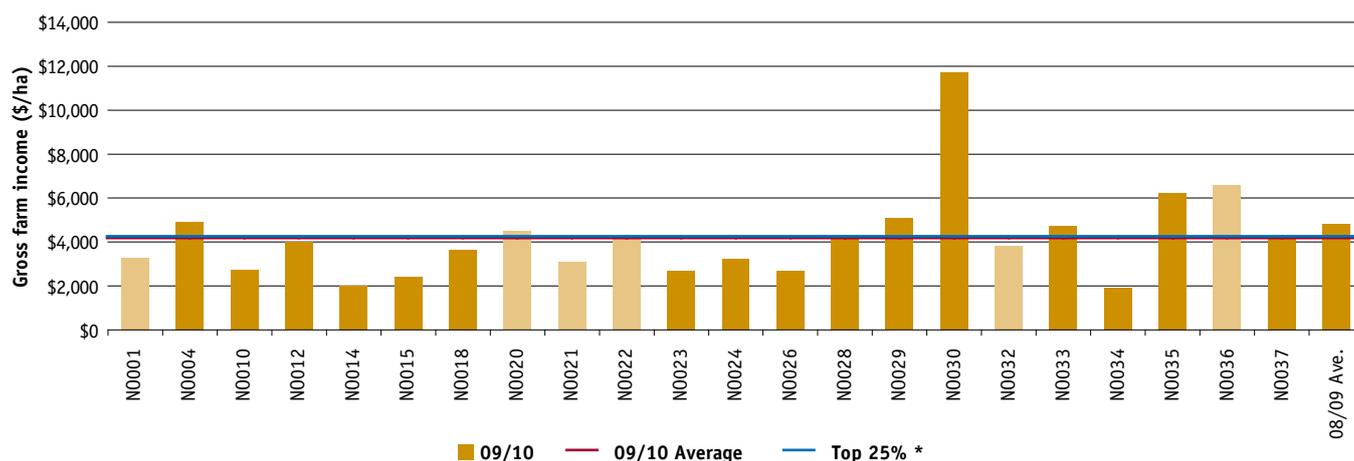
FARM PHYSICAL PARAMETERS	NORTH AVERAGE	Q1 TO Q3 RANGE	TOP 25% AVERAGE
Annual rainfall 09/10	556	446 - 529	657
Water used (irrigation + rainfall) (mm/ha)	811	668 - 900	927
Total useable area (Hectares)	216	111 - 302	186
Milking cows per useable hectares	1.6	1.2 - 1.8	1.6
Milk sold (kg MS /cow)	515	570 - 904	506
Milk sold (kg MS /ha)	806	442 - 584	784
Home grown feed as % of ME consumed	51%	41% - 66%	67%
People productivity (milking cows / FTE)	92	71 - 116	104
People productivity (kg MS / FTE)	46,880	36,340 - 53,605	52,245

## Gross farm income

Gross farm income includes all farm income, whether that is income from milk sales, an increase in inventories of stock or feed or cash income from livestock trading. The top 25% of farms only had a slightly higher gross income at \$4,256 compared with the average at \$4,184, as shown in Figure 14.

It also shows that the top performing farms ranked on earnings before interest and tax per hectare did not necessarily have the highest gross income per hectare. This suggests that the top performing farms have other attributes that enable them to achieve a higher EBIT, other than gross farm income.

**FIGURE 14: GROSS FARM INCOME PER HECTARE – NORTH**

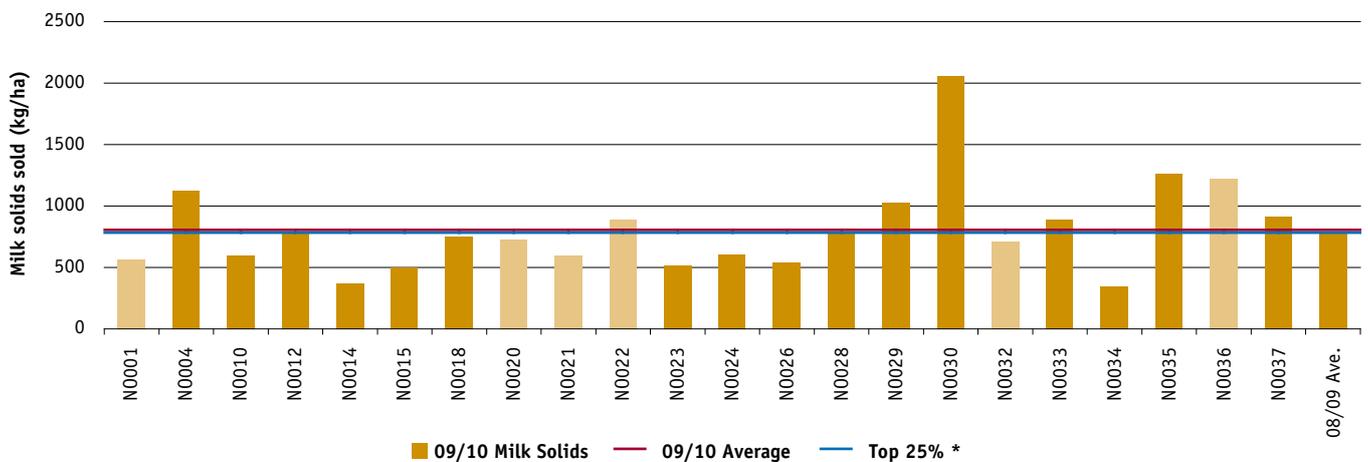


## Milk solids production

Figures 14 and 15 show the very strong correlation between income and milk solids sold per hectare, as income is primarily driven by the quantity of milk solids sold. During 2009/10, farms on average produced 806 kg MS/ha compared with 784 kg MS/ha last year. The range of this year's dataset was 348 kg MS/ha to 2,058 kg MS/ha.

Interestingly, the top 25% of farms produced marginally less milk solids per hectare than the average at 784, which is also the same as the regional average from last year. Table 4 above also shows that the top 25% also produced less milk solids per cow than the average. This highlights the fact that while greater production will generate greater income, the end result is not always greater profit.

**FIGURE 15: MILK SOLIDS SOLD PER HECTARE – NORTH**



## Variable costs

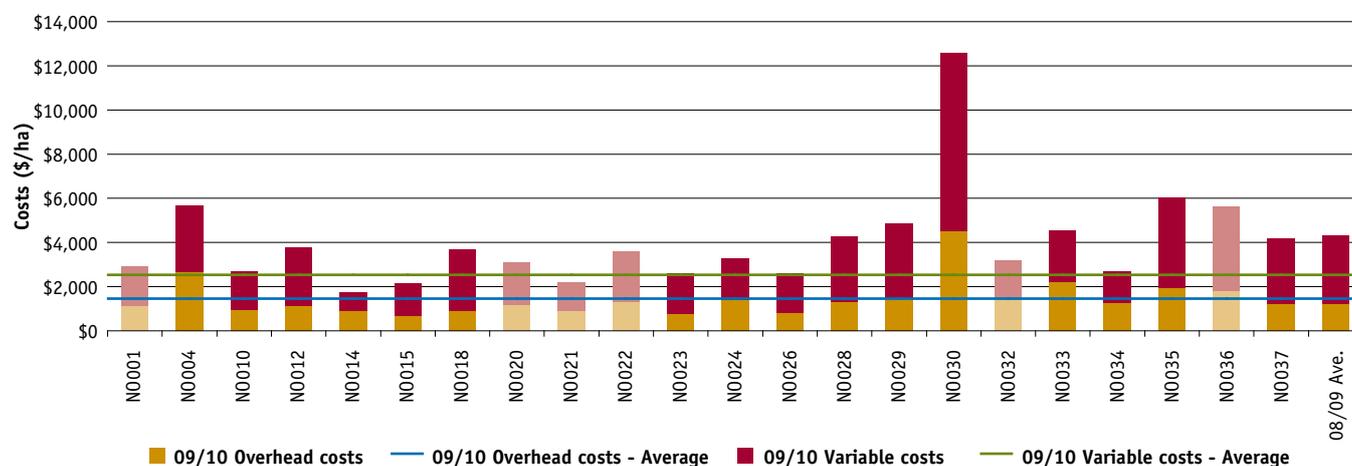
Variable costs ranged from \$813/ha to \$8,084/ha for the North in 2009/10. This wide range in total variable costs per hectare is seen in Figure 16. The average for the region, was \$2,539/ha, down from \$3,317/ha last year. Overhead costs have increased from \$1,200/ha to \$1,439/ha in 2009/10, representing a 20% increase. The percentage breakdown of the individual totals expressed as percentages is presented in Appendix Table A6.

Variable costs account for 63% of total costs on a per hectare basis for participant farms in the North region in 2009/10.

Feed costs are clearly the major variable cost representing 55% of total costs of production and 88% of variable costs for the average group. A break down of variable costs for the individual businesses on a \$/kg MS basis can be seen in Appendix Table A4.

It should be noted that the effects of drought over the past several seasons has meant that most farmers have changed their farming system to be more reliant on purchased feed. This means that these farms have a high percentage of imported feed, which can be seen in Appendix Table A2. This has impacted on the per hectare indicators.

**During 2009/10, farms on average produced 806 kg MS/ha compared with 784 kg MS/ha last year.**

**FIGURE 16: WHOLE FARM VARIABLE AND OVERHEAD COSTS PER HECTARE – NORTH**

## Overhead costs

Overhead costs are those that do not vary with the level of production. The DIFMP includes cash overheads such as rates and insurance as well as non cash costs such as imputed labour and depreciation of plant and equipment. Figure 16 illustrates the range spent on overhead costs per hectare, which was from \$701 to \$4,486 for farms in the North in 2009/10.

The main overhead cost categories include people cost, depreciation and repairs and maintenance. A breakdown of the overhead costs can be obtained in Appendix Table A5 and A7.

## Cost of production

Figure 16 and Table 5 present both variable and overhead costs to give the total cost of production per hectare and per kilogram of milk solids sold respectively. Cost of production expressed as per kilogram of milk solids sold is a useful risk ratio. The comparison of cost of production with gross income gives the average operating margin, i.e. EBIT/kg MS.

Table 5 shows that the top 25% of farms generally have equivalent costs per kilogram of milk solids sold in most categories when compared to the average of the entire North. The top 25% are able to lower their costs with purchased feed and the overhead cost of imputed labour.

**TABLE 5: COST OF PRODUCTION - NORTH**

FARM COSTS (\$ / KG MS)	NORTH AVERAGE	Q1 TO Q3 RANGE	TOP 25% AVERAGE
<b>VARIABLE COSTS</b>			
Herd costs	\$0.23	\$0.16 - \$0.29	\$0.22
Shed costs	\$0.15	\$0.12 - \$0.17	\$0.13
Purchased feed, inventory loss and agistment	\$1.80	\$1.41 - \$2.10	\$1.37
Home grown feed cost	\$0.92	\$0.62 - \$1.03	\$0.95
Livestock trading loss	\$0.00	\$0.00 - \$0.00	\$0.00
<b>Total variable costs (\$ / kg MS)</b>	<b>\$3.09</b>	<b>\$2.63 - \$3.40</b>	<b>\$2.67</b>
<b>OVERHEAD COSTS</b>			
Rates	\$0.03	\$0.02 - \$0.04	\$0.03
Registration and insurance	\$0.03	\$0.01 - \$0.04	\$0.02
Farm insurance	\$0.05	\$0.03 - \$0.07	\$0.05
Repairs and maintenance	\$0.25	\$0.15 - \$0.33	\$0.28
Bank charges	\$0.01	\$0.00 - \$0.01	\$0.01
Other overheads	\$0.14	\$0.09 - \$0.16	\$0.13
Employed people cost	\$0.31	\$0.10 - \$0.50	\$0.31
<b>Total cash overheads</b>	<b>\$0.82</b>	<b>\$0.60 - \$0.95</b>	<b>\$0.82</b>
Depreciation	\$0.22	\$0.12 - \$0.28	\$0.22
Imputed people cost	\$0.80	\$0.54 - \$1.00	\$0.65
<b>Total overhead costs (\$ / kg MS)</b>	<b>\$1.83</b>	<b>\$1.47 - \$2.16</b>	<b>\$1.69</b>
<b>Total cost of production (\$ / kg MS)</b>	<b>\$4.92</b>	<b>\$3.60 - \$4.61</b>	<b>\$4.36</b>

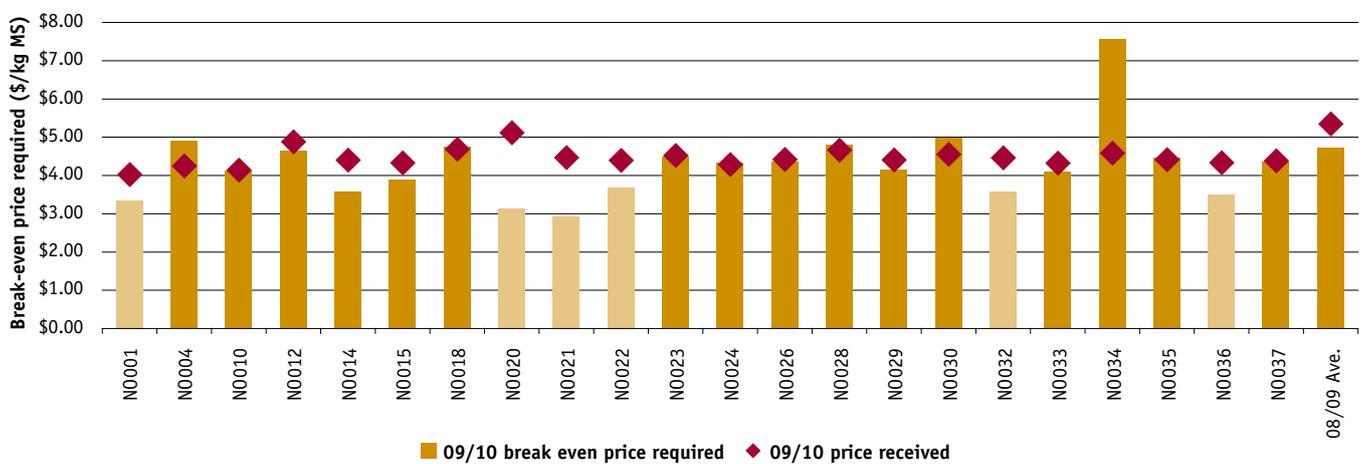
## Break-even price required

The break-even price required for milk is calculated as the cost of production less any livestock trading profit or increase in feed inventory or other income. That is the sum of variable and overhead costs, livestock trading loss and decrease in feed inventory, less any livestock trading profit, increase in feed inventory or other income.

Figure 17 shows that the break-even price required varies from \$2.93 per kg MS to \$7.58 per kg MS and the price received varies

from \$4.03 per kg MS to \$5.35 per kg MS. The results show that about one third of the data set (7 out of 22 farms) did not achieve a profit, which is shown where the purple diamond is below the yellow column. This is reflected in the average break-even price required being 4.50 kg/MS and the average price received was \$4.28 kg MS. The difference between the price received and the break-even price required is the earnings before interest and tax per kilogram of milk solids.

**FIGURE 17: BREAK-EVEN PRICE REQUIRED PER KILOGRAM OF MILK SOLIDS SOLD – NORTH**

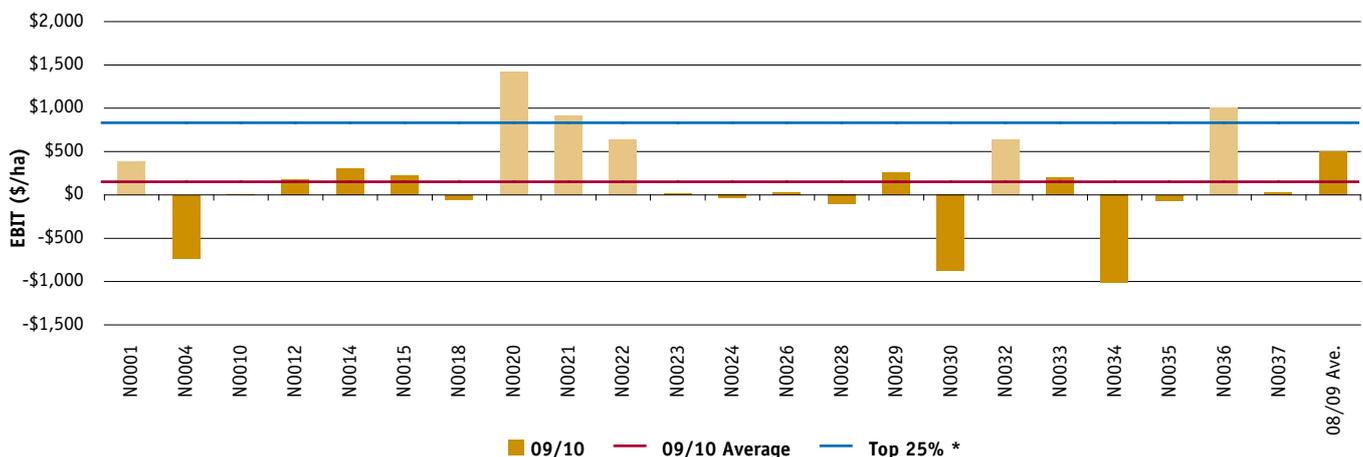


## Earnings Before Interest and Tax

Earnings before interest and tax is gross income, less variable and overhead costs. Figure 18 shows that the majority (68%) of farms in the North achieved a positive earnings before interest and tax in the 2009/10 year.

This is less than last year where 76% of farms returned positive EBIT/ha. The group average decreased again this year to \$153/ha, down from \$494/ha in 2008/09 and \$890/ha in 2007/08.

**FIGURE 18: WHOLE FARM EARNINGS BEFORE INTEREST AND TAX PER HECTARE – NORTH**

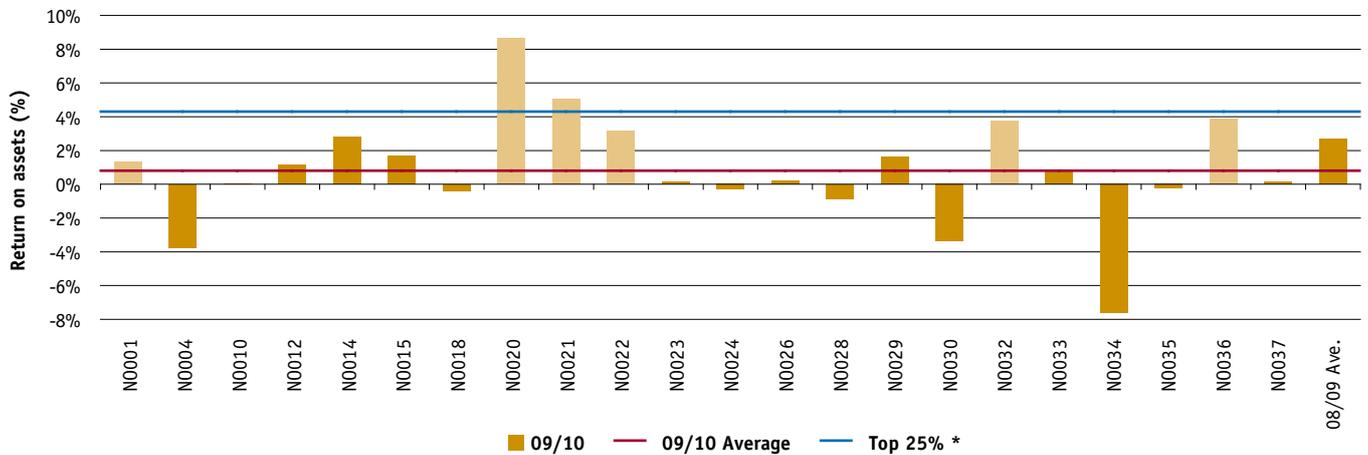


## Return on assets and equity

Return on assets is the earnings before interest and tax expressed as a percentage of total assets. It is an indicator of the overall earning power of total assets, irrespective of capital structure. Return on equity is the net farm income expressed as a percentage of owner equity. It is a measure of the owner's rate of return on investment. Figures 19 and 20 were calculated excluding capital appreciation. For return on equity including capital appreciation refer to Appendix Table A1.

Figure 19 shows the distribution of return on assets in 2009/10. The group achieved an average return on assets of 0.8% compared to 3.0% last year. The top 25% achieved 4.3% this year. Noticeably, the same farms that had a negative EBIT have a negative return on assets.

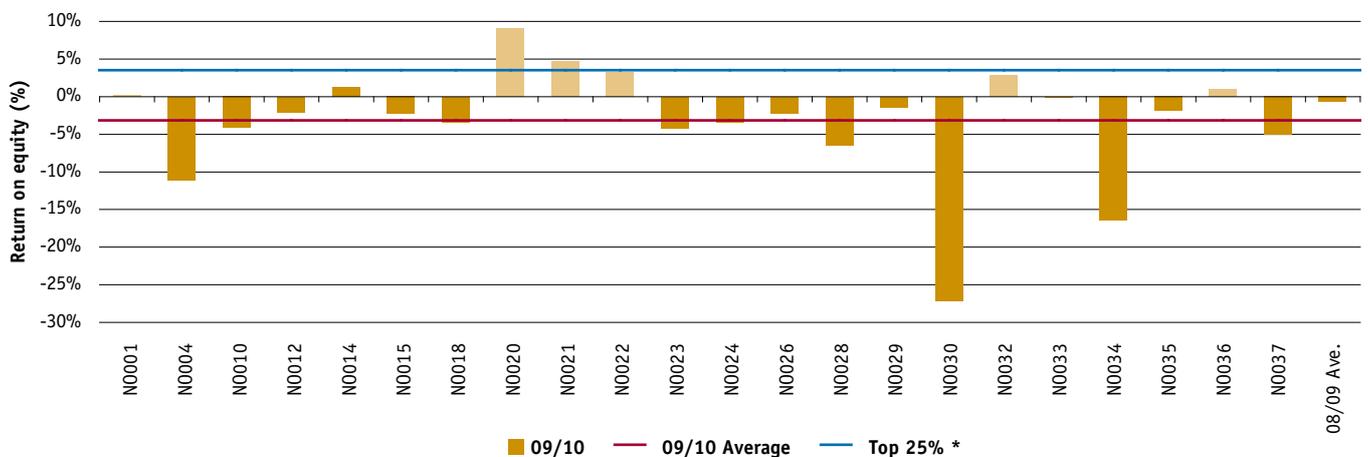
**FIGURE 19: RETURN ON ASSETS – NORTH**



The distribution of return on equity in 2009/10 is shown in Figure 20. Only one farm outside the top 25% achieved a positive return on equity. As a whole, the North achieved

an average return on equity of -3.1% and the top performers achieved 3.5%. This group average is noticeably lower than last year's group average of -1.0%.

**FIGURE 20: RETURN ON EQUITY – NORTH**



# Feed consumption and fertiliser

Feed data was collected on a whole farm basis, as determining which feeds went to each class of stock would have made the data collection process too difficult on many farms.

The relative contribution of each feed type to the ME consumption on the farm is shown in Figure 21. The broad range of different source of metabolisable energy used on individual farms is evident. For fourteen of the 22 farms surveyed in

the North, grazed pasture contributed less than half of the ME consumed on farm, which emphasises the demand for supplementary feed required in the diet.

**FIGURE 21: SOURCES OF WHOLE FARM METABOLISABLE ENERGY – NORTH**

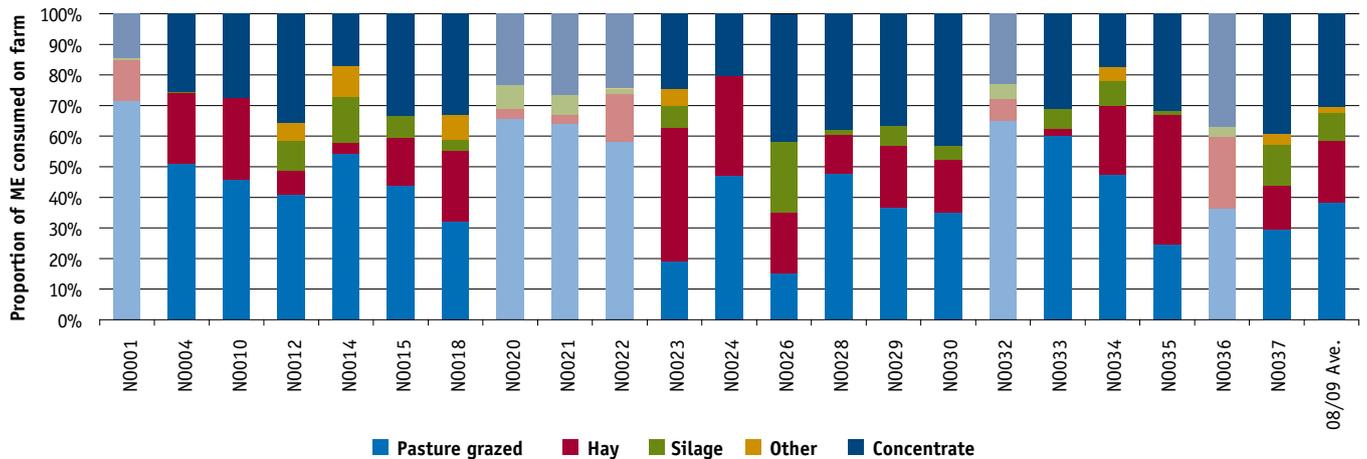


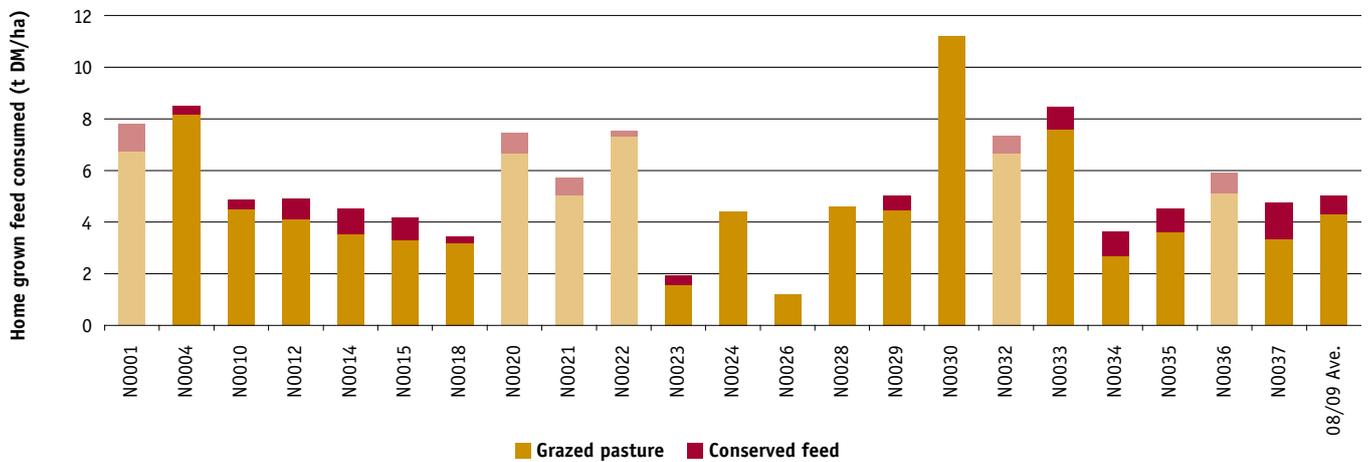
Figure 22 shows the estimated home grown feed production per hectare for farms in the North. The range is very large from 1.2 t/ha to over 11.2 t/ha, however the average was at the lower end of that range at 5.0 t/ha. This is consistent with home grown feed production result from the previous year which was 5 t/ha.

Grazed pasture consumption is estimated by using a back calculation method. It should be noted that there can be a number of sources of error in the method used to calculate home pasture consumption including incorrect estimation of

liveweight, amounts of fodder and concentrates fed, energy content of fodder and concentrate, energy content of pasture, wastage of feed and associative effects of feeds. Comparing pasture consumption estimated using the back calculation method between farms can lead to incorrect conclusions due to errors in each farm's estimate and it is best to compare pasture consumption on the same farm over time using the same method of estimation. More details on how pasture consumption was calculated can be found on page 17 of Part One – Statewide or in Appendix E.



**FIGURE 22: ESTIMATED TONNES OF HOME GROWN FEED PRODUCED PER HECTARE – NORTH**



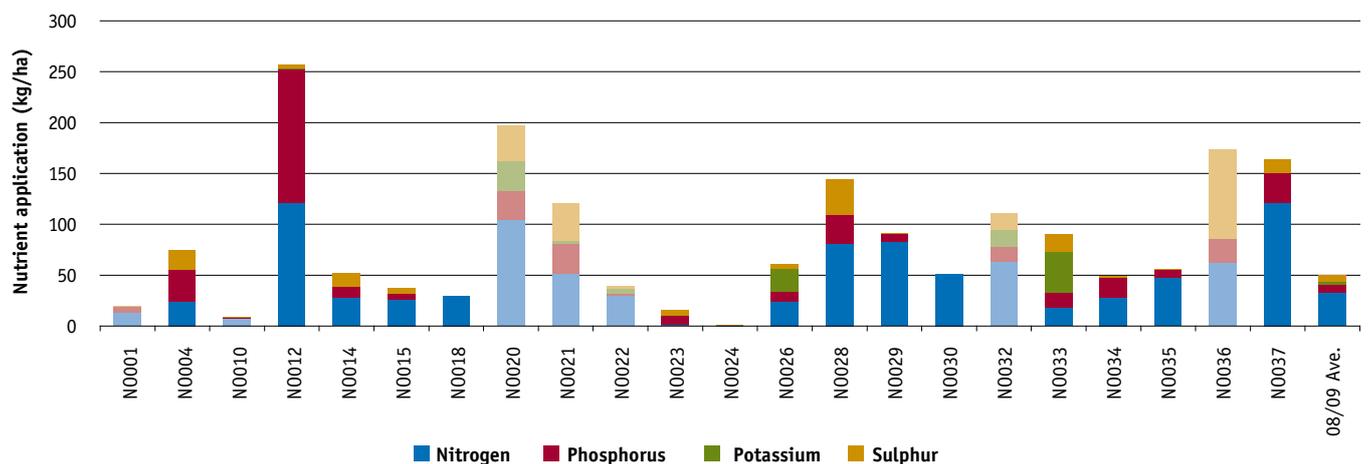
## Fertiliser application

The relationship between fertiliser application per hectare and home grown feed per tonnes of DM/ha during 2009/10 is shown in Figures 22 and 23. Unlike last year, where there was a trend of those farms that applied the greatest amount of fertiliser had the greatest amount of home grown feed, this year there are no clear trends.

This could be due to a range of factors including soil type, irrigation scheduling and timing of rain events.

Nearly three quarters (16 out of 22) of farms in the North applied fertiliser to at least some irrigated crops or pasture.

**FIGURE 23: NUTRIENT APPLICATION PER HECTARE – NORTH**







# Part Three: South West

# South West

Farms SW002 - SW025 were included in the 2008/09 sample and have been involved since 2006/07 sample. Please refer to page 5 for notes on the presentation of data.

## 2009/10 Seasonal conditions

Rainfall across the South West during 2009/10 and the average annual rainfall for participant farms are shown in Figure 24. Rainfall totals were between 93% and 115% of the individual long term averages, with nineteen farms recording annual rainfall greater than that of their respective long term average.

During 2009/10, the South West had an average winter rainfall, which led to some generalised water logging, while the spring was average to good. The combination of waterlogged pastures and reduced fertiliser applications due to cash flow limitations led to average quantities of silage and hay being produced. A mild summer saw average to above average yields from fodder crops with minimal insect damage. With a number of

good rainfall events during summer, pasture growth was also maintained. The autumn break was one of the best in a number of years, which has assisted in the good establishment of new pastures and has helped maintain overall pasture production. Appendix Table B2 gives further data on total rainfall and water used and, when compared to Figure 24, suggests that one of the farms in the top 25% had irrigation in 2009/10.

Top 25% \* - The top 25% are shown as the lighter bars in all graphs as ranked by earnings before interest and tax per hectare.

**FIGURE 24: 2009/10 ANNUAL RAINFALL AND LONG TERM AVERAGE RAINFALL – SOUTH WEST**

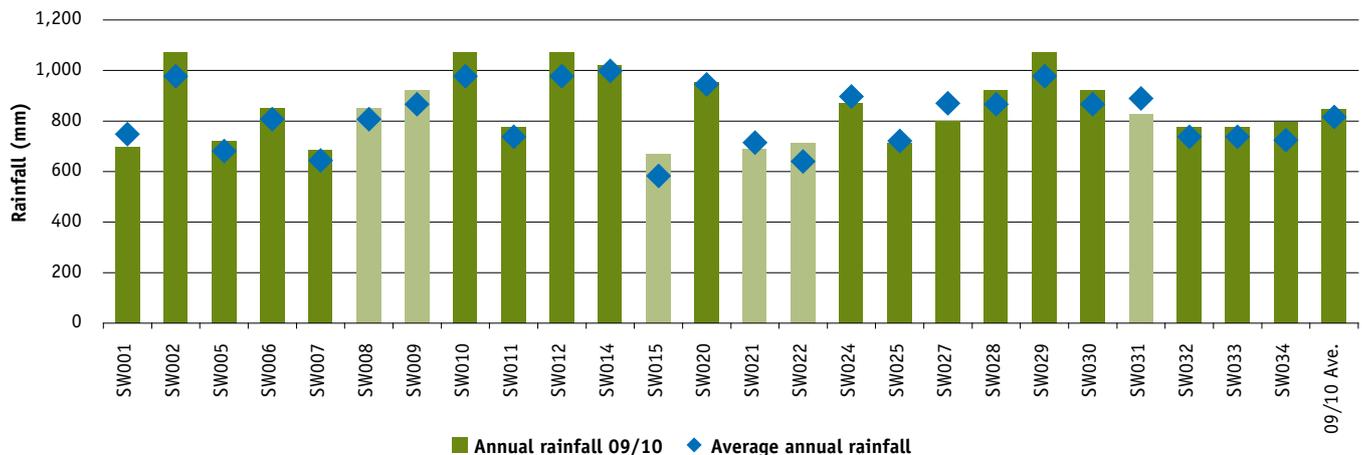


Figure 25 shows that gross income in the South West ranged from \$1,597 /ha to \$6,916/ha.

# Whole farm analysis

The key whole farm physical parameters for the South West are presented in Table 6. The Q1 – Q3 range shows the band in which the middle 50% of farms for each parameter sit.

The average farms received greater annual rainfall and used more water per hectare than the top 25% of farms ranked on earnings before interest and tax per hectare. However the key areas where the top 25% did distinguish themselves from the regional average were with total useable area, milk production, both as per cow and per hectare, and people productivity, both milking cows/FTE and kg MS/FTE.

**TABLE 6: FARM PHYSICAL DATA – SOUTH WEST**

FARM PHYSICAL PARAMETERS	SOUTH WEST AVERAGE	Q1 TO Q3 RANGE	TOP 25% AVERAGE
Annual rainfall 09/10	849	720 - 920	778
Water used (irrigation + rainfall) (mm/ha)	868	731 - 988	829
Total useable area (hectares)	302	146 - 353	494
Milking cows per useable hectares	1.3	1.1 - 1.5	1.4
Milk sold (kg MS /cow)	503	515 - 787	595
Milk sold (kg MS /ha)	665	446 - 560	817
Home grown feed as % of ME consumed	71%	67% - 75%	70%
People productivity (milking cows / FTE)	96	74 - 109	108
People productivity (kg MS / FTE)	48,392	37,987 – 56,266	63,585

## Gross farm income

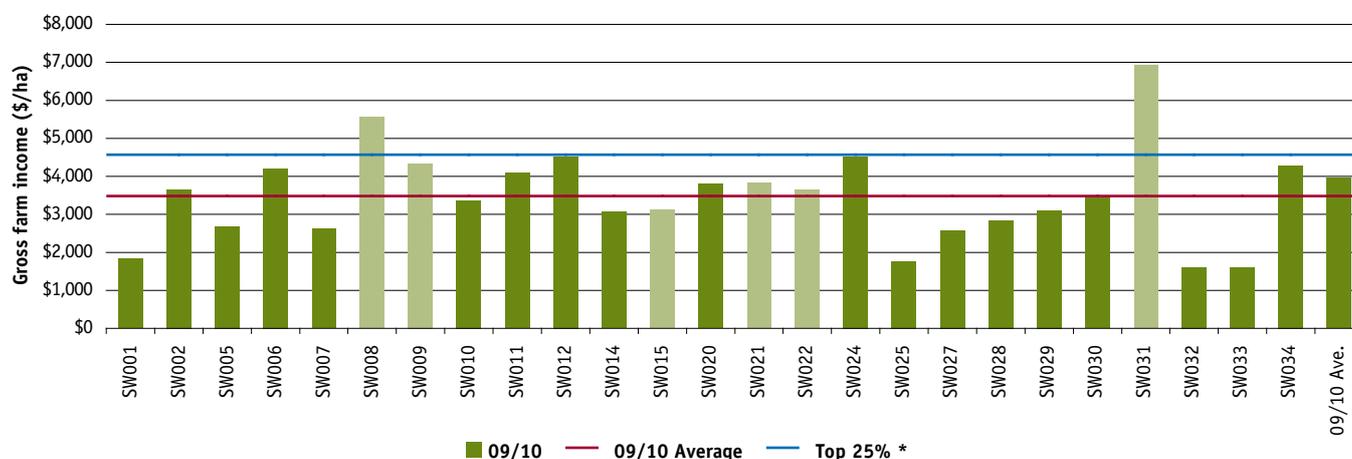
Gross farm income includes all farm income, whether that is income from milk sales, an increase in inventories of stock or feed, cash income from livestock trading, or income from other sources such as farm owned shares, interest from bank accounts and rebates or grants. Gross farm income as per kilogram of milk solids sold can be found in Appendix Table B1.

Figure 25 shows that gross income in the South West ranged from \$1,597 /ha to \$6,916/ha. In comparison with gross farm income from last year of \$3,964/ha, this year's average has

declined by \$484/ha to 3,480/ha, as shown by the red 2009/10 average line sitting below the 2008/09 average green bar.

Although on average the top 25% of farms had a higher gross income than the South West group, it can be seen in figure 25 that the top 25% of farms did not all receive the highest gross income for the group. This suggests these farms had other attributes that pushed them into the top 25%.

**FIGURE 25: GROSS FARM INCOME PER HECTARE – SOUTH WEST**

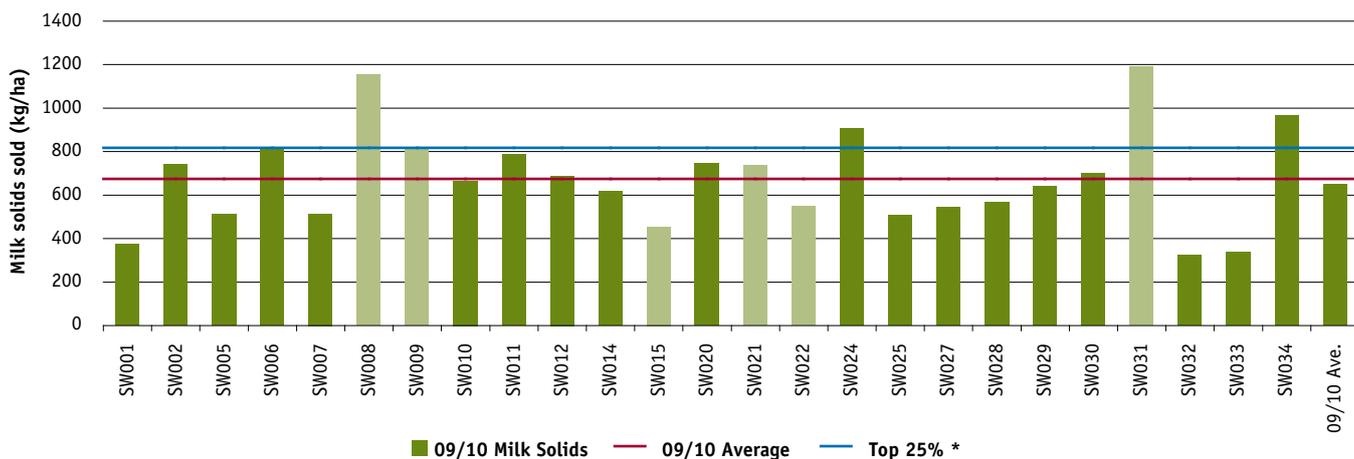


## Milk solids production

The strong correlation between income and milk solids per hectare can be seen in Figures 25 and 26. The variation between these figures is a result of other sources of income. The top performing farms achieved 817 kg MS/ha in the South

West compared to the average farm who sold 665 kg MS/ha. This group average is slightly up from the previous year of 649 kg MS/ha.

**FIGURE 26: MILK SOLIDS SOLD PER HECTARE – SOUTH WEST**



## Variable costs

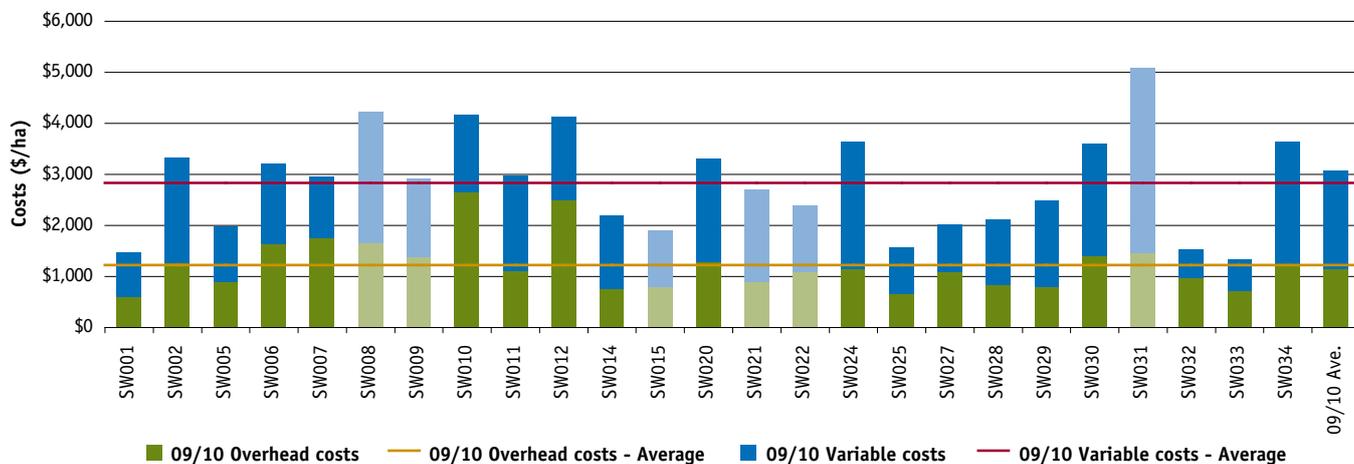
The separation of variable and overhead costs per hectare is shown in Figure 27. Variable costs are those costs that change directly according to the amount of output, such as herd, shed and feed costs.

cost in dairy farms of the South West; 47.5% of total costs of production were feed costs, which equates to 85% of the total variable costs.

Variable costs for the South West region varied from \$557/ha to \$3,635/ha. Feed costs were clearly the major variable

The percentage breakdown of the variable costs can be found in Appendix Table B6 and Appendix Table B4 gives the costs at dollars per kilogram of milk solids sold.

**FIGURE 27: WHOLE FARM VARIABLE AND OVERHEAD COSTS PER HECTARE – SOUTH WEST**



## Overhead costs

The calculation of overhead costs in the DIFMP consists of cash and non-cash costs to the dairy business. Examples of cash overheads include rates, insurance and employed people cost and non-cash overheads include depreciation and imputed labour.

Figure 27 also illustrates the variation in overhead costs per hectare between participant farms. Values ranged from \$597 to \$2,656 per hectare. There was not a large difference in the average overhead costs for the South West group and the top 25% average despite the large variation between individual farms. The average group recorded \$1,223/ha and the top 25% recorded \$1,213/ha.

The major overhead cost to the average South West farm was the cost of people in the business, which includes employed people and imputed labour. The cost of people represents 61% of total overhead costs. Repairs and maintenance and depreciation were the other two major overhead cost categories.

## Cost of production

Figure 27 and Table 7 present both variable and overhead costs to give total cost of production per hectare and per kilogram of milk solids sold. Cost of production is a useful risk ratio as it calculates the costs to produce a kilogram of milk solids sold. The comparison of cost of production to gross income returns the percentage of gross income retained as earnings (EBIT %).

**TABLE 7: COST OF PRODUCTION – SOUTH WEST**

FARM COSTS (\$ / KG MS)	SOUTH WEST AVERAGE	Q1 TO Q3 RANGE	TOP 25% AVERAGE
<b>VARIABLE COSTS</b>			
Herd costs	\$0.21	\$0.16 - \$0.25	\$0.21
Shed costs	\$0.16	\$0.11 - \$0.20	\$0.15
Purchased feed, inventory loss and agistment	\$1.17	\$0.79 - \$1.56	\$1.14
Home grown feed cost	\$0.82	\$0.68 - \$1.05	\$0.90
Livestock trading loss	\$0.00	\$0.00 - \$0.00	\$0.00
<b>Total variable costs (\$ / kg MS)</b>	<b>\$2.37</b>	<b>\$2.21 - \$2.64</b>	<b>\$2.40</b>
<b>OVERHEAD COSTS</b>			
Rates	\$0.04	\$0.03 - \$0.06	\$0.03
Registration and insurance	\$0.02	\$0.01 - \$0.02	\$0.01
Farm insurance	\$0.05	\$0.03 - \$0.08	\$0.04
Repairs and maintenance	\$0.27	\$0.17 - \$0.36	\$0.29
Bank charges	\$0.02	\$0.00 - \$0.02	\$0.02
Other overheads	\$0.11	\$0.04 - \$0.48	\$0.06
Employed people cost	\$0.38	\$0.60 - \$1.01	\$0.48
<b>Total cash overheads</b>	<b>\$0.89</b>	<b>\$0.03 - \$0.06</b>	<b>\$0.93</b>
Depreciation	\$0.21	\$0.12 - \$0.25	\$0.26
Imputed people cost	\$0.83	\$0.37 - \$1.05	\$0.36
<b>Total overhead costs (\$ / kg MS)</b>	<b>\$1.92</b>	<b>\$1.42 - \$1.99</b>	<b>\$1.55</b>
<b>Total cost of production (\$ / kg MS)</b>	<b>\$4.29</b>	<b>\$3.78 - \$4.43</b>	<b>\$3.95</b>

## Break-even price required

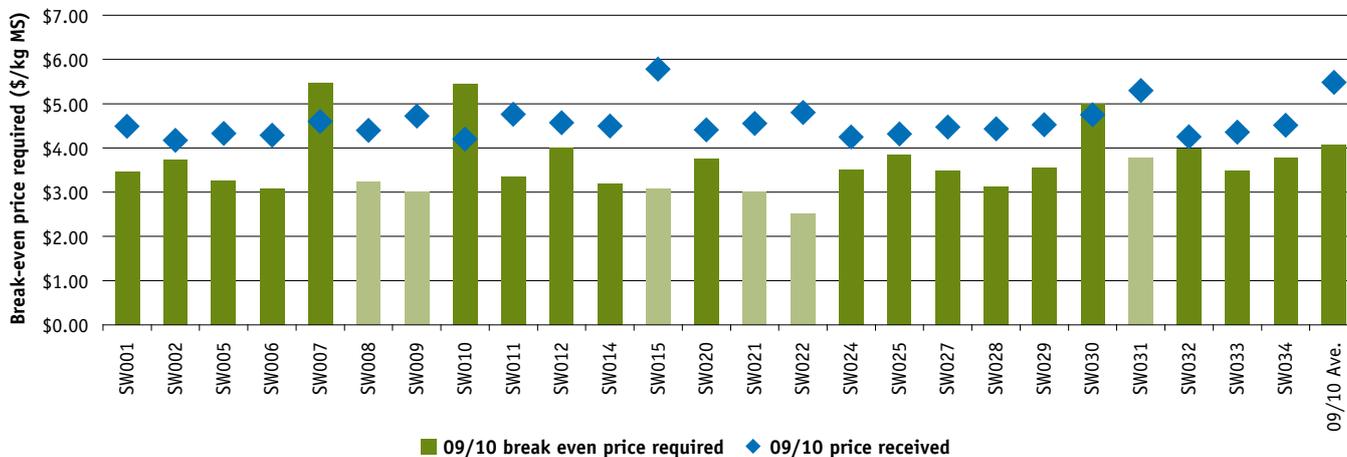
The break-even price required per kilogram of milk solids sold is calculated as the cost of production less any income from other sources, including livestock trading profit or increase in feed inventory. This makes it an even more relevant risk ratio in dairying than cost of production as it can be compared directly to the price of the main output in the business, that being milk price.

Figure 28 shows that the break-even price required varied from \$2.51 per kg MS to \$5.47 per kg MS in the South West.

The difference between the price received and the break-even price required is the earnings before interest and tax per kilogram of milk solids sold.

There is no clear link between those farms with higher break-even price required and per hectare cost, income or EBIT. This highlights the fact that values presented as dollars per kilogram milk solids sold are most useful as risk ratios for comparing dairy farms.

**FIGURE 28: BREAK-EVEN PRICE REQUIRED PER KILOGRAM OF MILK SOLIDS SOLD – SOUTH WEST**

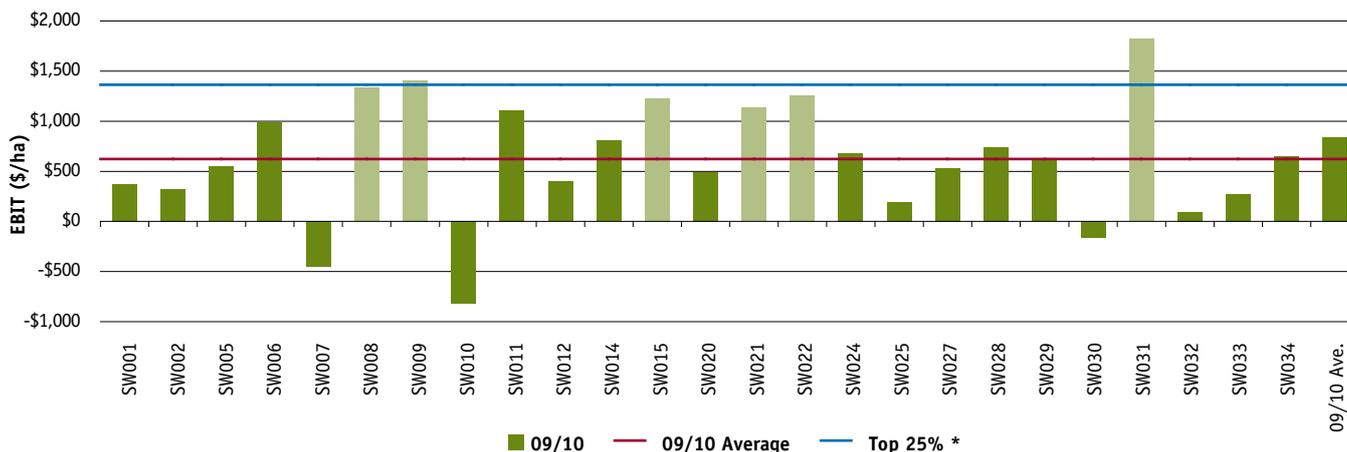


## Earnings Before Interest and Tax

Earnings before interest and tax (EBIT) is calculated by subtracting enterprise costs and overhead costs, including imputed labour costs from gross income. It is the return from all the capital invested in the business.

On average farms in the South West achieved an EBIT of \$622/ha, \$221/ha lower than the average of \$843/ha recorded last year. Despite a lower region average this year, the strength of financial performance in the region is again highlighted this year by comparing the regional average to the lower state wide average of \$504/ha.

**FIGURE 29: WHOLE FARM EARNINGS BEFORE INTEREST AND TAX PER HECTARE – SOUTH WEST**



## Return on assets and equity

Return on assets is the earnings before interest and tax expressed as a percentage of total assets involved in the farm business. It is an indicator of the overall earning power of total assets, irrespective of capital structure. Return on equity is the net farm income, that is EBIT minus interest and lease costs, expressed as a percentage of owner equity. It is a measure of the owner's rate of return on investment. Figures 30 and 31 were calculated excluding capital appreciation. For return on equity

including capital appreciation, as well as individual farm results, refer to Appendix Table B1.

The return on assets for the South West region ranged from -4.8% to 8.8%. Average return on asset for the group was 3.0%, down from 4.5% last year, and the top 25% achieved double that of the group average with 6.7%.

**FIGURE 30: RETURN ON ASSETS – SOUTH WEST**

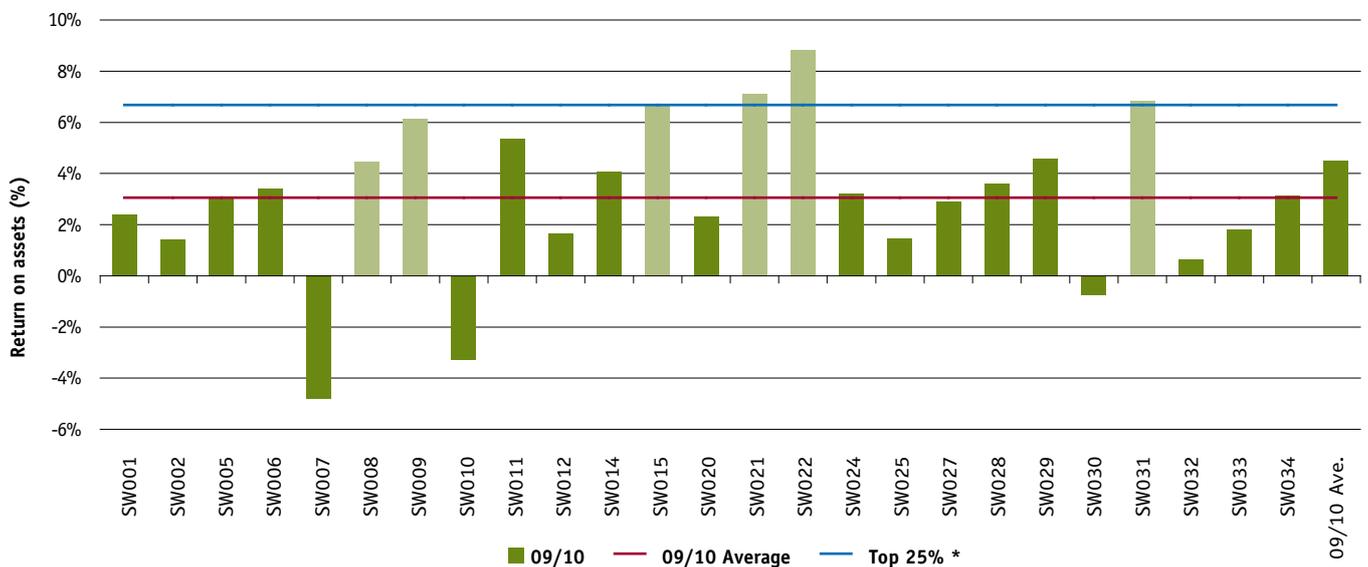
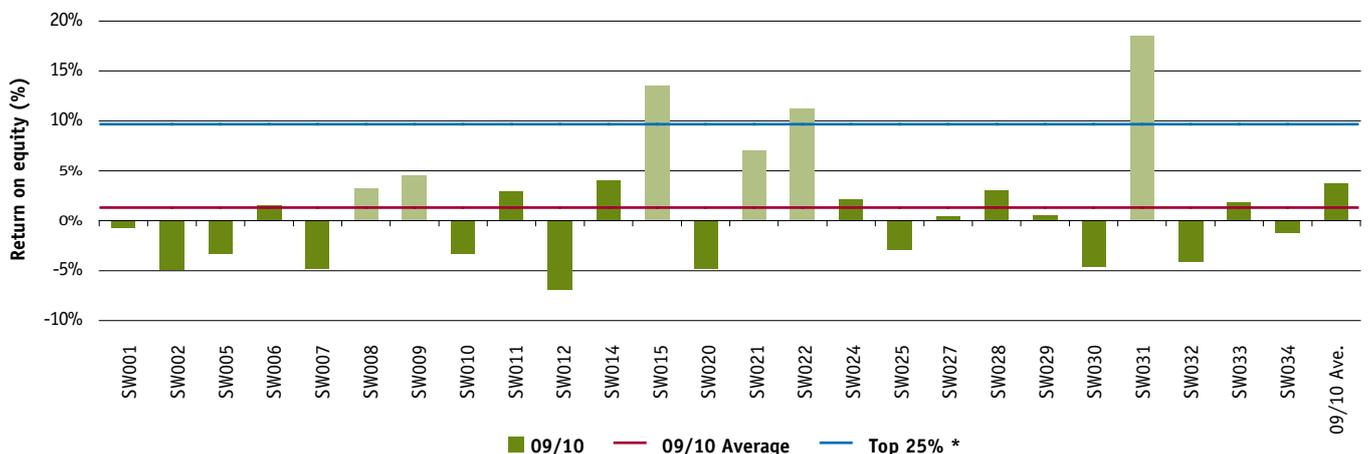


Figure 31 shows that the return on equity within the group ranged from -6.9% to 18.5% and averaged 1.3%. The average has again dropped this year and noticeably fewer farms achieved a positive return on equity compared to the previous two years. This lower return on equity can be attributed to the lower EBIT

achieved this year and the higher interest and lease charges compared to last year. A lower return on equity compared to a return on asset can be explained by interest and lease costs for additional capital being greater than the revenue it generates.

**FIGURE 31: RETURN ON EQUITY – SOUTH WEST**



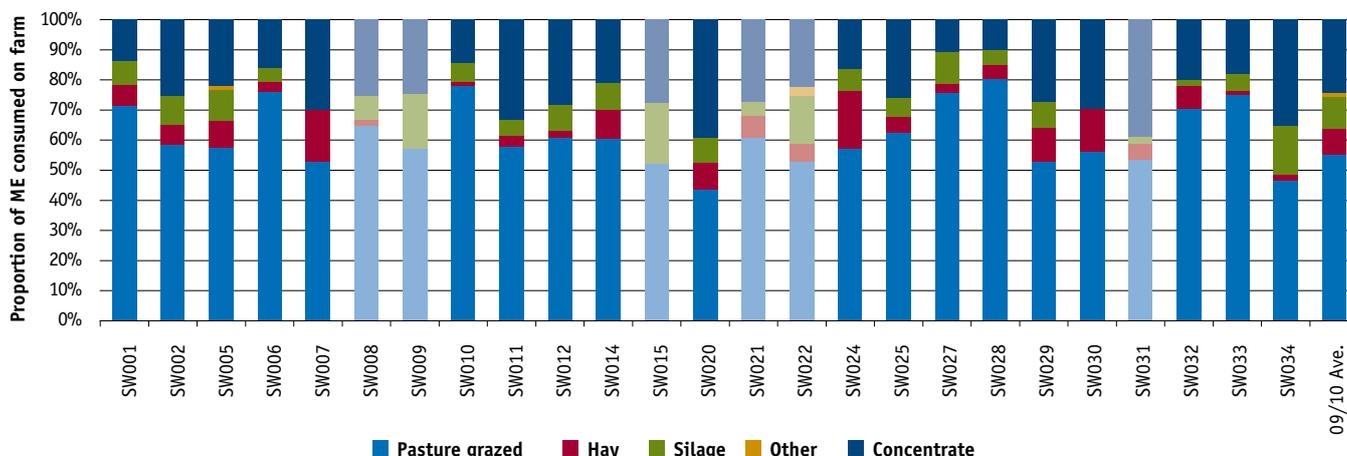
# Feed consumption and fertiliser

Feed data was collected on a whole farm basis rather than determining which feeds went to each class of stock as this would have made the data collection process too difficult on many farms.

Figure 32 shows the relative contribution of each feed type to the ME consumption on the farm. Grazed pasture contributes at least 44% of the ME consumed for all farms in the South West and 80% was the maximum. On average the total supplements fed represents 39% of ME consumed on farm.

'Other' sources of feed include sources that are not used by or available to dairy farmers on the common market. Palm kernel extract is included as a concentrate.

**FIGURE 32: SOURCES OF WHOLE FARM METABOLISABLE ENERGY – SOUTH WEST**



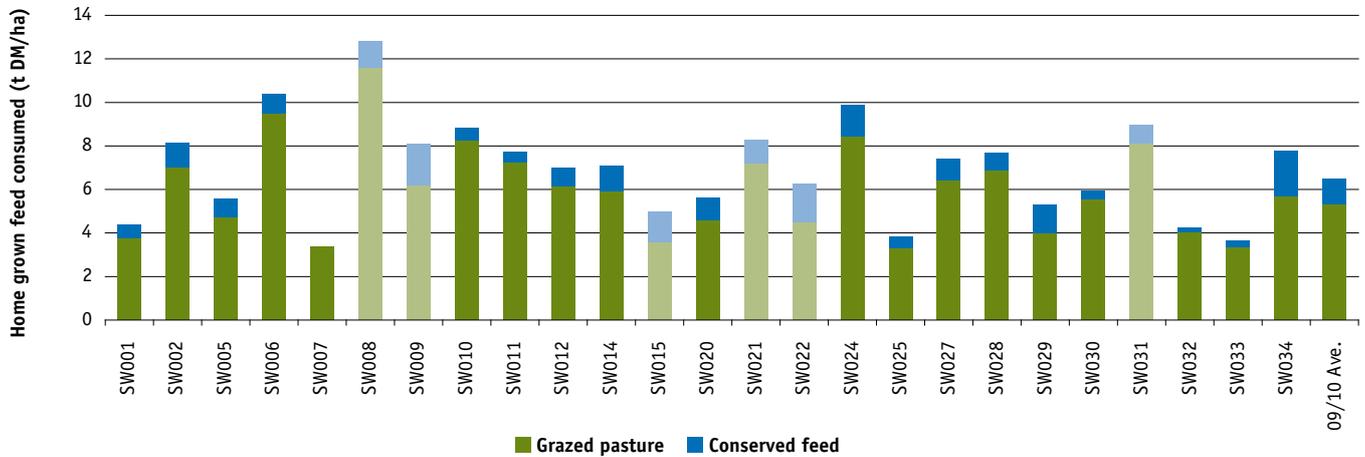
The estimated home grown feed consumption per hectare for farms in the South West is shown in Figure 33. This ranged from 3.4 t DM/ha up to 12.8 t DM/ha.

fodder and concentrate, energy content of pasture, wastage of feed and associative effects of feeds. Comparing pasture consumption estimated using the back calculation method between farms can lead to incorrect conclusions due errors in each farms estimate and it is best to compare pasture consumption on the same farm over time using the same method of estimation.

It should be noted that there can be a number of potential sources of error in the method used to calculate home pasture consumption including incorrect estimation of liveweight, amounts of fodder and concentrates fed, energy content of



**FIGURE 33: ESTIMATED TONNES OF HOME GROWN FEED PRODUCED PER HECTARE– SOUTH WEST**



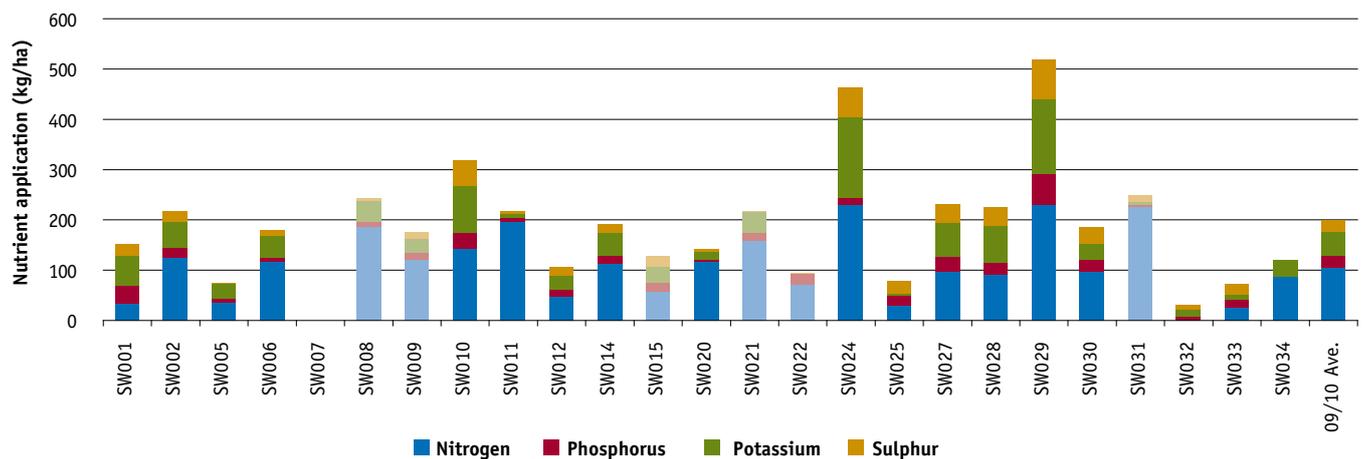
## Fertiliser application

The proportion of nutrients in fertiliser applied per hectare on farm is shown in Figure 34. Figures 33 and 34 do show some signs of correlation, but the influence of other factors beyond fertiliser application such as current soil fertility, climate and management of pastures can be attributable to the differences seen.

Rates of nitrogen application averaged over the entire useable area of each farm varied substantially, from 0kg/ha (25kg/ha is the lowest used amount) to up to 203 kg/ha. The average was 106 kg/ha, which exactly mirrors last year’s average.

The individual values relating to Figure 34 can be found in Appendix Table B2.

**FIGURE 34: NUTRIENT APPLICATION PER HECTARE – SOUTH WEST**







# Part Four: Gippsland

# Gippsland

Farms GI002 to GI017 are currently participating in the project for their fourth year. Farms GI020 to GI035 were involved in the 2009/10 project, excluding GI025. Please refer to page 5 for notes on the presentation of this data.

## 2009/10 Seasonal conditions

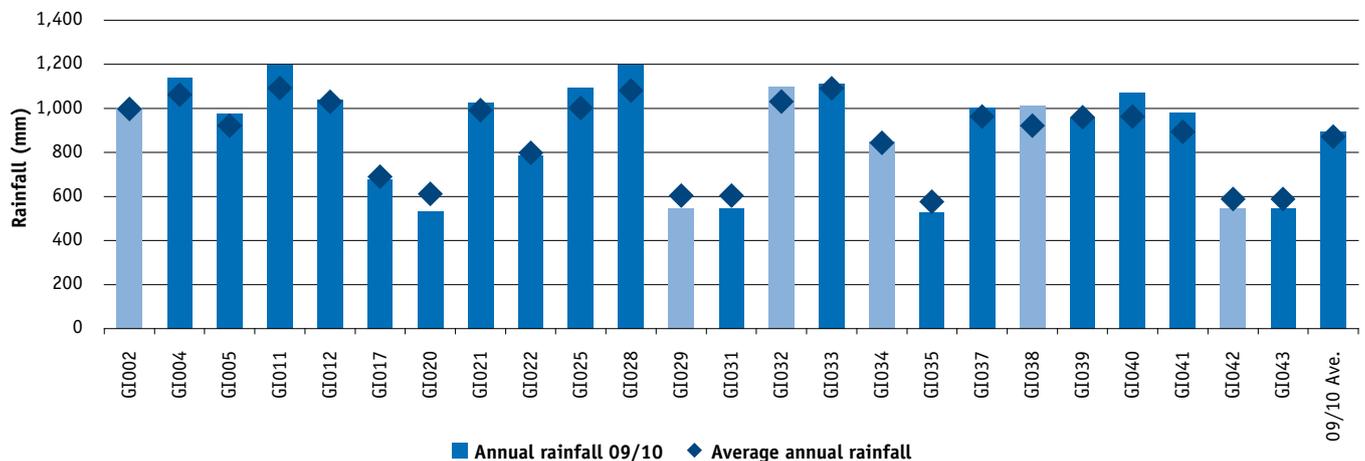
The rainfall across the Gippsland region during the 2009/10 is presented in Figure 35. Rainfall totals were generally in the range of 90% to 110% of the long-term average with the exception of GI020 who received 115% of the long term average.

In general, the winter and early spring period of 2009 in south and west Gippsland was very wet with only a small two week window in early September available to make silage. In contrast, conditions in east Gippsland were much drier with just enough moisture available to maintain pasture growth. The wet conditions in south and west Gippsland carried through to a warmer late October and a hot, dry early November that allowed plenty of late silage and early hay to be made however the quality of this fodder was lower than average. It wasn't until mid November that significant spring rain fell across all of Gippsland and temperatures returned back to normal for this time of year. Pasture quality after this period was much better than it had

been for the majority of spring. The late rain enabled green pasture to be carried into summer and also resulted in much of the Macalister Irrigation District receiving 90% of their water allocation, with final allocations finishing at 100% of high reliability water shares plus 45% of low reliability water shares. East Gippsland received some good rain in February in what appeared to be an early autumn break however this proved to be false and no more rain fell until late April. Across south and west Gippsland, the autumn break arrived in March promoting excellent pasture growth and continued autumn falls kept pasture growing right through to winter, reducing the need to feed large quantities of silage

Top 25% \* - The top 25% are shown as the lighter bars in all graphs as ranked by earnings before interest and tax per hectare.

**FIGURE 35: 2009/10 ANNUAL RAINFALL AND LONG TERM AVERAGE RAINFALL – GIPPSLAND**



The variation in gross income per hectare between participants in Gippsland, ranged from \$1,419/ha up to \$9,587/ha

# Whole farm analysis

The key whole farm physical parameters for Gippsland are presented in Table 8. The Q1 – Q3 range shows the band in which the middle 50% of farms for each parameter sit.

The averages of the top 25% of farms ranked on earnings before interest and tax per hectare were generally within the bounds of the Q1-Q3 range. Compared to the average of Gippsland participants, the top 25% used a smaller area (141 ha) and had lower annual rainfall (842 mm) but had considerably higher milk production with 865 kg MS sold per hectare, whereas the average achieved 792 kg MS.

**TABLE 8: FARM PHYSICAL DATA – GIPPSLAND**

FARM PHYSICAL PARAMETERS	GIPPSLAND AVERAGE	Q1 TO Q3 RANGE	TOP 25% AVERAGE
Annual rainfall 09/10	894	646 – 1,077	842
Water used (irrigation + rainfall) (mm/ha)	1,022	971 – 1,106	1,022
Total useable area (hectares)	172	98 - 212	141
Milking cows per useable hectares	1.7	1.4 – 2.0	1.7
Milk sold (kg MS /cow)	472	597 - 923	495
Milk sold (kg MS /ha)	792	440 - 517	865
Home grown feed as % of ME consumed	73%	70% - 80%	80%
People productivity (milking cows / FTE)	95	76 – 109	93
People productivity (kg MS / FTE)	44,537	37,282 – 50,694	46,176

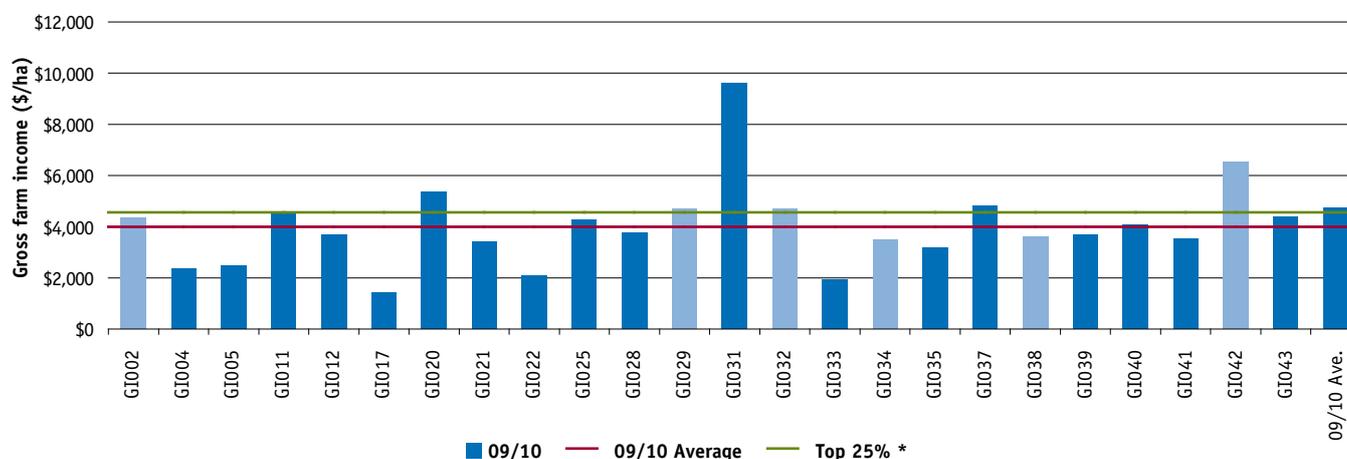
## Gross farm income

Gross farm income includes all farm income, whether that is income from milk sales, an increase in inventories of stock or feed or cash income from livestock trading. Income from sources such as farm owned shares, interest from bank accounts and rebates or farm related grants is also included. Off farm income such as that from unrelated work, personal or family income support is not included.

Figure 36 below shows the variation in gross income per hectare between participants in Gippsland, ranging from \$1,419/ha up to \$9,587/ha. The top 25% of farms averaged \$4,558/ha, compared to the group average of \$3,994.

Figure 36 shows that higher gross income does not necessarily correspond to a higher EBIT. Those farms with high gross income, such as GI020, GI031 and GI037, were not ranked in the top 25%. This suggests that the farms in the top 25% displayed other strengths, rather than high gross income, which resulted in them having the top whole farm earnings before interest and tax within the group.

**FIGURE 36: GROSS FARM INCOME PER HECTARE – GIPPSLAND**



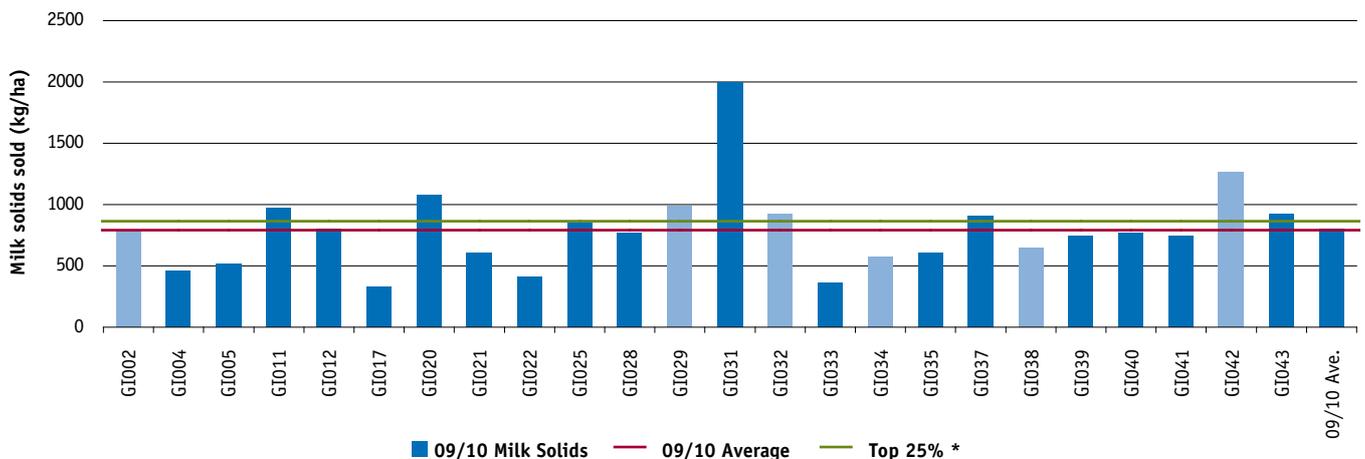
## Milk solids production

In 2009/10, average milk solids sold per hectare slightly declined on average to 792 kg MS/ha, falling slightly from 2008/09 levels of 803kg MS/ha. Similarly the top 25% of farms average kilograms of milk solids per hectare declined 41% from 2008/09 levels to 865kg MS/ha. There does not appear to be

any strong link between milk solids sold per hectare with either annual rainfall or the long-term average for individual farms.

The across-farm differences between Figure 36 and Figure 37 are explained by differences in the milk price received and income received from other sources by the individual farms.

**FIGURE 37: MILK SOLIDS SOLD PER HECTARE – GIPPSLAND**



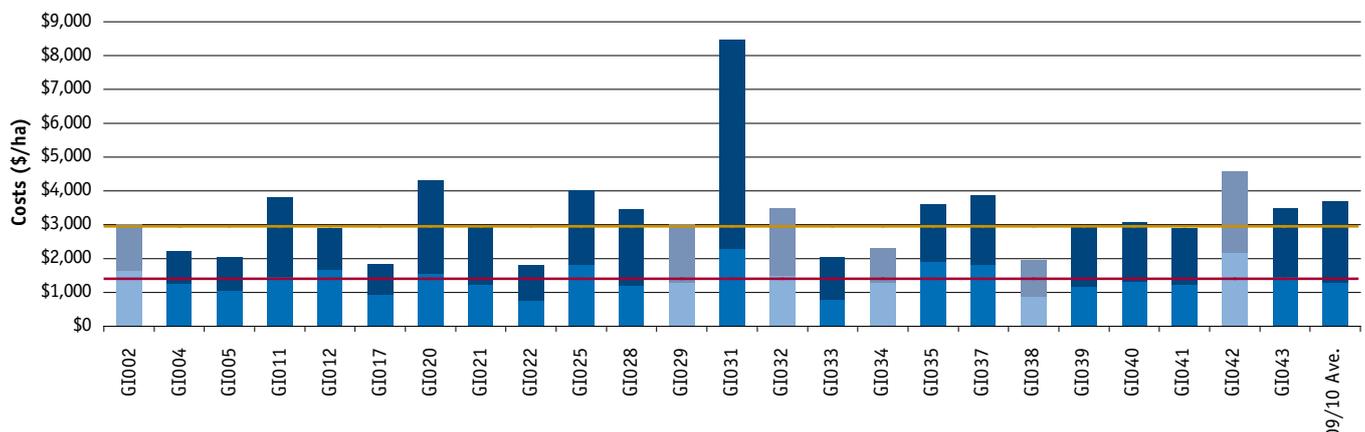
## Variable costs

Total variable costs for the individual farms on a per hectare basis can be seen in Figure 38, with the detailed per kilogram of milk solids sold values presented in Appendix Table C4. The percentages of each variable cost category that make up the total can be found in Appendix Table C6.

farms. They accounted for an average of 46% of total cost of production or 84% of total variable costs. Within feed costs, concentrates was the major component which accounted for 40% of the total variable costs. Fertiliser cost was the next major component at 17% of total variable costs. Variable costs were lower this year at \$2.33 kg MS compared to \$3.01 kg MS, emanating from a significantly reduced spending of \$0.52/kg MS, on purchased feed, inventory loss and agistment.

Similar with other regions and last year, in 2009/10 feed costs were by far the most significant variable cost for Gippsland

**FIGURE 38: WHOLE FARM VARIABLE AND OVERHEAD COSTS PER HECTARE – GIPPSLAND**



## Overhead costs

Figure 38 also illustrates the overhead costs per hectare for Gippsland. This figure includes the non cash overhead costs of imputed people cost and depreciation. Both these cost categories are very important costs to be considered in an economic analysis of a business to realistically monitor farm business performance.

People cost, including employed people and imputed people costs, was the major overhead cost, accounting for 63% of overhead costs for the regional average, and 60% in the top 25% of farms. The break down of overheads cost per hectare as a percent of the total costs can be found in Appendix Table C7 and Appendix Table C5 for breakdown to dollars per kilogram of milk solids (\$/kg MS).

There was a range of total overhead costs in Gippsland during 2009/10. The highest value was \$2,293/ha, almost three times the level of the lowest value, \$761/ha. Table 9 gives an indication of the range of overheads as per kilogram of milk solids sold and presents the regional and top 25% averages.

## Cost of production

Figure 38 and Table 9 present both variable and overhead costs to give the total cost of production per hectare and per kilogram of milk solids sold respectively. When cost of production is expressed as per kilogram of milk solids sold, the cost of production can be a useful risk ratio. By comparing cost of production per kilogram of milk solids sold to gross income, the average operating margin, ie EBIT/ kg MS, can be obtained.

As mentioned in the overhead costs section imputed people cost and depreciation are very important non-cash costs to be considered in an economic analysis of a business. However, Table 9 has these costs separated out allowing owner/operators to distinguish their own cost of labour and where cash flows occur in the business.

**TABLE 9: COST OF PRODUCTION – GIPPSLAND**

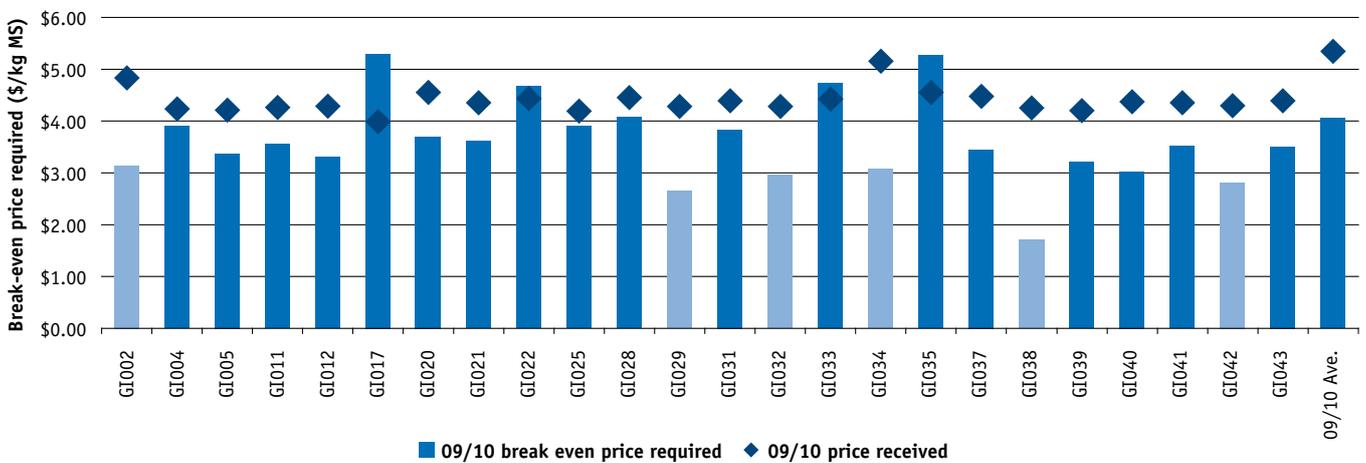
FARM COSTS (\$ / KG MS)	GIPPSLAND AVERAGE	Q1 TO Q3 RANGE	TOP 25% AVERAGE
<b>VARIABLE COSTS</b>			
Herd costs	\$0.22	\$0.15 - \$0.25	\$0.16
Shed costs	\$0.17	\$0.12 - \$0.20	\$0.15
Purchased feed, inventory loss and agistment	\$1.10	\$0.87 - \$1.38	\$0.76
Home grown feed cost	\$0.84	\$0.66 - \$0.99	\$0.77
Livestock trading loss	\$0.00	\$0.00 - \$0.00	\$0.00
<b>Total variable costs (\$ / kg MS)</b>	<b>\$2.33</b>	<b>\$1.91 - \$2.63</b>	<b>\$1.83</b>
<b>OVERHEAD COSTS</b>			
Rates	\$0.06	\$0.03 - \$0.06	\$0.08
Registration and insurance	\$0.03	\$0.01 - \$0.04	\$0.02
Farm insurance	\$0.05	\$0.03 - \$0.07	\$0.07
Repairs and maintenance	\$0.24	\$0.13 - \$0.30	\$0.21
Bank charges	\$0.02	\$0.00 - \$0.01	\$0.01
Other overheads	\$0.10	\$0.05 - \$0.13	\$0.07
Employed people cost	\$0.32	\$0.06 - \$0.50	\$0.11
<b>Total cash overheads</b>	<b>\$0.80</b>	<b>\$0.52 - \$1.04</b>	<b>\$0.58</b>
Depreciation	\$0.21	\$0.12 - \$0.29	\$0.21
Imputed people cost	\$0.88	\$0.54 - \$1.23	\$0.92
<b>Total overhead costs (\$ / kg MS)</b>	<b>\$1.90</b>	<b>\$1.55 - \$2.09</b>	<b>\$1.71</b>
<b>Total cost of production (\$ / kg MS)</b>	<b>\$4.22</b>	<b>\$3.80 - \$4.54</b>	<b>\$3.54</b>

## Break-even price required

The break-even price required for milk is calculated as the cost of production per kilogram of milk solids sold less any livestock trading profit or increase in feed inventory. By accounting for all costs and other sources of income, the break-even price required allows for a direct comparison to the price received for the main output of the business, being milk. The difference between the break-even price required and the price received is the earnings before interest and tax per unit.

Figure 39 shows that the break-even price required varies from \$1.71 per kg MS to \$5.30 per kg MS in Gippsland. Four farms, GI017, GI022, GI033 and GI035, have a break-even price required less than the price received which relates directly to the negative EBIT and return on assets for these farms. At \$3.59/kg MS, the average break-even price required is lower than that recorded in 2008/09 of \$4.05/kg MS. Also the milk price received is lower on average at \$4.38/kg MS compared to \$5.35/ kgMS last year.

**FIGURE 39: BREAK-EVEN PRICE REQUIRED PER KILOGRAM OF MILK SOLIDS SOLD – GIPPSLAND**



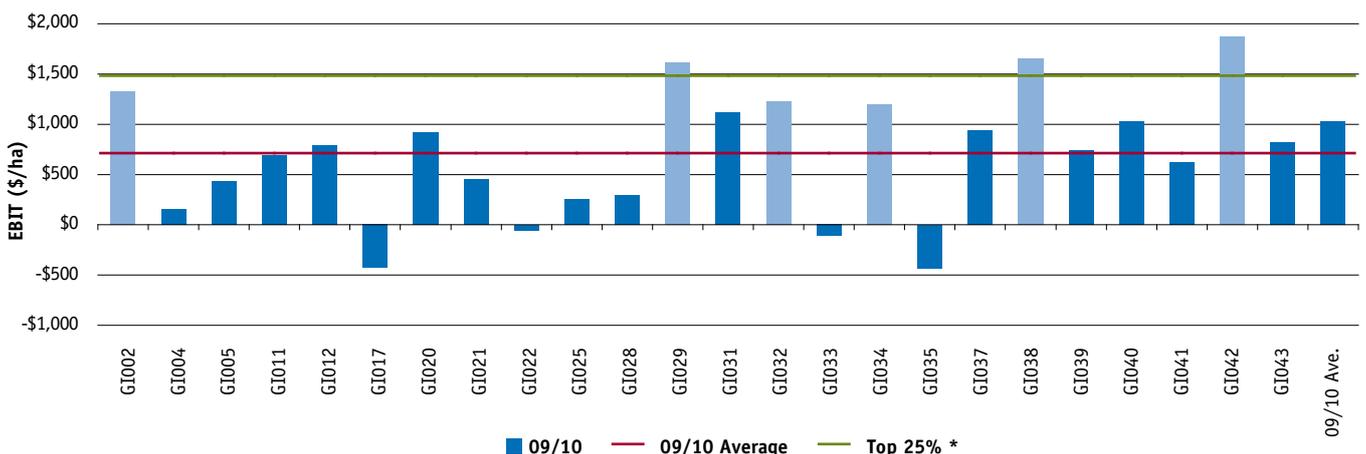
## Earnings Before Interest and Tax

Earnings before interest and tax (EBIT) is the gross income, less variable and overhead costs including imputed costs. During 2009/10 the EBIT on average for Gippsland farms fell to \$713/ha, from \$1,032/ha last year representing a 31% decline. The top 25% of farms recorded average EBIT of \$1,505/ha which is double the regional average. Possible explanations for the decline in EBIT this year can be attributed to the lower milk

production per hectare and lower milk price contributing to a lower gross farm income, as well as higher overhead costs.

Of interest is that those farms in the top 25% last year are again in the top performing group again this year, excluding those farms not in this year's dataset. This is a clear sign of consistently high performance by those farms when compared by EBIT.

**FIGURE 40: WHOLE FARM EARNINGS BEFORE INTEREST AND TAX PER HECTARE – GIPPSLAND**



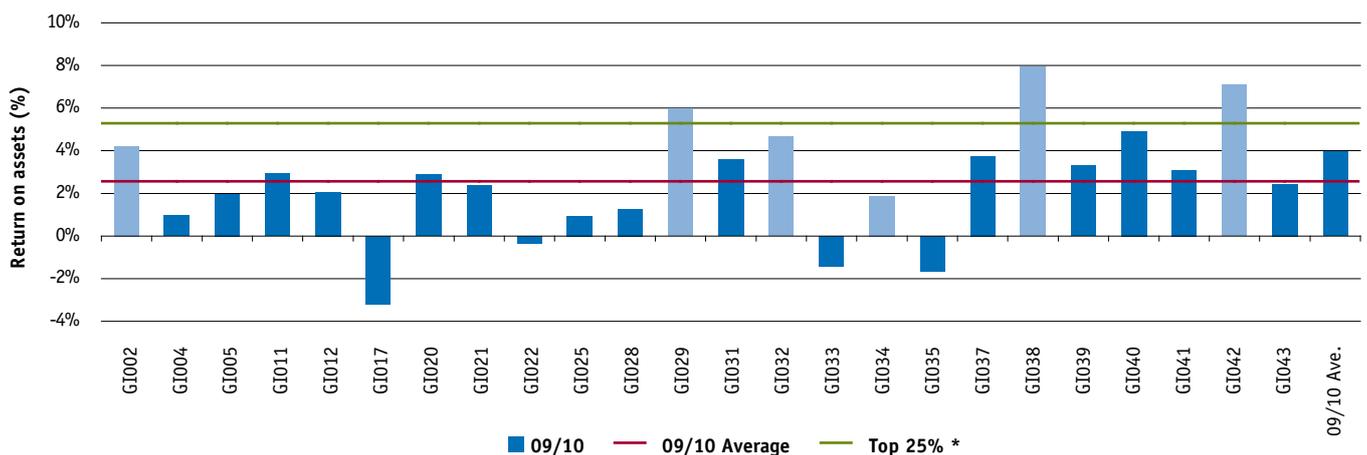
## Return on assets and equity

Return on assets is the earnings before interest and tax expressed as a percentage of total assets. It is an indicator of the earning power of total assets, irrespective of capital structure. Return on equity is the net farm income (earnings before interest and tax less interest and lease payments) expressed as a percentage of the owner's equity. It is a measure of the owner's rate of return on investment.

The variation between farms' return on assets will reflect the variation between farms' earnings before interest and tax, with differences between those farms with a similar EBIT being explained by the variation in the valuation of the total assets managed. These results are a reflection of the total economic result on the farm.

Return on assets in Gippsland ranged from -3.2% to 8.0% during 2009/10. The average of 2.6% return on assets for Gippsland is noticeably lower than last year, as shown by the red 09/10 average line being approximately two-thirds of the way up the 08/09 average bar. A return on assets becomes a lesser return on equity when the rate of interest on loans or lease on leased capital is greater than the return from the additional assets managed. A negative return on equity will result when total interest and lease payments exceed the earnings before interest and tax. When the percentage increases, it is the result of a higher return from the additional assets than the interest or lease rate.

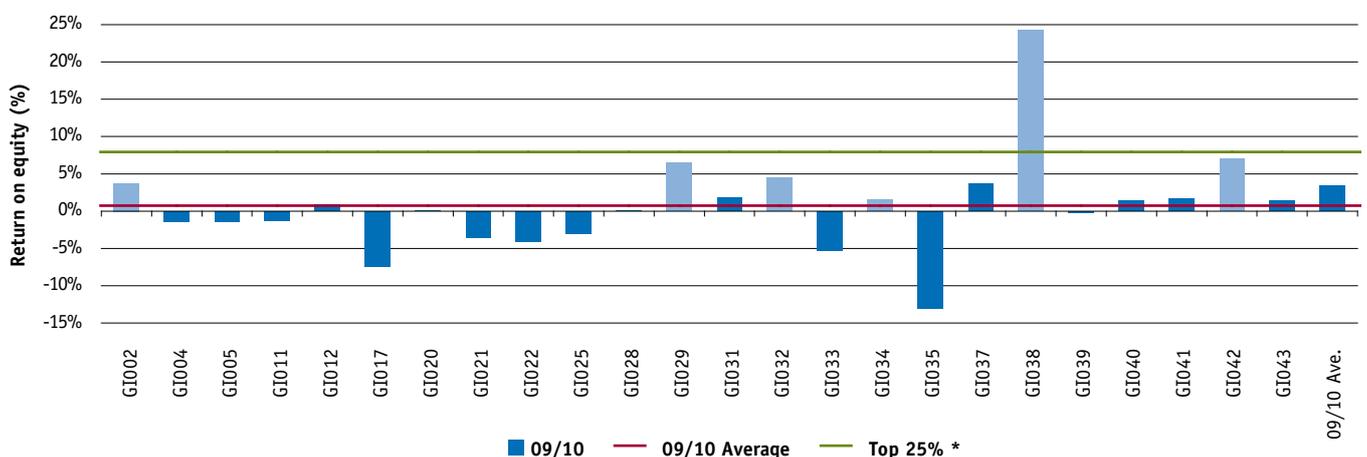
**FIGURE 41: RETURN ON ASSETS – GIPPSLAND**



Gippsland had mixed but generally positive results for return on equity (Figure 42). Values ranged from -13% up to 24%, and from the dataset 14 farms recorded a positive return on

equity. The significantly higher return on equity of GI038 can be explained by the significant proportion of leased land by this farm. The capital values can be seen in Appendix C1.

**FIGURE 42: RETURN ON EQUITY – GIPPSLAND**



# Feed consumption and fertiliser

Figure 43 shows that Gippsland dairy farming systems were predominantly pasture based, with 23 of the 24 farms sourcing over half their energy requirement from grazed pasture and all participants sourcing at least half their energy requirements from home grown feed. Pasture consumption is calculated as the gap between the calculated total energy required on farm for all stock classes and the energy provided from concentrates, silage, hay and other sources. A further description of the Energetics method used to calculate energy sources and feed consumption can be found on page 16 of Part One – Statewide or in Appendix E.

‘Other’ sources of feed include sources that are not used by or available to dairy farmers on the common market. Palm kernel extract is included as a concentrate.

**FIGURE 43: SOURCES OF WHOLE FARM METABOLISABLE ENERGY – GIPPSLAND**

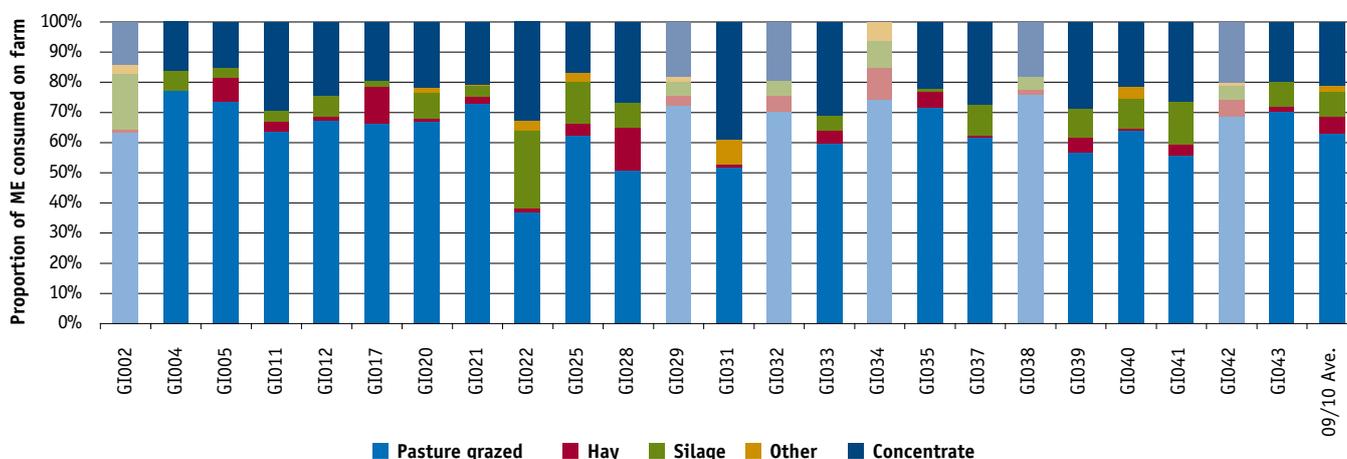


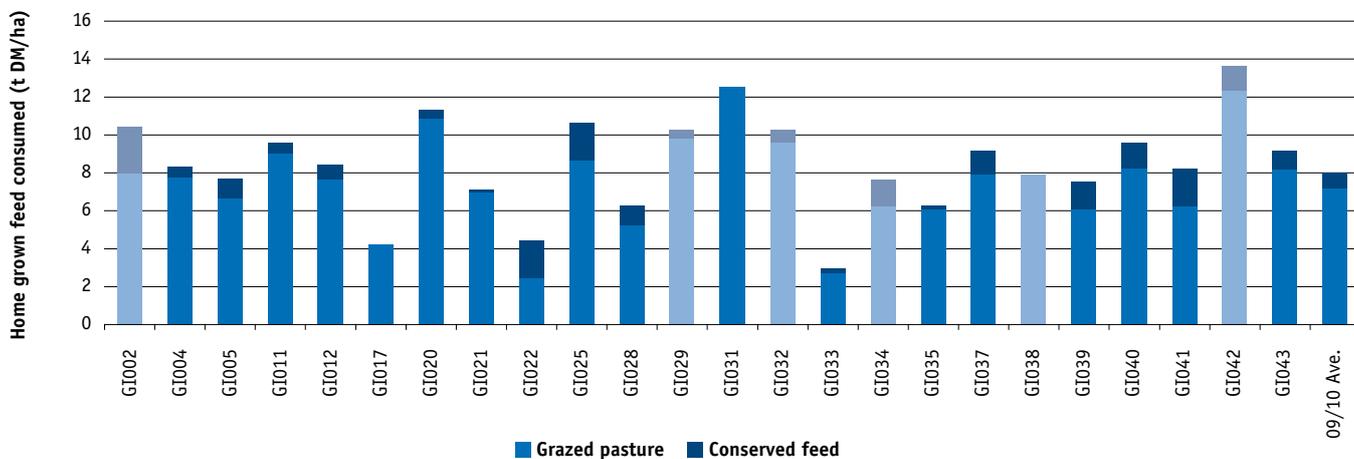
Figure 44 shows the estimated tonnes of home grown feed consumed per hectare for farms in Gippsland. Home grown feed can either be as grazed pasture (shown by the bottom lighter blue bars) and conserved pasture (shown by the top darker blue bars). These ranged from 2.9 t DM/ha up to 13.6 t DM/ha. The top 25% of farms had varying levels of conserved and home grown feed as not all the farms were above the regional average of 8.5 t DM/ha.

Of the sixteen farms that were involved in the past two years, there has been an increase in the estimate of home grown feed consumed for fifteen of these farms. This has come despite a decline on average of fertiliser rates however it does reflect the

increased rainfall, especially during September, a month a high pasture growth.

It should be noted that there can be a number of sources of error in the method used to calculate home pasture consumption including incorrect estimation of liveweight, amounts of fodder and concentrates fed, energy content of fodder and concentrate, energy content of pasture, wastage of feed and associative effects of feeds. Comparing pasture consumption estimated using the back calculation method between farms can lead to incorrect conclusions due to errors in each farms estimate and it is best to compare pasture consumption on the same farm over time using the same method of estimation.

**FIGURE 44: ESTIMATED TONNES OF HOME GROWN FEED PRODUCED PER HECTARE– GIPPSLAND**

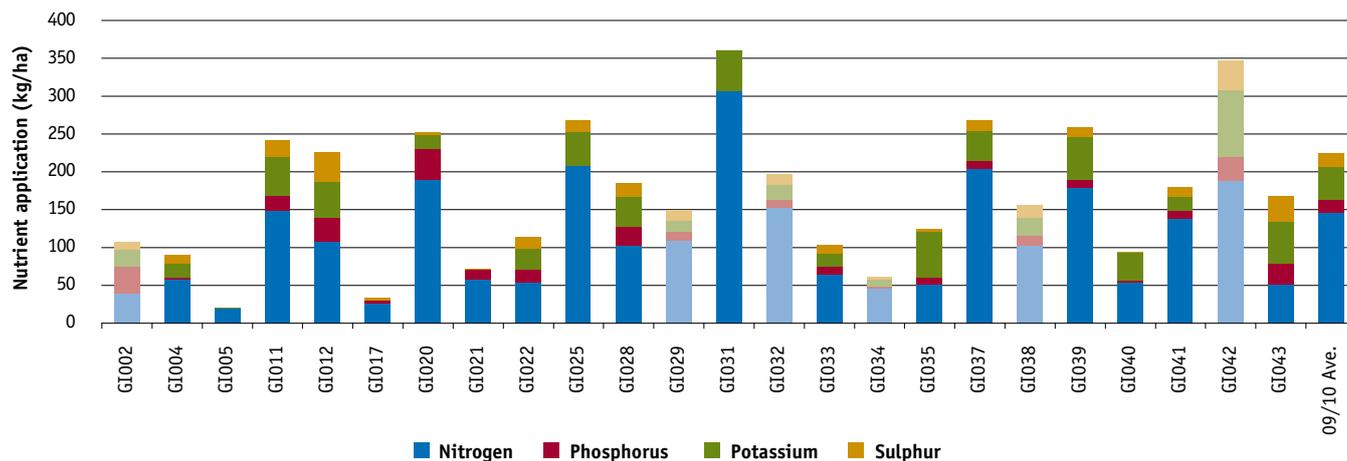


## Fertiliser application

Farms in Gippsland used a wide range of fertiliser application rates, both between farms and with the mix of key macronutrients on individual farms. With regard to application of nitrogen, rates varied from 19kg/ ha up to 307kg/ha, with the group average at 111kg/ha and the top 25% applied 107 kg/ ha of nitrogen.

There appears to be some degree of correlation between the pasture growth per hectare and fertiliser application rates as seen in Figures 44 and 45. The four farms with the highest pasture consumption also had the highest fertiliser application rates, although it should be noted that grazing strategies, timing and amount of rainfall and irrigation scheduling would also impact pasture growth and consumption. The values for Figure 45 can be found in Appendix Table C2.

**FIGURE 45: FERTILISER APPLICATION PER HECTARE – GIPPSLAND**







# Part Five: Business Confidence Survey

# Expectations, issues and owner / operator time and holidays

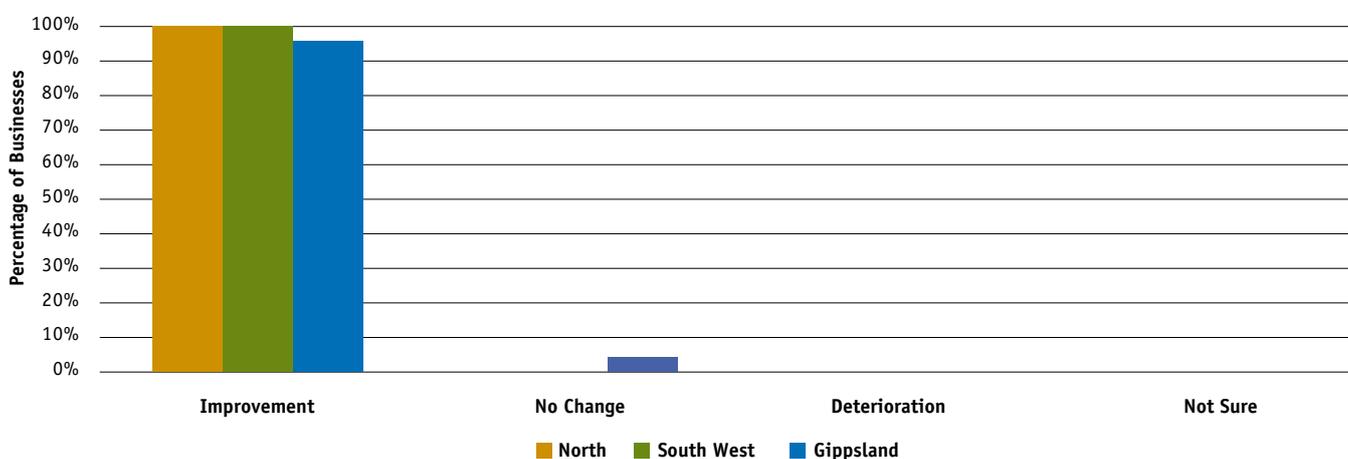
Responses to this business confidence survey were made in June and July 2010 with regard to the 2-010/11 financial year.

## Expectation for business returns

The expectations for business returns for 2010/11 have significantly changed from those recorded last year. Following the unprecedented milk price drop last year, the majority of farms had expected their business returns to deteriorate. However in 2010/11 there has been a substantial change in confidence. All farms, excluding one farm in Gippsland, expect their business returns to improve.

Responses to the survey were made with consideration of all aspects of farming, including climate and market conditions for all products bought and sold.

**FIGURE 46: EXPECTED CHANGE TO FARM BUSINESS RETURNS IN 2010/11**

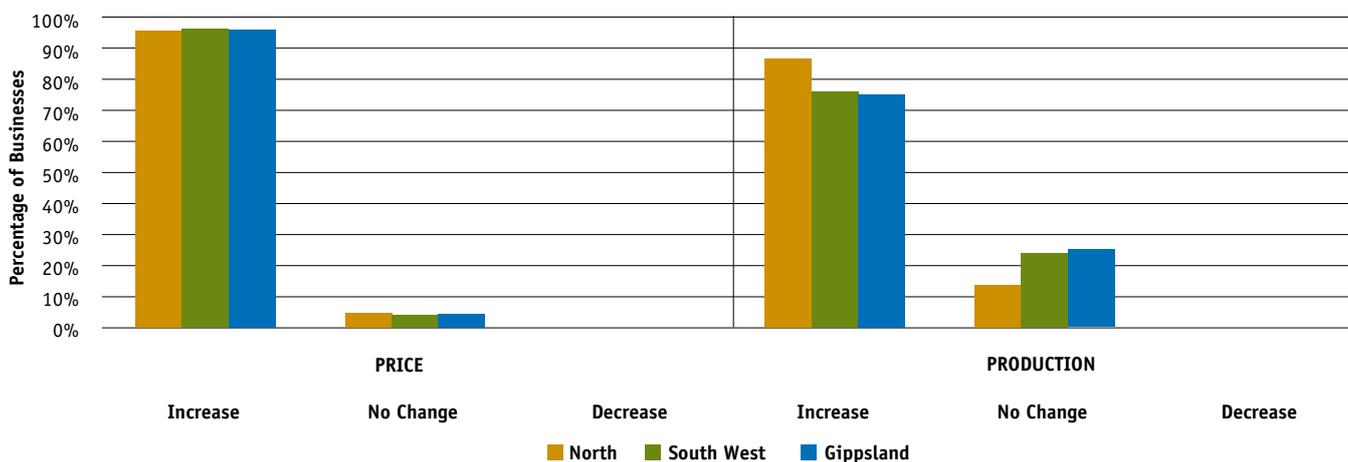


## Price and production expectations – milk

The majority of farmers are expecting their milk price and milk production to increase in 2010/11. There is a greater expectation that the milk price will increase than milk production. Around 95% of farmers in all regions agreed

that the milk price will increase in the coming year compared to 75-86% of farmers are expecting milk production to increase, as shown in Figure 47.

**FIGURE 47: PRODUCER EXPECTATIONS OF PRICES AND PRODUCTION OF MILK IN 2010/11**

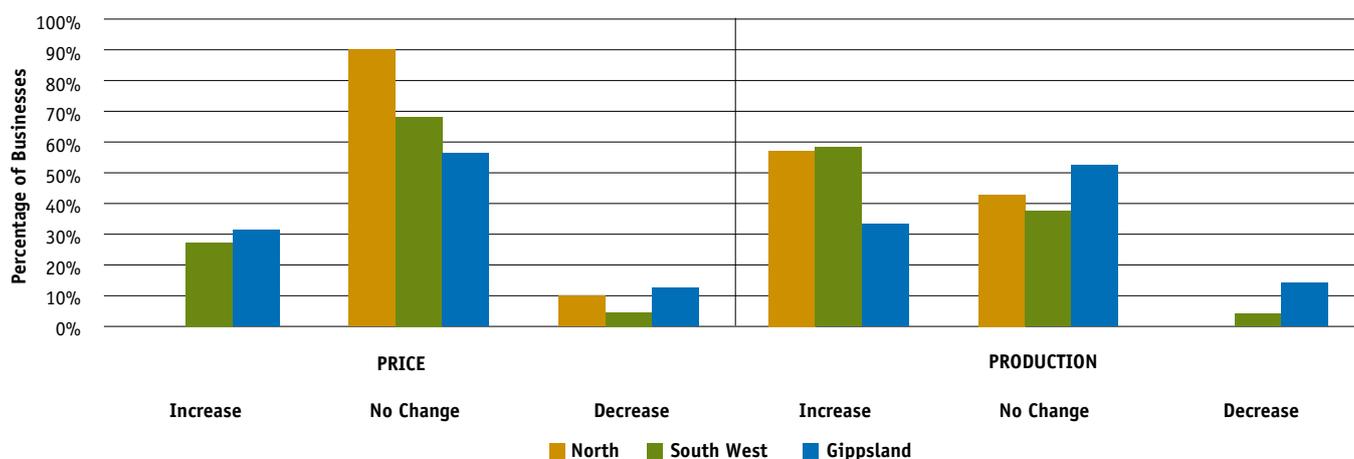


## Price and production expectations – fodder

There are mixed expectations of the price and production of fodder for farms between dairying regions (Figure 48). Of those participants in the North, 90% expect no change to the price of fodder and are split between an increase and no change in fodder production. These trends are similar to the South West and Gippsland however they are not as clear. The majority of

producers in South West (68%), and Gippsland (56%) expect fodder price to remain unchanged. For the majority of farmers, fodder production is expected to increase in the South West (58%) and remain unchanged in Gippsland (52%).

**FIGURE 48: PRODUCER EXPECTATIONS OF PRICES AND PRODUCTION OF FODDER IN 2010/11**



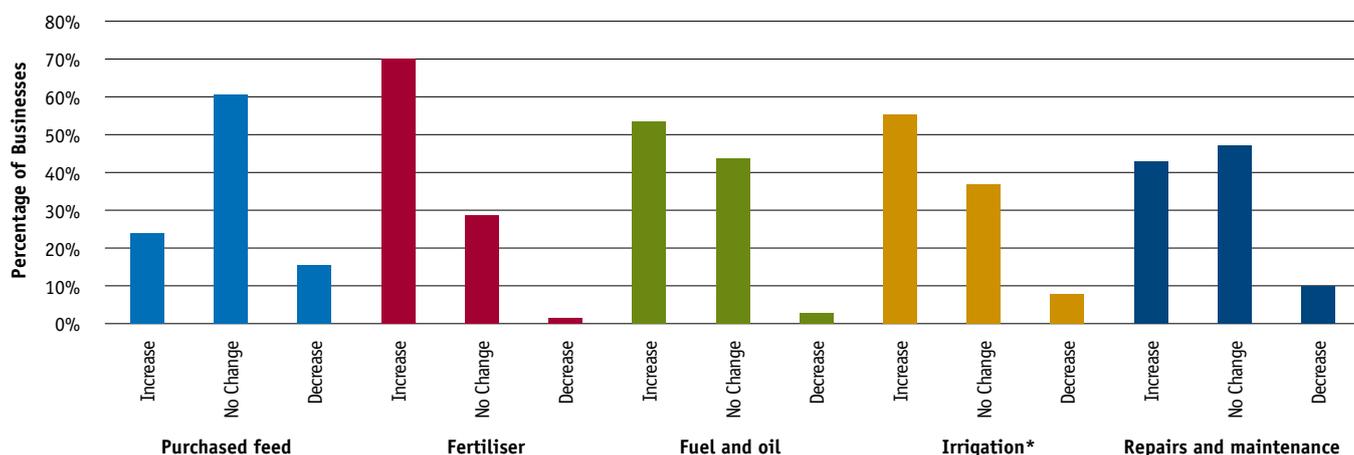
## Cost expectations

Data presented in Figure 49 represents the expectations of costs for the dairy industry from all 71 participating farms, excluding the costs of irrigation which is only representative of the 40 farms that have significant irrigation.

minority of responses expect costs to decrease suggesting that costs are expected to remain unchanged or increase. Generally people expect fertiliser, fuel and oil and irrigation to remain stable in cost. Conversely purchased feed is expected to remain stable and the cost of repairs and maintenance were mixed.

There is some uncertainty surrounding costs in the dairy industry and the responses are variable. However it is clear the

**FIGURE 49: PRODUCER EXPECTATIONS OF COSTS FOR THE DAIRY INDUSTRY IN 2010/11**



\*only includes 40 farms with irrigation

## Owner/operator time on farm and holidays

The average number of hours worked by the 71 participating farms was 59 hours per working week and the average number of days of holidays taken last year was 17 days (Table 10).

Sixteen of the 71 participating farms identified they had less than ten days of holiday during 2009/10, with 7 of those stating they took no holiday time at all.

**TABLE 10: OWNER / OPERATOR TIME ON FARM AND ON HOLIDAYS**

OWNER / OPERATOR TIME	STATEWIDE	NORTH	SOUTH WEST	GIPPSLAND
Estimate of average hours per working week	59	61	63	52
Days of holiday taken in 2009/10	17	12	21	16

## Major issues in the dairy industry – The next 12 months

A summary of the key issues identified by participant businesses over the coming 12 months are identified in Figure 50. A total of 141 responses were recorded from the 71 farms. All farms had at least one response.

Milk price and climate and water availability represented the top two issues with 19% of responses respectively. Following these were profitability (13%) and input costs (9%). Most of the participants who were concerned about work life balance (8%) were also concerned with finding skilled labour (7%).

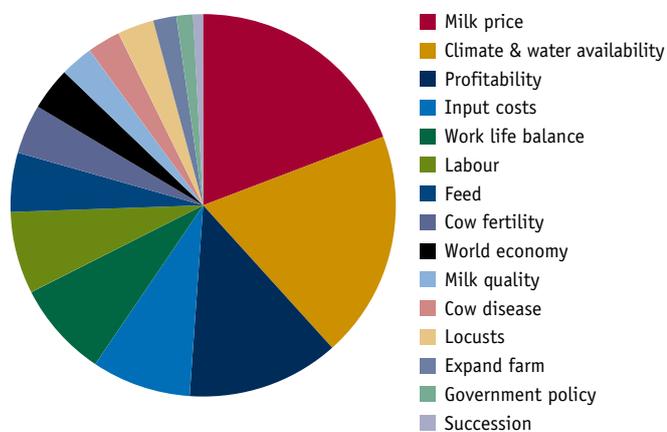
Four percent of responses were concerned with a potential locust outbreak, which reflects the potential issue in spring 2010. These participants were from the North and Gippsland.

## Major issues in the dairy industry – The next 5 years

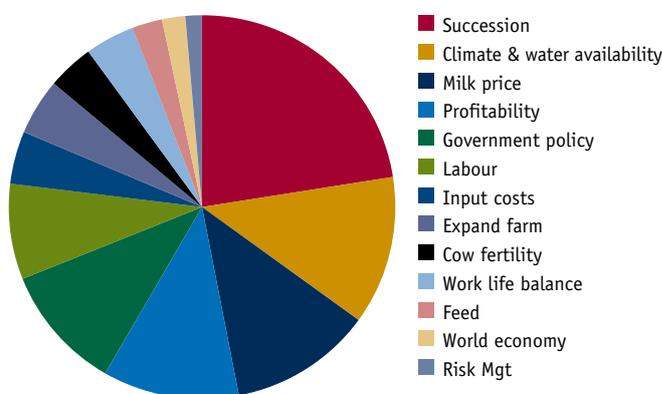
The key issues identified by individual participants for their businesses over the next 5 years are identified in Figure 51. A total of 152 responses were recorded from the 71 farms. All but one farm, flagged at least one issue.

Over the longer term, the main key issues are similar as those identified as key for the next 12 months, excluding succession planning. Succession represents 23% of responses, a significant increase from 1% for the next 12 months. Participants who were concerned about succession in the business also mentioned concerns for their age, retirement options and work life balance. Profitability issues (11%) were mainly the consolidation of debt, especially by those farms from the South West. Government policy (11%) covers issues such as bureaucracy in the water market, sustainable diversion limits, water security, and carbon trading.

**FIGURE 50: MAJOR ISSUES FOR INDIVIDUAL BUSINESSES – 12 MONTH OUTLOOK**



**FIGURE 51: MAJOR ISSUES FOR INDIVIDUAL BUSINESSES – 5 YEAR OUTLOOK**





# Part Six: Greenhouse

# 2009/10 Greenhouse gas emissions

The analysis of greenhouse gas emissions from participating farms is based on the Australian National Greenhouse Gas Inventory 2006 method. This model was developed to predict the source and quantity of greenhouse gasses emitted from a dairy farm. The initial analysis template was sourced from the University of Melbourne's Greenhouse website (<http://www.greenhouse.unimelb.edu.au>), which provides decision support frameworks for greenhouse accounting on Australian dairy, beef and grain farms. While comprehensive, this analysis should not be assumed exact, but used as indicative only.

Carbon dioxide equivalents (CO<sub>2</sub>-e) are used to standardise the greenhouse potentials from different gases. The Global Warming Potential (GWP) is the index used to convert relevant non-carbon dioxide gases to a carbon dioxide equivalent. This is calculated by multiplying the quantity of the gas by its Global Warming Potential (GWP). All of the data in this section is in CO<sub>2</sub>-e tonnes.

The GWP for the three gases that are noted in this report are; 1 : 21 : 310 (CO<sub>2</sub> : CH<sub>4</sub> : N<sub>2</sub>O). This means that one CO<sub>2</sub>-e tonne equates to 47.6 kg of methane (CH<sub>4</sub>) and 3.2 kg of nitrous oxide (N<sub>2</sub>O).

The distribution of different emission for 2009/10 is shown in Figure 52. Greenhouse gas emissions per tonne of milk solids produced ranged from 7.2 t/t MS to 15.4 t/t MS and the average level of emission was 10.2t/t MS. This is slightly lower than the average from last years greenhouse gas emissions audit of 10.4t/t MS however the range had widened compared to 7.4 to 13.9 t/t MS in 2008/09.

Methane (CH<sub>4</sub>) has been identified as the main greenhouse gas emitted from dairy farms. There are two main sources on farm; ruminant digestion and anaerobic digestion in effluent ponds. Methane produced from ruminant digestion is known as enteric methane and was the major source of emissions from all farms in this report, with an average of 74% of total emissions. Methane from effluent ponds accounted for 1% of total emissions.

The most efficient way of reducing enteric methane is by feeding high quality forages with increased digestibility. Ground or pelleted forages are more digestible than their unmodified form. Another simple and effective method of reducing enteric methane is to add unsaturated fatty acids such as linseed oil into the diet. Promising research continues into rumen modifiers and rumen microbe effects.

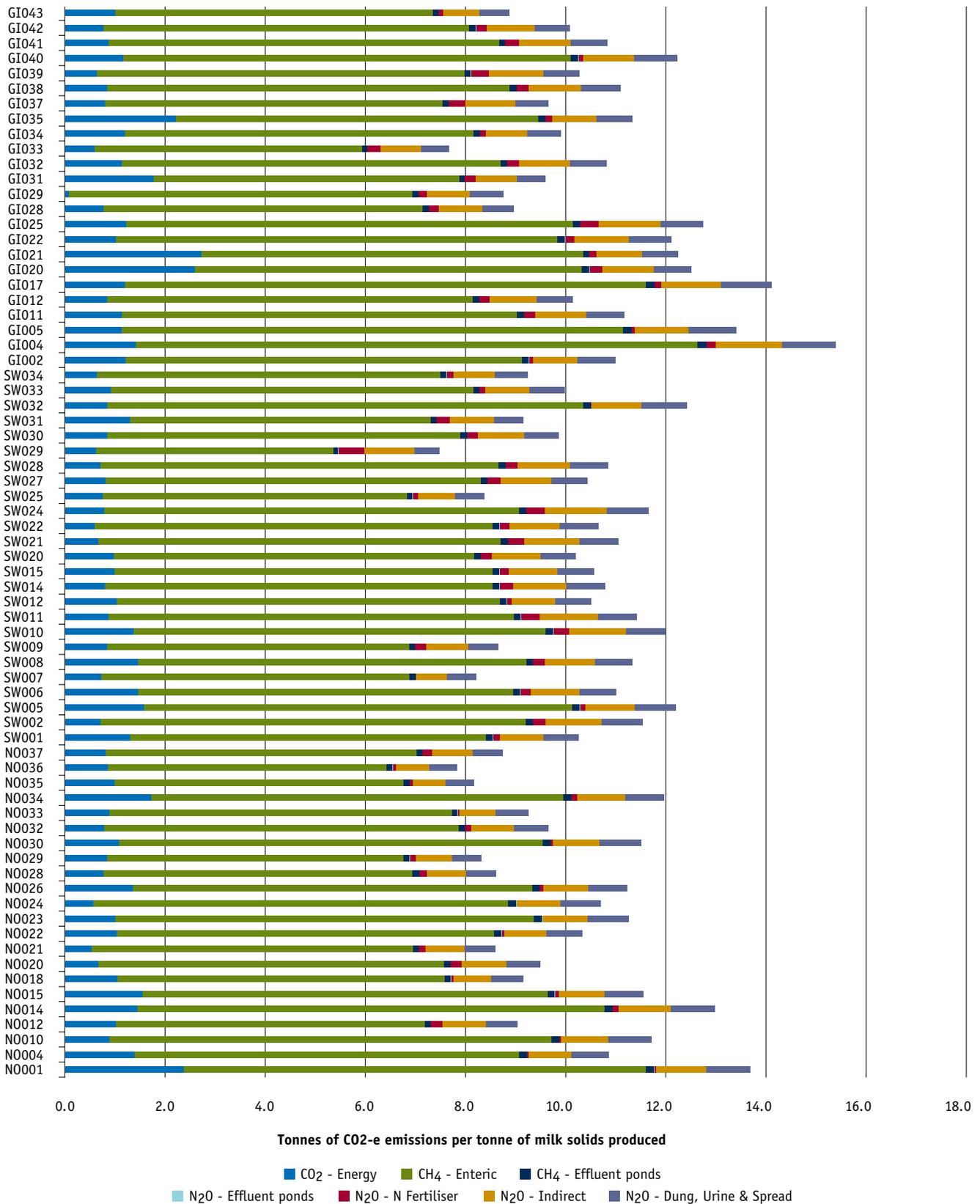
The second main emission is nitrous oxide (N<sub>2</sub>O) accounting for 18% of total emissions, the same level as that recorded in 2008/09. Nitrous oxide is emitted in significant levels from four main sources on a dairy farm; effluent ponds, fertiliser, indirect emissions (from ammonia and nitrate loss in soils), and excreta (dung and urine). N<sub>2</sub>O emissions from indirect N<sub>2</sub>O emissions were 8.9% and N<sub>2</sub>O from effluent ponds accounted for 0.04% of total emissions on farms. N<sub>2</sub>O from fertiliser accounted for 1.6% of total emissions and 6.9% of emissions were as N<sub>2</sub>O from excreta. N<sub>2</sub>O emissions are greatest in warm, waterlogged soils with readily available nitrogen. Over application of nitrogen, high stocking intensity and flood irrigation are all potential causes of increased nitrogen loss as nitrous oxide.

The third main greenhouse gas emission is carbon dioxide (CO<sub>2</sub>), which is produced primarily from fossil fuel consumption as either electricity or petrochemicals. CO<sub>2</sub> accounted for 10% of total emissions per kilogram of milk solids. Output levels were highly dependent on the source of electricity used with the majority of farms using brown coal generated electricity. Using renewable energy sources however, could cut electricity emissions significantly as demonstrated by farm GI029 who utilise hydro electricity and as a result have reduced emissions from CO<sub>2</sub> by at least 90% compared to other farms.

We are currently seeing the importance of understanding and monitoring greenhouse gas emissions, and this will potentially become even more essential in the near future. To find detailed information on the Australian National Greenhouse Gas Inventory, strategies for reducing greenhouse gasses and more details on sources of greenhouse gases on dairy farms visit the Australian Greenhouse Office's website at [www.climatechange.gov.au](http://www.climatechange.gov.au).

Greenhouse gas emissions per tonne of milk solids produced ranged from 7.2 t/t MS to 15.4 t/t MS and the average level of emission was 10.2t/t MS.

**FIGURE 52: 2009/10 GREENHOUSE GAS EMISSIONS PER TONNE OF MILK SOLIDS SOLD (CO2 EQUIVALENT)**







# Appendices

**TABLE A1**  
**Main Financial Indicators — North**

Farm number	Milk income (net)	All Other income	Gross Farm income	Total variable costs	Total overhead costs	Cost structure	Earnings before interest & tax	Return on assets <small>(EXCL. CAPITAL APPREC.)</small>	Interest & lease charges	Debt servicing ratio	Net farm income	Return on equity	Return on equity <small>(EXCL. CAPITAL APPREC.)</small>
N0001	\$4.03	\$1.82	\$5.85	\$3.22	\$1.95	88%	\$0.68	1.3%	\$0.58	10%	\$0.09	0.2%	4.2%
N0004	\$4.25	\$0.12	\$4.37	\$2.66	\$2.36	115%	-\$0.65	-3.8%	\$0.55	13%	-\$1.20	-11.1%	-11.1%
N0010	\$4.14	\$0.45	\$4.59	\$2.97	\$1.61	100%	\$0.02	0.1%	\$0.76	16%	-\$0.74	-4.1%	-17.7%
N0012	\$4.88	\$0.27	\$5.15	\$3.41	\$1.46	95%	\$0.24	1.1%	\$0.50	10%	-\$0.26	-2.1%	-0.5%
N0014	\$4.40	\$1.05	\$5.45	\$2.20	\$2.42	85%	\$0.83	2.8%	\$0.57	11%	\$0.26	1.2%	1.7%
N0015	\$4.33	\$0.49	\$4.82	\$2.92	\$1.41	90%	\$0.44	1.7%	\$0.82	17%	-\$0.37	-2.3%	-2.3%
N0018	\$4.68	\$0.20	\$4.89	\$3.76	\$1.20	101%	-\$0.07	-0.4%	\$0.37	8%	-\$0.44	-3.4%	-6.8%
N0020	\$5.12	\$1.09	\$6.21	\$2.62	\$1.62	68%	\$1.97	8.6%	\$0.65	11%	\$1.32	9.1%	9.1%
N0021	\$4.47	\$0.73	\$5.19	\$2.16	\$1.49	70%	\$1.54	5.1%	\$0.55	11%	\$0.99	4.7%	5.1%
N0022	\$4.40	\$0.37	\$4.76	\$2.57	\$1.47	85%	\$0.72	3.1%	\$0.06	1%	\$0.66	3.3%	3.2%
N0023	\$4.52	\$0.71	\$5.23	\$3.60	\$1.50	97%	\$0.04	0.1%	\$0.61	12%	-\$0.57	-4.2%	-4.2%
N0024	\$4.29	\$1.11	\$5.39	\$3.13	\$2.32	101%	-\$0.06	-0.3%	\$0.45	8%	-\$0.51	-3.4%	-3.4%
N0026	\$4.42	\$0.55	\$4.96	\$3.35	\$1.49	98%	\$0.05	0.2%	\$0.50	10%	-\$0.45	-2.2%	-1.9%
N0028	\$4.66	\$0.70	\$5.36	\$3.70	\$1.67	100%	-\$0.14	-0.9%	\$0.48	9%	-\$0.62	-6.4%	-6.4%
N0029	\$4.41	\$0.55	\$4.96	\$3.27	\$1.45	95%	\$0.25	1.6%	\$0.40	8%	-\$0.15	-1.4%	-1.4%
N0030	\$4.55	\$1.14	\$5.69	\$3.93	\$2.18	107%	-\$0.43	-3.4%	\$0.73	13%	-\$1.15	-27.2%	-27.2%
N0032	\$4.46	\$0.91	\$5.38	\$2.37	\$2.12	83%	\$0.89	3.7%	\$0.36	7%	\$0.54	2.8%	3.0%
N0033	\$4.32	\$1.05	\$5.37	\$2.61	\$2.53	96%	\$0.23	0.8%	\$0.26	5%	-\$0.03	-0.1%	0.2%
N0034	\$4.59	\$0.97	\$5.55	\$4.02	\$3.71	139%	-\$2.91	-7.6%	\$0.51	9%	-\$3.42	-16.5%	-30.7%
N0035	\$4.42	\$0.53	\$4.95	\$3.24	\$1.56	97%	-\$0.05	-0.2%	\$0.32	7%	-\$0.37	-1.9%	3.1%
N0036	\$4.33	\$1.07	\$5.40	\$3.11	\$1.47	85%	\$0.82	3.9%	\$0.71	13%	\$0.11	0.9%	1.7%
N0037	\$4.38	\$0.32	\$4.71	\$3.24	\$1.33	97%	\$0.03	0.1%	\$0.60	13%	-\$0.57	-5.1%	-4.4%
Average	\$4.46	\$0.74	\$5.19	\$3.09	\$1.83	95%	\$0.20	0.8%	\$0.51	10%	-\$0.31	-3.1%	-3.9%
Top 25%	\$4.47	\$1.00	\$5.47	\$2.67	\$1.69	80%	\$1.10	4.3%	\$0.48	9%	\$0.62	3.5%	4.4%

**TABLE A2**  
**Physical Information — North**

Farm number	Total useable area	Grazed area	Water used	Number of milking cows	Milking cows per useable area	Milk sold	Milk sold	Fat	Protein
	HA	HA	MM/HA	HD	HD/HA	KG MS/ COW	KG MS/ HA	%	%
N0001	159	147	1,074	260	1.6	344	562	4.0%	3.1%
N0004	65	65	886	120	1.8	609	1125	4.0%	3.2%
N0010	188	188	657	240	1.3	464	592	4.5%	3.4%
N0012	452	452	826	600	1.3	582	773	4.0%	3.3%
N0014	440	380	888	400	0.9	406	369	4.2%	3.3%
N0015	257	237	656	300	1.2	426	497	4.2%	3.5%
N0018	468	413	594	540	1.2	647	747	3.7%	3.4%
N0020	298	298	888	384	1.3	561	723	3.6%	3.3%
N0021	303	303	888	315	1.0	572	594	4.2%	3.4%
N0022	133	133	705	270	2.0	438	889	4.6%	3.3%
N0023	163	121	489	195	1.2	429	513	4.7%	3.6%
N0024	114	114	689	163	1.4	421	602	4.4%	3.3%
N0026	480	340	684	530	1.1	488	538	3.8%	3.4%
N0028	140	140	904	210	1.5	528	793	4.1%	3.5%
N0029	104	64	663	175	1.7	609	1024	4.1%	3.5%
N0030	45	45	794	200	4.4	463	2058	3.9%	3.3%
N0032	115	115	811	152	1.3	539	713	4.1%	3.4%
N0033	88	88	1,066	128	1.5	606	885	4.2%	3.4%
N0034	351	255	627	220	0.6	555	348	4.2%	3.4%
N0035	109	109	955	230	2.1	597	1259	4.2%	3.5%
N0036	110	110	1,196	230	2.1	585	1222	4.1%	3.3%
N0037	175	175	907	350	2.0	455	909	4.9%	3.7%
Average	216	195	811	282	1.6	515	806	4.2%	3.4%
Top 25%	186	184	927	269	1.6	506	784	4.1%	3.3%

TABLE A2

## Physical Information — North

(Continued)

Farm Number	Estimated grazed pasture	Estimated conserved feed	Home grown feed as % of ME consumed	Nitrogen application	Phosphorous application	Potassium application	Sulphur application	People productivity	People productivity
	T DM/ HA	T DM/ HA	% OF ME	KG/ HA	KG/ HA	KG/ HA	KG/ HA	HD/ FTE	KG MS/ FTE
N0001	6.8	1.1	83%	13.3	5.8	0.0	0.5	115	39,412
N0004	8.2	0.3	53%	23.7	32.1	0.0	18.9	49	29,904
N0010	4.5	0.4	50%	7.0	1.8	0.0	0.1	106	49,269
N0012	4.1	0.8	49%	121.7	130.7	1.1	3.2	139	81,179
N0014	3.5	1.0	69%	28.2	10.6	0.0	13.5	63	25,488
N0015	3.3	0.9	55%	25.6	6.7	0.0	5.4	116	49,430
N0018	3.2	0.2	34%	29.5	0.0	0.0	0.0	119	77,052
N0020	6.7	0.8	73%	104.6	28.1	29.7	35.1	118	66,191
N0021	5.0	0.7	72%	51.6	29.2	3.4	36.7	112	64,291
N0022	7.3	0.2	60%	30.3	1.6	5.2	2.0	119	52,142
N0023	1.5	0.4	24%	1.8	8.4	0.0	5.2	105	45,148
N0024	4.4	0.0	47%	0.3	0.3	0.0	0.0	59	25,004
N0026	1.2	0.0	15%	23.7	10.3	22.5	4.6	96	46,660
N0028	4.6	0.0	48%	80.7	28.1	0.0	35.3	81	42,762
N0029	4.5	0.6	41%	83.0	7.7	0.0	0.6	78	47,503
N0030	11.2	0.0	35%	51.1	0.0	0.0	0.0	78	36,062
N0032	6.7	0.7	71%	63.6	15.0	15.8	15.9	69	37,175
N0033	7.6	0.9	67%	18.7	14.2	40.4	17.5	58	35,164
N0034	2.7	1.0	64%	27.9	19.4	0.0	1.5	47	26,239
N0035	3.6	0.9	31%	48.0	7.7	0.0	0.6	79	46,944
N0036	5.1	0.8	42%	62.7	22.7	0.0	88.1	93	54,260
N0037	3.3	1.4	42%	121.0	29.7	0.0	13.1	119	54,092
Average	5.0	0.6	51%	46.3	18.6	5.4	13.5	92	46,880
Top 25%	6.3	0.7	67%	54.4	17.1	9.0	29.7	104	52,245

TABLE A3

## Purchased feed — North

Farm number	Purchased feed per milker	Concentrate price	Silage price	Hay price	Other feed price	Average purchased feed price	Average ME of purchased feed	Average purchased feed price	Percent of total energy imported
	T DM/HD	\$/ T DM	\$/ T DM	\$/ T DM	\$/ T DM	\$/ T DM	MJ ME/ KG	C/ MJ	% OF ME
N0001	1.0	\$168	\$115	\$122	\$80	\$156	11.5	1.4	17%
N0004	4.7	\$270	-	\$165	-	\$209	10.3	2.2	47%
N0010	4.5	\$196	-	\$180	\$180	\$188	10.4	2.0	50%
N0012	4.1	\$248	\$71	\$122	\$141	\$183	11.2	1.8	51%
N0014	2.1	\$286	-	\$134	\$148	\$212	11.6	1.9	31%
N0015	2.8	\$210	-	\$185	\$198	\$201	11.6	1.8	45%
N0018	5.6	\$200	\$151	\$151	\$239	\$215	11.4	2.0	66%
N0020	2.0	\$303	\$100	\$172	\$163	\$280	12.0	2.4	27%
N0021	1.9	\$308	-	\$182	\$167	\$299	12.5	2.4	28%
N0022	2.8	\$292	-	\$142	\$160	\$214	10.1	2.2	40%
N0023	5.7	\$284	\$179	\$151	\$227	\$192	10.5	1.9	76%
N0024	4.0	\$283	-	\$138	\$137	\$182	10.6	1.9	53%
N0026	6.4	\$197	\$53	\$113	\$115	\$130	10.8	1.2	85%
N0028	3.7	\$219	\$80	\$151	\$161	\$190	10.6	1.9	52%
N0029	4.4	\$284	\$71	\$210	\$162	\$245	11.1	2.3	59%
N0030	5.2	\$234	\$64	\$149	\$150	\$191	10.9	1.9	65%
N0032	2.1	\$289	-	\$185	\$197	\$264	11.8	2.3	29%
N0033	2.5	\$326	-	\$155	-	\$313	12.7	2.5	33%
N0034	3.5	\$193	-	\$134	\$326	\$172	11.4	1.7	36%
N0035	5.3	\$263	-	\$162	\$206	\$199	10.9	2.0	69%
N0036	4.1	\$290	-	\$168	\$168	\$233	11.0	2.3	58%
N0037	3.2	\$299	\$100	\$155	\$104	\$232	11.9	2.1	58%
Average	3.7	\$256	\$98	\$156	\$172	\$214	11.2	2.0	49%
Top 25%	2.3	\$275	-	-	-	\$241	11.5	2.2	33%

TABLE A4

## Variable costs — North

Farm number	AI & herd test	Animal health	Calf rearing	Shed power	Dairy supplies	Total herd & shed costs	Fertiliser	Irrigation	Hay & silage making
	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS
N0001	\$0.03	\$0.23	\$0.02	\$0.08	\$0.04	\$0.40	\$0.07	\$1.15	\$0.12
N0004	\$0.08	\$0.09	\$0.00	\$0.07	\$0.06	\$0.30	\$0.05	\$0.17	\$0.01
N0010	\$0.05	\$0.05	\$0.00	\$0.09	\$0.10	\$0.29	\$0.03	\$0.33	\$0.07
N0012	\$0.14	\$0.21	\$0.04	\$0.07	\$0.07	\$0.54	\$0.27	\$0.44	\$0.12
N0014	\$0.09	\$0.06	\$0.01	\$0.13	\$0.07	\$0.36	\$0.21	\$0.01	\$0.00
N0015	\$0.11	\$0.12	\$0.07	\$0.15	\$0.03	\$0.48	\$0.14	\$0.24	\$0.18
N0018	\$0.14	\$0.14	\$0.02	\$0.07	\$0.09	\$0.46	\$0.05	\$0.85	\$0.09
N0020	\$0.07	\$0.13	\$0.06	\$0.07	\$0.05	\$0.37	\$0.39	\$0.00	\$0.30
N0021	\$0.06	\$0.05	\$0.02	\$0.06	\$0.06	\$0.24	\$0.34	\$0.00	\$0.21
N0022	\$0.09	\$0.09	\$0.00	\$0.09	\$0.03	\$0.31	\$0.08	\$0.31	\$0.05
N0023	\$0.09	\$0.08	\$0.02	\$0.08	\$0.03	\$0.30	\$0.08	\$0.11	\$0.03
N0024	\$0.07	\$0.07	\$0.01	\$0.07	\$0.16	\$0.38	\$0.02	\$0.18	\$0.00
N0026	\$0.12	\$0.09	\$0.00	\$0.11	\$0.09	\$0.41	\$0.05	\$0.27	\$0.17
N0028	\$0.14	\$0.18	\$0.06	\$0.07	\$0.07	\$0.52	\$0.28	\$0.71	\$0.16
N0029	\$0.06	\$0.05	\$0.03	\$0.07	\$0.10	\$0.32	\$0.11	\$0.24	\$0.09
N0030	\$0.07	\$0.09	\$0.01	\$0.07	\$0.09	\$0.33	\$0.09	\$0.09	\$0.00
N0032	\$0.10	\$0.12	\$0.03	\$0.05	\$0.11	\$0.42	\$0.29	\$0.00	\$0.12
N0033	\$0.22	\$0.09	\$0.02	\$0.07	\$0.02	\$0.42	\$0.30	\$0.01	\$0.14
N0034	\$0.03	\$0.09	\$0.04	\$0.08	\$0.07	\$0.31	\$0.26	\$1.31	\$0.31
N0035	\$0.11	\$0.22	\$0.00	\$0.08	\$0.02	\$0.44	\$0.09	\$0.48	\$0.05
N0036	\$0.05	\$0.08	\$0.08	\$0.08	\$0.07	\$0.36	\$0.12	\$0.24	\$0.07
N0037	\$0.09	\$0.12	\$0.03	\$0.09	\$0.07	\$0.40	\$0.30	\$0.28	\$0.07
Average	\$0.09	\$0.11	\$0.03	\$0.08	\$0.07	\$0.38	\$0.17	\$0.34	\$0.11
Top 25%	\$0.07	\$0.12	\$0.04	\$0.07	\$0.06	\$0.35	\$0.22	\$0.28	\$0.15

Farm number	Fuel & oil	Pasture improvement/cropping	Other feed costs	Fodder purchases	Grain/concentrates/other	Agistment costs	Total feed costs	Total variable costs
	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS
N0001	\$0.10	\$0.46	\$0.00	\$0.09	\$0.45	\$0.37	\$2.82	\$3.22
N0004	\$0.14	\$0.05	\$0.00	\$0.88	\$0.96	\$0.09	\$2.36	\$2.66
N0010	\$0.06	\$0.12	\$0.00	\$1.13	\$0.94	\$0.00	\$2.68	\$2.97
N0012	\$0.16	\$0.27	\$0.00	\$0.12	\$1.29	\$0.20	\$2.87	\$3.41
N0014	\$0.25	\$0.11	\$0.00	\$0.14	\$1.04	\$0.08	\$1.84	\$2.20
N0015	\$0.10	\$0.19	\$0.04	\$0.42	\$1.07	\$0.06	\$2.44	\$2.92
N0018	\$0.11	\$0.05	\$0.04	\$0.69	\$1.42	\$0.00	\$3.30	\$3.76
N0020	\$0.10	\$0.24	\$0.01	\$0.15	\$0.95	\$0.11	\$2.24	\$2.62
N0021	\$0.09	\$0.16	\$0.00	\$0.05	\$1.06	\$0.01	\$1.92	\$2.16
N0022	\$0.05	\$0.14	\$0.00	\$0.55	\$1.01	\$0.08	\$2.27	\$2.57
N0023	\$0.07	\$0.08	\$0.02	\$1.54	\$1.29	\$0.06	\$3.30	\$3.60
N0024	\$0.07	\$0.11	\$0.42	\$1.10	\$0.82	\$0.02	\$2.76	\$3.13
N0026	\$0.16	\$0.16	\$0.19	\$0.62	\$1.33	\$0.01	\$2.94	\$3.35
N0028	\$0.09	\$0.11	\$0.07	\$0.37	\$1.03	\$0.36	\$3.18	\$3.70
N0029	\$0.05	\$0.02	\$0.18	\$0.85	\$1.22	\$0.20	\$2.95	\$3.27
N0030	\$0.14	\$0.09	\$0.06	\$1.39	\$1.73	\$0.00	\$3.60	\$3.93
N0032	\$0.11	\$0.18	\$0.00	\$0.26	\$0.95	\$0.04	\$1.95	\$2.37
N0033	\$0.10	\$0.07	\$0.00	\$0.11	\$1.37	\$0.08	\$2.19	\$2.61
N0034	\$0.28	\$0.17	\$0.03	\$0.46	\$0.76	\$0.13	\$3.71	\$4.02
N0035	\$0.06	\$0.10	\$0.00	\$0.85	\$0.97	\$0.20	\$2.80	\$3.24
N0036	\$0.14	\$0.06	\$0.00	\$0.72	\$1.21	\$0.18	\$2.74	\$3.11
N0037	\$0.07	\$0.31	\$0.00	\$0.33	\$1.45	\$0.04	\$2.84	\$3.24
Average	\$0.11	\$0.15	\$0.05	\$0.58	\$1.11	\$0.11	\$2.71	\$3.09
Top 25%	\$0.10	\$0.21	\$0.00	\$0.30	\$0.94	\$0.13	\$2.32	\$2.67

TABLE A5

## Overhead costs — North

Farm number	Rates	Registration & insurance	Farm insurance	Repairs & maintenance	Bank charges	Other overheads	Employed people	Total cash overheads	Depreciation	Imputed people cost	Total overheads
	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/KG MS
N0001	\$0.05	\$0.02	\$0.07	\$0.26	\$0.02	\$0.16	\$0.53	\$1.11	\$0.21	\$0.63	\$1.95
N0004	\$0.03	\$0.05	\$0.08	\$0.26	\$0.03	\$0.12	\$0.05	\$0.61	\$0.18	\$1.56	\$2.36
N0010	\$0.03	\$0.02	\$0.04	\$0.10	\$0.00	\$0.08	\$0.28	\$0.56	\$0.27	\$0.78	\$1.61
N0012	\$0.06	\$0.00	\$0.04	\$0.34	\$0.01	\$0.20	\$0.71	\$1.36	\$0.10	\$0.00	\$1.46
N0014	\$0.04	\$0.02	\$0.14	\$0.28	\$0.01	\$0.16	\$0.63	\$1.28	\$0.30	\$0.84	\$2.42
N0015	\$0.02	\$0.05	\$0.02	\$0.16	\$0.00	\$0.08	\$0.64	\$0.97	\$0.08	\$0.36	\$1.41
N0018	\$0.04	\$0.02	\$0.06	\$0.22	\$0.01	\$0.07	\$0.20	\$0.61	\$0.14	\$0.46	\$1.20
N0020	\$0.02	\$0.00	\$0.03	\$0.35	\$0.00	\$0.20	\$0.30	\$0.90	\$0.30	\$0.42	\$1.62
N0021	\$0.04	\$0.01	\$0.04	\$0.27	\$0.01	\$0.10	\$0.14	\$0.60	\$0.29	\$0.60	\$1.49
N0022	\$0.02	\$0.04	\$0.00	\$0.39	\$0.01	\$0.06	\$0.20	\$0.72	\$0.04	\$0.71	\$1.47
N0023	\$0.02	\$0.01	\$0.04	\$0.16	\$0.01	\$0.11	\$0.03	\$0.38	\$0.08	\$1.04	\$1.50
N0024	\$0.04	\$0.04	\$0.09	\$0.13	\$0.00	\$0.31	\$0.02	\$0.64	\$0.16	\$1.53	\$2.32
N0026	\$0.04	\$0.09	\$0.00	\$0.26	\$0.00	\$0.09	\$0.66	\$1.15	\$0.18	\$0.16	\$1.49
N0028	\$0.02	\$0.01	\$0.03	\$0.14	\$0.02	\$0.09	\$0.27	\$0.58	\$0.13	\$0.96	\$1.67
N0029	\$0.01	\$0.01	\$0.04	\$0.07	\$0.00	\$0.18	\$0.03	\$0.35	\$0.11	\$0.99	\$1.45
N0030	\$0.01	\$0.01	\$0.03	\$0.46	\$0.01	\$0.15	\$0.03	\$0.70	\$0.17	\$1.30	\$2.18
N0032	\$0.03	\$0.04	\$0.05	\$0.28	\$0.00	\$0.16	\$0.29	\$0.85	\$0.28	\$1.00	\$2.12
N0033	\$0.04	\$0.05	\$0.07	\$0.40	\$0.02	\$0.13	\$0.09	\$0.80	\$0.43	\$1.29	\$2.53
N0034	\$0.06	\$0.06	\$0.10	\$0.55	\$0.04	\$0.27	\$0.83	\$1.91	\$0.80	\$1.01	\$3.71
N0035	\$0.02	\$0.01	\$0.07	\$0.10	\$0.01	\$0.14	\$0.31	\$0.66	\$0.17	\$0.74	\$1.56
N0036	\$0.03	\$0.01	\$0.09	\$0.11	\$0.00	\$0.10	\$0.41	\$0.75	\$0.20	\$0.52	\$1.47
N0037	\$0.02	\$0.01	\$0.04	\$0.20	\$0.00	\$0.08	\$0.25	\$0.59	\$0.11	\$0.63	\$1.33
Average	\$0.03	\$0.03	\$0.05	\$0.25	\$0.01	\$0.14	\$0.31	\$0.82	\$0.22	\$0.80	\$1.83
Top 25%	\$0.03	\$0.02	\$0.05	\$0.28	\$0.01	\$0.13	\$0.31	\$0.82	\$0.22	\$0.65	\$1.69



TABLE A6

# Variable costs % — North

Percentage of total farm costs

Farm number	AI & herd test	Animal health	Calf rearing	Shed power	Dairy supplies	Total herd & shed costs	Fertiliser	Irrigation	Hay & silage making
	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS
N0001	0.6%	4.4%	0.4%	1.5%	0.8%	7.7%	1.4%	22.3%	2.3%
N0004	1.6%	1.8%	0.0%	1.5%	1.2%	6.1%	1.1%	3.3%	0.1%
N0010	1.1%	1.2%	0.0%	1.9%	2.1%	6.4%	0.6%	7.2%	1.5%
N0012	2.9%	4.4%	0.8%	1.4%	1.5%	11.0%	5.5%	9.1%	2.4%
N0014	1.9%	1.3%	0.3%	2.8%	1.5%	7.8%	4.5%	0.3%	0.0%
N0015	2.6%	2.8%	1.5%	3.5%	0.7%	11.2%	3.3%	5.5%	4.2%
N0018	2.9%	2.9%	0.3%	1.4%	1.8%	9.3%	1.0%	17.1%	1.7%
N0020	1.7%	3.0%	1.4%	1.6%	1.2%	8.8%	9.3%	0.0%	7.2%
N0021	1.6%	1.4%	0.6%	1.5%	1.6%	6.7%	9.2%	0.0%	5.8%
N0022	2.2%	2.2%	0.1%	2.3%	0.8%	7.6%	2.0%	7.6%	1.2%
N0023	1.8%	1.5%	0.4%	1.6%	0.5%	5.9%	1.6%	2.1%	0.6%
N0024	1.2%	1.2%	0.1%	1.3%	3.0%	6.9%	0.4%	3.4%	0.0%
N0026	2.5%	1.9%	0.0%	2.3%	1.8%	8.5%	1.1%	5.5%	3.5%
N0028	2.6%	3.3%	1.2%	1.3%	1.3%	9.7%	5.3%	13.1%	3.0%
N0029	1.4%	1.1%	0.7%	1.5%	2.0%	6.7%	2.3%	5.1%	1.9%
N0030	1.1%	1.5%	0.1%	1.2%	1.4%	5.4%	1.5%	1.5%	0.0%
N0032	2.2%	2.7%	0.7%	1.1%	2.6%	9.3%	6.4%	0.0%	2.7%
N0033	4.3%	1.8%	0.3%	1.4%	0.3%	8.2%	5.8%	0.3%	2.7%
N0034	0.4%	1.1%	0.5%	1.0%	0.9%	4.0%	3.4%	17.0%	4.1%
N0035	2.4%	4.6%	0.1%	1.7%	0.5%	9.2%	1.8%	10.1%	1.0%
N0036	1.1%	1.8%	1.7%	1.7%	1.6%	8.0%	2.6%	5.3%	1.4%
N0037	2.0%	2.5%	0.8%	1.9%	1.6%	8.7%	6.6%	6.0%	1.5%
Average	1.9%	2.3%	0.5%	1.7%	1.4%	7.9%	3.5%	6.4%	2.2%
Top 25%	1.6%	2.6%	0.8%	1.6%	1.4%	8.0%	5.2%	5.9%	3.4%

Farm Number	Fuel & oil	Pasture improvement/cropping	Other feed costs	Fodder purchases	Grain/concentrates/other	Agistment costs	Total feed costs	Total variable costs
	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS
N0001	1.9%	8.9%	0.0%	1.8%	8.6%	7.2%	54.5%	62.2%
N0004	2.9%	1.0%	0.0%	17.5%	19.2%	1.9%	47.0%	53.0%
N0010	1.4%	2.5%	0.0%	24.7%	20.6%	0.0%	58.5%	64.9%
N0012	3.2%	5.5%	0.0%	2.5%	26.5%	4.2%	59.0%	70.0%
N0014	5.5%	2.3%	0.0%	3.0%	22.5%	1.7%	39.8%	47.6%
N0015	2.4%	4.3%	0.9%	9.6%	24.7%	1.4%	56.3%	67.5%
N0018	2.3%	1.0%	0.7%	14.0%	28.6%	0.0%	66.5%	75.8%
N0020	2.3%	5.6%	0.2%	3.4%	22.5%	2.5%	52.9%	61.7%
N0021	2.3%	4.4%	0.0%	1.4%	29.0%	0.2%	52.5%	59.2%
N0022	1.2%	3.5%	0.0%	13.7%	24.8%	1.9%	56.0%	63.6%
N0023	1.4%	1.5%	0.5%	30.3%	25.4%	1.3%	64.7%	70.6%
N0024	1.3%	2.1%	7.7%	20.2%	15.1%	0.4%	50.5%	57.5%
N0026	3.3%	3.2%	3.9%	12.8%	27.4%	0.1%	60.8%	69.3%
N0028	1.7%	2.0%	1.3%	6.8%	19.2%	6.7%	59.2%	68.9%
N0029	1.0%	0.3%	3.8%	18.1%	25.8%	4.3%	62.6%	69.3%
N0030	2.3%	1.5%	1.0%	22.8%	28.4%	0.0%	58.9%	64.3%
N0032	2.4%	4.0%	0.0%	5.9%	21.2%	0.9%	43.4%	52.8%
N0033	2.0%	1.3%	0.0%	2.2%	26.7%	1.6%	42.7%	50.8%
N0034	3.6%	2.2%	0.4%	6.0%	9.8%	1.7%	48.0%	52.0%
N0035	1.2%	2.1%	0.0%	17.8%	20.2%	4.2%	58.3%	67.5%
N0036	2.9%	1.4%	0.0%	15.7%	26.4%	4.0%	59.9%	67.8%
N0037	1.6%	6.7%	0.0%	7.3%	31.6%	0.8%	62.1%	70.9%
Average	2.3%	3.1%	0.9%	11.7%	22.9%	2.1%	55.2%	63.0%
Top 25%	2.2%	4.6%	0.0%	7.0%	22.1%	2.8%	53.2%	61.2%

TABLE A7

## Overhead costs — North

Percentage of total farm costs

Farm number	Rates	Registration & insurance	Farm insurance	Repairs & maintenance	Bank charges	Other overheads	Employed people	Total cash overheads	Depreciation	Imputed people cost	Total overheads
	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS
N0001	1.0%	0.4%	1.4%	5.0%	0.4%	3.0%	10.3%	21.5%	4.1%	12.2%	37.8%
N0004	0.6%	1.0%	1.6%	5.3%	0.6%	2.4%	1.0%	12.2%	3.6%	31.1%	47.0%
N0010	0.6%	0.4%	0.8%	2.3%	0.1%	1.8%	6.2%	12.2%	6.0%	16.9%	35.1%
N0012	1.1%	0.1%	0.8%	7.0%	0.1%	4.1%	14.6%	27.9%	2.1%	0.0%	30.0%
N0014	0.9%	0.3%	2.9%	6.1%	0.3%	3.4%	13.7%	27.6%	6.5%	18.2%	52.4%
N0015	0.5%	1.2%	0.4%	3.7%	0.1%	1.8%	14.7%	22.4%	1.8%	8.3%	32.5%
N0018	0.8%	0.3%	1.3%	4.4%	0.1%	1.4%	4.0%	12.2%	2.8%	9.2%	24.2%
N0020	0.6%	0.1%	0.7%	8.2%	0.1%	4.6%	7.0%	21.3%	7.2%	9.9%	38.3%
N0021	1.0%	0.2%	1.0%	7.4%	0.2%	2.8%	3.9%	16.4%	8.0%	16.3%	40.8%
N0022	0.4%	1.0%	0.0%	9.6%	0.3%	1.5%	5.0%	17.8%	1.0%	17.6%	36.4%
N0023	0.4%	0.3%	0.7%	3.2%	0.2%	2.1%	0.5%	7.5%	1.6%	20.3%	29.4%
N0024	0.8%	0.7%	1.6%	2.4%	0.0%	5.7%	0.4%	11.6%	2.9%	28.0%	42.5%
N0026	0.9%	1.9%	0.0%	5.4%	0.1%	1.9%	13.7%	23.8%	3.7%	3.3%	30.7%
N0028	0.3%	0.3%	0.5%	2.6%	0.4%	1.6%	5.0%	10.8%	2.4%	17.9%	31.1%
N0029	0.3%	0.2%	0.9%	1.6%	0.1%	3.9%	0.6%	7.4%	2.3%	20.9%	30.7%
N0030	0.2%	0.2%	0.5%	7.6%	0.1%	2.5%	0.5%	11.5%	2.9%	21.3%	35.7%
N0032	0.6%	0.9%	1.1%	6.2%	0.1%	3.5%	6.5%	18.9%	6.2%	22.2%	47.2%
N0033	0.8%	1.1%	1.3%	7.9%	0.4%	2.5%	1.7%	15.7%	8.4%	25.1%	49.2%
N0034	0.7%	0.8%	1.3%	7.2%	0.5%	3.5%	10.7%	24.7%	10.3%	13.0%	48.0%
N0035	0.5%	0.1%	1.4%	2.1%	0.2%	2.9%	6.5%	13.7%	3.5%	15.4%	32.5%
N0036	0.6%	0.2%	1.9%	2.3%	0.1%	2.2%	9.0%	16.4%	4.5%	11.4%	32.2%
N0037	0.5%	0.2%	0.8%	4.4%	0.0%	1.7%	5.4%	12.9%	2.5%	13.8%	29.1%
Average	0.6%	0.5%	1.0%	5.1%	0.2%	2.8%	6.4%	16.7%	4.3%	16.0%	37.0%
Top 25%	0.7%	0.5%	1.0%	6.5%	0.2%	2.9%	7.0%	18.7%	5.1%	14.9%	38.8%

TABLE A8

## Capital structure — North

	AREA	LAND VALUE			OTHER ASSETS (PER USABLE HECTARE)				LIABILITIES		EQUITY	
	Total usable area	Total land value per usable hectare	Total land value per milking cow	Plant & equipment	Livestock	Hay & grain	Other assets	Total assets	Liabilities per usable hectare	Liabilities per milking cow	Equity per usable hectare	Average equity
Average	216	\$7,633	\$5,505	\$1,565	\$2,541	\$165	\$487	\$12,450	\$5,041	\$3,259	\$7,409	58%
Top 25%	186	\$10,067	\$7,071	\$1,551	\$2,878	\$197	\$708	\$15,452	\$5,128	\$3,290	\$10,323	67%

**TABLE B1**  
Main Financial Indicators — South West

Farm number	Milk income (net)	All other income	Gross farm income	Total variable costs	Total overhead costs	Cost structure	Earnings before interest & tax	Return on assets	Interest & lease charges	Debt servicing ratio	Net farm income	Return on equity	Return on equity
	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	% OF INCOME	\$/ KG MS	(EXCL. CAPITAL APPREC.)	\$/ KG MS	% OF INCOME	\$/ KG MS		(INCL. CAPITAL APPREC.)
SW001	\$4.49	\$0.55	\$5.04	\$2.37	\$1.64	80%	\$1.03	2.4%	\$1.21	24%	-\$0.19	-0.7%	-0.7%
SW002	\$4.17	\$0.76	\$4.94	\$2.78	\$1.72	91%	\$0.43	1.4%	\$1.26	25%	-\$0.82	-4.9%	-4.9%
SW005	\$4.33	\$0.91	\$5.23	\$2.11	\$1.74	74%	\$1.07	3.1%	\$1.52	31%	-\$0.45	-3.3%	1.0%
SW006	\$4.29	\$0.84	\$5.13	\$1.93	\$2.00	77%	\$1.20	3.4%	\$0.89	17%	\$0.32	1.5%	0.7%
SW007	\$4.60	\$0.49	\$5.08	\$2.32	\$3.42	113%	-\$0.88	-4.8%	\$0.00	0%	-\$0.88	-4.8%	-4.8%
SW008	\$4.40	\$0.42	\$4.81	\$2.22	\$1.44	76%	\$1.15	4.5%	\$0.61	13%	\$0.55	3.2%	3.3%
SW009	\$4.72	\$0.57	\$5.29	\$1.88	\$1.69	67%	\$1.72	6.1%	\$0.61	11%	\$1.11	4.6%	23.8%
SW010	\$4.20	\$0.84	\$5.04	\$2.29	\$3.99	124%	-\$1.24	-3.3%	\$0.02	0%	-\$1.25	-3.4%	-3.5%
SW011	\$4.76	\$0.43	\$5.20	\$2.36	\$1.42	73%	\$1.41	5.4%	\$1.04	20%	\$0.37	3.0%	3.0%
SW012	\$4.57	\$2.01	\$6.58	\$2.38	\$3.63	91%	\$0.58	1.7%	\$1.62	25%	-\$1.04	-6.9%	-7.8%
SW014	\$4.50	\$0.44	\$4.94	\$2.32	\$1.22	72%	\$1.30	4.1%	\$0.57	12%	\$0.72	4.1%	2.2%
SW015	\$5.78	\$1.09	\$6.87	\$2.43	\$1.75	61%	\$2.70	6.7%	\$1.25	18%	\$1.45	13.5%	25.8%
SW020	\$4.41	\$0.68	\$5.09	\$2.71	\$1.73	87%	\$0.66	2.3%	\$1.18	23%	-\$0.52	-4.9%	-4.5%
SW021	\$4.55	\$0.65	\$5.20	\$2.45	\$1.21	70%	\$1.54	7.1%	\$0.17	3%	\$1.37	7.1%	20.6%
SW022	\$4.80	\$1.85	\$6.65	\$2.38	\$1.98	65%	\$2.29	8.8%	\$0.58	9%	\$1.72	11.2%	11.2%
SW024	\$4.25	\$0.75	\$5.00	\$2.77	\$1.27	81%	\$0.75	3.2%	\$0.35	7%	\$0.40	2.1%	9.8%
SW025	\$4.32	\$0.03	\$4.35	\$2.21	\$1.62	88%	\$0.48	1.5%	\$1.00	23%	-\$0.52	-3.0%	-4.8%
SW027	\$4.47	\$0.27	\$4.74	\$1.71	\$1.99	78%	\$0.98	2.9%	\$0.88	19%	\$0.11	0.4%	0.5%
SW028	\$4.43	\$0.59	\$5.02	\$2.24	\$1.48	74%	\$1.30	3.6%	\$0.55	11%	\$0.76	3.0%	6.9%
SW029	\$4.52	\$0.34	\$4.86	\$2.64	\$1.24	80%	\$0.98	4.6%	\$0.92	19%	\$0.06	0.5%	0.5%
SW030	\$4.75	\$0.15	\$4.90	\$3.13	\$1.99	104%	-\$0.24	-0.7%	\$0.72	15%	-\$0.96	-4.6%	-4.6%
SW031	\$5.29	\$0.52	\$5.81	\$3.05	\$1.23	74%	\$1.53	6.8%	\$0.73	13%	\$0.80	18.5%	18.5%
SW032	\$4.25	\$0.74	\$4.99	\$1.72	\$2.99	94%	\$0.28	0.6%	\$1.27	25%	-\$0.99	-4.2%	-4.2%
SW033	\$4.36	\$0.85	\$5.21	\$1.99	\$2.34	83%	\$0.88	1.8%	\$0.32	6%	\$0.56	1.8%	1.8%
SW034	\$4.52	\$0.35	\$4.87	\$2.74	\$1.39	85%	\$0.74	3.1%	\$0.86	18%	-\$0.12	-1.2%	16.0%
Average	\$4.55	\$0.68	\$5.23	\$2.37	\$1.92	83%	\$0.91	3.0%	\$0.80	15%	\$0.10	1.3%	4.2%
Top 25%	\$4.93	\$0.85	\$5.77	\$2.40	\$1.55	69%	\$1.82	6.7%	\$0.66	11%	\$1.17	9.7%	17.2%

**TABLE B2**  
Physical Information — South West

Farm number	Total useable area	Grazed area	Water used	Number of milking cows	Milking cows per useable area	Milk sold	Milk sold	Fat	Protein
	HA	HA	MM/HA	HD	HD/HA	KG MS/ COW	KG MS/ HA	%	%
SW001	439	429	731	340	0.8	471	365	4.3%	3.3%
SW002	148	148	1,072	200	1.4	548	740	4.1%	3.2%
SW005	269	269	720	380	1.4	363	512	4.4%	3.5%
SW006	142	142	988	285	2.0	408	819	4.7%	3.4%
SW007	116	116	684	120	1.0	498	515	5.2%	4.1%
SW008	285	285	999	500	1.8	658	1155	4.3%	3.3%
SW009	160	160	945	220	1.4	595	819	4.0%	3.2%
SW010	126	126	1,072	175	1.4	479	666	4.3%	3.3%
SW011	453	453	774	800	1.8	446	787	4.1%	3.3%
SW012	95	95	1,072	160	1.7	408	688	4.4%	3.4%
SW014	214	214	1,022	242	1.1	548	619	3.9%	3.2%
SW015	1,384	1,384	683	1,050	0.8	599	454	3.9%	3.3%
SW020	217	217	952	310	1.4	522	745	3.7%	3.2%
SW021	435	435	689	612	1.4	523	736	4.1%	3.3%
SW022	466	466	711	520	1.1	491	548	4.2%	3.5%
SW024	117	117	869	175	1.5	605	904	4.1%	3.3%
SW025	331	265	713	240	0.7	560	406	4.5%	3.4%
SW027	126	126	799	187	1.5	366	545	5.3%	3.7%
SW028	640	640	920	800	1.3	454	567	4.1%	3.3%
SW029	353	353	1,072	400	1.1	564	639	4.1%	3.2%
SW030	260	260	920	390	1.5	467	701	4.2%	3.5%
SW031	237	237	945	400	1.7	705	1190	3.6%	3.3%
SW032	171	171	774	130	0.8	425	323	4.7%	3.6%
SW033	146	133	774	120	0.8	373	307	4.4%	3.4%
SW034	226	206	796	400	1.8	498	881	4.0%	3.4%
Average	302	298	868	366	1.3	503	665	4.3%	3.4%
Top 25%	494	494	829	550	1.4	595	817	4.0%	3.3%

TABLE B2

## Physical Information — South West

(Continued)

Farm number	Estimated grazed pasture	Estimated conserved feed	Home grown feed as % of ME consumed	Nitrogen application	Phosphorous application	Potassium application	Sulphur application	People productivity	People productivity
	T DM/ HA	T DM/ HA	% OF ME	KG/ HA	KG/ HA	KG/ HA	KG/ HA	HD/ FTE	KG MS/ FTE
SW001	3.8	0.6	83%	34.4	34.7	59.6	23.4	99	46,457
SW002	7.0	1.1	68%	126.1	18.6	51.8	20.1	82	44,711
SW005	4.7	0.9	68%	35.3	8.0	30.5	1.6	115	41,785
SW006	9.5	0.9	83%	116.6	8.3	44.5	10.3	105	42,783
SW007	3.4	0.0	53%	0.0	0.0	0.0	0.0	36	17,715
SW008	11.6	1.2	71%	186.8	8.9	42.7	3.8	85	55,703
SW009	6.2	1.9	75%	121.4	13.7	28.0	12.6	74	43,976
SW010	8.3	0.5	83%	141.9	31.3	94.9	50.2	41	19,863
SW011	7.2	0.5	61%	196.9	8.3	7.7	5.2	141	62,755
SW012	6.1	0.9	69%	48.4	13.9	26.7	17.3	57	23,380
SW014	5.9	1.2	72%	113.0	16.7	44.8	16.7	103	56,266
SW015	3.6	1.4	72%	57.0	17.7	32.2	20.9	109	65,306
SW020	4.6	1.0	53%	117.5	4.4	14.4	5.5	76	39,516
SW021	7.2	1.1	70%	158.0	17.6	40.1	0.2	175	91,635
SW022	4.5	1.8	73%	71.2	21.4	0.0	1.5	98	48,129
SW024	8.4	1.5	67%	229.7	15.0	159.5	58.4	90	54,378
SW025	3.3	0.5	72%	29.3	20.0	4.3	25.3	68	37,987
SW027	6.4	1.0	87%	97.6	29.2	67.4	36.8	93	34,178
SW028	6.9	0.8	90%	92.3	23.6	71.9	36.3	147	66,789
SW029	4.0	1.3	70%	230.1	61.8	148.7	77.2	148	83,562
SW030	5.5	0.4	60%	97.7	22.4	32.9	33.3	107	50,243
SW031	8.1	0.9	59%	225.1	5.6	5.3	12.5	109	76,759
SW032	4.0	0.2	74%	0.0	7.7	14.9	9.6	56	23,761
SW033	3.3	0.3	82%	25.3	16.2	9.7	19.7	74	27,418
SW034	5.7	2.1	63%	87.5	0.0	33.2	0.0	110	54,731
Average	6.0	1.0	71%	105.6	17.0	42.6	19.9	96	48,392
Top 25%	6.9	1.4	70%	136.6	14.1	24.7	8.6	108	63,585

TABLE B3

## Purchased feed — South West

Farm number	Purchased feed per milker	Concentrate price	Silage price	Hay price	Other feed price	Average purchased feed price	Average ME of purchased feed	Average purchased feed price	Percent of total energy imported
	T DM/HD	\$/ T DM	\$/ T DM	\$/ T DM	\$/ T DM	\$/ T DM	MJ ME/ KG	C/ MJ	% OF ME
SW001	1.1	\$308	-	\$141	\$139	\$266	11.3	2.4	17%
SW002	2.8	\$328	-	\$235	\$138	\$302	11.7	2.7	32%
SW005	2.0	\$224	-	\$139	\$145	\$192	10.9	1.9	32%
SW006	0.9	\$237	-	\$134	-	\$236	12.0	2.0	17%
SW007	3.2	\$308	-	\$204	\$203	\$260	10.7	2.6	47%
SW008	2.6	\$276	\$73	\$116	-	\$250	12.5	2.1	29%
SW009	1.7	\$298	\$72	-	-	\$294	12.8	2.3	25%
SW010	1.2	\$325	\$80	\$137	\$134	\$287	12.3	2.4	17%
SW011	2.5	\$203	\$40	\$147	\$170	\$188	12.4	1.6	39%
SW012	1.7	\$261	-	\$160	\$160	\$251	11.8	2.2	31%
SW014	2.4	\$323	-	\$157	\$158	\$273	11.4	2.5	28%
SW015	2.3	\$307	-	-	-	\$307	12.0	2.6	28%
SW020	3.1	\$293	-	\$91	\$90	\$249	12.4	2.1	47%
SW021	2.6	\$209	-	\$167	\$168	\$205	12.3	2.0	30%
SW022	1.9	\$187	\$74	\$139	\$270	\$174	11.8	1.5	27%
SW024	3.5	\$403	-	\$205	\$224	\$290	11.0	2.8	33%
SW025	1.8	\$319	\$72	\$128	\$120	\$299	12.7	2.4	28%
SW027	0.7	\$325	-	\$169	\$209	\$295	11.5	2.6	13%
SW028	0.7	\$270	-	\$100	\$100	\$261	11.8	2.3	10%
SW029	1.8	\$366	-	\$244	\$244	\$353	12.5	2.9	30%
SW030	2.8	\$276	-	\$164	\$278	\$238	10.9	2.3	40%
SW031	3.2	\$328	-	\$145	\$145	\$318	12.8	2.5	41%
SW032	1.9	\$202	-	\$141	-	\$186	11.5	1.7	26%
SW033	0.8	\$290	-	-	-	\$290	13.6	2.2	18%
SW034	2.3	\$300	-	\$100	\$100	\$293	11.9	2.5	37%
Average	2.1	\$287	\$69	\$153	\$168	\$262	11.9	2.3	29%
Top 25%	2.4	\$267	-	-	-	\$258	12.3	2.2	30%

**TABLE B4**  
**Variable costs — South West**

Farm number	AI & herd test	Animal health	Calf rearing	Shed power	Dairy supplies	Total herd & shed costs	Fertiliser	Irrigation	Hay & silage making
	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS
SW001	\$0.12	\$0.07	\$0.02	\$0.09	\$0.08	\$0.38	\$0.88	\$0.02	\$0.21
SW002	\$0.08	\$0.05	\$0.01	\$0.05	\$0.04	\$0.24	\$0.39	\$0.00	\$0.16
SW005	\$0.10	\$0.11	\$0.03	\$0.12	\$0.26	\$0.62	\$0.31	\$0.00	\$0.02
SW006	\$0.07	\$0.03	\$0.01	\$0.07	\$0.03	\$0.21	\$0.48	\$0.18	\$0.12
SW007	\$0.11	\$0.16	\$0.03	\$0.08	\$0.05	\$0.43	\$0.00	\$0.00	\$0.00
SW008	\$0.05	\$0.12	\$0.00	\$0.07	\$0.02	\$0.27	\$0.31	\$0.06	\$0.06
SW009	\$0.10	\$0.09	\$0.00	\$0.06	\$0.07	\$0.31	\$0.32	\$0.02	\$0.06
SW010	\$0.07	\$0.16	\$0.02	\$0.06	\$0.09	\$0.41	\$0.57	\$0.04	\$0.10
SW011	\$0.07	\$0.11	\$0.05	\$0.11	\$0.09	\$0.44	\$0.30	\$0.00	\$0.20
SW012	\$0.07	\$0.05	\$0.02	\$0.10	\$0.11	\$0.36	\$0.14	\$0.05	\$0.19
SW014	\$0.08	\$0.04	\$0.03	\$0.06	\$0.04	\$0.24	\$0.48	\$0.03	\$0.18
SW015	\$0.06	\$0.16	\$0.04	\$0.06	\$0.12	\$0.44	\$0.32	\$0.04	\$0.05
SW020	\$0.09	\$0.09	\$0.00	\$0.09	\$0.07	\$0.35	\$0.24	\$0.00	\$0.21
SW021	\$0.04	\$0.10	\$0.00	\$0.07	\$0.03	\$0.24	\$0.45	\$0.00	\$0.31
SW022	\$0.08	\$0.08	\$0.10	\$0.07	\$0.10	\$0.43	\$0.44	\$0.00	\$0.35
SW024	\$0.03	\$0.04	\$0.01	\$0.07	\$0.05	\$0.20	\$0.50	\$0.00	\$0.12
SW025	\$0.20	\$0.12	\$0.00	\$0.05	\$0.01	\$0.39	\$0.42	\$0.02	\$0.06
SW027	\$0.13	\$0.07	\$0.00	\$0.09	\$0.15	\$0.44	\$0.40	\$0.00	\$0.20
SW028	\$0.13	\$0.18	\$0.03	\$0.04	\$0.06	\$0.45	\$0.63	\$0.00	\$0.22
SW029	\$0.02	\$0.10	\$0.04	\$0.05	\$0.07	\$0.29	\$0.40	\$0.00	\$0.32
SW030	\$0.08	\$0.09	\$0.05	\$0.08	\$0.13	\$0.43	\$0.64	\$0.04	\$0.01
SW031	\$0.07	\$0.13	\$0.07	\$0.07	\$0.15	\$0.49	\$0.44	\$0.05	\$0.06
SW032	\$0.03	\$0.07	\$0.12	\$0.07	\$0.08	\$0.37	\$0.25	\$0.00	\$0.05
SW033	\$0.11	\$0.09	\$0.02	\$0.03	\$0.24	\$0.50	\$0.20	\$0.03	\$0.22
SW034	\$0.07	\$0.09	\$0.01	\$0.06	\$0.10	\$0.33	\$0.42	\$0.00	\$0.32
Average	\$0.08	\$0.10	\$0.03	\$0.07	\$0.09	\$0.37	\$0.40	\$0.02	\$0.15
Top 25%	\$0.07	\$0.11	\$0.03	\$0.07	\$0.08	\$0.36	\$0.38	\$0.03	\$0.15

Farm number	Fuel & oil	Pasture improvement/cropping	Other feed costs	Fodder purchases	Grain/concentrates/other	Agistment costs	Total feed costs	Total variable costs
	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS
SW001	\$0.19	\$0.05	\$0.00	\$0.00	\$0.65	\$0.00	\$1.99	\$2.37
SW002	\$0.10	\$0.12	\$0.05	\$0.40	\$1.34	\$0.00	\$2.54	\$2.78
SW005	\$0.13	\$0.04	\$0.00	\$0.00	\$0.86	\$0.13	\$1.49	\$2.11
SW006	\$0.22	\$0.13	\$0.00	\$0.00	\$0.60	\$0.00	\$1.72	\$1.93
SW007	\$0.05	\$0.01	\$0.00	\$0.52	\$1.16	\$0.17	\$1.90	\$2.32
SW008	\$0.10	\$0.14	\$0.24	\$0.04	\$1.01	\$0.00	\$1.95	\$2.22
SW009	\$0.10	\$0.12	\$0.00	\$0.00	\$0.94	\$0.00	\$1.57	\$1.88
SW010	\$0.26	\$0.08	\$0.05	\$0.06	\$0.72	\$0.00	\$1.88	\$2.29
SW011	\$0.03	\$0.10	\$0.04	\$0.17	\$1.02	\$0.06	\$1.92	\$2.36
SW012	\$0.08	\$0.11	\$0.07	\$0.07	\$1.14	\$0.17	\$2.02	\$2.38
SW014	\$0.09	\$0.06	\$0.00	\$0.18	\$1.06	\$0.00	\$2.08	\$2.32
SW015	\$0.18	\$0.12	\$0.00	\$0.00	\$1.29	\$0.00	\$1.99	\$2.43
SW020	\$0.12	\$0.07	\$0.00	\$0.19	\$1.54	\$0.00	\$2.36	\$2.71
SW021	\$0.07	\$0.22	\$0.00	\$0.10	\$1.06	\$0.00	\$2.21	\$2.45
SW022	\$0.13	\$0.26	\$0.06	\$0.00	\$0.71	\$0.00	\$1.95	\$2.38
SW024	\$0.08	\$0.17	\$0.01	\$0.58	\$1.11	\$0.00	\$2.57	\$2.77
SW025	\$0.09	\$0.19	\$0.00	\$0.00	\$1.04	\$0.00	\$1.82	\$2.21
SW027	\$0.07	\$0.00	\$0.01	\$0.06	\$0.52	\$0.00	\$1.27	\$1.71
SW028	\$0.05	\$0.16	\$0.02	\$0.01	\$0.41	\$0.29	\$1.79	\$2.24
SW029	\$0.09	\$0.01	\$0.24	\$0.13	\$1.17	\$0.00	\$2.36	\$2.64
SW030	\$0.13	\$0.15	\$0.00	\$0.49	\$1.23	\$0.00	\$2.70	\$3.13
SW031	\$0.07	\$0.18	\$0.05	\$0.04	\$1.55	\$0.12	\$2.57	\$3.05
SW032	\$0.08	\$0.03	\$0.01	\$0.20	\$0.73	\$0.00	\$1.35	\$1.72
SW033	\$0.11	\$0.22	\$0.00	\$0.00	\$0.70	\$0.00	\$1.49	\$1.99
SW034	\$0.06	\$0.05	\$0.00	\$0.03	\$1.51	\$0.03	\$2.41	\$2.74
Average	\$0.11	\$0.11	\$0.03	\$0.13	\$1.00	\$0.04	\$2.00	\$2.37
Top 25%	\$0.11	\$0.17	\$0.06	\$0.03	\$1.09	\$0.02	\$2.04	\$2.40

TABLE B5

## Overhead costs — South West

Farm number	Rates	Registration & insurance	Farm insurance	Repairs & maintenance	Bank charges	Other overheads	Employed people	Total cash overheads	Depreciation	Imputed people cost	Total overheads
	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS
SW001	\$0.04	\$0.02	\$0.05	\$0.17	\$0.00	\$0.10	\$0.50	\$0.87	\$0.15	\$0.61	\$1.64
SW002	\$0.06	\$0.01	\$0.08	\$0.19	\$0.01	\$0.13	\$0.00	\$0.49	\$0.18	\$1.05	\$1.72
SW005	\$0.06	\$0.02	\$0.08	\$0.23	\$0.02	\$0.08	\$0.62	\$1.10	\$0.06	\$0.58	\$1.74
SW006	\$0.03	\$0.02	\$0.05	\$0.47	\$0.01	\$0.21	\$0.41	\$1.20	\$0.15	\$0.66	\$2.00
SW007	\$0.03	\$0.01	\$0.05	\$0.14	\$0.01	\$0.07	\$2.03	\$2.34	\$0.22	\$0.85	\$3.42
SW008	\$0.03	\$0.01	\$0.04	\$0.28	\$0.02	\$0.08	\$0.46	\$0.92	\$0.19	\$0.34	\$1.44
SW009	\$0.04	\$0.01	\$0.02	\$0.19	\$0.01	\$0.04	\$0.69	\$1.01	\$0.37	\$0.31	\$1.69
SW010	\$0.07	\$0.02	\$0.11	\$0.51	\$0.01	\$0.12	\$0.00	\$0.83	\$0.74	\$2.42	\$3.99
SW011	\$0.04	\$0.01	\$0.03	\$0.20	\$0.01	\$0.22	\$0.82	\$1.34	\$0.09	\$0.00	\$1.42
SW012	\$0.04	\$0.02	\$0.17	\$0.84	\$0.02	\$0.26	\$0.03	\$1.38	\$0.25	\$2.00	\$3.63
SW014	\$0.03	\$0.01	\$0.03	\$0.19	\$0.01	\$0.05	\$0.04	\$0.35	\$0.09	\$0.78	\$1.22
SW015	\$0.03	\$0.01	\$0.03	\$0.48	\$0.01	\$0.04	\$0.85	\$1.45	\$0.19	\$0.10	\$1.75
SW020	\$0.02	\$0.02	\$0.02	\$0.10	\$0.00	\$0.14	\$0.33	\$0.62	\$0.28	\$0.83	\$1.73
SW021	\$0.01	\$0.00	\$0.03	\$0.15	\$0.00	\$0.02	\$0.36	\$0.58	\$0.22	\$0.41	\$1.21
SW022	\$0.07	\$0.01	\$0.08	\$0.46	\$0.08	\$0.10	\$0.16	\$0.96	\$0.27	\$0.75	\$1.98
SW024	\$0.04	\$0.01	\$0.04	\$0.12	\$0.01	\$0.10	\$0.08	\$0.40	\$0.08	\$0.79	\$1.27
SW025	\$0.03	\$0.01	\$0.04	\$0.18	\$0.00	\$0.00	\$0.20	\$0.45	\$0.12	\$1.05	\$1.62
SW027	\$0.07	\$0.11	\$0.08	\$0.10	\$0.00	\$0.14	\$0.04	\$0.54	\$0.12	\$1.33	\$1.99
SW028	\$0.06	\$0.01	\$0.02	\$0.23	\$0.03	\$0.08	\$0.46	\$0.89	\$0.16	\$0.42	\$1.48
SW029	\$0.03	\$0.00	\$0.03	\$0.17	\$0.00	\$0.06	\$0.34	\$0.63	\$0.23	\$0.37	\$1.24
SW030	\$0.06	\$0.01	\$0.04	\$0.45	\$0.08	\$0.10	\$0.19	\$0.93	\$0.29	\$0.78	\$1.99
SW031	\$0.00	\$0.00	\$0.03	\$0.19	\$0.01	\$0.08	\$0.35	\$0.67	\$0.29	\$0.26	\$1.23
SW032	\$0.04	\$0.01	\$0.05	\$0.36	\$0.02	\$0.32	\$0.00	\$0.81	\$0.16	\$2.02	\$2.99
SW033	\$0.05	\$0.02	\$0.10	\$0.19	\$0.00	\$0.24	\$0.00	\$0.60	\$0.07	\$1.68	\$2.34
SW034	\$0.04	\$0.01	\$0.06	\$0.20	\$0.00	\$0.08	\$0.48	\$0.87	\$0.17	\$0.35	\$1.39
Average	\$0.04	\$0.02	\$0.05	\$0.27	\$0.02	\$0.11	\$0.38	\$0.89	\$0.21	\$0.83	\$1.92
Top 25%	\$0.03	\$0.01	\$0.04	\$0.29	\$0.02	\$0.06	\$0.48	\$0.93	\$0.26	\$0.36	\$1.55



TABLE B6

# Variable costs % — South West

Percentage of total farm costs

Farm number	AI & herd test	Animal health	Calf rearing	Shed power	Dairy supplies	Total herd & shed costs	Fertiliser	Irrigation	Hay & silage making
	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS
SW001	3.1%	1.8%	0.4%	2.2%	2.0%	9.5%	21.8%	0.6%	5.1%
SW002	1.9%	1.2%	0.1%	1.2%	0.9%	5.3%	8.7%	0.0%	3.5%
SW005	2.5%	2.9%	0.7%	3.2%	6.7%	16.0%	8.1%	0.0%	0.6%
SW006	1.7%	0.8%	0.3%	1.7%	0.8%	5.2%	12.1%	4.5%	3.0%
SW007	1.9%	2.8%	0.5%	1.3%	0.9%	7.4%	0.0%	0.0%	0.0%
SW008	1.5%	3.2%	0.0%	2.0%	0.7%	7.3%	8.5%	1.7%	1.6%
SW009	2.7%	2.6%	0.0%	1.6%	2.0%	8.8%	9.0%	0.7%	1.6%
SW010	1.2%	2.6%	0.3%	1.0%	1.4%	6.6%	9.0%	0.6%	1.6%
SW011	1.9%	2.8%	1.4%	3.0%	2.4%	11.5%	7.9%	0.0%	5.3%
SW012	1.2%	0.9%	0.4%	1.7%	1.8%	5.9%	2.3%	0.8%	3.2%
SW014	2.1%	1.1%	0.9%	1.7%	1.1%	6.9%	13.6%	0.7%	5.1%
SW015	1.5%	3.7%	1.0%	1.3%	2.8%	10.5%	7.6%	1.0%	1.1%
SW020	2.0%	2.1%	0.0%	2.1%	1.7%	7.9%	5.4%	0.0%	4.7%
SW021	1.2%	2.7%	0.0%	1.9%	0.8%	6.6%	12.3%	0.0%	8.6%
SW022	1.8%	1.8%	2.2%	1.6%	2.4%	9.8%	10.0%	0.0%	8.1%
SW024	0.8%	1.0%	0.2%	1.8%	1.2%	4.9%	12.3%	0.0%	3.0%
SW025	5.2%	3.3%	0.0%	1.4%	0.4%	10.2%	11.1%	0.4%	1.5%
SW027	3.5%	1.9%	0.0%	2.4%	4.0%	11.9%	10.9%	0.0%	5.5%
SW028	3.5%	4.7%	0.8%	1.2%	1.7%	12.0%	17.0%	0.0%	5.9%
SW029	0.6%	2.7%	1.1%	1.2%	1.8%	7.4%	10.2%	0.0%	8.2%
SW030	1.5%	1.8%	1.1%	1.6%	2.6%	8.5%	12.5%	0.7%	0.2%
SW031	1.6%	3.0%	1.6%	1.6%	3.5%	11.4%	10.4%	1.1%	1.3%
SW032	0.6%	1.5%	2.6%	1.6%	1.7%	7.9%	5.4%	0.0%	1.0%
SW033	2.6%	2.1%	0.5%	0.8%	5.5%	11.5%	4.7%	0.8%	5.2%
SW034	1.6%	2.1%	0.2%	1.5%	2.5%	8.0%	10.1%	0.0%	7.7%
Average	2.0%	2.3%	0.7%	1.7%	2.1%	8.8%	9.6%	0.5%	3.7%
Top 25%	1.7%	2.8%	0.8%	1.7%	2.0%	9.1%	9.6%	0.7%	3.7%

Farm Number	Fuel & oil	Pasture improvement/cropping	Other feed costs	Fodder purchases	Grain/concentrates/other	Agistment costs	Total feed costs	Total variable costs
	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS
SW001	4.6%	1.2%	0.0%	0.0%	16.2%	0.0%	49.7%	59.2%
SW002	2.2%	2.6%	1.1%	8.8%	29.7%	0.0%	56.5%	61.7%
SW005	3.5%	1.0%	0.0%	0.0%	22.2%	3.4%	38.7%	54.7%
SW006	5.5%	3.4%	0.0%	0.0%	15.4%	0.0%	43.8%	49.1%
SW007	0.9%	0.1%	0.1%	9.0%	20.1%	2.9%	33.0%	40.4%
SW008	2.8%	3.7%	6.5%	1.0%	27.5%	0.0%	53.3%	60.6%
SW009	2.8%	3.4%	0.0%	0.0%	26.4%	0.0%	43.9%	52.7%
SW010	4.2%	1.2%	0.8%	1.0%	11.5%	0.0%	29.9%	36.5%
SW011	0.9%	2.6%	1.2%	4.4%	27.0%	1.6%	50.9%	62.4%
SW012	1.3%	1.8%	1.2%	1.2%	19.0%	2.8%	33.7%	39.6%
SW014	2.5%	1.7%	0.0%	5.0%	30.0%	0.0%	58.6%	65.5%
SW015	4.3%	2.8%	0.0%	0.0%	30.9%	0.0%	47.7%	58.2%
SW020	2.7%	1.5%	0.0%	4.2%	34.7%	0.0%	53.1%	61.1%
SW021	2.0%	5.9%	0.0%	2.6%	28.9%	0.0%	60.4%	67.0%
SW022	3.1%	5.9%	1.4%	0.0%	16.3%	0.0%	44.8%	54.6%
SW024	1.9%	4.2%	0.4%	14.5%	27.5%	0.0%	63.7%	68.6%
SW025	2.4%	5.0%	0.0%	0.0%	27.1%	0.0%	47.4%	57.6%
SW027	2.0%	0.0%	0.2%	1.7%	14.0%	0.0%	34.3%	46.2%
SW028	1.4%	4.3%	0.5%	0.2%	11.2%	7.7%	48.3%	60.2%
SW029	2.3%	0.4%	6.1%	3.4%	30.2%	0.0%	60.7%	68.1%
SW030	2.6%	2.9%	0.0%	9.5%	24.1%	0.0%	52.6%	61.1%
SW031	1.6%	4.3%	1.3%	1.0%	36.3%	2.8%	60.0%	71.3%
SW032	1.7%	0.6%	0.2%	4.3%	15.5%	0.0%	28.7%	36.6%
SW033	2.5%	5.1%	0.0%	0.0%	16.2%	0.0%	34.5%	45.9%
SW034	1.5%	1.2%	0.0%	0.7%	36.5%	0.7%	58.4%	66.4%
Average	2.5%	2.7%	0.8%	2.9%	23.8%	0.9%	47.5%	56.2%
Top 25%	2.8%	4.3%	1.5%	0.8%	27.7%	0.5%	51.7%	60.7%

TABLE B7

## Overhead costs — South West

Percentage of total farm costs

Farm number	Rates	Registration & insurance	Farm insurance	Repairs & maintenance	Bank charges	Other overheads	Employed people	Total cash overheads	Depreciation	Imputed people cost	Total overheads
	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS
SW001	0.9%	0.6%	1.2%	4.2%	0.0%	2.5%	12.4%	21.8%	3.8%	15.3%	40.8%
SW002	1.3%	0.2%	1.7%	4.3%	0.3%	3.0%	0.0%	10.9%	4.1%	23.3%	38.3%
SW005	1.6%	0.4%	2.0%	5.9%	0.6%	2.2%	16.0%	28.6%	1.5%	15.2%	45.3%
SW006	0.8%	0.5%	1.2%	11.9%	0.3%	5.2%	10.5%	30.4%	3.8%	16.7%	50.9%
SW007	0.6%	0.2%	0.9%	2.4%	0.1%	1.1%	35.4%	40.8%	3.9%	14.9%	59.6%
SW008	0.8%	0.2%	1.2%	7.7%	0.5%	2.2%	12.6%	25.2%	5.1%	9.2%	39.4%
SW009	1.1%	0.4%	0.7%	5.3%	0.4%	1.0%	19.3%	28.2%	10.4%	8.7%	47.3%
SW010	1.1%	0.3%	1.8%	8.2%	0.1%	1.9%	0.0%	13.2%	11.8%	38.5%	63.5%
SW011	0.9%	0.1%	0.8%	5.4%	0.3%	5.9%	21.8%	35.3%	2.3%	0.0%	37.6%
SW012	0.7%	0.3%	2.8%	14.1%	0.3%	4.4%	0.5%	23.0%	4.1%	33.3%	60.4%
SW014	0.8%	0.2%	0.8%	5.5%	0.2%	1.5%	1.1%	10.0%	2.7%	21.9%	34.5%
SW015	0.6%	0.3%	0.8%	11.5%	0.2%	1.0%	20.4%	34.7%	4.7%	2.5%	41.8%
SW020	0.6%	0.4%	0.4%	2.1%	0.1%	3.1%	7.4%	14.0%	6.2%	18.7%	38.9%
SW021	0.3%	0.1%	0.9%	4.0%	0.1%	0.7%	9.7%	15.8%	6.0%	11.2%	33.0%
SW022	1.7%	0.2%	1.9%	10.5%	1.8%	2.3%	3.7%	22.0%	6.3%	17.1%	45.4%
SW024	0.9%	0.2%	1.1%	2.9%	0.3%	2.5%	1.9%	9.8%	1.9%	19.7%	31.4%
SW025	0.7%	0.4%	0.9%	4.6%	0.0%	0.0%	5.3%	11.9%	3.2%	27.3%	42.4%
SW027	1.9%	3.0%	2.2%	2.7%	0.1%	3.8%	0.9%	14.6%	3.2%	36.1%	53.8%
SW028	1.7%	0.4%	0.5%	6.3%	0.7%	2.1%	12.3%	24.1%	4.3%	11.4%	39.8%
SW029	0.8%	0.1%	0.8%	4.3%	0.0%	1.6%	8.6%	16.3%	6.0%	9.6%	31.9%
SW030	1.1%	0.1%	0.7%	8.9%	1.5%	1.9%	3.8%	18.1%	5.6%	15.2%	38.9%
SW031	0.1%	0.1%	0.7%	4.5%	0.2%	1.9%	8.2%	15.7%	6.9%	6.1%	28.7%
SW032	0.9%	0.3%	1.1%	7.7%	0.5%	6.7%	0.0%	17.2%	3.3%	42.8%	63.4%
SW033	1.1%	0.5%	2.3%	4.3%	0.0%	5.6%	0.1%	13.8%	1.5%	38.7%	54.1%
SW034	1.0%	0.2%	1.3%	4.9%	0.1%	1.8%	11.6%	21.0%	4.0%	8.6%	33.6%
Average	1.0%	0.4%	1.2%	6.2%	0.4%	2.6%	8.9%	20.7%	4.7%	18.5%	43.8%
Top 25%	0.8%	0.2%	1.0%	7.3%	0.5%	1.5%	12.3%	23.6%	6.5%	9.1%	39.3%

TABLE B8

## Capital structure — South West

	AREA	LAND VALUE			OTHER ASSETS (PER USABLE HECTARE)				LIABILITIES		EQUITY	
	Total usable area	Total land value per usable hectare	Total land value per milking cow	Plant & equipment	Livestock	Hay & grain	Other assets	Total assets	Liabilities per usable hectare	Liabilities per milking cow	Equity per usable hectare	Average equity
Average	302	\$13,743	\$10,601	\$1,547	\$2,102	\$113	\$129	\$17,683	\$5,960	\$4,513	\$11,723	66%
Top 25%	494	\$12,569	\$9,459	\$2,004	\$2,452	\$186	\$224	\$17,439	\$5,328	\$4,073	\$12,111	67%

**TABLE C1**  
**Main Financial Indicators — Gippsland**

Farm number	Milk income (net)	All other income	Gross farm income	Total variable costs	Total overhead costs	Cost structure	Earnings before interest & tax	Return on assets	Interest & lease charges	Debt servicing ratio	Net farm income	Return on equity	Return on equity
	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	% OF INCOME	\$/ KG MS	(EXCL. CAPITAL APPREC.)	\$/ KG MS	% OF INCOME	\$/ KG MS	(INCL. CAPITAL APPREC.)	(INCL. CAPITAL APPREC.)
GI002	\$4.83	\$0.66	\$5.50	\$1.73	\$2.08	69%	\$1.69	4.2%	\$0.51	9%	\$1.18	3.7%	24.5%
GI004	\$4.23	\$0.86	\$5.10	\$2.09	\$2.68	94%	\$0.33	1.0%	\$0.69	14%	-\$0.36	-1.4%	1.8%
GI005	\$4.21	\$0.58	\$4.79	\$1.90	\$2.04	82%	\$0.84	2.0%	\$1.05	22%	-\$0.21	-1.5%	-1.5%
GI011	\$4.26	\$0.39	\$4.65	\$2.40	\$1.51	84%	\$0.71	2.9%	\$0.88	19%	-\$0.17	-1.2%	-0.8%
GI012	\$4.29	\$0.33	\$4.61	\$1.55	\$2.08	79%	\$0.99	2.1%	\$0.69	15%	\$0.30	0.9%	0.9%
GI017	\$3.99	\$0.36	\$4.35	\$2.73	\$2.86	128%	-\$1.31	-3.2%	\$0.39	9%	-\$1.70	-7.5%	-14.6%
GI020	\$4.55	\$0.43	\$4.98	\$2.56	\$1.44	80%	\$0.85	2.9%	\$0.84	17%	\$0.02	0.1%	-4.1%
GI021	\$4.35	\$1.32	\$5.67	\$2.92	\$2.01	87%	\$0.74	2.4%	\$1.06	19%	-\$0.32	-3.5%	-2.7%
GI022	\$4.43	\$0.68	\$5.11	\$2.58	\$1.88	87%	-\$0.14	-0.4%	\$0.93	22%	-\$1.08	-4.1%	-3.8%
GI025	\$4.19	\$0.85	\$5.04	\$2.60	\$2.14	94%	\$0.30	0.9%	\$0.79	16%	-\$0.49	-3.0%	-0.5%
GI028	\$4.45	\$0.41	\$4.86	\$2.94	\$1.54	92%	\$0.38	1.3%	\$0.37	8%	\$0.01	0.1%	0.6%
GI029	\$4.28	\$0.47	\$4.75	\$1.75	\$1.32	64%	\$1.64	6.0%	\$0.57	12%	\$1.07	6.5%	7.0%
GI031	\$4.39	\$0.41	\$4.80	\$3.09	\$1.15	88%	\$0.56	3.6%	\$0.34	7%	\$0.22	1.9%	10.9%
GI032	\$4.28	\$0.81	\$5.09	\$2.16	\$1.60	74%	\$1.33	4.6%	\$0.28	5%	\$1.05	4.4%	11.3%
GI033	\$4.43	\$0.92	\$5.34	\$3.42	\$2.22	106%	-\$0.30	-1.4%	\$0.34	6%	-\$0.64	-5.4%	-6.8%
GI034	\$5.16	\$0.93	\$6.08	\$1.77	\$2.23	66%	\$2.09	1.9%	\$0.49	8%	\$1.60	1.5%	1.5%
GI035	\$4.55	\$0.67	\$5.22	\$2.80	\$3.14	114%	-\$0.72	-1.7%	\$1.09	21%	-\$1.81	-13.0%	-11.8%
GI037	\$4.48	\$0.82	\$5.30	\$2.25	\$2.01	81%	\$1.03	3.7%	\$0.58	11%	\$0.45	3.7%	3.7%
GI038	\$4.25	\$1.27	\$5.52	\$1.66	\$1.32	54%	\$2.54	8.0%	\$1.08	20%	\$1.46	24.3%	22.9%
GI039	\$4.20	\$0.75	\$4.95	\$2.40	\$1.56	80%	\$1.00	3.3%	\$1.00	20%	\$0.00	-0.2%	1.7%
GI040	\$4.37	\$0.98	\$5.35	\$2.28	\$1.73	75%	\$1.35	4.9%	\$1.22	23%	\$0.12	1.4%	1.7%
GI041	\$4.35	\$0.37	\$4.72	\$2.23	\$1.65	82%	\$0.83	3.1%	\$0.47	10%	\$0.37	1.7%	2.1%
GI042	\$4.30	\$0.86	\$5.16	\$1.91	\$1.72	70%	\$1.48	7.1%	\$0.55	11%	\$0.93	7.1%	12.2%
GI043	\$4.39	\$0.37	\$4.76	\$2.18	\$1.61	80%	\$0.89	2.4%	\$0.55	12%	\$0.34	1.4%	1.4%
Average	\$4.38	\$0.69	\$5.07	\$2.33	\$1.90	84%	\$0.80	2.6%	\$0.70	14%	\$0.10	0.7%	2.4%
Top 25%	\$4.52	\$0.83	\$5.35	\$1.83	\$1.71	66%	\$1.79	5.3%	\$0.58	11%	\$1.22	7.9%	13.2%

**TABLE C2**  
**Physical Information — Gippsland**

Farm number	Total useable area	Grazed area	Water used	Number of milking cows	Milking cows per useable area	Milk sold	Milk sold	Fat	Protein
	HA	HA	MM/HA	HD	HD/HA	KG MS/ COW	KG MS/ HA	%	%
GI002	194	182	1,004	290	1.5	527	787	4.0%	3.3%
GI004	83	83	1,138	110	1.3	351	464	4.3%	3.4%
GI005	123	123	975	186	1.5	340	514	4.1%	3.2%
GI011	90	90	1,200	180	2.0	488	971	4.1%	3.4%
GI012	100	100	1,041	148	1.5	540	799	4.1%	3.3%
GI017	204	204	685	184	0.9	362	326	4.1%	3.1%
GI020	333	333	960	778	2.3	460	1076	4.2%	3.3%
GI021	270	270	1,024	370	1.4	441	605	5.1%	3.8%
GI022	481	245	783	447	0.9	437	406	3.9%	3.5%
GI025	88	88	1,112	200	2.3	372	845	4.6%	3.5%
GI028	150	150	1,196	226	1.5	512	771	4.1%	3.5%
GI029	116	116	1,105	240	2.1	476	985	4.6%	3.3%
GI031	73	73	1,206	280	3.8	520	1996	4.3%	3.5%
GI032	136	136	1,097	235	1.7	536	926	4.2%	3.4%
GI033	188	180	1,110	120	0.6	568	363	4.1%	3.3%
GI034	122	122	851	148	1.2	474	575	3.7%	3.2%
GI035	49	32	891	63	1.3	472	607	4.1%	3.1%
GI037	236	233	1,002	395	1.7	542	907	4.1%	3.5%
GI038	189	189	1,011	260	1.4	473	650	4.4%	3.4%
GI039	136	136	958	203	1.5	499	745	4.2%	3.4%
GI040	323	298	1,076	568	1.8	435	765	4.3%	3.2%
GI041	247	247	980	370	1.5	496	745	4.5%	3.5%
GI042	88	88	1,061	230	2.6	485	1267	4.3%	3.3%
GI043	112	112	1,069	200	1.8	516	922	4.5%	3.4%
Average	172	160	1,022	268	1.7	472	792	4.2%	3.4%
Top 25%	141	139	1,022	234	1.7	495	865	4.2%	3.3%

TABLE C2

## Physical Information — Gippsland

(Continued)

Farm Number	Estimated grazed pasture	Estimated conserved feed	Home grown feed as % of ME consumed	Nitrogen application	Phosphorous application	Potassium application	Sulphur application	People productivity	People productivity
	T DM/ HA	T DM/ HA	% OF ME	KG/ HA	KG/ HA	KG/ HA	KG/ HA	HD/ FTE	KG MS/ FTE
GI002	8.0	2.5	83%	39.4	36.2	21.5	10.2	90	47,323
GI004	7.8	0.6	83%	57.5	3.1	17.9	10.9	70	24,704
GI005	6.7	1.0	85%	19.0	0.7	1.2	0.0	84	28,696
GI011	9.0	0.6	67%	148.2	19.6	51.0	22.4	144	70,408
GI012	7.7	0.7	73%	108.1	31.2	48.1	39.1	71	38,350
GI017	4.2	0.0	66%	26.1	4.4	0.0	3.9	72	26,017
GI020	10.8	0.4	69%	189.5	40.5	18.9	3.2	114	52,591
GI021	7.0	0.1	74%	58.6	12.0	0.0	1.3	101	44,468
GI022	2.5	2.0	66%	54.0	17.1	27.6	15.5	115	50,407
GI025	8.7	1.9	76%	207.6	0.0	45.6	15.5	118	44,052
GI028	5.2	1.0	61%	103.3	24.0	40.7	17.3	83	42,353
GI029	9.8	0.5	75%	109.3	10.9	15.5	14.4	105	49,947
GI031	12.5	0.0	51%	306.8	0.0	53.7	0.0	139	72,186
GI032	9.6	0.7	75%	152.2	10.6	20.3	13.1	97	51,864
GI033	2.7	0.2	65%	64.1	10.3	17.7	11.5	52	29,395
GI034	6.3	1.4	91%	46.0	2.8	9.0	3.4	72	34,075
GI035	6.1	0.2	74%	51.8	8.2	60.4	3.3	55	25,846
GI037	7.9	1.2	71%	204.5	10.2	39.8	13.9	93	50,664
GI038	7.9	0.4	80%	102.2	12.9	24.9	16.1	107	50,784
GI039	6.1	1.4	70%	179.3	10.5	56.7	12.9	77	38,463
GI040	8.2	1.3	74%	53.6	2.9	36.6	0.3	129	56,196
GI041	6.3	2.0	73%	138.0	10.1	19.2	13.0	99	49,124
GI042	12.3	1.3	76%	188.2	31.5	88.7	39.0	89	43,066
GI043	8.2	1.0	78%	50.8	27.9	55.8	34.0	93	47,915
Average	7.6	0.9	73%	110.8	14.1	32.1	13.1	95	44,537
Top 25%	9.0	1.1	80%	106.2	17.5	30.0	16.0	93	46,176

TABLE C3

## Purchased feed — Gippsland

Farm number	Purchased feed per milker	Concentrate price	Silage price	Hay price	Other feed price	Average purchased feed price	Average ME of purchased feed	Average purchased feed price	Percent of total energy imported
	T DM/HD	\$/ T DM	\$/ T DM	\$/ T DM	\$/ T DM	\$/ T DM	MJ ME/ KG	C/ MJ	% OF ME
GI002	1.2	\$205	-	-	\$105	\$188	13.4	1.4	17%
GI004	1.2	\$256	\$120	-	-	\$246	12.4	2.0	17%
GI005	0.8	\$316	-	\$167	-	\$313	12.0	2.7	15%
GI011	2.3	\$300	-	\$160	\$160	\$279	11.6	2.5	33%
GI012	1.9	\$180	\$100	\$170	-	\$179	11.8	1.5	27%
GI017	2.5	\$293	\$350	\$245	\$265	\$275	11.3	2.6	34%
GI020	2.2	\$243	\$68	\$179	\$209	\$200	11.0	1.9	31%
GI021	1.6	\$338	\$70	\$211	\$224	\$291	12.6	2.4	26%
GI022	2.2	\$351	-	\$182	\$182	\$316	12.5	2.6	34%
GI025	1.4	\$203	-	\$140	\$156	\$202	11.7	1.8	24%
GI028	2.7	\$331	-	\$226	\$238	\$291	11.3	2.7	39%
GI029	1.6	\$268	\$100	\$194	\$199	\$236	11.7	2.1	25%
GI031	2.9	\$280	-	\$295	\$206	\$264	12.3	2.3	49%
GI032	1.9	\$289	\$90	\$170	-	\$251	11.5	2.3	25%
GI033	2.3	\$509	-	\$192	\$192	\$459	12.4	3.8	35%
GI034	0.6	\$0	\$100	\$170	\$102	\$108	12.4	1.0	9%
GI035	2.0	\$246	-	\$120	\$120	\$221	9.7	2.3	26%
GI037	2.0	\$264	\$68	-	-	\$251	12.6	2.0	29%
GI038	1.4	\$249	\$60	-	-	\$228	11.8	2.0	20%
GI039	1.9	\$267	-	\$232	-	\$265	12.4	2.2	30%
GI040	1.7	\$295	\$64	-	\$192	\$258	12.7	2.1	26%
GI041	1.7	\$260	-	-	-	\$260	13.1	2.0	27%
GI042	1.7	\$280	-	\$184	\$202	\$257	11.2	2.4	24%
GI043	1.3	\$320	-	\$166	-	\$297	12.4	2.5	22%
Average	1.8	\$273	\$108	\$189	\$183	\$256	12.0	2.2	27%
Top 25%	1.4	\$215	-	-	-	\$211	12.0	1.9	20%

**TABLE C4**  
**Variable costs — Gippsland**

Farm number	AI & herd test	Animal health	Calf rearing	Shed power	Dairy supplies	Total herd & shed costs	Fertiliser	Irrigation	Hay & silage making
	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS
GI002	\$0.07	\$0.02	\$0.02	\$0.07	\$0.12	\$0.32	\$0.58	\$0.00	\$0.01
GI004	\$0.03	\$0.18	\$0.02	\$0.12	\$0.07	\$0.42	\$0.27	\$0.00	\$0.17
GI005	\$0.13	\$0.07	\$0.02	\$0.10	\$0.12	\$0.44	\$0.33	\$0.00	\$0.15
GI011	\$0.09	\$0.02	\$0.02	\$0.09	\$0.12	\$0.34	\$0.48	\$0.00	\$0.10
GI012	\$0.04	\$0.08	\$0.01	\$0.06	\$0.04	\$0.24	\$0.45	\$0.00	\$0.04
GI017	\$0.08	\$0.05	\$0.00	\$0.10	\$0.08	\$0.32	\$0.15	\$0.00	\$0.00
GI020	\$0.09	\$0.09	\$0.02	\$0.15	\$0.02	\$0.37	\$0.37	\$0.33	\$0.13
GI021	\$0.16	\$0.07	\$0.01	\$0.11	\$0.15	\$0.51	\$0.18	\$0.00	\$0.53
GI022	\$0.14	\$0.14	\$0.05	\$0.09	\$0.03	\$0.45	\$0.48	\$0.00	\$0.71
GI025	\$0.07	\$0.13	\$0.12	\$0.15	\$0.07	\$0.54	\$0.62	\$0.06	\$0.13
GI028	\$0.09	\$0.12	\$0.03	\$0.09	\$0.03	\$0.35	\$0.67	\$0.00	\$0.16
GI029	\$0.08	\$0.11	\$0.01	\$0.07	\$0.04	\$0.30	\$0.22	\$0.22	\$0.08
GI031	\$0.14	\$0.11	\$0.00	\$0.07	\$0.11	\$0.43	\$0.25	\$0.19	\$0.06
GI032	\$0.07	\$0.10	\$0.04	\$0.09	\$0.03	\$0.33	\$0.78	\$0.00	\$0.05
GI033	\$0.07	\$0.23	\$0.03	\$0.08	\$0.07	\$0.47	\$0.53	\$0.00	\$0.25
GI034	\$0.05	\$0.07	\$0.00	\$0.17	\$0.11	\$0.40	\$0.19	\$0.00	\$0.38
GI035	\$0.16	\$0.12	\$0.02	\$0.20	\$0.04	\$0.55	\$0.26	\$0.42	\$0.03
GI037	\$0.10	\$0.14	\$0.02	\$0.06	\$0.08	\$0.39	\$0.49	\$0.02	\$0.13
GI038	\$0.05	\$0.09	\$0.02	\$0.07	\$0.03	\$0.25	\$0.39	\$0.02	\$0.16
GI039	\$0.06	\$0.13	\$0.03	\$0.07	\$0.08	\$0.37	\$0.42	\$0.00	\$0.20
GI040	\$0.09	\$0.08	\$0.06	\$0.08	\$0.07	\$0.38	\$0.15	\$0.01	\$0.17
GI041	\$0.02	\$0.28	\$0.03	\$0.09	\$0.01	\$0.44	\$0.47	\$0.00	\$0.24
GI042	\$0.04	\$0.09	\$0.00	\$0.05	\$0.05	\$0.23	\$0.26	\$0.17	\$0.08
GI043	\$0.09	\$0.10	\$0.01	\$0.06	\$0.08	\$0.35	\$0.45	\$0.35	\$0.08
Average	\$0.08	\$0.11	\$0.02	\$0.10	\$0.07	\$0.38	\$0.39	\$0.08	\$0.17
Top 25%	\$0.06	\$0.08	\$0.02	\$0.09	\$0.06	\$0.31	\$0.40	\$0.07	\$0.13

Farm number	Fuel & oil	Pasture improvement/cropping	Other feed costs	Fodder purchases	Grain/concentrates/other	Agistment costs	Total feed costs	Total variable costs
	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS
GI002	\$0.14	\$0.07	\$0.09	\$0.00	\$0.53	\$0.00	\$1.41	\$1.73
GI004	\$0.11	\$0.14	\$0.00	\$0.00	\$0.98	\$0.00	\$1.67	\$2.09
GI005	\$0.07	\$0.05	\$0.00	\$0.00	\$0.85	\$0.00	\$1.46	\$1.90
GI011	\$0.07	\$0.03	\$0.01	\$0.11	\$1.25	\$0.00	\$2.06	\$2.40
GI012	\$0.12	\$0.06	\$0.04	\$0.00	\$0.60	\$0.00	\$1.31	\$1.55
GI017	\$0.13	\$0.05	\$0.00	\$0.96	\$1.09	\$0.03	\$2.41	\$2.73
GI020	\$0.14	\$0.16	\$0.02	\$0.12	\$0.92	\$0.00	\$2.19	\$2.56
GI021	\$0.11	\$0.13	\$0.00	\$0.41	\$1.05	\$0.00	\$2.41	\$2.92
GI022	\$0.11	\$0.31	\$0.08	\$0.00	\$0.44	\$0.00	\$2.14	\$2.58
GI025	\$0.06	\$0.18	\$0.00	\$0.16	\$0.81	\$0.04	\$2.06	\$2.60
GI028	\$0.06	\$0.06	\$0.00	\$0.38	\$1.26	\$0.00	\$2.59	\$2.94
GI029	\$0.06	\$0.04	\$0.00	\$0.10	\$0.72	\$0.00	\$1.44	\$1.75
GI031	\$0.05	\$0.05	\$0.00	\$0.07	\$1.59	\$0.40	\$2.66	\$3.09
GI032	\$0.09	\$0.06	\$0.00	\$0.00	\$0.85	\$0.00	\$1.83	\$2.16
GI033	\$0.10	\$0.15	\$0.00	\$0.06	\$1.85	\$0.00	\$2.94	\$3.42
GI034	\$0.11	\$0.07	\$0.09	\$0.00	\$0.16	\$0.37	\$1.37	\$1.77
GI035	\$0.17	\$0.04	\$0.20	\$0.14	\$0.99	\$0.00	\$2.25	\$2.80
GI037	\$0.08	\$0.12	\$0.01	\$0.01	\$1.00	\$0.00	\$1.86	\$2.25
GI038	\$0.05	\$0.04	\$0.00	\$0.00	\$0.74	\$0.00	\$1.41	\$1.66
GI039	\$0.07	\$0.11	\$0.07	\$0.05	\$1.08	\$0.02	\$2.03	\$2.40
GI040	\$0.04	\$0.07	\$0.08	\$0.21	\$1.17	\$0.00	\$1.89	\$2.28
GI041	\$0.09	\$0.03	\$0.00	\$0.00	\$0.97	\$0.00	\$1.80	\$2.23
GI042	\$0.08	\$0.01	\$0.00	\$0.10	\$0.86	\$0.11	\$1.68	\$1.91
GI043	\$0.08	\$0.05	\$0.00	\$0.00	\$0.68	\$0.13	\$1.83	\$2.18
Average	\$0.09	\$0.09	\$0.03	\$0.12	\$0.94	\$0.05	\$1.95	\$2.33
Top 25%	\$0.09	\$0.05	\$0.03	\$0.03	\$0.64	\$0.08	\$1.52	\$1.83

TABLE C5

## Overhead costs — Gippsland

Farm number	Rates	Registration & insurance	Farm insurance	Repairs & maintenance	Bank charges	Other overheads	Employed people	Total cash overheads	Depreciation	Imputed people cost	Total overheads
	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS
GI002	\$0.06	\$0.06	\$0.08	\$0.44	\$0.00	\$0.20	\$0.16	\$1.00	\$0.29	\$0.79	\$2.08
GI004	\$0.06	\$0.04	\$0.09	\$0.31	\$0.02	\$0.28	\$0.25	\$1.04	\$0.19	\$1.44	\$2.68
GI005	\$0.08	\$0.04	\$0.07	\$0.02	\$0.01	\$0.05	\$0.00	\$0.28	\$0.12	\$1.64	\$2.04
GI011	\$0.04	\$0.02	\$0.04	\$0.18	\$0.00	\$0.07	\$0.06	\$0.40	\$0.34	\$0.76	\$1.51
GI012	\$0.13	\$0.01	\$0.03	\$0.17	\$0.00	\$0.14	\$0.05	\$0.53	\$0.34	\$1.21	\$2.08
GI017	\$0.05	\$0.02	\$0.05	\$0.16	\$0.00	\$0.04	\$0.46	\$0.78	\$0.58	\$1.49	\$2.86
GI020	\$0.04	\$0.01	\$0.02	\$0.24	\$0.00	\$0.06	\$0.74	\$1.11	\$0.09	\$0.25	\$1.44
GI021	\$0.04	\$0.02	\$0.04	\$0.22	\$0.02	\$0.14	\$0.73	\$1.22	\$0.22	\$0.57	\$2.01
GI022	\$0.10	\$0.01	\$0.07	\$0.30	\$0.01	\$0.11	\$0.77	\$1.36	\$0.21	\$0.31	\$1.88
GI025	\$0.04	\$0.09	\$0.00	\$0.45	\$0.26	\$0.05	\$0.07	\$0.96	\$0.18	\$1.01	\$2.14
GI028	\$0.04	\$0.01	\$0.03	\$0.17	\$0.00	\$0.08	\$0.16	\$0.49	\$0.10	\$0.95	\$1.54
GI029	\$0.02	\$0.02	\$0.05	\$0.12	\$0.00	\$0.03	\$0.32	\$0.56	\$0.11	\$0.65	\$1.32
GI031	\$0.02	\$0.01	\$0.01	\$0.04	\$0.00	\$0.05	\$0.90	\$1.04	\$0.11	\$0.00	\$1.15
GI032	\$0.03	\$0.02	\$0.12	\$0.24	\$0.00	\$0.00	\$0.14	\$0.54	\$0.30	\$0.76	\$1.60
GI033	\$0.03	\$0.04	\$0.04	\$0.25	\$0.00	\$0.10	\$0.05	\$0.51	\$0.16	\$1.56	\$2.22
GI034	\$0.26	\$0.02	\$0.04	\$0.13	\$0.00	\$0.11	\$0.07	\$0.63	\$0.29	\$1.31	\$2.23
GI035	\$0.05	\$0.09	\$0.05	\$0.51	\$0.00	\$0.17	\$0.14	\$1.02	\$0.39	\$1.73	\$3.14
GI037	\$0.03	\$0.00	\$0.08	\$0.47	\$0.01	\$0.13	\$0.51	\$1.24	\$0.30	\$0.47	\$2.01
GI038	\$0.02	\$0.02	\$0.03	\$0.12	\$0.02	\$0.06	\$0.00	\$0.26	\$0.15	\$0.91	\$1.32
GI039	\$0.03	\$0.04	\$0.02	\$0.13	\$0.00	\$0.11	\$0.19	\$0.52	\$0.05	\$0.98	\$1.56
GI040	\$0.05	\$0.01	\$0.08	\$0.29	\$0.00	\$0.14	\$0.47	\$1.05	\$0.23	\$0.45	\$1.73
GI041	\$0.04	\$0.01	\$0.03	\$0.36	\$0.01	\$0.11	\$0.94	\$1.48	\$0.07	\$0.10	\$1.65
GI042	\$0.07	\$0.00	\$0.08	\$0.24	\$0.03	\$0.04	\$0.00	\$0.47	\$0.15	\$1.10	\$1.72
GI043	\$0.04	\$0.01	\$0.07	\$0.10	\$0.01	\$0.09	\$0.50	\$0.82	\$0.18	\$0.60	\$1.61
Average	\$0.06	\$0.03	\$0.05	\$0.24	\$0.02	\$0.10	\$0.32	\$0.80	\$0.21	\$0.88	\$1.90
Top 25%	\$0.08	\$0.02	\$0.07	\$0.21	\$0.01	\$0.07	\$0.11	\$0.58	\$0.21	\$0.92	\$1.71



TABLE C6

## Variable costs % — Gippsland

Percentage of total farm costs

Farm number	AI & herd test	Animal health	Calf rearing	Shed power	Dairy supplies	Total herd & shed costs	Fertiliser	Irrigation	Hay & silage making
	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS
GI002	1.8%	0.6%	0.7%	1.9%	3.3%	8.3%	15.2%	0.0%	0.2%
GI004	0.7%	3.7%	0.4%	2.6%	1.5%	8.8%	5.6%	0.0%	3.6%
GI005	3.4%	1.7%	0.5%	2.6%	3.0%	11.2%	8.4%	0.0%	3.7%
GI011	2.3%	0.6%	0.5%	2.3%	3.0%	8.7%	12.2%	0.0%	2.7%
GI012	1.2%	2.3%	0.4%	1.5%	1.2%	6.6%	12.5%	0.0%	1.1%
GI017	1.4%	1.0%	0.1%	1.9%	1.4%	5.7%	2.8%	0.0%	0.0%
GI020	2.3%	2.1%	0.4%	3.8%	0.6%	9.3%	9.2%	8.3%	3.2%
GI021	3.2%	1.5%	0.3%	2.2%	3.1%	10.3%	3.7%	0.0%	10.7%
GI022	3.1%	3.1%	1.2%	1.9%	0.7%	10.1%	10.7%	0.0%	16.0%
GI025	1.5%	2.8%	2.5%	3.2%	1.5%	11.5%	13.1%	1.2%	2.7%
GI028	2.0%	2.6%	0.7%	2.0%	0.6%	7.8%	15.0%	0.0%	3.7%
GI029	2.5%	3.5%	0.4%	2.2%	1.4%	9.9%	7.3%	7.3%	2.5%
GI031	3.4%	2.5%	0.0%	1.7%	2.6%	10.1%	5.9%	4.5%	1.5%
GI032	1.9%	2.8%	1.0%	2.3%	0.9%	8.8%	20.7%	0.0%	1.4%
GI033	1.2%	4.1%	0.5%	1.3%	1.3%	8.4%	9.4%	0.0%	4.5%
GI034	1.3%	1.7%	0.0%	4.2%	2.8%	10.1%	4.8%	0.0%	9.6%
GI035	2.8%	2.0%	0.3%	3.5%	0.6%	9.2%	4.4%	7.1%	0.5%
GI037	2.4%	3.2%	0.4%	1.4%	1.9%	9.2%	11.5%	0.5%	3.0%
GI038	1.8%	2.9%	0.5%	2.5%	0.8%	8.5%	13.0%	0.7%	5.5%
GI039	1.6%	3.2%	0.6%	1.8%	2.1%	9.4%	10.7%	0.1%	5.2%
GI040	2.3%	2.1%	1.4%	2.1%	1.7%	9.6%	3.7%	0.2%	4.3%
GI041	0.5%	7.2%	0.9%	2.3%	0.3%	11.2%	12.1%	0.0%	6.2%
GI042	1.2%	2.4%	0.1%	1.4%	1.2%	6.4%	7.1%	4.8%	2.3%
GI043	2.4%	2.8%	0.3%	1.5%	2.2%	9.2%	11.9%	9.3%	2.2%
Average	2.0%	2.6%	0.6%	2.3%	1.7%	9.1%	9.6%	1.8%	4.0%
Top 25%	1.8%	2.3%	0.4%	2.4%	1.7%	8.7%	11.4%	2.1%	3.6%

Farm number	Fuel & oil	Pasture improvement/cropping	Other feed costs	Fodder purchases	Grain/concentrates/other	Agistment costs	Total feed costs	Total variable costs
	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS
GI002	3.7%	1.8%	2.3%	0.0%	13.9%	0.0%	37.1%	45.4%
GI004	2.2%	2.8%	0.0%	0.0%	20.6%	0.0%	34.9%	43.8%
GI005	1.8%	1.4%	0.0%	0.0%	21.7%	0.0%	37.0%	48.2%
GI011	1.9%	0.8%	0.1%	2.9%	32.1%	0.0%	52.7%	61.4%
GI012	3.2%	1.8%	1.1%	0.0%	16.5%	0.0%	36.1%	42.7%
GI017	2.3%	0.9%	0.0%	17.2%	19.5%	0.6%	43.2%	48.9%
GI020	3.5%	4.1%	0.5%	3.0%	23.0%	0.0%	54.7%	64.0%
GI021	2.2%	2.7%	0.0%	8.3%	21.3%	0.0%	49.0%	59.3%
GI022	2.4%	7.0%	1.8%	0.0%	10.0%	0.0%	47.9%	57.9%
GI025	1.3%	3.9%	0.0%	3.3%	17.0%	0.8%	43.4%	54.8%
GI028	1.4%	1.3%	0.1%	8.4%	28.1%	0.0%	57.8%	65.7%
GI029	2.0%	1.4%	0.0%	3.3%	23.3%	0.0%	47.1%	57.0%
GI031	1.2%	1.2%	0.0%	1.6%	37.4%	9.4%	62.8%	72.9%
GI032	2.4%	1.5%	0.0%	0.0%	22.6%	0.0%	48.6%	57.4%
GI033	1.7%	2.7%	0.0%	1.1%	32.8%	0.0%	52.2%	60.6%
GI034	2.8%	1.6%	2.1%	0.0%	3.9%	9.4%	34.2%	44.3%
GI035	2.8%	0.6%	3.3%	2.4%	16.7%	0.0%	37.9%	47.1%
GI037	1.9%	2.7%	0.2%	0.2%	23.5%	0.0%	43.6%	52.8%
GI038	1.8%	1.5%	0.1%	0.0%	24.7%	0.0%	47.3%	55.8%
GI039	1.7%	2.7%	1.6%	1.3%	27.4%	0.5%	51.3%	60.6%
GI040	0.9%	1.9%	2.0%	5.2%	29.2%	0.0%	47.3%	56.8%
GI041	2.2%	0.7%	0.0%	0.0%	25.0%	0.0%	46.2%	57.4%
GI042	2.2%	0.4%	0.0%	2.7%	23.8%	3.1%	46.3%	52.7%
GI043	2.2%	1.4%	0.0%	0.0%	17.9%	3.5%	48.3%	57.5%
Average	2.2%	2.0%	0.6%	2.5%	22.2%	1.1%	46.1%	55.2%
Top 25%	2.5%	1.4%	0.8%	1.0%	18.7%	2.1%	43.4%	52.1%

TABLE C7

## Overhead costs — Gippsland

Percentage of total farm costs

Farm number	Rates	Registration & insurance	Farm insurance	Repairs & maintenance	Bank charges	Other overheads	Employed people	Total cash overheads	Depreciation	Imputed people cost	Total overheads
	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS
GI002	1.6%	1.6%	2.0%	11.5%	0.1%	5.2%	4.2%	26.2%	7.6%	20.8%	54.6%
GI004	1.3%	0.7%	2.0%	6.5%	0.4%	5.8%	5.2%	21.8%	4.1%	30.3%	56.2%
GI005	2.0%	1.0%	1.9%	0.6%	0.3%	1.3%	0.0%	7.1%	3.1%	41.6%	51.8%
GI011	1.1%	0.5%	0.9%	4.5%	0.0%	1.7%	1.4%	10.2%	8.8%	19.6%	38.6%
GI012	3.5%	0.4%	0.8%	4.7%	0.1%	3.8%	1.4%	14.7%	9.3%	33.3%	57.3%
GI017	0.8%	0.3%	1.0%	2.9%	0.1%	0.8%	8.2%	14.0%	10.4%	26.7%	51.1%
GI020	1.0%	0.1%	0.6%	6.1%	0.0%	1.4%	18.4%	27.7%	2.2%	6.2%	36.0%
GI021	0.9%	0.5%	0.8%	4.4%	0.5%	2.8%	14.9%	24.7%	4.5%	11.5%	40.7%
GI022	2.3%	0.1%	1.6%	6.8%	0.1%	2.4%	17.2%	30.6%	4.6%	6.9%	42.1%
GI025	0.9%	1.9%	0.0%	9.5%	5.4%	1.0%	1.4%	20.1%	3.8%	21.3%	45.2%
GI028	0.8%	0.2%	0.8%	3.7%	0.1%	1.8%	3.6%	10.9%	2.2%	21.2%	34.3%
GI029	0.8%	0.5%	1.6%	3.9%	0.2%	1.0%	10.3%	18.3%	3.7%	21.1%	43.0%
GI031	0.5%	0.2%	0.3%	1.0%	0.1%	1.1%	21.3%	24.5%	2.6%	0.0%	27.1%
GI032	0.7%	0.6%	3.1%	6.2%	0.0%	0.0%	3.7%	14.5%	8.0%	20.1%	42.6%
GI033	0.5%	0.7%	0.7%	4.4%	0.1%	1.8%	0.9%	9.1%	2.8%	27.6%	39.4%
GI034	6.5%	0.4%	1.0%	3.2%	0.1%	2.8%	1.7%	15.9%	7.1%	32.7%	55.7%
GI035	0.8%	1.5%	0.9%	8.7%	0.1%	2.8%	2.4%	17.1%	6.6%	29.1%	52.9%
GI037	0.7%	0.1%	1.8%	11.1%	0.3%	3.1%	12.0%	29.1%	7.1%	11.0%	47.2%
GI038	0.5%	0.5%	1.0%	4.1%	0.7%	1.9%	0.0%	8.8%	4.9%	30.6%	44.2%
GI039	0.7%	1.0%	0.6%	3.2%	0.0%	2.8%	4.8%	13.2%	1.4%	24.8%	39.4%
GI040	1.4%	0.3%	1.9%	7.2%	0.1%	3.6%	11.7%	26.1%	5.7%	11.3%	43.2%
GI041	1.1%	0.2%	0.7%	9.2%	0.2%	2.7%	24.2%	38.2%	1.7%	2.7%	42.6%
GI042	2.1%	0.1%	2.1%	6.7%	0.7%	1.2%	0.0%	12.8%	4.2%	30.3%	47.3%
GI043	1.2%	0.4%	1.7%	2.7%	0.1%	2.4%	13.3%	21.8%	4.9%	15.8%	42.5%
Average	1.4%	0.6%	1.2%	5.5%	0.4%	2.3%	7.6%	19.1%	5.0%	20.7%	44.8%
Top 25%	2.0%	0.6%	1.8%	5.9%	0.3%	2.0%	3.3%	16.1%	5.9%	25.9%	47.9%

TABLE C8

## Capital structure — Gippsland

	AREA	LAND VALUE			OTHER ASSETS (PER USABLE HECTARE)				LIABILITIES		EQUITY	
	Total usable area	Total land value per usable hectare	Total land value per milking cow	Plant & equipment	Livestock	Hay & grain	Other assets	Total assets	Liabilities per usable hectare	Liabilities per milking cow	Equity per usable hectare	Average equity
Average	172	\$14,445	\$9,444	\$1,550	\$2,403	\$172	\$441	\$19,066	\$5,679	\$3,358	\$13,387	68%
Top 25%	141	\$21,987	\$15,105	\$1,933	\$2,510	\$213	\$294	\$27,058	\$4,471	\$2,575	\$22,587	78%

**TABLE D1**  
**Main Financial Indicators — Statewide**

Farm number	Milk income (net)	All other income	Gross farm income	Total variable costs	Total overhead costs	Cost structure	Earnings before interest & tax	Return on assets <small>(EXCL. CAPITAL APPREC.)</small>	Interest & lease charges	Debt servicing ratio	Net farm income	Return on equity	Return on equity <small>(INCL. CAPITAL APPREC.)</small>
	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	% OF INCOME	\$/ KG MS		\$/ KG MS	% OF INCOME	\$/ KG MS		
Average	\$4.46	\$0.70	\$5.17	\$2.58	\$1.89	87%	\$0.65	2.2%	\$0.68	13%	-\$0.03	-0.3%	1.1%
Top 25%	\$4.66	\$0.83	\$5.49	\$2.27	\$1.61	71%	\$1.61	5.6%	\$0.68	12%	\$0.93	6.9%	11.6%

**TABLE D2**  
**Physical Information — Statewide**

Farm number	Total useable area	Grazed area	Water used	Number of milking cows	Milking cows per useable area	Milk sold	Milk sold	Butterfat	Protein
	HA	HA	MM/HA	HD	HD/HA	KG MS/ COW	KG MS/ HA	%	%
Average	232	219	903	307	1.5	496	752	4.2%	3.4%
Top 25%	289	287	957	403	1.7	528	911	4.1%	3.3%

Farm number	Estimated grazed pasture	Estimated conserved feed	Home grown feed as % of ME consumed	Nitrogen application	Phosphorous application	Potassium application	Sulphur application	People productivity	People productivity
	T DM/ HA	T DM/ HA	% OF ME	KG/ HA	KG/ HA	KG/ HA	KG/ HA	HD/ FTE	KG MS/ FTE
Average	6.2	0.8	66%	89.0	16.5	27.5	15.6	94	46,620
Top 25%	8.0	1.1	71%	127.7	14.4	27.8	15.9	107	56,274

**TABLE D3**  
**Purchased feed — Statewide**

Farm number	Purchased feed per milker	Concentrate price	Silage price	Hay price	Other feed price	Average purchased feed price	Average ME of purchased feed	Average purchased feed price	Percent of total energy imported
	T DM/HD	\$/ T DM	\$/ T DM	\$/ T DM	\$/ T DM	\$/ T DM	MJ ME/ KG	C/ MJ	% OF ME
Average	2.5	\$273	\$96	\$164	\$171	\$245	11.7	2.2	34%
Top 25%	2.1	\$250	-	-	-	\$237	12.1	2.0	29%

**TABLE D4**  
**Variable costs — Statewide**

Farm number	AI & herd test	Animal health	Calf rearing	Shed power	Dairy supplies	Total herd & shed costs	Fertiliser	Irrigation	Hay & silage making
	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS
Average	\$0.09	\$0.11	\$0.03	\$0.08	\$0.08	\$0.38	\$0.32	\$0.14	\$0.14
Top 25%	\$0.07	\$0.09	\$0.03	\$0.08	\$0.07	\$0.34	\$0.35	\$0.07	\$0.14

Farm number	Fuel & oil	Pasture improvement/cropping	Other feed costs	Fodder purchases	Grain/concentrates/other	Agistment costs	Total feed costs	Total variable costs
	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS
Average	\$0.10	\$0.11	\$0.04	\$0.27	\$1.01	\$0.06	\$2.20	\$2.58
Top 25%	\$0.10	\$0.11	\$0.04	\$0.09	\$0.94	\$0.08	\$1.92	\$2.27

TABLE D5

## Overhead costs — Statewide

Farm number	Rates	Registration & insurance	Farm insurance	Repairs & maintenance	Bank charges	Other overheads	Employed people	Total cash overheads	Depreciation	Imputed people cost	Total overheads
	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/ KG MS	\$/KG MS
Average	\$0.04	\$0.02	\$0.05	\$0.25	\$0.01	\$0.12	\$0.34	\$0.84	\$0.21	\$0.83	\$1.89
Top 25%	\$0.05	\$0.01	\$0.05	\$0.25	\$0.01	\$0.10	\$0.38	\$0.85	\$0.22	\$0.54	\$1.61

TABLE D6

## Variable costs % — Statewide

Percentage of total farm costs

Farm number	AI & herd test	Animal health	Calf rearing	Shed power	Dairy supplies	Total herd & shed costs	Fertiliser	Irrigation	Hay & silage making
	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS
Average	2.0%	2.4%	0.6%	1.9%	1.7%	8.6%	7.7%	2.8%	3.4%
Top 25%	1.8%	2.4%	0.8%	2.0%	1.8%	8.9%	9.3%	1.8%	3.7%

Farm Number	Fuel & oil	Pasture improvement/cropping	Other feed costs	Fodder purchases	Grain/concentrates/other	Agistment costs	Total feed costs	Total variable costs
	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS
Average	2.3%	2.6%	0.8%	5.5%	23.0%	1.4%	49.4%	58.0%
Top 25%	2.5%	2.8%	0.9%	2.3%	24.2%	1.8%	49.3%	58.2%

TABLE D7

## Overhead costs — Statewide

Percentage of total farm costs

Farm number	Rates	Registration & insurance	Farm insurance	Repairs & maintenance	Bank charges	Other overheads	Employed people	Total cash overheads	Depreciation	Imputed people cost	Total overheads
	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS	% OF COSTS
Average	1.0%	0.5%	1.2%	5.6%	0.3%	2.6%	7.7%	18.9%	4.7%	18.5%	42.0%
Top 25%	1.2%	0.4%	1.3%	6.4%	0.3%	2.4%	9.7%	21.8%	5.6%	14.4%	41.8%

TABLE D8

## Capital structure — Statewide

	AREA	LAND VALUE			OTHER ASSETS (PER USABLE HECTARE)				LIABILITIES		EQUITY	
	Total usable area	Total land value per usable hectare	Total land value per milking cow	Plant & equipment	Livestock	Hay & grain	Other assets	Total assets	Liabilities per usable hectare	Liabilities per milking cow	Equity per usable hectare	Average equity
Average	232	\$12,087	\$8,631	\$1,554	\$2,340	\$149	\$346	\$16,529	\$5,580	\$3,734	\$10,949	64%
Top 25%	289	\$16,416	\$10,726	\$1,864	\$2,743	\$183	\$298	\$21,554	\$6,361	\$3,820	\$15,194	66%

# Appendix E: Glossary Of Terms

## **All other income**

Income to the farm from all sources except milk. Includes livestock and feed inventory, dividends, interest payments received, rents from cottage, rebates and grants.

## **Annual hours**

Total hours worked by a person during the given twelve month period.

## **Appreciation**

An increase in the value of an asset in the market place. Often only applicable to land value.

## **Asset**

Anything managed by the farm, whether it is owned or not. Assets include land and buildings, plant and machinery, fixtures and fittings, trading stock, investments, debtors, and cash.

## **Break-even price required**

Cost of production minus income only sourced from the main enterprise output. Allows for direct comparison with price received of main output.

## **Cash overheads**

All fixed costs that have a cash cost to the business. Includes all overhead costs except imputed people costs and depreciation.

## **Cost of production**

Variable costs plus overhead costs. Usually expressed in terms of the main enterprise output, ie kilograms of milk solids.

## **Cost structure**

Cost of production as a percentage of gross income.

## **Debt servicing ratio**

Interest and lease costs as a percentage of gross farm income.

## **Depreciation**

Decrease in value over time of capital asset, usually as a result of using the asset. Depreciation is not cash, but reduces the book value of the asset and is therefore a cost.

## **Earnings before interest and tax (EBIT)**

*Previously reported as operating profit*

Gross income minus total variable costs and total overhead costs.

## **EBIT %**

The ratio of EBIT compared to gross income. Indicates the percentage of each dollar of gross income that is retained as EBIT.

## **Employed people cost**

Cash cost of any paid employee, including on-costs such as superannuation, workcover etc.

## **Equity**

Total assets minus total liabilities. Equal to the total value of capital invested in the farm business by the owner/ operator(s).

## **Equity %**

Total equity as a percentage of the total assets managed. The proportion of the total assets owned by the business.

## **Farm income**

See gross farm income.

## **Feed costs**

Cost of fertiliser, irrigation (including effluent), hay and silage making, fuel and oil, pasture improvement, fodder purchases, grain/concentrates, agistment and lease costs associated with any of the above costs.

## **Finance costs**

Total interest plus total lease costs paid.

## **Full time equivalent (FTE)**

Standardised people unit. Equal to 2400 hours a year. Calculated as 50 hours a week, 48 weeks a year.

## **Grazed area**

Total useable area minus any area used only for fodder production during the year.

## **Grazed pasture**

Calculated using the energetics method. Grazed pasture is calculated as the gap between total energy required by livestock over the year and amount of energy available from other sources (hay, silage, grain and concentrates).

Total energy required by livestock is a factor of; age, weight, growth rate, pregnancy and lactation requirements, distance to shed and Terrain, and number of animals.

Total energy available is the sum of energy available from all feed sources except pasture, calculated as (weight (kg) x dry matter content (DM %) x metabolisable energy (MJ/kg DM)).

## **Gross farm income**

Farm income including milk sales, livestock and feed trading gains and other income such as income from grants and rebates.

## **Gross margin**

Gross income minus total variable costs.

## **Herd costs**

Cost of AI and herd tests, animal health and calf rearing.

## **Imputed**

An estimated amount, introduced into economic management analysis to allow reasonable comparisons between years and between other businesses.

**Imputed people cost**

*Previously imputed labour*

Allocation for cost of owner/ family/ sharefarmer time in the business, taken as the greater of \$400 per cow less paid people or \$20 per hour.

**Liability**

Money owed to someone else, eg family or an institute such as a bank.

**Metabolisable energy**

Energy available to livestock in feed, expressed in megajoules per kilogram of dry matter (MJ/kg DM).

**Milk income**

Income through the sales of milk.

**Net farm income**

*Previously reported as business profit*

Earnings before interest and tax minus interest and lease charges. The amount of profit available for capital investment, loan principal repayments and tax.

**Number of milkers**

Total number of cows milked for at least three months.

**Other income**

Income to the farm from other farm owned assets and external sources. Includes dividends, interest payments received, rents from cottage, rebates and grants.

**Overhead costs**

All fixed costs incurred by the farm business e.g. rates, administration, depreciation, insurance, imputed labour. Interest, leases, capital expenditure, principal repayments and tax are not included.

**People cost**

*Previously reported as labour cost*

Cost of the people resource on farm. Includes both imputed and employed people cost.

**People productivity**

*Previously reported as labour efficiency*

FTEs per cow and per kilogram of milk solid. Measures of productivity of the total people resources in the business.

**People resource**

*Previously reported as labour*

Any person who works in the business, be they the owner, family, sharefarmer or employed on a permanent, part time or contract basis.

**Return on Assets (RoA)**

Earnings before interest and tax divided by the value of total assets.

**Return on Equity (RoE)**

Net farm income divided by the value of total equity.

**Shed costs**

Cost of shed power and dairy supplies such as filter socks, rubber ware, vacuum pump oil etc.

**Total Income**

See gross farm income.

**Total usable area**

Total hectares managed minus that area of land which is of little or no value for livestock production eg house and shed area.

**Total water used**

Total rainfall plus average irrigation water used expressed as millimetres per hectare, where irrigation water is calculated as; (total megalitres of water used/total useable area) x 100.

**Variable costs**

All costs that vary with the size of production in the enterprise eg herd, shed and feed costs.

## List of abbreviations

<b>AI</b>	Artificial insemination.
<b>BPR</b>	Break-even price required.
<b>CH<sub>4</sub></b>	Methane gas.
<b>CO<sub>2</sub></b>	Carbon dioxide gas.
<b>CO<sub>2</sub>-e</b>	Carbon dioxide equivalents.
<b>CoP</b>	Cost of production.
<b>DM</b>	Dry matter of feed stuffs.
<b>DPI</b>	Department of Primary Industries Victoria.
<b>EBIT</b>	Earnings before interest and tax.
<b>FTE</b>	Full time equivalent.
<b>GWP</b>	Global Warming Potential.
<b>ha</b>	Hectares.
<b>hd</b>	Head of cattle.
<b>kg</b>	Kilograms.
<b>ME</b>	Metabolisable energy (MJ/kg).
<b>MJ</b>	Megajoules of energy.
<b>mm</b>	Millimetres. 1 mm is equivalent to 4 points or 1/25th of an inch of rainfall.
<b>MS</b>	Milk solids (proteins and fats).
<b>N<sub>2</sub>O</b>	Nitrous oxide gas.
<b>Q1</b>	First quartile, i.e. the value of which one quarter, or 25%, of data in that range is <i>less</i> than.
<b>Q3</b>	Third quartile, i.e. the value of which one quarter, or 25%, of data in that range is <i>greater</i> than.
<b>t</b>	Tonne = 1,000 kg



