Dairy Australia
Your Levy at Work

Dairy Farm Monitor Project

New South Wales

Annual Report 2011/12

State Government Victoria

NSW GOVERNMENT Department of Primary Industries

Acknowledgements

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To find out the latest information on the project visit the project website:
www.dairyaustralia.com.au/dairyfarmmonitor

Or the NSW Department of Primary Industries website:
www.dpi.nsw.gov.au/agriculture/livestock/dairycattle/facts-and-figures

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Notes on the presentation of data in this report

This section of the report defines and explains the calculations used and the data presented throughout the report. The different sections of the report are discussed and the number of participant farms in the dairying regions listed.

This section presents a guide to the layout of the report and should not be confused with section II Farm Monitor Method which discusses the methodology for the farm data analysis.

This report is presented in the following parts:

> Summary
> Farm monitor method
> Statewide overview
> North region overview
> South region overview
> Appendices.

The report presents visual descriptions of the data for the 2011/12 financial year. Data is presented for individual farms, regional averages and top 25% of farms ranked by return on assets. 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 the fact that farms are not randomly selected.

The top 25% of farms are presented as lighter coloured bars in he regional overview figures. Return on assets is the determinate of the top producers, providing an assessment of the performance of the whole farm while accounting for differences in location, the quality of land and production system.

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 provide both brevity, and clarity, in the report, groups of participating farms in each region are referred to by their regional name:

> The 14 participating farms in the Northern New South Wales region are referred to as 'the North'.
> The 14 participating farms in the Southern and Inland New South Wales region are referred to as 'the South'.

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 reference to measures on a per kilogram of milk solids sold, or per cow basis. The appendix tables contain the majority of financial information on 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.

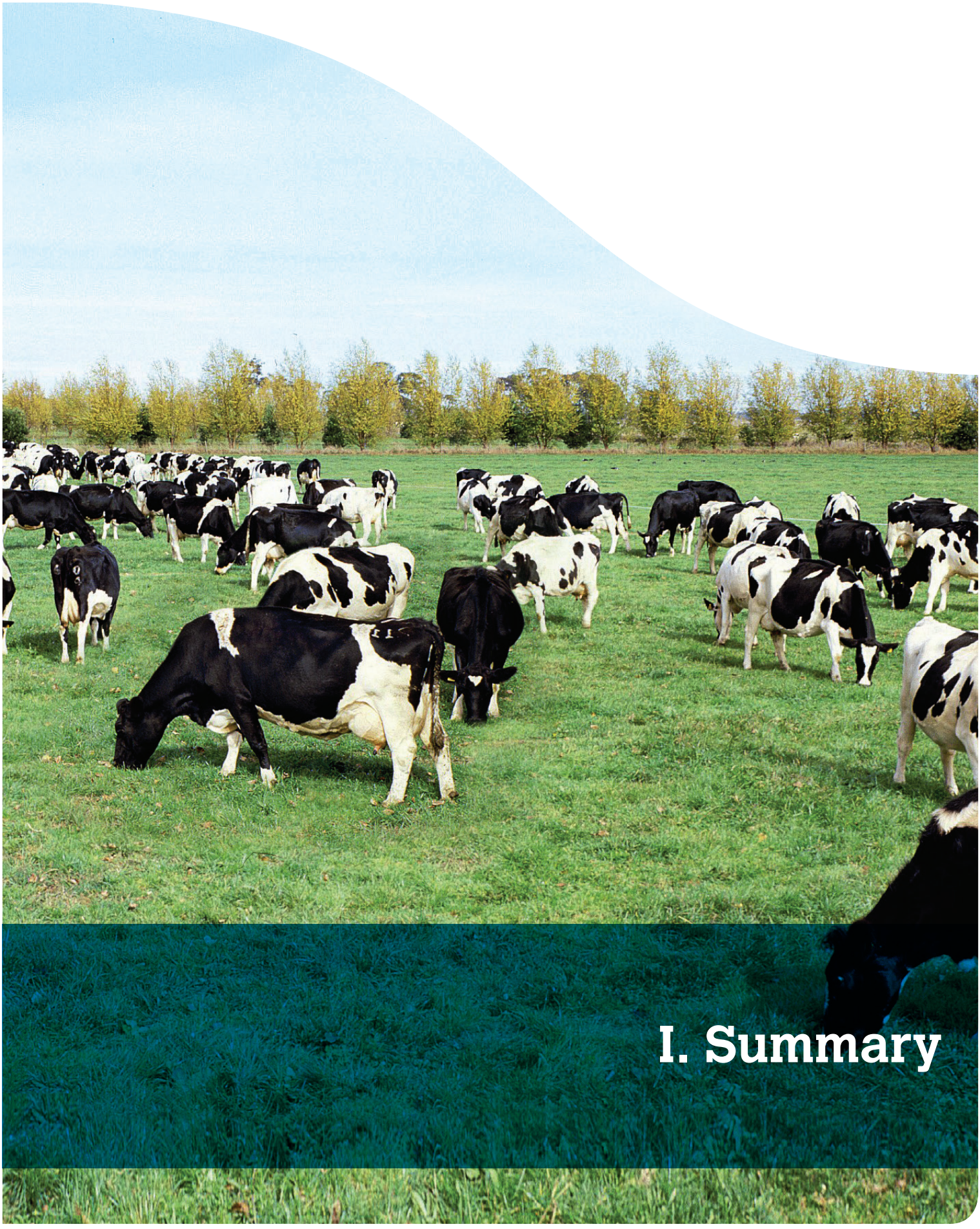
The methodology used is the same as that used in the Victorian Dairy Farm Monitor Project, and various other referenced sources. Attention should be paid to methodology when directly comparing figures from this report with those generated via other means. More detail on the methodology is provided in Part II.

Percentage differences are calculated as [(new value—original value)/ original value]. For example 'costs went from $80/ha to $120/ha, a 50% increase'; [{(120-80)/80} x (100/1)] = [(40/80) x 100] = 0.5 x 100 = 50%, unless otherwise stated.

Top 25% consists of 6 farms ranked on return on assets on a state wide basis, and are taken by considering all 28 farms as the one sample and not from combining the top farms from each region.

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

Keep an eye on the project website for further reports and updates on the project, including the 2012/13 Dairy Farm Monitor Project at: www.dairyaustralia.com.au/dairyfarmmonitor



I. Summary

Summary

This is the first year of the Dairy Farm Monitor Project in New South Wales. The project aims to provide the New South Wales dairy industry with valuable farm level data relating to profitability and production, as well as identifying the key drivers of productivity and profitability growth.

Data was collected from 28 farms from across the whole of NSW, with almost every dairying region represented. The offer was made to any interested farmer in NSW to be considered to join the project. Participants have been selected with the objective of representing a distribution of farm sizes, herd sizes and geographical locations within the state. The participating farms were then allocated into two groups for analysis: the Northern and the Southern. The Northern group includes farms from the Queensland border to the Hunter Valley along the coast and hinterland. The Southern group includes farms along the coast from Sydney to Bega, and farms from the inland river systems of NSW, including the Tamworth, Central West and Riverina regions. This grouping reflects general similarities among farm systems, and the influences on milk pricing across NSW.

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. NSW has a very large geographical spread and a wide range of regional differences in terms of climate and farm systems.

NSW milk production has been fairly stable year on year, and comprises about 12% of Australian supply. About 70% of NSW milk is used for domestic drinking milk and the rest for manufacturing. The northern and central regions of NSW predominantly supply liquid milk market processors, who demand a flat milk supply throughout the year. Strong demand for milk has kept milk prices relatively higher in the northern half of the state than the southern half during 2011/12.

Seasonal conditions for the first half of the year were generally favourable across most of NSW. However above average rainfall fell from January onwards, leading to widespread flooding, initially in the northern coastal regions and then in the central west and Riverina in February and March. These floods caused significant damage to infrastructure and disruption to normal farm production, with the impact felt for several months.

Profitability across all NSW farms was strong in 2011/12, with average whole farm earnings before interest and tax (EBIT) of $232,226; and average return on assets (ROA) of 4.3%.

The top 25 per cent of producers showed the strength of well run dairy farms, recording profitability levels well above the average. These farms averaged earnings before interest and tax of $1.94 per kilogram of milk solids, $1,395 per hectare, and a return on assets of 8.7 percent excluding capital appreciation.This is compared to the statewide average of earnings before interest and tax of $1.34 per kilogram of milk solids, $850 per hectare, and a return on assets of 4.3 per cent excluding capital appreciation.

Expectations of a lower milk price, with severe two tier pricing and reduction in allocations of tier one contracts for the liquid milk processors, combined with rising input costs, particularly for grain, meant that confidence in the NSW dairy industry was down towards the end of 2012.

With processors sending clear market signals against oversupply of milk in spring and summer, production and income in 2012/13 is expected to be flat or lower, and farmer confidence declining. Weaker Victorian milk prices are expected to impact on the southern NSW farmers, as well as dampening tier two prices in the north.

II. Farm monitor method

Farm monitor method

This section of the report explains the methodology behind how figures in the Dairy Farm Monitor Project (DFMP) are calculated and what they mean. It helps put farm business economic terminology into context.

The methodology employed to generate the profitability and productivity data in this report was adapted from that described in *The Farming Game* (Malcolm et al. 2005) and is consistent with that used in previous Dairy Farm Monitor Project reports. Readers should be aware that not all benchmarking programs use the same methodology or terminology for farm financial reporting. The allocation of items such as lease costs, overhead costs or imputed labour costs against the farm enterprises will vary between financial benchmarking programs. 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 compared with caution.

Figure 1: Dairy Farm Monitor Project method

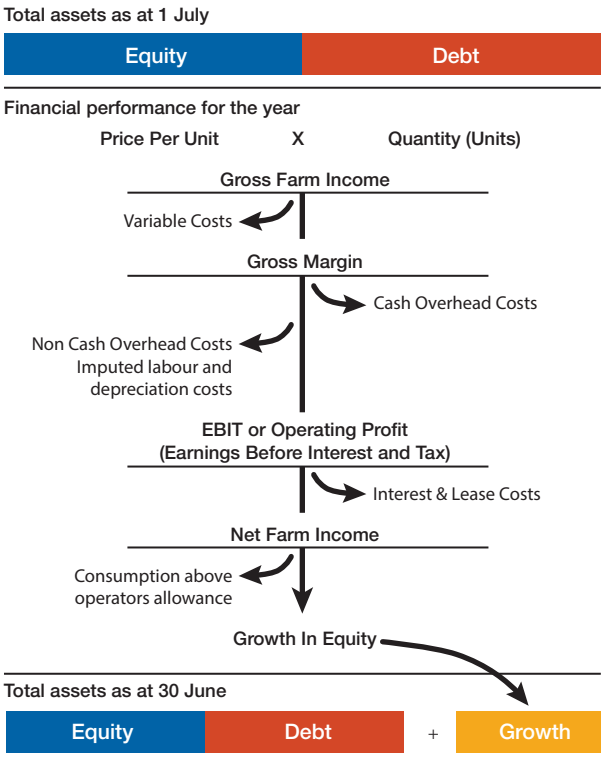


Figure 1 demonstrates how all of the different farm business economic terms come together and are calculated. It is adapted from an initial diagram obtained from Bill Malcolm (2008) at the University of Melbourne. The diagram shows the different profitability measures as certain costs are deducted from total income. It also discusses capital and growth.

Growth is achieved by investing in assets which generate income. These assets can be owned with equity (ones 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 is dependant on the maximisation of income and minimisation of costs, or cost efficiency relative to income generation.

The method is also shown using the state average results in Figure 2. Production and economic data are identified to indicate how the terms are calculated and how they all fit together.

Gross farm income

The farming business generates a total income which can be income from milk cash income (net), livestock trading profit, feed inventory change or other sources such as colostrum sales or share dividends. The main source of income that from milk is calculated simply 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 profitability measures.

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. Gross margins are not generally referred to in economic analysis of dairy farming businesses.

Overhead costs

Overhead costs are costs that are not directly related to an enterprise as they are expenses incurred through the general operating of the business. The DFMP separates overheads into cash overheads and non cash overheads, to distinguish between cash flows of the business. Cash overheads are those fixed costs such as rates, insurance, and repairs and maintenance. Non cash overheads include costs that are not actual cash receipts or expenditure; for example the amount of depreciation on a piece of equipment. Imputed operators allowance for labour and management is also a non cash overhead 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.

Earnings before interest and tax

Earnings before interest and tax (EBIT) is calculated by subtracting variable and overhead costs from gross farm income. EBIT is sometimes referred to as operating profit and is the return from all the capital used in the business.

In previous editions of the DFMP farms have been ranked by EBIT per hectare. In 2011/12 we have changed this ranking method to a return on assets basis.

Net farm income

Net farm income is EBIT minus interest and lease costs and is the reward to the farmer's own capital. Interest and lease costs are viewed as financing expenses, either for borrowed money or leased land that is being utilised.

Net farm income is then used to pay tax and what is left over is business profit (after tax) or surplus and therefore growth, as it can be invested into the business to expand the equity base; either by direct reinvestment or the payment of debt.

Return on assets and return on equity

Two commonly used economic indicators of whole farm performance are return on assets and return on equity. They measure the return to their respective capital base.

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 assets under management in the farm business, including the value of leased assets. EBIT 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.

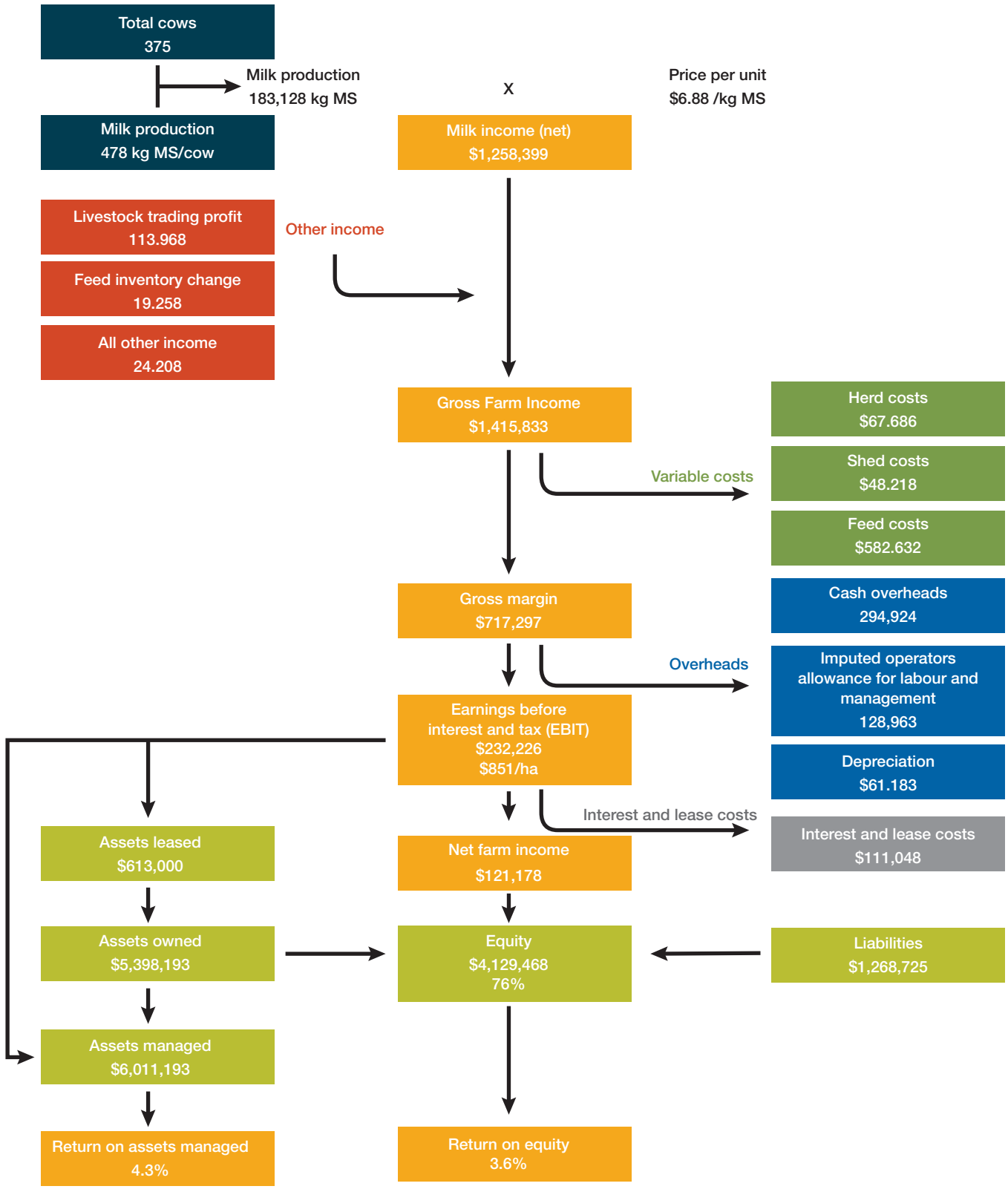
In 2011/12 RoA has replaced EBIT as the final financial measure used to gauge the profitability of a farming business. Return on asset enables a more complete assessment to be made of individual and between different farming businesses as it ignores how the operation is financed while also accounting for the difference in the productive capacity of land in different areas and regions.

In Figure 1 total assets are visually represented by debt and equity. The debt: equity ratio, or equity per cent 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 DFMP 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 2011/12 return on asset has replaced EBIT as the final financial measure used to gauge the profitability of a farming business.

Figure 2: Dairy Farm Monitor Project Method profit map—NSW state average data[1]



1 Profit map adapted from Queensland Dairy Accounting Scheme—2010 with permission from Ray Murphy, Department of Employment, Economic Development and Innovation, Queensland.

Part One: Statewide

Statewide overview

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

Farms in the North region range in location from the Queensland border to the Hunter Valley along the coast and hinterland. They are generally characterised as having moderate to high rainfall, limited irrigation, a kikuyu/annual ryegrass pasture base with some summer crops. The Southern group includes farms along the coast from Sydney to Bega, and farms from the inland river systems of NSW, including the Tamworth, Central West and Riverina regions. They are generally characterised by lower rainfall, mainly irrigated perennial and annual pastures, larger herds and farm size. This grouping reflects general similarities among farm systems, and the influences on milk pricing across NSW.

The approximate locations of the participating farms are shown in Figure 3.

2011/12 Seasonal conditions

NSW received above average rainfall during 2011/12, with major flooding occurring in the North in January, and in the South during February and March. The regional chapters provide more detail on the 2011/12 seasonal conditions.

Figure 4 shows the rainfall pattern during the year.

Figure 3: Distribution of participant farms across NSW 2011/12

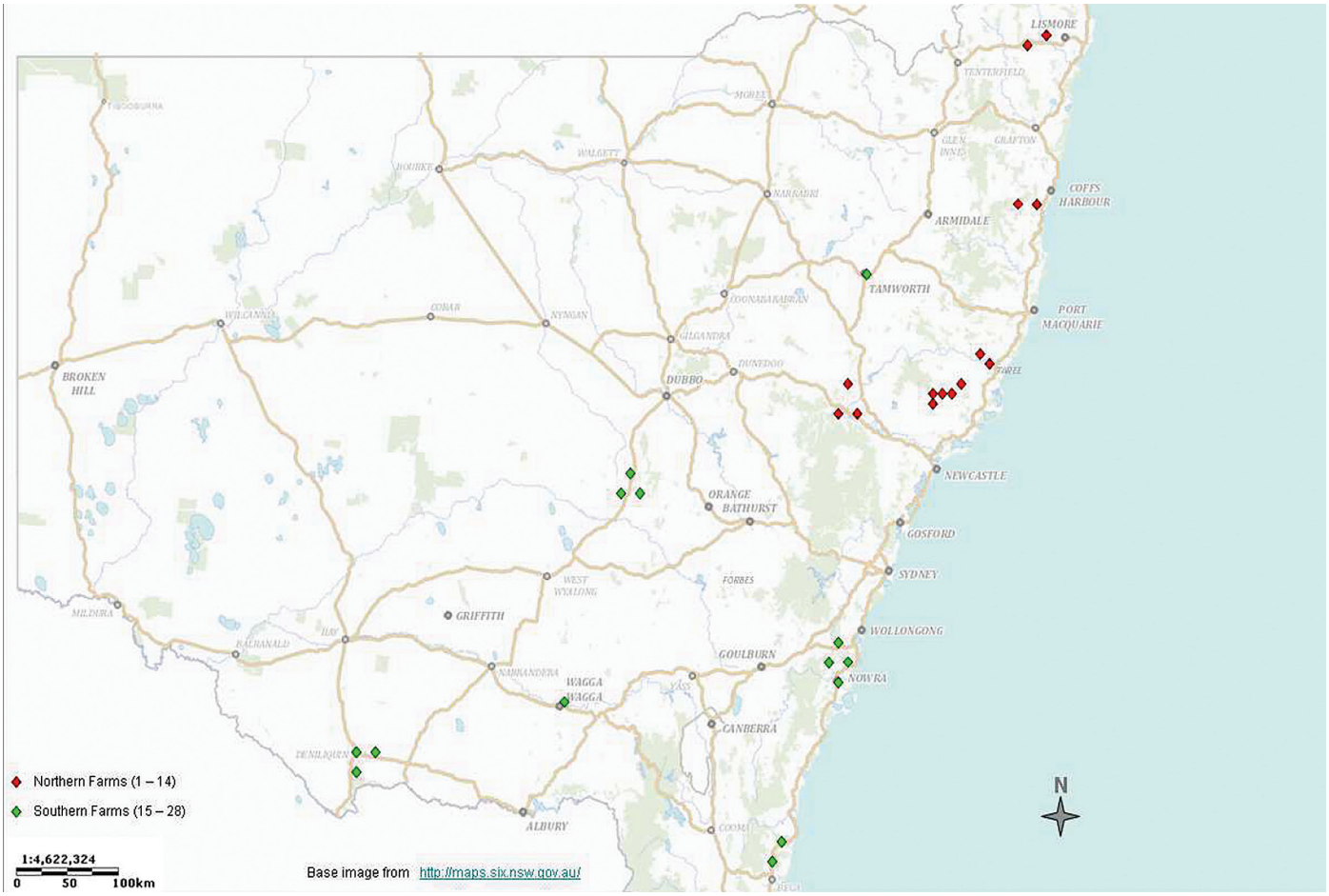
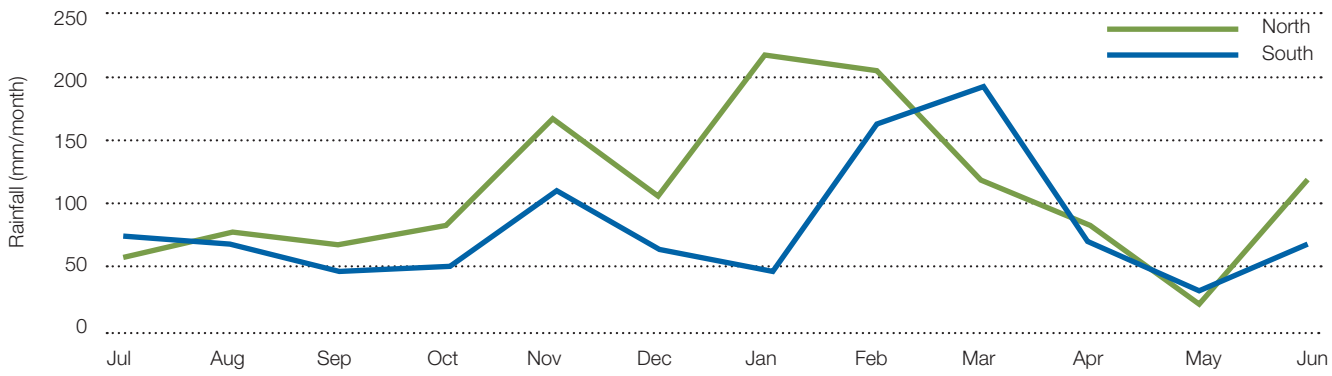


Figure 4: 2011/12 monthly rainfall



Whole farm analysis

On average, farms in the Southern region had larger usable areas and ran larger herds compared to the Northern region. Farms in the South had a higher average milk production across the year on both a per cow and per hectare basis, but farms in the North received a higher milk price than farms in the South.

Total water use per hectare reflected the wet year in both regions and subsequent availability of irrigation water. Each region recorded over 1,100mm per hectare of water used. Farms in the South recorded higher average labour efficiency than the North both in cows milked and milk solids produced per labour unit.

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

Figure 5 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 & tax. The legend for Figure 5 and the values for category can be found in Table 2.

Gross farm income

Gross income includes all farm income, whether that is income from milk sales, a change 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 income per hectare between the regions closely reflects the stocking rates of the two regions. While Figure 5 shows just how much milk income dominates gross income overall, other sources are still important to the farm business.

Variable costs

Variable costs are costs directly associated with production. Examples include animal health, contract services, supplementary feeding, agistment and pasture costs. Figure 5 shows the large proportion of costs contributed by purchased feed and agistment (seen as dark green), particularly in the South. Home grown feed was the other major variable cost.

The total cost of feed accounted for around 83% of total variable costs in both regions. 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 $2,674/ha.

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 labour 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 labour cost is calculated as $25 per hour of imputed labour performed by either the owner operator or family members.

Table 2 shows that participants in the North had slightly higher average overhead costs per hectare than those in the South. This is mainly due to higher imputed labour and depreciation costs.

Table 1: Average farm physical data—state overview

Farm physical parameters	Statewide	North	South
Number of farms in sample	28	14	14
Herd size (max no. cows milked for at least 3 months)	375	300	450
Annual rainfall 11/12	1,164	1,334	995
Water used (irrigation + rainfall) (mm/ha)	1,270	1,398	1,142
Total usable area (hectares)	300	250	351
Stocking rate (milking cows per usable hectares)	1.4	1.3	1.5
Milk sold (kg MS /cow)	478	461	495
Milk sold (kg MS /ha)	663	598	728
Milk price received ($/kg MS)	$6.88	$7.13	$6.64
Labour efficiency (milking cows / FTE)	81	73	88
Labour efficiency (kg MS / FTE)	38,565	33,725	43,405

Feed inventory gains were reported in both regions as the above average rainfall allowed for building up of fodder reserves on most farms.

Figure 5: average farm financial performance per hectare

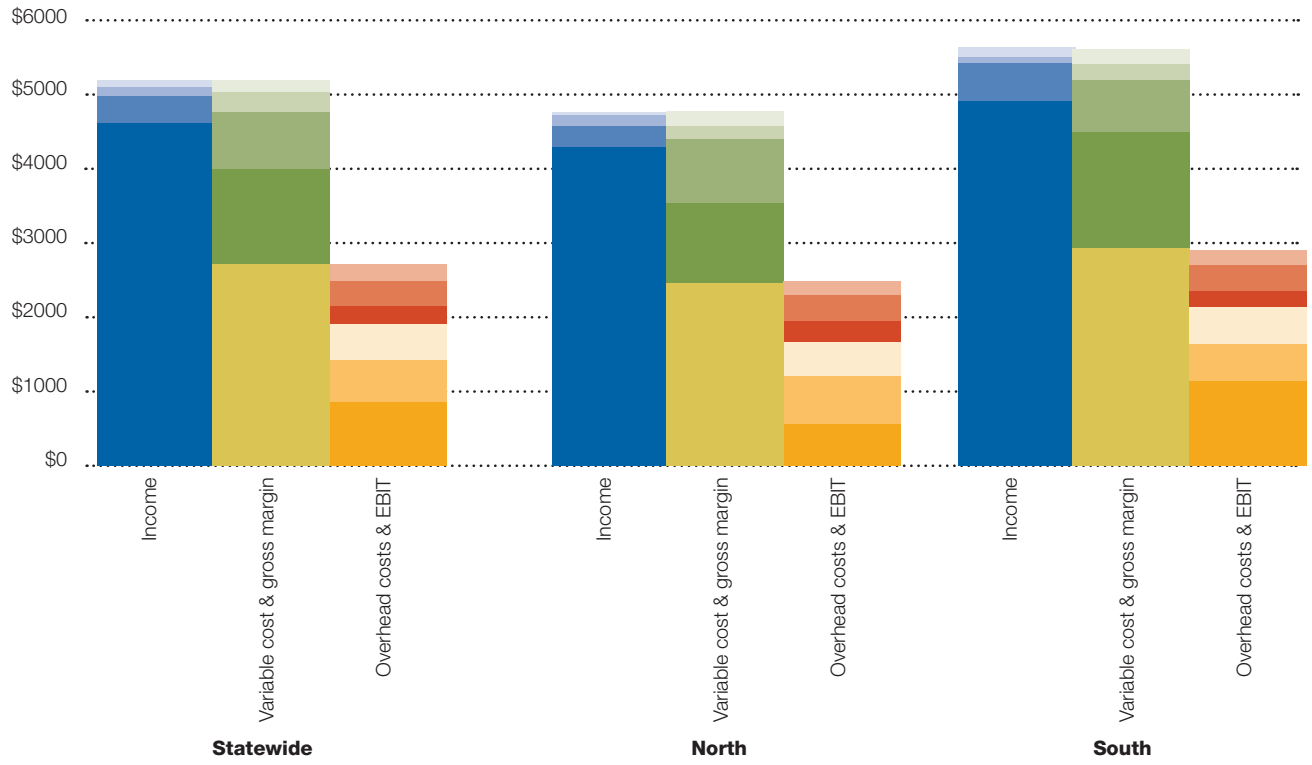


Table 2: Average farm financial performance per hectare—statewide (including legend for Figure 5)

	Farm income and cost category	Statewide	North	South
	Income			
	Feed inventory change	$81	$36	$126
	Other farm income	$99	$157	$41
	Livestock trading profit	$401	$301	$501
	Milk income (net)	$4,582	$4,248	$4,916
	Gross farm income	**$5,163**	**$4,741**	**$5,584**
	Variable costs			
	Shed cost	$177	$171	$183
	Herd cost	$226	$213	$239
	Home grown feed cost	$762	$844	$680
	Purchased feed and agistment	$1,324	$1,059	$1,588
	Total variable costs	**$2,488**	**$2,287**	**$2,690**
	Gross margin			
	per hectare	**$2,674**	**$2,455**	**$2,894**
	Overhead costs			
	All other overheads	$210	$200	$220
	Repairs and maintenance	$323	$317	$329
	Depreciation	$238	$257	$219
	Employed labour	$498	$497	$500
	Imputed owner/operator and family labour	$554	$616	$492
	Total overhead costs	**$1,824**	**$1,888**	**$1,759**
	Earnings before interest & tax			
	per hectare	**$851**	**$567**	**$1,135**

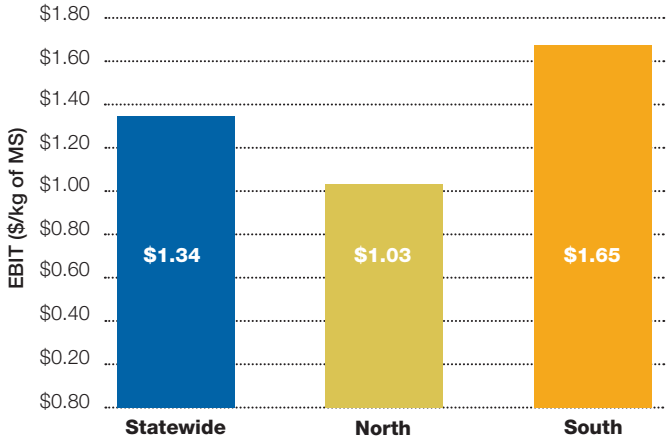
Earnings before interest and tax

Earnings before interest and tax (EBIT) is the gross farm income, less variable costs and overhead costs including non-cash 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 across the state, when expressed as per kilogram of milk solids (Figure 6) and as per hectare (Table 2).

Return on assets and equity

Figure 6: Average earnings before interest & tax per kilogram of milk solids sold

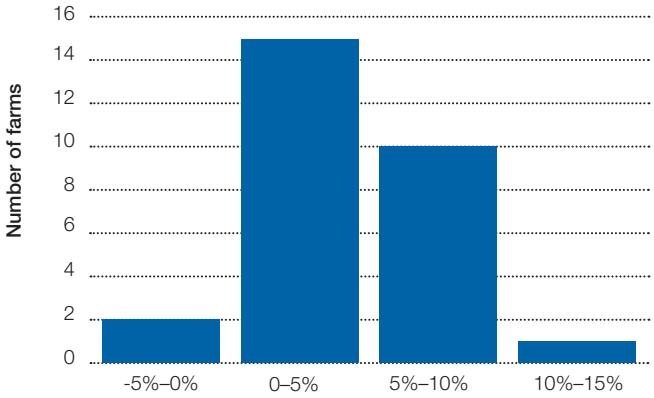


The return on assets is the earnings before interest & tax expressed as a percentage of total farm assets under management and hence is an indicator of the earning power of total assets, irrespective of capital structure. Similarly, it can be considered as an indicator of the overall efficiency of use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

The average return on assets for participants across the state was 4.3%, with a range from -0.3% to 10.8% and a median of 3.9% (Figure 7 and Appendix Tables 1). Twenty six of the 28 participant farms had a positive return on assets, while the remaining two farms reported a return on assets of between zero and -0.5 per cent.

The value of land varied widely across the 28 farms in the group, according to location and land capability. Values for livestock and permanent water rights have been standardised across all farms, while land values have been entered at current market value.

Figure 7: Distribution of farms by return on assets

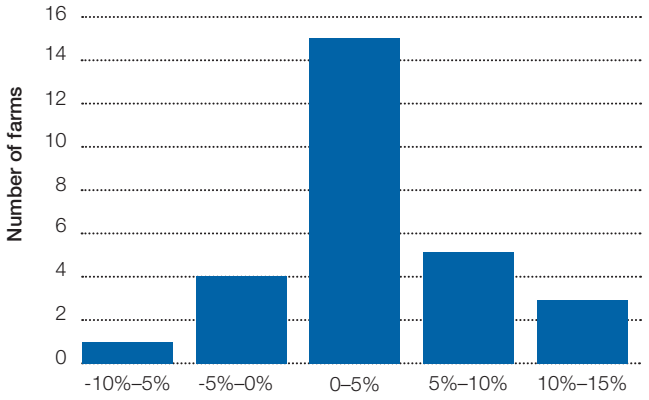


Return on equity is the net farm income (earnings before interest and tax less interest and lease charges) expressed as a percentage of owner equity. Items not accounted for in net farm income are capital expenditure, principle loan repayments and tax. Return on equity is a measure of the owner's rate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

The average return on equity for the 28 farms during 2011/12 was 3.6% while the average for the top 25% was 10.2%. Five of the 28 farms in the sample recorded negative returns to equity and these were spread across both regions.

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

Figure 8: 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…[2]"

Table 3 presents some common risk indicators. Refer to Appendix E for the definition of terms used in Table 3. The indicators in Table 3 can also be found in Appendix Tables 1, 3 and 8 for each region.

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 tradeoff 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. Often in response to greater perceived risk, farmers will opt to expose their business to less risk. In good times this will result in lower returns, in bad times it will lessen the losses.

The cost structure ratio provides variable costs as a proportion of total costs. A lower ratio implies that overhead costs comprised a greater proportion of total costs which in turn indicates less flexibility in the business. Table 3 shows that across the state for every $1.00 spent, $0.56 is used to cover variable costs. One minus this ratio gives the proportion of total costs that are overhead costs.

The debt services ratio shows interest and lease costs, as a proportion of gross income. The ratio of 8% this year indicates that on average farms repaid $0.08 of every dollar of gross income to their creditors.

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.

The higher the risk indicator (or lower with equity %) in Table 3, 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 indictors, given it is measured against the product produced and sold currently and not the capital invested.

Table 3: Risk indicators—statewide

	Statewide	North	South
Cost structure (proportion of total costs that are variable costs)	56%	58%	54%
Debt services ratio (percentage of income as finance costs)	8%	10%	6%
Debt per cow	$3,373	$4,350	$2,396
Equity percentage (ownership of total assets managed)	76%	70%	82%
Percentage of feed imported (as a % of total ME)	43%	48%	38%

[2] Malcolm, L.R., Makeham, J.P. and Wright, V. (2005), *The Farming Game, Agricultural Management and Marketing,* Cambridge University Press, New York. p180

Physical measures

Feed consumption

Figure 9 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.

Grazed pasture is the major component of the cow's diet in all regions however the dependence on supplements can also be seen. In the North and South grazed pasture made up 47% and 50% of the diet respectively. Home grown feed, whether grazed or conserved, accounted for over 50% of the total ME fed in each region however it was significantly higher in the North accounting for 62% of total ME fed compared to 52% in the South. Both regions are dependent on concentrates with average proportion of ME sourced from concentrates at around 37%.

Appendix Tables 3 give further information on purchased feed.

Figure 9: Sources of whole farm metabolisable energy

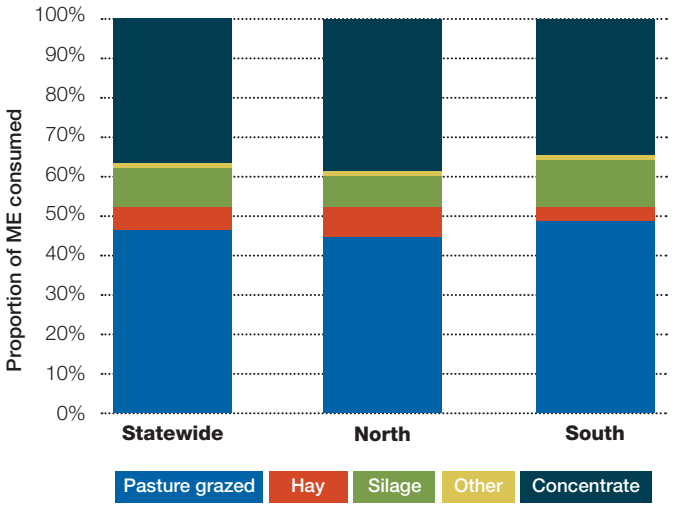
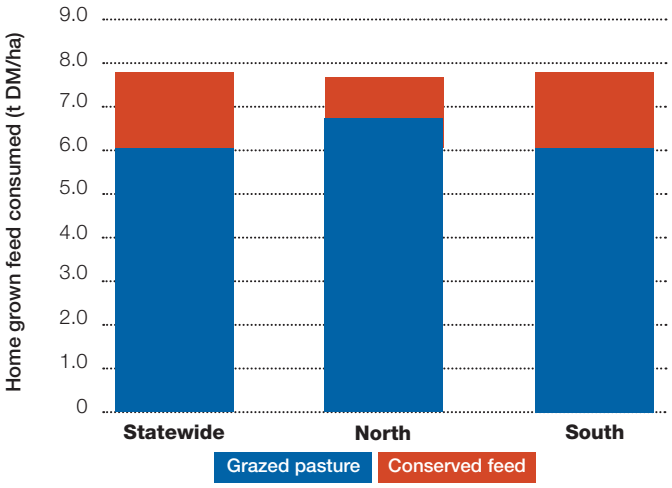


Figure 10 shows the average estimated home grown feed consumed per hectare. Both Figures 9 and 10 were estimated using the Victorian DPI's Pasture Consumption calculator. It involves first a calculation of the total energy required on the farm, which is a factor of stock numbers held on the farm, the 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 consumed per milking hectare will be dependent on numerous factors, with water availability, fertiliser application rates and grazing management being central. The average estimates were, as grazed feed and conserved feed, 6.8t/ha & 0.9t/ha for the North and 5.9t/ha & 1.8t/ha for the South.

Appendix Tables 2 gives estimates of individual tonnes of home grown feed consumed per milking hectare. The graph below accounts only for the consumption of pasture that occurred on the milking area whether by milking, dry or young stock.

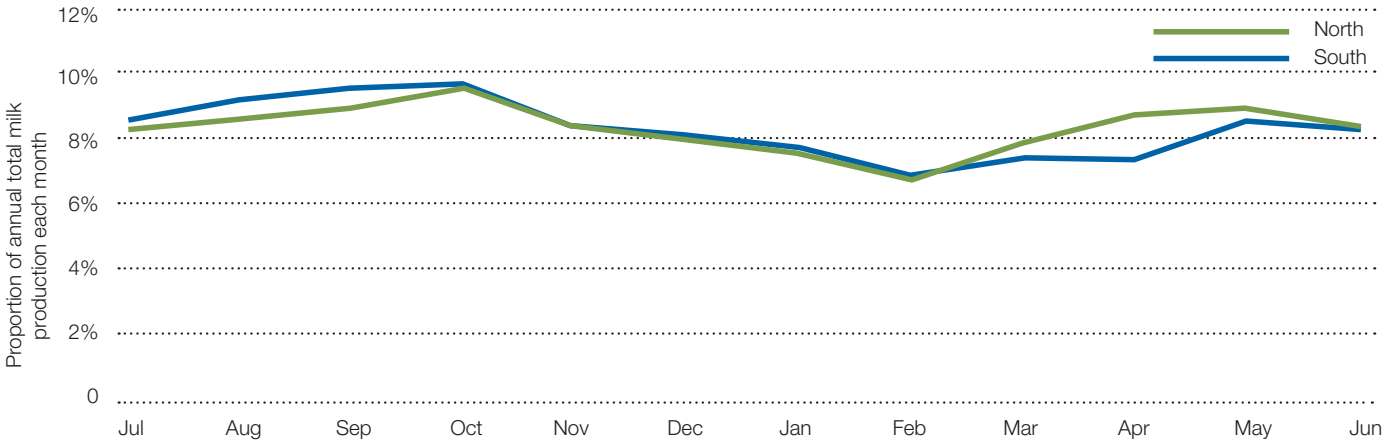
Figure 10: Estimated tonnes of home grown feed consumed per milking hectare

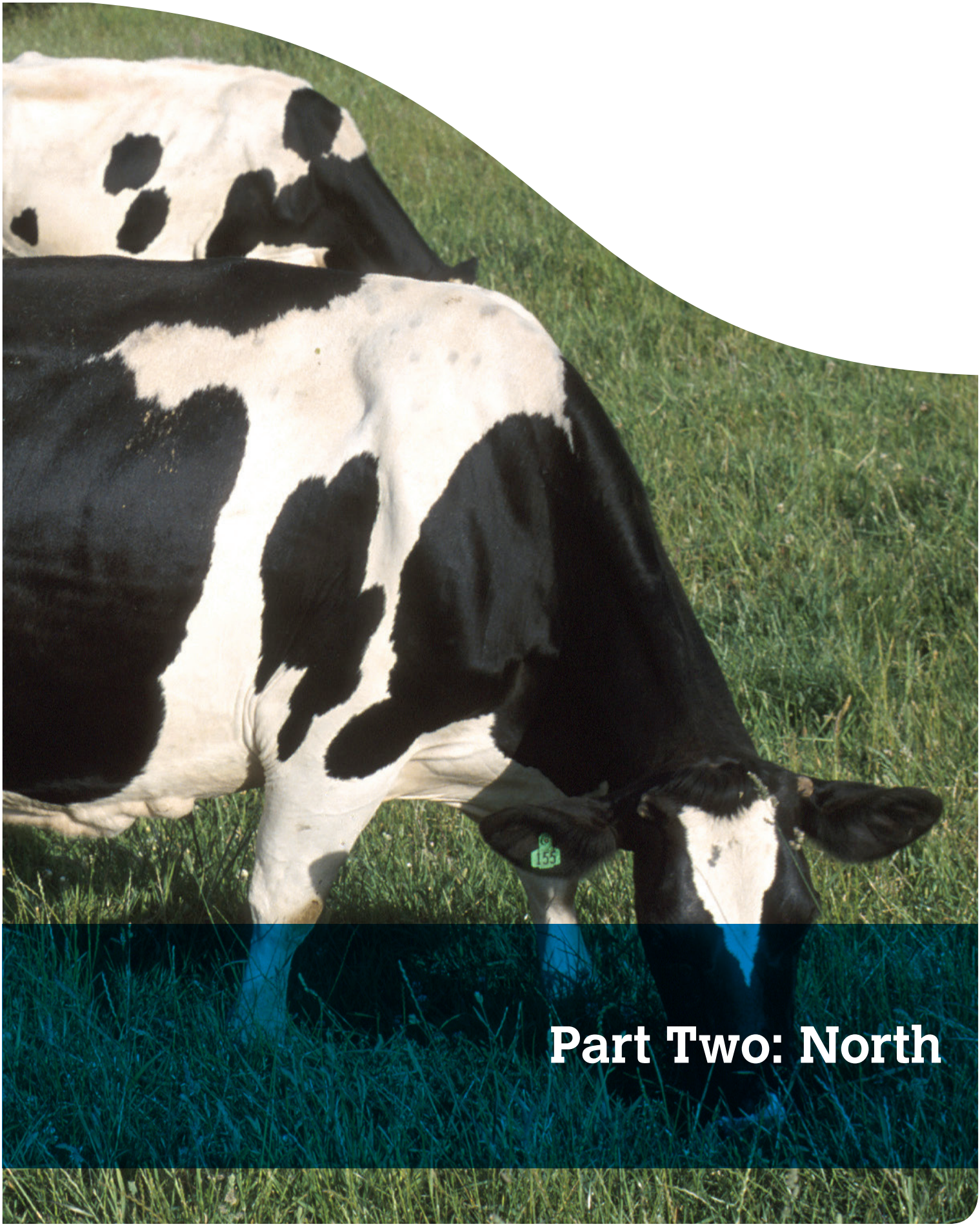


Milk production

Average distribution of monthly milk production across NSW reflects the trend towards a flatter milk supply required by processors for the liquid milk market. In general it can be seen that farms in the South tend to produce a greater proportion of milk in the July to October period than farms in the North however farms in both regions produce over a third of their annual milk supply during this period. While production is very similar during the middle part of the year it can be seen that farms in the North produce more milk in the autumn period than farms in the South.

Figure 12: Monthly distribution of milk production





Part Two: North

North overview

2011/12 Seasonal conditions

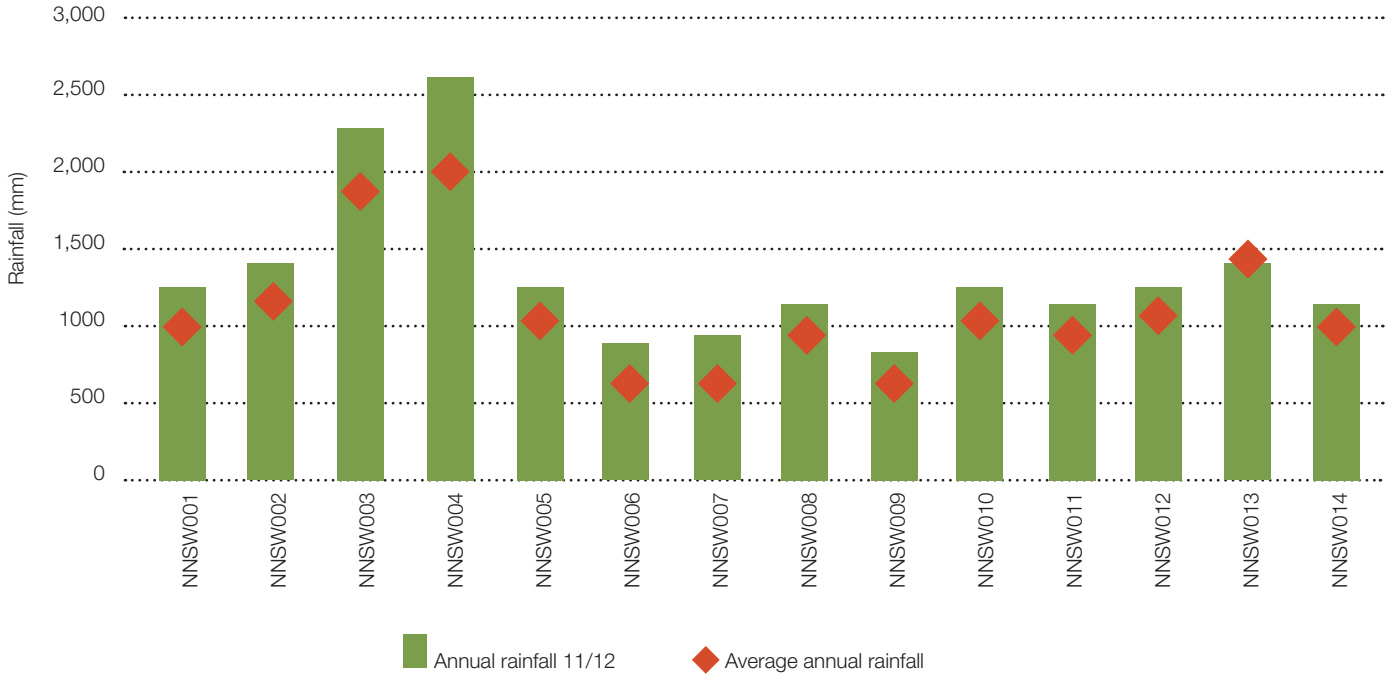
Above average rainfall and flooding was again experienced by farmers in the North during 2011/12, disrupting normal farm management and causing damage to infrastructure and productivity.

Following the good returns posted in 2010/11 milk prices remained at similar levels during 2011/12. This enabled farmers to better cope with floods and recovery, and to consolidate their businesses.

Wet seasons generally drain any fodder reserves and can make it difficult to grow and conserve pastures and crops. Floods in summer caused damage to fodder crops such as maize, but pastures can usually recover once the water subsides.

Overall, apart from the farms damaged by the large rainfall events in January, most farms in the North had a good year.

Figure 14: 2011/12 Annual rainfall and long term average rainfall—North



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 by return on assets had higher annual rainfall, higher milk production as measured by milk solids per hectare and per cow compared to the average. However the average farmed a greater total usable area and grew slightly more home grown feed as percentage of ME consumed.

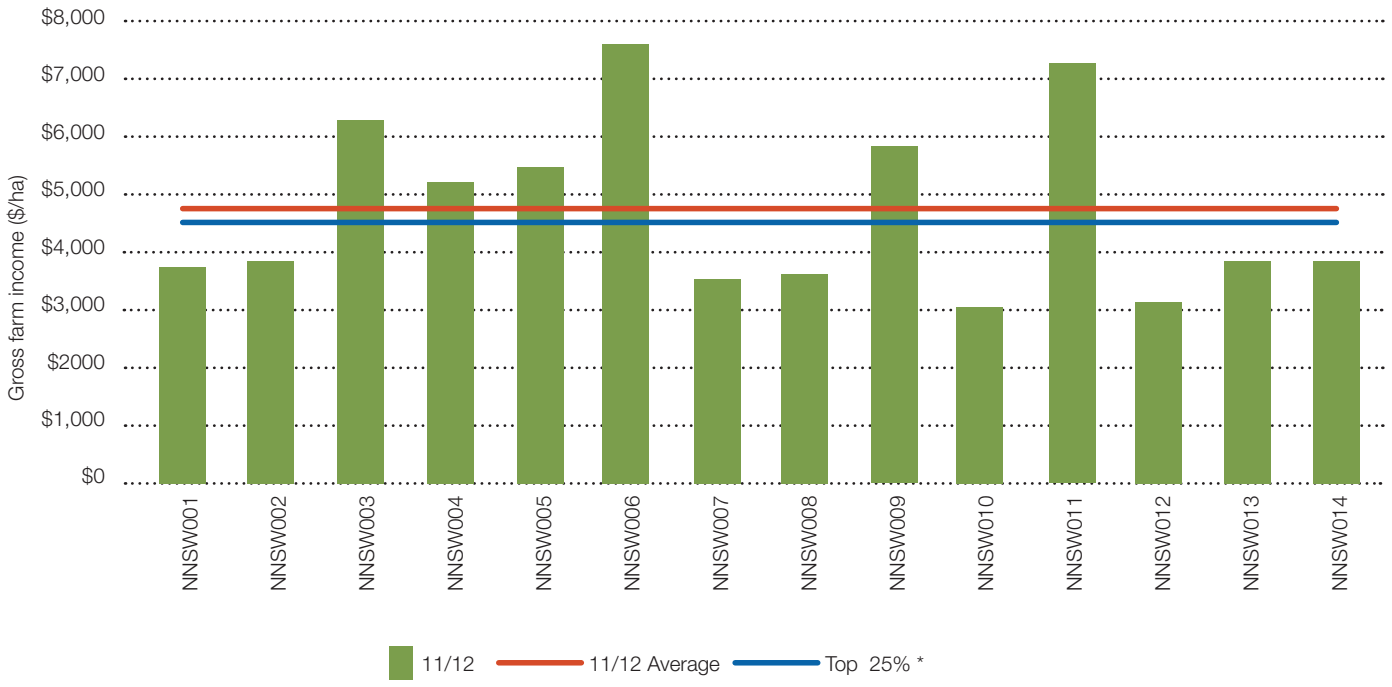
Table 4: Farm physical data—North

Farm physical parameters	North average	Q1 to Q3 range	Top 25% average
Annual rainfall 2011/12	1,334	1,108–1,242	1,181
Water used (irrigation + rainfall) (mm/ha)	1,398	1,158–1,285	1,218
Total usable area (Hectares)	250	164–206	356
Milking cows per usable hectares	1.3	0.9–1.1	1.3
Milk sold (kg MS /cow)	461	444–464	462
Milk sold (kg MS /ha)	598	460–487	575
Home grown feed as % of ME consumed	62%	59%–65%	61%
Labour efficiency (milking cows / FTE)	73	62–73	83
Labour efficiency (kg MS / FTE)	33,725	29,544–33,423	38,427

Gross farm income

Gross farm income includes all farm income, whether that is income from milk sales, changes in inventories of stock or feed, or cash income from livestock trading. Gross farm income of $4449 is the average of the top 25% and is actually lower than the overall average of $4741 (Figure 15). The Figure shows that the top performing farms ranked by return on assets 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.

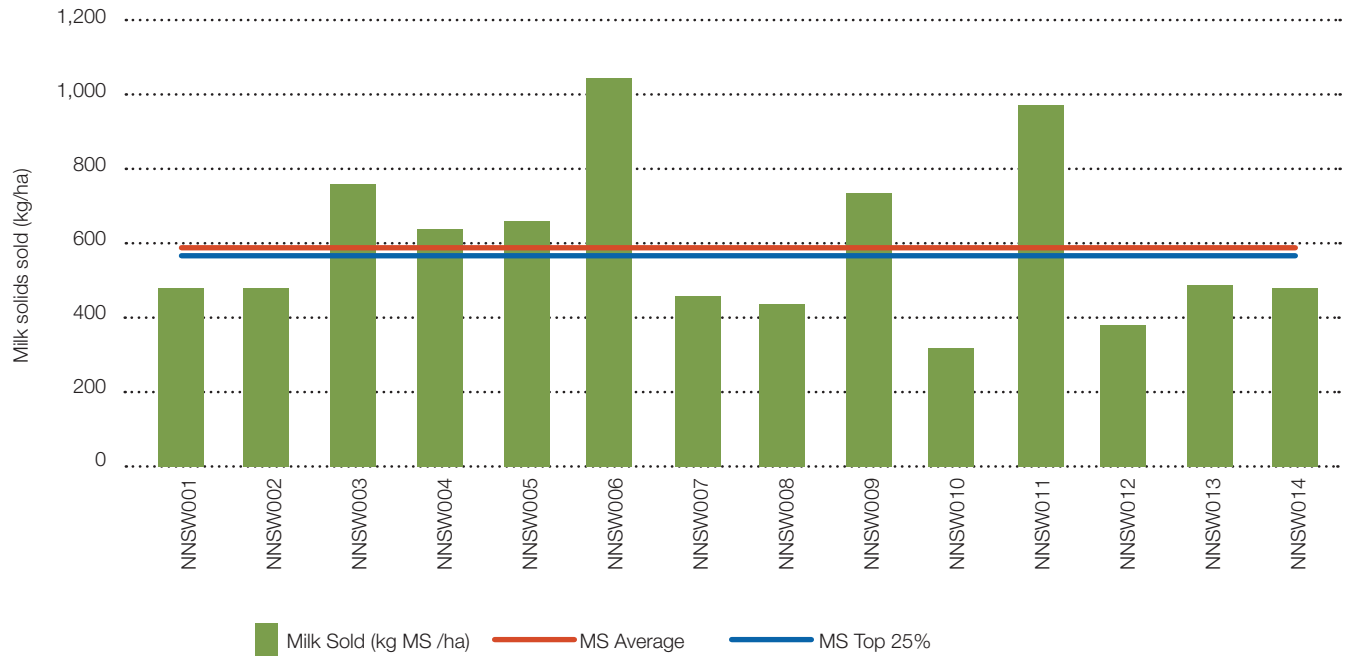
Figure 15: Gross farm income per hectare—North



Milk solids production

Figures 15 and 16 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 2011/12 on average farms produced 598 kg MS/ha. The range of this year's dataset was 328 kg MS/ha to 1,050 kg MS/ha.

Figure 16: milk solids sold per hectare—North



Variable costs

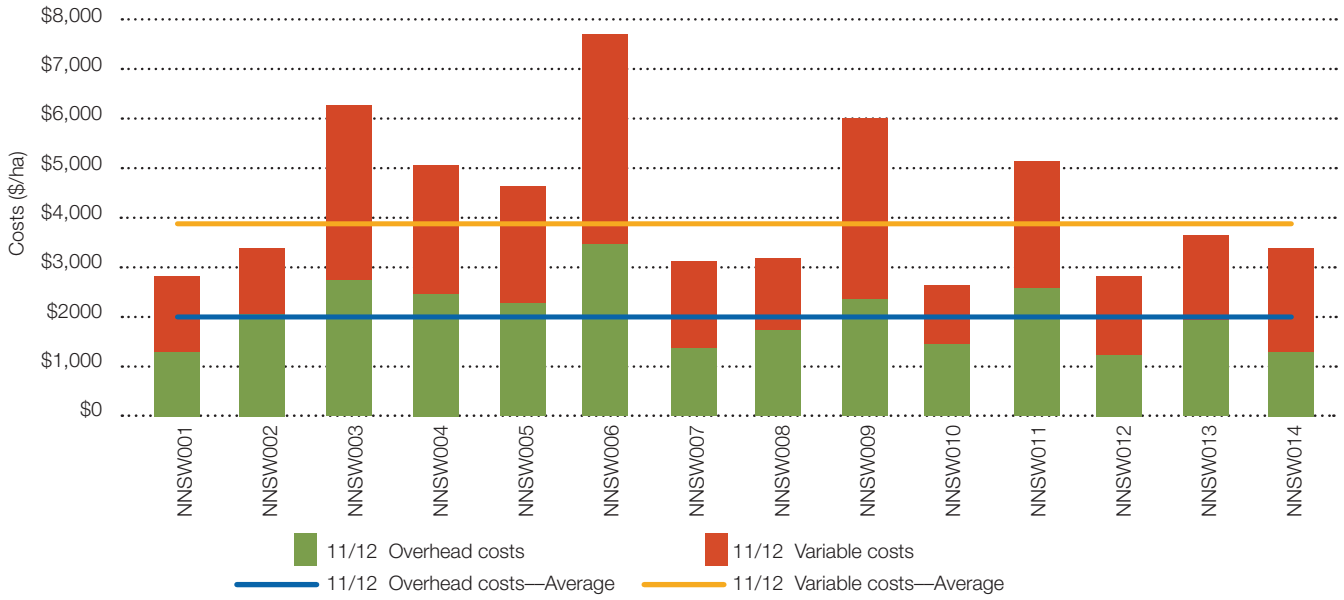
Variable costs include herd, shed and feed costs, with the average in 2011/12 being $3791/ha.

The wide range of $1,206/ha to $4255/ha for Northern farms can be seen by the variation in maroon bars in Figure 17.

Feed costs are clearly the major variable cost accounting for 53% of total costs. A break down of variable costs for the individual businesses on a $/kg MS basis can be seen in Appendix Table A4.

Overhead costs were $1,888/ha on average in 2011/12. The main overhead cost category is labour, both employed and imputed. Imputed labour for farm owners, family members and sharefarmers is valued at $25/hr for all hours worked. The percentage breakdown of the individual totals expressed as percentages is presented in Appendix Table A6.

Figure 17: 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 DFMP includes cash overheads such as rates and insurance as well as non cash costs such as imputed owner operator and family labour and depreciation of plant and equipment. Figure 16 illustrates the range spent on overhead costs per hectare, which was from $1079 to $3,384 for farms in the North in 2011/12.

The main overhead cost categories include labour cost, depreciation and repairs and maintenance. A breakdown of the overhead costs is provided in Appendix Table A5 and A7.

Cost of production

Figure 17 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.

Table 5: Cost of production—North

Farm costs ($ / kg MS)	North average	Q1 to Q3 range	Top 25% average
Variable costs			
Herd costs	$0.35	$0.24–$0.36	$0.31
Shed costs	$0.29	$0.23–$0.26	$0.21
Purchased feed and agistment	$1.79	$1.44–$1.85	$1.83
Home grown feed cost	$1.38	$0.90–$1.49	$1.27
Total variable costs ($ / kg MS)	**$3.81**	**$3.52–$3.70**	**$3.63**
Overhead costs			
Rates	$0.05	$0.04–$0.06	$0.05
Registration and insurance	$0.05	$0.01–$0.05	$0.05
Farm insurance	$0.08	$0.04–$0.06	$0.06
Repairs and maintenance	$0.53	$0.31–$0.55	$0.26
Bank charges	$0.03	$0.00–$0.01	$0.04
Other overheads	$0.15	$0.10–$0.14	$0.15
Employed labour cost	$0.88	$0.55–$0.86	$0.66
Total cash overheads	**$1.76**	**$1.39–$1.86**	**$1.28**
Depreciation	$0.45	$0.65–$1.04	$0.38
Imputed owner/operator and family labour	$0.99	$0.28–$0.44	$0.93
Total overhead costs ($ / kg MS)	**$3.20**	**$2.82–$3.22**	**$2.59**
Total cost of production ($ / kg MS)	**$7.01**	**$6.73–$7.20**	**$6.22**

Break-even price required

The break-even price required for milk is calculated as variable and overhead costs less income other than milk including livestock trading profit, changes in feed inventory or other income. The difference between the break-even price required and milk income is earnings before interest and tax per kilogram of milk solids.

Figure 18 shows that the break-even price required varied from $4.62 per kg MS to $7.40 per kg MS and the price received varied from $6.78 per kg MS to $7.38 per kg MS. The results highlight that in 2011/12 all farms bar two recorded positive profit.

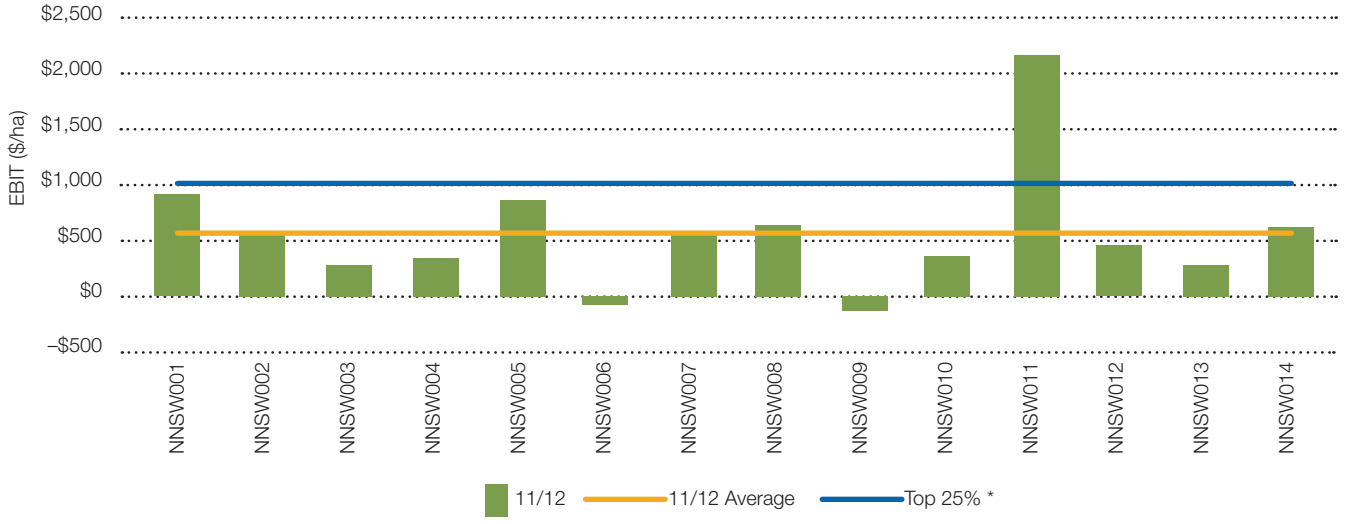
Figure 18: Break-even price required per kilogram of milk solids sold—North

Earnings before interest and tax

Earnings before interest and tax is gross income, less variable and overhead costs. Figure 19 highlights a strong performance by most farms in the North. The group average was $567/ha in 2011/12.

The top 25% recorded almost double than the average EBIT/ha at $1,028.

Figure 19: Whole farm earnings before interest & tax per hectare—North

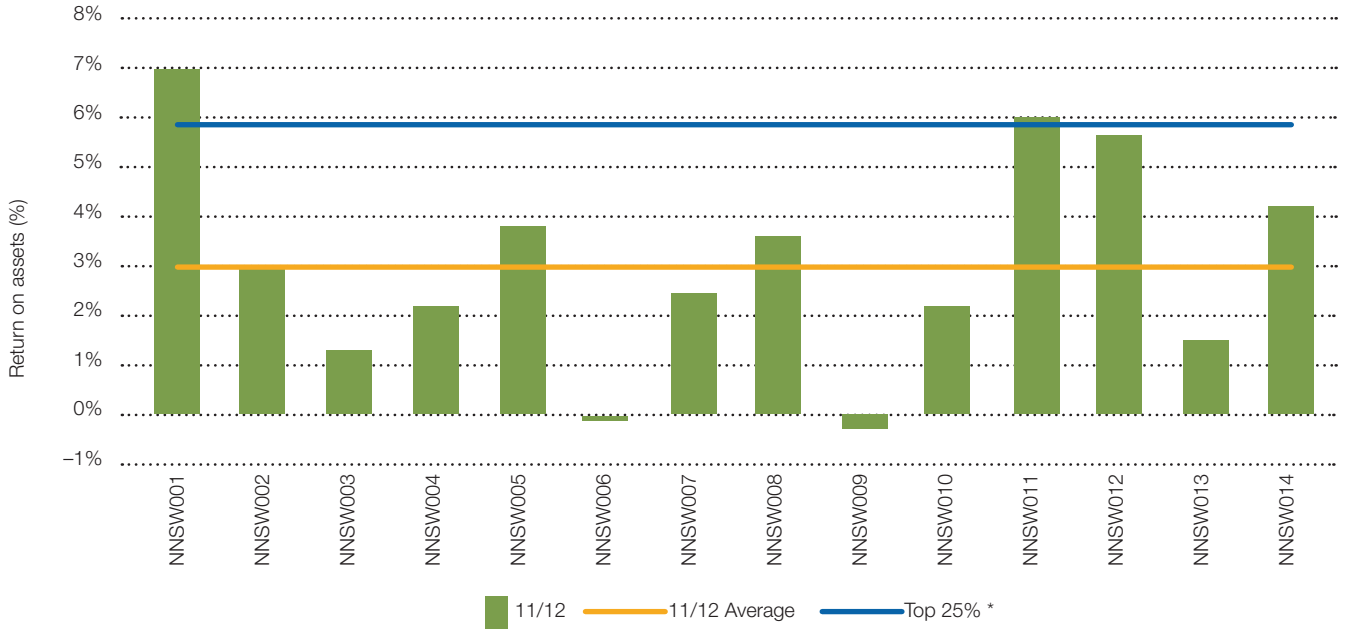


Return on assets and equity

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 20 shows the distribution of return on assets in 2011/12. The group achieved a moderate average return on assets of 3.0%. The top 25% achieved 6.0% this year. The range was 0–7.0%. It's worth noting that while related, a lower EBIT/ha does not always result in low return on assets as highlighted by farm NNSW001.

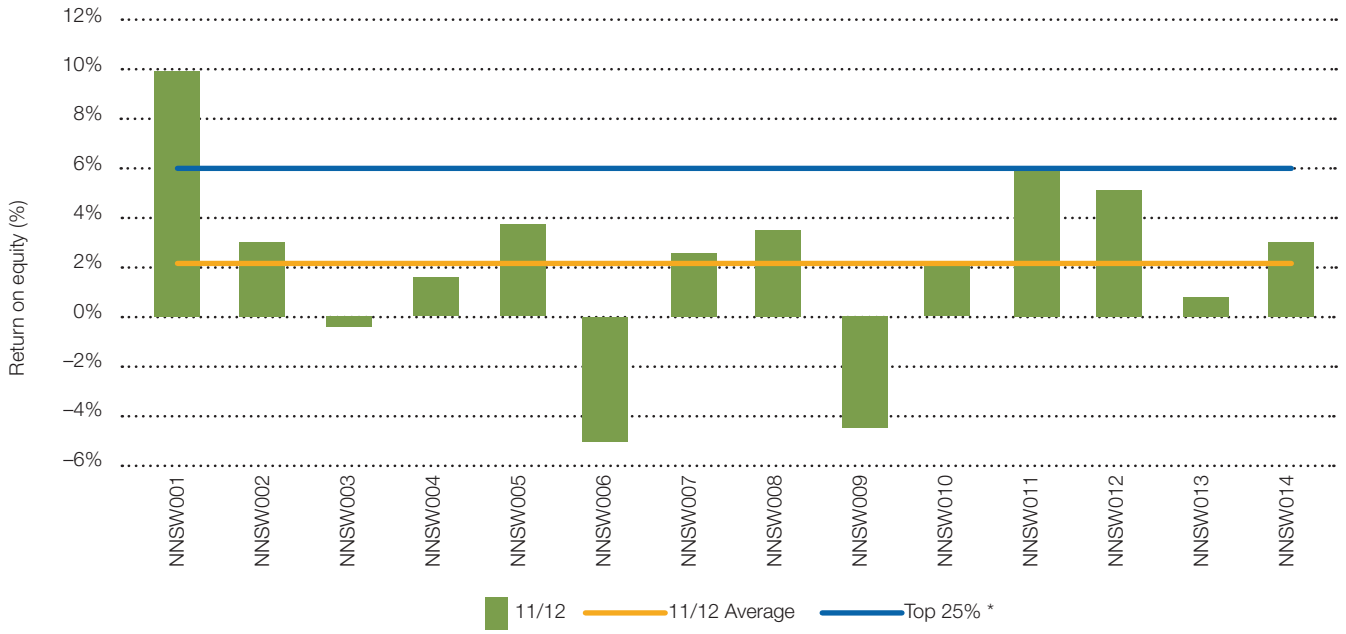
Figure 20: Return on assets—North



The distribution of return on equity in 2011/12 is shown in Figure 21. This year the range of return on equity for North farms was 0% to 10%, with an average of 2.0%. The top performers achieved 10%.

Interestingly the top 25% as ranked by return on assets are within the highest performing farms according to return on equity. This consistent result highlights the financial strength of the top farms.

Figure 21: Return on equity—North



Feed consumption

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 in shown in Figure 22. The broad range of different source of metabolisable energy used on individual farms is evident. Pasture grazed accounted for less than 50% of the ME consumed on 5 of the 14 farms.

On average pasture constituted 50% of the diet, with concentrates 36% and silage 11% of the diet.

Figure 22: Sources of whole farm metabolisable energy—North

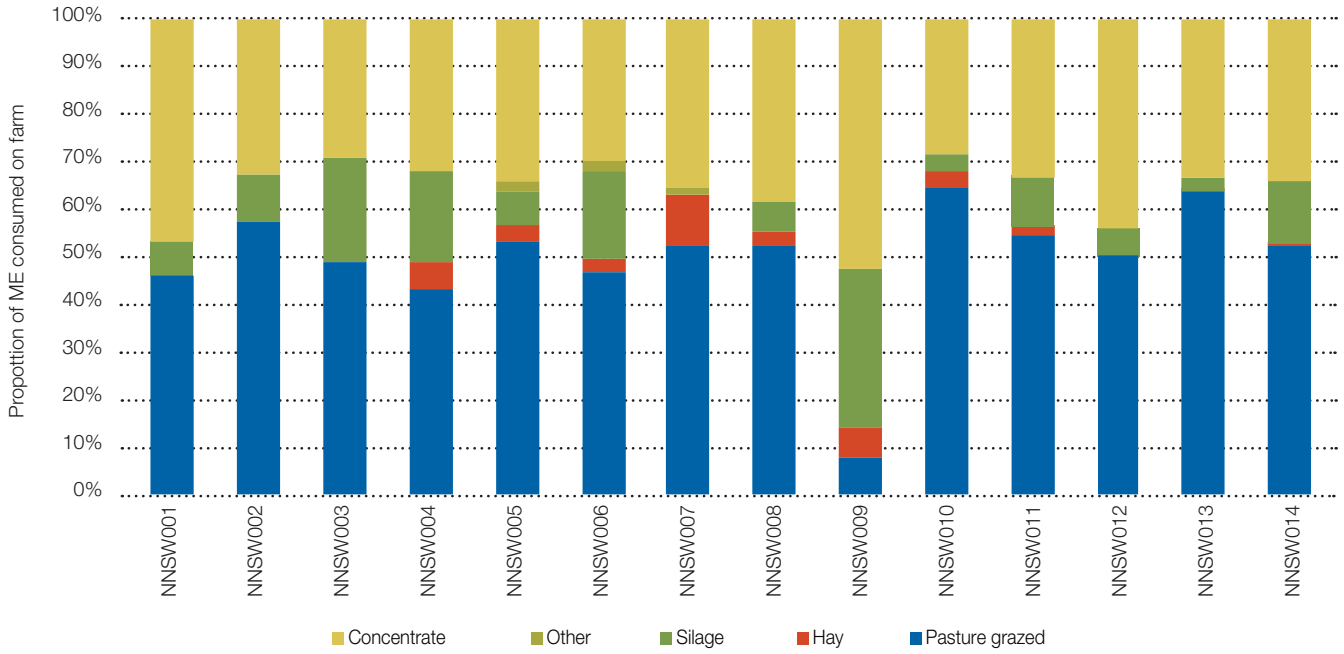
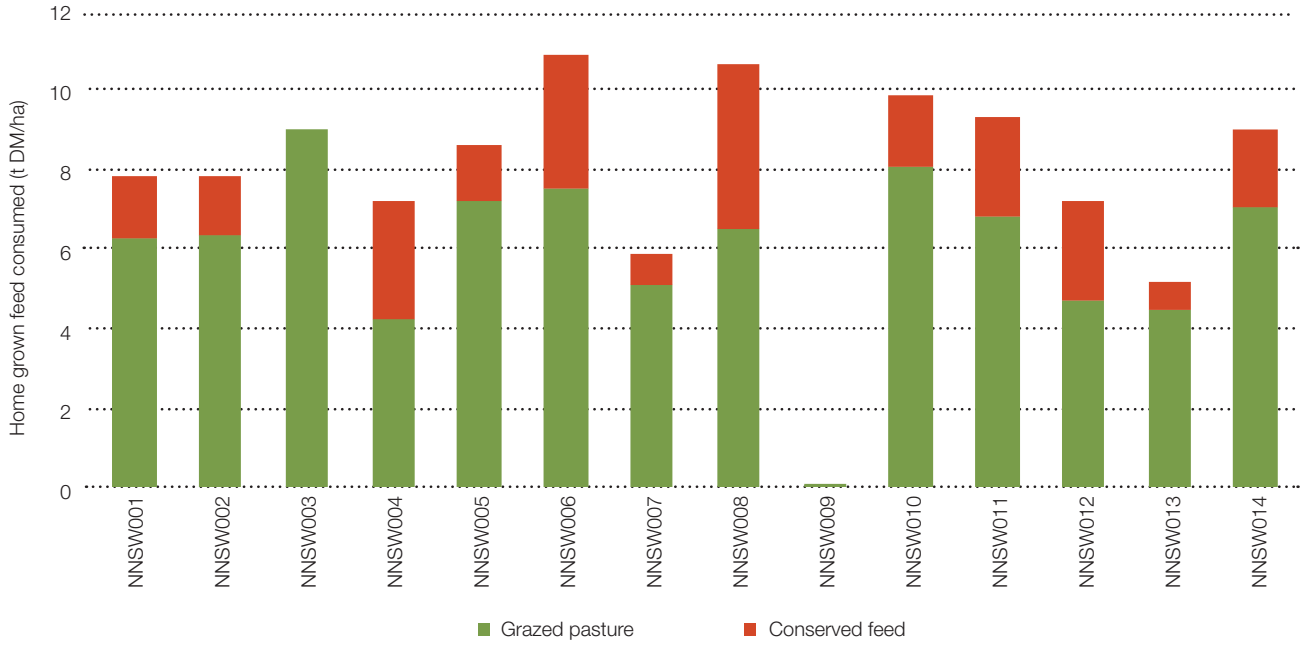


Figure 23 shows the estimated home grown feed consumed per milking hectare for farms in the North.

Total pasture harvest for the North was 7.7 t DM/ha on average. 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 16 of Part One—Statewide or in Appendix E.

Figure 23: Estimated tonnes of home grown feed consumed per milking hectare—North



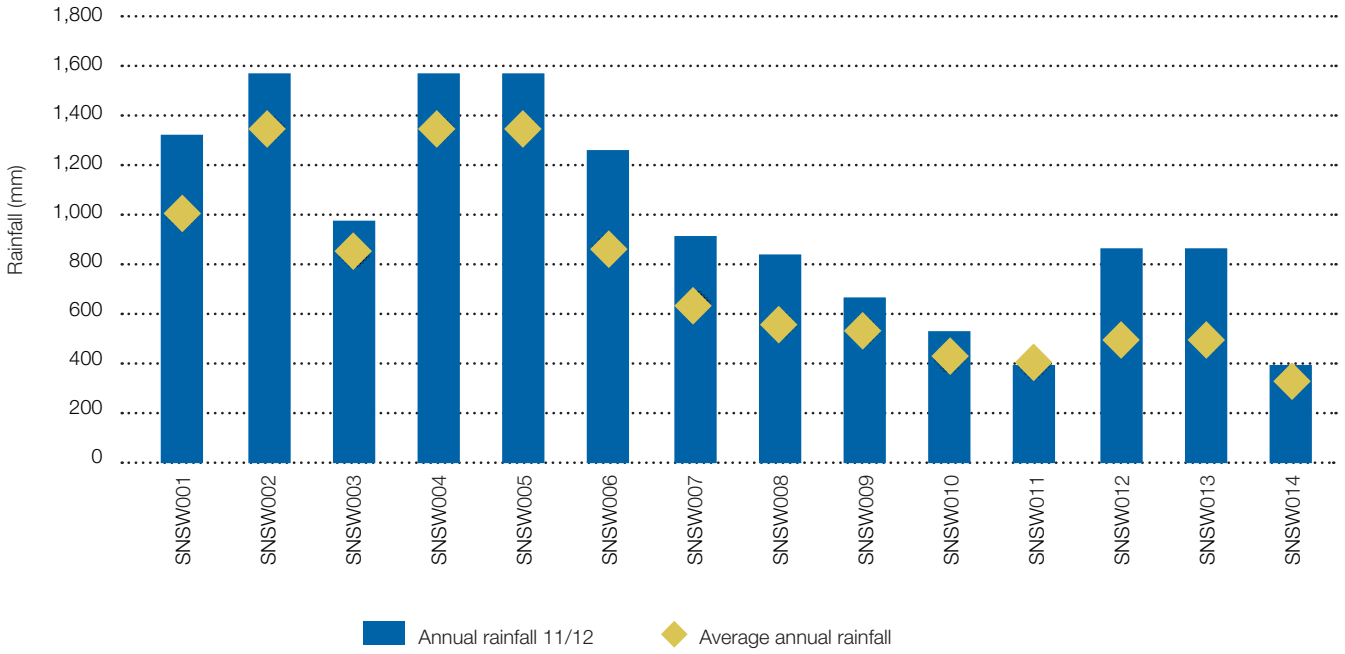
Part Three: South

South overview

2011/12 Seasonal conditions

Seasonal conditions varied in the South from very dry to very wet during this year. This region covers the coastal and highlands areas south from Sydney, as well as the inland river systems. As in the North, floods were experienced in most dairying regions during February and March of 2012, causing significant damage and disruption of normal farming practices. Pastures and crops were lost or damaged and autumn sowing of annual pastures was delayed. Following the floods was a period of very little rain, so ironically some new pastures suffered from moisture stress and needed to be re-sown.

Figure 25: 2011/12 Annual rainfall and long term average rainfall—South



*Please refer to page 5 for notes on the presentation of data.

Whole farm analysis

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

The top 25% of farms ranked according to return on assets recorded higher results than the average for each physical parameter, except milk sold per cow.

The top 25% of farms received greater rainfall, had larger total usable area and ran more milking cows per hectare than the average.

The areas where the top 25% were noticeably above the regional average were with milk production per hectare, and labour efficiency, both milking cows/FTE and kg MS/FTE.

Table 6: Farm physical data—South

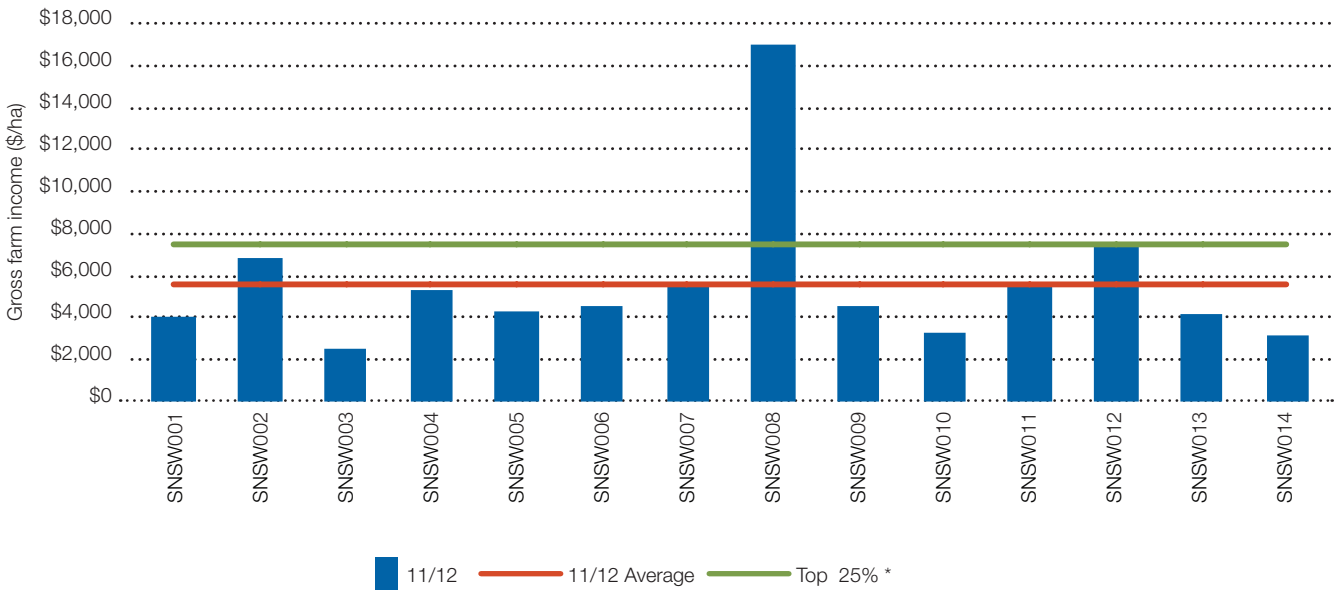
Farm physical parameters	South average	Q1 to Q3 range	Top 25% average
Annual rainfall 11/12	580	719–949	668
Water used (irrigation + rainfall) (mm/ha)	666	994–1,114	992
Total usable area (hectares)	205	172–278	237
Milking cows per usable hectares	1.5	1.0–1.3	1.9
Milk sold (kg MS /cow)	495	483–503	474
Milk sold (kg MS /ha)	728	518–607	937
Home grown feed as % of ME consumed	52%	42%–56%	53%
Labour efficiency (milking cows / FTE)	88	76–82	101
Labour efficiency (kg MS / FTE)	43,405	38,108–41,117	47,081

Gross farm income

Gross farm income includes all farm income, whether that is income from milk sales, cash income from livestock trading, or income from other sources such as farm owned shares, interest from bank accounts and rebates or grants. Changes in inventories of stock or feed are also accounted for in gross farm income and in 2011/12 meaning this figure was deducted from or added to gross farm income. Gross farm income as per kilogram of milk solids sold can be found in Appendix Table B1.

Figure 26 shows that gross farm income in the South averaged $5584, with a range from $2580 per hectare to $16992/ha. The farms in the top 25% recorded gross farm income of $7500 /ha. This suggests that while it has an influence, high gross farm income alone does not translate to being highly profitable and that other attributes of top performers need to be examined when assessing farm performance.

Figure 26: Gross farm income per hectare—South

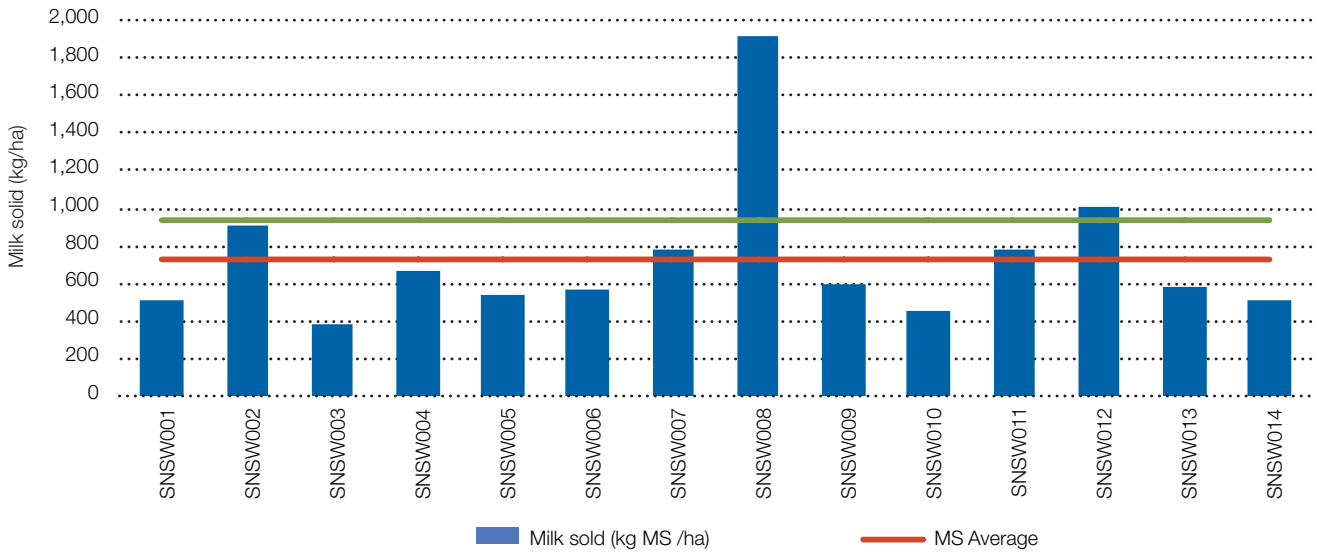


Milk solids production

The strong correlation between gross farm income and milk solids per hectare can be seen in Figures 26 and 27. The slight variation between these figures is as a result of other sources of income.

The top performing farms achieved 937 kg MS/ha in the South compared to the average farms which sold almost 25% less at 728 kg MS/ha.

Figure 27: Milk solids sold per hectare—South



Variable costs

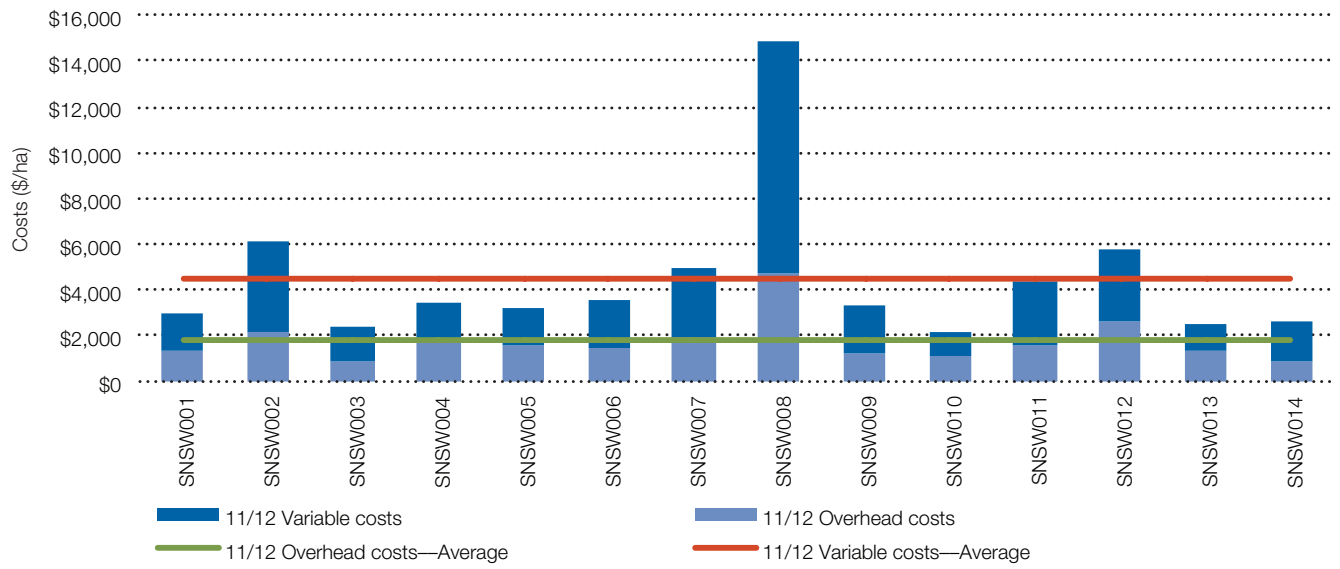
The separation of variable and overhead costs per hectare is shown in Figure 28. Variable costs are those costs that change directly according to the amount of output, such as herd, shed and feed costs.

Variable costs for the South region varied from $1133/ha to $10109/ha.

Feed costs were the major variable cost in the South accounting for 46% of total costs of production in 2011/12.

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

Figure 28: Whole farm variable and overhead costs per hectare—South



Overhead costs

The calculation of overhead costs in the DFMP consists of cash and non-cash costs to the dairy business. Examples of cash overheads include rates, insurance and employed labour, and non-cash overheads include depreciation and imputed owner/operator and family labour.

Figure 27 also illustrates the variation in overhead costs per hectare between participant farms. Values ranged from $886 to $4747 per hectare, with an average of $1759 /ha.

The major overhead cost to the average South farm was the cost of labour in the business, which includes both employed and imputed labour. Labour costs account for 58% of total overhead costs. Repairs and maintenance and depreciation were the other two major overhead cost categories.

Cost of production

Figure 26 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 indicator as it calculates the costs incurred 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

Farm costs ($ / kg MS)	South average	Q1 to Q3 range	Top 25% average
Variable costs			
Herd costs	$0.31	$0.24–$0.32	$0.30
Shed costs	$0.25	$0.20–$0.26	$0.25
Purchased feed and agistment	$1.93	$1.38–$1.82	$1.85
Home grown feed cost	$0.93	$0.58–$0.95	$0.94
Total variable costs ($ / kg MS)	**$3.42**	**$3.07–$3.47**	**$3.33**
Overhead costs			
Rates	$0.05	$0.02–$0.03	$0.04
Registration and insurance	$0.02	$0.01–$0.01	$0.00
Farm insurance	$0.07	$0.05–$0.08	$0.07
Repairs and maintenance	$0.41	$0.28–$0.41	$0.42
Bank charges	$0.03	$0.00–$0.01	$0.03
Other overheads	$0.14	$0.12–$0.15	$0.12
Employed labour	$0.64	$0.43–$0.68	$0.47
Total cash overheads	**$1.35**	**$1.08–$1.46**	**$1.15**
Depreciation	$0.29	$0.23–$0.32	$0.25
Imputed owner/operator and family labour	$0.76	$0.49–$0.86	$0.88
Total overhead costs ($ / kg MS)	**$2.40**	**$2.33–$2.45**	**$2.28**
Total cost of production ($ / kg MS)	**$5.83**	**$4.26–$5.16**	**$5.61**

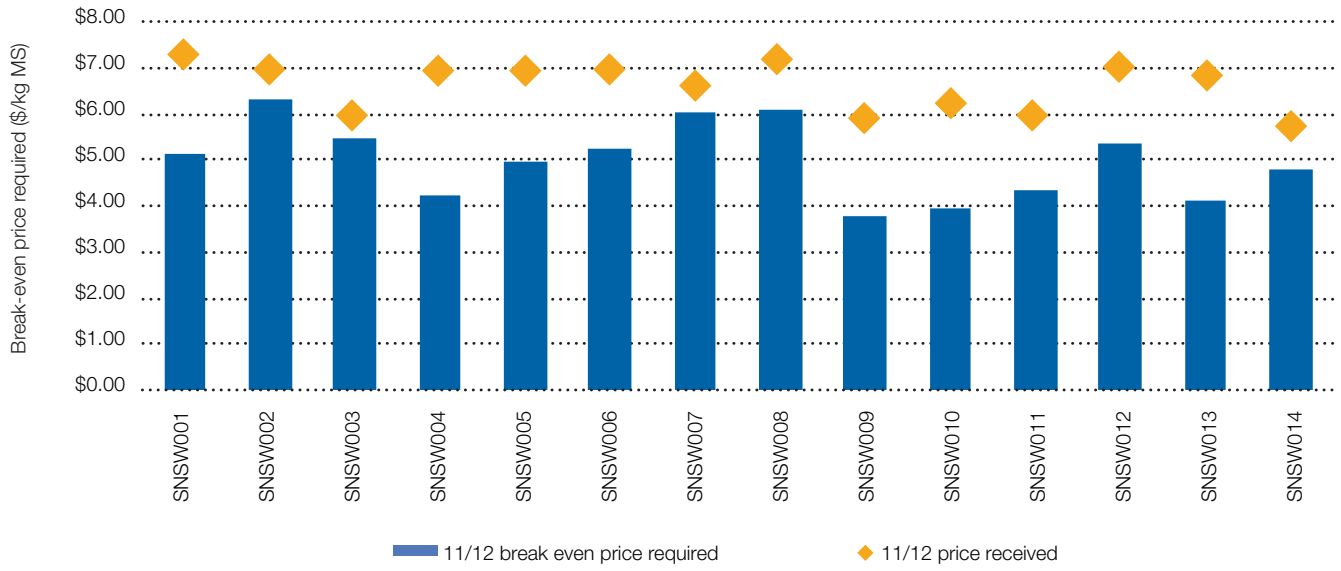
Break-even price required

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 change in feed inventory. This makes it an even more relevant risk indicator in dairying than cost of production as it can be compared directly to the price received of the main output in the business, that being milk.

Figure 29 shows that the break-even price required ranged from $4.11/kg MS to $6.34/per kg MS in the South. The average milk price received in 2011/12 was $6.65 /kg MS. The distribution was $5.71 to $7.20 /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 sold.

Figure 29: Break-even price required per kilogram of milk solids sold—South



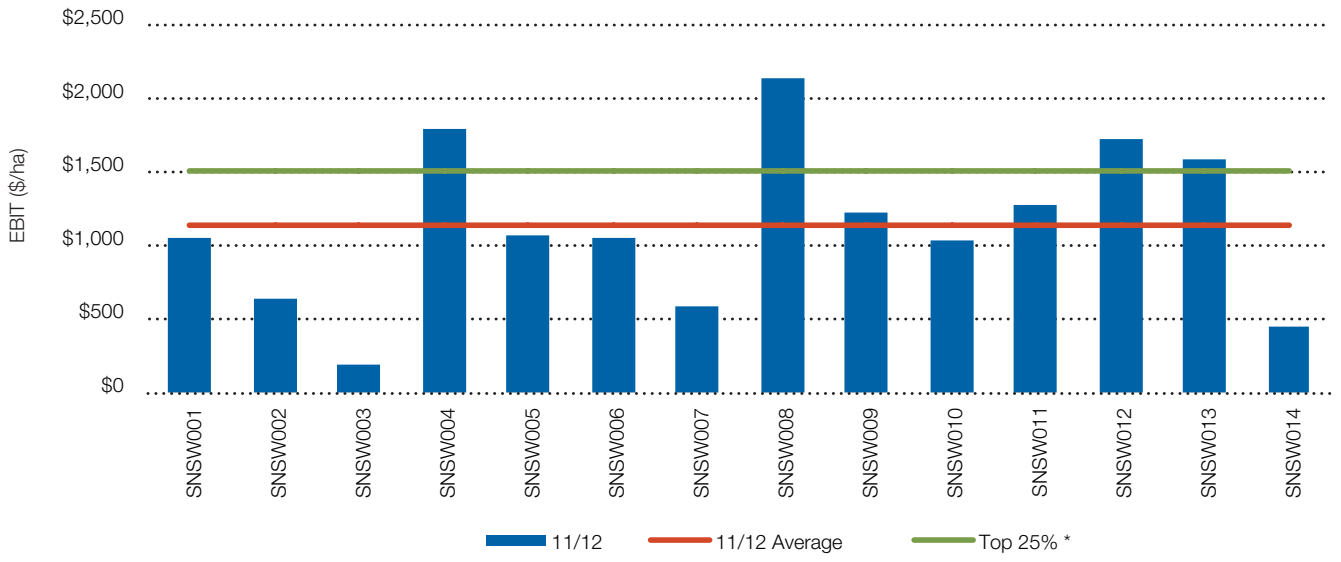
Earnings before interest and tax

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

On average, EBIT per hectare in the South was $1135.

The strength of the top performers is highlighted by recording an average EBIT of $1,513/ha, 33% higher than the average.

Figure 30: Whole farm earnings before interest and tax per hectare—South



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. In 2011/12 the ranking of the top 25% of farms is based on return on asset.

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 region ranged from 1.4% to 10.8% (Figure 31), with an average of 5.5%. The top 25% achieved 9.2%.

It is also worth noting that there is a huge variation in land price in the South region, where farm location includes the southern highlands close to Sydney as well as the southern Riverina region where land values have been separated from water entitlement.

This year return on equity had a wide range from -1.9% up to 13.0% as shown in Figure 32. The average was 4.9%, with the top 25 % of farms averaging 9.2% return on equity.

Only 2 of 14 farms in the sample recorded a negative return on equity.

Figure 31: Return on assets—South

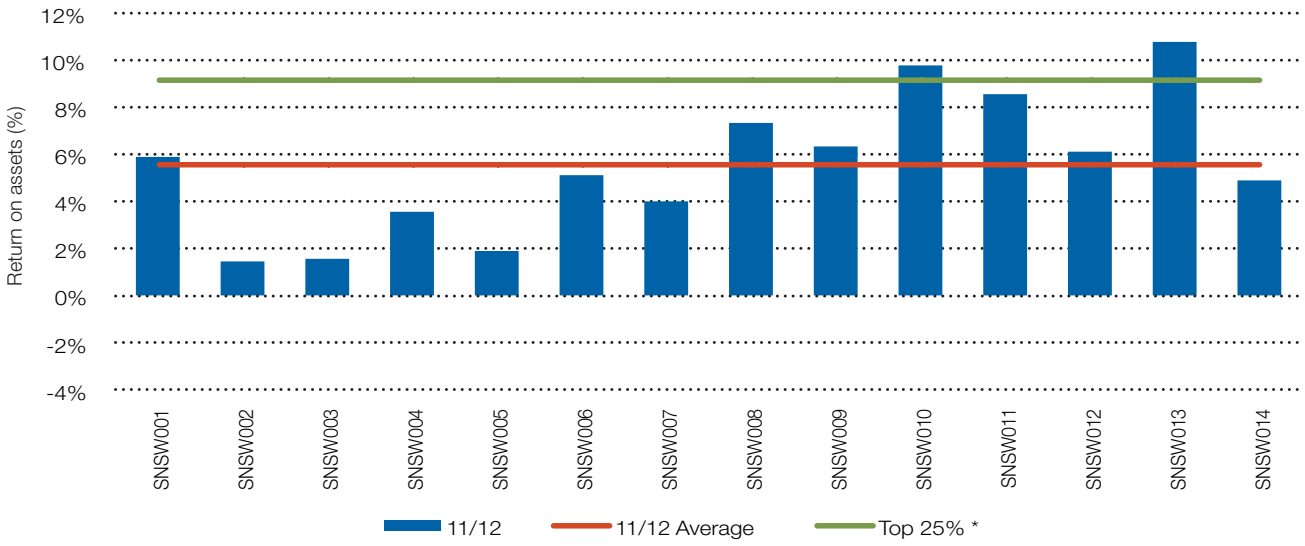
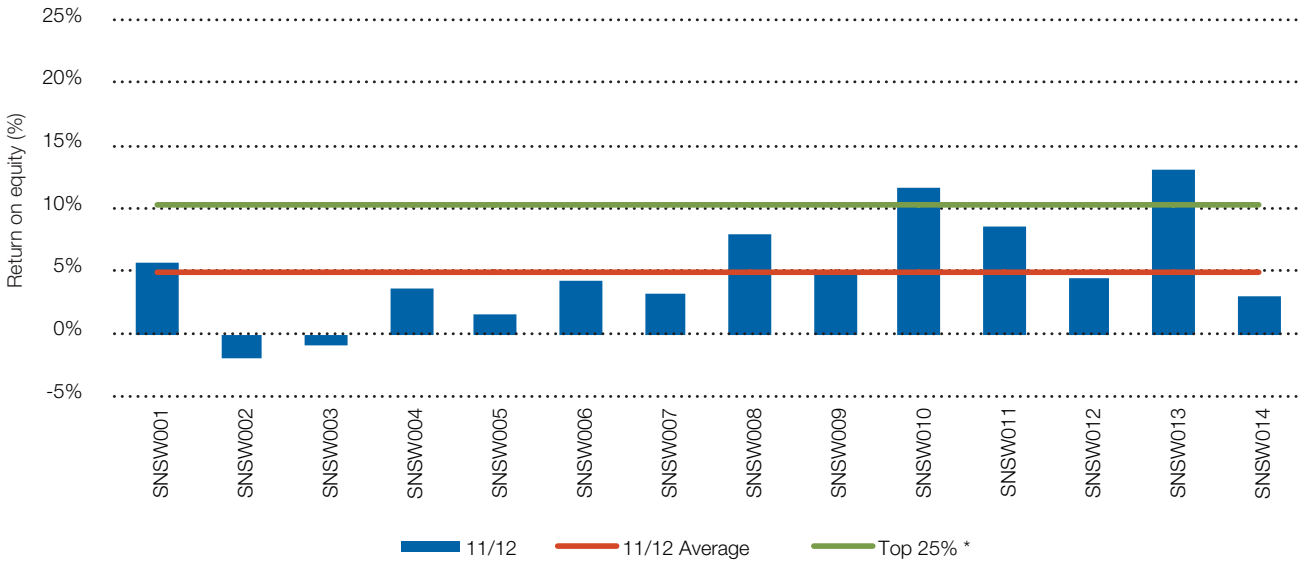


Figure 32: Return on equity—South



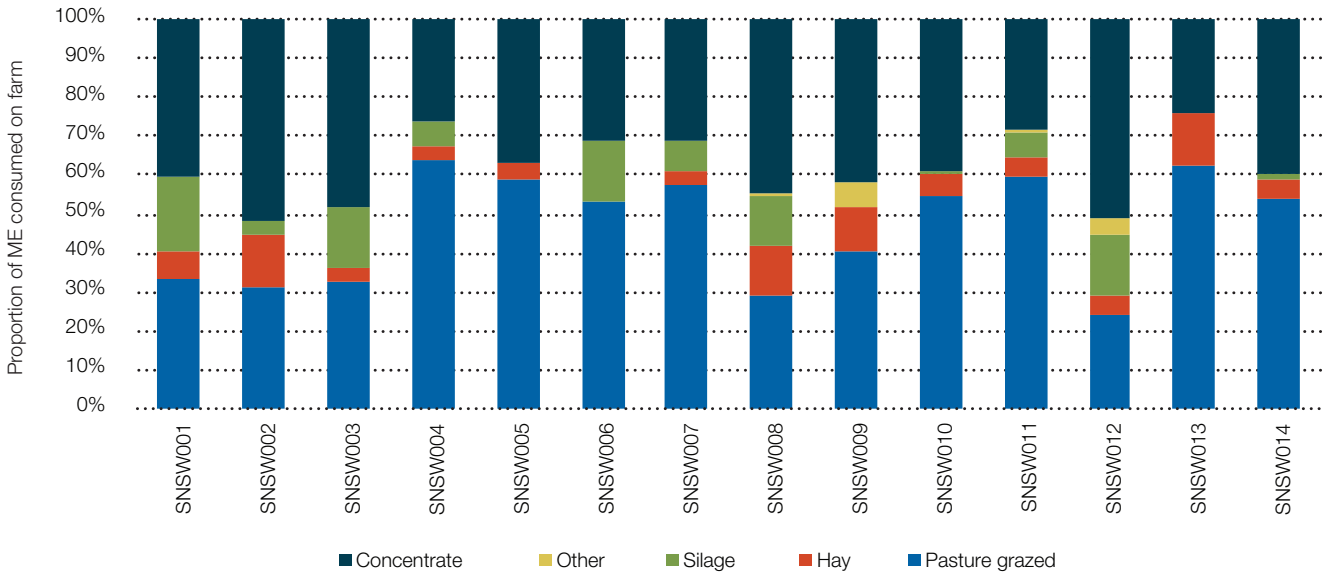
Feed consumption

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 33 shows the relative contribution of each feed type to the ME consumption on the farm. 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.

The contribution of grazed pasture as a proportion of ME consumed on farm was 47% in 2011/12. Concentrate supplements contributed 38% of total ME fed while silage made up 8% and hay 7% of total ME consumed on farm on average.

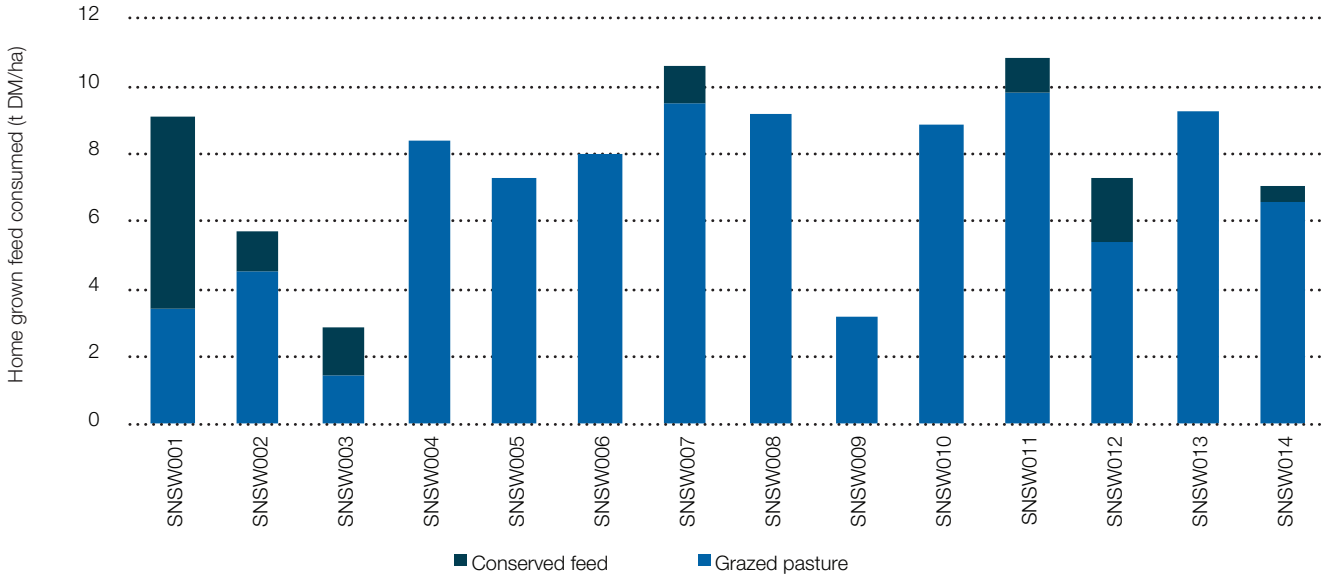
Figure 33: Sources of whole farm metabolisable energy—South

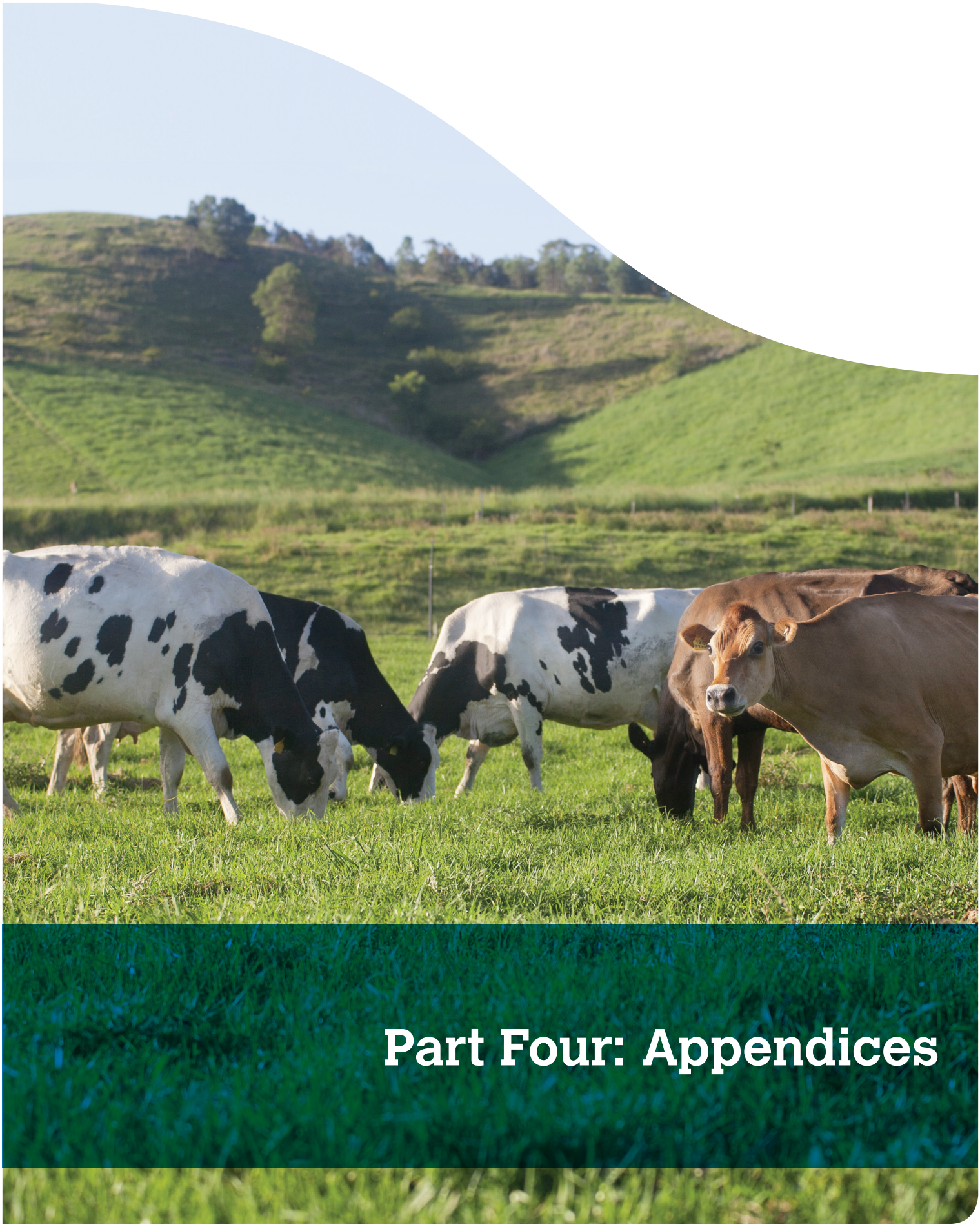


In 2011/12 home grown feed consumption has been measured per milking hectare as opposed to per usable hectare. Pasture consumption for farms in the South is shown in Figure 34. The amount of pasture grazed this year ranged from 1.5 tonnes of dry matter per hectare up to 9.8 t DM/ha, with an average of 6.8 t DM/ha. Conserved fodder ranged from 0 t DM/ha to 5.7 t DM/ha, with an average of 1.0 t DM/ha. This resulted in an average total pasture harvest from the milking area of 7.8 t DM/ha.

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 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.

Figure 34: Estimated tonnes of home grown feed produced per milking hectare—South West





Part Four: Appendices

Appendix A: North

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 (Variable costs / Total costs)	Earnings Before Interest & Tax	Return on assets (excl. Capital Appreciation)	Interest & lease charges	Debt servicing ratio	Net farm income	Return on equity	Return on equity (incl. capital apprec.)
	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	%	$/ kg MS	%	$/ kg MS	% of income	$/ kg MS	%	%
NNSW001	$7.28	$0.73	$8.01	$3.49	$2.53	58%	$1.99	7.0%	$1.00	12.5%	$0.99	10.1%	10.7%
NNSW002	$6.78	$1.62	$8.40	$3.17	$4.03	44%	$1.20	3.0%	$0.04	0.4%	$1.17	3.0%	3.0%
NNSW003	$6.83	$1.69	$8.51	$4.73	$3.42	58%	$0.36	1.1%	$0.43	5.0%	-$0.07	-0.3%	-0.7%
NNSW004	$7.34	$0.72	$8.06	$3.96	$3.58	52%	$0.52	2.2%	$0.15	1.9%	$0.37	1.7%	-1.6%
NNSW005	$7.38	$0.74	$8.12	$3.60	$3.18	53%	$1.34	3.8%	$0.00	0.0%	$1.34	3.8%	3.9%
NNSW006	$7.11	$0.14	$7.25	$4.05	$3.22	56%	-$0.03	-0.1%	$0.91	12.6%	-$0.94	-5.1%	-5.0%
NNSW007	$7.24	$0.51	$7.75	$3.70	$2.82	57%	$1.24	2.5%	$0.26	3.4%	$0.98	2.5%	2.6%
NNSW008	$7.19	$1.09	$8.27	$3.30	$3.58	48%	$1.39	3.7%	$0.05	0.7%	$1.34	3.6%	2.9%
NNSW009	$7.27	$0.54	$7.82	$4.98	$2.96	63%	-$0.13	-0.3%	$1.16	14.9%	-$1.30	-4.4%	-4.4%
NNSW010	$7.38	$1.62	$9.01	$3.67	$4.00	48%	$1.34	2.3%	$0.40	4.4%	$0.94	1.9%	1.9%
NNSW011	$6.80	$0.52	$7.32	$2.64	$2.50	51%	$2.18	6.0%	$0.19	2.6%	$1.99	5.8%	5.9%
NNSW012	$7.01	$1.15	$8.16	$4.15	$2.85	59%	$1.15	5.5%	$0.52	6.4%	$0.63	5.0%	5.2%
NNSW013	$6.91	$0.98	$7.89	$3.66	$3.71	50%	$0.51	1.5%	$0.35	4.4%	$0.17	0.8%	0.8%
NNSW014	$7.26	$0.73	$7.99	$4.23	$2.47	63%	$1.28	4.3%	$0.77	9.7%	$0.51	2.9%	2.9%
Average	$7.13	$0.91	$8.04	$3.81	$3.20	54%	$1.03	3.0%	$0.45	5.6%	$0.58	2.2%	2.0%

Table A2: Physical Information—North

Farm number	Total usable area	Milking area	Water used	Number of milking cows	Milking cows per usable area	Milk sold	Milk sold	Fat	Protein
	ha	ha	mm/ha	hd	hd/ha	kg MS/ cow	kg MS/ ha	%	%
NNSW001	303	90	1,244	280	0.9	499	461	3.9%	3.3%
NNSW002	108	50	1,428	105	1.0	472	459	3.9%	3.2%
NNSW003	206	104	2,279	407	2.0	385	760	4.4%	3.5%
NNSW004	120	80	2,702	170	1.4	464	657	4.1%	3.5%
NNSW005	197	100	1,303	246	1.2	538	672	4.3%	3.3%
NNSW006	120	100	1,146	277	2.3	455	1050	3.7%	3.1%
NNSW007	260	160	1,033	242	0.9	497	462	3.6%	3.2%
NNSW008	262	85	1,192	240	0.9	485	444	3.7%	3.2%
NNSW009	312	94	930	506	1.6	460	746	3.6%	3.2%
NNSW010	328	101	1,295	270	0.8	398	328	4.1%	3.3%
NNSW011	180	140	1,285	400	2.2	441	980	4.7%	3.9%
NNSW012	200	80	1,242	190	1.0	399	379	3.5%	3.1%
NNSW013	158	97	1,389	170	1.1	453	487	3.7%	3.2%
NNSW014	740	250	1,101	700	0.9	508	481	3.6%	3.1%
Average	250	109	1,398	300	1.3	461	598	3.9%	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	Labour efficiency	Labour efficiency
	t DM/ ha	t DM/ ha	% of ME	kg/ ha	kg/ ha	kg/ ha	kg/ ha	hd/ FTE	kg MS/ FTE
NNSW001	6.3	1.5	54%	123.2	33.7	45.8	22.1	100	49,669
NNSW002	6.3	1.5	67%	164.9	35.7	47.2	22.3	69	32,639
NNSW003	9.0	0.0	71%	286.8	38.1	71.3	17.3	60	22,980
NNSW004	4.2	3.0	63%	149.4	29.5	110.7	7.9	40	18,356
NNSW005	7.2	1.4	60%	262.4	17.3	39.4	40.7	59	31,769
NNSW006	7.5	3.4	65%	230.4	10.2	2.0	4.1	73	33,423
NNSW007	5.1	0.8	58%	44.2	0.0	0.0	0.0	77	38,310
NNSW008	6.5	4.1	61%	88.6	4.2	28.6	1.9	81	39,161
NNSW009	0.1	0.0	37%	115.3	14.4	25.1	34.6	67	30,947
NNSW010	8.0	1.8	71%	89.8	0.0	0.0	0.0	111	44,137
NNSW011	6.8	2.5	66%	209.6	26.0	41.0	11.8	83	36,416
NNSW012	4.7	2.5	56%	32.2	0.9	10.0	1.1	73	29,076
NNSW013	4.5	0.7	67%	58.7	10.7	0.0	16.4	59	26,719
NNSW014	7.1	1.9	66%	0.0	0.0	0.0	0.0	76	38,548
Average	5.9	1.8	62%	132.5	15.8	30.1	12.9	73	33,725

*on milking area

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
NNSW001	3.0	$238	-	-	-	$238	12.4	1.9	46%
NNSW002	1.7	$377	-	-	-	$377	12.5	3.0	33%
NNSW003	1.2	$346	-	-	-	$346	12.9	2.7	29%
NNSW004	1.8	$379	-	-	-	$380	12.0	3.3	37%
NNSW005	1.4	$243	-	$200	$325	$262	12.1	2.2	40%
NNSW006	2.2	$297	-	$226	-	$295	10.8	2.8	35%
NNSW007	2.7	$407	-	-	$320	$368	12.2	3.1	42%
NNSW008	2.4	$235	-	-	-	$235	11.9	2.0	39%
NNSW009	3.4	$268	-	$211	$178	$258	12.4	2.2	63%
NNSW010	1.4	$249	-	-	-	$246	12.8	1.9	29%
NNSW011	1.7	$293	-	-	-	$293	12.5	2.4	34%
NNSW012	2.4	$400	-	-	-	$400	12.5	3.2	44%
NNSW013	2.3	$370	-	-	-	$370	12.5	3.0	33%
NNSW014	2.4	$201	-	$225	-	$202	12.3	1.7	34%
Average	2.1	$307	-	$216	$274	$305	12.3	2.5	38%

Table A4: Variable costs—North

Farm number	AI and herd test	Animal health	Calf rearing	Shed power	Dairy supplies	Total herd & shed costs	Fertiliser	Irrigation	Hay and silage making
	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS
NNSW001	$0.00	$0.13	$0.00	$0.12	$0.08	$0.32	$0.52	$0.00	$0.16
NNSW002	$0.05	$0.08	$0.01	$0.13	$0.17	$0.45	$0.47	$0.03	$0.15
NNSW003	$0.15	$0.11	$0.32	$0.19	$0.07	$0.84	$1.07	$0.00	$0.54
NNSW004	$0.07	$0.13	$0.00	$0.14	$0.17	$0.52	$0.57	$0.03	$0.27
NNSW005	$0.17	$0.18	$0.00	$0.16	$0.26	$0.77	$0.87	$0.06	$0.23
NNSW006	$0.05	$0.38	$0.00	$0.13	$0.10	$0.66	$0.36	$0.29	$0.40
NNSW007	$0.00	$0.14	$0.00	$0.22	$0.15	$0.52	$0.15	$0.22	$0.03
NNSW008	$0.16	$0.29	$0.01	$0.16	$0.10	$0.72	$0.43	$0.09	$0.04
NNSW009	$0.11	$0.25	$0.00	$0.14	$0.23	$0.74	$0.44	$0.27	$0.04
NNSW010	$0.25	$0.26	$0.01	$0.32	$0.12	$0.96	$0.53	$0.03	$0.02
NNSW011	$0.00	$0.27	$0.07	$0.06	$0.16	$0.55	$0.35	$0.22	$0.00
NNSW012	$0.16	$0.19	$0.00	$0.16	$0.09	$0.59	$0.34	$0.00	$0.06
NNSW013	$0.11	$0.27	$0.04	$0.14	$0.11	$0.66	$0.36	$0.00	$0.05
NNSW014	$0.22	$0.22	$0.00	$0.11	$0.09	$0.65	$1.07	$0.03	$0.01
Average	$0.11	$0.21	$0.03	$0.16	$0.14	$0.64	$0.54	$0.09	$0.14

Farm number	Fuel and 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
NNSW001	$0.19	$0.17	$0.28	$0.00	$1.78	$0.07	$3.17	$3.49
NNSW002	$0.32	$0.16	$0.00	$0.00	$1.54	$0.07	$2.72	$3.17
NNSW003	$0.18	$0.36	$0.01	$0.00	$1.17	$0.55	$3.89	$4.73
NNSW004	$0.17	$0.45	$0.00	$0.38	$1.43	$0.14	$3.44	$3.96
NNSW005	$0.13	$0.22	$0.00	$0.12	$1.21	$0.00	$2.83	$3.60
NNSW006	$0.12	$0.33	$0.01	$0.11	$1.55	$0.22	$3.40	$4.05
NNSW007	$0.17	$0.28	$0.12	$0.23	$1.98	$0.00	$3.18	$3.70
NNSW008	$0.16	$0.12	$0.00	$0.00	$1.75	$0.00	$2.58	$3.30
NNSW009	$0.36	$0.68	$0.22	$0.37	$1.81	$0.05	$4.24	$4.98
NNSW010	$0.21	$0.83	$0.11	$0.02	$0.96	$0.00	$2.72	$3.67
NNSW011	$0.10	$0.15	$0.04	$0.00	$1.23	$0.00	$2.09	$2.64
NNSW012	$0.13	$0.11	$0.05	$0.00	$2.67	$0.20	$3.56	$4.15
NNSW013	$0.19	$0.21	$0.08	$0.00	$2.12	$0.00	$3.00	$3.66
NNSW014	$0.10	$0.82	$0.16	$0.02	$1.26	$0.11	$3.58	$4.23
Average	$0.18	$0.35	$0.08	$0.09	$1.60	$0.10	$3.17	$3.81

Table A5: Overhead costs—North

Farm number	Rates	Registration & insurance	Farm insurance	Repairs & maintenance	Bank charges	Other overheads	Employed Labour	Total cash overheads	Depreciation	Imputed owner/ operator & family labour	Total overheads
	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS
NNSW001	$0.04	$0.01	$0.06	$0.36	$0.15	$0.14	$0.27	$1.02	$0.55	$0.95	$2.53
NNSW002	$0.06	$0.12	$0.10	$1.03	$0.00	$0.16	$0.86	$2.33	$0.79	$0.92	$4.03
NNSW003	$0.04	$0.02	$0.04	$0.55	$0.05	$0.10	$1.18	$1.98	$0.15	$1.29	$3.42
NNSW004	$0.06	$0.01	$0.04	$0.55	$0.07	$0.06	$0.61	$1.39	$0.35	$1.84	$3.58
NNSW005	$0.04	$0.05	$0.04	$0.98	$0.00	$0.10	$1.13	$2.33	$0.26	$0.59	$3.18
NNSW006	$0.03	$0.05	$0.09	$0.85	$0.00	$0.12	$0.90	$2.04	$0.44	$0.74	$3.22
NNSW007	$0.04	$0.04	$0.10	$0.53	$0.02	$0.19	$0.60	$1.52	$0.25	$1.04	$2.82
NNSW008	$0.06	$0.07	$0.00	$0.72	$0.00	$0.03	$2.26	$3.14	$0.44	$0.00	$3.58
NNSW009	$0.03	$0.01	$0.18	$0.21	$0.01	$0.17	$0.33	$0.95	$0.61	$1.40	$2.96
NNSW010	$0.07	$0.07	$0.20	$0.62	$0.14	$0.18	$1.25	$2.53	$0.85	$0.61	$4.00
NNSW011	$0.04	$0.01	$0.00	$0.16	$0.00	$0.25	$0.34	$0.80	$0.43	$1.27	$2.50
NNSW012	$0.06	$0.12	$0.14	$0.24	$0.02	$0.13	$0.73	$1.43	$0.22	$1.21	$2.85
NNSW013	$0.12	$0.06	$0.03	$0.36	$0.01	$0.29	$0.53	$1.39	$0.62	$1.71	$3.71
NNSW014	$0.06	$0.06	$0.04	$0.29	$0.00	$0.09	$1.31	$1.86	$0.32	$0.30	$2.47
Average	$0.05	$0.05	$0.08	$0.53	$0.03	$0.15	$0.88	$1.76	$0.45	$0.99	$3.20

Table A6: Variable costs—North

Farm number	AI and herd test	Animal health	Calf rearing	Shed power	Dairy supplies	Total herd & shed costs	Fertiliser	Irrigation	Hay and silage making
	% of costs	% of costs	% of costs	% of costs	% of costs	% of costs	% of costs	% of costs	% of costs
NNSW001	0.0%	2.1%	0.0%	1.9%	1.3%	5.4%	8.7%	0.0%	2.6%
NNSW002	0.7%	1.2%	0.1%	1.9%	2.4%	6.2%	6.5%	0.4%	2.1%
NNSW003	1.9%	1.3%	3.9%	2.4%	0.8%	10.4%	13.1%	0.0%	6.6%
NNSW004	0.9%	1.8%	0.0%	1.9%	2.3%	6.9%	7.6%	0.3%	3.6%
NNSW005	2.5%	2.6%	0.0%	2.4%	3.8%	11.3%	12.8%	0.9%	3.4%
NNSW006	0.7%	5.2%	0.0%	1.7%	1.4%	9.0%	4.9%	4.0%	5.4%
NNSW007	0.0%	2.2%	0.0%	3.4%	2.4%	7.9%	2.3%	3.4%	0.5%
NNSW008	2.4%	4.2%	0.1%	2.3%	1.5%	10.5%	6.2%	1.2%	0.6%
NNSW009	1.4%	3.1%	0.0%	1.8%	3.0%	9.3%	5.6%	3.4%	0.5%
NNSW010	3.3%	3.4%	0.1%	4.2%	1.5%	12.5%	7.0%	0.4%	0.3%
NNSW011	0.0%	5.2%	1.4%	1.1%	3.1%	10.8%	6.8%	4.2%	0.0%
NNSW012	2.3%	2.7%	0.0%	2.3%	1.2%	8.4%	4.9%	0.0%	0.8%
NNSW013	1.5%	3.6%	0.5%	2.0%	1.4%	9.0%	4.8%	0.0%	0.7%
NNSW014	3.4%	3.3%	0.0%	1.6%	1.4%	9.7%	16.0%	0.5%	0.2%
Average	1.5%	3.0%	0.4%	2.2%	2.0%	9.1%	7.6%	1.3%	2.0%

Farm number	Fuel and 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
NNSW001	3.2%	2.8%	4.7%	0.0%	29.6%	1.1%	52.7%	58.0%
NNSW002	4.4%	2.2%	0.0%	0.0%	21.3%	0.9%	37.8%	44.0%
NNSW003	2.3%	4.4%	0.1%	0.0%	14.4%	6.8%	47.7%	58.1%
NNSW004	2.2%	6.0%	0.0%	5.0%	19.0%	1.8%	45.6%	52.5%
NNSW005	1.9%	3.2%	0.0%	1.8%	17.8%	0.0%	41.8%	53.1%
NNSW006	1.6%	4.6%	0.2%	1.6%	21.3%	3.1%	46.7%	55.7%
NNSW007	2.6%	4.3%	1.8%	3.5%	30.5%	0.0%	48.8%	56.8%
NNSW008	2.3%	1.7%	0.0%	0.0%	25.4%	0.0%	37.4%	48.0%
NNSW009	4.5%	8.6%	2.8%	4.7%	22.8%	0.7%	53.4%	62.7%
NNSW010	2.8%	10.9%	1.4%	0.2%	12.6%	0.0%	35.4%	47.9%
NNSW011	2.0%	2.9%	0.7%	0.0%	23.9%	0.0%	40.6%	51.4%
NNSW012	1.9%	1.5%	0.8%	0.0%	38.1%	2.8%	50.9%	59.3%
NNSW013	2.5%	2.8%	1.1%	0.0%	28.7%	0.0%	40.6%	49.6%
NNSW014	1.5%	12.2%	2.4%	0.3%	18.8%	1.7%	53.4%	63.1%
Average	2.5%	4.9%	1.1%	1.2%	23.2%	1.3%	45.2%	54.3%

Table A7: Overhead costs—North

Farm number	Rates	Registration & insurance	Farm insurance	Repairs & maintenance	Bank charges	Other overheads	Employed Labour	Total cash overheads	Depreciation	Imputed owner / operator & family labour	Total overheads
	% of costs	% of costs	% of costs	% of costs	% of costs	% of costs	% of costs	% of costs	% of costs	% of costs	% of costs
NNSW001	0.7%	0.1%	1.0%	5.9%	2.4%	2.3%	4.5%	17.0%	9.2%	15.9%	42.0%
NNSW002	0.8%	1.6%	1.4%	14.3%	0.0%	2.3%	11.9%	32.3%	10.9%	12.8%	56.0%
NNSW003	0.5%	0.2%	0.5%	6.7%	0.7%	1.2%	14.5%	24.3%	1.8%	15.8%	41.9%
NNSW004	0.7%	0.1%	0.6%	7.2%	0.9%	0.8%	8.0%	18.4%	4.6%	24.5%	47.5%
NNSW005	0.5%	0.7%	0.6%	14.5%	0.0%	1.5%	16.6%	34.4%	3.8%	8.7%	46.9%
NNSW006	0.3%	0.7%	1.3%	11.7%	0.0%	1.7%	12.4%	28.0%	6.1%	10.2%	44.3%
NNSW007	0.6%	0.5%	1.5%	8.2%	0.2%	3.0%	9.3%	23.4%	3.9%	16.0%	43.2%
NNSW008	0.9%	1.1%	0.0%	10.4%	0.0%	0.4%	32.8%	45.6%	6.4%	0.0%	52.0%
NNSW009	0.4%	0.2%	2.3%	2.6%	0.2%	2.2%	4.2%	12.0%	7.7%	17.6%	37.3%
NNSW010	0.9%	0.9%	2.7%	8.1%	1.8%	2.3%	16.3%	33.0%	11.1%	8.0%	52.1%
NNSW011	0.8%	0.2%	0.0%	3.0%	0.0%	4.9%	6.6%	15.6%	8.3%	24.8%	48.6%
NNSW012	0.8%	1.7%	2.0%	3.4%	0.2%	1.9%	10.4%	20.4%	3.1%	17.2%	40.7%
NNSW013	1.6%	0.8%	0.3%	4.8%	0.1%	4.0%	7.3%	18.9%	8.4%	23.1%	50.4%
NNSW014	0.8%	0.9%	0.6%	4.3%	0.1%	1.3%	19.6%	27.7%	4.8%	4.4%	36.9%
Average	0.7%	0.7%	1.1%	7.5%	0.5%	2.1%	12.5%	25.1%	6.4%	14.2%	45.7%

Table A8: Capital structure—North

	Farm Assets				Other farm assets (per usable hectare)				
	Land value	Land value	Permanent water value	Permanent water value	Plant and equipment	Livestock	Hay and grain	Other assets	Total assets
	$/ha	$/cow	$/ha	$/cow	$/ha	$/ha	$/ha	$/ha	$/ha
Average	$12,323	$9,614	$2,166	$1,619	$2,408	$1,985	$223	$336	$19,441

	Liabilities		Equity	
	Liabilities per usable hectare	Liabilities per milking cow	Equity per usable hectare	Average equity
	$/ha	$/cow	$/ha	%
Average	$3,333	$2,396	$16,108	82%

Appendix B: South

Table B1: Main Financial Indicators—South

Farm number	Milk income (net)	All other income	Gross farm income	Total variable costs	Total overhead costs	Cost structure (Variable costs/Total costs)	Earnings Before Interest & Tax	Return on assets (excl. capital apprec.)	Interest & lease charges	Debt servicing ratio	Net farm income	Return on equity	Return on equity (incl. capital apprec.)
	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	%	$/ kg MS	%	$/ kg MS	% of income	$/ kg MS	%	%
SNSW001	$7.20	$0.74	$7.94	$3.25	$2.62	55%	$2.07	5.9%	$0.21	2.6%	$1.86	5.7%	14.3%
SNSW002	$7.06	$0.45	$7.51	$4.39	$2.41	65%	$0.72	1.4%	$1.29	17.2%	-$0.58	-1.9%	-2.4%
SNSW003	$6.02	$0.81	$6.83	$3.89	$2.40	62%	$0.53	1.6%	$0.74	10.9%	-$0.21	-0.9%	4.0%
SNSW004	$6.93	$1.04	$7.97	$2.48	$2.79	47%	$2.71	3.6%	$0.99	12.4%	$1.72	3.6%	3.6%
SNSW005	$6.98	$0.93	$7.92	$3.03	$2.88	51%	$2.00	1.9%	$0.83	10.5%	$1.17	1.5%	1.5%
SNSW006	$7.07	$0.94	$8.02	$3.61	$2.56	59%	$1.85	5.2%	$1.22	15.2%	$0.63	4.2%	4.4%
SNSW007	$6.78	$0.32	$7.10	$3.90	$2.44	62%	$0.76	4.0%	$0.57	8.0%	$0.19	3.2%	3.1%
SNSW008	$7.20	$1.67	$8.87	$5.28	$2.48	68%	$1.12	7.4%	$0.48	5.4%	$0.64	8.0%	8.8%
SNSW009	$5.88	$1.78	$7.66	$3.42	$2.15	61%	$2.09	6.3%	$1.37	17.8%	$0.72	4.7%	4.8%
SNSW010	$6.20	$0.88	$7.08	$2.48	$2.32	52%	$2.28	9.9%	$0.40	5.6%	$1.88	11.6%	11.6%
SNSW011	$5.99	$1.17	$7.16	$3.58	$1.95	65%	$1.63	8.6%	$0.00	0.0%	$1.63	8.6%	9.0%
SNSW012	$7.08	$0.40	$7.48	$3.19	$2.57	55%	$1.72	6.2%	$0.91	12.2%	$0.81	4.5%	4.5%
SNSW013	$6.82	$0.23	$7.05	$1.99	$2.36	46%	$2.70	10.8%	$0.60	8.5%	$2.11	13.0%	13.3%
SNSW014	$5.71	$0.36	$6.07	$3.43	$1.74	66%	$0.90	5.0%	$0.57	9.5%	$0.32	3.0%	3.0%
Average	$6.64	$0.84	$7.48	$3.42	$2.40	58%	$1.65	5.5%	$0.73	9.7%	$0.92	4.9%	6.0%

Table B2: Physical Information—South

Farm number	Total usable area	Milking area	Water used	Number of milking cows	Milking cows per usable area	Milk sold	Milk sold	Fat	Protein
	ha	ha	mm/ha	hd	hd/ha	kg MS/cow	kg MS/ ha	%	%
SNSW001	800	150	1,362	760	1.0	535	509	4.0%	3.0%
SNSW002	176	88	1,642	300	1.7	530	903	4.0%	3.3%
SNSW003	874	554	995	660	0.8	500	378	3.7%	3.2%
SNSW004	160	80	1,585	211	1.3	503	663	3.8%	3.2%
SNSW005	233	100	1,585	250	1.1	505	542	3.9%	3.1%
SNSW006	277	100	1,320	345	1.2	457	569	4.0%	3.2%
SNSW007	620	280	1,076	918	1.5	525	777	3.7%	3.1%
SNSW008	270	150	1,225	956	3.5	541	1916	3.6%	3.1%
SNSW009	280	156	724	329	1.2	501	589	3.8%	3.2%
SNSW010	380	133	731	362	1.0	480	457	3.7%	3.3%
SNSW011	170	100	994	350	2.1	382	786	4.1%	3.4%
SNSW012	146	61	1,041	330	2.3	445	1,005	3.8%	3.2%
SNSW013	126	50	1,020	150	1.2	494	588	4.4%	3.6%
SNSW014	401	186	681	385	1.0	531	510	3.7%	3.4%
Average	351	156	1,142	450	1.5	495	728	3.9%	3.2%

Table B2: Physical Information—South
(continued)

Farm number	Estimated grazed pasture*	Estimated conserved feed*	Home grown feed as % of ME consumed	Nitrogen application	Phosphorous application	Potassium application	Sulphur application	Labour efficiency	Labour efficiency
	t DM/ ha	t DM/ ha	% of ME	kg/ ha	kg/ ha	kg/ ha	kg/ ha	hd/ FTE	kg MS/ FTE
SNSW001	3.4	5.7	53%	24.9	2.1	1.8	0.4	75	40,344
SNSW002	4.5	1.2	35%	20.2	35.6	58.8	28.5	73	38,593
SNSW003	1.5	1.4	46%	39.5	23.3	17.5	2.4	76	38,080
SNSW004	8.4	0.0	71%	22.3	2.8	0.0	7.4	76	38,105
SNSW005	7.3	0.0	59%	28.5	8.4	7.0	8.6	89	45,073
SNSW006	8.0	0.0	69%	0.0	0.0	0.0	0.0	95	43,435
SNSW007	9.5	1.1	63%	181.6	34.2	64.2	37.0	92	48,112
SNSW008	9.2	0.0	29%	156.7	7.3	7.8	5.5	111	60,313
SNSW009	3.2	0.0	40%	24.3	7.3	0.0	2.3	76	38,309
SNSW010	8.9	0.0	55%	20.6	7.6	0.0	9.6	79	38,117
SNSW011	9.8	1.0	65%	0.0	0.0	0.0	0.0	141	53,829
SNSW012	5.4	1.8	28%	109.6	34.2	0.0	2.7	77	34,111
SNSW013	9.3	0.0	63%	0.0	0.0	0.0	0.0	73	36,065
SNSW014	6.6	0.4	53%	0.0	0.0	0.0	0.0	104	55,188
Average	6.8	0.9	52%	44.9	11.6	11.2	7.5	88	43,405

*on milking area

Table B3:Purchased feed—South

Farm number	Purchased feed per milker	Concentrate price	Silage price	Hay price	Other feed price	Average purchased feed	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
SNSW001	3.5	$326	-	$232	$236	$306	12.7	2.5	47%
SNSW002	4.6	$342	-	-	-	$305	11.8	2.7	65%
SNSW003	2.3	$316	-	$220	-	$326	12.4	2.7	54%
SNSW004	2.1	$316	-	$142	$140	$281	11.8	2.5	29%
SNSW005	2.6	$301	-	$153	$161	$278	12.2	2.4	41%
SNSW006	1.8	$332	-	-	-	$332	12.6	2.7	31%
SNSW007	1.5	$461	-	$135	$280	$417	12.3	3.5	37%
SNSW008	4.5	$253	-	$205	$205	$228	11.3	2.1	71%
SNSW009	4.4	$218	-	$170	$80	$204	11.3	1.9	60%
SNSW010	1.4	$348	-	$143	$143	$327	12.4	2.7	45%
SNSW011	1.9	$204	$70	$121	$107	$172	11.8	1.5	35%
SNSW012	3.7	$249	-	$200	$55	$217	12.2	1.9	72%
SNSW013	2.7	$200	-	$180	-	$189	10.7	2.1	37%
SNSW014	2.0	$350	-	$191	$150	$316	12.0	2.7	47%
Average	2.8	$301	$70	$174	$156	$278	12.0	2.4	48%

Table B4: Variable costs—South

Farm number	AI and herd test	Animal health	Calf rearing	Shed power	Dairy supplies	Total herd & shed costs	Fertiliser	Irrigation	Hay and silage making
	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS
SNSW001	$0.16	$0.22	$0.00	$0.06	$0.10	$0.54	$0.13	$0.00	$0.05
SNSW002	$0.09	$0.17	$0.03	$0.10	$0.29	$0.68	$0.22	$0.03	$0.15
SNSW003	$0.27	$0.25	$0.00	$0.14	$0.19	$0.85	$0.64	$0.01	$0.18
SNSW004	$0.13	$0.12	$0.01	$0.14	$0.07	$0.46	$0.08	$0.00	$0.12
SNSW005	$0.14	$0.18	$0.00	$0.14	$0.11	$0.57	$0.16	$0.00	$0.14
SNSW006	$0.08	$0.15	$0.00	$0.17	$0.07	$0.48	$0.15	$0.02	$0.00
SNSW007	$0.21	$0.23	$0.00	$0.13	$0.18	$0.74	$0.48	$0.32	$0.18
SNSW008	$0.26	$0.24	$0.00	$0.12	$0.14	$0.76	$0.15	$0.13	$0.01
SNSW009	$0.10	$0.21	$0.00	$0.19	$0.05	$0.55	$0.09	$0.01	$0.00
SNSW010	$0.11	$0.09	$0.00	$0.01	$0.11	$0.33	$0.18	$0.26	$0.09
SNSW011	$0.17	$0.16	$0.00	$0.20	$0.13	$0.67	$0.42	$0.29	$0.21
SNSW012	$0.07	$0.07	$0.00	$0.11	$0.01	$0.26	$0.08	$0.06	$0.03
SNSW013	$0.11	$0.04	$0.00	$0.13	$0.13	$0.42	$0.00	$0.07	$0.00
SNSW014	$0.10	$0.25	$0.00	$0.11	$0.09	$0.56	$0.61	$0.20	$0.08
Average	$0.14	$0.17	$0.00	$0.13	$0.12	$0.56	$0.24	$0.10	$0.09

Farm number	Fuel and 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
SNSW001	$0.14	$0.08	$0.08	$0.39	$1.85	$0.00	$2.71	$3.25
SNSW002	$0.23	$0.13	$0.00	$0.65	$2.29	$0.00	$3.70	$4.39
SNSW003	$0.10	$0.13	$0.00	$0.12	$1.84	$0.03	$3.04	$3.89
SNSW004	$0.19	$0.02	$0.26	$0.13	$1.17	$0.04	$2.02	$2.48
SNSW005	$0.12	$0.07	$0.22	$0.15	$1.47	$0.15	$2.46	$3.03
SNSW006	$0.16	$0.85	$0.20	$0.00	$1.49	$0.28	$3.14	$3.61
SNSW007	$0.11	$0.18	$0.41	$0.06	$1.41	$0.00	$3.15	$3.90
SNSW008	$0.15	$0.15	$0.37	$1.60	$1.84	$0.12	$4.52	$5.28
SNSW009	$0.27	$0.16	$0.00	$0.46	$1.76	$0.13	$2.87	$3.42
SNSW010	$0.16	$0.18	$0.07	$0.09	$1.02	$0.10	$2.15	$2.48
SNSW011	$0.11	$0.43	$0.07	$0.28	$1.02	$0.09	$2.92	$3.58
SNSW012	$0.31	$0.09	$0.00	$0.43	$1.85	$0.10	$2.93	$3.19
SNSW013	$0.19	$0.07	$0.00	$0.61	$0.59	$0.05	$1.57	$1.99
SNSW014	$0.26	$0.34	$0.00	$0.19	$1.20	$0.00	$2.88	$3.43
Average	$0.18	$0.20	$0.12	$0.37	$1.49	$0.08	$2.86	$3.42

Table B5: Overhead costs—South

Farm	Rates	Registration & insurance		Farm insurance	Repairs & maintenance	Bank charges	Other overheads	Employed Labour	Depreciation	Imputed owner/ operator & family labour	Total overheads
	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS
SNSW001	$0.03	$0.03	$0.08	$0.57	$0.00	$0.14	$0.70	$1.55	$0.33	$0.74	$2.62
SNSW002	$0.16	$0.03	$0.07	$0.36	$0.01	$0.11	$0.69	$1.43	$0.39	$0.59	$2.41
SNSW003	$0.05	$0.06	$0.03	$0.31	$0.00	$0.15	$1.17	$1.77	$0.16	$0.47	$2.40
SNSW004	$0.07	$0.01	$0.10	$0.47	$0.01	$0.18	$0.33	$1.17	$0.38	$1.24	$2.79
SNSW005	$0.08	$0.08	$0.09	$0.75	$0.01	$0.17	$0.42	$1.59	$0.27	$1.02	$2.88
SNSW006	$0.02	$0.06	$0.12	$0.50	$0.03	$0.20	$0.99	$1.92	$0.32	$0.32	$2.56
SNSW007	$0.02	$0.01	$0.02	$0.40	$0.00	$0.43	$1.38	$2.25	$0.19	$0.00	$2.44
SNSW008	$0.01	$0.01	$0.05	$0.73	$0.02	$0.15	$0.96	$1.92	$0.30	$0.26	$2.48
SNSW009	$0.04	$0.01	$0.01	$0.22	$0.00	$0.03	$0.65	$0.96	$0.32	$0.87	$2.15
SNSW010	$0.03	$0.01	$0.07	$0.27	$0.02	$0.18	$0.47	$1.04	$0.22	$1.06	$2.32
SNSW011	$0.09	$0.01	$0.06	$0.50	$0.01	$0.13	$0.45	$1.26	$0.15	$0.54	$1.95
SNSW012	$0.03	$0.00	$0.13	$0.31	$0.03	$0.14	$0.68	$1.32	$0.40	$0.85	$2.57
SNSW013	$0.02	$0.00	$0.10	$0.20	$0.07	$0.00	$0.00	$0.39	$0.31	$1.66	$2.36
SNSW014	$0.03	$0.01	$0.07	$0.21	$0.00	$0.00	$0.06	$0.38	$0.35	$1.00	$1.74
Average	$0.05	$0.02	$0.07	$0.41	$0.02	$0.14	$0.64	$1.35	$0.29	$0.76	$2.40

Table B6: Variable costs—South

Farm number	AI and herd test	Animal health	Calf rearing	Shed power	Dairy supplies	Total herd & shed costs	Fertiliser	Irrigation	Hay and silage making
	% of costs	% of costs	% of costs	% of costs	% of costs	% of costs	% of costs	% of costs	% of costs
SNSW001	2.7%	3.7%	0.0%	1.0%	1.7%	9.1%	2.2%	0.0%	0.8%
SNSW002	1.3%	2.4%	0.5%	1.5%	4.3%	10.1%	3.2%	0.4%	2.2%
SNSW003	4.3%	4.0%	0.0%	2.2%	3.1%	13.6%	10.2%	0.1%	2.9%
SNSW004	2.4%	2.2%	0.2%	2.6%	1.4%	8.8%	1.6%	0.0%	2.3%
SNSW005	2.3%	3.0%	0.0%	2.4%	1.9%	9.6%	2.7%	0.0%	2.4%
SNSW006	1.3%	2.5%	0.0%	2.8%	1.2%	7.8%	2.4%	0.3%	0.0%
SNSW007	3.3%	3.6%	0.0%	2.1%	2.8%	11.7%	7.6%	5.1%	2.8%
SNSW008	3.3%	3.0%	0.0%	1.6%	1.8%	9.8%	1.9%	1.3%	0.1%
SNSW009	1.7%	3.7%	0.0%	3.4%	1.0%	9.9%	1.7%	0.1%	0.0%
SNSW010	2.4%	1.9%	0.0%	0.2%	2.3%	6.8%	3.8%	5.3%	2.0%
SNSW011	3.1%	2.8%	0.0%	3.7%	2.4%	12.1%	7.6%	5.3%	3.8%
SNSW012	1.1%	1.3%	0.0%	1.9%	0.2%	4.5%	1.3%	1.0%	0.5%
SNSW013	2.5%	1.0%	0.0%	3.0%	3.1%	9.6%	0.0%	1.6%	0.0%
SNSW014	2.0%	4.8%	0.1%	2.1%	1.8%	10.8%	11.8%	2.4%	1.6%
Average	2.4%	2.9%	0.1%	2.2%	2.1%	9.6%	4.1%	1.6%	1.5%

Farm number	Fuel and 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
SNSW001	2.4%	1.4%	1.3%	6.6%	31.6%	0.0%	46.2%	55.4%
SNSW002	3.4%	1.9%	0.0%	9.6%	33.8%	0.0%	54.5%	64.6%
SNSW003	1.6%	2.0%	0.0%	1.9%	29.3%	0.4%	48.3%	61.8%
SNSW004	3.6%	0.3%	4.9%	2.6%	22.3%	0.8%	38.3%	47.1%
SNSW005	2.0%	1.2%	3.6%	2.5%	24.8%	2.5%	41.7%	51.3%
SNSW006	2.5%	13.7%	3.2%	0.0%	24.1%	4.6%	50.8%	58.6%
SNSW007	1.7%	2.9%	6.5%	0.9%	22.3%	0.0%	49.8%	61.5%
SNSW008	1.9%	1.9%	4.8%	20.6%	23.7%	1.6%	58.3%	68.0%
SNSW009	4.8%	2.8%	0.0%	8.2%	31.7%	2.3%	51.6%	61.4%
SNSW010	3.4%	3.8%	1.4%	1.8%	21.3%	2.1%	44.8%	51.6%
SNSW011	2.0%	7.7%	1.3%	5.0%	18.4%	1.7%	52.8%	64.8%
SNSW012	5.3%	1.5%	0.0%	7.5%	32.1%	1.8%	51.0%	55.4%
SNSW013	4.3%	1.6%	0.0%	14.0%	13.7%	1.1%	36.2%	45.7%
SNSW014	5.1%	6.5%	0.0%	3.6%	23.2%	0.0%	55.7%	66.4%
Average	3.2%	3.5%	1.9%	6.0%	25.1%	1.3%	48.5%	58.1%

Table B7: Overhead costs—South

Farm number	Rates	Registration & insurance	Farm insurance	Repairs & maintenance	Bank charges	Other overheads	Employed Labour	Total cash overheads	Depreciation	Imputed owner/ operator & family labour	Total overheads
	% of costs	% of costs	% of costs	% of costs	% of costs	% of costs	% of costs	% of costs	% of costs	% of costs	% of costs
SNSW001	0.5%	0.5%	1.4%	9.7%	0.0%	2.4%	11.9%	26.5%	5.6%	12.6%	44.6%
SNSW002	2.3%	0.4%	1.0%	5.2%	0.1%	1.7%	10.2%	21.0%	5.8%	8.7%	35.4%
SNSW003	0.8%	0.9%	0.5%	5.0%	0.0%	2.4%	18.5%	28.2%	2.5%	7.5%	38.2%
SNSW004	1.4%	0.2%	1.9%	9.0%	0.1%	3.3%	6.2%	22.2%	7.3%	23.5%	52.9%
SNSW005	1.4%	1.4%	1.5%	12.6%	0.1%	2.9%	7.1%	26.9%	4.5%	17.3%	48.7%
SNSW006	0.4%	1.0%	2.0%	8.0%	0.4%	3.3%	16.0%	31.1%	5.2%	5.1%	41.4%
SNSW007	0.3%	0.1%	0.2%	6.2%	0.1%	6.7%	21.8%	35.5%	3.0%	0.0%	38.5%
SNSW008	0.1%	0.1%	0.6%	9.4%	0.3%	1.9%	12.3%	24.7%	3.9%	3.3%	32.0%
SNSW009	0.8%	0.1%	0.1%	3.9%	0.1%	0.6%	11.6%	17.2%	5.8%	15.6%	38.6%
SNSW010	0.5%	0.1%	1.5%	5.6%	0.4%	3.8%	9.9%	21.7%	4.5%	22.1%	48.4%
SNSW011	1.6%	0.1%	1.2%	9.1%	0.2%	2.4%	8.1%	22.7%	2.7%	9.8%	35.2%
SNSW012	0.5%	0.0%	2.3%	5.3%	0.6%	2.4%	11.7%	22.9%	6.9%	14.8%	44.6%
SNSW013	0.5%	0.0%	2.3%	4.7%	1.6%	0.0%	0.0%	9.0%	7.1%	38.1%	54.3%
SNSW014	0.5%	0.3%	1.4%	4.0%	0.0%	0.0%	1.2%	7.4%	6.8%	19.4%	33.6%
Average	0.8%	0.4%	1.3%	7.0%	0.3%	2.4%	10.5%	22.6%	5.1%	14.1%	41.9%

Table B8: Capital structure—South

	Farm Assets				Other farm assets (per usable hectare)				
	Land value	Land value	Permanent water value	Permanent water value	Plant and equipment	Livestock	Hay and grain	Other assets	Total assets
	$/ha	$/cow	$/ha	$/cow	$/ha	$/ha	$/ha	$/ha	$/ha
Average	$14,370	$11,026	$2,650	$1,767	$2,141	$2,210	$184	$505	$22,061

	Liabilities		Equity	
	Liabilities per usable hectare	Liabilities per milking cow	Equity per usable hectare	Average equity
	$/ha	$/cow	$/ha	%
Average	$6,281	$4,350	$15,780	70%

Appendix C: Statewide

Table C1: Main Financial Indicators—Statewide

	Milk income (net)	All other income	Gross farm income	Total variable costs	Total overhead costs	Cost structure (Variable costs/Total costs)	Earnings Before Interest & Tax	Return on assets (excl. capital apprec.)	Interest & lease charges	Debt servicing ratio	Net farm income	Return on equity	Return on equity (incl. capital apprec.)
	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	%	$/ kg MS	%	$/ kg MS	% of income	$/ kg MS	%	%
Average	$6.88	$0.88	$7.76	$3.62	$2.80	56%	$1.34	4.3%	$0.59	7.7%	$0.75	3.6%	4.0%
Top 25%	$6.64	$0.98	$7.62	$3.35	$2.34	58%	$1.93	8.0%	$0.68	8.9%	$1.25	8.6%	8.9%

Table C2: Physical Information—Statewide

	Total usable area	Milking area	Water used	Number of milking cows	Milking cows per usable area	Milk sold	Milk sold	Fat	Protein
	ha	ha	mm/ha	hd	hd/ha	kg MS/cow	kg MS/ ha	%	%
Average	300	133	1,270	375	1.4	478	663	3.9%	3.3%
Top 25%	239	106	997	394	1.7	477	829	3.9%	3.3%

Table C2: Physical Information—Statewide (continued)

	Estimated grazed pasture*	Estimated conserved feed*	Home grown feed as % of ME consumed	Nitrogen application	Phosphorous application	Potassium application	Sulphur application	Labour efficiency	Labour efficiency
	t DM/ ha	t DM/ ha	% of ME	kg/ ha	kg/ ha	kg/ ha	kg/ ha	hd/ FTE	kg MS/ FTE
Average	6.4	1.3	57%	88.7	13.7	20.7	10.2	81	38,565
Top 25%	7.4	0.6	48%	62.0	12.9	7.7	6.0	94	44,345

*on milking area

Table C3: Purchased feed—Statewide

	Purchased feed per milker	Concentrate price	Silage price	Hay price	Other feed price	Average purchased feed	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	$304	$18	$148	$1,475	$292	12.1	2.5	43%
Top 25%	3.1	$244	$10	$146	$84	$225	11.7	2.0	52%

Table C4: Variable costs—Statewide

	AI and herd test	Animal health	Calf rearing	Shed power	Dairy supplies	Total herd & shed costs	Fertiliser	Irrigation	Hay and silage making
	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS
Average	$0.13	$0.19	$0.02	$0.14	$0.13	$0.60	$0.39	$0.09	$0.12
Top 25%	$0.12	$0.13	$0.00	$0.13	$0.09	$0.47	$0.21	$0.12	$0.07

	Fuel and 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	$0.18	$0.28	$0.10	$0.23	$1.55	$0.09	$3.02	$3.62
Top 25%	$0.20	$0.18	$0.11	$0.49	$1.41	$0.09	$2.88	$3.35

Table C5: Overhead costs—Statewide

	Rates	Registration & insurance	Farm insurance	Repairs & maintenance	Bank charges	Other overheads	Employed Labour	Depreciation	Imputed owner/ operator & family labour	Total overheads
	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS	$/ kg MS
Average	$0.05	$0.04	$0.07	$0.47	$0.02	$0.14	$0.76	$1.56	$0.37	$0.87	$2.80
Top 25%	$0.04	$0.00	$0.07	$0.37	$0.04	$0.11	$0.50	$1.13	$0.32	$0.88	$2.34

Table C6: Variable costs—Statewide

	AI and herd test	Animal health	Calf rearing	Shed power	Dairy supplies	Total herd & shed costs	Fertiliser	Irrigation	Hay and silage making
	% of costs	% of costs	% of costs	% of costs	% of costs	% of costs	% of costs	% of costs	% of costs
Average	2.0%	2.9%	0.2%	2.2%	2.0%	9.3%	5.9%	1.5%	1.7%
Top 25%	2.0%	2.3%	0.0%	2.2%	1.7%	8.3%	3.6%	2.1%	1.3%

	Fuel and 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	2.8%	4.2%	1.5%	3.6%	24.1%	1.3%	46.9%	56.2%
Top 25%	3.6%	3.1%	1.7%	8.1%	24.3%	1.7%	49.6%	57.9%

Table C7: Overhead costs—Statewide

	Rates	Registration & insurance	Farm insurance	Repairs & maintenance	Bank charges	Other overheads	Employed Labour	Total cash overheads	Depreciation	Imputed owner/ operator & family labour	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	0.8%	0.5%	1.2%	7.2%	0.4%	2.3%	11.5%	23.8%	5.8%	14.2%	43.8%
Top 25%	0.7%	0.1%	1.3%	6.3%	0.8%	1.9%	8.3%	19.3%	5.7%	17.1%	42.1%

Table C8: Capital structure—Statewide

	Farm Assets				Other farm assets (per usable hectare)				
	Land value	Land value	Permanent water value	Permanent water value	Plant and equipment	Livestock	Hay and grain	Other assets	Total assets
	$/ha	$/cow	$/ha	$/cow	$/ha	$/ha	$/ha	$/ha	$/ha
Average	$13,346	$10,320	$2,408	$1,693	$2,274	$2,097	$204	$421	$20,751
Top 25%	$8,521	$5,521	$3,984	$2,479	$2,553	$2,523	$286	$239	$18,106

	Liabilities		Equity	
	Liabilities per usable hectare	Liabilities per milking cow	Equity per usable hectare	Average equity
	$/ha	$/cow	$/ha	%
Average	$4,807	$3,373	$15,944	76%
Top 25%	$6,869	$4,424	$11,237	63%

Appendix D: Glossary of terms

All other income
Income to the farm from all sources except milk. Includes livestock trading profit, feed inventory change, dividends, interest payments received, rents from cottages, 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 i.e. kilograms of milk solids.

Cost structure
Variable costs as a percentage of total costs, where total costs equals variable costs plus overhead costs.

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

Depreciation
Decrease is 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 & tax (EBIT)
Gross income minus total variable costs, 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 labour 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 usable 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 labour cost
An allocated allowance for cost of owner/operator, family and sharefarmer time in the business, taken as the greater of $400 per cow less employed labour or $25 per hour.

Liability
Money owed to someone else, e.g. 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.

Milking area
Total usable area minus out blocks or run-off areas.

Net farm income
Previously reported as business profit

Earnings before interest & tax minus interest and lease costs. 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.

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

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

Labour resource
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 & tax divided by the value of total assets under management.

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 e.g. 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 usable area) x 100.

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

List of abbreviations

AI	Artificial insemination.
BPR	Break-even price required.
CH4	Methane gas.
CO2	Carbon dioxide gas.
CO2-e	Carbon dioxide equivalent.
CoP	Cost of production.
DFMP	Dairy Farm Monitor Project.
DM	Dry matter of feed stuffs.
DPI	Department of Primary Industries Victoria.
EBIT	Earnings before interest and tax.
FTE	Full time equivalent.
GWP	Global Warming Potential.
ha	Hectares.
hd	Head of cattle.
HRWS	High Reliability Water Shares.
kg	Kilograms.
LRWS	Low Reliability Water Shares.
ME	Metabolisable energy (MJ/kg).
MJ	Megajoules of energy.
mm	Millimetres. 1 mm is equivalent to 4 points or 1/25th of an inch of rainfall.
MS	Milk solids (proteins and fats).
N2O	Nitrous oxide gas.
Q1	First quartile, i.e. the value of which one quarter, or 25%, of data in that range is *less* than.
Q3	Third quartile, i.e. the value of which one quarter, or 25%, of data in that range is *greater* than.
RoA	Return on assets.
RoE	Return on equity.
t	Tonne = 1,000 k.

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