DairyNZ

# Economic Survey 2023-24


of economic analysis

# Foreword

Welcome to the 60th edition of the DairyNZ Economic Survey.

Over 60 years of effort and dedication to accuracy has produced a time series of data that is insightful, and highlights that the sector has clearly evolved. There are a few, observations that stand out to me.

If you think that last decade has been tough – you're right. We haven't seen such low total returns on assets coupled with high volatility since the early 1980's. This reflects stagnation in land values (so no capital gain) coupled with milk price volatility and cost inflation.

But the recent years show signs that we are now achieving higher levels of operating profits. These cash returns are what we need to make investment in farms attractive and ultimately drive farm values up based on profitability, rather than speculation.

The analysis of data over the last 60 years shows large increases in the amount spent on supplements over time. This shows the value of long-term data – blips associated with one-off droughts or milk price spikes are put into perspective and trends reflecting changing practices and situations on farms can be identified.

My final observation relates to variability. There is large variability in profit between farms, much more than between farm systems or even regions. Whenever we look at this data, management skill emerges as the key driver. This points to the opportunity for individual farmers to take these insights and use DairyBase to benchmark their performance and identify areas to focus on.

I want to acknowledge the key contributors to this important industry publication. The Economic Survey is based on data that farmers share with the sector through DairyBase and targeted data collection – this willingness to share information is one of the strengths of the dairy sector. The process of getting accurate data into the system depends on the dedicated work of DairyNZ's field teams and the effort of accountants working with their farmer clients. Finally, the DairyNZ DairyBase and Economics teams take the data and turn it into the useful information contained in this report.

Thanks to all the people who have worked since 1963 to produce this legacy. I would like to add a challenge to those who come next, to maintain these standards and add new insights as the sector evolves.

Ngā mihi nui

Bruce Thorrold

Chief Science Advisor

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# Introduction

The 2023-24 DairyNZ Economic Survey is the nineteenth annual survey of New Zealand dairy farmers using dairy farm business data from DairyBase®.

The Economic Survey of Factory Supply Dairy Farmers was first published in 1963-64 by the New Zealand Dairy Board. In 1988-89 the survey was undertaken by Livestock Improvement Corporation (LIC) and then Dexcel in 1999-2000, when the name was changed to Economic Survey of New Zealand Dairy Farmers. From 2005-06 DairyNZ published the survey under the new title DairyNZ Economic Survey.

DairyNZ is an industry good organisation, representing New Zealand's dairy farmers. Funded by a levy on milksolids and together with government investment, our purpose is to progress a positive future for New Zealand dairy farming and help dairy farmers successfully navigate through change. We aim to do this by leading innovation in world-class dairy farming and by working always in the best interests of New Zealand's dairy farmers. DairyBase® is owned and managed by DairyNZ on behalf of the dairy farmers of New Zealand.

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This publication is a reference compilation of dairy farmers' key financial data. DairyNZ has endeavoured to ensure that the information in this publication is accurate but does not accept liability for any error or omission. No persons involved in data collection, processing, analysis or editing will be held accountable. Data in this document can be used for other purposes provided it is correctly referenced. The correct reference for all data contained in this document is: DairyNZ Economic Survey 2023-24.

The DairyNZ Economic Survey is available as a PDF version on the DairyNZ website and as an interactive online publication allowing direct download of summary data as CSV files.

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# Executive Summary

Compared to the previous season (2022-23), the milksolids payout received by owner-operator farmers in the DairyNZ Economic Survey sample in 2023-24 decreased by $0.35 to $8.33 per kilogram of milksolids (kg MS). Milksolids sold per cow increased by 5 kg MS to 423 kg MS, while the stocking rate remained the same at 2.8 cows/ha. As a result, milksolids sold per hectare increased slightly in the 2023-24 season, from 1,174 kg MS/ha in 2022-23 to 1,180 kg MS/ha. Operating expenses per kilogram of milksolids decreased by $0.16 to $6.51. The lower milksolids payout outweighed the reduction in operating expenses in 2023-24, resulting in an operating profit per hectare of $2,845, which was $172 lower than the previous season. The operating return on dairy assets also decreased from 5.4 percent (2022-23) to 5.3 percent (2023-24), and the total return on assets marginally decreased by 0.3 percentage points to 3.6 percent. The combination of lower returns from dairy operations and higher interest costs resulted in a lower total return on equity of 0.9 percent in 2023-24, compared to 3.5 percent in the previous season.

## Owner-operator Summary

In the 2023-24 season owner-operators faced a decrease in the milksolids payout, which, together with persistently high farm expenses, led to a marginal decline in operating profit compared to the previous season.

The milksolids payout received by owner-operators in 2023-24 was $0.35 (4 percent) lower than the price received in 2022-23. Although milksolids sold per cow increased by 1 percent, milksolids sold per hectare increased marginally by 0.5 percent in the2023-24 season, and the stocking rate remained unchanged, primarily due to a similar increase in both herd size (from 407 to 411 cows) and effective hectares (from 145 to 148). Gross farm revenue per kilogram of milksolids in 2023-24 ($8.92/kg MS) was $0.32 lower than in the previous season, a consequence of lower income from the sale of milksolids. Farm working expenses and operating expenses in 2023-24 season ($5.45/kg MS and $6.51/kg MS, respectively) marginally decreased, driven mainly by slightly lower feed, labour, and fertiliser expenses (Table 12.4). The operating profit of $2,845 per hectare in 2023-24 was down 5.7 percent on the previous season, a consequence of lower gross farm revenue (-3 percent) and relatively consistent operating expenses.

The cash surplus in 2023-24 ($4,032) was well below the 10-year average of $10,654. Cash surplus is the cash remaining from the farming operation during the year after rent, interest, tax, capital transactions, debt repayments, drawings, and discretionary expenses have been deducted. Factors that contributed to the lower cash surplus in 2023-24 were a decrease in net off-farm income ($15,647), significant reductions in net capital transactions (-$26,905), and higher net debt ($135,675), compared to the previous year (Table 12.5).

In 2023-24, the total return on assets (0.3 percent) and the total return on equity (-2.6 percent) were significantly lower than their respective 10-year averages (3.3 percent and 2.5 percent, respectively). In 2023-24, total liabilities increased by $24,206 to $4,051,746. Closing term liabilities were $22.23/kg MS, significantly lower than the peak of $25.31/kg MS in 2017-18. On average, total equity growth was -$27,714 due to a smaller increase in equity from profit ($37,717 in 2023-24 compared to $129,388 in 2022-23) and negative growth in equity from capital (revaluation of assets).

Owner-operator Summary Table

| Variable | 2022-23 | 2023-24 |
|---|---|---|
| PHYSICAL CHARACTERISTICS: | | |
| Effective hectares | 145 | 148 |
| Peak cows milked | 407 | 411 |
| Stocking rate (cows/ha) | 2.8 | 2.8 |
| Kg milksolids sold | 169,990 | 174,235 |
| Milksolids sold per hectare | 1,174 | 1,180 |
| Milksolids sold per cow | 418 | 423 |
| PRICES: | | |
| PAYOUT RECEIVED ($/kg MS sold) | 8.68 | 8.33 |
| CASHFLOW: | | |
| Cash operating surplus | 593,495 | 612,103 |
| Discretionary cash | 302,861 | 253,926 |
| Cash available for living and growth | 301,982 | 229,715 |
| Cash surplus/deficit | 44,541 | 4,032 |
| PROFITABILITY PER HA: | | |
| Dairy gross farm revenue per ha | 10,851 | 10,526 |
| Dairy operating expenses per ha | 7,834 | 7,680 |
| Dairy operating profit per ha | 3,017 | 2,845 |
| Business profit before tax per all effective hectares | 1,834 | 1,271 |
| PROFITABILITY PER KG MILKSOLIDS: | | |
| Dairy gross farm revenue per kg milksolids | 9.24 | 8.92 |
| Farm working expenses per kg milksolids | 5.75 | 5.45 |
| Dairy operating expenses per kg milksolids | 6.67 | 6.51 |
| Dairy operating profit per kg milksolids | 2.57 | 2.41 |
| RETURNS: | | |
| Operating return on dairy assets % | 5.4 | 5.3 |
| Total return on assets % | 3.9 | 3.6 |
| Total return on equity % | 3.5 | 0.9 |
| WEALTH CREATION: | | |
| Growth in equity | 95,121 | -27,714 |
| Growth in equity from profit | 129,388 | 37,717 |
| Growth in equity from capital | -34,231 | -65,125 |
| Growth in equity % | 1.9 | -0.6 |
| RISK: | | |
| Closing debt to asset % | 44.4 | 46.2 |
| Closing term liabilities per kg MS | 22.22 | 22.30 |

## 50:50 Sharemilkers Summary

In this iteration of the DairyNZ Economic Survey, the physical characteristics of 50:50 sharemilker (herd-owning sharemilker) farms remained largely unchanged, with negligible changes in terms of hectares, peak cows milked, and stocking rate.

The combination of stagnant gross farm revenue and persistent farm working expenses contributed to the tightened economic performance of 50:50 sharemilker farms relative to the previous season. However, despite the weaker performance, on average, 50:50 sharemilkers maintained positive profitability and returns. Additionally, the proportion of 50:50 sharemilkers experiencing higher indebtedness (39.4 percent debt-to-assets ratio) in 2023-24 increased from 36.6 percent in 2022-23.

Dairy operating profit per hectare for 50:50 sharemilkers has been declining since 2020-21, and it decreased by a further 13 percent to $961 per hectare in 2023-24 compared to the previous season. Lower milk payouts received (-$0.18/kg MS) were partially offset by an increase in milksolids per cow (+10/kg MS). Gross farm revenue of $4.42/kg MS was $0.23 lower in 2023-24. Farm working expenses of $2.95/kg MS were $0.10/kg MS lower than the previous season. Operating expenses decreased by $0.09 in 2023-24 to $3.67/kg MS.

Cash surplus in 2023-24 ($29,048) was higher than in 2022-23 ($5,853) but lower than in 2021-22 ($38,556). However, the cash surplus in 2023-24 was still above the 10-year average of $2,625. A key factor that contributed to the better cash surplus in 2023-24 was the reduction in net debt to -$18,092, down from $48,487 in the previous season and well below the 10-year average ($12,682). Tax expenses in 2023-24 ($50,204) were 37 percent higher than the 10-year average ($36,578), and drawings remained largely unchanged at approximately $90,000, exceeding the 10-year average of $72,400.

## 50:50 Sharemilkers Summary Table

| Variable | 2022-23 | 2023-24 |
|---|---|---|
| PHYSICAL CHARACTERISTICS | | |
| Effective hectares | 147 | 145 |
| Peak cows milked | 437 | 434 |
| Stocking rate (cows/ha) | 3.0 | 3.0 |
| Kg milksolids sold | 181,551 | 185,071 |
| Milksolids sold per hectare | 1,239 | 1,275 |
| Milksolids sold per cow | 416 | 426 |
| PRICES: | | |
| PAYOUT RECEIVED ($/kg MS sold) | 4.14 | 3.96 |
| CASHFLOW: | | |
| Cash operating surplus | 250,934 | 204,120 |
| Discretionary cash | 168,587 | 128,545 |
| Cash available for living and growth | 181,016 | 130,568 |
| Cash surplus/deficit | 5,853 | 29,048 |
| PROFITABILITY PER HA: | | |
| Dairy gross farm revenue per ha | 5,763 | 5,637 |
| Dairy operating expenses per ha | 4,659 | 4,676 |
| Dairy operating profit per ha | 1,104 | 961 |
| Business profit before tax per all effective hectares | 1,480 | 1,272 |
| PROFITABILITY PER KG MILKSOLIDS: | | |
| Dairy gross farm revenue per kg milksolids | 4.65 | 4.42 |
| Farm working expenses per kg milksolids | 3.05 | 2.95 |
| Dairy operating expenses per kg milksolids | 3.76 | 3.67 |
| Dairy operating profit per kg milksolids | 0.89 | 0.75 |
| RETURNS: | | |
| Operating return on dairy assets % | 15.9 | 14.7 |
| Total return on assets % | 6.8 | 8.3 |
| Total return on equity % | 9.4 | 10.5 |
| WEALTH CREATION: | | |
| Growth in equity | 62,197 | 72,982 |
| Growth in equity from profit | 93,657 | 78,827 |
| Growth in equity from capital | -31,445 | -5,488 |
| Growth in equity % | 7.4 | 9.8 |
| RISK: | | |
| Closing debt to asset % | 36.6 | 39.4 |
| Closing term liabilities per kg MS | 2.29 | 2.41 |

# Summary of the 2023-24 Season

The 2023–24 production season brought challenges to many regions, with summer conditions proving particularly tough. Pasture growth was constrained from late December in Northland, Waikato, Taranaki, Bay of Plenty, and the Lower North Island. In Northland and the Lower North Island, pasture growth remained below average through to mid-autumn. By comparison, Otago–Southland and the West Coast experienced favourable summer conditions, which helped reduce feed pressure. Canterbury also faced a dry summer, which required greater use of irrigation through summer and into autumn.

On farm, these conditions led to an average increase in supplementary feed use of around 400 kg DM/ha, along with a reduction in pasture eaten of approximately 170 kg DM/ha. Feed deficits were particularly evident on North Island farms from January to March, driving increased reliance on supplements. As a result, average milksolids production per herd fell by 1.2% in Taranaki and 1.0% in the Lower North Island. Waikato recorded a smaller decline of 0.5%, while Northland, which was more severely affected by dry conditions, saw a 3.2% drop. In contrast, Canterbury and Otago–Southland were able to make the most of the season. Strong summer pasture growth in Otago–Southland and effective use of irrigation in Canterbury supported a 3.6% increase in average milksolids per herd. These figures are reported in Table 3.2 of the Dairy Statistics 2023–24 publication.

Tightening farm finances were a key feature of the 2023–24 season. Owner-operators received an average payout of $8.33/kg MS, down from $8.68/kg MS in 2022–23, equating to a revenue reduction of approximately $0.35/kg MS. Sharemilkers received an average payout of $3.96/kg MS, compared to $4.14/kg MS the previous season, a drop of $0.18/kg MS. These lower payouts were driven by significant declines in Global Dairy Trade prices, with Fonterra forecasting a milk price midpoint of $6.75/kg MS in August 2023. Farms supplying Westland Milk Products in the South Island did not receive their full retrospective payments from the 2022–23 season due to lower-than-expected revenue. As a result, average payouts in the West Coast – Top of the South region were around $1.00/kg MS lower than those received by North Island farms. This retrospective adjustment also affected some farms in Canterbury, and Otago–Southland.

An expectation of lower farmgate milk prices and high interest rates influenced on-farm spending decisions in 2023–24, with some farms strategically adjusting farm inputs to lower expenses. Easing feed and fertiliser prices from their 2022–23 peaks helped reduce overall farm working expenses, with owner-operators seeing a reduction of around $0.30/kg MS and sharemilkers $0.10/kg MS. However, rising interest costs created significant pressure, particularly for owner-operators, with average interest payments reaching $1.69/kg MS, the highest recorded in sixty years. For the first time since 2018–19, interest costs exceeded the total spent on net feed made, purchased, and cropped, highlighting the increasing share of non-operational costs. With the Official Cash Rate holding steady at 5.5%, effective interest rates averaged 7.6% on term loans and 8.5% on bank facilities. These high financing costs contributed to the lowest discretionary cash levels for owner-operators since the 2018–19 season. Sharemilkers were less exposed to interest rate pressure; however, the reduction in revenue still exceeded the reduction in costs, resulting in tighter margins.

Regional differences in feed availability and revenue led to significant disparities in profitability. In Northland, a high reliance on feed and fertiliser inputs, combined with unplanned feed expenditure, contributed to a decline in the median owner-operator operating profit margin to 18.6%. This was well below the region's 10-year average of 25.8% and made it challenging for many Northland dairy farms to cover non-operational expenses such as tax, interest, and drawings. In contrast, Otago–Southland owner-operators benefited from favourable pasture growth, which reduced the need for purchased feed and fertiliser. Expenses for both were approximately $0.20/kg MS lower compared to 2021–22 and 2022–23. As a result, owner-operators in the region achieved a median operating margin of 32.2%, the highest among all regions.

High interest costs, the need for liquidity, and ongoing principal repayments shaped how farms managed cash in 2023–24. Many owner-operators freed up capital by selling assets. On average, land and buildings were reduced by $80,000, dairy investments by $31,000, plant and machinery by $15,000, and current assets by $37,000. Livestock values also declined by $18,000, partly reflecting herd culling in regions that faced prolonged feed pressure. These asset sales supported both operational spending and debt reduction. According to the Reserve Bank, the number of farms on interest-only payments was greater in 2023-24, relative to the previous season. Despite more farmers opting out of repaying principal on loans, long term liabilities decreased by $136,000, from $4.02 million to $3.89 million. Taken together, these observations suggest that farmers with sufficient cash were still prioritising principal repayments, looking to reduce the future burden of interest costs.

While some owner-operators reduced assets to generate cash, sharemilkers took a different path. Many were in a growth phase, reflecting transitions from other business types such as variable order sharemilking, contract milking, or equity partnerships into full sharemilking arrangements. On average, sharemilkers increased livestock assets by $60,000 and plant and machinery by $5,800, reflecting herd purchases made by new entrants. As a result, their average term liabilities rose from $427,000 to $446,000 over the season, with debt used to support expansion into sharemilking roles.

These decisions were reflected in equity movements. Average owner-operator equity declined by approximately $27,000, driven by a $65,000 fall in capital assets, partially offset by $38,000 in equity gains from farm profits. As the decline in assets outpaced the reduction in liabilities, the average owner-operator debt-to-asset ratio rose by 1.8 percentage points, reversing several years of gradual reductions. Sharemilkers saw more favourable movement. On average, equity increased by $73,000, primarily driven by $78,900 in equity from farm profits. This was partially offset by a slight capital reduction of $5,500. Their average debt-to-asset ratio increased by 2.8 percentage points, consistent with the additional debt incurred by those entering sharemilking.

These financial decisions resulted in a cash surplus of $0.02/kg MS for owner-operators. Around one-third of owner-operators prioritised the repayment of significant principal on their loans, funded partly by asset sales and partly using discretionary cash. This comes with a consequence of having less cash available to support the beginning of the 2024–25 season. Sharemilkers, conversely, generated a cash surplus of $0.16/kg MS. Despite having less discretionary cash compared to 2022–23, some farmers took on debt to transition into sharemilking, while others limited capital spending. This resulted in a higher overall cash surplus of $0.16/kg MS, compared to $0.03/kg MS in the previous season.

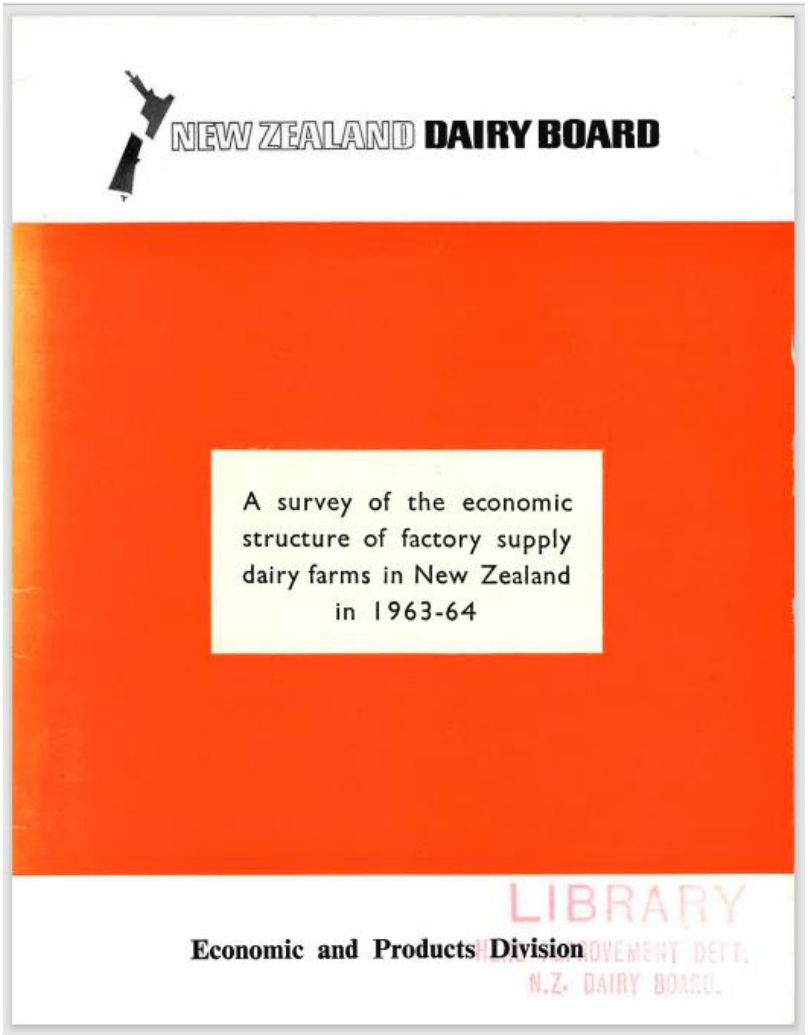
Overall, New Zealand dairy farms navigated a challenging financial season in 2023–24. Despite high interest costs and lingering inflation, farms found ways to adapt. In some regions, favourable growing conditions helped ease pressure. With interest rates beginning to fall, feed prices stabilising, and milk prices expected to rise, many dairy farmers are entering the 2024–25 season with a more positive outlook.

# 1. Celebrating 60 years of the Economic Survey

The 2023-24 season marked the 60th anniversary of the Economic Survey and its predecessors. In this chapter, we describe the evolution of the financial position and performance of the average New Zealand dairy farm over the past 60 years. By consolidating historical data, we highlight key trends and insights, such as:

- Intensification and expansion of the sector
- A declining trend in total return on assets (as a percentage)
- Fluctuations in dairy farm Debt to Asset Ratios
- Increased real spending on feed by dairy farmers

Cover of the first publication of economic survey



## 1.1. Background

Each edition of the Economic Survey outlines the financial performance of the average New Zealand dairy farm for a given season. By combining the results across all 60 reports, we can examine how the average dairy farm has evolved over time.

This chapter describes both the evolution of the survey itself and the New Zealand dairy sector over six decades. It outlines how comparisons were made, explores the key changes and their drivers, and concludes by summarising the sector's development and enduring themes.

The DairyNZ Economic Survey traces its origins to the Economic Survey of Factory Supply Dairy Farmers, first published for the 1963–64 season by the New Zealand Dairy Board. From the 1988–89 season, LIC prepared the report until Dexcel (DairyNZ's predecessor) assumed responsibility for the 1999–00 edition, renaming it the Economic Survey of New Zealand Dairy Farmers. In 2005–06, Dexcel became DairyNZ, and the publication adopted its current name, the DairyNZ Economic Survey.

Over the years, the publication has evolved with changes in financial metrics, sample sizes, and analytical approaches. Despite these changes, the survey has consistently provided a robust overview of national average profitability and returns from dairying in New Zealand. It continues to be a widely used resource among farmers, researchers, and policymakers.

**1960-1980**

This period was marked by major structural changes. By 1969, 229 dairy factories were in operation, and in 1973, the world's largest dairy factory opened in Hāwera (DairyNZ 2014). The New Zealand Dairy Board was responsible for exporting all the country's dairy products, playing a central role in sector development (Akoorie & Scott-Kennel 1999).

The first rotary shed was invented in Taranaki in 1969

Until 1970, the United Kingdom was New Zealand's primary export destination, taking over 90% of butter exports and 75% of cheese (Nixon & Yeabsley 2010). The United Kingdoms' entry into the European Economic Community in 1973 displaced New Zealand's exports and prompted the industry to diversify both its products and markets. In response, Supplementary Minimum Price Schemes were introduced to protect farm incomes (Griffith & Grundy 1988).

Milk collection in the 1960s

Farm practices modernised rapidly. Bulk milk tankers replaced the use of cream cans (DairyNZ 2014), and a shift from Jersey to Crossbreed cattle reflected a preference for milk volume over fat content (LIC 2004).

Technological innovations such as rotary milking platforms dramatically improved efficiency, allowing one farmer to manage larger herds (Stringleman & Scrimgeour 2008). Other developments—electric fencing, automated plant cleaning systems, and improved feed systems (e.g. silage pits and maize)—further boosted productivity (DairyNZ 2014). The adoption of nitrogen fertilisers became more widespread, and health treatments improved, particularly for milk fever and mastitis (DairyNZ 2014). LIC also launched its Somatic Cell Count service during this period (LIC 2025).

**1980-2000**

The 1980s and 1990s brought profound changes. The removal of agricultural subsidies in 1984 forced farmers into a fully market-driven environment (Gouin 2006). Inflation peaked at 19% in 1987 (New Zealand Herald 2017), compounding financial pressures.

Despite challenges, technological and structural developments accelerated. Mechanisation increased, embryo technology advanced, and indoor calf rearing gained traction. New systems such as the National Dairy Herd Database and MINDA were established (DairyNZ 2014; LIC 2025).

### Haymaking

Environmental concerns also rose. The Resource Management Act (RMA), passed in 1991, laid the groundwork for future sustainability. Meanwhile, the 1990s saw a period of extensive dairy expansion in the South Island, with its share of the national herd growing from 7% to 20% (LIC 1999).

Research institutions such as the Dairy Research Corporation and AgResearch emerged in the early 1990s (Galbreath 2008). Industry consolidation accelerated: 35 dairy companies operated in 1982; by 1998, only eight remained (DairyNZ 2014). The Breeding Worth (BW) index was introduced in 1996 to replace the 1974 Breeding Index (BI) (LIC 2025), and the payout system shifted from a fat-based to a milksolids-based model (LIC 1999).

## 2000-2023

The 2000s marked a further transformational period for New Zealand's dairy industry, driven by deregulation, consolidation, and structural reform. A key milestone was the Dairy Industry Restructuring Act (DIRA) of 2001, which enabled the merger of the New Zealand Dairy Board with the country's two largest dairy processors—New Zealand Dairy Group and Kiwi Co-operative Dairies—to form Fonterra. This consolidation aimed to enhance the global competitiveness of New Zealand's dairy sector (MPI 2024).

Industry support organisations also evolved in the early 2000s. Dexcel and Dairy Insight were established to provide research, extension services, and advocacy for dairy farmers. These organisations later merged in 2007 to form DairyNZ, a single industry-good body committed to improving farmer outcomes and sustainability.

During this period, the industry sharpened its focus on both profitability and environmental stewardship. Several initiatives were introduced, including the milksolids levy in 2003 (NZL 2003), the launch of DairyBase® in 2004 to support farm benchmarking and business improvement, and the signing of the Dairying and Clean Streams Accord, which marked a first step toward voluntary environmental commitments (MAF 2011).

Structural changes on-farm mirrored sector-wide trends. By the late 2000s, the average dairy farm had grown significantly compared to the 1990s—from 164 cows on 70 hectares (2.3 cows/ha) to 376 cows on 134 hectares (2.8 cows/ha) (DairyNZ & LIC 2024). This intensification was underpinned by technological advances and market expansion.

Export opportunities broadened, particularly after the Free Trade Agreement with China in 2008, which triggered a sharp rise in dairy exports to China and Southeast Asia (NZG 2008). The sector continued to consolidate, with three main dairy co-operatives emerging by 2007: Fonterra, Westland, and Tatua (Nilsson & Ohlsson 2007). Fonterra further expanded by constructing the world's largest milk drier in Edendale. The industry also celebrated key milestones, such as Westland Milk Products' 75th anniversary in 2012 and Tatua's centenary in 2014. However, this rapid growth also brought environmental and regulatory challenges.

Farmers have invested in more technology, such as cow wearables

From the 2010s onwards, land-use regulations, freshwater protection rules, and greenhouse gas (GHG) policies became more prominent. The introduction of the National Environmental Standards for Freshwater (2020) and debates over tools like split-gas emissions approaches, emissions intensity metrics, and the now-discontinued He Waka Eke Noa (HWEN) programme reflected the evolving and uncertain regulatory landscape. Water use regulations and the phasing out of border dyke irrigation further required capital investment and adaptation, particularly for farms with historic water rights.

The COVID-19 pandemic added further strain, particularly in terms of labour shortages and the industry's reliance on migrant workers. Nonetheless, New Zealand's dairy sector maintained its global leadership position, marking 200 years of dairying alongside record export revenues.

## 1.2. Our Approach

The Economic Survey is published annually to provide season-by-season comparisons of dairy farm performance. To reflect on 60 years of change, this chapter identifies how the physical and financial characteristics of the average New Zealand dairy farm have evolved over time. Meaningful comparisons across decades require adjustments for inflation and differences in economic conditions. This section outlines the methods used to group and transform the data prior to the presentation of results.

### 1.2.1. Physical decade analysis

To explore changes in the physical and financial characteristics of dairy farms over time, the data was grouped into seven decades spanning 1963 to 2024. The average (mean) was calculated for each metric within each decade. Note that the first and last decades contain fewer seasons of data than the middle decades due to the study's start and end points.

### 1.2.2. Inflation adjustment

All financial values reported in the Economic Survey are nominal and therefore reflect the value of money at the time of each survey. While ratios and percentages are naturally comparable across time, absolute financial figures must be adjusted to remove the distorting effect of inflation. For this purpose, the Consumer Price Index (CPI) from Stats NZ (2025) was used to deflate nominal values into real terms.

It's important to note that CPI reflects general inflation, whereas dairy-specific inflation—more accurately represented by the Producer Price Index (PPI) for dairy—has typically been higher. Unfortunately, the dairy PPI does not extend back to the beginning of the study period and therefore could not be applied across all decades. This means that not all inflation effects may have been fully removed from long-term financial comparisons.

### 1.2.3. Indices

To compare changes in physical and financial metrics over time, indices were developed by setting the earliest observed value of each variable as a baseline (index value = 1) and then expressing subsequent values as proportions of this baseline. This approach highlights relative growth or decline over time, regardless of scale.

### 1.2.4. Proportions

For simplicity and consistency in reporting expenditure trends, several expense categories were combined, for instance:

- Animal Health and Breeding and Breeding and Herd Testing were combined into Animal Health and Breeding
- Farm Dairy Expenses, Electricity, Freight, Weed and Pest, and Other became Other.

The proportion of each aggregated category was then calculated relative to nominal Total Dairy Cash Expenses for each season. This allows us to track how the relative magnitude of different cost categories has shifted over time.

## 1.3. Results and Discussion

### 1.3.1. Physical Characteristics

Over the past six decades, the physical scale and intensity of the average dairy farm in New Zealand have undergone a major transformation. The sector evolved from small, simple operations into larger, more technologically advanced businesses. In the 1960s, the average dairy farm milked 92 cows across 59 hectares (1.6 cows per hectare). By the 1990s, this had increased to 190 cows on 79 hectares (2.4 cows/ha), and by the 2010s, farms averaged 410 cows on 144 hectares (2.9 cows/ha). These trends are summarised in Table 1.1.

A key contributor to this growth was the introduction and widespread adoption of rotary milking platforms, which helped enable the efficient milking of larger herds. Advances in genetics, pasture management, and feed systems further boosted production per cow, leading to increased total milk production, even when cow numbers plateaued from 2010 onwards. This highlights the sector's ability to extract more value from the same physical footprint.

Table 1.1: Physical Characteristics of the Average New Zealand Dairy Farm by Decade

| Metric | 1960s | 1970s | 1980s | 1990s | 2000s | 2010s | 2020s |
|---|---|---|---|---|---|---|---|
| Maximum Cows Milked | 92 | 117 | 136 | 190 | 309 | 410 | 411 |
| Effective Area (Ha) | 59 | 69 | 65 | 79 | 114 | 144 | 143 |
| Production (kg milksolids) | 21,086 | 27,870 | 36,169 | 55,201 | 103,530 | 155,399 | 171,514 |
| Milksolids per cow | 237 | 238 | 266 | 290 | 335 | 379 | 417 |

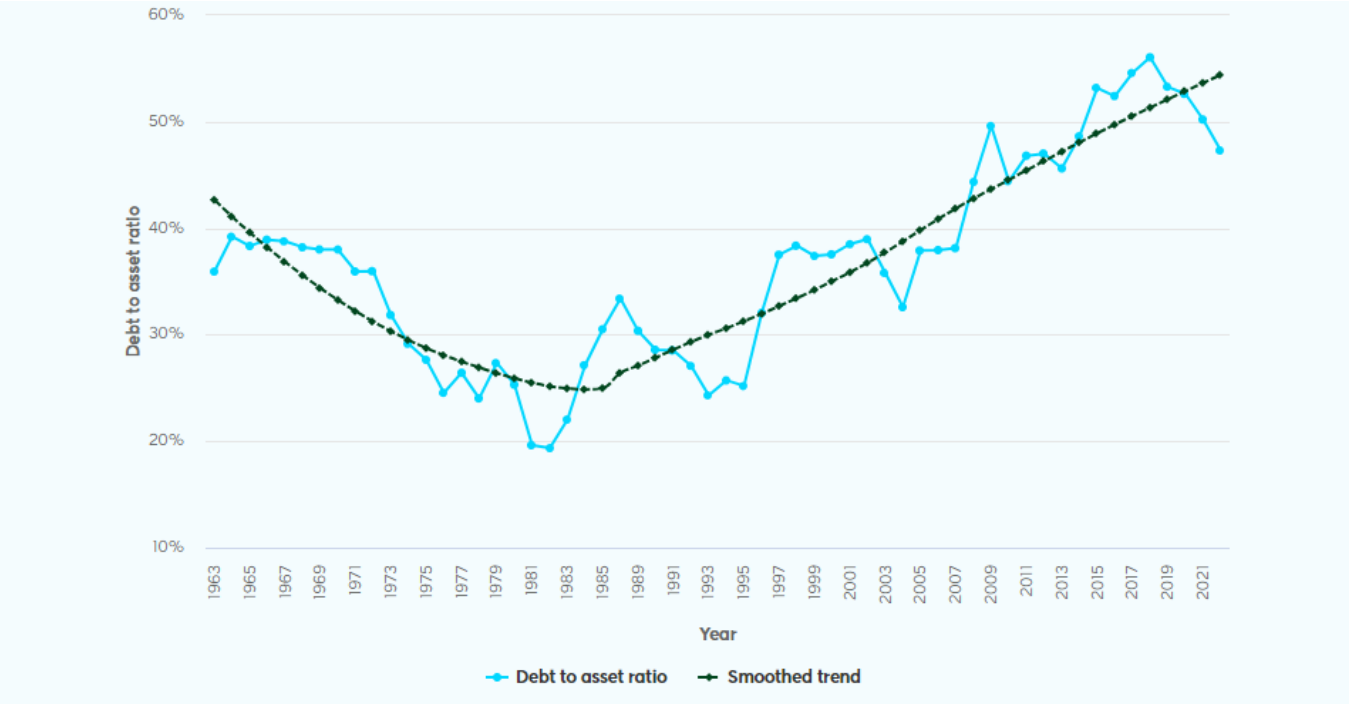
### 1.3.2. Financial Position

The economic performance of New Zealand dairy farms has also evolved significantly, influenced by changes in both income potential and capital investment. This section focuses on three key indicators of financial position: Total Return on assets, Debt to asset ratio, and Real growth in equity.

Graph 1.1: Average total return on assets for the last 43 seasons

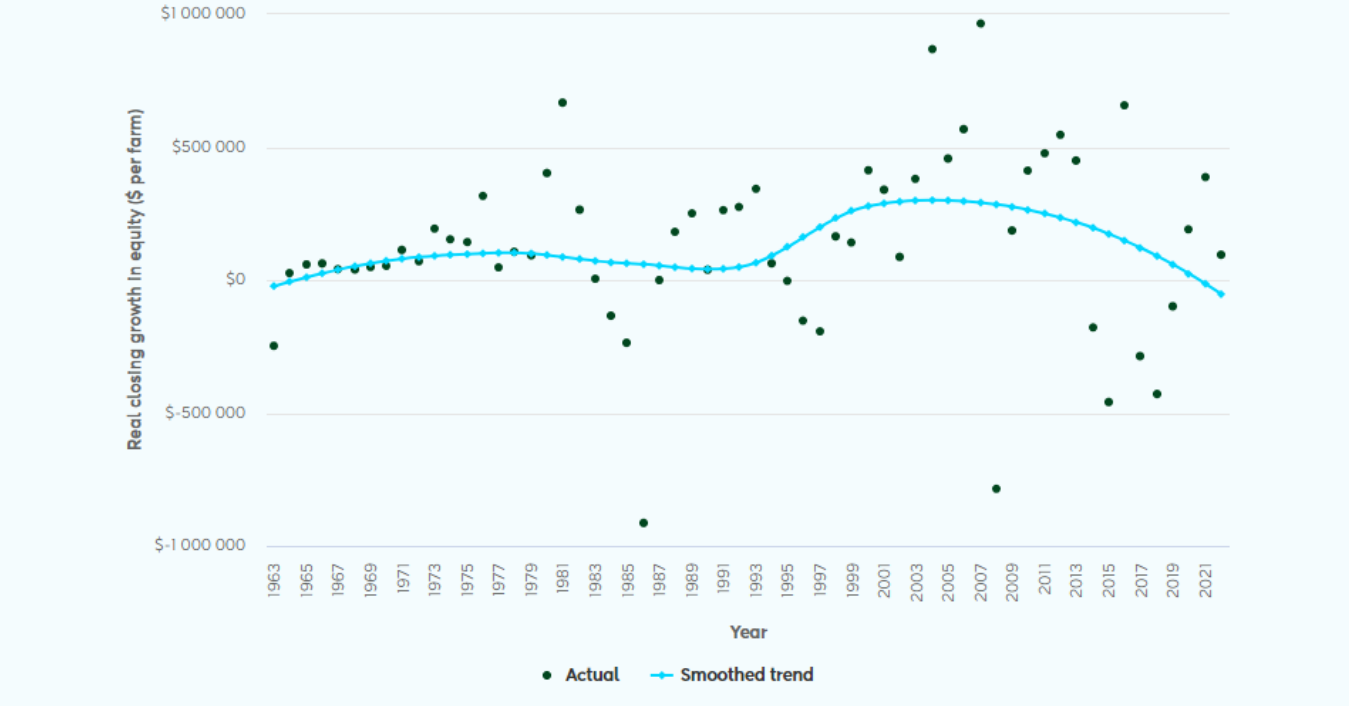

Although data limitations prevent estimation of this metric for the full 60-year period, 43 seasons of data reveal a declining trend in Total Return on assets (ROA). Despite growth in real and nominal returns, this growth has not kept pace with rising asset values—especially land and buildings—leading to a reduction in the average return on investment. The declining trend in return on assets highlights the sector's transition to a more capital-heavy model, where rising land and infrastructure values have outpaced income growth—reflecting a shift toward a more mature and stable industry with lower marginal returns on investment.

Graph 1.2: 60 Years of average dairy debt to asset ratio



Over the study period, the Debt to asset ratio ranged from around 20% in the early 1980s to a peak of 56% in 2018. This metric is highly responsive to shifts in land values and borrowing activity. Its peak coincided with the expansion of cow numbers and farm area—suggesting that much of the sector's physical growth was financed through debt. Since then, the ratio has declined, reflecting debt repayments supported by favourable margins and relatively flat land prices.

Graph 1.3: 60 Years of average dairy real closing growth in equity

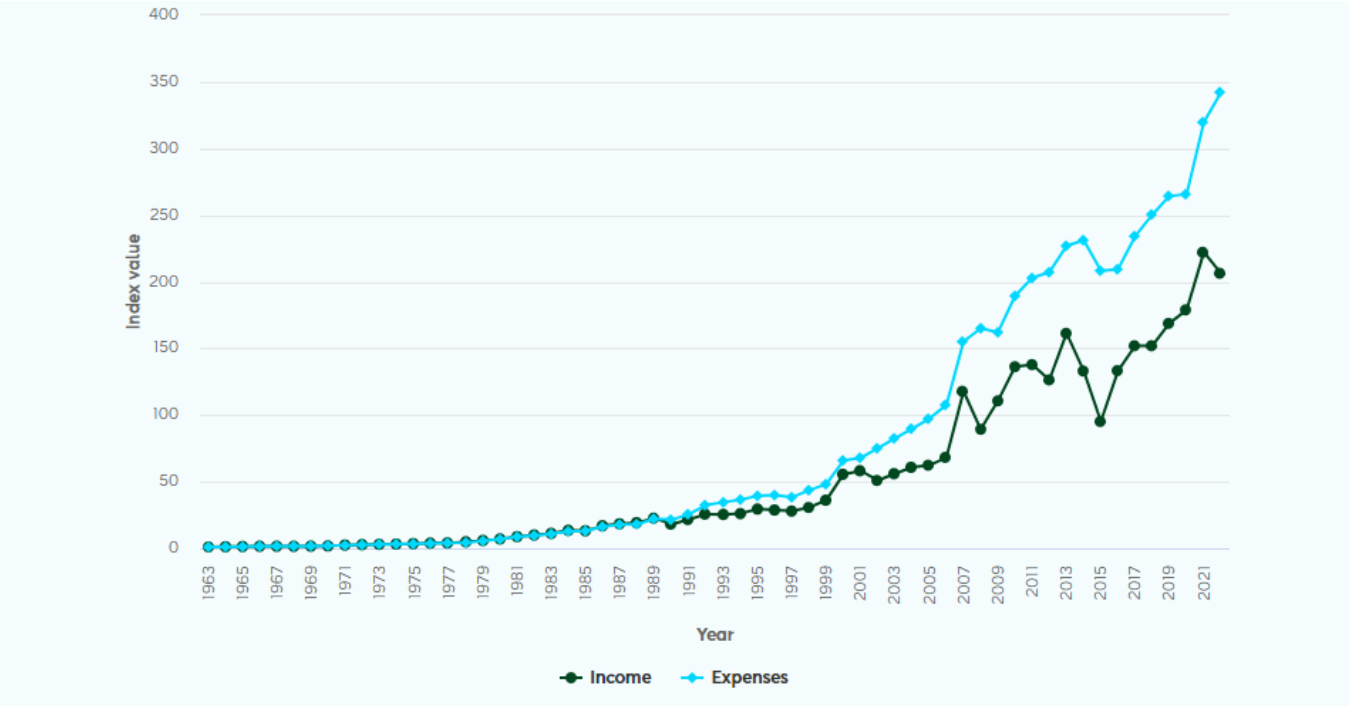



Equity growth (calculated in real terms) has shown periods of strong gains—most notably in the late 1990s and early 2000s—largely driven by capital appreciation in land values. Post-2000, growth has become increasingly volatile, with several negative seasons. While the long-term picture includes substantial cumulative gains, the recent trend suggests a flattening or decline in equity growth, highlighting the importance of resilience and risk management in an increasingly capital-intensive sector.

### 1.3.3. Financial Performance

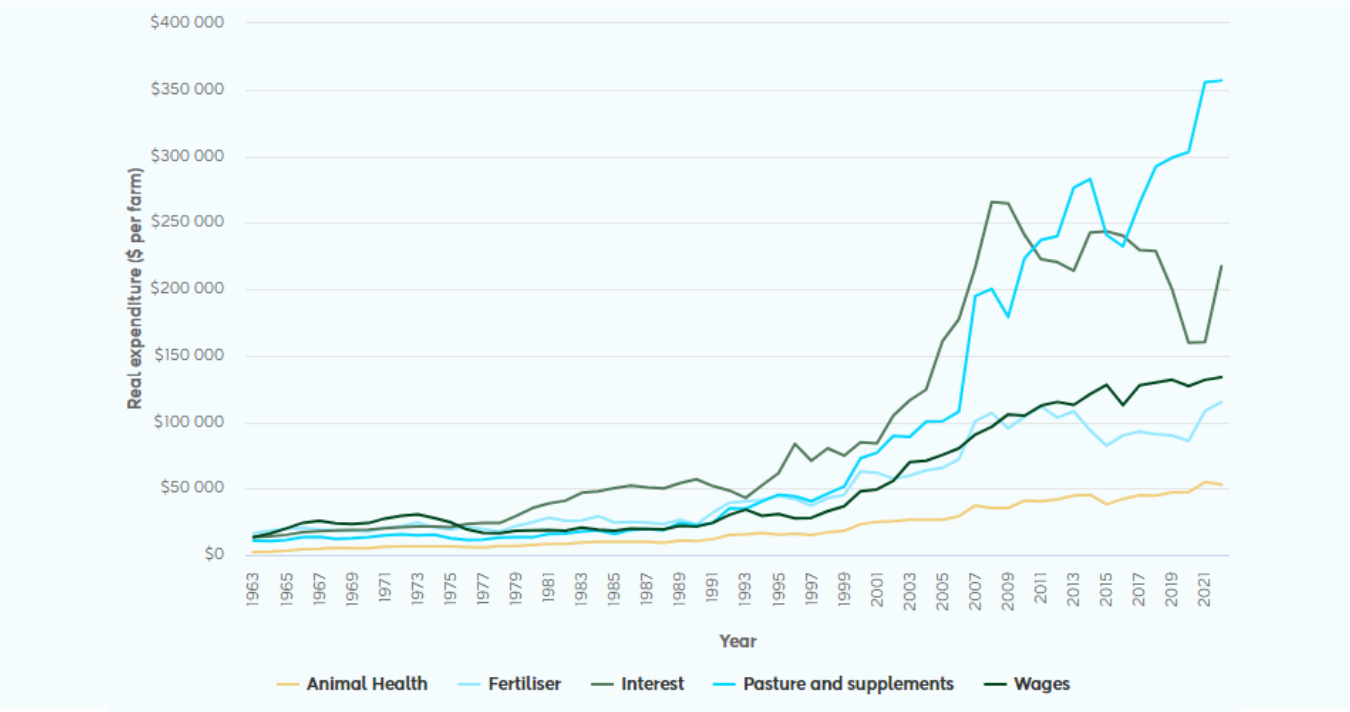
Dairy farm financial performance, measured through real and nominal income and expenses, has evolved considerably. While farmers have little control over milk prices (being price takers), they can influence milk volume. Since 2000, both real income and real expenditure have risen, but the latter has generally outpaced the former. This divergence has resulted in growing pressure on farm profitability as expenditure growth outstrips income growth.

Graph 1.4: 60 Years of dairy indexed real income and expenditure




From the 1980s onward, real expenditure across most farm input categories generally followed similar trends, with the exception of interest costs, which spiked during periods of high interest rates. Since the early 2000s, spending patterns have become more distinct across categories, highlighting shifts in farm systems, adoption of new technologies, and changes in input intensity. This divergence reflects the evolving complexity and specialisation within the dairy sector.

Graph 1.5: 60 Years of selected real expenses



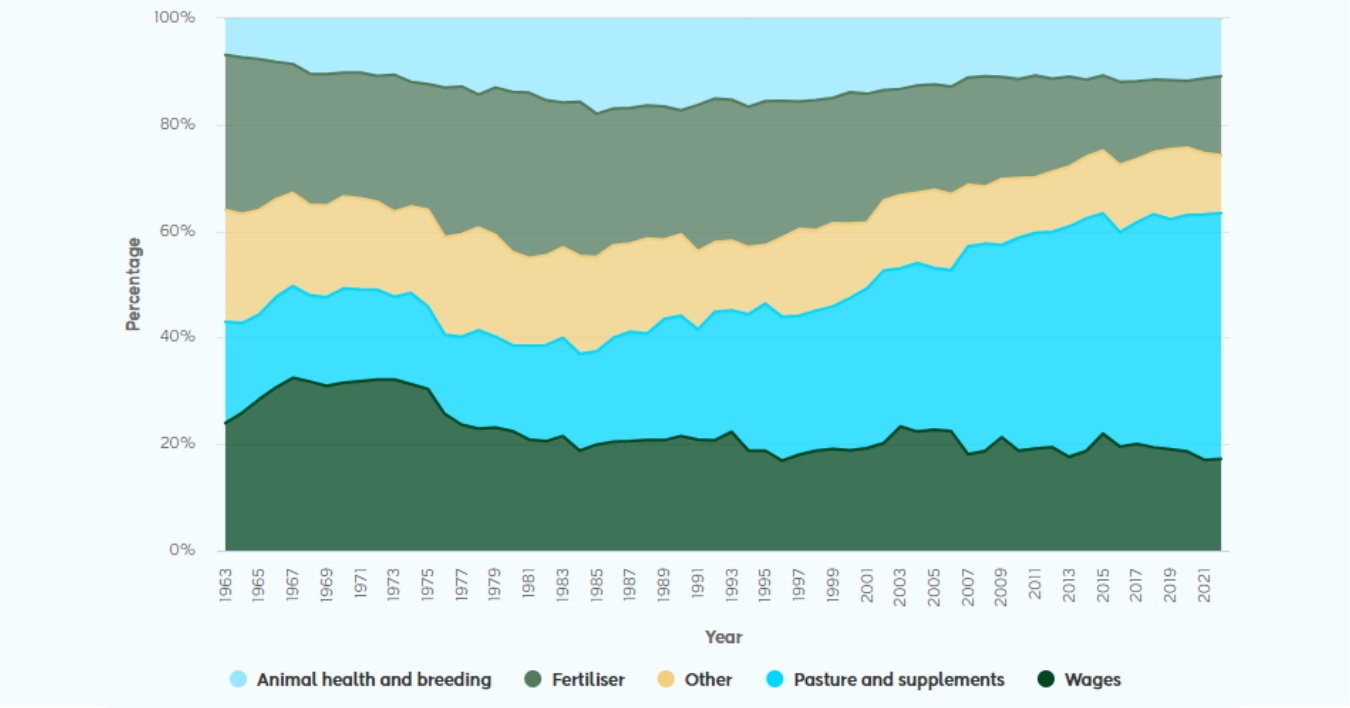
Over the past 60 years, real spending on pasture and supplements has increased dramatically, especially from the early 2000s onward. As shown in Graph 1.7, the index of real expenditure on pasture and supplements (adjusted for inflation and normalised to the first year) remained relatively flat through the 1960s to 1980s, before starting a steady rise in the 1990s.

A particularly sharp increase occurred after 2000, with real spending reaching more than 13 times the 1961–65 baseline by 2021. This rapid growth reflects the intensification of dairy systems and the increasing reliance on purchased feed to support higher production levels.

In contrast, the stocking rate index (Graph 1.7)—while showing a gradual increase over time—has remained relatively stable since around 2010. This divergence between feed spending and stocking rate suggests that the increased expenditure is not simply due to running more cows per hectare but also reflects greater investment in per-cow productivity through improved feed quality and availability.

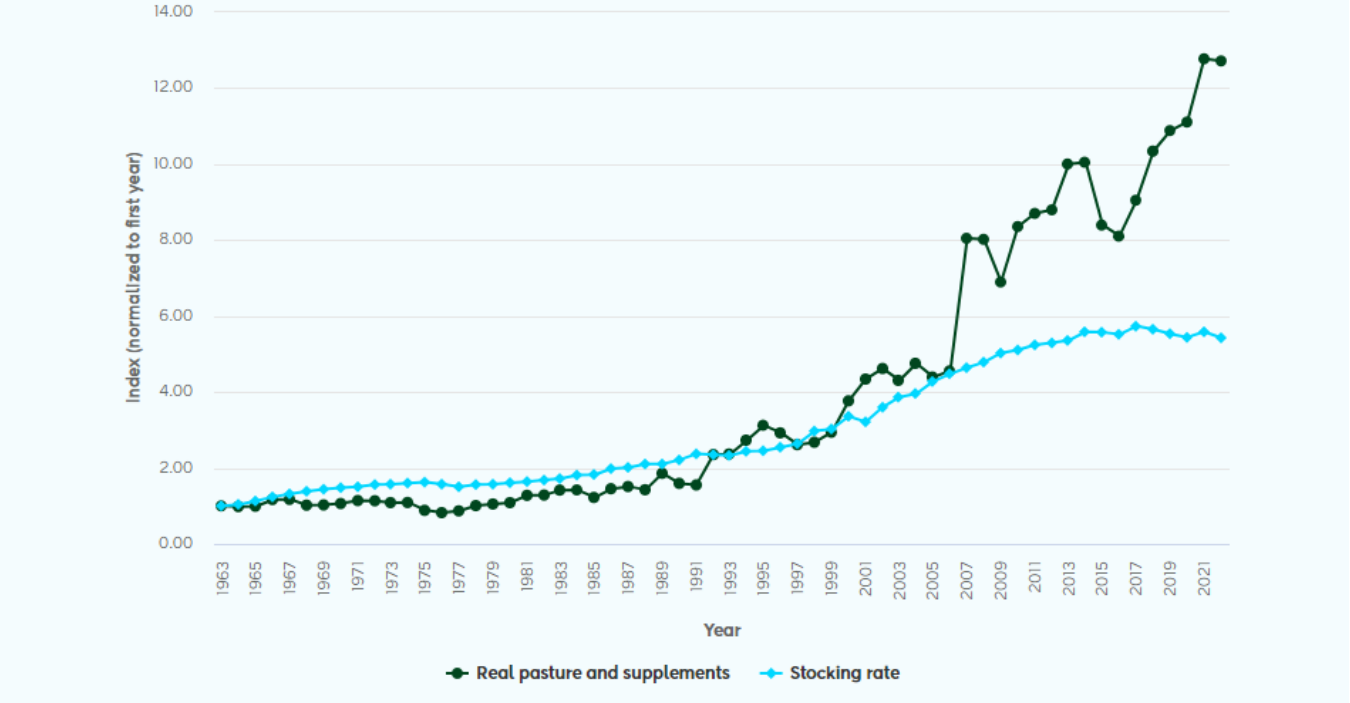
Together, these trends point to a shift in farming systems toward higher input systems with a focus on optimising milk production, possibly in response to market pressures and changes in land use.

Graph 1.6: Proportion of average total dairy cash expenses over 60 years




Indexed real spending on pasture and supplements per hectare has grown substantially faster than the stocking rate index, since the nineties which has levelled off or even declined slightly in recent years. This widening gap suggests that farmers are investing more intensively in feeding each cow, in addition to increasing the number of cows per hectare. While the spending data is adjusted for inflation, some residual effects may remain, so comparisons should be interpreted with some caution. Nonetheless, the trend reflects a shift toward higher-input systems aimed at improving per-animal productivity.

Graph 1.7: 60 Years of Average Spending on Feed Relative to Stocking Rate




## 1.4. Conclusions

Over the past 60 years, the Economic Survey has documented the transformation of New Zealand's dairy sector from small-scale, regionally focused farms into globally competitive, technologically advanced enterprises. The data tells a powerful story: the average herd has more than quadrupled in size, almost doubled its milksolids production per cow, and adapted its systems to meet both market demands and environmental expectations.

This evolution has been shaped not only by on-farm changes but also by major policy and market shifts. The removal of agricultural subsidies in the mid-1980s marked a turning point, forcing the sector to stand on its own commercially. At around the same time, global trade dynamics shifted: the UK's entry into the European Economic Community in 1973 ended New Zealand's preferential access and accelerated diversification into new markets. Today, the sector thrives on exports, with China and Southeast Asia becoming major trading partners following the 2008 Free Trade Agreement.

Structural changes continued across the industry. Milk processors consolidated from over 200 in the 1970s to just a handful by the 2000s. Payment systems shifted from rewarding volume to valuing milksolids, driving productivity-focused breeding strategies and improvements in herd genetics. Input systems intensified, with real spending on feed—particularly pasture and supplements—rising dramatically to support greater output per cow. At the same time, capital investment also increased, bringing with it higher land values, increased debt, and a long-term decline in total return on assets—signalling a transition to a more mature industry with steadier performance and lower marginal returns.

Yet amid these changes, some foundations remain firm. New Zealand's dairy sector continues to hold its comparative advantage as a predominantly pasture-based system, supported by its favourable landscape and climate, and shaped by its strong export orientation. The enduring variability in performance between farms—regardless of region or system—reinforces that good management, not just scale or technology, remains the ultimate differentiator.

Looking ahead, the sector faces new challenges and opportunities. Environmental regulation, climate risk, and market volatility will test resilience. But as this 60-year legacy shows, the sector is adaptable. The task now is to ensure profitability comes not from speculation or expansion alone, but from strong operational performance, smart use of resources, and continued innovation.

As we celebrate six decades of insight, the challenge is clear: to carry this legacy forward, uphold the standards set, and keep turning data into action for a stronger, more sustainable future.

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# 2. Survey Description

## 2.1. Survey Methodology

Groups of farms were selected to match the average regional herd size, hectares and milksolids production as published in the New Zealand Dairy Statistics 2023-24 as close as possible while maintaining a large sample size. The initial pool of farms included 760 owner-operators and 229 50:50 sharemilkers (herd-owning sharemilkers) with data validated and committed to the DairyBase® database for the 2023-24 financial year. Businesses were then excluded for the following reasons:

- Multiple herds operating under one business identity.
- Herds with fewer than 50 cows.
- Businesses with a significant change in the land area during the year (>10%).
- Extreme outlier data.
- Incomplete financial data.

The sample selection process aimed to align the regional and national average herd sizes, hectares and milksolids production for each of these two ownership structures while retaining a reasonable number of farm businesses. These regional and national averages are available in the 2023-24 New Zealand Dairy Statistics publication.

The final number of herds included in this survey comprised 200 owner-operators and 96 50:50 sharemilker herds. Of the owner-operator herds, 151 (76%) were North Island herds, and 49 (24%) were from the South Island. Of the sharemilker herds, 64 (67%) were from the North Island, and 32 (33%) were South Island herds.

## 2.2. Ownership Structure Definitions

An owner-operator receives 100 percent of the milk revenue and either owns, or leases, both the herd and the land. In contrast, a 50:50 sharemilker owns the herd but not the milking land and receives 50 percent of the milk revenue. Although the definition of sharemilkers used in this survey is 50:50, in practice, they may receive between 40 percent and 60 percent of the milk revenue. Herds with variable order sharemilkers, and farm owners with sharemilking arrangements, were not included in this survey.

## 2.3. Sample Unit

The data used in this survey reflects the total dairying enterprise of each business. Where businesses have multiple ownership types, such as partnerships and trusts, the accounts of all entities are consolidated and entered as one.

## 2.4. Survey Weights

All national averages in this report have been weighted by the regional proportion of herds reported in the 2023-24 New Zealand Dairy Statistics (Table 2.1). Simply averaging the regional data shown in this document does not produce the same national average. Weighting the data ensures that each region contributes a representative proportion to the national averages. The national averages for 50:50 sharemilkers are weighted by the regional proportion of sharemilkers.

Table 2.1: Dairy Statistics 2023-24

| Region | Owner-operator herds | % of Owner-operator herds | 50:50 Sharemilker herds | % of 50:50 Sharemilker herds |
|---|---|---|---|---|
| Northland | 433 | 7.9 | 167 | 5.8 |
| Waikato | 1,663 | 30.4 | 1,106 | 38.5 |
| Bay of Plenty | 287 | 5.2 | 137 | 4.8 |
| Taranaki | 819 | 14.9 | 436 | 15.2 |
| Lower North Island | 569 | 10.4 | 198 | 6.9 |
| West Coast - Top of the South | 290 | 5.3 | 88 | 3.1 |
| Canterbury | 703 | 12.8 | 313 | 10.9 |
| Otago - Southland | 715 | 13 | 425 | 14.8 |
| Total New Zealand | 5,479 | 100 | 2,870 | 100 |

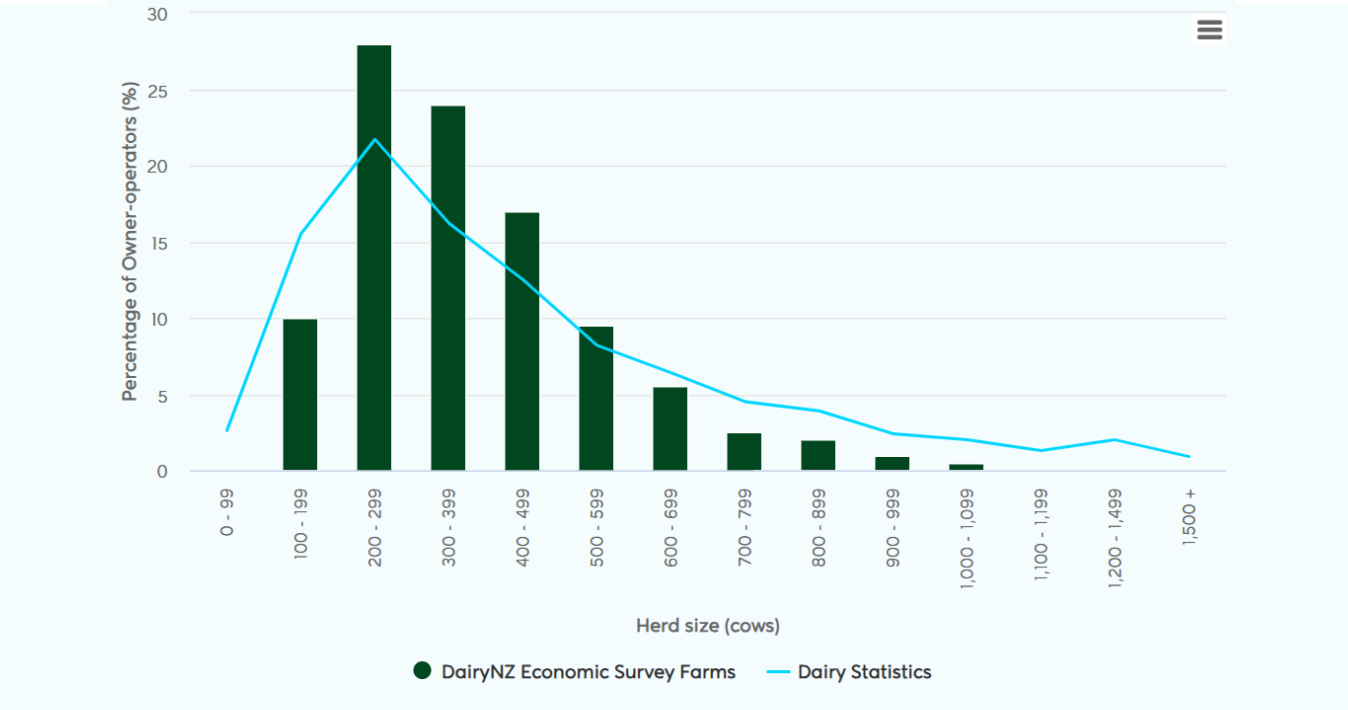
## 2.5. Herd Size Distributions

The average owner-operator herd in the DairyNZ Economic Survey had 411 cows, 3 cows more than in the 2022-23 season. In comparison to the 2023-24 New Zealand Dairy Statistics national average herd size of 448, the average DairyNZ Economic Survey farm had 37 fewer cows.

Graph 2.1 shows a comparison of the owner-operator herd distribution between the 2023-24 DairyNZ Economic Survey and the 2023-24 New Zealand Dairy Statistics. In general, the DairyNZ Economic Survey:

- Is over-represented by herds between 200 and 599 cows.
- Is under-represented by herds with less than 200 cows, and by herds with 600 cows or more.

Graph 2.1: New Zealand Owner-operator Herd Size Distributions

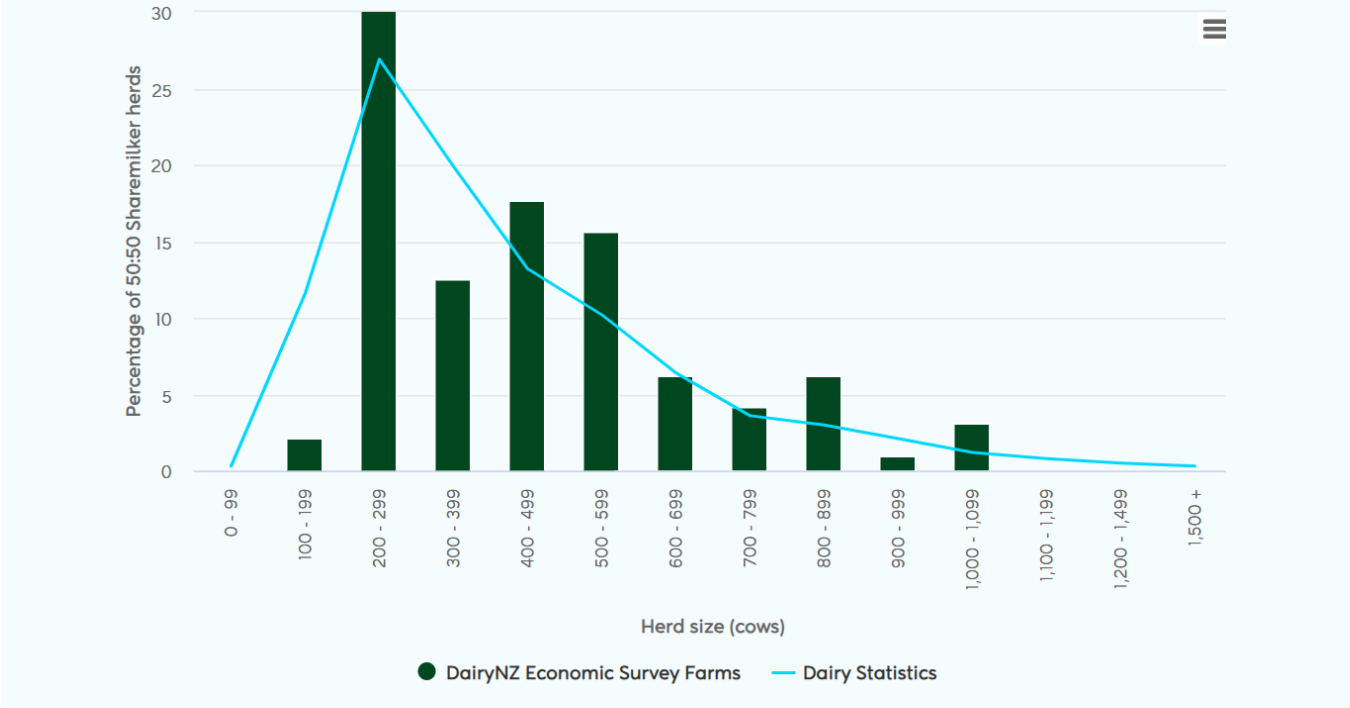



The DairyNZ Economic Survey national average herd size for 50:50 sharemilkers of 434 cows is larger than the 415 cows recorded in the 2023-24 New Zealand Dairy Statistics.

As compared with the 2023-24 New Zealand Dairy Statistics (Graph 2.2), for 50:50 sharemilkers, the DairyNZ Economic Survey:

- Has no herds under 100 cows and herds with more than 1,100 cows.
- Is over-represented by herds between 200–299, 400–499, 800–899, and 1,000–1,099 cows.
- Is under-represented by herds between 100-199, 300-399, and 900-999 cows.

Graph 2.2: New Zealand 50:50 Sharemilker Herd Size Distributions



## 2.6. Survey Regions

This survey uses geographic districts as defined by the 73 Territorial Local Authorities (TLAs) in DairyBase. These districts are amalgamated into eight regions, five in the North Island and three in the South Island. Regions 6 and 7, and the TLAs included in them were updated in the 2021-22 DairyNZ Economic Survey, to reflect similar changes in DairyBase®. Since 2021-22, the Marlborough and Kaikoura districts were moved from the Marlborough - Canterbury region to the West Coast - Top of the South region. For regions 6 and 7, part of the differences between values before and after the 2021-22 season (sections 7.1 and 10.1) is due to the rearrangement of the TLAs that were part of them.

**1 Northland**
1. Far North district
2. Whangarei district
3. Kaipara district
4. Rodney district
5. North Shore district
6. Waitakere district

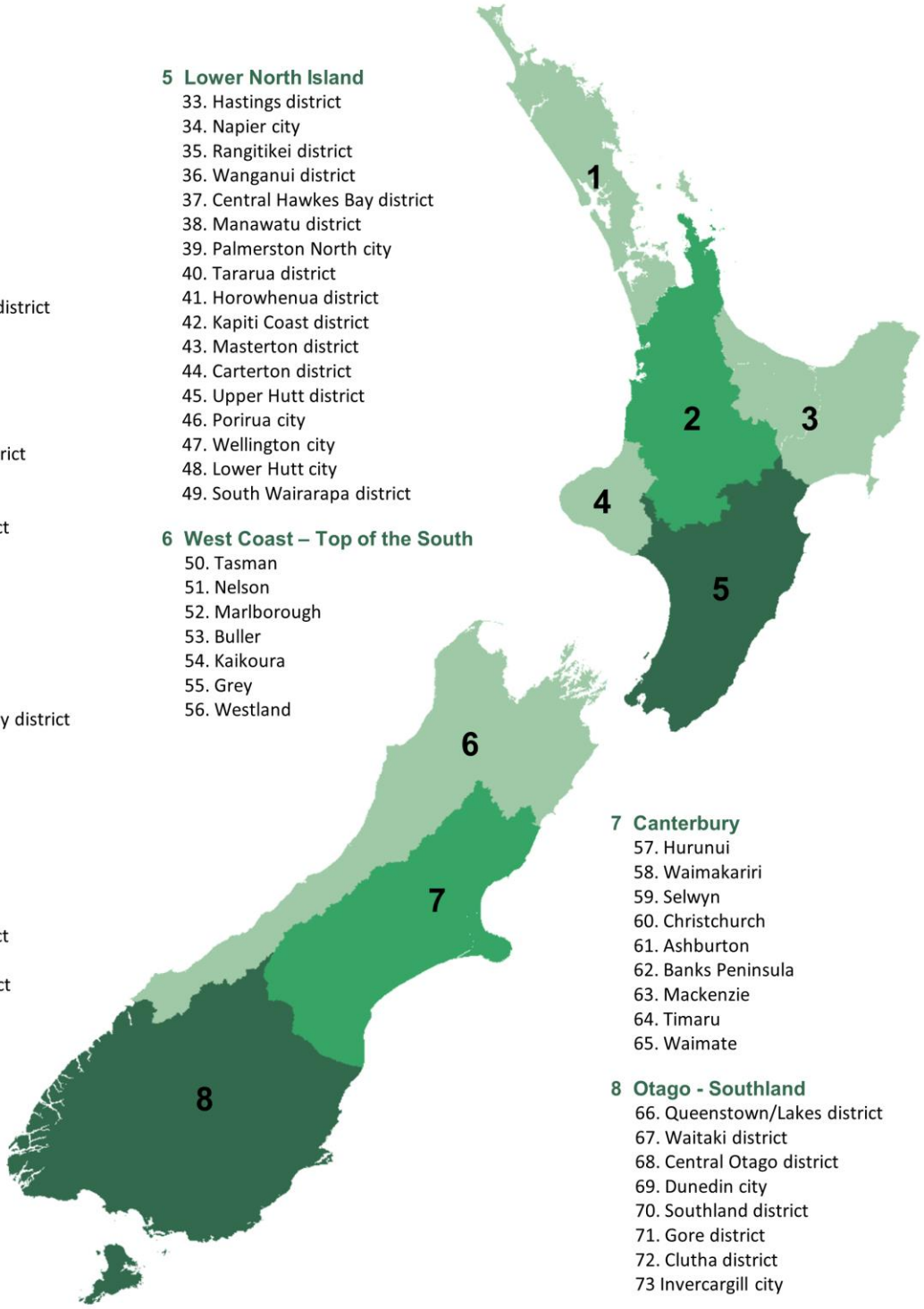
**2 Waikato**
7. Auckland city
8. Thames/Coromandel district
9. Manukau city
10 Papakura district
11. Franklin district
12. Hauraki district
13. Waikato district
14. Matamata/Piako district
15. Hamilton city
16. Waipa district
17. South Waikato district
18. Otorohanga district
19. Waitomo district
20. Taupo district
21. Ruapehu district

**3 Bay of Plenty**
22. Tauranga district
23. Western Bay of Plenty district
24. Opotiki district
25. Kawerau district
26. Rotorua district
27. Gisborne district
28. Whakatane district
29. Wairoa district

**4 Taranaki**
30. New Plymouth district
31. Stratford district
32. South Taranaki district

**5 Lower North Island**
33. Hastings district
34. Napier city
35. Rangitikei district
36. Wanganui district
37. Central Hawkes Bay district
38. Manawatu district
39. Palmerston North city
40. Tararua district
41. Horowhenua district
42. Kapiti Coast district
43. Masterton district
44. Carterton district
45. Upper Hutt district
46. Porirua city
47. Wellington city
48. Lower Hutt city
49. South Wairarapa district

**6 West Coast – Top of the South**
50. Tasman
51. Nelson
52. Marlborough
53. Buller
54. Kaikoura
55. Grey
56. Westland




**7 Canterbury**
57. Hurunui
58. Waimakariri
59. Selwyn
60. Christchurch
61. Ashburton
62. Banks Peninsula
63. Mackenzie
64. Timaru
65. Waimate

**8 Otago - Southland**
66. Queenstown/Lakes district
67. Waitaki district
68. Central Otago district
69. Dunedin city
70. Southland district
71. Gore district
72. Clutha district
73 Invercargill city

## 2.7. Production Systems

Farms are categorised into one of five production systems based on the timing, purpose and amount of imported feed used, both purchased as supplements and grazing off for dry cows. Young stock grazing policies are excluded when categorising herds into the five production systems described below.

System 1: All grass, self-contained, all adult stock on the dairy platform.

- No feed is imported. No supplement is fed unless harvested off the effective milking area, and dry cows are not grazed off the effective milking area.

System 2: Feed imported fed to dry cows (either supplement or grazing off).

- 90-99 percent of total feed is home grown feed. Variation in percentage as most cows are wintered off in high rainfall areas or cold climates.

System 3: Feed imported to extend lactation and for dry cows.

- 80-89 percent of total feed is home grown feed.

System 4: Feed imported and used at both ends of lactation and for dry cows.

- 70-79 percent of total feed is home grown feed.

System 5: Imported feed used all year.

- 50-69 percent of total feed is home grown feed, though it could be less than 50 percent in some cases.

This publication refers to low, medium and high input systems. These are defined as:

- **Low:** system 1 and system 2.
- **Medium:** system 3.
- **High:** system 4 and system 5.

## 2.8. Operating Profit Adjustments

Non-cash adjustments for resources used but not accounted for by cash income or expenditure are made when calculating the operating profit. A summary of these adjustments is shown below. For more detail, refer to the DairyBase® Operating Profit Adjustments and DairyBase® Livestock Values documents. An example of non-cash adjustments is the value of change in dairy livestock. This is the value due to a change in livestock numbers which is added or subtracted (if negative) to net dairy cash income to form gross farm revenue. This adjustment is made because the revenue from net dairy cash income can be affected by changes in herd size. For example, in drought years, more stock is sold and therefore, revenue through net livestock sales will be considerably higher. Similarly, livestock will be purchased in the years following a drought to increase numbers to a more normal level. The adjustment offsets these changes with a value for change in livestock on hand.

The operating profit adjustments include:

- **The value of change in dairy livestock**. This is calculated as follows: closing livestock numbers less opening livestock numbers, valued at closing herd scheme values (Inland Revenue).
- **Labour adjustment**. This has two components: unpaid management based on the size of the herd and time worked, and unpaid labour valued at an hourly market rate.
- **Feed inventory adjustment.** This is estimated as closing supplementary feed on hand less opening supplementary feed on hand, valued at a standard 39 cents per kilogram of dry matter in 2023-24.
- **Owned support block adjustment**. This value is based on the regional market lease rate per hectare.
- **Depreciation**. This is the depreciation recorded in the annual financial statements of the farm.

## 2.9. Asset Values

DairyBase® calculates market values for land and buildings by using the most recent rateable valuations for each farm and adjusting these to 1 June 2023 and 1 June 2024 market values using sales data supplied by Quotable Value and REINZ, plus discussions with regional real estate agents and valuers. Opening and closing livestock values for each year are calculated using the Inland Revenue herd value scheme NAMV (National Average Market Values) for the appropriate age group of animals. Plant, machinery and vehicle values are recorded at book value. Off-farm assets and investments are shown as market values.

## 2.10. GST

The financial data is GST exclusive as these transactions are neutral to the farm operation.

## 2.11. Statistical Methodology

Multiple methodologies are used in the DairyNZ Economic Survey to generate statistics.

Tables and graphs that use time series data are generated using an average of sums methodology. The average of sums involves summing all values together. While per farm values will be equivalent to the arithmetic mean, values that are divided by the number of cows, hectares, and milksolids will report the average value divided by the average denominator.

The average of sums approach ensures that table entries add up to totals and sub-totals. However, a consequence of this methodology is that the averages reported are not equivalent to the arithmetic mean and can be biased depending on the data distribution. This bias can be severe in small samples, such as those used to produce the regional and production system tables. To circumvent issues of this kind, we now report the median of the data in the tables and graphs that are most at risk of showing such bias i.e. regional data. The median is the number that divides the data into two halves, such that half of the data is below, and half the data is above this value.

It is a robust and unbiased representation of the centre of the data. In the affected tables, entries will no longer add up to totals and sub-totals but provide a more accurate and representative value for the data. For example, in Table 7.1, we can see that by adding milk sales (net of dairy levy), net livestock sales (sales - purchases) and other dairy cash income, they do not add up to net dairy cash income, in contrast to the equivalent table presented in the 2018-19 version of the DairyNZ Economic Survey.

The median is used in several different figures and tables:

- In Graph 3.1, we use the median deviation from the 30-year median rainfall. We do this because the arithmetic average is not robust to severe weather events that may misrepresent the true average rainfall a region receives in a season.
- In Tables 7.1, 7.2, 10.1 and 10.2, we report the median values for the table entries. Issues applying **the average of sums** methodology on these tables were identified in 2020. It was decided that accurate representation of these values was more important than ensuring the values added up in the table.

# 3. Physical Analysis

## 3.1. Introduction

The DairyNZ Economic Survey reports the trends in the financial performance of dairy farms but not all the trends in physical performance. While not presented, there are key physical indicators of milk production such as the days in milk, cow condition, reproductive performance, soil fertility, and fertiliser use data available in DairyBase®. It is the combination of the physical performance of the farm reflected through milksolids production, the cost of production and milk prices that drives the financial results. To find out more about the physical performance of dairy farms refer to New Zealand Dairy Statistics, available on the DairyNZ or LIC websites.

## 3.2. Rainfall Summary

NIWA supplies daily climate data for various points across New Zealand with their Virtual Climate Station Network. These data are collated into district-level averages for each month, weighted for areas where more farms are located. Within each region, median rainfall for the October to December (spring), January to March (summer), April to June (autumn) and July to September (winter) periods was calculated. The variation in the median regional rainfall from the thirty-year-weighted median is shown in Graph 3.1. See section 2.11 for an explanation of the median methodology used here. Compared to the 30-year median, most regions experienced significantly drier conditions during winter, summer, and autumn. Taranaki and the Lower North Island had consistently lower rainfall across all seasons, while Otago–Southland recorded higher rainfall throughout the year.

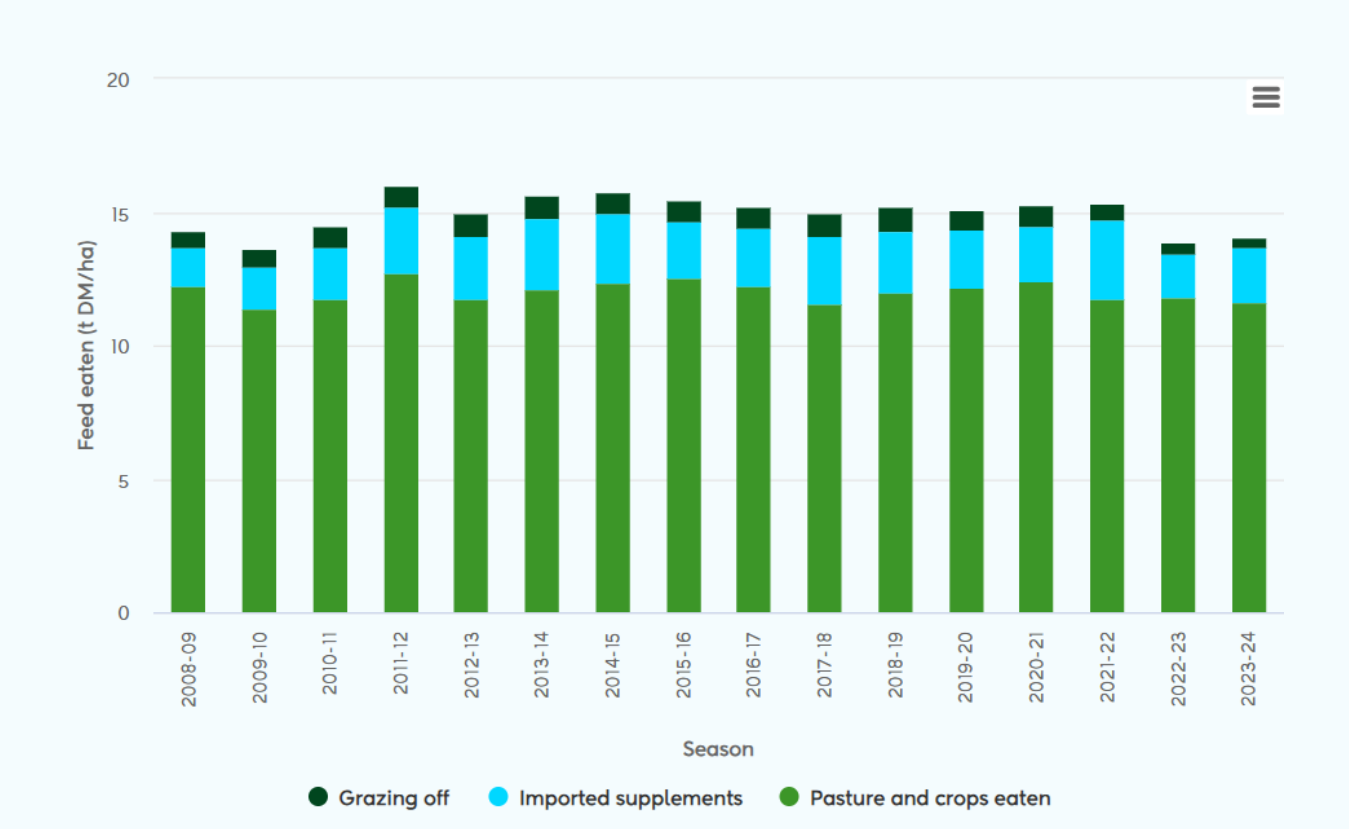
Graph 3.1: Variation in rainfall in 2023-24 compared to the 30-year median

## 3.3. Feed Use

Pasture and crop eaten, grazing off farm, and imported feed were estimated from the subsample of farms in DairyBase® that completed a physical analysis. Pasture and crop eaten marginally decreased from 11.82 tDM/ha in 2022-23 to 11.65 tDM/ha in 2023-24, while the use of imported supplements increased from 1.62 tDM/ha to 2.02 tDM/ha (Graph 3.2).

In 2023-24, of the total feed eaten per hectare, approximately 83 percent corresponded to pasture and crops eaten, 14 per cent to imported supplements and 3 percent to grazing off. On average, total feed eaten per hectare in 2023-24 (14.1 tDM/ha) was lower than the 10-year average (15.0 tDM/ha).

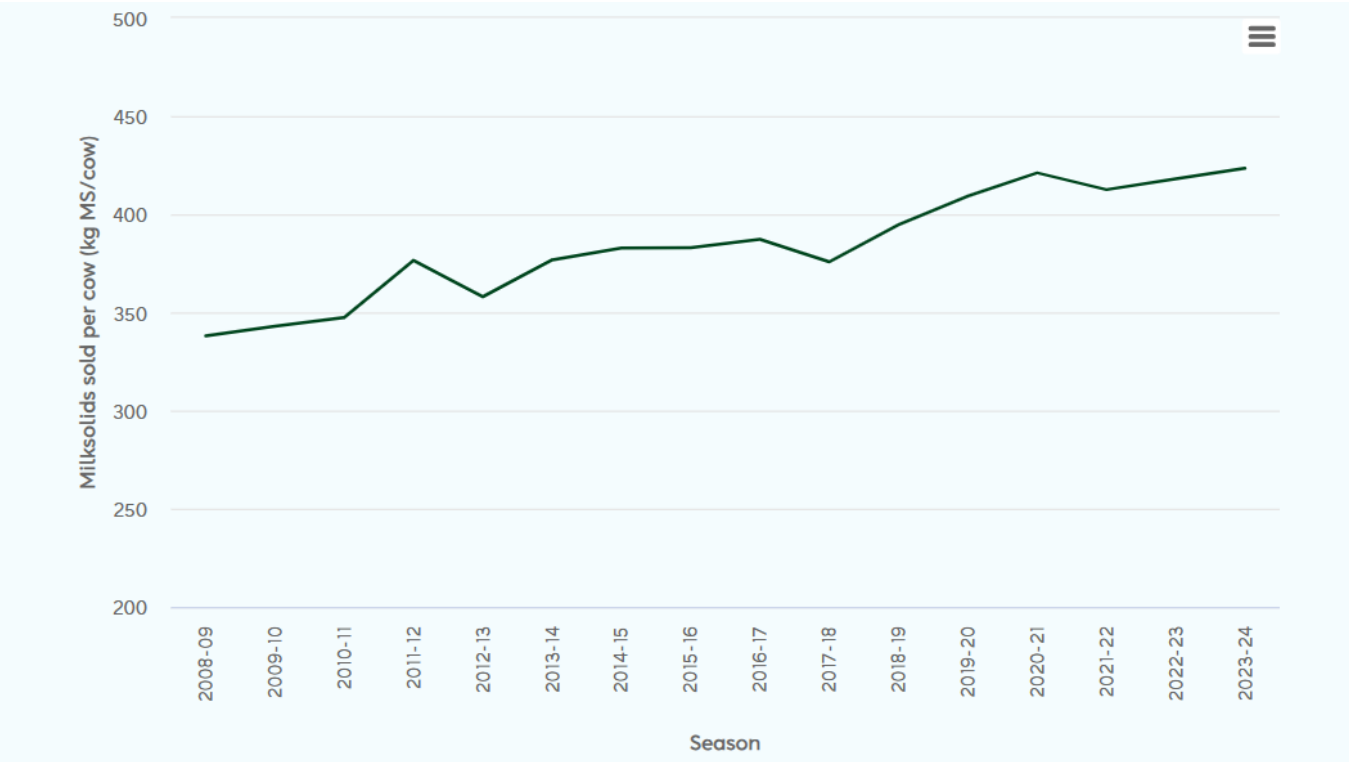
Graph 3.2: Trends in feed use



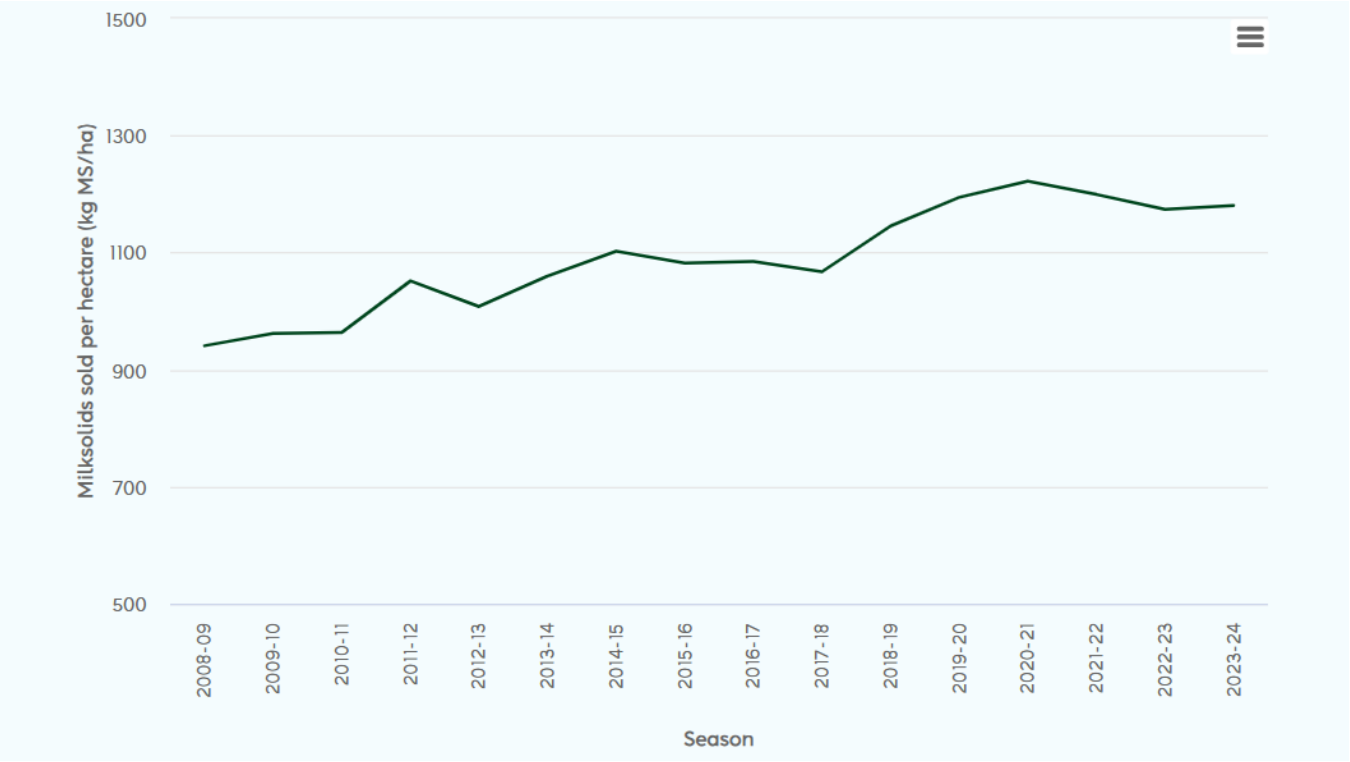
## 3.4. Partial Productivity

Milk production per cow and per hectare increased compared to last season as shown in Graph 3.3 and 3.4, respectively. On the average dairy farm in the DairyNZ Economic Survey, milksolids sold per cow increased from 418 kg in 2022–23 to 423 kg in 2023-24. Milksolids sold per hectare also increased slightly, from 1,174 kg to 1,180 kg over the same period.

Graph 3.3: Milksolids production per cow

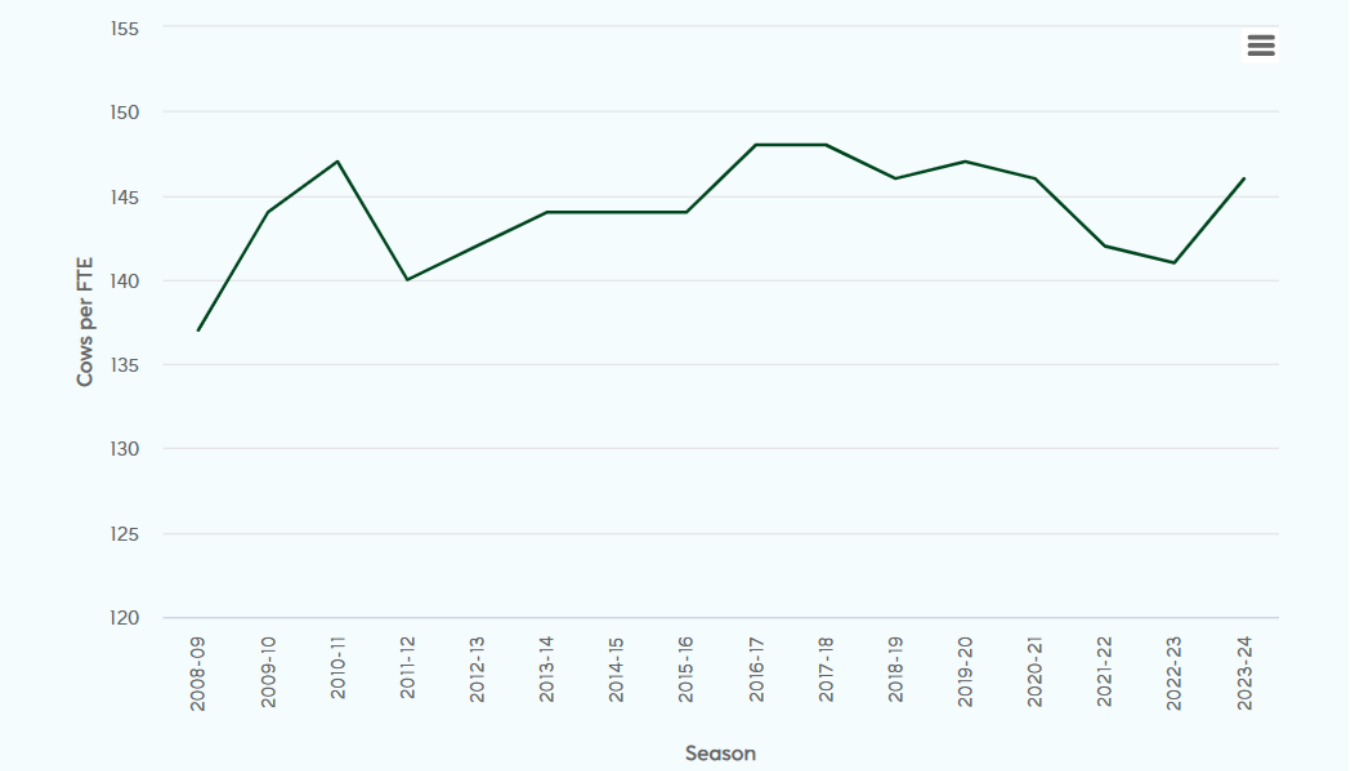



Graph 3.4: Milksolids production per hectare



Between 2019–20 and 2022–23, the number of cows per full-time equivalent (FTE) labour unit decreased from 147 to 141. However, in 2023-24, this number bounced back to 146 closer to the same level as in 2019–20 level (Graph 3.5).

Graph 3.5: Cows per FTE



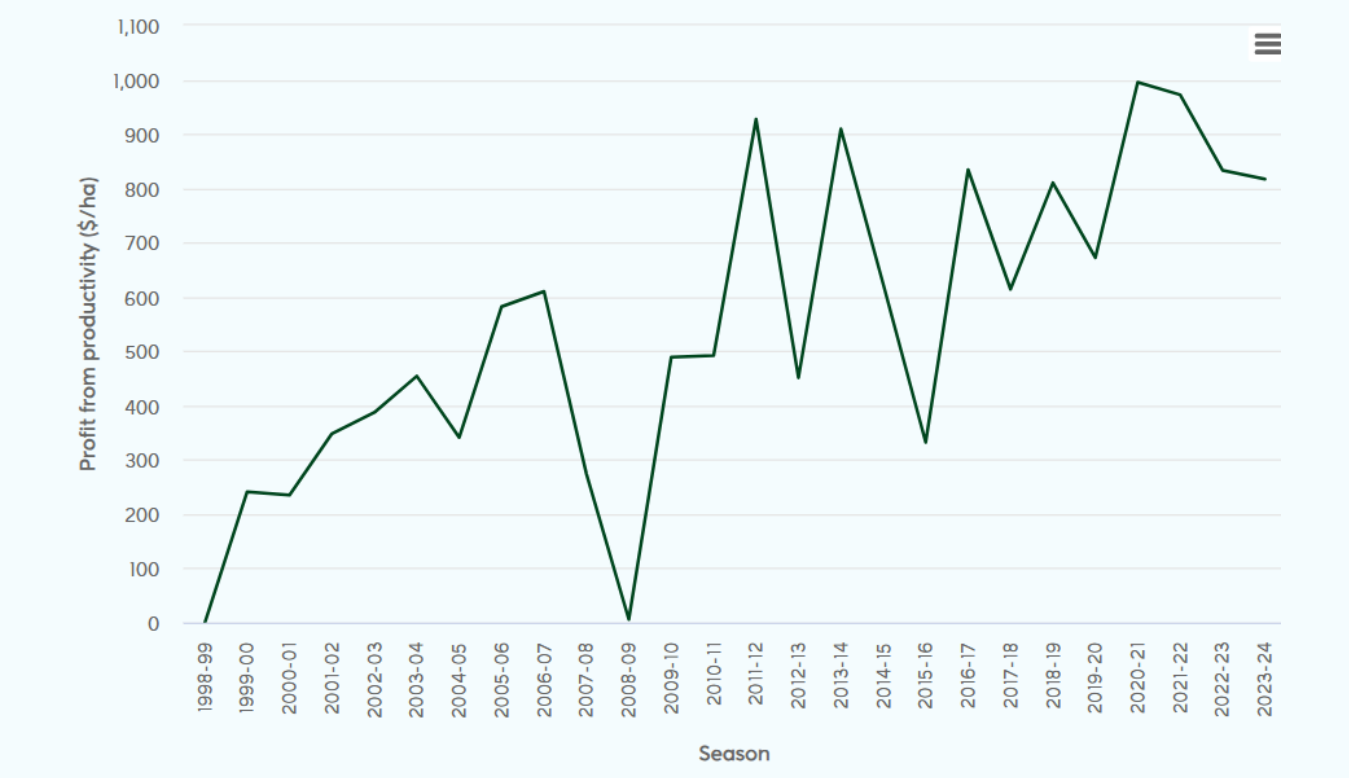

## 3.5. Profit from Productivity

Productivity improvements over time are essential to sustain or grow business profits and compete successfully with alternative uses for multiple input resources. DairyNZ has developed a measure for productivity based on operating profit. Operating profit from productivity (PFP) is defined as the difference between actual Operating Profit and the operating profit that would have occurred with no productivity changes since a base year (i.e. in the absence of milksolids production increases and with operating expenses per kilogram of milksolids increasing annually at the rate of dairy farm input price inflation), see Figure 3.6.

PFP is a measure of cost-efficient milksolids production increases since the base year, valued at the end of the year operating profit margin per kilogram of milksolids. It excludes the cost of capital, although depreciation and changes in hectares are accounted for. The three main contributory components of PFP are milksolids production increases since the base year, operating expenses savings in inflation-adjusted terms since the base year, and end-year operating profit per kilogram of milksolids (influenced by milk prices). DairyNZ and dairy farmers are increasingly focused on achieving cost-efficient milksolids production, and PFP provides a means for monitoring the value of productivity gains over time.

In 2023-24 PFP decreased for the third consecutive season, from $995 per hectare in 2020/21 to $817 in 2023-24 (1998-99 base year PFP = $0/ha). Graph 3.6 shows the gains made in PFP were relatively steady from 1999-00 to 2006-07. However, fluctuations in milk prices, seasonal rainfall and inflation have caused PFP to be more volatile since then.

Graph 3.6: Gains in Profit from Productivity



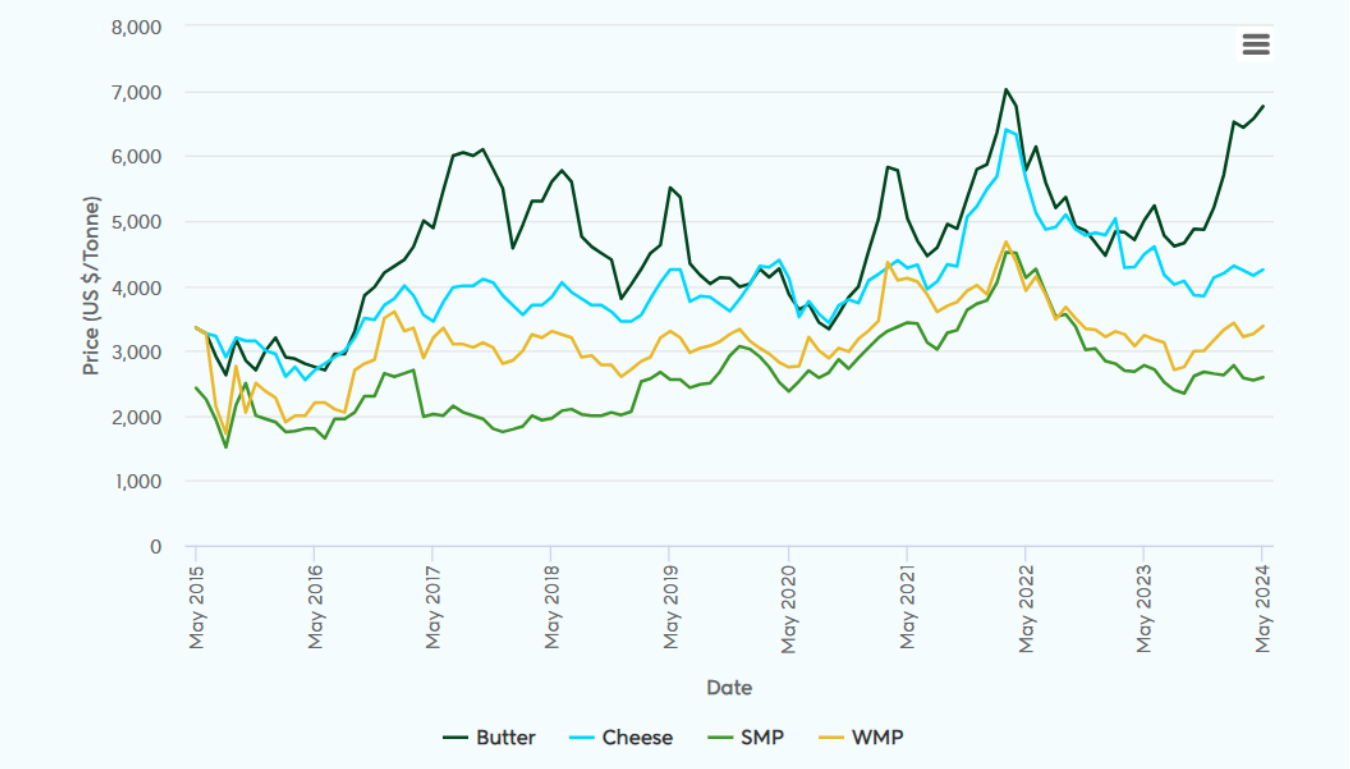
# 4. Prices Received and Paid

## 4.1. Milk Payment

In 2023-24, owner-operators in DairyBase® received an average cash payout of $8.33/kg milksolids sold (this includes any applicable advance payments, retrospective payments and the industry good levy). This was $0.35 less than the previous season. The 2023-24 New Zealand Dairy Statistics publication reported an average nominal payout (including dividend payments) of $8.90/kg MS.

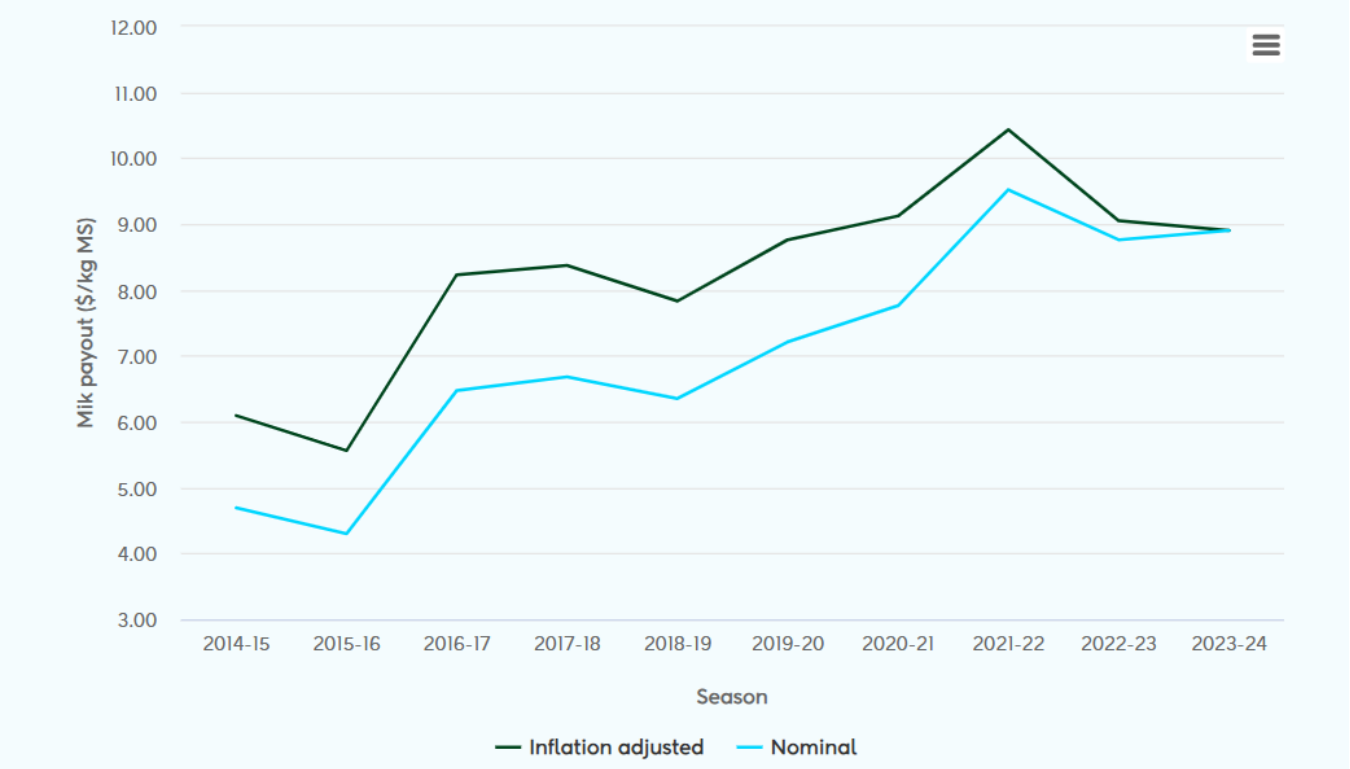
During the 2023-24 season, international dairy prices (Graph 4.1) followed different overall trends, reflecting a combination of growth, decline and variability. Between May 2023 and May 2024, the price of butter showed strong and consistent growth, rising from US$5,233 per tonne to USD$6,762 per tonne. The price of cheese experienced a decline mid-year but recovered slightly by May 2024, ending at US$4,248 per tonne, still below its starting point of US$4,601 per tonne. The price of skim milk powder (SMP) and whole milk powder (WMP) fluctuated throughout the season, ultimately decreasing from US$2,711 to US$2,590 per tonne for SMP and increasing from US$3,172 to US$3,379 per tonne for WMP.

Graph 4.1: World Milk Commodity Prices (US $/tonne)




The 2023-24 average milk payout reported by the New Zealand Dairy Statistics publication of $8.90 per kilogram of milksolids was $0.67 above the decade average in inflation-adjusted terms ($8.23) (Graph 4.2). Although the milk payout per kilogram of milksolids decreased in 2023-24, it is still the third highest of the last 10 seasons.

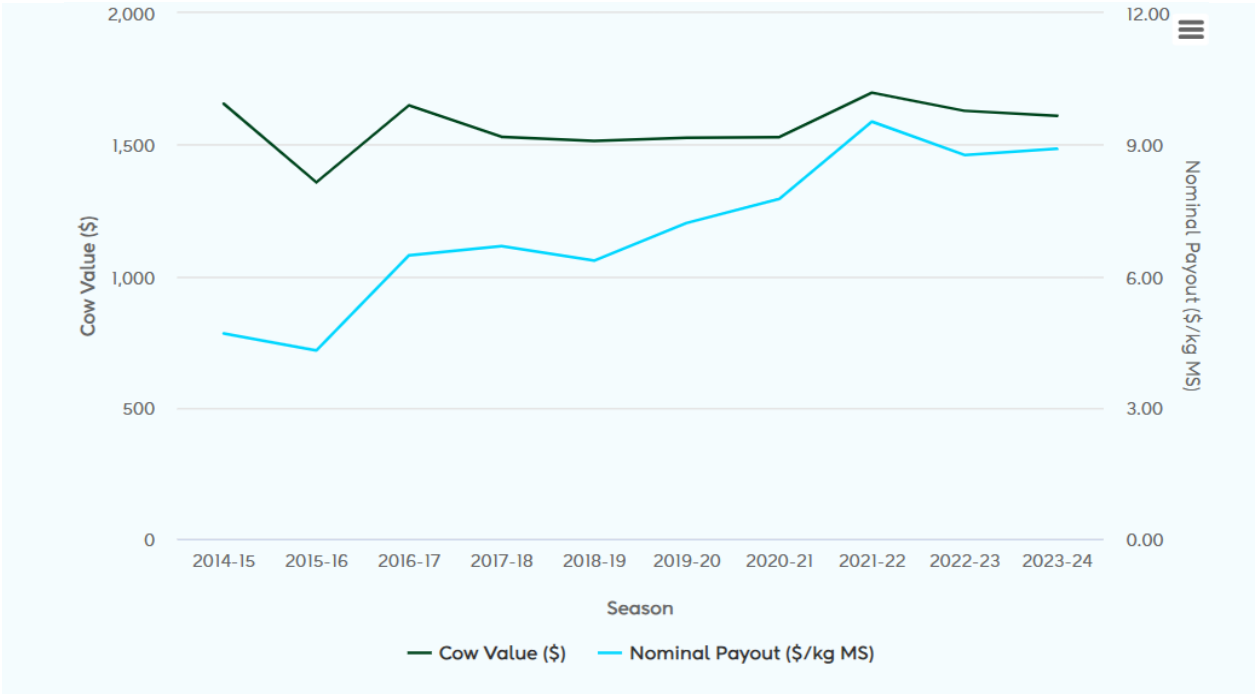
Graph 4.2: Trend in Milk Payout (Nominal and Real)




## 4.2. Livestock Prices

The value of mixed aged dairy cows decreased slightly in 2023-24, to $1,609 per cow (from $1,628 in the 2022-23 season). The 2023-24 dairy cow value, in nominal terms, was close to the decade average of $1,569 per cow. Historically, dairy cow values have followed the trend in milk prices, often with a slight time lag (Graph 4.3).

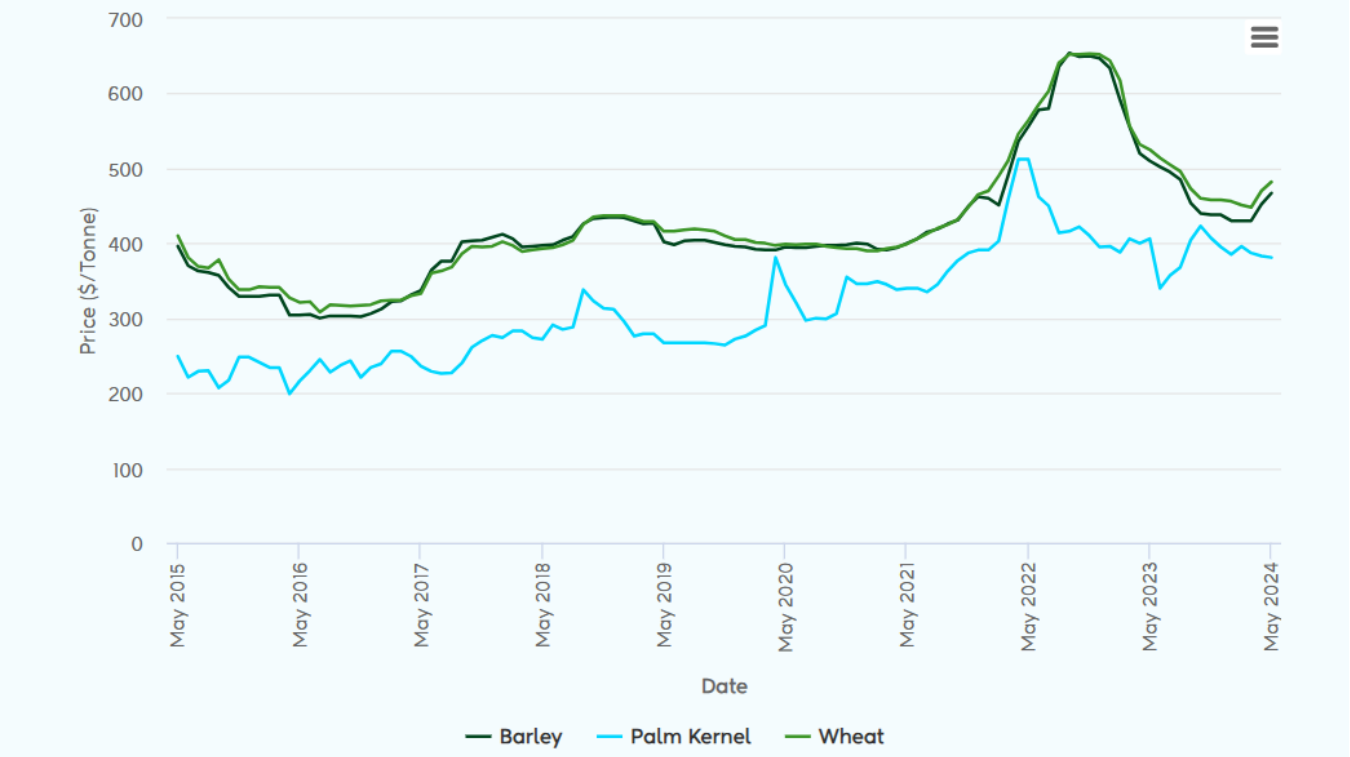
Graph 4.3: Trend in Cow Values Relative to Milk Payout



## 4.3. Feed and Fertiliser Prices

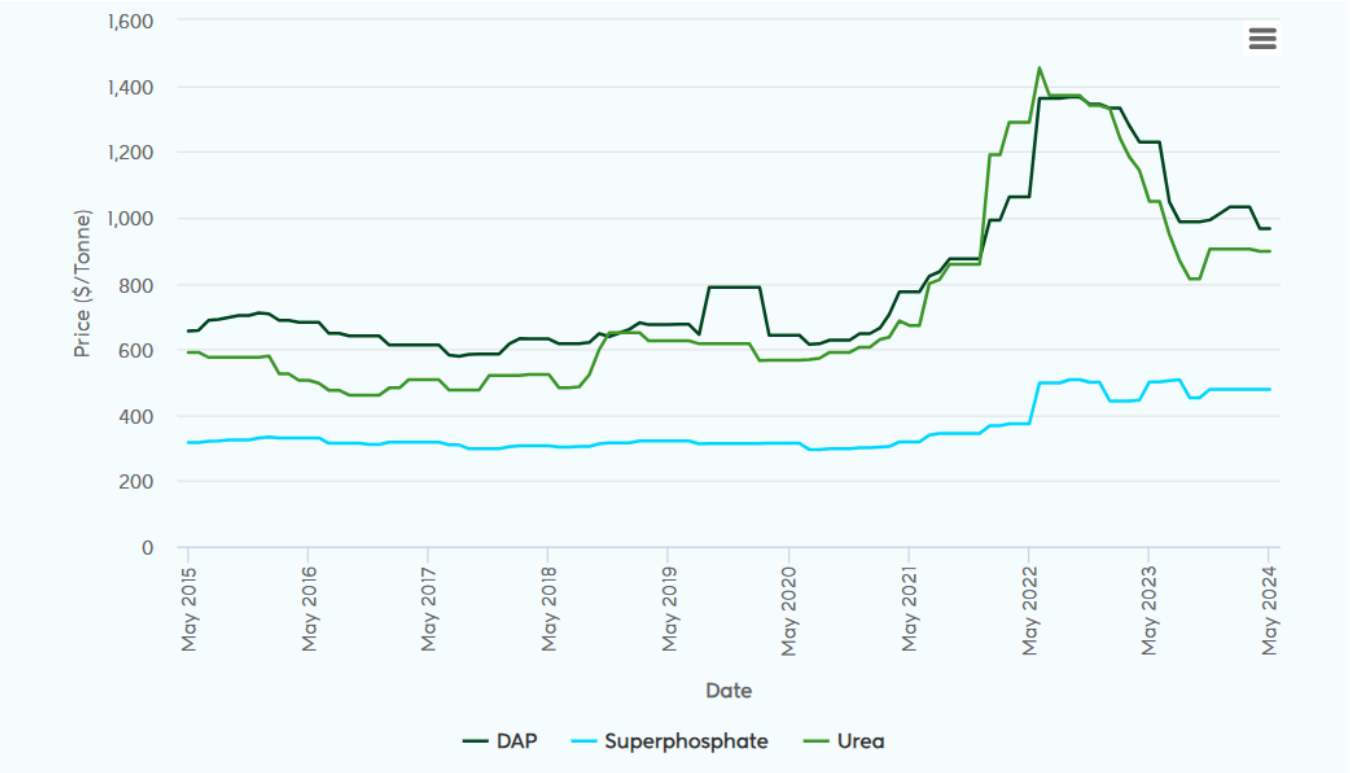
The prices of barley and wheat declined steadily through most of the 2022-23 season (by 14 and 13 percent, respectively). Although both saw slight increases in the final two months (to $430 and $448 per tonne), they remained below their opening values of $467 and $482 per tonne (Graph 4.4). In contrast to the change in the price of barley and wheat, the price of Palm Kernel Extract (PKE) increased at the beginning of the season (from $340/tonne in June to $423/tonne in October) and decreased steadily to $383/tonne by the end of the season (Graph 4.4).

Graph 4.4: Feed Prices




During the 2023-24 season the prices of urea, superphosphate and Di-Ammonium Phosphate (DAP) fertilisers decreased (Graph 4.5). The price per tonne of urea decreased from $1,049 in June 2023 to $813 in October 2023 and raised slightly to $897 by May 2024, this represented a 14 percent decrease in price during the season. The price per tonne of DAP decreased significantly, by 21 percent, from $1,229 in June 2023 to $966 in May 2024. The price per tonne of superphosphate fluctuated slightly during the season, from $500 to $478.

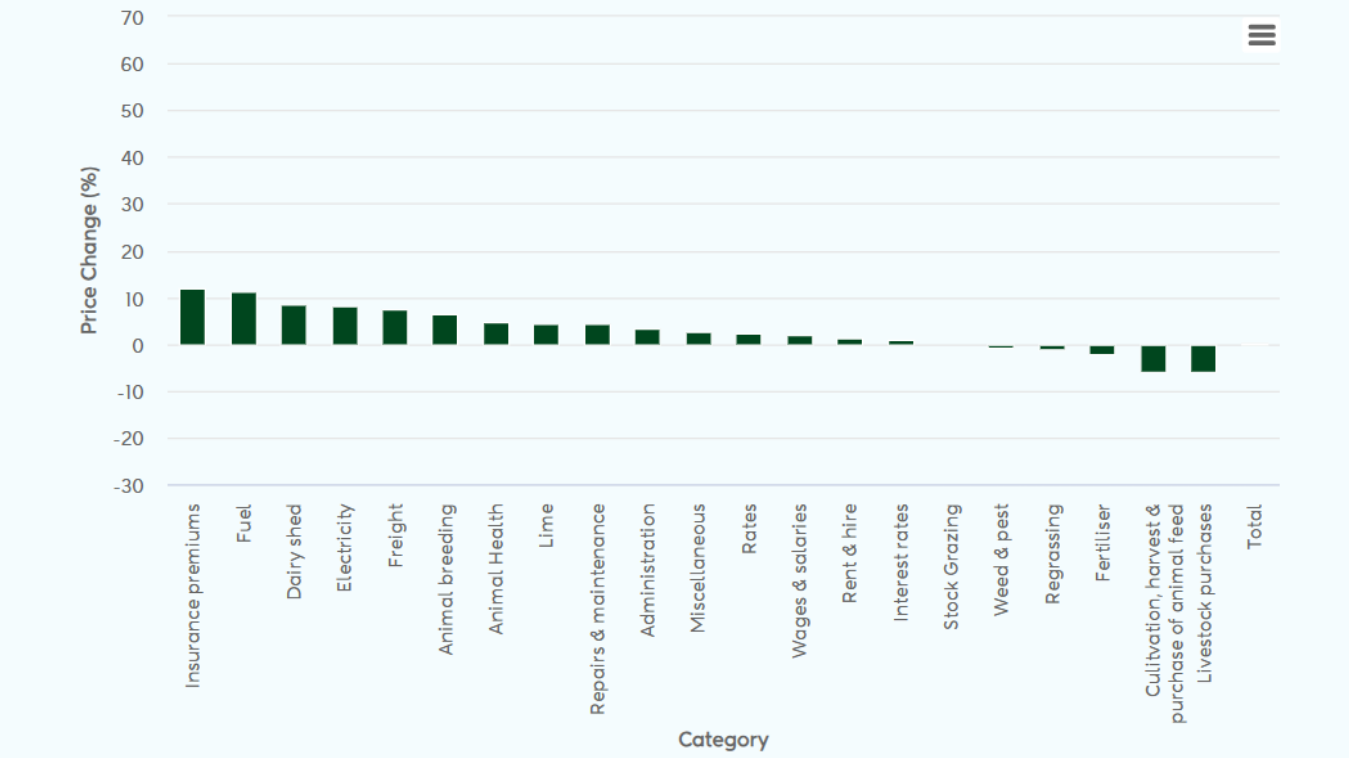
Graph 4.5: Fertiliser Prices




## 4.4. On-farm Inflation

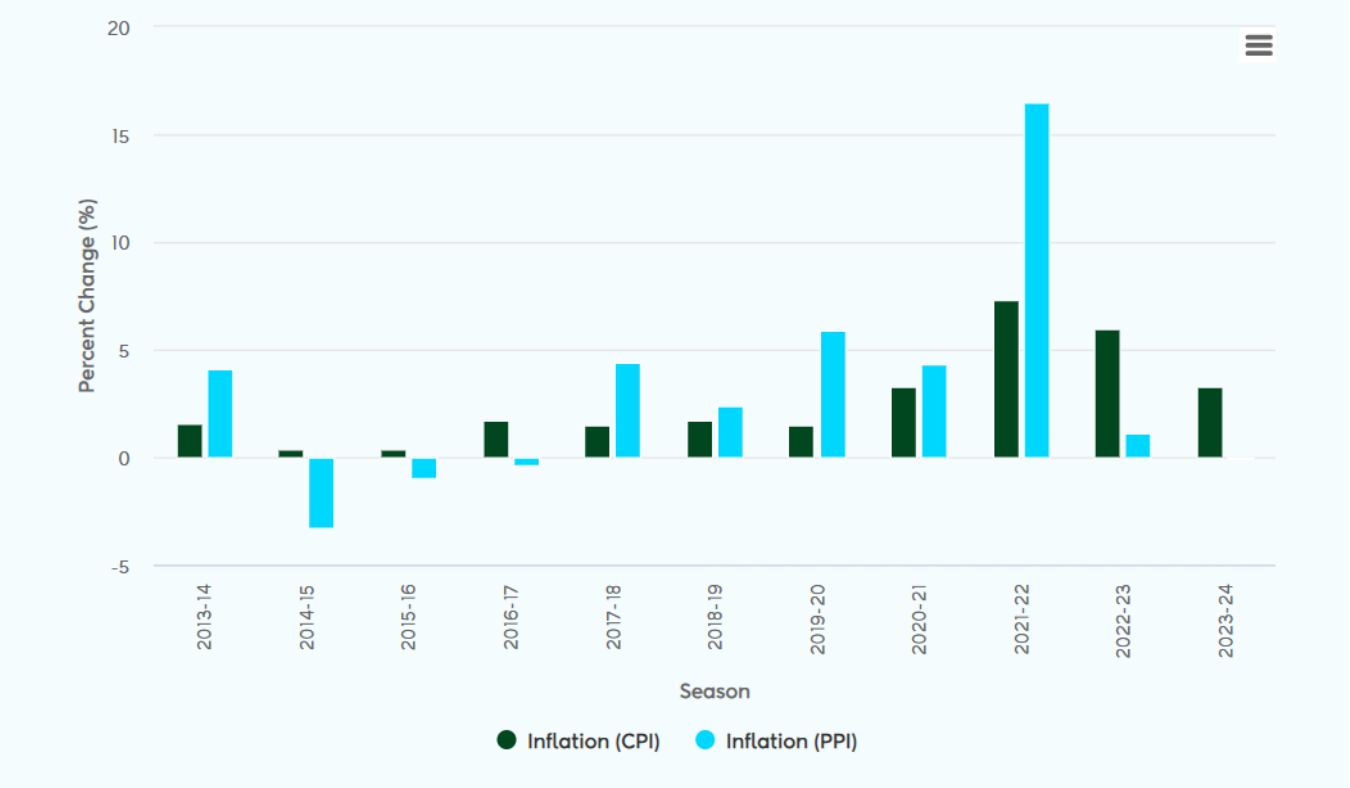
Statistics New Zealand compiles the movement of on-farm input prices in the Farm Expenses Price Index for dairy farms. The percentage movement of each category is weighted by a three-year rolling average of the contribution of each category to total expenditure. In the year to June 2024, the overall change in expense price index was a 0.4 percent increase (which was seven percentage points lower than in the previous season). The price movements of individual categories for the 2023-24 season are shown in Graph 4.6. The main categories that experienced price reductions were regrassing (-1 percent), fertiliser (-2 percent), cultivation, harvest & purchase of animal feed (-6 percent), and livestock purchases (-6 percent). The most notable increases were for insurance premiums (+12 percent) and fuel (+11 percent).

Graph 4.6: Dairy Input Price Changes




The Producer Price Index (Stats NZ NZSIOC Level 3, June 2023 to June 2024) decreased to 0.1 percent, from 1.1 percent the previous year (Graph 4.7). General inflation, as measured by the Consumer Price Index (CPI), decreased from 6 percent to 3.3 percent in 2023-24, equivalent to that of other earlier seasons.

Graph 4.7: Dairy Farm Producer Price Index and CPI Changes



# 5. Owner-Operator: Operational Financial Analysis

## 5.1. Introduction

Dairy operating profit of $2,845 per hectare in 2023-24 was down 6 per cent on the previous season. The milk payout received of $8.33 per kilogram of milksolids sold was down $0.35 (about 4 per cent) on the average price received in 2022-23. Milksolids sold per cow and milksolids sold per hectare increased by 5 and 6 kg, respectively, in 2023-24. Net livestock income (sales minus purchases) per kilogram of milksolids sold increased from $0.51 in 2022-23 to $0.58 in 2023-24. Gross farm revenue was $8.92 per kilogram of milksolids in 2023-24, $0.32 lower than the previous season. Farm working expenses (FWE) of $5.45 per kilogram of milksolids was -$0.30 lower than in the previous season. After increasing for three consecutive seasons, operating expenses decreased by $0.16 in 2023-24 to $6.51 per kilogram of milksoldis. Despite this decrease, Operating expenses in 2023-24 were the second-highest of the past ten seasons. The cash available for living and business growth in 2023-24 was $229,715 per farm, 24% lower than the previous season.

## 5.2. Revenue

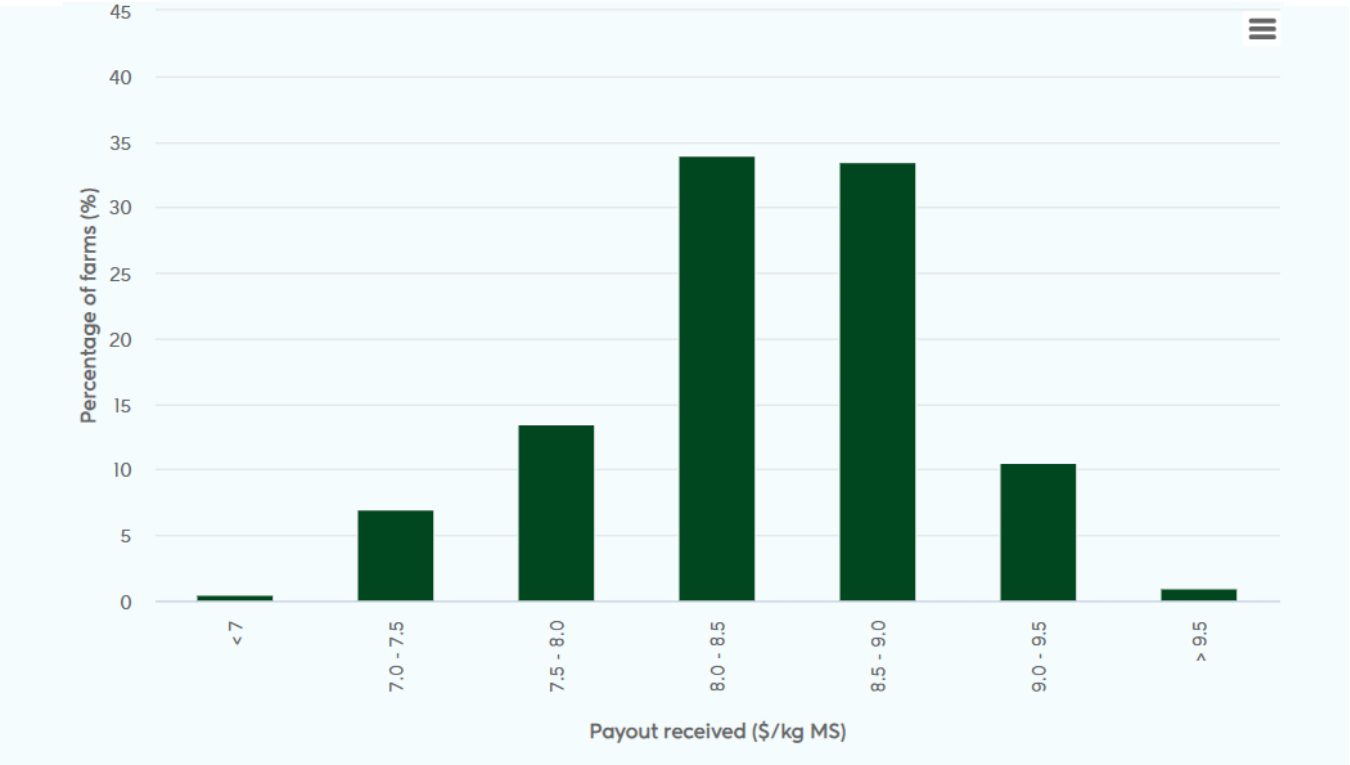
The milk payout received (including dividend payments) in 2023-24 decreased by $0.35 (about 4 per cent) from the previous season to $8.33 per kilogram of milksolids sold. Milk sales per farm (net of dairy levies) decreased by $23,290 (1.6 per cent) from last season to $1,452,066, the third highest of the last 10 seasons. Milk revenue in 2022-23 accounted for 93 per cent of gross farm revenue. Net revenue from livestock sales increased by $14,936 to $101,718 in 2023-24, the highest of the last decade. Livestock revenue accounted for 6.5 per cent of the total gross farm revenue per farm. Table 12.1 describes average revenue per farm, while revenue values normalised by cows and effective hectares can be found in tables 12.2 and 12.3 respectively.

During the 2023-24 season, the milksolids payout ($/kg MS) received by the majority of farmers (98 per cent) varied between $7.00 and $9.50 (Graph 5.1). These differences are driven by:

- Variations in the milk composition (fat, protein, lactose, minerals),
- Transport distances,
- Annual account balance dates,
- Milk company supplied,
- Different systems such as organics,
- Penalties incurred,
- Whether the farm operated in the previous season.

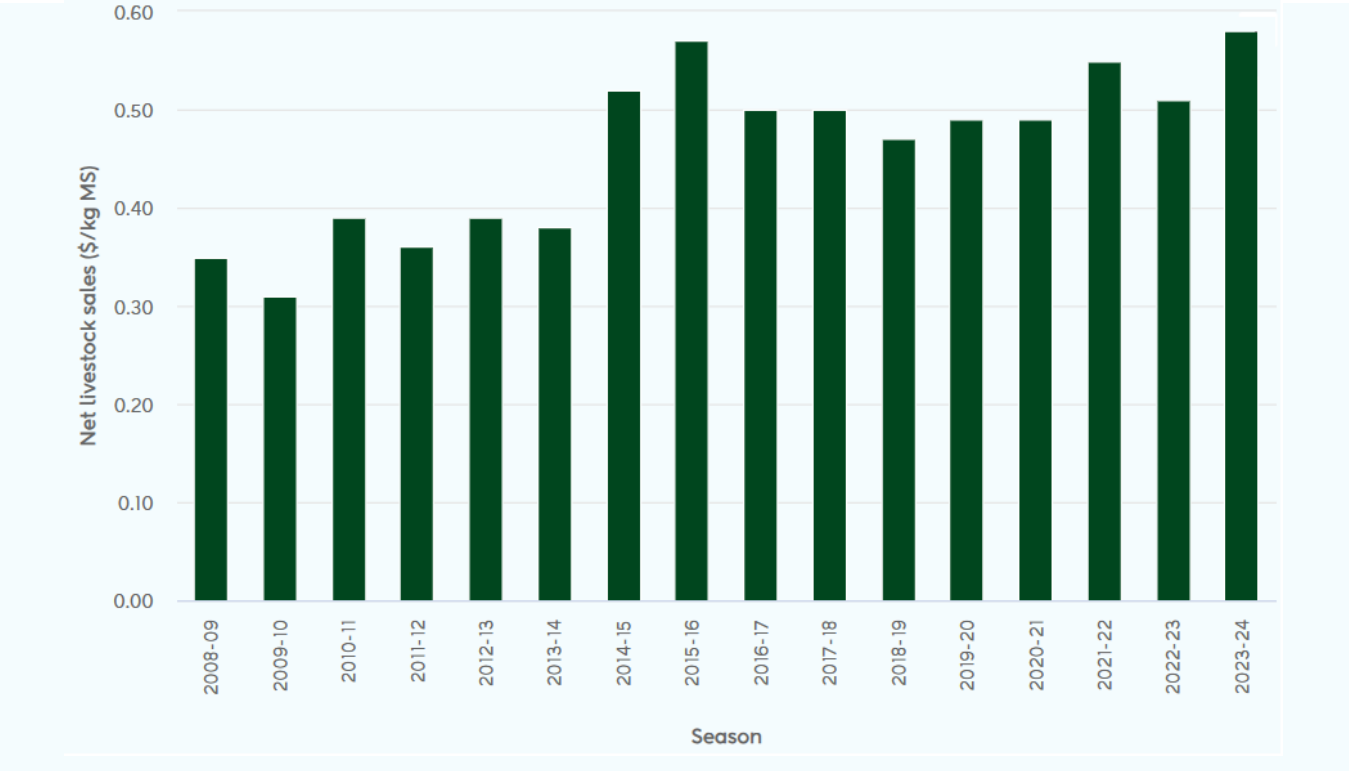
About 67 per cent of farms received a milksolids payout (milk price plus dividend) between $8.00 and $9.00 per kilogram of milksolids in 2023-24. About 20 per cent of farms received a milksolids payout between $7.00 and $8.00, and about 10 per cent received a milksolids payout between $9.00 and $9.50.

Graph 5.1: Distribution of Milk Payout Received in 2023-24




Cash income from net livestock sales increased by 14 per cent, from $0.51 per kg MS in 2022-23 to $0.58 in 2023-24. This is the highest level recorded in the past ten seasons (Graph 5.2).

Graph 5.2: Net Livestock Sales ($/kg MS)




Dairy gross farm revenue on a typical New Zealand dairy farm was $1,553,841, about 1 per cent lower than the previous season ($1,571,170 in 2022-23). On a per hectare basis, gross farm revenue of $10,526 was 3 per cent lower than the per hectare gross farm revenue in 2022-

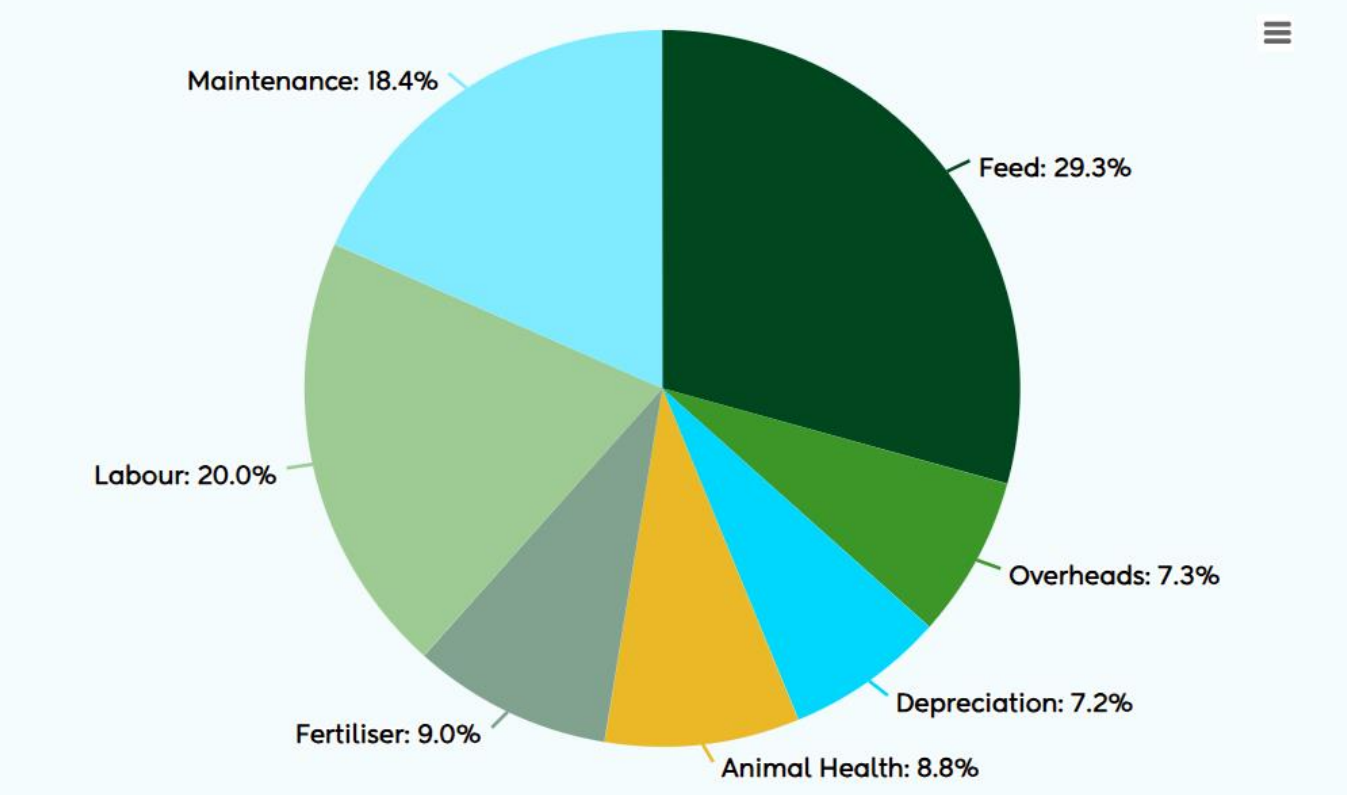
23 ($10,851). At $8.92 per kilogram of milksolids, gross farm revenue in 2023-24 was $0.32 (about 3%) below the previous season when measured on a per kilogram of milksolids sold basis.

Tables 12.1 to 12.4 in chapter 12 show the net cash income, cash farm working expenses and the adjustments made to calculate operating profit for the average New Zealand owner-operator on a per farm, per cow, per hectare and per kilogram of milksolids sold basis, respectively.

## 5.3. Expenditure

Graph 5.3 shows the major 2023-24 expenditure categories. Feed continues to be the largest expenditure category at 29 per cent in 2023-24 and has been the largest expense category since 2007-08. Labour was the second-highest operating expense for dairy farms at 20.0 per cent of total operating expenditure. Maintenance and fertiliser contributed 18 and 9 per cent, respectively.

Graph 5.3: Proportion of Dairy Operating Expenditure in 2023-24




Changes in the total farm expenditure are driven by the farm area, herd size and milksolids produced. Therefore, it is more appropriate to assess spending per cow, hectare, or kilogram of milksolids to track changes in individual expense items. In 2023-24, average farm working expenses (i.e. cash expenses) per kilogram of milksolids decreased by $0.30 (-5%) to $5.45. Although this is lower than in 2022-23, it remains the second highest in the last 10 seasons.

Table 5.1 shows the distribution (%) of dairy expenses in the last 10 seasons. The proportion (%) of feed expenditure in the 2023-24 season (29.3 per cent) was the second highest in the last 10 seasons, reflecting the high feed costs and inflation during the season. In contrast, the proportion of fertiliser expenses in the 2023-24 season (9.0 per cent) was the second lowest in the last 10 seasons.

Table 5.1: Proportion (%) of Dairy Operating Expenditure in the last 10 years.

| Season | Animal health expenditure (%) | Depreciation expenditure (%) | Feed expenditure (%) | Fertiliser expenditure (%) | Labour expenditure (%) | | Maintenance expenditure (%) | Overheads expenditure (%) |
|---|---|---|---|---|---|---|---|---|
| 2014-15 | | 8.6 | 8.5 | 27.2 | 10.1 | 20.8 | 18.3 | 6.5 |
| 2015-16 | | 7.8 | 9.2 | 26.5 | 9.9 | 22.6 | 17.0 | 7.0 |
| 2016-17 | | 8.6 | 9.2 | 24.6 | 10.2 | 21.4 | 19.0 | 7.0 |
| 2017-18 | | 8.6 | 8.7 | 25.4 | 9.9 | 21.1 | 19.8 | 6.5 |
| 2018-19 | | 8.6 | 8.2 | 27.9 | 9.1 | 20.5 | 18.8 | 6.9 |
| 2019-20 | | 8.9 | 8.2 | 27.2 | 9.2 | 20.2 | 19.6 | 6.7 |
| 2020-21 | | 8.8 | 7.9 | 27.9 | 8.8 | 20.3 | 19.5 | 6.8 |
| 2021-22 | | 8.6 | 7.1 | 28.9 | 9.6 | 19.1 | 20.1 | 6.6 |
| 2022-23 | | 8.6 | 6.5 | 30.3 | 10.4 | 19.0 | 18.7 | 6.5 |
| 2023-24 | | 8.8 | 7.2 | 29.3 | 9.0 | 20.0 | 18.4 | 7.3 |

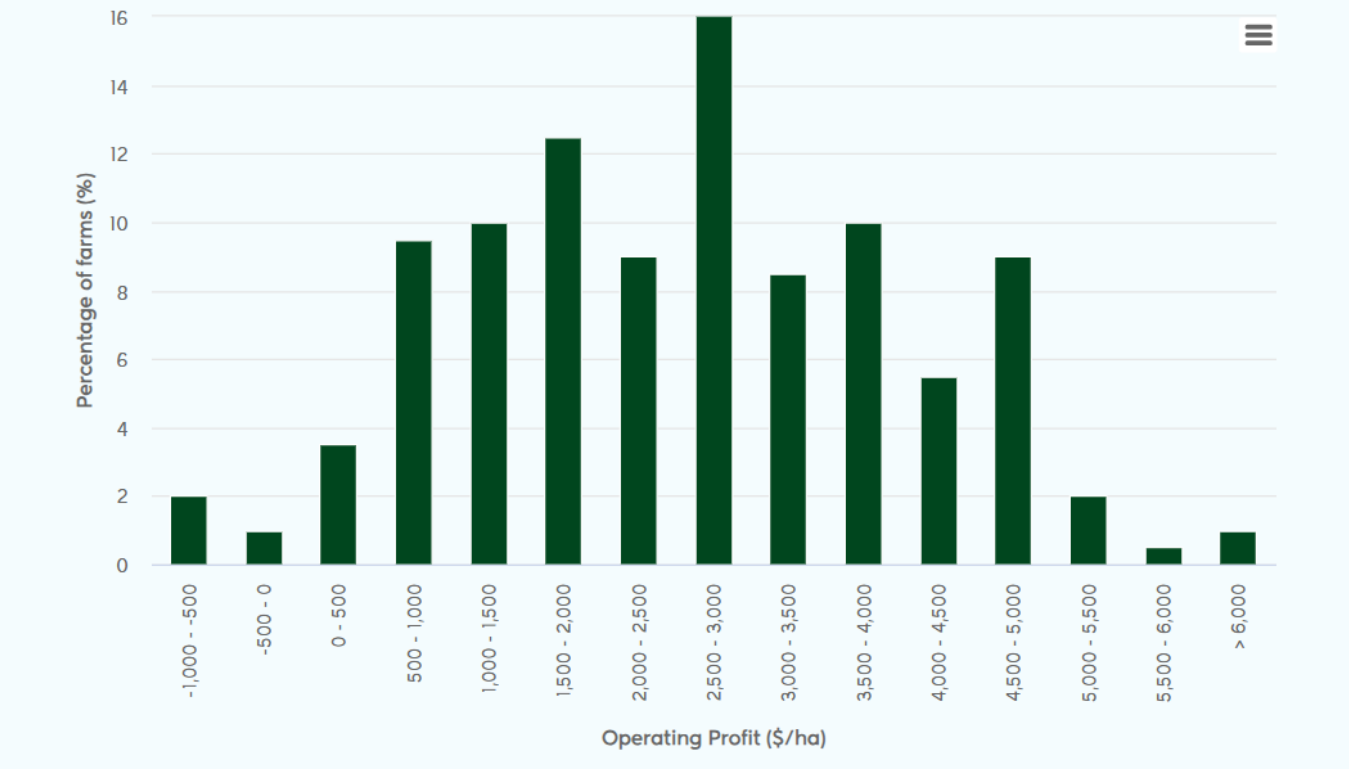
Table 12.4 shows the changes in operating expenses categories per kilogram of milksolids. Many of these expenses remained stable, closely aligning with their long-term trend. Feed and fertiliser were the categories that experienced the greatest decreases compared to the previous season, decreasing by $0.11 and $0.13 per kg of milksolids, respectively. In 2023-24, Dairy operating expenses per kilogram of milksolids were $6.51, $0.16 below the 2022-23 season. As with many of the trends over the season this was the second highest level of operating expenses in the last decade, and the third time that operating expenses per kilogram of milksolids exceeded $6.00.

## 5.4. Profitability

Operating profit is a key indicator of dairy farm financial performance. This measure, expressed on a per hectare basis, is beneficial for comparing the profitability between farms. Operating profit incorporates adjustments to allow comparisons between farms, but does not include interest, tax, rent payments or capital expenditure. Table 12.3 shows the revenue and expenditure items included in operating profit on a per hectare basis.

Graph 5.4 shows the distribution of 2023-24 operating profit per hectare. Ninety per cent of farmers had operating profits between $500 and $5,000 per hectare, while 4 per cent of farmers had operating profits over $5,000 per hectare. About 3 per cent of farmers recorded a negative operating profit in 2023-24, 1.1 percentage point higher than the previous season.

Graph 5.4: Distribution of Owner-operators Profit ($/hectare) in 2023-24




Graph 5.5 shows the distribution of operating profit ($/ha) in the last ten seasons. The distribution of operating profit has noticeable shifts across seasons, and it is clearly influenced by the milksolids payout received ($/kg milksolids sold), with a higher spread at high payouts and a narrower spread at lower payouts. In 2023-24, the range in operating profit ($/ha) was slightly larger than in the previous season, with 50% of farms (between the 25th and 75th percentile) having an operating profit per hectare spanning $2,202 (between $1,469 and $3,671), and 10% of farms having an operating profit per hectare below $704.

Graph 5.5: Distribution of operating profit ($/ha) in the last 10 seasons

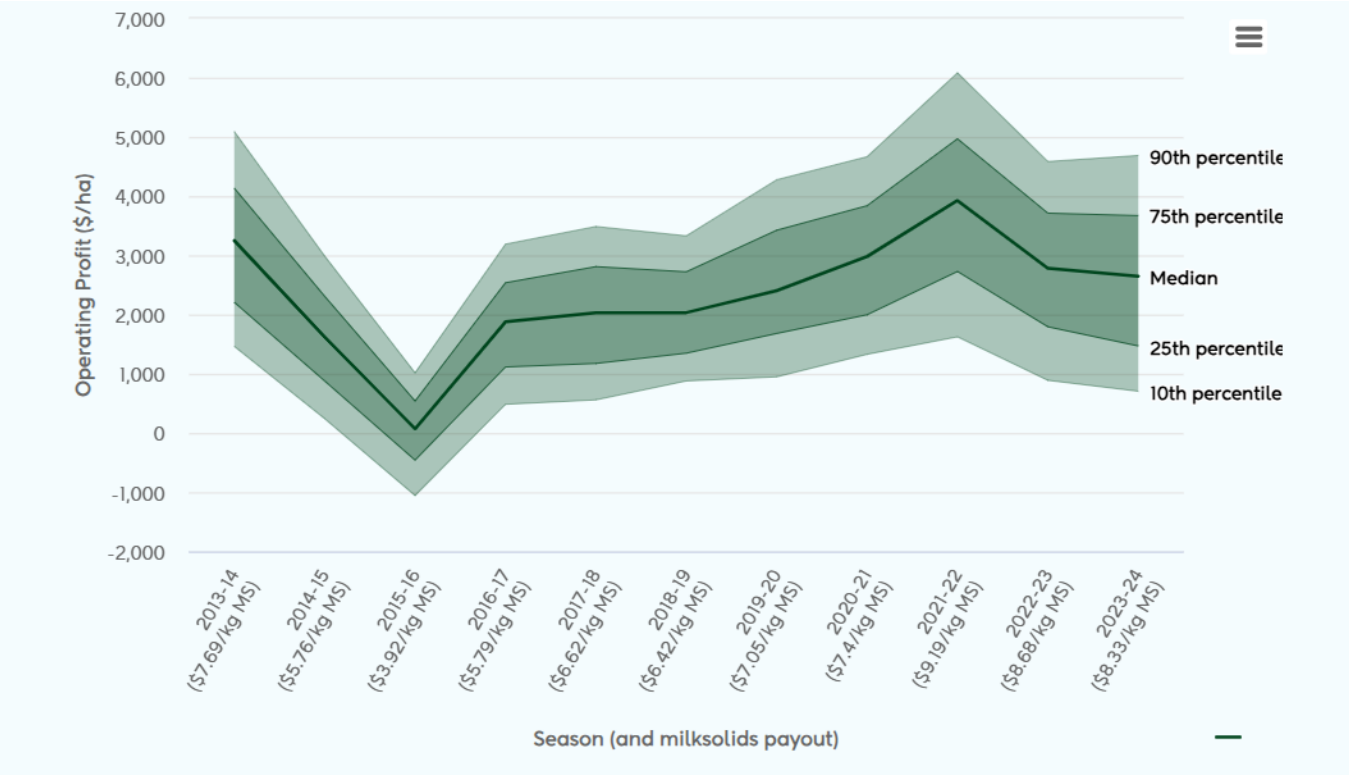


Table 5.2 and Table 5.3 show the average size and profitability of farms by quartile. Quartiles were constructed by ranking surveyed farms on operating profit per hectare across New Zealand. Top quartile farms average $4,529 operating profit per hectare, compared with $725 for the bottom quartile group. Each quartile group produced more milksolids per hectare compared with the quartile lower. Top quartile farmers produced approximately 60 per cent more kilograms of milksolids per hectare than the bottom quartile farmers, with substantially lower farm working expenses per kilogram of milksolids (-23%).

There is a small difference in gross farm revenue per kg MS across the quartiles, with farmers in the top quartile having a similar gross farm revenue than farmers in the bottom quartile. The differences in profit per kilogram of milksolids between the quartiles is mainly driven by significant differences in the groups operating expenses per kilogram of milksolids. Top quartile farms are more efficient as demonstrated by their lower operating expenses per kilogram of milksolids. Operating expenses per kilogram of milksolids increased from the top quartile group to the bottom quartile group from $5.72 to $8.13, respectively.

Table 5.2: 2023-24 Owner-operator Quartile Profit ($/kg MS)

| Variable | Bottom Quartile | Lower Middle Quartile | Upper Middle Quartile | Top Quartile |
|---|---|---|---|---|
| PHYSICAL CHARACTERISTICS | | | | |
| Number of herds | 50 | 50 | 50 | 50 |
| Effective hectares | 129 | 150 | 150 | 136 |
| Peak cows milked | 295 | 390 | 428 | 421 |
| Stocking rate (cows/ha) | 2.3 | 2.6 | 2.8 | 3.0 |
| Kg milksolids sold | 107,697 | 149,355 | 181,498 | 188,408 |
| Milksolids sold per hectare | 842 | 1,014 | 1,176 | 1,348 |
| Milksolids sold per cow | 362 | 386 | 415 | 441 |
| PAYOUT RECEIVED ($/kg MS sold) | 8.26 | 8.38 | 8.42 | 8.53 |
| DAIRY CASH INCOME ($/kg MS): | | | | |
| Milk sales (net of dairy levies) | 8.24 | 8.33 | 8.32 | 8.47 |
| Net livestock sales (sales - purchases) | 0.84 | 0.61 | 0.61 | 0.51 |
| Other dairy cash income | 0.09 | 0.04 | 0.04 | 0.05 |
| Net dairy cash income | 9.17 | 8.99 | 8.98 | 9.02 |
| CASH FARM WORKING EXPENSES ($/kg MS): | | | | |
| Wages | 0.81 | 0.81 | 0.72 | 0.67 |
| Animal health | 0.36 | 0.33 | 0.29 | 0.28 |
| Breeding & herd improvement | 0.22 | 0.20 | 0.18 | 0.15 |
| Farm dairy | 0.08 | 0.08 | 0.09 | 0.07 |
| Electricity | 0.17 | 0.15 | 0.12 | 0.11 |
| Net feed made, purchased, cropped | 1.92 | 1.34 | 1.33 | 1.25 |
| Stock grazing | 0.23 | 0.37 | 0.55 | 0.65 |
| Support block lease | 0.09 | 0.08 | 0.07 | 0.03 |
| Fertiliser (including Nitrogen) | 0.70 | 0.71 | 0.57 | 0.44 |
| Irrigation | 0.00 | 0.02 | 0.13 | 0.12 |

| | | | | |
|---|---|---|---|---|
| Regrassing | 0.11 | 0.09 | 0.07 | 0.07 |
| Weed & pest | 0.05 | 0.03 | 0.04 | 0.03 |
| Vehicles & fuel | 0.38 | 0.28 | 0.23 | 0.19 |
| Repairs & maintenance | 0.59 | 0.52 | 0.39 | 0.37 |
| Freight & general | 0.11 | 0.09 | 0.08 | 0.08 |
| Administration | 0.23 | 0.22 | 0.16 | 0.18 |
| Insurance | 0.17 | 0.14 | 0.12 | 0.11 |
| ACC | 0.04 | 0.04 | 0.03 | 0.03 |
| Rates | 0.15 | 0.14 | 0.12 | 0.10 |
| Farm working expenses | 6.41 | 5.62 | 5.30 | 4.92 |
| Cash operating surplus | 2.76 | 3.37 | 3.68 | 4.10 |
| ADJUSTMENTS ($/kg MS): | | | | |
| Value of change in dairy livestock | -0.19 | -0.06 | -0.09 | -0.03 |
| Less labour adjustment | 0.88 | 0.61 | 0.53 | 0.39 |
| Plus feed inventory adjustment | -0.03 | 0.06 | 0.02 | 0.01 |
| Less owned support block adjustment | 0.23 | 0.19 | 0.07 | 0.06 |
| Less depreciation | 0.57 | 0.53 | 0.47 | 0.37 |
| Net Adjustments | -1.89 | -1.34 | -1.14 | -0.83 |
| OPERATING CASH & NON-CASH ($/kg MS): | | | | |
| Dairy gross farm revenue | 8.99 | 8.92 | 8.88 | 8.99 |
| Dairy operating expenses | 8.12 | 6.90 | 6.35 | 5.72 |
| Dairy operating profit | 0.87 | 2.03 | 2.53 | 3.27 |
| OPERATING CASH & NON-CASH ($/ha): | | | | |
| Dairy gross farm revenue | 7,503 | 8,895 | 10,716 | 12,443 |
| Dairy operating expenses | 6,778 | 6,873 | 7,659 | 7,914 |
| Dairy operating profit | 725 | 2,022 | 3,057 | 4,529 |
| Operating profit margin (%) | 10.2 | 22.8 | 30.1 | 37.9 |

In 2023-24, the operating return on dairy assets ranged from 2.1 per cent in the bottom quartile to 7.6 per cent in the top quartile, a range of 5.5 percentage points (Table 5.3). This range in operating return on dairy assets (difference between the top quartile and the bottom quartile) was close to the one observed in 2022-23 (5.3 per cent).

Table 5.3: 2023-24 Owner-operator Quartile Financial Position

| Variable | Bottom Quartile | Lower Middle Quartile | Upper Middle Quartile | Top Quartile |
|---|---|---|---|---|
| RETURNS: | | | | |
| Operating return on dairy assets % | 2.1 | 4.7 | 5.7 | 7.6 |
| Total return on assets % | -1.4 | 2.4 | 3.7 | 5.6 |
| Total return on equity % | -8.3 | -2.1 | 0.2 | 5.5 |
| Growth in equity % | -6.8 | -0.9 | -1.0 | 0.5 |
| DEBT: | | | | |
| Closing term liabilities ($/kg MS sold) | 22.63 | 22.66 | 22.88 | 22.56 |
| Closing debt to asset % | 39.0 | 44.5 | 44.5 | 47.0 |

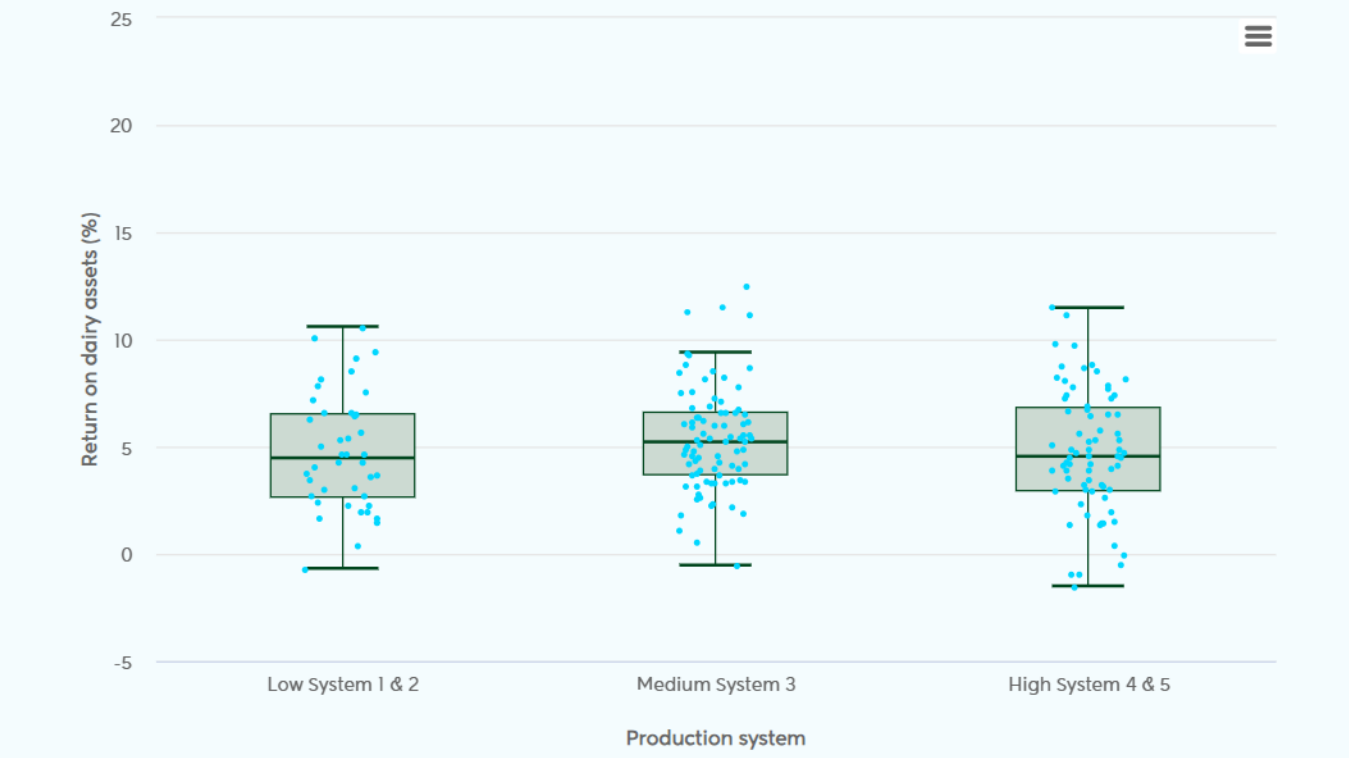
Measuring the cost efficiency of milksolids production (operating expenses/kg MS) relative to milksolids payout is more relevant than production or expenditure alone when focusing on how to achieve high profit margins. The last two rows in Table 5.4 shows the strength of the association between these variables. A value of 0 per cent means there is no association, while a value of 100 percent means a perfect association. In the 2023-24 season, the relationship between dairy operating profit per hectare and kilograms of milksolids sold per hectare (R2= 0.4) was similar to the previous year and the 10-year average (R2= 0.4). The relationship (R2) between dairy operating profit ($/ha) and operating expenses ($/kg MS) is moderate and had varied between 0.5 and 0.6 in the last 10 seasons.

Table 5.4: Relationship (R2) between Production, Profit and Operating Expenses

| Variable | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|---|---|---|---|
| Payout received ($/kg MS) | 5.76 | 3.92 | 5.79 | 6.62 | 6.42 | 7.05 | 7.40 | 9.20 | 8.68 | 8.40 |
| Milksolids (kg MS/ha) | 1,102 | 1,082 | 1,085 | 1,067 | 1,145 | 1,125 | 1,154 | 1,143 | 1,114 | 1,095 |
| Dairy operating expenses ($/kg MS) | 4.94 | 4.45 | 4.60 | 5.13 | 5.10 | 5.47 | 5.44 | 6.51 | 6.84 | 6.75 |
| Dairy operating profit ($/ha) | 1,537 | -9 | 1,937 | 2,238 | 2,154 | 2,540 | 2,976 | 3,920 | 2,775 | 2,576 |
| R2 (%) - dairy operating profit $/ha & kg MS/ha | 0.2 | 0.0 | 0.3 | 0.4 | 0.4 | 0.5 | 0.5 | 0.5 | 0.4 | 0.4 |
| R2 (%) - dairy operating profit $/ha & operating expenses $/kg MS | 0.6 | 0.6 | 0.5 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |

Operating return on dairy assets is a measure of the operating profit generated by the dairy assets employed at the start of the season. This measure excludes non-dairy activities and any change in capital value. The average operating return on dairy assets was 5.3 per cent in 2023-24. Grouping farm systems into low (systems 1 and 2), medium (system 3) and high input (systems 4 and 5) show that the median operating return on dairy assets was highest for medium input farms (5.2%, Graph 5.6). There was a significant difference in the variation of operating returns on dairy assets within the groups, with the highest range in the high input farms (-1.54% to 14.4%) and the lowest range in the medium input farms (-0.57% to 9.34%).

Graph 5.6: Distribution of Return on Dairy Assets in 2023-24




Business profit before tax is another measure of profitability that considers the cost of borrowing and other non-dairy activities. This is the overall profitability of the business enterprise and not just the dairy farm operation, the 2023-24 figures are shown in Table 5.5.

Table 5.5: 2023-24 Business Profit before Tax

| Variable | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|---|---|---|---|
| BUSINESS PROFIT ($): | | | | | | | | | | |
| Dairy operating profit | 223,630 | -1,291 | 286,227 | 338,871 | 314,435 | 390,831 | 449,132 | 598,081 | 436,843 | 420,064 |
| Plus labour adjustment | 59,021 | 56,341 | 61,154 | 63,920 | 62,545 | 62,011 | 70,195 | 79,852 | 80,362 | 84,797 |
| Plus owned support block adjustment | 14,889 | 14,126 | 14,359 | 16,786 | 13,143 | 16,151 | 16,720 | 18,843 | 20,738 | 22,776 |
| Plus net non-dairy profit | -673 | -318 | 3,331 | 5,444 | 6,904 | 11,894 | 3,870 | 5,499 | 5,136 | 4,313 |
| Plus net off-farm income | 12,078 | 9,238 | 19,811 | 18,114 | 6,670 | 13,167 | 9,838 | -199 | 36,366 | 15,647 |
| Less rent (excluding support block) | 22,250 | 20,047 | 19,582 | 20,703 | 12,499 | 17,280 | 17,069 | 14,929 | 13,227 | 8,845 |
| Less interest | 195,984 | 197,277 | 197,343 | 191,459 | 194,022 | 172,460 | 140,608 | 149,895 | 217,165 | 295,210 |
| Business profit before tax | 90,731 | -139,258 | 167,789 | 231,251 | 197,163 | 304,312 | 392,077 | 537,252 | 349,052 | 243,543 |
| Business profit before tax ($/total hectares) | 478 | -734 | 887 | 1,174 | 1,077 | 1,681 | 2,131 | 2,868 | 1,834 | 1,271 |

**Note:**

Total hectares = Total effective hectares (effective dairy + effective dairy support block + effective non-dairy).

On average, total effective hectares (effective dairy + effective dairy support block + effective non-dairy) increased by two hectares from the previous season to 192 hectares. The average dairy farm in 2023-24 made a business profit before tax of $243,543. This business profit is equivalent to $1,271 per total effective hectare, $563 less than the previous year. The dairy operating profit per farm decreased by $16,779, to $420,064, compared to the previous season. Rent payments decreased by 33 per cent (from $13,227 to $8,845). Interest payments per farm in 2023-24 ($295,210) were the highest of the last 10 seasons, and $78,045 (36%) higher than the previous season.

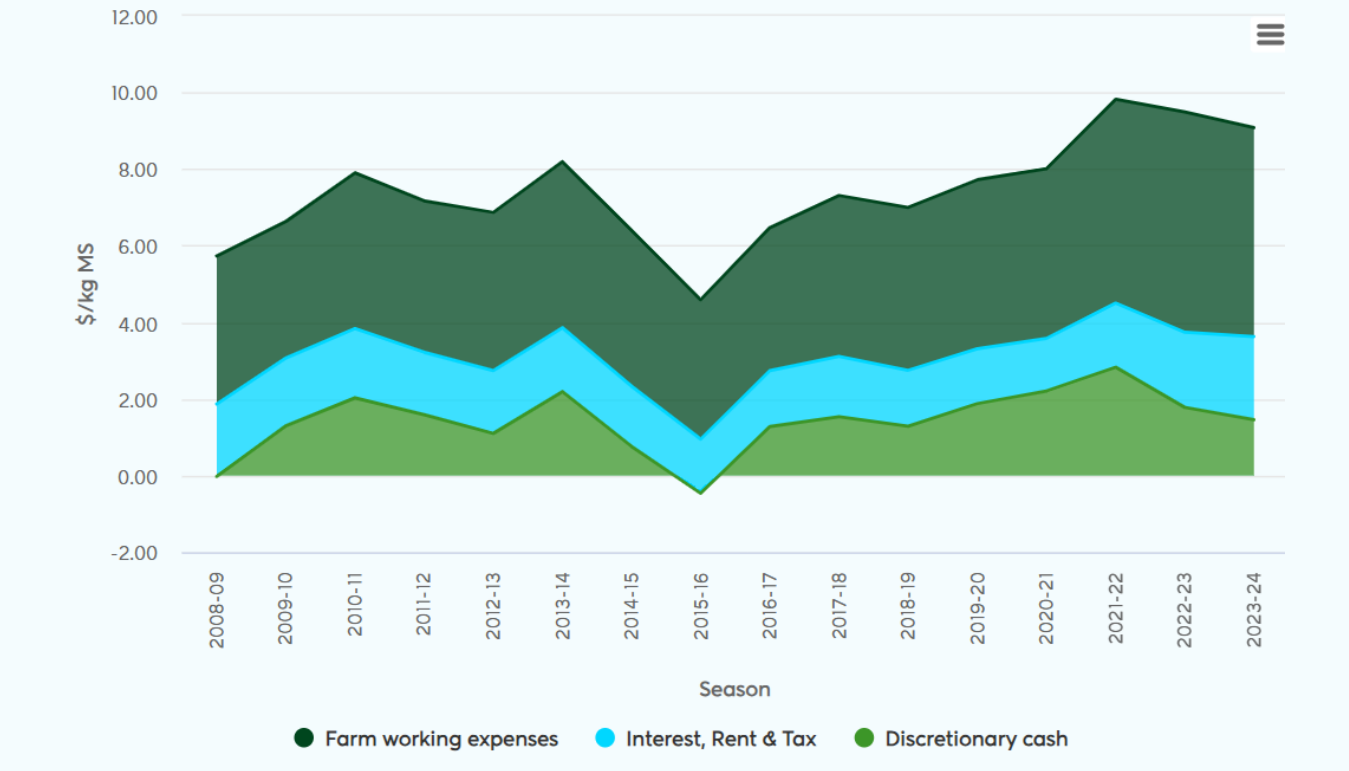
## 5.5. Cash Flow

The cash operating surplus is the difference between net dairy cash income and farm working expenses. In 2023-24, the cash operating surplus was $612,103, constituting a 3 per cent increase from 2022-23. On a per kilogram of milksolids basis, the cash operating surplus in 2023-24 was $3.51, up 0.6 per cent from the previous season. Once rent, interest and tax are paid, and net income from non-dairy farming activities are added, the amount left is discretionary cash. Total discretionary cash in 2023-24 was $253,926, equating to $1.46 per kilogram of milksolids, 8% lower than the previous season (Table 12.5).

Many farm businesses include cash funds and off-farm income in their annual accounts. The cash available after including these activities and any change of funds deposited or withdrawn from the IRD Income Equalisation Scheme is the cash available for drawings, debt repayments and/or capital development and purchases. Cash available for living and business growth in 2023-24 was $229,715 per farm, 24 per cent lower than the previous season.

On a per kilogram of milksolids basis, compared to the previous year, interest, rent & tax increased by 11 per cent (to $2.17), Farm working expenses decreased by 5 per cent (to $5.45) and Discretionary cash decreased by 18 per cent (to $1.46) in 2023-24 (Graph 5.7).

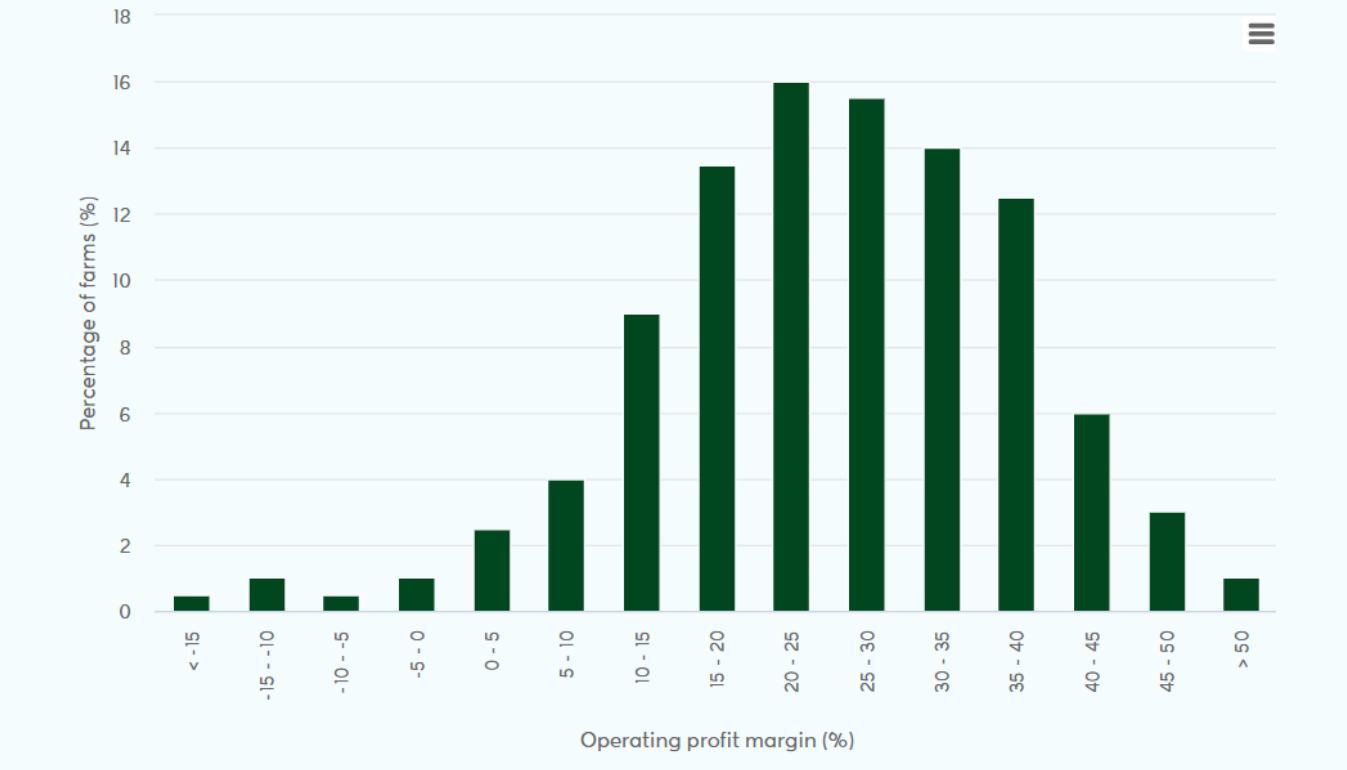
Graph 5.7: Annual Change in Revenue and Expenditure Over the Last 10 Years ($/kg MS)



## 5.6. Operating Profit Margin

Operating profit margin is an indicator of dairy farm financial performance. This measurement is expressed as a percentage and describes the proportion of gross farm revenue converted to profit (Operating profit/Gross farm revenue). The ability of a farmer to convert a high proportion of their revenue to profit indicates that the farm is cost-efficient and better placed to deal with financial and production risks. The average operating profit margin in 2023-24 was 27 percent, down 1 percentage points from the 2022-23 season. Graph 5.8 shows the distribution of operating profit margin in 2023-24. Ninety-three per cent of farms had an operating profit margin between 0 and 45 percent, with 4 per cent of farms having an operating profit margin above 45 per cent and 3 per cent of farms having a negative operating profit margin.

Graph 5.8: Distribution of Operating Profit Margin (%) in 2023-24



# 6. Owner-Operator: Equity and Capital Financial Analysis

## 6.1. Introduction

This section considers owner-operator dairy farms' equity and capital position, with additional information about trends over time.

The operating return on dairy assets slightly decreased from 5.4 per cent in 2022-23 to 5.3 per cent in 2023-24, and the total return on equity decreased from 3.5 per cent in 2022-23 to 0.9 per cent in 2023-24 (Table 12.7). Total liabilities as a percentage of total assets (debt to asset ratio) increased from 44.4 per cent in 2022-23 to 46.2 per cent in 2023-24, the first increase since the peak of 53.4 per cent in 2018-19. Closing term liabilities per kilogram of milksolids increased slightly to $22.30, the third lowest of the last ten seasons.

## 6.2. Dairy Assets

The number of dairy farms sold in 2023-24 was 117, 16 per cent (23 farms) lower than in 2022-23. The REINZ average sales price per kilogram of milksolids and per hectare for the last 10 seasons is shown below in Table 6.1. Hectares are measured as total rather than effective area, which is generally used in this publication. The analysis only includes farms considered to be commercial farms. Raw data from REINZ prior to 2019-20 was weighted by the number of farms in each region, but from 2019-20 figures have not been weighted. The average dairy land price per kilogram of milksolids decreased to $36 in 2023-24, $1 higher than in the previous season, but below the 10-year average of $38 and the peak value of $44 observed in the 2014-15 season.

Table 6.1: Average Sales Price and Number of Dairy Farms Sold

| Variable | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|---|---|---|---|
| Farms sold | 244 | 192 | 217 | 226 | 148 | 113 | 198 | 200 | 140 | 117 |
| Average $ sale price/kg MS | 44 | 39 | 40 | 40 | 38 | 37 | 35 | 35 | 37 | 36 |
| Average $ sale price/ha | 39,577 | 36,557 | 37,835 | 38,015 | 36,846 | 33,410 | 31,393 | 34,427 | 34,600 | 30,584 |
| Average $ sale price/ha (inflation adjusted) | 51,422 | 47,305 | 48,126 | 47,640 | 45,415 | 40,590 | 36,906 | 37,718 | 35,752 | 30,584 |
| CPI | 979 | 983 | 1,000 | 1,015 | 1,032 | 1,047 | 1,082 | 1,161 | 1,231 | 1,272 |

**Note:**

- Inflation-adjusted value (real dollar value) has been estimated using the Consumers Price Index for the end of each June quarter (Sourced from Statistics New Zealand)

## 6.3. Liabilities and Debt Servicing

Interest is the cash cost of borrowing funds, while rent is the cost of borrowing assets. Interest and rent per kilogram of milksolids has increased steadily in recent years, from $0.92 in 2020-21 to $1.75 in 2023-24, the highest of the last 10 seasons (Table 6.2). Interest and rent represented 19.6 percent of gross farm revenue (GFR), about 5 percentage points higher than in the previous season. This means that for every dollar of gross farm income earned $0.196 are required to pay interest and rent.

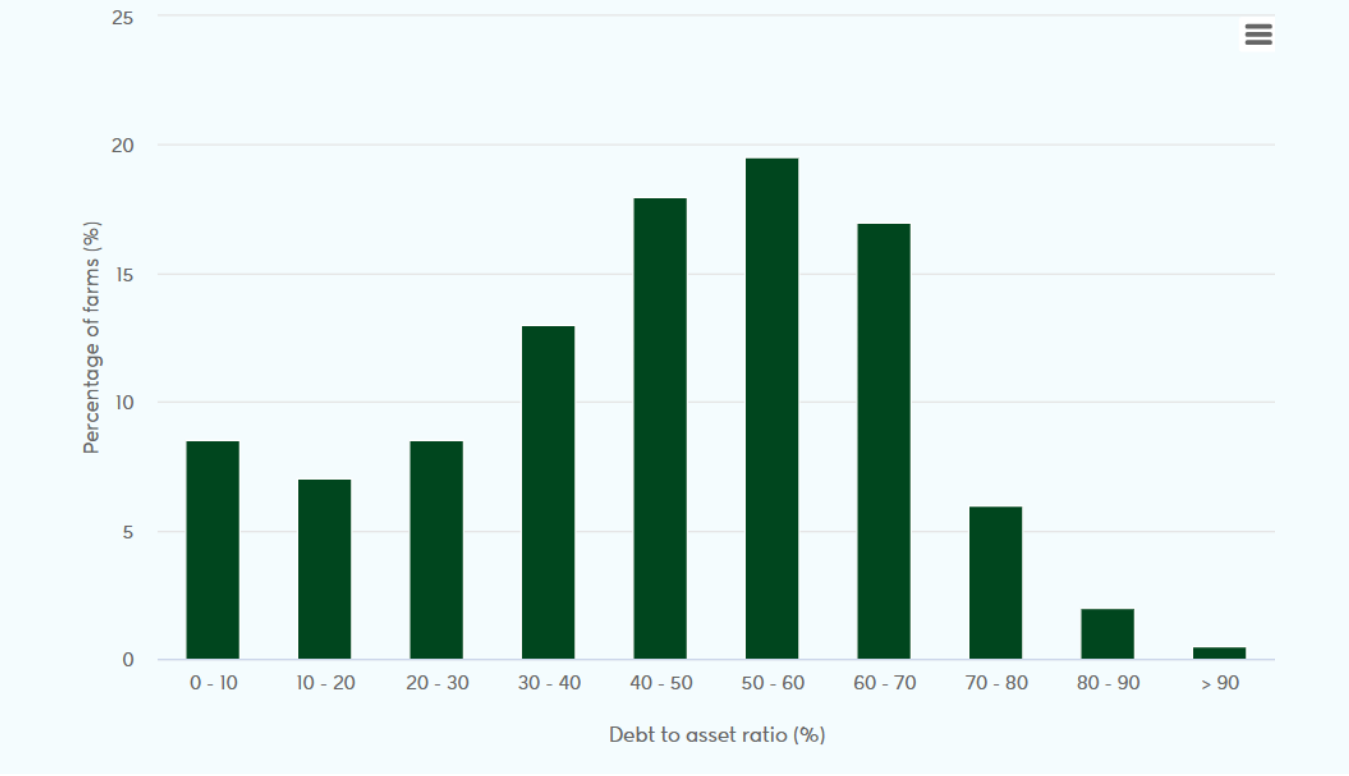
Table 6.2: Debt Servicing Ratios

| Variable | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|---|---|---|---|
| Interest & rent $/kg MS | 1.36 | 1.36 | 1.35 | 1.31 | 1.24 | 1.12 | 0.92 | 0.95 | 1.36 | 1.75 |
| Interest & rent % Gross farm revenue (GFR) | 21.5 | 30.5 | 21.2 | 18.2 | 17.7 | 14.7 | 11.6 | 9.7 | 14.7 | 19.6 |
| Term liabilities $/kg MS | 21.26 | 22.49 | 25.00 | 25.31 | 24.92 | 23.25 | 22.37 | 23.56 | 22.22 | 22.30 |

Compared to the 2022-23 season, the debt-to-asset ratio increased by about 2 percentage points in 2023-24, to 46.2 percent (Table 12.6). The debt-to-asset ratio in 2023-24 is the third lowest of the past ten seasons, slightly higher than the 2014-15 ($45.8) and 2022-23 ($44.4) seasons and 7.2 percentage points below the peak of 53.4 percent recorded in 2018-19 (Table 12.6).

Graph 6.1 shows the debt-to-asset ratio distribution among farms in 2023-24. Over 8 percent of farms had a debt-to-asset ratio below 10 percent and about 28 percent of farms had a debt-to-asset ratio between 10 and 40 percent. At the higher end about 9 percent of the farms had a debt-to-asset ratio exceeding 70 percent, with 0.5 per cent in the high-risk category of over 90 percent.

Graph 6.1: Debt to Asset Distribution in 2023-24



Over the past ten years, the average farm has increased its milksolids production by 9 percent. During this same period, total liabilities have increased by about 13 percent, from $3.6 million to $4.1 million per farm. Compared to the most recent season, 2023-24, farmers increased their term liabilities by 3 per cent (Table 12.6).

## 6.4. Liquidity

Despite a decline in net dairy cash income and the high farm working expenses, a cash operating surplus of $612,103 was recorded in 2023-24, an increase of $18,608 compared to the previous season. Table 6.3 shows a breakdown of the changes in working capital, including the source and use of cash funds. The main contributors to total source of funds in 2023-24 were the cash operating surplus from the current season's farming operation and a change in working capital ($272,013) (Table 6.3). The change in working capital decreased to $272,013 in 2023-24, $28,815 lower than the previous season. This is mainly associated with the reduction in current assets (-$37,106) (Table 12.6).

In 2023-24, of the total cash available (total source of funds), 40 per cent was spent on interest payments in 2023-24 (Table 6.3). Drawings from the dairy business for family living was the second largest cash expenditure, representing 18 per cent of total cash expenditure. Tax payments made up 10 percent, while net capital transactions (development and purchases) and rent accounted for 4 per cent and 1 percent, respectively.

Table 6.3: Flow of funds

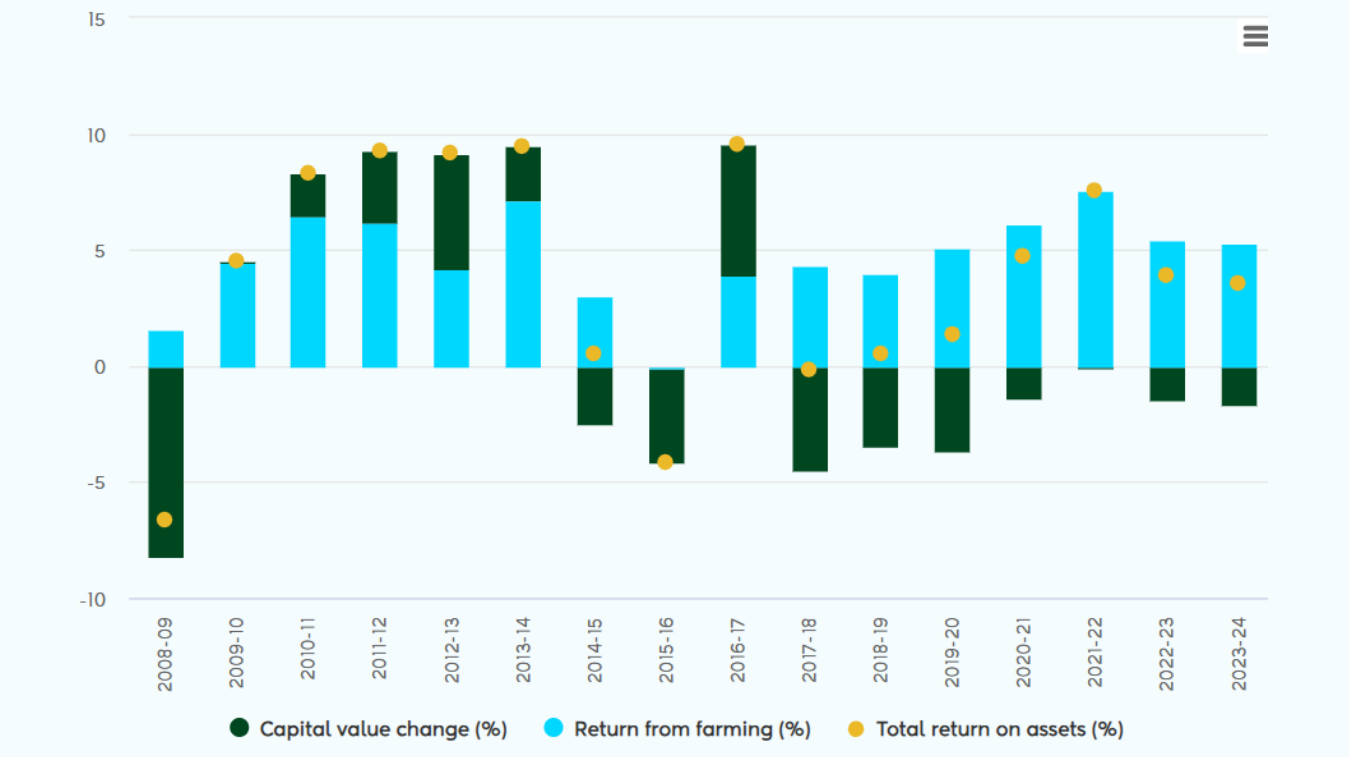
| Variable | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|---|---|---|---|
| WORKING CAPITAL: | | | | | | | | | | |
| Change in current assets | -99,057 | -24,651 | 56,493 | -12,326 | -17,418 | 205,720 | 241,278 | 309,682 | 292,846 | 246,273 |
| Less change in current liabilities | -20,779 | -2,678 | -9,780 | 29,949 | -5,362 | -7,441 | 5,350 | 44,208 | -7,982 | -25,740 |
| Change in working capital | -78,278 | -21,973 | 66,273 | -42,275 | -12,056 | 213,162 | 235,928 | 265,474 | 300,828 | 272,013 |
| WORKING CAPITAL: | | | | | | | | | | |
| Cash operating surplus | 361,272 | 141,757 | 415,410 | 478,511 | 446,701 | 537,460 | 601,492 | 771,689 | 593,495 | 612,103 |
| Plus change in working capital | -78,278 | -21,973 | 66,273 | -42,275 | -12,056 | 213,162 | 235,928 | 265,474 | 300,828 | 272,013 |
| Plus net non-dairy cash income | 486 | 904 | 3,371 | 6,064 | 7,040 | 10,682 | 3,378 | 7,614 | 5,411 | 3,586 |
| Plus net off-farm income | 12,078 | 9,238 | 19,811 | 18,114 | 6,670 | 13,167 | 9,838 | -199 | 36,366 | 15,647 |
| Plus introduced funds | 28,307 | 77,696 | -24,004 | -40,908 | -2,774 | -18,560 | -16,833 | -60,186 | -909 | -25,385 |
| Plus income equalisation | -9,579 | 16,765 | 1,307 | 40 | 307 | -475 | 875 | -1,643 | 29 | 1,175 |
| Plus increase in term debt | 93,026 | 111,778 | 75,868 | 92,523 | 74,554 | -49,483 | -59,719 | -43,029 | -38,791 | -135,765 |
| Total source of funds | 407,312 | 336,165 | 558,036 | 512,069 | 520,442 | 705,952 | 774,958 | 939,721 | 896,429 | 743,374 |
| APPLICATION OF FUNDS: | | | | | | | | | | |
| Rent (excluding support block) | 22,250 | 20,047 | 19,582 | 20,703 | 12,499 | 17,280 | 17,069 | 14,929 | 13,227 | 8,845 |
| Plus interest | 195,984 | 197,277 | 197,343 | 191,459 | 194,022 | 172,460 | 140,608 | 149,895 | 217,165 | 295,210 |
| Plus tax | 34,078 | 7,939 | 16,773 | 41,532 | 38,315 | 52,696 | 77,161 | 124,502 | 102,018 | 73,356 |
| Plus net capital transactions | 201,119 | 76,697 | 109,749 | 238,591 | 207,027 | 113,522 | 148,238 | 267,306 | 137,369 | -26,905 |
| Plus drawings | 110,437 | 78,151 | 82,043 | 104,334 | 95,173 | 92,090 | 106,679 | 114,873 | 117,646 | 132,471 |
| Total application of funds | 563,868 | 380,111 | 425,490 | 596,619 | 547,036 | 448,048 | 489,756 | 671,505 | 587,425 | 482,976 |
| Total source of funds less application of funds | -156,556 | -43,946 | 132,546 | -84,550 | -26,593 | 257,903 | 285,202 | 268,215 | 309,003 | 260,398 |

## 6.5. Returns

The return on dairy assets is discussed under farm profitability (section 5.4). The total return on assets considers operating profit from both dairy and non-dairy farming operations, plus the change in the value of capital assets. The total return on assets in 2023-24 was 3.6 percent, close to the total return on assets in the previous season (3.9 percent). The 2023-24 total return on assets comprised 5.3 per cent net return from all farming operations and -1.7 per cent net return from capital (Graph 6.2).

For the past decade, the percentage of total return on assets has ranged between -4.1 and 9.6 percent, driven by changes in the value of land and buildings, dairy company share values, livestock values and profits (Table 12.6 and Table 12.7).

Graph 6.2: Owner-Operator Total Return on Assets




The percentage return on equity is the return on the owner's funds, including capital changes after interest is paid (Table 12.7). The return on equity will be higher than the total return on assets when the latter is greater than the cost of debt and vice versa. In 2023-24, the total return on equity (0.9%) was lower than the total return on assets (3.6%), and 2.6 percentage points lower than in 2022-23.

# 7. Owner-Operator: Regional and Systems Financial Analysis

## 7.1. Regional Profitability

DairyBase® classifies farms into eight regions, five in the North Island and three in the South Island (refer to section 2.6). **The values reported in Table 7.1 and 7.2 are median values to reduce numerical bias created by the average of sums methodology in regional samples. Thus, totals and sub-totals in these tables will not add up but will better represent the average values of the data sample. See section 2.11 for an explanation of this methodology**.

Table 7.1 shows the values of key performance indicators (KPIs) per kilogram of milksolids in the eight regions, for the 2023-24 season. Dairy farms in the Taranaki region had the smallest average herd size (282 cows), followed by Northland (300). The Canterbury and Otago-Southland regions had the largest herd sizes in New Zealand, with 685 cows and 585 cows, respectively.

The West Coast - Top of the South, Northland and Lower North Island regions had the lowest stocking rates in the country, with 2.1, 2.4 and 2.4 cows/ha, respectively. Canterbury had the highest stocking rate (3.5 cows/ha), and the remaining regions had a stocking rate that varied between 2.8 and 3.0 cows/ha.

Northland and Bay of Plenty recorded the lowest average milksolids production per cow of all the regions (360 and 365 kg MS/cow, respectively). The other three North Island regions recorded milksolids per cow between 390 and 413 kg MS (Table 7.1). The Otago-Southland region had the highest milksolids production per cow (472 kilograms) in the South Island and the rest of the country. However, Canterbury production is considerably higher on a per hectare basis (1,605 kilograms) due to its higher stocking rate.

The average payout received in each region varied between $7.44 and $8.79 per kilogram of milksolids sold. Regional average farm working expenses (FWE) per kilogram of milksolids were lowest in Taranaki ($4.94), and the highest FWE per kilogram of milksolids was reported in Northland ($6.24). Canterbury ($3,584) and Otago-Southland ($3,498) recorded the highest operating profit on a per hectare basis, while the Northland region recorded the lowest operating profit per hectare ($1,306). Farms in the Otago-Southland and Taranaki regions experienced higher levels of profitability in 2023-24 relative to other regions in terms of dairy operating profit per kilogram of milksolids, $2.74 and $2.70 respectively (Table 7.1).

Table 7.1: Regional Owner-operator Profitability ($/kg MS) in 2023-24

| Variable | Northland | Waikato | Bay of Plenty | Taranaki | Lower North Island | West Coast - Top of the South | Canterbury | Otago - Southland |
|---|---|---|---|---|---|---|---|---|
| PHYSICAL CHARACTERISTICS | | | | | | | | |
| Number of herds | 29 | 40 | 24 | 43 | 15 | 17 | 19 | 13 |
| Effective hectares | 123 | 118 | 140 | 106 | 177 | 155 | 208 | 200 |
| Peak cows milked | 300 | 310 | 396 | 282 | 364 | 334 | 685 | 585 |
| Stocking rate (cows/ha) | 2.4 | 2.8 | 3.0 | 2.8 | 2.4 | 2.1 | 3.5 | 2.9 |
| Kg milksolids sold | 95,351 | 138,167 | 138,540 | 110,328 | 167,813 | 132,086 | 324,081 | 265,589 |
| Milksolids sold per hectare | 835 | 1,155 | 1,044 | 1,105 | 922 | 829 | 1,605 | 1,330 |
| Milksolids sold per cow | 360 | 413 | 365 | 407 | 390 | 391 | 456 | 472 |
| PAYOUT RECEIVED ($/kg MS sold) | 8.79 | 8.47 | 8.58 | 8.48 | 8.47 | 7.44 | 8.21 | 8.27 |
| DAIRY CASH INCOME ($/kg MS): | | | | | | | | |
| Milk sales (net of dairy levies) | 8.79 | 8.47 | 8.58 | 8.48 | 8.47 | 7.44 | 8.21 | 8.27 |
| Net livestock sales (sales - purchases) | 0.71 | 0.60 | 0.58 | 0.45 | 0.73 | 0.58 | 0.49 | 0.38 |
| Other dairy cash income | 0.04 | 0.01 | 0.01 | 0.01 | 0.02 | 0.00 | 0.00 | 0.02 |
| Net dairy cash income | 9.68 | 9.16 | 9.35 | 9.02 | 9.22 | 7.99 | 8.72 | 8.69 |
| CASH FARM WORKING EXPENSES ($/kg MS): | | | | | | | | |
| Wages | 0.92 | 0.72 | 0.66 | 0.45 | 0.79 | 0.60 | 0.86 | 0.65 |
| Animal health | 0.34 | 0.33 | 0.34 | 0.25 | 0.37 | 0.23 | 0.27 | 0.29 |
| Breeding & herd improvement | 0.21 | 0.20 | 0.17 | 0.18 | 0.20 | 0.16 | 0.17 | 0.16 |
| Farm dairy | 0.06 | 0.07 | 0.06 | 0.09 | 0.08 | 0.08 | 0.07 | 0.06 |
| Electricity | 0.16 | 0.14 | 0.15 | 0.13 | 0.16 | 0.13 | 0.09 | 0.11 |
| Net feed made, purchased, cropped | 1.51 | 1.73 | 1.49 | 1.37 | 1.21 | 0.98 | 0.97 | 1.23 |
| Stock grazing | 0.27 | 0.29 | 0.21 | 0.37 | 0.06 | 0.28 | 1.11 | 0.67 |
| Support block lease | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 | 0.03 | 0.00 | 0.00 |
| Fertiliser (including Nitrogen) | 0.73 | 0.55 | 0.51 | 0.55 | 0.49 | 0.97 | 0.42 | 0.54 |
| Irrigation | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.25 | 0.00 |
| Regrassing | 0.12 | 0.05 | 0.05 | 0.04 | 0.09 | 0.06 | 0.08 | 0.07 |
| Weed & pest | 0.04 | 0.03 | 0.02 | 0.03 | 0.03 | 0.03 | 0.01 | 0.02 |
| Vehicles & fuel | 0.36 | 0.25 | 0.25 | 0.28 | 0.25 | 0.30 | 0.13 | 0.20 |
| Repairs & maintenance | 0.57 | 0.37 | 0.38 | 0.39 | 0.56 | 0.35 | 0.33 | 0.50 |
| Freight & general | 0.08 | 0.07 | 0.08 | 0.09 | 0.07 | 0.09 | 0.05 | 0.07 |
| Administration | 0.15 | 0.15 | 0.16 | 0.16 | 0.16 | 0.17 | 0.16 | 0.13 |
| Insurance | 0.15 | 0.13 | 0.14 | 0.14 | 0.14 | 0.16 | 0.09 | 0.10 |
| ACC | 0.05 | 0.03 | 0.03 | 0.02 | 0.04 | 0.04 | 0.03 | 0.02 |
| Rates | 0.11 | 0.14 | 0.15 | 0.13 | 0.15 | 0.09 | 0.05 | 0.10 |
| Farm working expenses | 6.24 | 5.33 | 5.41 | 4.94 | 5.54 | 5.15 | 5.54 | 5.03 |
| Cash operating surplus | 3.13 | 3.66 | 3.83 | 4.03 | 3.55 | 3.05 | 3.07 | 3.52 |
| ADJUSTMENTS ($/kg MS): | | | | | | | | |
| Value of change in dairy livestock | -0.13 | 0.00 | -0.02 | -0.06 | -0.11 | -0.06 | -0.09 | 0.11 |
| Less labour adjustment | 0.83 | 0.66 | 0.64 | 0.82 | 0.65 | 0.84 | 0.12 | 0.36 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Plus feed inventory adjustment | 0.00 | 0.07 | 0.02 | 0.00 | -0.09 | 0.02 | 0.00 | 0.03 |
| Less owned support block adjustment | 0.00 | 0.00 | 0.03 | 0.00 | 0.21 | 0.00 | 0.00 | 0.28 |
| Less depreciation | 0.50 | 0.40 | 0.40 | 0.46 | 0.45 | 0.57 | 0.42 | 0.39 |
| Net Adjustments | -1.59 | -1.33 | -1.19 | -1.63 | -1.65 | -1.39 | -0.83 | -0.71 |
| OPERATING CASH & NON-CASH ($/kg MS): | | | | | | | | |
| Dairy gross farm revenue | 9.47 | 9.15 | 9.32 | 8.94 | 9.11 | 8.05 | 8.62 | 8.67 |
| Dairy operating expenses | 7.74 | 6.56 | 6.61 | 6.23 | 7.21 | 6.51 | 6.17 | 6.35 |
| Dairy operating profit | 1.73 | 2.47 | 2.70 | 2.60 | 2.04 | 1.57 | 2.35 | 2.74 |
| OPERATING CASH & NON-CASH ($/ha): | | | | | | | | |
| Dairy gross farm revenue | 7,459 | 10,496 | 9,870 | 10,041 | 8,541 | 6,558 | 13,592 | 11,830 |
| Dairy operating expenses | 5,889 | 7,347 | 7,134 | 7,000 | 6,402 | 5,307 | 9,632 | 8,608 |
| Dairy operating profit | 1,306 | 2,915 | 2,807 | 2,954 | 1,942 | 1,456 | 3,584 | 3,498 |
| Operating profit margin (%) | 18.6 | 28.6 | 29.4 | 29.5 | 22.1 | 19.0 | 27.1 | 32.2 |

Table 7.2 shows the values for the key indicators of financial position for the eight regions in 2023-24. The values reported in this table are medians; see section 2.11 for an explanation of this methodology. Regional median for operating returns on dairy assets ranged between 3.0 and 7.7 percent. Otago-Southland (7.7%) and Bay of Plenty (5.8%) had the highest operating return on dairy assets in 2023-24. The Lower North Island region had the lowest operating returns on dairy assets (3.0%). In the case of total return on assets, Otago-Southland (8.0%) and Canterbury (5.2%) recorded the highest values, while Northland recorded the lowest (-0.8%).

Total return on equity is the return on the owner's funds, including capital changes after interest is paid. Three regions had a positive percentage of total return on equity in 2023-24 (Table 7.2). The regional median for equity growth was negative for Northland (-3.1%), Waikato (-3.1%), Bay of Plenty (-1.9%), Taranaki (-1.5%), Lower North Island (-2.0%) and West Coast - Top of the South (-4.5%). Northland and West Coast - Top of the South had the largest growth in equity (15.9% and 17.8%, respectively).

Average term liabilities per kilogram of milksolids in 2023-24 varied significantly between regions. The range in term liabilities was $15.62 to $28.37 per kilogram of milksolids. Taranaki was the region with the highest term liabilities per kilogram of milksolids ($28.37) while West Coast - Top of the South was the lowest ($15.62/kg MS). Debt to asset levels also varied significantly between regions. Northland farms had the lowest debt-to-asset ratio (38.0%) while Taranaki farms had the highest debt-to-asset ratio (59.7%).

Table 7.2: Regional Owner-operator Financial Position 2023-24

| Variable | Northland | Waikato | Bay of Plenty | Taranaki | Lower North Island | West Coast - Top of the South | Canterbury | Otago - Southland |
|---|---|---|---|---|---|---|---|---|
| RETURNS: | | | | | | | | |
| Operating return on dairy assets % | 3.1 | 4.6 | 5.8 | 4.8 | 3.0 | 5.0 | 5.4 | 7.7 |
| Total return on assets % | -0.8 | 0.8 | 3.9 | 3.3 | 2.1 | 1.8 | 5.2 | 8.0 |
| Total return on equity % | -3.6 | -2.3 | 0.4 | -0.4 | -2.0 | -3.1 | 4.4 | 9.6 |
| Growth in equity % | -3.1 | -3.1 | -1.9 | -1.5 | -2.0 | -4.5 | 1.1 | 7.7 |
| DEBT: | | | | | | | | |
| Closing term liabilities ($/kg MS sold) | 20.90 | 22.11 | 20.93 | 30.66 | 24.49 | 14.61 | 18.93 | 20.44 |
| Closing debt to asset % | 38.0 | 45.1 | 49.3 | 59.7 | 39.4 | 49.0 | 51.6 | 45.7 |

## 7.2. Production Systems

DairyBase® categorises farms into five production systems based on the quantity of feed purchased (including off-farm grazing) and the timing and use of imported feed (refer to Section 2.7 for production system descriptions). For the following analysis, the systems have been combined to produce three categories: low (systems 1 and 2), medium (system 3) and high (systems 4 and 5). Within each production system, there is variation in milksolids production and profitability. The production system type is not a good indicator of profitability as a farm can be profitable (or unprofitable) operating at any system. Profit is less to do with the production system type and more to do with the management, milksolids production and the farm specific costs.

The values reported in Table 7.3 and 7.4 are median values to reduce numerical bias created by the **average of sums** methodology in regional samples. Thus, totals and sub-totals in these tables will not add up but will better represent average values in the data sample. See section 2.11 for an explanation of this methodology.

Table 7.3 shows the key 2023-24 performance indicators per kilogram of milksolids in the three production system categories. The average stocking rate increased from low to high production systems. Average milksolids per cow and per hectare also follow this trend, reflecting higher inputs of supplementary feed. On average low system farms recorded 334 kg MS per cow, medium system farms recorded an average of 404 kg MS per cow while high input farms recorded an average of 448 kg MS per cow. The average milksolids production per hectare in high input farms (1,231 kg) was 141 kilograms higher than in medium input farms (1,090 kg) and 399 kilograms lower than in low input farms (832 kg).

Dairy cash income per kilogram of milksolids was highest for low input systems ($9.12) due to milk sales being greater than the other two systems. Medium input systems had the lowest dairy cash income per kilogram of milksolids ($9.03) while high input systems had a cash income per kilogram of milksolids that fell between that of low and medium input systems ($9.08). Farm working expenses per kilogram of milksolids were $5.11 for low input systems, $5.19 for medium input systems and $5.75 for high input systems.

Cash operating surplus per kilogram of milksolids was the highest for low input systems ($4.00), followed by medium input systems ($3.80). High input systems recorded the lowest average cash operating surplus of all farm systems ($3.36 per kilogram of milksolids). Operating profit per kilogram of milksolids was highest for medium input systems ($2.56), and lowest for high input systems ($2.04). Low input systems had an operating profit per kilogram of milksolids of $2.49, which was close to that of medium input systems. Operating profit per hectare was highest for medium input systems ($2,904), $416 higher than high input systems ($2,488) and $551 higher than low input systems ($1,937).

Table 7.3: Owner-operator Production Systems Profitability ($/kg MS) in 2023-24

| Variable | 1 & 2 (Low) | 3 (Medium) | 4 & 5 (High) |
|---|---|---|---|
| PHYSICAL CHARACTERISTICS | | | |
| Number of herds | 42 | 85 | 73 |
| Effective hectares | 120 | 135 | 143 |
| Peak cows milked | 291 | 374 | 368 |
| Stocking rate (cows/ha) | 2.5 | 2.7 | 2.8 |
| Kg milksolids sold | 99,780 | 145,658 | 159,734 |
| Milksolids sold per hectare | 832 | 1,090 | 1,231 |
| Milksolids sold per cow | 334 | 404 | 448 |
| PAYOUT RECEIVED ($/kg MS sold) | 8.58 | 8.46 | 8.46 |
| | | | |
| DAIRY CASH INCOME ($/kg MS): | | | |
| Milk sales (net of dairy levies) | 8.58 | 8.46 | 8.46 |
| Net livestock sales (sales - purchases) | 0.60 | 0.49 | 0.58 |
| Other dairy cash income | 0.00 | 0.01 | 0.02 |
| Net dairy cash income | 9.12 | 9.03 | 9.08 |
| CASH FARM WORKING EXPENSES ($/kg MS): | | | |
| Wages | 0.72 | 0.68 | 0.66 |
| Animal health | 0.26 | 0.28 | 0.33 |
| Breeding & herd improvement | 0.18 | 0.18 | 0.19 |
| Farm dairy | 0.07 | 0.08 | 0.06 |
| Electricity | 0.15 | 0.13 | 0.13 |
| Net feed made, purchased, cropped | 0.81 | 1.38 | 1.69 |
| Stock grazing | 0.30 | 0.38 | 0.32 |
| Support block lease | 0.00 | 0.00 | 0.00 |
| Fertiliser (including Nitrogen) | 0.66 | 0.54 | 0.61 |
| Irrigation | 0.00 | 0.00 | 0.00 |
| Regrassing | 0.06 | 0.06 | 0.06 |
| Weed & pest | 0.03 | 0.03 | 0.03 |
| Vehicles & fuel | 0.30 | 0.24 | 0.28 |
| Repairs & maintenance | 0.44 | 0.39 | 0.45 |
| Freight & general | 0.08 | 0.07 | 0.07 |
| Administration | 0.19 | 0.14 | 0.15 |
| Insurance | 0.15 | 0.13 | 0.14 |
| ACC | 0.04 | 0.03 | 0.03 |
| Rates | 0.13 | 0.12 | 0.11 |
| Farm working expenses | 5.11 | 5.19 | 5.75 |
| Cash operating surplus | 4.00 | 3.80 | 3.36 |
| ADJUSTMENTS ($/kg MS): | | | |
| Value of change in dairy livestock | -0.07 | -0.04 | -0.02 |

| | | | |
|---|---|---|---|
| Less labour adjustment | 0.91 | 0.65 | 0.62 |
| Plus feed inventory adjustment | 0.00 | 0.00 | 0.00 |
| Less owned support block adjustment | 0.02 | 0.00 | 0.00 |
| Less depreciation | 0.43 | 0.42 | 0.45 |
| Net Adjustments | -1.50 | -1.28 | -1.33 |
| OPERATING CASH & NON-CASH ($/kg MS): | | | |
| Dairy gross farm revenue | 9.03 | 9.03 | 9.04 |
| Dairy operating expenses | 6.51 | 6.31 | 6.95 |
| Dairy operating profit | 2.49 | 2.56 | 2.04 |
| OPERATING CASH & NON-CASH ($/ha): | | | |
| Dairy gross farm revenue | 7,610 | 9,599 | 11,138 |
| Dairy operating expenses | 5,231 | 6,693 | 8,548 |
| Dairy operating profit | 1,937 | 2,904 | 2,488 |
| Operating profit margin (%) | 27.4 | 28.8 | 22.1 |

Table 7.4 shows key 2023-24 average financial indicators in the three production system categories. The measures reported in this table are medians; see section 2.11 for an explanation of this methodology. The operating return on dairy assets was highest for medium input farms (5.2%) and lowest for low input farms (4.4%). Once capital and non-dairy operations were included, the average total return on assets was similar for medium and high input systems (3.3%). Low input farms had the lowest total return on dairy assets (1.6%), compared to medium and high input systems (each 3.3%). Low input farms had the lowest debt-to-asset ratio (43%), while high input farms had the highest debt to asset ratio (51 percent). Closing term liabilities per kilogram of milksolids increased from low (20.54%) to high (22.35%) input systems.

All farm system types had negative median growth in equity percentages. Low input farms had the lowest growth in equity (-3.1%) while high input farms had the highest growth in equity (-0.6%) (Table 7.4).

Table 7.4: Owner-operator Production Systems Financial Position 2023-24

| Variable | 1 & 2 (Low) | 3 (Medium) | 4 & 5 (High) |
|---|---|---|---|
| RETURNS: | | | |
| Operating return on dairy assets % | 4.4 | 5.2 | 4.6 |
| Total return on assets % | 1.6 | 3.3 | 3.3 |
| Total return on equity % | -1.4 | 0.5 | -1.6 |
| Growth in equity % | -3.1 | -1.5 | -0.6 |
| DEBT: | | | |
| Closing term liabilities ($/kg MS sold) | 20.54 | 21.12 | 22.35 |
| Closing debt to asset % | 43.1 | 48.5 | 51.4 |

# 8. 50:50 Sharemilkers: Operational Financial Analysis

## 8.1. Introduction

Operating profit per hectare for 50:50 sharemilkers (herd owning sharemilkers) decreased by 13 per cent to $961 per hectare in 2023-24. In terms of the revenue composition the lower payout received in 2023-24 was partially offset by the increase in milksolids production per hectare (from 1,239 kg in 2022-23 to 1,275 kg in 2023-24). Operating expenses per kilogram of milksolids decreased by 2 per cent to $3.67. The average cash available for living and business growth decreased to $130,568 per farm, a decrease of $50,448 from 2022-23 (Table 13.5).

Tables 13.1 to 13.4 in Chapter 13 show net cash income, cash farm working expenses and the adjustments made to calculate operating profit for the average New Zealand 50:50 sharemilker on a per farm, per cow, per hectare and per kilogram of milksolids sold basis.

## 8.2. Revenue

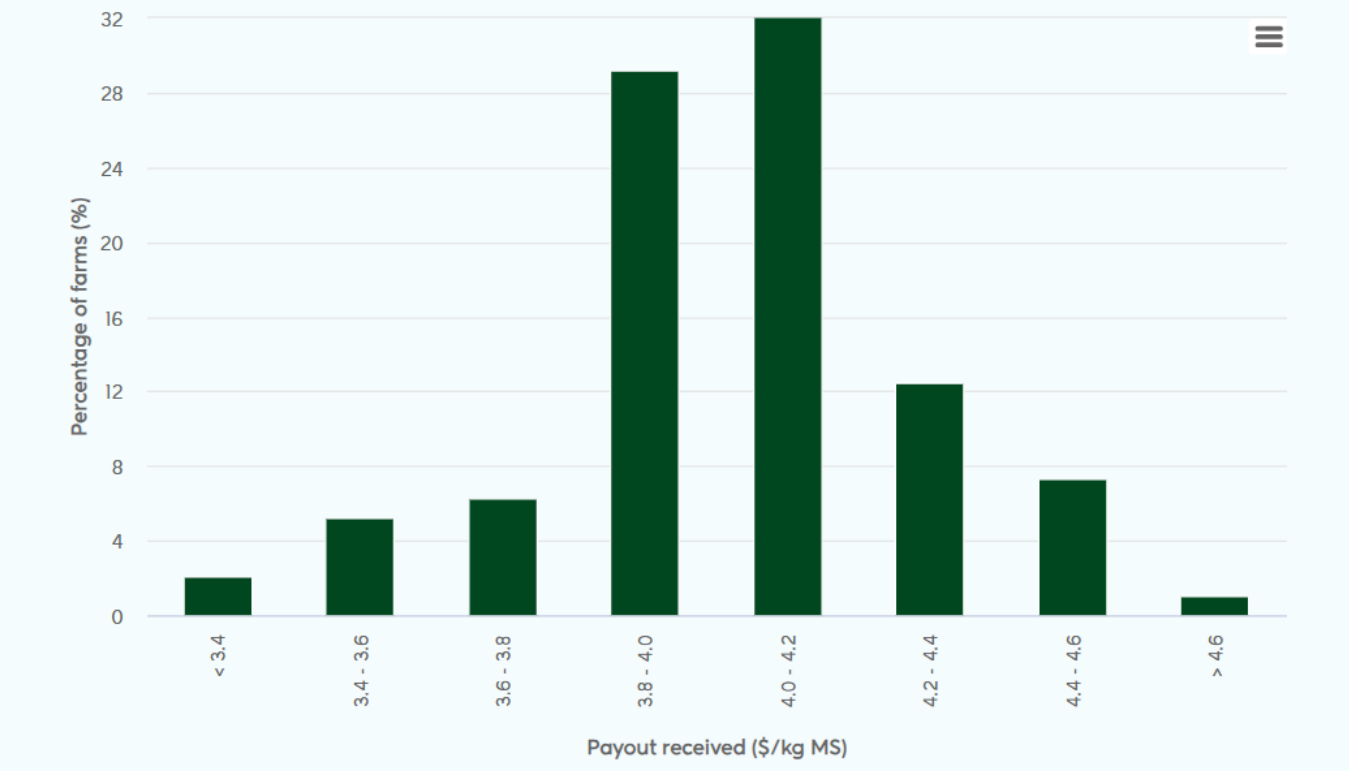
In 2023-24, the milk payout received (including dividend payments) decreased $0.18 from the previous season to $3.96 per kilogram of milksolids. Both kilograms of milksolids sold per cow and per hectare increased from 2022-23 to 2023-24, by 10 and 36 kg MS, respectively (Table 13.1). The average milk sales (net of dairy levies) per farm of $733,129 was lower than in the previous season ($752,157). Milk revenue in 2023-24 accounted for 90 per cent of gross farm revenue. Livestock revenue accounted for 2 per cent of the total gross farm revenue per farm.

Graph 8.1 shows the variation in milksolids payout received by farmers in the 2023-24 season. These differences are driven by:

- Differences in the percentage of milk payment received (between 40% and 60%),
- Variations in the milk composition (fat, protein, lactose, minerals),
- Annual account balance dates,
- Milk company supplied,
- Different systems such as organics,
- Penalties incurred, and,
- Whether the sharemilker operated in the previous season.

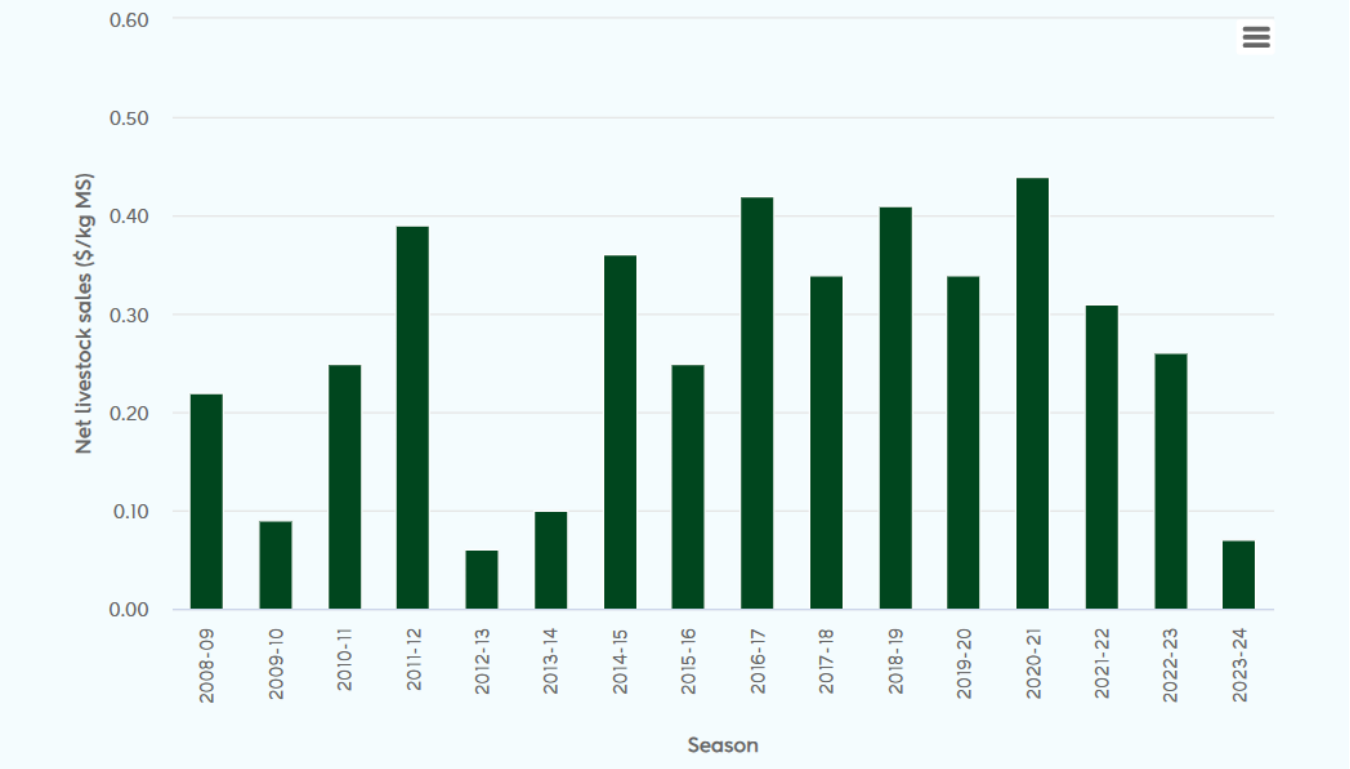
The majority (66%) of 50:50 sharemilkers received a milksolids payout between $3.80 and $4.20 (Graph 8.1).

Graph 8.1: Distribution of Milk Payout Received in 2023-24




Cash income from net livestock sales decreased by $0.19 to $0.07 per kilogram of milksolids in 2023-24 (Graph 8.2), the lowest of the past 10 seasons. Net livestock sales per cow decreased by $78 to $30, the lowest of the past 10 seasons.

Graph 8.2: Net Livestock Sales ($/kg MS)



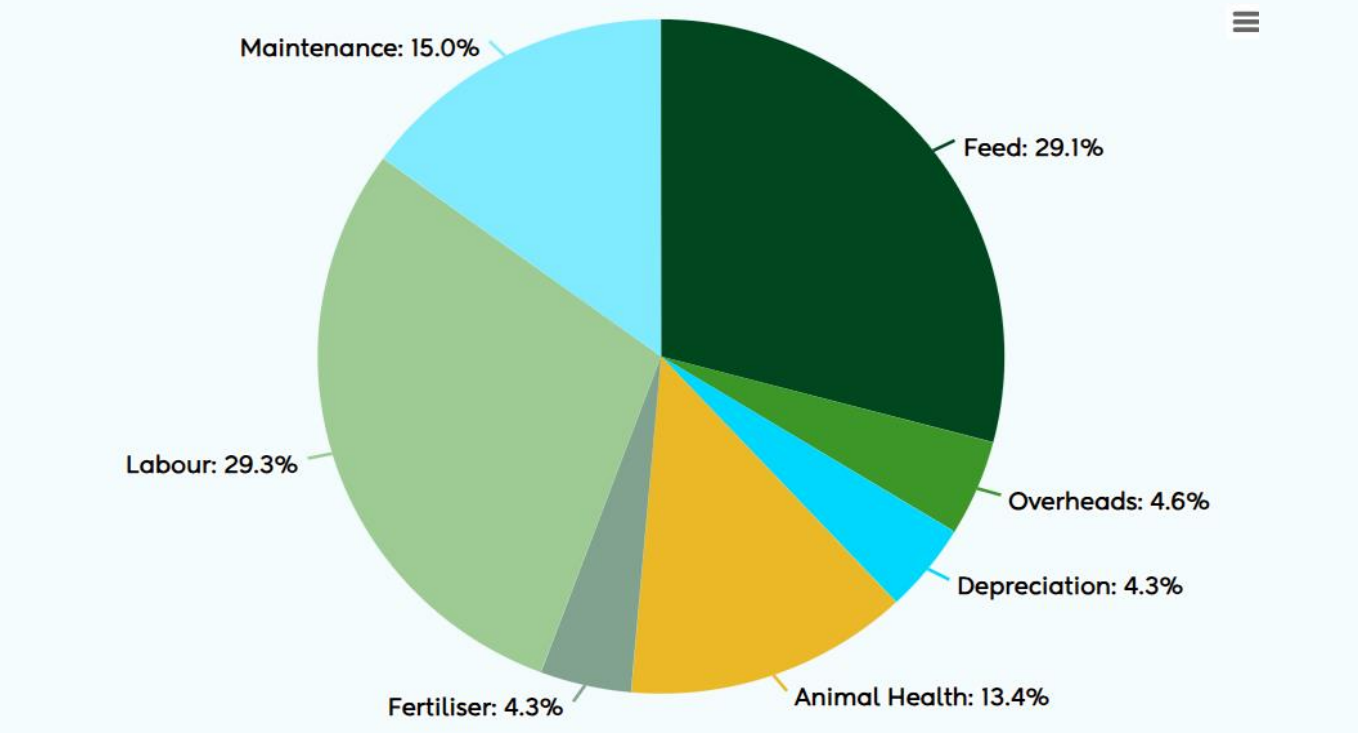
Dairy gross farm revenue for a typical 50:50 sharemilker was $818,446, representing a 3 per cent decrease compared to the previous season ($844,762). On a per hectare basis, gross farm revenue decreased by 2 percent, from $5763 in 2022-23 to $5,637 in 2023-24.

Tables 13.1 to 13.4 show net cash income, cash farm working expenses and the adjustments made to calculate operating profit for the average New Zealand 50:50 sharemilker on a per farm, per cow, per hectare and per kilogram of milksolids sold basis, respectively.

## 8.3. Expenditure

In 2023-24, feed and labour were the largest expenditure categories for 50:50 sharemilkers, each representing about 29 per cent of total farm expenses. Maintenance followed as the third-largest cost at 15%, with animal health close behind at 13%. These four categories together made up the bulk of farm operating costs (87%). Graph 8.3 shows the distribution of major expenditure categories for the season.

Graph 8.3: Proportion of Dairy Operating Expenditure for 50:50 Sharemilkers in 2023-24




Changes in total farm expenditure for sharemilkers are primarily affected by the herd size, milksolids produced, and labour since sharemilkers primarily pay animal related costs and labour costs. Compared to the previous season, in 2023-24, farm working expenses (FWE) per farm decreased by 1.5 per cent to $546,296. On a per kilogram of milksolids basis, FWE decreased by $0.10 to $2.95. After non-cash adjustments, total operating expenses per kilogram of milksolids decreased by $0.09 to $3.67.

Table 8.1 shows the historical distribution (%) of dairy expenses in the last 10 seasons. Historically, labour and feed expenses have represented the highest proportions of operating expenses for 50:50 sharemilkers. Although the proportions of labour and feed expenses were similar in 2023-24, the 10-year average proportion of labour expenses (29.8%) was higher than that of feed expenses (26.3%). This can be associated to the high feed costs and inflation during that season. Historically, overhead and fertiliser expenses were the lowest expense categories for 50:50 sharemilkers, with 4.6 and 4.8 percent (10-year average), respectively.

Table 8.1: Proportion (%) of Dairy Operating Expenditure in the last 10 years.

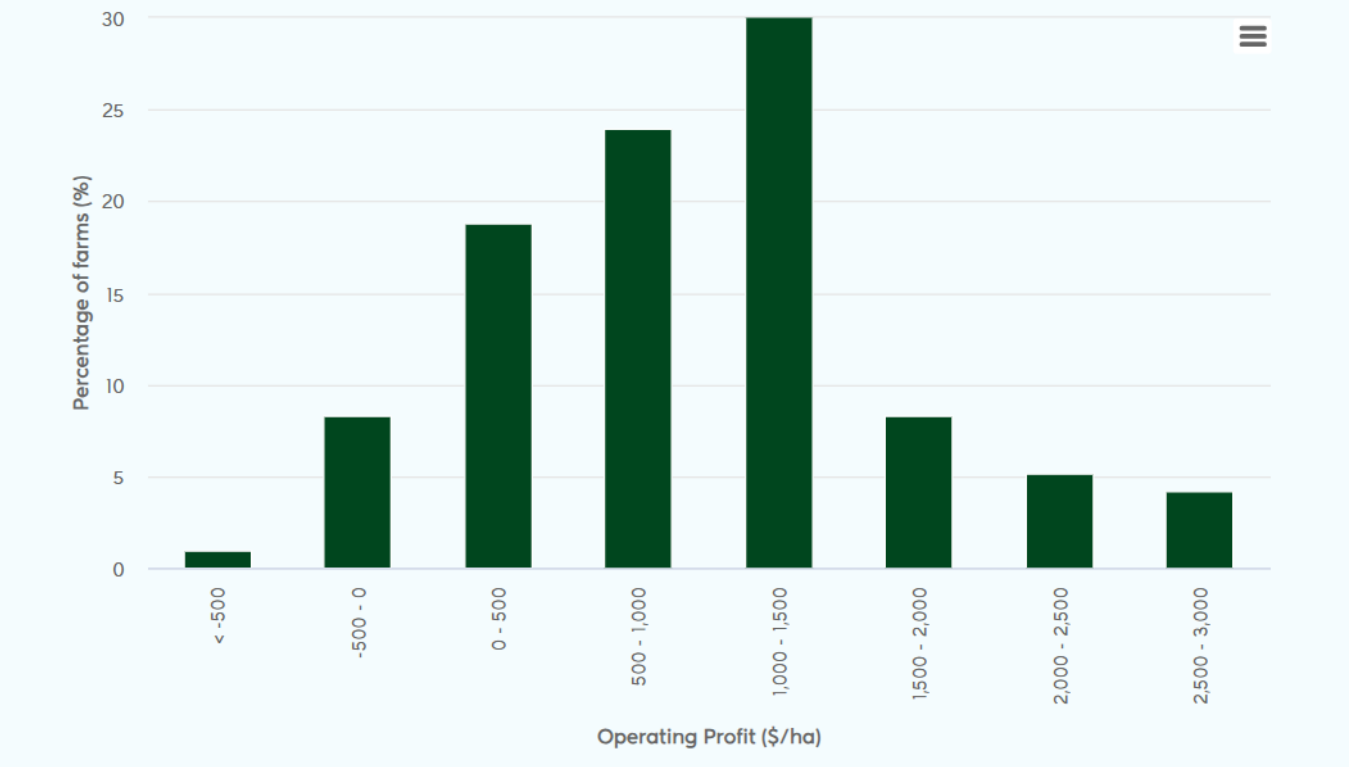
| Season | Animal health expenditure (%) | Depreciation expenditure (%) | Feed expenditure (%) | Fertiliser expenditure (%) | Labour expenditure (%) | Maintenance expenditure (%) | Overheads expenditure (%) |
|---|---|---|---|---|---|---|---|
| 2014-15 | 13.7 | 5.7 | 26.2 | 4.6 | 29.2 | 15.7 | 4.9 |
| 2015-16 | 13.2 | 5.9 | 23.9 | 4.8 | 31.1 | 16.1 | 5.0 |
| 2016-17 | 14.1 | 5.0 | 22.5 | 4.9 | 31.2 | 17.4 | 4.9 |
| 2017-18 | 13.8 | 5.4 | 25.0 | 4.5 | 30.8 | 16.0 | 4.5 |
| 2018-19 | 14.4 | 4.8 | 26.7 | 4.7 | 29.1 | 15.6 | 4.7 |
| 2019-20 | 14.1 | 4.9 | 26.8 | 5.1 | 29.0 | 15.7 | 4.4 |
| 2020-21 | 14.2 | 5.1 | 25.6 | 4.4 | 30.4 | 15.8 | 4.5 |
| 2021-22 | 14.2 | 4.5 | 27.8 | 4.8 | 29.3 | 15.1 | 4.3 |
| 2022-23 | 13.5 | 4.5 | 28.9 | 5.4 | 28.1 | 15.2 | 4.4 |
| 2023-24 | 13.4 | 4.3 | 29.1 | 4.3 | 29.3 | 15.0 | 4.6 |

## 8.4. Profitability

Operating profit is a key indicator of dairy farm financial performance. This measure, expressed on a per hectare basis, is useful for comparing the profitability between farms. Operating profit incorporates adjustments to allow comparisons between farms but does not include interest, tax or rent payments. Tables 13.1 to 13.4 show the revenue and expenditure items included in operating profit. On average, operating profit per hectare in the 2023-24 season ($961) was lower than in the previous four seasons, but still above the 10-year average operating profit ($845).

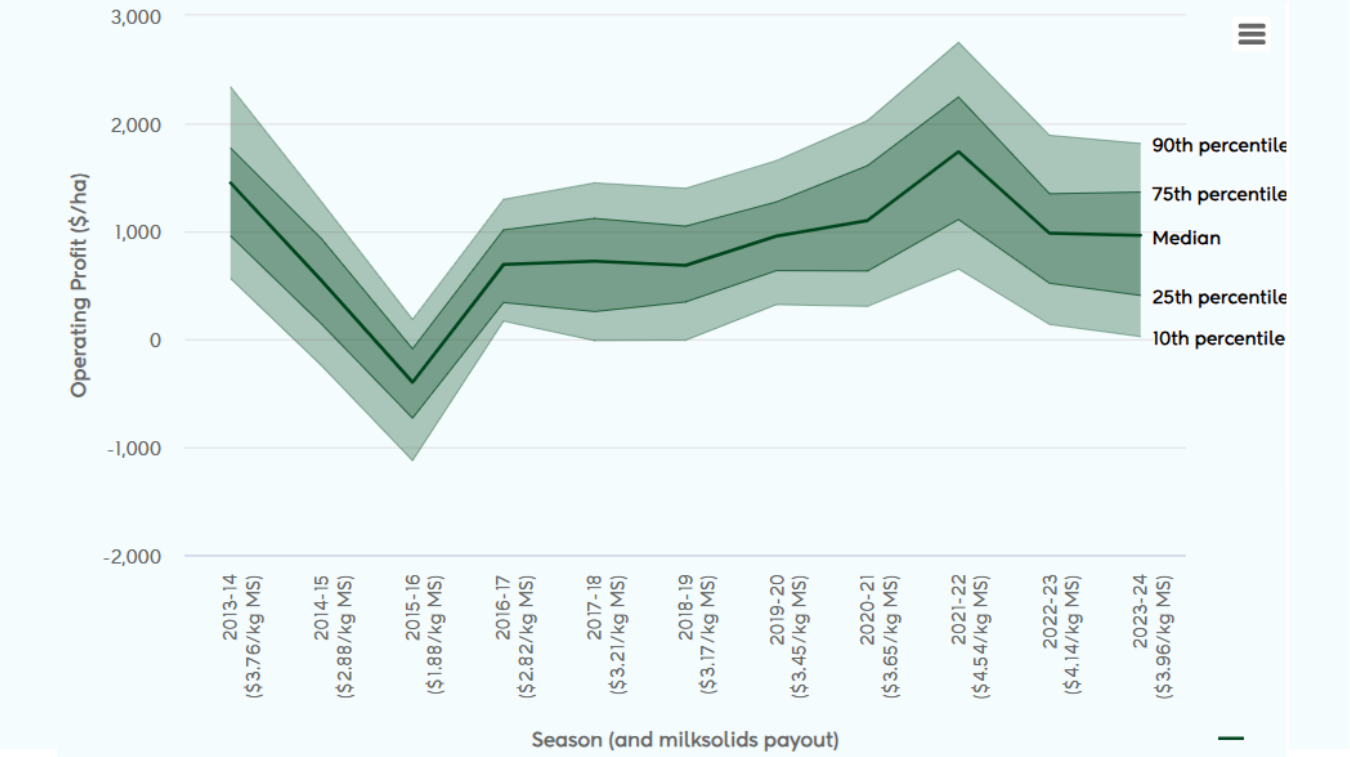
Graph 8.4 shows the distribution of operating profit per hectare in the 2023-24 season. Fifty-four per cent of 50:50 sharemilkers had operating profits between $500 and $1,500 per hectare, while 4 per cent of farmers had operating profits between $2,500 and $3,000 per hectare. About 9 per cent of farms recorded a negative operating profit in 2023-24 (Graph 8.4).

Graph 8.4: Distribution of Operating Profit ($/hectare) in 2023-24



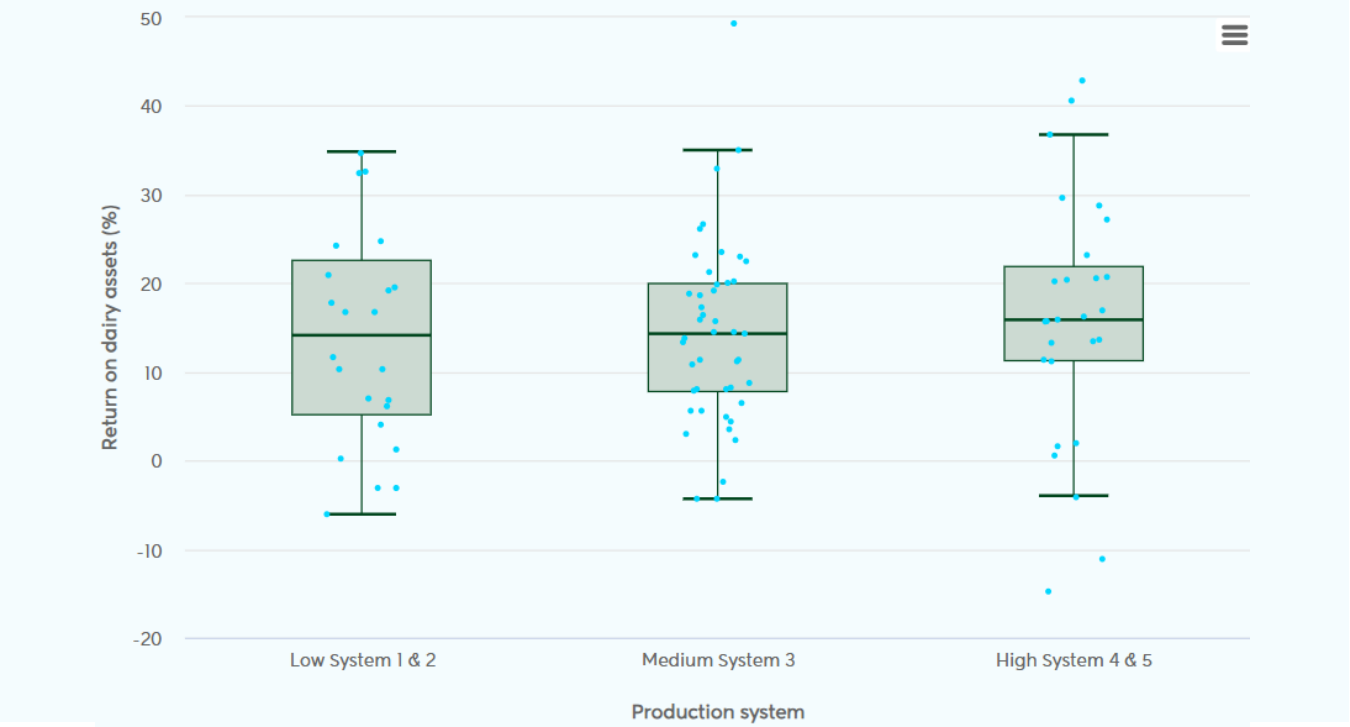

Graph 8.5 shows the distribution of operating profit ($/ha) over the past ten seasons. Similar to owner-operators, the distribution of operating profit for 50:50 sharemilkers have noticeable shifts across seasons, largely influenced by the milksolids payout. In 2023-24, the range in operating profit ($/ha) was wider than in the previous season, with the middle 50% of farms (between the 25th and 75th percentile) earning between $405 and $1,363 per hectare, a range of $958. Ten per cent of farms recorded an operating profit below $23 per hectare.

Graph 8.5: Distribution of Operating Profit ($/ha) in the last 10 seasons



Operating return on dairy assets measures the operating profit generated by the dairy assets employed at the start of the season. This measure excludes non-dairy activities and any change in capital value. For sharemilkers, operating returns on dairy assets are more volatile than owner-operators, as sharemilkers' dairy assets are primarily livestock, which are more susceptible to market fluctuations. The average operating return on dairy assets for sharemilkers decreased from 15.9 per cent in 2022-23 to 14.7 per cent in 2023-24. Graph 8.6 shows the distribution of operating return on dairy assets by production systems. Grouping farm production systems into low (systems 1 and 2), medium (system 3), and high input (systems 4 and 5) show that high input systems had a higher median operating return on dairy assets (15.8%) than medium and low input systems (14.3% and 14.2%, respectively).

Graph 8.6: Return on Dairy Assets Distribution in 2023-24




Business profit before tax is another measure of profitability that considers the cost of borrowing and other non-dairy activities, measuring the overall profitability of the business enterprise and not just the dairy farm operation (Table 8.2).

Table 8.2: Business Profit before Tax

| BUSINESS PROFIT ($): | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|---|---|---|---|
| Dairy operating profit | 65,599 | -53,678 | 91,877 | 98,570 | 117,177 | 151,293 | 180,220 | 246,175 | 161,879 | 139,591 |
| Plus labour adjustment | 77,508 | 73,553 | 72,041 | 80,608 | 80,071 | 82,559 | 91,240 | 100,776 | 102,774 | 104,061 |
| Plus owned support block adjustment | 1,245 | 695 | 508 | 251 | 299 | 479 | 611 | 1,010 | 860 | 0 |
| Plus net non-dairy profit | 2,671 | 2,203 | 2,387 | 2,758 | 2,615 | 1,209 | 5,284 | 844 | 2,636 | 2,547 |
| Plus net off-farm income | 3,817 | 4,546 | 2,281 | 4,071 | 5,230 | 10,975 | 8,513 | 12,921 | 12,018 | 11,674 |
| Less rent (excluding support block) | 5,154 | 1,407 | 1,047 | 2,320 | 827 | 1,220 | 438 | 214 | 43 | 113 |
| Less interest | 31,805 | 37,949 | 34,629 | 31,626 | 36,976 | 27,516 | 21,389 | 19,725 | 29,384 | 39,163 |
| Business profit before tax | 113,971 | -12,038 | 133,967 | 154,478 | 166,064 | 217,779 | 264,041 | 341,787 | 250,740 | 218,598 |
| Business profit before tax ($/total hectares) | 755 | -75 | 841 | 967 | 951 | 1,260 | 1,577 | 2,202 | 1,480 | 1,272 |

In 2023-24, the average sharemilker made a business profit before tax of $218,598 per farm, down $32,142 compared to the previous season. This business profit is equivalent to $1,272 per all effective hectares (effective dairy + effective dairy support block + effective non-dairy). Interest paid in 2023-24 ($39,163) was the highest of the last 10 seasons, attributable to the high official cash rate at the beginning of the season. Rent payments in 2023-24 ($113) were higher than in the previous season, but still significantly lower than the 10-year average ($1,268).

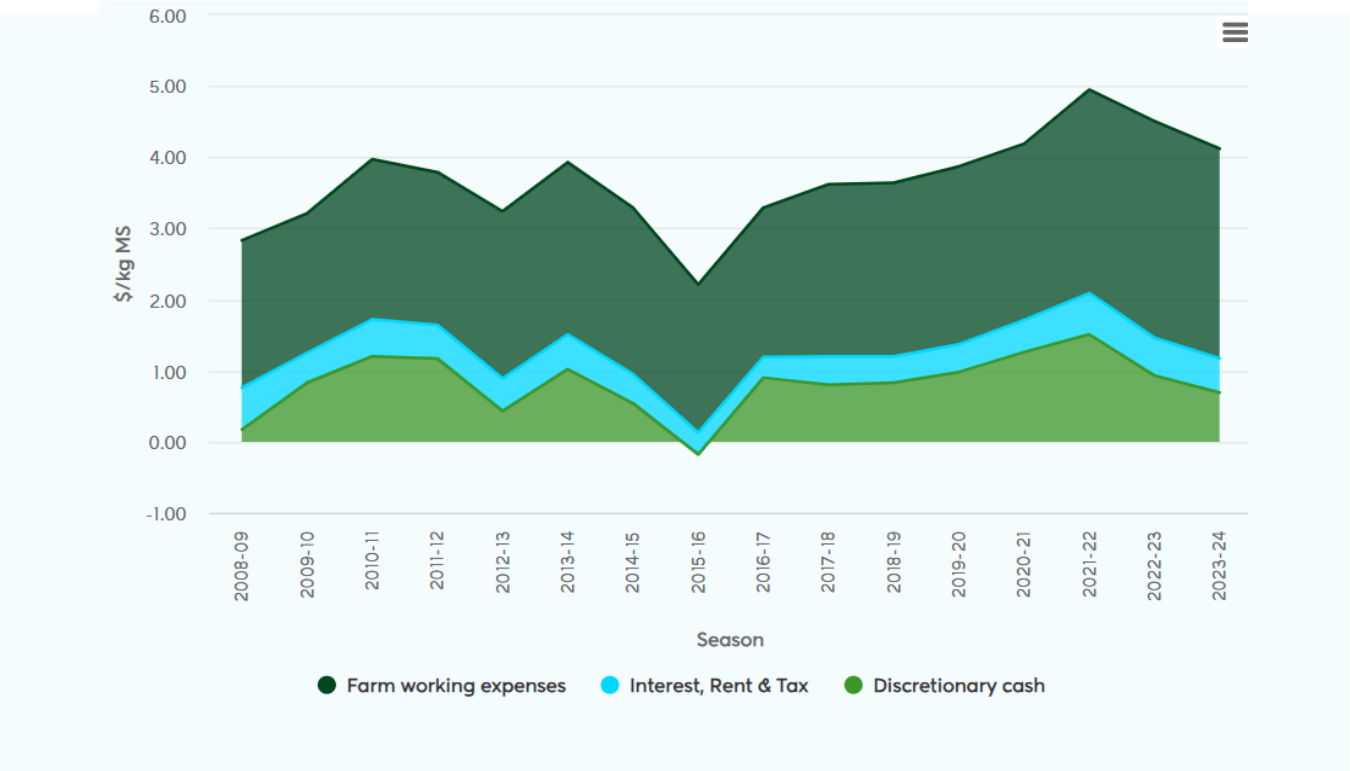
## 8.5. Cash Flow

The cash operating surplus is the difference between net dairy cash income and farm working expenses. In 2023-24, the average cash operating surplus of 50:50 sharemilkers ($204,120) decreased by 19 per cent compared to the previous season. On a per kilogram of milksolids basis, the $1.10 cash operating surplus was down $0.28 from last season. Once rent, interest and tax are paid, and net income from non-dairy farming activities and net off-farm income are added, the remaining value is discretionary cash. Total discretionary cash in 2023-24 was $128,545, down $40,042 from the previous season and equivalent to $0.69 per kilogram of milksolids (Table 13.5).

Many farm businesses include cash funds and off-farm income in their annual accounts. The cash available after including these activities and any change of funds deposited or withdrawn from the IRD Income Equalisation Scheme is the cash available for personal living and business growth, which can be used for drawings, debt repayments and/or capital development and purchases. In 2023-24, cash available for living and business growth was $130,568 per farm, down $50,448 from last season (Table 13.5).

In 2023-24, on a per kilogram of milksolids basis, net dairy cash income ($4.05) was $0.39 lower than in the previous season ($4.44). After farm working expenses ($2.95) and interest, rent & tax ($0.48) were deducted, a discretionary cash of $0.69 was left per kilogram of milksolids(Graph 8.7). Discretionary cash per kilogram of milksolids in the 2023-24 season was lower than the previous season ($0.93) and the 10-year average of $0.83.

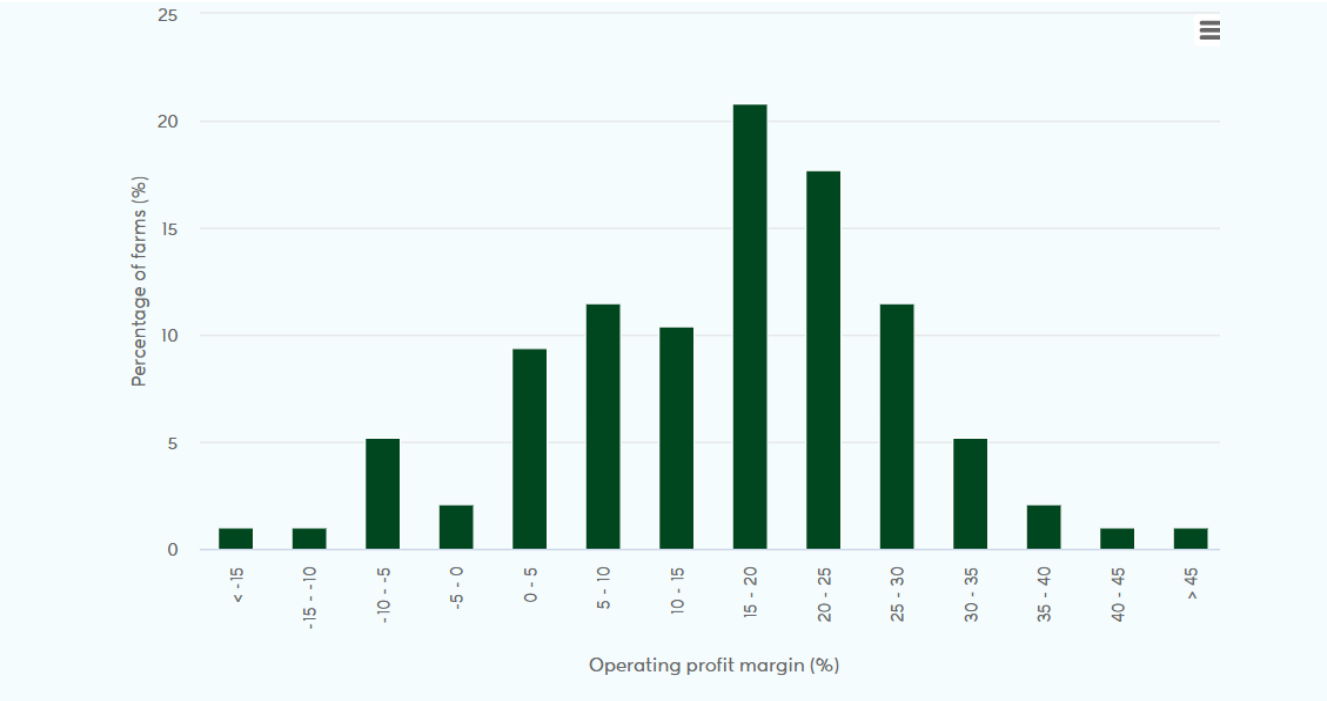
Graph 8.7: Annual Change in Revenue and Expenditure Over 10 Years ($/kg MS)




## 8.6. Operating Profit Margin

Operating profit margin is an indicator of dairy farm financial performance. This measurement is expressed as a percentage and describes the proportion of gross farm revenue converted to profit. The ability of a farmer to convert a high proportion of their revenue to profit indicates that the farm is cost-efficient and better placed to deal with financial and production risks. Graph 8.8 shows the distribution of operating profit margins in the 2023-24 season. In this season, 72 per cent of 50:50 sharemilkers had an operating profit margin between 5 per cent and 30 per cent (Graph 8.8).

Graph 8.8: Distribution of Operating Profit Margins (%) in 2023-24



# 9. 50:50 Sharemilkers: Equity and Capital Financial Analysis

## 9.1. Introduction

This section considers dairy farms' equity and capital position, with additional information about trends over time in these positions.

The average dairy operating profit per hectare of 50:50 sharemilkers in 2023-24 decreased by $143, to $961. Cash operating surplus per farm in 2023-24 ($204,120) was $46,814 (19%) lower than in the previous year. The average interest paid by 50:50 sharemilkers in 2023-24 ($39,163) was the highest of the last 10 seasons (Table 13.5). After the addition of introduced funds and income equalisation, the discretionary cash available in 2023-24 was $128,545, $40,042 (24%) lower than in the previous season ($168,587). The cash surplus per kilogram of milksolids in 2023-24 ($0.16) was significantly higher than in the previous season ($0.03) and the 10-year average ($0.01). Sharemilkers' equity grew by $72,982 in 2023-24, to $816,067, driven by growth in equity from the farming operation ($78,827). Total liabilities as a percentage of total assets (the debt-to-asset ratio) increased to 39.4 per cent at the end of the season. Closing term liabilities per kilogram of milksolids increased from $2.29 (2022-23 season) to $2.41 (2023-24).

## 9.2. Dairy Assets

Total dairy assets increased by $68,289 during the 2023-24 season, closing at $1,165,277 per farm (Table 13.6). Livestock constitutes the highest proportion of sharemilkers' dairy assets, comprising 71 per cent of total dairy assets at closing.

## 9.3. Liabilities and Debt Servicing

Interest is the cash cost of borrowing funds, while rent is the cost of borrowing assets. The average interest and rent per kilogram of milksolids in 2023-24 was $0.21, higher than in the previous five seasons and the 10-year average of $0.20 (Table 9.2). The average term debt decreased by $37,101 during the 2023-24, closing at $427,399 per farm (Table 13.6).

The flow of funds (Table 9.1) shows the components of the change in working capital, including the source and application of cash funds. The total source of funds for 2023-24 ($406,056) were mostly from farm operations that is cash operating surplus and change in working capital, each representing 50 per cent and 41 per cent of total source of funds, respectively. Of the funds applied, 41 per cent was spent on drawings (2 percentage points higher than the previous season) and 23 per cent was used for tax payments ($50,204). Net capital transactions ($41,720) represented 19 per cent of total funds applied.

Table 9.1: Flow of Funds

| Variable | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|---|---|---|---|
| WORKING CAPITAL: | | | | | | | | | | |
| Change in current assets | -23,771 | -16,221 | 22,455 | 2,932 | -24,375 | 112,605 | 161,046 | 195,556 | 153,504 | 150,590 |
| Less change in current liabilities | -1,920 | 23,954 | -9,244 | 15,668 | -10,322 | -10,193 | -16,512 | 21,208 | -3,071 | -17,325 |
| Change in working capital | -21,851 | -40,175 | 31,699 | -12,736 | -14,053 | 122,798 | 177,558 | 174,349 | 156,575 | 167,916 |
| WORKING CAPITAL: | | | | | | | | | | |
| Cash operating surplus | 137,419 | 11,433 | 167,540 | 169,323 | 213,273 | 230,372 | 298,298 | 344,252 | 250,934 | 204,120 |
| Plus change in working capital | -21,851 | -40,175 | 31,699 | -12,736 | -14,053 | 122,798 | 177,558 | 174,349 | 156,575 | 167,916 |
| Plus net non-dairy cash income | 2,511 | 2,243 | 1,798 | 1,996 | 2,659 | -1,380 | 5,060 | 906 | 1,611 | 2,231 |
| Plus net off-farm income | 3,817 | 4,546 | 2,281 | 4,071 | 5,230 | 10,975 | 8,513 | 12,921 | 12,018 | 11,674 |
| Plus introduced funds | 24,197 | 26,601 | 12,583 | 14,806 | -19,006 | -10,255 | 27,709 | -9,120 | 13,246 | 2,037 |
| Plus income equalisation | -6,091 | 5,707 | 1,412 | 0 | 470 | 0 | 596 | 0 | -817 | -14 |
| Plus increase in term debt | 50,721 | 37,011 | -17,644 | -20,730 | 33,643 | -8,192 | -20,070 | -60,025 | -48,487 | 18,092 |
| Total source of funds | 190,723 | 47,366 | 199,669 | 156,730 | 222,216 | 344,318 | 497,664 | 463,283 | 385,080 | 406,056 |
| APPLICATION OF FUNDS: | | | | | | | | | | |
| Rent (excluding support block) | 5,154 | 1,407 | 1,047 | 2,320 | 827 | 1,220 | 438 | 214 | 43 | 113 |
| Plus interest | 31,805 | 37,949 | 34,629 | 31,626 | 36,976 | 27,516 | 21,389 | 19,725 | 29,384 | 39,163 |
| Plus tax | 25,101 | 5,492 | 6,220 | 24,199 | 30,109 | 39,336 | 60,010 | 79,532 | 66,548 | 50,204 |
| Plus net capital transactions | 89,030 | 26,407 | 36,654 | 49,540 | 113,811 | 57,631 | 119,380 | 84,090 | 48,159 | 41,720 |
| Plus drawings | 83,335 | 56,461 | 57,721 | 74,517 | 67,169 | 65,458 | 76,247 | 79,739 | 90,535 | 89,566 |
| Total application of funds | 234,425 | 127,716 | 136,271 | 182,202 | 248,891 | 191,161 | 277,464 | 263,300 | 234,670 | 220,766 |
| Total source of funds less application of funds | -43,702 | -80,350 | 63,398 | -25,472 | -26,675 | 153,157 | 220,200 | 199,984 | 150,411 | 185,290 |

In 2023-24, the average cash operating surplus of 50:50 sharemilkers was $204,120, the lowest recorded in the past five seasons (Table 9.1). This translates to $1.10 per kilogram of milksolids (Table 13.5). The 2023-24 average level of discretionary cash was $128,545 per farm, $40,042 lower than in the previous season and $12,750 below the 10-year average (Table 13.5). The average term liabilities per kilogram of milksolids increased by $0.12 in the 2023-24 season, to $2.41, the second lowest of the past 10 seasons (Table 9.2).

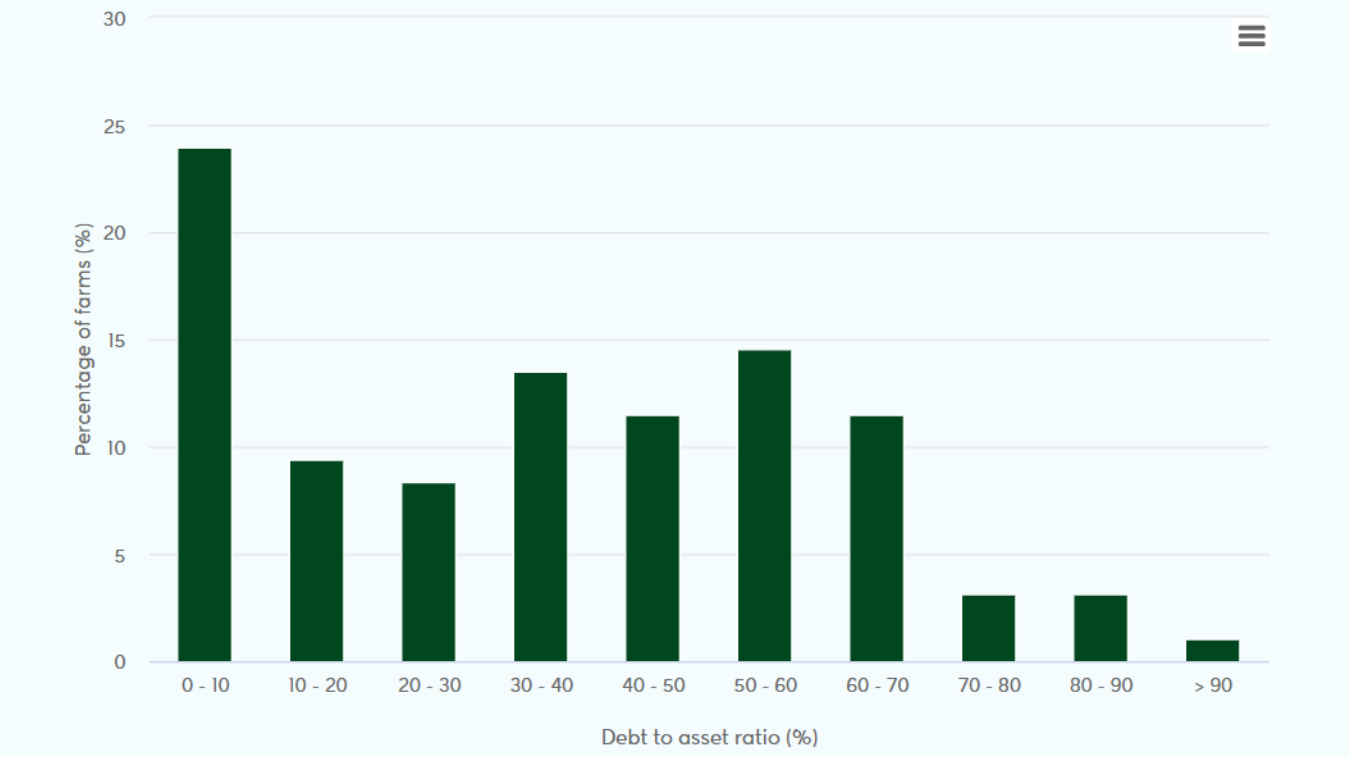
Table 9.2: Debt Servicing Ratios

| Variable | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|---|---|---|---|
| Interest & rent $/kg MS | 0.24 | 0.27 | 0.25 | 0.23 | 0.20 | 0.16 | 0.12 | 0.12 | 0.16 | 0.21 |
| Interest & rent % GFR | 7.1 | 11.5 | 7.3 | 6.1 | 5.6 | 4.1 | 2.9 | 2.3 | 3.5 | 4.8 |
| Term liabilities $/kg MS | 3.36 | 4.07 | 4.05 | 3.81 | 3.78 | 3.19 | 2.91 | 2.67 | 2.29 | 2.41 |

The debt-to-asset ratio increased to 39.4 per cent in 2023-24, up from 36.6 per cent and 36.5 per cent in the previous two seasons, respectively. This marks the reversal in the steady downward trend observed since 2018-19. Despite the increase, the 2023-24 debt-to-asset value was the third lowest recorded over the past decade.

Graph 9.1 shows the distribution of debt-to-asset ratio for 50:50 sharemilkers in the 2023-24 season. About 24 per cent of farms had a debt-to-asset ratio below 10 percent, 67 per cent of farms had a debt-to-asset ratio below 50 per cent and 7 per cent of farms had a debt-to-asset ratio over 70 percent.

Graph 9.1: Debt to Asset Distribution in 2023-24



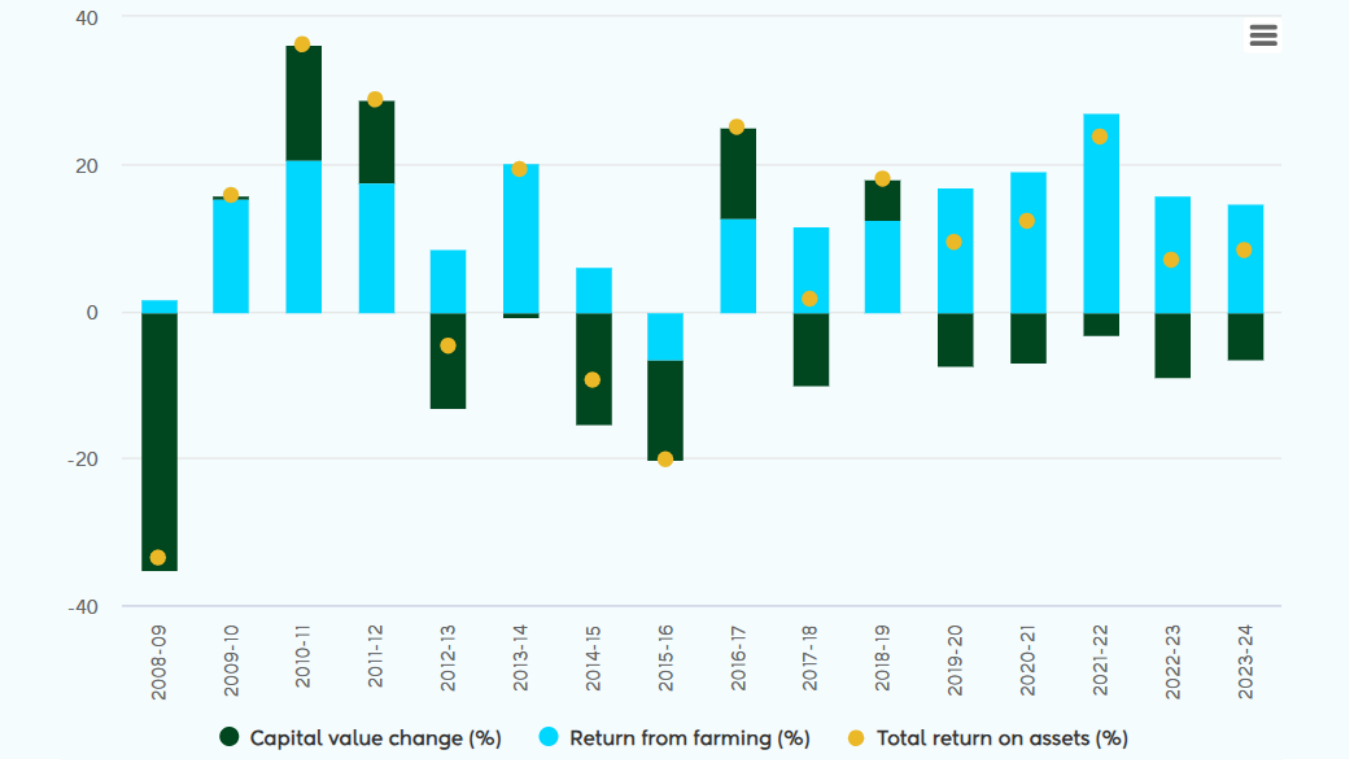

## 9.4. Returns

The return on dairy assets is discussed under farm profitability (section 8.4). The total return on assets considers operating profit from both dairy and non-dairy farming operations, plus the change in the value of capital assets. The total return on assets in 2023-24 was 8.3 percent, 1.5 percentage points higher than the previous season (Table 13.7).

For 50:50 sharemilkers, the net return from dairy activity in the 2023-24 season was $139,479 per farm, lower than in the previous four seasons (Table 13.7). Combined with an average change in capital value of -$36,437 per farm resulted in a total return of $105,588 in the 2023-24 season. In general, 50:50 Sharemilker returns are more volatile than those earned by owner-operators due to livestock being their largest asset class and livestock values fluctuating with greater magnitude than land prices.

During the past 10 years (2014-15 to 2022-24) the total return on assets has ranged between -20.2 (2015-16) and 25.1 per cent (2016-17), as a result of changes in capital and returns from farming operations (Graph 9.2).

Graph 9.2: Sharemilker Total Return on Assets




The percentage return on equity is the return on the owner's funds, including capital changes after interest is paid (Table 13.7). The return on equity will be higher than the total return on assets when the latter is greater than the cost of debt and vice versa. In 2023-24, the total return on equity was 10.5 per cent (Table 13.7), slightly higher than in the previous season (9.4%), but below the 10-year average of 13.7 percent.

# 10. 50:50 Sharemilkers: Regional Financial Analysis

## 10.1. Regional Profitability

DairyBase® classifies farms into eight regions, five in the North Island and three in the South Island (refer to section 2.6). Table 10.1 and 10.2 shows key 2023-24 average performance indicators per kilogram of milksolids for 50:50 sharemilker farms in these eight regions. The low number of farms in the regions presented here may also reduce the representativeness of the sample. No data is reported for the West Coast - Top of the South region as this region had less than 5 herds contributing data in the 2023-24 season. **Both Table 10.1 and 10.2 report median values to reduce numerical bias created by the average of sums methodology in regional samples**. Thus, totals and sub-totals in these tables will better represent average values of the data sample but will not add up. See section 2.11 for an explanation of this methodology.

The average herd sizes in the South Island were considerably larger than in the North Island. The Lower North Island region had the smallest average herd size of 250 cows, followed by Taranaki (267). Canterbury had the largest average herd size in the South Island and the country with 785 cows, 233 cows more than the average Otago-Southland farm (565 cows).

Between regions, range of stocking rates varies between 2.3 and 3.7 cows per hectare. Of the regions contributing data, Northland had the lowest stocking rate (2.3 cows/ha), Canterbury had the highest stocking rate (3.7 cows/ha), and the remaining regions had average stocking rates between 2.5 and 2.9 cows/ha.

For 50:50 sharemilkers, the regional averages for milksolids production per cow varied between 349 (Northland) and 493 (Otago-Southland) in 2023-24. The North Island regions recorded milksolids per cow between 349 and 409 kg MS. On a per hectare basis, the Canterbury and Otago - Southland regions recorded the highest milksolids production per hectare (1,620 and 1,428 kg MS/ha, respectively) (Table 10.1). In the North Island regions milksolids production per hectare varied between 782 and 1,198 kg MS.

The average payout received in each region varied between $3.96 (Canterbury) and $4.20 (Northland) per kilogram of milksolids. Farm working expenses (FWE) per kilogram of milksolids was lowest in Taranaki ($2.48) and highest in Northland ($3.60). The bottom of Table 10.1 shows the regional gross farm revenue, operating expenses and operating profit levels on a per hectare basis in 2023-24. Otago - Southland recorded the highest operating profit on a per hectare basis ($1,342), while Taranaki recorded the highest operating profit per kilogram of milksolids ($1.01/kg MS). Operating profit for 50:50 sharemilker farms in the North Island ranged from $139 (Northland) to $1,202 (Taranaki) in 2023-24.

Table 10.1: Regional Sharemilker Profitability ($/kg MS) 2023-24

| Variable | Northland | Waikato | Bay of Plenty | Taranaki | Lower North Island | West Coast - Top of the South | Canterbury | Otago - Southland |
|---|---|---|---|---|---|---|---|---|
| PHYSICAL CHARACTERISTICS | | | | | | | | |
| Number of herds | 9 | 20 | 13 | 13 | 9 | — | 15 | 16 |
| Effective hectares | 140 | 118 | 140 | 96 | 130 | — | 219 | 195 |
| Peak cows milked | 320 | 325 | 350 | 267 | 250 | — | 785 | 552 |
| Stocking rate (cows/ha) | 2.3 | 2.9 | 2.9 | 2.7 | 2.5 | — | 3.7 | 2.9 |
| Kg milksolids sold | 111,809 | 127,798 | 147,283 | 115,420 | 106,471 | — | 337,738 | 257,630 |
| Milksolids sold per hectare | 782 | 1,198 | 1,149 | 1,128 | 1,001 | — | 1,620 | 1,428 |
| Milksolids sold per cow | 349 | 409 | 407 | 404 | 398 | — | 458 | 493 |
| PAYOUT RECEIVED ($/kg MS sold) | 4.20 | 3.97 | 4.06 | 4.06 | 4.13 | — | 3.96 | 4.01 |
| DAIRY CASH INCOME ($/kg MS): | | | | | | | | |
| Milk sales (net of dairy levies) | 4.20 | 3.97 | 4.06 | 4.06 | 4.13 | — | 3.96 | 4.01 |
| Net livestock sales (sales - purchases) | 0.74 | 0.42 | 0.53 | 0.36 | 0.10 | — | 0.51 | 0.28 |
| Other dairy cash income | 0.03 | 0.00 | 0.03 | 0.01 | 0.00 | — | 0.00 | 0.01 |
| Net dairy cash income | 4.93 | 4.41 | 4.53 | 4.61 | 4.61 | — | 4.60 | 4.33 |
| CASH FARM WORKING EXPENSES ($/kg MS): | | | | | | | | |
| Wages | 0.58 | 0.56 | 0.60 | 0.16 | 0.63 | — | 0.61 | 0.55 |
| Animal health | 0.31 | 0.33 | 0.36 | 0.21 | 0.24 | — | 0.27 | 0.23 |
| Breeding & herd improvement | 0.23 | 0.18 | 0.16 | 0.16 | 0.22 | — | 0.14 | 0.15 |
| Farm dairy | 0.05 | 0.06 | 0.06 | 0.06 | 0.06 | — | 0.04 | 0.04 |
| Electricity | 0.18 | 0.11 | 0.12 | 0.13 | 0.15 | — | 0.10 | 0.09 |
| Net feed made, purchased, cropped | 0.75 | 0.67 | 0.78 | 0.62 | 0.71 | — | 0.49 | 0.62 |
| Stock grazing | 0.14 | 0.26 | 0.14 | 0.23 | 0.29 | — | 0.73 | 0.59 |
| Support block lease | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 |
| Fertiliser (including Nitrogen) | 0.28 | 0.14 | 0.16 | 0.17 | 0.20 | — | 0.14 | 0.10 |
| Irrigation | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.11 | 0.00 |
| Regrassing | 0.01 | 0.03 | 0.01 | 0.00 | 0.00 | — | 0.00 | 0.01 |
| Weed & pest | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | — | 0.00 | 0.01 |
| Vehicles & fuel | 0.29 | 0.21 | 0.24 | 0.19 | 0.26 | — | 0.14 | 0.15 |
| Repairs & maintenance | 0.12 | 0.09 | 0.08 | 0.08 | 0.07 | — | 0.05 | 0.07 |
| Freight & general | 0.06 | 0.07 | 0.09 | 0.06 | 0.06 | — | 0.04 | 0.05 |
| Administration | 0.11 | 0.08 | 0.13 | 0.09 | 0.12 | — | 0.08 | 0.08 |
| Insurance | 0.05 | 0.04 | 0.06 | 0.06 | 0.05 | — | 0.03 | 0.04 |
| ACC | 0.04 | 0.03 | 0.02 | 0.03 | 0.04 | — | 0.02 | 0.03 |
| Rates | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 |
| Farm working expenses | 3.60 | 3.01 | 2.99 | 2.48 | 3.34 | — | 3.13 | 2.90 |
| Cash operating surplus | 1.82 | 1.25 | 1.61 | 1.95 | 1.27 | — | 1.34 | 1.39 |
| ADJUSTMENTS ($/kg MS): | | | | | | | | |
| Value of change in dairy livestock | 0.09 | 0.09 | 0.21 | 0.01 | 0.33 | — | 0.00 | 0.06 |
| Less labour adjustment | 1.15 | 0.64 | 0.75 | 0.92 | 0.73 | — | 0.38 | 0.44 |
| Plus feed inventory adjustment | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 |
| Less owned support block adjustment | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 |
| Less depreciation | 0.27 | 0.17 | 0.19 | 0.15 | 0.19 | — | 0.12 | 0.13 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Net Adjustments | -1.36 | -0.71 | -0.77 | -1.06 | -0.72 | — | -0.50 | -0.38 |
| OPERATING CASH & NON-CASH ($/kg MS): | | | | | | | | |
| Dairy gross farm revenue | 4.93 | 4.52 | 4.91 | 4.68 | 4.64 | — | 4.51 | 4.33 |
| Dairy operating expenses | 4.78 | 3.86 | 3.94 | 3.60 | 4.28 | — | 3.77 | 3.47 |
| Dairy operating profit | 0.21 | 0.54 | 0.84 | 1.01 | 0.29 | — | 0.76 | 0.93 |
| OPERATING CASH & NON-CASH ($/ha): | | | | | | | | |
| Dairy gross farm revenue | 4,262 | 5,452 | 5,449 | 5,329 | 4,695 | — | 7,057 | 6,056 |
| Dairy operating expenses | 3,705 | 4,720 | 4,588 | 4,118 | 3,897 | — | 5,687 | 5,079 |
| Dairy operating profit | 193 | 627 | 852 | 1,202 | 342 | — | 1,209 | 1,342 |
| Operating profit margin (%) | 4.3 | 12.3 | 18.0 | 22.7 | 6.0 | — | 18.6 | 20.7 |

**Note:**

No data for the West Coast - Top of the South region is reported as this region had less than 5 herds contributing data.

Table 10.2 shows the eight regions' 2023-24 key financial indicators. The values reported in this table are medians (see section 2.11 for more information). In 2023-24, the average operating returns on dairy assets ranged from 3.5 per cent (Northland) to 22.8 per cent (Otago-Southland). Regional total return on assets were lower than operating return on dairy assets and ranged from -0.7 per cent (Lower North Island) to 13.1 percent (Otago-Southland).

Total return on equity is the return on the owner's funds, including capital changes after interest is paid. With the exception of Northland, which recorded a negative total return on equity (-2.2%), all other regions reported a positive total return on equity. In 2023-24, Northland had the highest closing term liabilities ($4.63/kg MS) and debt-to-asset ratio (56.6%). Otago-Southland recorded the lowest closing term liabilities ($1.50/kg MS) while Waikato had the lowest closing debt-to-asset ratio ($32.9/kg MS) (see Table 10.2).

Table 10.2: Regional 50:50 Sharemilker Financial Position 2023-24

| Variable | Northland | Waikato | Bay of Plenty | Taranaki | Lower North Island | West Coast - Top of the South | Canterbury | Otago - Southland |
|---|---|---|---|---|---|---|---|---|
| RETURNS: | | | | | | | | |
| Operating return on dairy assets % | 3.5 | 10.3 | 13.3 | 19.2 | 7.8 | 11.3 | 15.8 | 22.8 |
| Total return on assets % | 1.2 | 5.8 | 6.0 | 8.5 | -0.7 | 5.2 | 11.0 | 13.1 |
| Total return on equity % | -2.2 | 7.1 | 6.5 | 11.5 | 1.4 | 4.8 | 14.6 | 18.5 |
| Growth in equity % | 3.1 | 3.4 | 11.0 | 9.1 | -2.3 | 3.3 | 6.9 | 17.4 |
| DEBT: | | | | | | | | |
| Closing term liabilities ($/kg MS sold) | 4.63 | 1.73 | 2.93 | 2.56 | 2.43 | 2.04 | 2.84 | 1.50 |
| Closing debt to asset % | 56.6 | 32.9 | 43.8 | 43.4 | 49.6 | 38.1 | 42.9 | 37.4 |

# 11. Key performance indicators of international competitiveness

This chapter presents the distribution of some key performance indicators to assess the international competitiveness and economic resilience of the New Zealand dairy sector. These measures are:

- The cost of production, measured in terms of dollars per kilogram of milksolids, is a popular metric in global studies of competitiveness. In the New Zealand context, it is measured as operating expenses ($) per kilogram of milksolids. A lower cost of production mitigates the impact of a low milk price on profitability and results in increased operating profit during high milk prices. It is a key measure of resilience as a low cost of production helps to buffer the impacts of a change in the milk price on a farm business.
- The dairy operating profit margin (%) is the ratio of operating profit and gross farm revenue. The dairy operating profit margin is a percentage most often between zero and fifty. A higher value denotes that a farm produces a given level of revenue at a lower cost, indicating that it can better survive through turbulent market and production conditions.
- The operating return on dairy assets, measured in percentage terms, is a key financial metric used worldwide to measure how effectively a business is employing their asset base. This metric captures the ability of a farm to grow through careful, considered investment in high-performing assets.
- The equity to milksolids metric, measured in dollars per kilogram of milksolids terms, reflects resilience through its focus on the value of the farm business asset that is owned and not borrowed. Controlling the level of milk production makes it easier to compare across farms, both nationally and globally.

These measures are reported in Tables 11.1 through 11.4 by quartiles and the mean. The quartiles can be interpreted as follows:

- The 25th percentile for a variable represents a value where 25 percent of the data is lower.
- The 50th percentile or median represents the centre of the data, such that 50 percent of data points are lower, and 50 percent are higher than this value.
- The 75th percentile represents a value such that 75 percent of observations are lower than this value.

In comparison, the mean is an average calculated by adding all values together and dividing by the number of observations. The mean provides an average across the values for all observations.

Table 11.1: Cost of Production

| COST OF PRODUCTION (Operating expenses / kg MS) | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|---|---|---|---|
| 25th percentile | 5.35 | 4.66 | 5.32 | 5.62 | 5.69 | 5.95 | 5.94 | 7.09 | 7.51 | 7.39 |
| Mean | 4.76 | 4.21 | 4.57 | 5.02 | 5.15 | 5.38 | 5.34 | 6.43 | 6.72 | 6.6 |
| 50th percentile | 4.85 | 4.36 | 4.72 | 5.12 | 5.18 | 5.47 | 5.44 | 6.51 | 6.84 | 6.75 |
| 75th percentile | 4.3 | 3.9 | 4.13 | 4.55 | 4.61 | 4.88 | 4.84 | 5.72 | 6.02 | 5.8 |

Note:

- Cost of production = Operating expenses

Table 11.2: Operating Profit Margin

| OPERATING PROFIT MARGIN (%) | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|---|---|---|---|
| 25th percentile | 17 | -6.3 | 19.3 | 23.1 | 20.1 | 21.7 | 25.5 | 28.2 | 20 | 17.7 |
| Mean | 23.7 | 2.2 | 27.5 | 29.7 | 26.5 | 28.5 | 31.5 | 34.1 | 26.4 | 25.3 |
| 50th percentile | 24.6 | 4.7 | 30.5 | 30.9 | 26.5 | 30 | 32.5 | 35.3 | 27.1 | 25.9 |
| 75th percentile | 33.2 | 12.1 | 36.1 | 36.1 | 33.8 | 35.5 | 38.9 | 41.6 | 34.7 | 34.2 |

Table 11.3: Operating Return on Assets

| OPERATING RETURN ON DAIRY ASSETS (%) | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|---|---|---|---|
| 25th percentile | 2.2 | -0.7 | 2.7 | 3.2 | 2.7 | 3.2 | 4.3 | 5.4 | 3.4 | 3.3 |
| Mean | 3.7 | -0.1 | 4.4 | 5.3 | 4 | 5.2 | 6.3 | 7.6 | 5.3 | 5 |
| 50th percentile | 3.4 | 0.1 | 4.3 | 4.5 | 3.9 | 4.8 | 5.8 | 7.3 | 5.2 | 4.8 |
| 75th percentile | 4.8 | 1 | 5.4 | 6.3 | 5.2 | 6.8 | 8 | 9.6 | 6.9 | 6.6 |

Table 11.4: Equity

| EQUITY ($/kg MS) | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|---|---|---|---|
| 25th percentile | 18.93 | 13.08 | 18.32 | 14.92 | 13.42 | 13.62 | 14.09 | 17.53 | 18.52 | 17.47 |
| Mean | 28.38 | 25.06 | 30.78 | 27.19 | 25.22 | 26.26 | 26.52 | 32.7 | 35.01 | 31.53 |
| 50th percentile | 27.63 | 22.08 | 26.28 | 25.09 | 20.61 | 21.6 | 22.17 | 26.59 | 27.75 | 24.68 |
| 75th percentile | 37.29 | 34.14 | 41.17 | 33.99 | 34.17 | 35.09 | 33.43 | 40.03 | 42.1 | 40.12 |

# 12. Time Series Tables: Owner-Operator

Table 12.1: Cash Operating Surplus and Operating Profit - $ per farm

| Variable | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|---|---|---|---|
| PHYSICAL CHARACTERISTICS | | | | | | | | | | |
| Number of herds | 296 | 279 | 316 | 265 | 260 | 326 | 308 | 255 | 266 | 200 |
| Effective hectares | 146 | 148 | 148 | 151 | 146 | 142 | 141 | 144 | 145 | 148 |
| Peak cows milked | 419 | 418 | 414 | 430 | 424 | 415 | 408 | 419 | 407 | 411 |
| Stocking rate (cows/ha) | 2.9 | 2.8 | 2.8 | 2.8 | 2.9 | 2.9 | 2.9 | 2.9 | 2.8 | 2.8 |
| Kg milksolids sold | 160,367 | 160,270 | 160,302 | 161,567 | 167,189 | 169,761 | 171,720 | 172,832 | 169,990 | 174,235 |
| Milksolids sold per hectare | 1,102 | 1,082 | 1,085 | 1,067 | 1,145 | 1,194 | 1,222 | 1,199 | 1,174 | 1,180 |
| Milksolids sold per cow | 383 | 383 | 387 | 376 | 395 | 409 | 421 | 413 | 418 | 423 |
| PAYOUT RECEIVED ($/kg MS sold) | 5.76 | 3.92 | 5.79 | 6.62 | 6.42 | 7.05 | 7.40 | 9.19 | 8.68 | 8.33 |
| DAIRY CASH INCOME ($): | | | | | | | | | | |
| Milk sales (net of dairy levies) | 923,621 | 628,192 | 928,944 | 1,068,927 | 1,073,346 | 1,197,023 | 1,271,447 | 1,588,525 | 1,475,356 | 1,452,066 |
| Net livestock sales (sales - purchases) | 83,804 | 90,596 | 79,495 | 80,967 | 77,911 | 82,883 | 83,337 | 95,756 | 86,782 | 101,718 |
| Other dairy cash income | 6,466 | 5,819 | 5,633 | 6,789 | 6,377 | 5,836 | 7,705 | 7,495 | 8,155 | 8,491 |
| Net dairy cash income | 1,013,891 | 724,607 | 1,014,072 | 1,156,683 | 1,157,633 | 1,285,742 | 1,362,488 | 1,691,776 | 1,570,293 | 1,562,276 |
| CASH FARM WORKING EXPENSES ($): | | | | | | | | | | |
| Wages | 97,790 | 103,689 | 92,630 | 106,331 | 110,011 | 113,880 | 111,931 | 123,332 | 133,711 | 134,291 |
| Animal health | 36,553 | 30,906 | 34,577 | 37,497 | 37,958 | 40,754 | 41,674 | 51,240 | 52,827 | 53,811 |
| Breeding & herd improvement | 23,746 | 19,702 | 21,986 | 25,043 | 27,336 | 28,626 | 28,930 | 30,470 | 31,339 | 31,256 |
| Farm dairy | 9,693 | 7,902 | 9,636 | 9,433 | 9,773 | 10,804 | 10,391 | 11,569 | 13,478 | 13,901 |
| Electricity | 17,636 | 17,646 | 18,352 | 18,256 | 18,521 | 18,818 | 19,217 | 20,233 | 20,242 | 21,824 |
| Net feed made, purchased, cropped | 152,147 | 118,281 | 120,103 | 151,337 | 167,341 | 175,287 | 186,564 | 245,970 | 259,152 | 245,051 |
| Stock grazing | 64,319 | 64,317 | 58,368 | 58,254 | 71,042 | 72,720 | 70,207 | 73,343 | 87,739 | 97,164 |
| Support block lease | 11,992 | 12,385 | 12,322 | 10,882 | 9,548 | 10,371 | 10,285 | 13,850 | 9,924 | 9,488 |
| Fertiliser (including Nitrogen) | 75,738 | 66,595 | 73,964 | 77,478 | 77,175 | 77,691 | 75,625 | 101,368 | 114,986 | 95,551 |
| Irrigation | 9,367 | 7,987 | 8,527 | 8,314 | 12,833 | 18,773 | 16,270 | 14,191 | 13,496 | 15,886 |
| Regrassing | 9,776 | 7,751 | 9,913 | 12,503 | 11,654 | 12,456 | 12,321 | 15,067 | 15,005 | 14,078 |
| Weed & pest | 5,502 | 5,561 | 5,631 | 5,951 | 5,299 | 5,441 | 5,567 | 7,981 | 6,990 | 6,179 |
| Vehicles & fuel | 28,918 | 26,704 | 29,220 | 31,584 | 30,955 | 30,230 | 28,783 | 39,257 | 43,802 | 41,441 |
| Repairs & maintenance | 52,240 | 35,753 | 46,630 | 63,665 | 58,032 | 61,811 | 70,505 | 89,439 | 85,992 | 76,379 |
| Freight & general | 8,700 | 8,666 | 7,755 | 8,518 | 7,912 | 12,330 | 12,109 | 14,389 | 15,164 | 13,871 |
| Administration | 17,680 | 18,974 | 17,895 | 19,675 | 21,182 | 24,213 | 24,300 | 27,755 | 30,497 | 33,066 |
| Insurance | 10,773 | 10,252 | 10,947 | 12,635 | 13,587 | 13,961 | 14,319 | 16,302 | 17,533 | 21,076 |
| ACC | 4,134 | 3,690 | 3,445 | 3,785 | 3,750 | 3,134 | 4,785 | 5,041 | 5,492 | 5,352 |
| Rates | 15,915 | 16,089 | 16,761 | 17,031 | 17,022 | 16,979 | 17,212 | 19,289 | 19,427 | 20,507 |
| Farm working expenses | 652,619 | 582,850 | 598,662 | 678,172 | 710,932 | 748,282 | 760,996 | 920,087 | 976,798 | 950,173 |
| Cash operating surplus | 361,272 | 141,757 | 415,410 | 478,511 | 446,701 | 537,460 | 601,492 | 771,689 | 593,495 | 612,103 |
| ADJUSTMENTS ($): | | | | | | | | | | |
| Value of change in dairy livestock | 2,632 | -13,067 | 9,835 | 11,378 | 8,780 | 7,282 | 230 | 3,176 | 877 | -8,434 |
| Less labour adjustment | 59,021 | 56,341 | 61,154 | 63,920 | 62,545 | 62,011 | 70,195 | 79,852 | 80,362 | 84,797 |
| Plus feed inventory adjustment | -210 | 3,453 | 2,790 | -2,413 | 3,164 | -3,484 | 5,884 | -1,929 | 17,404 | 4,156 |
| Less owned support block adjustment | 14,889 | 14,126 | 14,359 | 16,786 | 13,143 | 16,151 | 16,720 | 18,843 | 20,738 | 22,776 |
| Less depreciation | 66,154 | 62,967 | 66,295 | 67,899 | 68,522 | 72,265 | 71,559 | 76,161 | 73,834 | 80,186 |
| Net Adjustments | -137,642 | -143,048 | -129,183 | -139,640 | -132,266 | -146,629 | -152,360 | -173,609 | -156,653 | -192,038 |

| OPERATING CASH & NON-CASH: | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Dairy gross farm revenue | 1,016,523 | 711,540 | 1,023,907 | 1,168,061 | 1,166,413 | 1,293,024 | 1,362,718 | 1,694,953 | 1,571,170 | 1,553,841 |
| Dairy operating expenses | 792,893 | 712,831 | 737,680 | 829,190 | 851,978 | 902,193 | 913,587 | 1,096,872 | 1,134,328 | 1,133,777 |
| Dairy operating profit | 223,630 | -1,291 | 286,227 | 338,871 | 314,435 | 390,831 | 449,132 | 598,081 | 436,843 | 420,064 |

Table 12.2: Cash Operating Surplus and Operating Profit - $ per cow

| Variable | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|---|---|---|---|
| PHYSICAL CHARACTERISTICS | | | | | | | | | | |
| Number of herds | 296 | 279 | 316 | 265 | 260 | 326 | 308 | 255 | 266 | 200 |
| Effective hectares | 146 | 148 | 148 | 151 | 146 | 142 | 141 | 144 | 145 | 148 |
| Peak cows milked | 419 | 418 | 414 | 430 | 424 | 415 | 408 | 419 | 407 | 411 |
| Stocking rate (cows/ha) | 2.9 | 2.8 | 2.8 | 2.8 | 2.9 | 2.9 | 2.9 | 2.9 | 2.8 | 2.8 |
| Kg milksolids sold | 160,367 | 160,270 | 160,302 | 161,567 | 167,189 | 169,761 | 171,720 | 172,832 | 169,990 | 174,235 |
| Milksolids sold per hectare | 1,102 | 1,082 | 1,085 | 1,067 | 1,145 | 1,194 | 1,222 | 1,199 | 1,174 | 1,180 |
| Milksolids sold per cow | 383 | 383 | 387 | 376 | 395 | 409 | 421 | 413 | 418 | 423 |
| PAYOUT RECEIVED ($/kg MS sold) | 5.76 | 3.92 | 5.79 | 6.62 | 6.42 | 7.05 | 7.40 | 9.19 | 8.68 | 8.33 |
| DAIRY CASH INCOME ($/cow): | | | | | | | | | | |
| Milk sales (net of dairy levies) | 2,204 | 1,503 | 2,244 | 2,486 | 2,534 | 2,886 | 3,118 | 3,792 | 3,628 | 3,529 |
| Net livestock sales (sales - purchases) | 200 | 217 | 192 | 188 | 184 | 200 | 204 | 229 | 213 | 247 |
| Other dairy cash income | 15 | 14 | 14 | 16 | 15 | 14 | 19 | 18 | 20 | 21 |
| Net dairy cash income | 2,420 | 1,734 | 2,449 | 2,690 | 2,733 | 3,100 | 3,341 | 4,038 | 3,861 | 3,797 |
| CASH FARM WORKING EXPENSES ($/cow): | | | | | | | | | | |
| Wages | 233 | 248 | 224 | 247 | 260 | 275 | 274 | 294 | 329 | 326 |
| Animal health | 87 | 74 | 84 | 87 | 90 | 98 | 102 | 122 | 130 | 131 |
| Breeding & herd improvement | 57 | 47 | 53 | 58 | 65 | 69 | 71 | 73 | 77 | 76 |
| Farm dairy | 23 | 19 | 23 | 22 | 23 | 26 | 25 | 28 | 33 | 34 |
| Electricity | 42 | 42 | 44 | 42 | 44 | 45 | 47 | 48 | 50 | 53 |
| Net feed made, purchased, cropped | 363 | 283 | 290 | 352 | 395 | 423 | 457 | 587 | 637 | 596 |
| Stock grazing | 154 | 154 | 141 | 135 | 168 | 175 | 172 | 175 | 216 | 236 |
| Support block lease | 29 | 30 | 30 | 25 | 23 | 25 | 25 | 33 | 24 | 23 |
| Fertiliser (including Nitrogen) | 181 | 159 | 179 | 180 | 182 | 187 | 185 | 242 | 283 | 232 |
| Irrigation | 22 | 19 | 21 | 19 | 30 | 45 | 40 | 34 | 33 | 39 |
| Regrassing | 23 | 19 | 24 | 29 | 28 | 30 | 30 | 36 | 37 | 34 |
| Weed & pest | 13 | 13 | 14 | 14 | 13 | 13 | 14 | 19 | 17 | 15 |
| Vehicles & fuel | 69 | 64 | 71 | 73 | 73 | 73 | 71 | 94 | 108 | 101 |
| Repairs & maintenance | 125 | 86 | 113 | 148 | 137 | 149 | 173 | 213 | 211 | 186 |
| Freight & general | 21 | 21 | 19 | 20 | 19 | 30 | 30 | 34 | 37 | 34 |
| Administration | 42 | 45 | 43 | 46 | 50 | 58 | 60 | 66 | 75 | 80 |
| Insurance | 26 | 25 | 26 | 29 | 32 | 34 | 35 | 39 | 43 | 51 |
| ACC | 10 | 9 | 8 | 9 | 9 | 8 | 12 | 12 | 14 | 13 |
| Rates | 38 | 38 | 40 | 40 | 40 | 41 | 42 | 46 | 48 | 50 |
| Farm working expenses | 1,558 | 1,394 | 1,446 | 1,577 | 1,678 | 1,804 | 1,866 | 2,196 | 2,402 | 2,309 |
| Cash operating surplus | 862 | 339 | 1,003 | 1,113 | 1,055 | 1,296 | 1,475 | 1,842 | 1,459 | 1,488 |
| ADJUSTMENTS ($/cow): | | | | | | | | | | |
| Value of change in dairy livestock | 6 | -31 | 24 | 26 | 21 | 18 | 1 | 8 | 2 | -21 |
| Less labour adjustment | 141 | 135 | 148 | 149 | 148 | 149 | 172 | 191 | 198 | 206 |
| Plus feed inventory adjustment | -1 | 8 | 7 | -6 | 7 | -8 | 14 | -5 | 43 | 10 |
| Less owned support block adjustment | 36 | 34 | 35 | 39 | 31 | 39 | 41 | 45 | 51 | 55 |
| Less depreciation | 158 | 151 | 160 | 158 | 162 | 174 | 175 | 182 | 182 | 195 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Net Adjustments | -329 | -342 | -312 | -325 | -312 | -353 | -374 | -414 | -385 | -467 |
| OPERATING CASH & NON-CASH ($/cow) | | | | | | | | | | |
| Dairy gross farm revenue | 2,426 | 1,702 | 2,473 | 2,716 | 2,754 | 3,117 | 3,341 | 4,046 | 3,863 | 3,777 |
| Dairy operating expenses | 1,892 | 1,705 | 1,782 | 1,928 | 2,011 | 2,175 | 2,240 | 2,618 | 2,789 | 2,756 |
| Dairy operating profit | 534 | -3 | 691 | 788 | 742 | 942 | 1,101 | 1,428 | 1,074 | 1,021 |

## Table 12.3: Cash Operating Surplus and Operating Profit - $ per effective hectare

| Variable | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|---|---|---|---|
| PHYSICAL CHARACTERISTICS | | | | | | | | | | |
| Number of herds | 296 | 279 | 316 | 265 | 260 | 326 | 308 | 255 | 266 | 200 |
| Effective hectares | 146 | 148 | 148 | 151 | 146 | 142 | 141 | 144 | 145 | 148 |
| Peak cows milked | 419 | 418 | 414 | 430 | 424 | 415 | 408 | 419 | 407 | 411 |
| Stocking rate (cows/ha) | 2.9 | 2.8 | 2.8 | 2.8 | 2.9 | 2.9 | 2.9 | 2.9 | 2.8 | 2.8 |
| Kg milksolids sold | 160,367 | 160,270 | 160,302 | 161,567 | 167,189 | 169,761 | 171,720 | 172,832 | 169,990 | 174,235 |
| Milksolids sold per hectare | 1,102 | 1,082 | 1,085 | 1,067 | 1,145 | 1,194 | 1,222 | 1,199 | 1,174 | 1,180 |
| Milksolids sold per cow | 383 | 383 | 387 | 376 | 395 | 409 | 421 | 413 | 418 | 423 |
| PAYOUT RECEIVED ($/kg MS sold) | 5.76 | 3.92 | 5.79 | 6.62 | 6.42 | 7.05 | 7.40 | 9.19 | 8.68 | 8.33 |
| DAIRY CASH INCOME ($/ha): | | | | | | | | | | |
| Milk sales (net of dairy levies) | 6,348 | 4,242 | 6,285 | 7,060 | 7,353 | 8,421 | 9,046 | 11,022 | 10,189 | 9,836 |
| Net livestock sales (sales - purchases) | 576 | 612 | 538 | 535 | 534 | 583 | 593 | 664 | 599 | 689 |
| Other dairy cash income | 44 | 39 | 38 | 45 | 44 | 41 | 55 | 52 | 56 | 58 |
| Net dairy cash income | 6,968 | 4,893 | 6,861 | 7,640 | 7,930 | 9,046 | 9,694 | 11,739 | 10,845 | 10,583 |
| CASH FARM WORKING EXPENSES ($/ha): | | | | | | | | | | |
| Wages | 672 | 700 | 627 | 702 | 754 | 801 | 796 | 856 | 923 | 910 |
| Animal health | 251 | 209 | 234 | 248 | 260 | 287 | 296 | 356 | 365 | 365 |
| Breeding & herd improvement | 163 | 133 | 149 | 165 | 187 | 201 | 206 | 211 | 216 | 212 |
| Farm dairy | 67 | 53 | 65 | 62 | 67 | 76 | 74 | 80 | 93 | 94 |
| Electricity | 121 | 119 | 124 | 121 | 127 | 132 | 137 | 140 | 140 | 148 |
| Net feed made, purchased, cropped | 1,046 | 799 | 813 | 1,000 | 1,146 | 1,233 | 1,327 | 1,707 | 1,790 | 1,660 |
| Stock grazing | 442 | 434 | 395 | 385 | 487 | 512 | 499 | 509 | 606 | 658 |
| Support block lease | 82 | 84 | 83 | 72 | 65 | 73 | 73 | 96 | 69 | 64 |
| Fertiliser (including Nitrogen) | 521 | 450 | 500 | 512 | 529 | 547 | 538 | 703 | 794 | 647 |
| Irrigation | 64 | 54 | 58 | 55 | 88 | 132 | 116 | 98 | 93 | 108 |
| Regrassing | 67 | 52 | 67 | 83 | 80 | 88 | 88 | 105 | 104 | 95 |
| Weed & pest | 38 | 38 | 38 | 39 | 36 | 38 | 40 | 55 | 48 | 42 |
| Vehicles & fuel | 199 | 180 | 198 | 209 | 212 | 213 | 205 | 272 | 303 | 281 |
| Repairs & maintenance | 359 | 241 | 315 | 421 | 398 | 435 | 502 | 621 | 594 | 517 |
| Freight & general | 60 | 59 | 52 | 56 | 54 | 87 | 86 | 100 | 105 | 94 |
| Administration | 122 | 128 | 121 | 130 | 145 | 170 | 173 | 193 | 211 | 224 |
| Insurance | 74 | 69 | 74 | 83 | 93 | 98 | 102 | 113 | 121 | 143 |
| ACC | 28 | 25 | 23 | 25 | 26 | 22 | 34 | 35 | 38 | 36 |
| Rates | 109 | 109 | 113 | 112 | 117 | 119 | 122 | 134 | 134 | 139 |
| Farm working expenses | 4,485 | 3,936 | 4,050 | 4,479 | 4,870 | 5,264 | 5,414 | 6,384 | 6,746 | 6,436 |
| Cash operating surplus | 2,483 | 957 | 2,811 | 3,161 | 3,060 | 3,781 | 4,279 | 5,355 | 4,099 | 4,146 |
| ADJUSTMENTS ($/ha): | | | | | | | | | | |
| Value of change in dairy livestock | 18 | -88 | 67 | 75 | 60 | 51 | 2 | 22 | 6 | -57 |
| Less labour adjustment | 406 | 380 | 414 | 422 | 428 | 436 | 499 | 554 | 555 | 574 |
| Plus feed inventory adjustment | -1 | 23 | 19 | -16 | 22 | -25 | 42 | -13 | 120 | 28 |
| Less owned support block adjustment | 102 | 95 | 97 | 111 | 90 | 114 | 119 | 131 | 143 | 154 |
| Less depreciation | 455 | 425 | 449 | 448 | 469 | 508 | 509 | 528 | 510 | 543 |
| Net Adjustments | -946 | -966 | -874 | -922 | -906 | -1,032 | -1,084 | -1,205 | -1,082 | -1,301 |
| OPERATING CASH & NON-CASH ($/ha): | | | | | | | | | | |
| Dairy gross farm revenue | 6,986 | 4,804 | 6,928 | 7,715 | 7,991 | 9,097 | 9,695 | 11,761 | 10,851 | 10,526 |
| Dairy operating expenses | 5,449 | 4,813 | 4,991 | 5,477 | 5,837 | 6,347 | 6,500 | 7,611 | 7,834 | 7,680 |
| Dairy operating profit | 1,537 | -9 | 1,937 | 2,238 | 2,154 | 2,750 | 3,195 | 4,150 | 3,017 | 2,845 |

## Table 12.4: Cash Operating Surplus and Operating Profit - $ per kg milksolids sold

| Variable | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|---|---|---|---|
| PHYSICAL CHARACTERISTICS | | | | | | | | | | |
| Number of herds | 296 | 279 | 316 | 265 | 260 | 326 | 308 | 255 | 266 | 200 |
| Effective hectares | 146 | 148 | 148 | 151 | 146 | 142 | 141 | 144 | 145 | 148 |
| Peak cows milked | 419 | 418 | 414 | 430 | 424 | 415 | 408 | 419 | 407 | 411 |
| Stocking rate (cows/ha) | 2.9 | 2.8 | 2.8 | 2.8 | 2.9 | 2.9 | 2.9 | 2.9 | 2.8 | 2.8 |
| Kg milksolids sold | 160,367 | 160,270 | 160,302 | 161,567 | 167,189 | 169,761 | 171,720 | 172,832 | 169,990 | 174,235 |
| Milksolids sold per hectare | 1,102 | 1,082 | 1,085 | 1,067 | 1,145 | 1,194 | 1,222 | 1,199 | 1,174 | 1,180 |
| Milksolids sold per cow | 383 | 383 | 387 | 376 | 395 | 409 | 421 | 413 | 418 | 423 |
| PAYOUT RECEIVED ($/kg MS sold) | 5.76 | 3.92 | 5.79 | 6.62 | 6.42 | 7.05 | 7.40 | 9.19 | 8.68 | 8.33 |
| DAIRY CASH INCOME ($/kg MS): | | | | | | | | | | |
| Milk sales (net of dairy levies) | 5.76 | 3.92 | 5.79 | 6.62 | 6.42 | 7.05 | 7.40 | 9.19 | 8.68 | 8.33 |
| Net livestock sales (sales - purchases) | 0.52 | 0.57 | 0.50 | 0.50 | 0.47 | 0.49 | 0.49 | 0.55 | 0.51 | 0.58 |
| Other dairy cash income | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.03 | 0.04 | 0.04 | 0.05 | 0.05 |
| Net dairy cash income | 6.32 | 4.52 | 6.33 | 7.16 | 6.92 | 7.57 | 7.93 | 9.79 | 9.24 | 8.97 |
| CASH FARM WORKING EXPENSES ($/kg MS): | | | | | | | | | | |
| Wages | 0.61 | 0.65 | 0.58 | 0.66 | 0.66 | 0.67 | 0.65 | 0.71 | 0.79 | 0.77 |
| Animal health | 0.23 | 0.19 | 0.22 | 0.23 | 0.23 | 0.24 | 0.24 | 0.30 | 0.31 | 0.31 |
| Breeding & herd improvement | 0.15 | 0.12 | 0.14 | 0.16 | 0.16 | 0.17 | 0.17 | 0.18 | 0.18 | 0.18 |
| Farm dairy | 0.06 | 0.05 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.07 | 0.08 | 0.08 |
| Electricity | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.12 | 0.12 | 0.13 |
| Net feed made, purchased, cropped | 0.95 | 0.74 | 0.75 | 0.94 | 1.00 | 1.03 | 1.09 | 1.42 | 1.52 | 1.41 |
| Stock grazing | 0.40 | 0.40 | 0.36 | 0.36 | 0.42 | 0.43 | 0.41 | 0.42 | 0.52 | 0.56 |
| Support block lease | 0.07 | 0.08 | 0.08 | 0.07 | 0.06 | 0.06 | 0.06 | 0.08 | 0.06 | 0.05 |
| Fertiliser (including Nitrogen) | 0.47 | 0.42 | 0.46 | 0.48 | 0.46 | 0.46 | 0.44 | 0.59 | 0.68 | 0.55 |
| Irrigation | 0.06 | 0.05 | 0.05 | 0.05 | 0.08 | 0.11 | 0.09 | 0.08 | 0.08 | 0.09 |
| Regrassing | 0.06 | 0.05 | 0.06 | 0.08 | 0.07 | 0.07 | 0.07 | 0.09 | 0.09 | 0.08 |
| Weed & pest | 0.03 | 0.03 | 0.04 | 0.04 | 0.03 | 0.03 | 0.03 | 0.05 | 0.04 | 0.04 |
| Vehicles & fuel | 0.18 | 0.17 | 0.18 | 0.20 | 0.19 | 0.18 | 0.17 | 0.23 | 0.26 | 0.24 |
| Repairs & maintenance | 0.33 | 0.22 | 0.29 | 0.39 | 0.35 | 0.36 | 0.41 | 0.52 | 0.51 | 0.44 |
| Freight & general | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.07 | 0.07 | 0.08 | 0.09 | 0.08 |
| Administration | 0.11 | 0.12 | 0.11 | 0.12 | 0.13 | 0.14 | 0.14 | 0.16 | 0.18 | 0.19 |
| Insurance | 0.07 | 0.06 | 0.07 | 0.08 | 0.08 | 0.08 | 0.08 | 0.09 | 0.10 | 0.12 |
| ACC | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 | 0.03 |
| Rates | 0.10 | 0.10 | 0.10 | 0.11 | 0.10 | 0.10 | 0.10 | 0.11 | 0.11 | 0.12 |
| Farm working expenses | 4.07 | 3.64 | 3.73 | 4.20 | 4.25 | 4.41 | 4.43 | 5.32 | 5.75 | 5.45 |
| Cash operating surplus | 2.25 | 0.88 | 2.59 | 2.96 | 2.67 | 3.17 | 3.50 | 4.46 | 3.49 | 3.51 |
| ADJUSTMENTS ($/kg MS): | | | | | | | | | | |
| Value of change in dairy livestock | 0.02 | -0.08 | 0.06 | 0.07 | 0.05 | 0.04 | 0.00 | 0.02 | 0.01 | -0.05 |
| Less labour adjustment | 0.37 | 0.35 | 0.38 | 0.40 | 0.37 | 0.37 | 0.41 | 0.46 | 0.47 | 0.49 |
| Plus feed inventory adjustment | 0.00 | 0.02 | 0.02 | -0.01 | 0.02 | -0.02 | 0.03 | -0.01 | 0.10 | 0.02 |
| Less owned support block adjustment | 0.09 | 0.09 | 0.09 | 0.10 | 0.08 | 0.10 | 0.10 | 0.11 | 0.12 | 0.13 |
| Less depreciation | 0.41 | 0.39 | 0.41 | 0.42 | 0.41 | 0.43 | 0.42 | 0.44 | 0.43 | 0.46 |
| Net Adjustments | -0.86 | -0.89 | -0.81 | -0.86 | -0.79 | -0.86 | -0.89 | -1.00 | -0.92 | -1.10 |
| OPERATING CASH & NON-CASH ($/kg MS): | | | | | | | | | | |
| Dairy gross farm revenue | 6.34 | 4.44 | 6.39 | 7.23 | 6.98 | 7.62 | 7.94 | 9.81 | 9.24 | 8.92 |
| Dairy operating expenses | 4.94 | 4.45 | 4.60 | 5.13 | 5.10 | 5.31 | 5.32 | 6.35 | 6.67 | 6.51 |
| Dairy operating profit | 1.39 | -0.01 | 1.79 | 2.10 | 1.88 | 2.30 | 2.62 | 3.46 | 2.57 | 2.41 |

Table 12.5: Cashflow

| Variable | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|---|---|---|---|
| PHYSICAL CHARACTERISTICS | | | | | | | | | | |
| Number of herds | 296 | 279 | 316 | 265 | 260 | 326 | 308 | 255 | 266 | 200 |
| Effective hectares | 146 | 148 | 148 | 151 | 146 | 142 | 141 | 144 | 145 | 148 |
| Peak cows milked | 419 | 418 | 414 | 430 | 424 | 415 | 408 | 419 | 407 | 411 |
| Stocking rate (cows/ha) | 2.9 | 2.8 | 2.8 | 2.8 | 2.9 | 2.9 | 2.9 | 2.9 | 2.8 | 2.8 |
| Kg milksolids sold | 160,367 | 160,270 | 160,302 | 161,567 | 167,189 | 169,761 | 171,720 | 172,832 | 169,990 | 174,235 |
| Milksolids sold per hectare | 1,102 | 1,082 | 1,085 | 1,067 | 1,145 | 1,194 | 1,222 | 1,199 | 1,174 | 1,180 |
| Milksolids sold per cow | 383 | 383 | 387 | 376 | 395 | 409 | 421 | 413 | 418 | 423 |
| PAYOUT RECEIVED ($/kg MS sold) | 5.76 | 3.92 | 5.79 | 6.62 | 6.42 | 7.05 | 7.40 | 9.19 | 8.68 | 8.33 |
| CASHFLOW: | | | | | | | | | | |
| Net dairy cash income | 1,013,891 | 724,607 | 1,014,072 | 1,156,683 | 1,157,633 | 1,285,742 | 1,362,488 | 1,691,776 | 1,570,293 | 1,562,276 |
| Farm working expenses | 652,619 | 582,850 | 598,662 | 678,172 | 710,932 | 748,282 | 760,996 | 920,087 | 976,798 | 950,173 |
| Cash operating surplus | 361,272 | 141,757 | 415,410 | 478,511 | 446,701 | 537,460 | 601,492 | 771,689 | 593,495 | 612,103 |
| DISCRETIONARY CASH | | | | | | | | | | |
| Less rent (excluding support block) | 22,250 | 20,047 | 19,582 | 20,703 | 12,499 | 17,280 | 17,069 | 14,929 | 13,227 | 8,845 |
| Less interest | 195,984 | 197,277 | 197,343 | 191,459 | 194,022 | 172,460 | 140,608 | 149,895 | 217,165 | 295,210 |
| Less tax | 34,078 | 7,939 | 16,773 | 41,532 | 38,315 | 52,696 | 77,161 | 124,502 | 102,018 | 73,356 |
| Plus net non-dairy cash income | 486 | 904 | 3,371 | 6,064 | 7,040 | 10,682 | 3,378 | 7,614 | 5,411 | 3,586 |
| Plus net off-farm income | 12,078 | 9,238 | 19,811 | 18,114 | 6,670 | 13,167 | 9,838 | -199 | 36,366 | 15,647 |
| Discretionary cash | 121,524 | -73,364 | 204,894 | 248,995 | 215,575 | 318,873 | 379,870 | 489,778 | 302,861 | 253,926 |
| OTHER CASH INCOME | | | | | | | | | | |
| Plus introduced funds | 28,307 | 77,696 | -24,004 | -40,908 | -2,774 | -18,560 | -16,833 | -60,186 | -909 | -25,385 |
| Plus income equalisation | -9,579 | 16,765 | 1,307 | 40 | 307 | -475 | 875 | -1,643 | 29 | 1,175 |
| Cash available for living and growth | 140,252 | 21,097 | 182,197 | 208,127 | 213,109 | 299,837 | 363,911 | 427,950 | 301,982 | 229,715 |
| OTHER CASH EXPENDITURE | | | | | | | | | | |
| Less net capital transactions | 201,119 | 76,697 | 109,749 | 238,591 | 207,027 | 113,522 | 148,238 | 267,306 | 137,369 | -26,905 |
| Less net debt | -93,026 | -111,777 | -75,867 | -92,523 | -74,133 | 49,483 | 59,719 | 43,029 | 38,791 | 135,765 |
| Less net drawings | 110,437 | 78,151 | 82,043 | 104,334 | 95,173 | 92,090 | 106,679 | 114,873 | 117,646 | 132,471 |
| Cash surplus/deficit | -78,278 | -21,974 | 66,272 | -42,275 | -14,958 | 57,909 | 59,112 | 2,543 | 44,541 | 4,032 |
| CASHFLOW ($/kg MS) | | | | | | | | | | |
| Net dairy cash income | 6.32 | 4.52 | 6.33 | 7.16 | 6.92 | 7.57 | 7.93 | 9.79 | 9.24 | 8.97 |
| Farm working expenses | 4.07 | 3.64 | 3.73 | 4.20 | 4.25 | 4.41 | 4.43 | 5.32 | 5.75 | 5.45 |
| Cash operating surplus | 2.25 | 0.88 | 2.59 | 2.96 | 2.67 | 3.17 | 3.50 | 4.46 | 3.49 | 3.51 |
| DISCRETIONARY CASH ($/kg MS) | | | | | | | | | | |
| Less rent (excluding support block) | 0.14 | 0.13 | 0.12 | 0.13 | 0.07 | 0.10 | 0.10 | 0.09 | 0.08 | 0.05 |
| Less interest | 1.22 | 1.23 | 1.23 | 1.19 | 1.16 | 1.02 | 0.82 | 0.87 | 1.28 | 1.69 |
| Less tax | 0.21 | 0.05 | 0.10 | 0.26 | 0.23 | 0.31 | 0.45 | 0.72 | 0.60 | 0.42 |
| Plus net non-dairy cash income | 0.00 | 0.01 | 0.02 | 0.04 | 0.04 | 0.06 | 0.02 | 0.04 | 0.03 | 0.02 |
| Plus net off-farm income | 0.08 | 0.06 | 0.12 | 0.11 | 0.04 | 0.08 | 0.06 | 0.00 | 0.21 | 0.09 |
| Discretionary cash | 0.76 | -0.46 | 1.28 | 1.54 | 1.29 | 1.88 | 2.21 | 2.83 | 1.78 | 1.46 |
| OTHER CASH INCOME ($/kg MS) | | | | | | | | | | |
| Plus introduced funds | 0.18 | 0.48 | -0.15 | -0.25 | -0.02 | -0.11 | -0.10 | -0.35 | -0.01 | -0.15 |
| Plus income equalisation | -0.06 | 0.10 | 0.01 | 0.00 | 0.00 | 0.00 | 0.01 | -0.01 | 0.00 | 0.01 |
| Cash available for living and growth | 0.87 | 0.13 | 1.14 | 1.29 | 1.27 | 1.77 | 2.12 | 2.48 | 1.78 | 1.32 |
| OTHER CASH EXPENDITURE ($/kg MS) | | | | | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Less net capital transactions | 1.25 | 0.48 | 0.68 | 1.48 | 1.24 | 0.67 | 0.86 | 1.55 | 0.81 | -0.15 |
| Less net debt | -0.58 | -0.70 | -0.47 | -0.57 | -0.44 | 0.29 | 0.35 | 0.25 | 0.23 | 0.78 |
| Less net drawings | 0.69 | 0.49 | 0.51 | 0.65 | 0.57 | 0.54 | 0.62 | 0.66 | 0.69 | 0.76 |
| Cash surplus/deficit | -0.49 | -0.14 | 0.41 | -0.26 | -0.09 | 0.34 | 0.34 | 0.01 | 0.26 | 0.02 |

## Table 12.6: Capital Structure and Wealth Creation

| Variable | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|---|---|---|---|
| PHYSICAL CHARACTERISTICS | | | | | | | | | | |
| Number of herds | 296 | 279 | 316 | 265 | 260 | 326 | 308 | 255 | 266 | 200 |
| Effective hectares | 146 | 148 | 148 | 151 | 146 | 142 | 141 | 144 | 145 | 148 |
| Peak cows milked | 419 | 418 | 414 | 430 | 424 | 415 | 408 | 419 | 407 | 411 |
| Stocking rate (cows/ha) | 2.9 | 2.8 | 2.8 | 2.8 | 2.9 | 2.9 | 2.9 | 2.9 | 2.8 | 2.8 |
| Kg milksolids sold | 160,367 | 160,270 | 160,302 | 161,567 | 167,189 | 169,761 | 171,720 | 172,832 | 169,990 | 174,235 |
| Milksolids sold per hectare | 1,102 | 1,082 | 1,085 | 1,067 | 1,145 | 1,194 | 1,222 | 1,199 | 1,174 | 1,180 |
| Milksolids sold per cow | 383 | 383 | 387 | 376 | 395 | 409 | 421 | 413 | 418 | 423 |
| PAYOUT RECEIVED ($/kg MS sold) | 5.76 | 3.92 | 5.79 | 6.62 | 6.42 | 7.05 | 7.40 | 9.19 | 8.68 | 8.33 |
| DAIRY ASSETS AT OPEN | | | | | | | | | | |
| Land & buildings | 5,055,041 | 5,473,880 | 5,518,535 | 5,849,932 | 6,091,560 | 6,039,561 | 5,752,162 | 6,339,284 | 6,711,501 | 6,704,369 |
| Plant, machinery and vehicles | 233,302 | 258,077 | 254,722 | 252,258 | 249,118 | 260,302 | 240,288 | 259,426 | 273,160 | 300,187 |
| Livestock | 967,406 | 812,241 | 640,378 | 834,061 | 754,230 | 737,092 | 730,625 | 755,462 | 821,996 | 798,105 |
| Investments (excluding non-dairy) | 892,639 | 688,384 | 791,795 | 800,126 | 815,583 | 660,658 | 585,604 | 586,494 | 413,317 | 432,466 |
| Current assets | 285,915 | 176,424 | 138,254 | 208,018 | 180,448 | 172,313 | 189,667 | 262,660 | 287,681 | 283,379 |
| Total dairy assets at open | 7,434,303 | 7,409,006 | 7,343,684 | 7,944,395 | 8,090,939 | 7,869,926 | 7,498,345 | 8,203,328 | 8,507,655 | 8,518,506 |
| Plus non-dairy assets | 207,058 | 258,166 | 267,387 | 403,636 | 353,525 | 351,490 | 371,716 | 480,669 | 510,527 | 444,186 |
| Total assets | 7,641,361 | 7,667,172 | 7,611,071 | 8,348,031 | 8,444,463 | 8,221,416 | 7,870,061 | 8,683,997 | 9,018,182 | 8,962,692 |
| LIABILITIES AT OPEN | | | | | | | | | | |
| Term liabilities | 3,317,150 | 3,493,221 | 3,932,350 | 3,996,989 | 4,091,376 | 3,995,700 | 3,901,222 | 4,115,003 | 3,816,278 | 4,020,930 |
| Current liabilities | 182,128 | 197,175 | 160,682 | 149,261 | 189,611 | 178,179 | 156,630 | 173,275 | 258,035 | 192,321 |
| Total liabilities | 3,499,278 | 3,690,396 | 4,093,032 | 4,146,250 | 4,280,987 | 4,173,879 | 4,057,851 | 4,288,278 | 4,074,313 | 4,213,252 |
| Owners equity at open | 4,142,083 | 3,976,776 | 3,518,039 | 4,201,781 | 4,163,476 | 4,047,537 | 3,812,209 | 4,395,719 | 4,943,869 | 4,749,440 |
| DAIRY ASSETS AT CLOSE | | | | | | | | | | |
| Land & buildings | 5,368,063 | 5,289,448 | 5,854,250 | 5,843,351 | 5,933,994 | 5,888,745 | 5,808,851 | 6,631,060 | 6,676,105 | 6,624,363 |
| Plant, machinery and vehicles | 233,593 | 243,360 | 249,436 | 255,794 | 246,538 | 253,497 | 240,804 | 286,344 | 287,910 | 285,937 |
| Livestock | 804,897 | 651,096 | 815,984 | 776,831 | 752,063 | 748,428 | 734,146 | 848,540 | 785,591 | 780,971 |
| Investments (excluding non-dairy) | 751,874 | 810,143 | 823,402 | 748,739 | 665,352 | 632,180 | 584,287 | 467,449 | 470,286 | 401,198 |
| Current assets | 186,858 | 151,773 | 194,747 | 195,692 | 163,031 | 205,720 | 241,278 | 309,682 | 292,846 | 246,273 |
| Total dairy assets at close | 7,345,285 | 7,145,820 | 7,937,819 | 7,820,407 | 7,760,977 | 7,728,570 | 7,609,364 | 8,543,075 | 8,512,738 | 8,338,742 |
| Plus Non-dairy assets | 224,823 | 258,766 | 280,232 | 411,434 | 388,794 | 350,613 | 374,638 | 505,088 | 553,792 | 434,730 |
| Total assets | 7,570,108 | 7,404,586 | 8,218,051 | 8,231,841 | 8,149,771 | 8,079,184 | 7,984,003 | 9,048,163 | 9,066,531 | 8,773,472 |
| LIABILITIES AT CLOSE | | | | | | | | | | |
| Term liabilities | 3,410,176 | 3,604,999 | 4,008,218 | 4,089,512 | 4,165,930 | 3,946,217 | 3,841,503 | 4,071,973 | 3,777,487 | 3,885,165 |
| Current liabilities | 161,349 | 194,497 | 150,902 | 179,210 | 184,250 | 170,738 | 161,979 | 217,484 | 250,054 | 166,581 |
| Total liabilities | 3,571,525 | 3,799,496 | 4,159,120 | 4,268,722 | 4,350,179 | 4,116,954 | 4,003,482 | 4,289,457 | 4,027,540 | 4,051,746 |
| Owners equity at close | 3,998,583 | 3,605,090 | 4,058,931 | 3,963,119 | 3,799,592 | 3,962,230 | 3,980,521 | 4,758,706 | 5,038,990 | 4,721,726 |
| EQUITY | | | | | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Growth in equity | -143,500 | -371,686 | 540,892 | -238,662 | -363,884 | -85,307 | 168,312 | 362,987 | 95,121 | -27,714 |
| Growth in equity from profit | -53,784 | -225,348 | 68,973 | 85,385 | 63,675 | 159,527 | 208,237 | 297,876 | 129,388 | 37,717 |
| Growth in equity from capital | -89,716 | -146,338 | 471,919 | -324,047 | -427,560 | -244,765 | -39,822 | 65,148 | -34,231 | -65,125 |
| Growth in equity % | -3.5 | -9.3 | 15.4 | -5.7 | -8.7 | -2.1 | 4.4 | 8.3 | 1.9 | -0.6 |
| Closing debt to asset % | 45.8 | 50.3 | 49.4 | 50.7 | 53.4 | 51.0 | 50.1 | 47.4 | 44.4 | 46.2 |
| Closing term liabilities per kg MS | 21.26 | 22.49 | 25.00 | 25.31 | 24.92 | 23.25 | 22.37 | 23.56 | 22.22 | 22.30 |

Table 12.7: Returns

| Variable | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|---|---|---|---|
| PHYSICAL CHARACTERISTICS | | | | | | | | | | |
| Number of herds | 296 | 279 | 316 | 265 | 260 | 326 | 308 | 255 | 266 | 200 |
| Effective hectares | 146 | 148 | 148 | 151 | 146 | 142 | 141 | 144 | 145 | 148 |
| Peak cows milked | 419 | 418 | 414 | 430 | 424 | 415 | 408 | 419 | 407 | 411 |
| Stocking rate (cows/ha) | 2.9 | 2.8 | 2.8 | 2.8 | 2.9 | 2.9 | 2.9 | 2.9 | 2.8 | 2.8 |
| Kg milksolids sold | 160,367 | 160,270 | 160,302 | 161,567 | 167,189 | 169,761 | 171,720 | 172,832 | 169,990 | 174,235 |
| Milksolids sold per hectare | 1,102 | 1,082 | 1,085 | 1,067 | 1,145 | 1,194 | 1,222 | 1,199 | 1,174 | 1,180 |
| Milksolids sold per cow | 383 | 383 | 387 | 376 | 395 | 409 | 421 | 413 | 418 | 423 |
| PAYOUT RECEIVED ($/kg MS sold) | 5.76 | 3.92 | 5.79 | 6.62 | 6.42 | 7.05 | 7.40 | 9.19 | 8.68 | 8.33 |
| RETURN ON DAIRY ASSETS % | | | | | | | | | | |
| Dairy operating profit | 223,630 | -1,291 | 286,227 | 338,871 | 314,435 | 390,831 | 449,132 | 598,081 | 436,843 | 420,064 |
| Plus owned support block adjustment | 14,889 | 14,126 | 14,359 | 16,786 | 13,143 | 16,151 | 16,720 | 18,843 | 20,738 | 22,776 |
| Less rent | 22,250 | 20,047 | 19,582 | 20,703 | 12,499 | 17,280 | 17,069 | 14,929 | 13,227 | 8,845 |
| Net return from dairy | 216,269 | -7,212 | 281,004 | 334,954 | 315,079 | 389,701 | 448,783 | 601,995 | 444,354 | 433,995 |
| Total dairy assets (less current) at open | 7,148,388 | 7,232,582 | 7,205,430 | 7,736,377 | 7,910,490 | 7,697,613 | 7,308,678 | 7,940,668 | 8,219,974 | 8,235,127 |
| Operating return on dairy assets % | 3.0 | -0.1 | 3.9 | 4.3 | 4.0 | 5.1 | 6.1 | 7.6 | 5.4 | 5.3 |
| TOTAL RETURN ON ASSETS % | | | | | | | | | | |
| Net return from dairy | 216,269 | -7,212 | 281,004 | 334,954 | 315,079 | 389,701 | 448,783 | 601,995 | 444,354 | 433,995 |
| Plus net non-dairy profit | -673 | -318 | 3,331 | 5,444 | 6,904 | 11,894 | 3,870 | 5,499 | 5,136 | 4,313 |
| Plus change in capital value | -175,947 | -301,565 | 430,903 | -353,833 | -277,275 | -287,474 | -78,028 | 46,611 | -95,819 | -118,124 |
| Total return | 39,649 | -309,095 | 715,238 | -13,435 | 44,709 | 114,121 | 374,625 | 654,105 | 353,671 | 320,184 |
| Total assets (less current) at open | 7,355,446 | 7,490,748 | 7,472,817 | 8,140,013 | 8,264,015 | 8,221,416 | 7,870,061 | 8,683,997 | 9,018,182 | 8,962,692 |
| Total return on assets % | 0.5 | -4.1 | 9.6 | -0.2 | 0.5 | 1.4 | 4.8 | 7.5 | 3.9 | 3.6 |
| TOTAL RETURN ON EQUITY % | | | | | | | | | | |
| Total return | 39,649 | -309,095 | 715,238 | -13,435 | 44,709 | 114,121 | 374,625 | 654,105 | 353,671 | 320,184 |
| Plus net off-farm income | 12,078 | 9,238 | 19,811 | 18,114 | 6,670 | 13,167 | 9,838 | -199 | 36,366 | 15,647 |
| Less interest | 195,984 | 197,277 | 197,343 | 191,459 | 194,022 | 172,460 | 140,608 | 149,895 | 217,165 | 295,210 |
| Total return for equity | -144,237 | -497,164 | 537,538 | -186,502 | -142,643 | -45,173 | 243,855 | 504,011 | 172,871 | 40,622 |
| Equity at open | 4,142,083 | 3,976,776 | 3,518,039 | 4,201,781 | 4,163,476 | 4,047,537 | 3,812,209 | 4,395,719 | 4,943,869 | 4,749,440 |
| Total return on equity % | -3.5 | -12.5 | 15.3 | -4.4 | -3.4 | -1.1 | 6.4 | 11.5 | 3.5 | 0.9 |

# 13.Time Series Tables: 50:50 Sharemilkers

Table 13.1: Cash Operating Surplus and Operating Profit - $ per farm

| Variable | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|---|---|---|---|
| PHYSICAL CHARACTERISTICS | | | | | | | | | | |
| Number of herds | 111 | 109 | 113 | 108 | 122 | 124 | 108 | 87 | 109 | 96 |
| Effective hectares | 132 | 133 | 132 | 137 | 151 | 144 | 140 | 140 | 147 | 145 |
| Peak cows milked | 383 | 379 | 372 | 391 | 452 | 431 | 424 | 422 | 437 | 434 |
| Stocking rate (cows/ha) | 2.9 | 2.8 | 2.8 | 2.8 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Kg milksolids sold | 151,044 | 144,587 | 143,685 | 147,143 | 184,909 | 175,656 | 182,030 | 171,282 | 181,551 | 185,071 |
| Milksolids sold per hectare | 1,144 | 1,085 | 1,089 | 1,072 | 1,222 | 1,219 | 1,300 | 1,227 | 1,239 | 1,275 |
| Milksolids sold per cow | 394 | 381 | 386 | 376 | 410 | 408 | 429 | 406 | 416 | 426 |
| PAYOUT RECEIVED ($/kg MS sold) | 2.88 | 1.88 | 2.82 | 3.21 | 3.17 | 3.45 | 3.65 | 4.54 | 4.14 | 3.96 |
| DAIRY CASH INCOME ($): | | | | | | | | | | |
| Milk sales (net of dairy levies) | 434,377 | 272,370 | 405,691 | 472,702 | 586,337 | 606,847 | 665,124 | 778,049 | 752,157 | 733,129 |
| Net livestock sales (sales - purchases) | 54,333 | 35,783 | 60,598 | 50,428 | 75,931 | 60,008 | 80,562 | 52,633 | 46,973 | 12,840 |
| Other dairy cash income | 2,381 | 3,368 | 2,419 | 2,321 | 2,332 | 3,280 | 4,596 | 3,365 | 6,275 | 4,446 |
| Net dairy cash income | 491,091 | 311,521 | 468,708 | 525,451 | 664,600 | 670,136 | 750,282 | 834,048 | 805,405 | 750,415 |
| CASH FARM WORKING EXPENSES ($): | | | | | | | | | | |
| Wages | 52,915 | 48,799 | 51,624 | 61,841 | 82,680 | 76,511 | 80,791 | 82,429 | 92,742 | 99,842 |
| Animal health | 35,418 | 28,668 | 31,232 | 34,238 | 43,264 | 41,198 | 43,119 | 49,737 | 52,314 | 52,457 |
| Breeding & herd improvement | 22,026 | 20,299 | 20,065 | 24,196 | 30,219 | 29,137 | 30,536 | 30,290 | 32,276 | 31,697 |
| Farm dairy | 6,653 | 6,629 | 6,886 | 7,538 | 8,922 | 9,415 | 8,627 | 8,671 | 10,200 | 10,048 |
| Electricity | 15,840 | 15,435 | 15,505 | 15,362 | 18,649 | 18,121 | 19,104 | 18,387 | 20,825 | 20,845 |
| Net feed made, purchased, cropped | 77,650 | 53,410 | 55,474 | 72,032 | 93,630 | 93,405 | 100,999 | 116,467 | 134,016 | 116,036 |
| Stock grazing | 50,175 | 42,034 | 34,075 | 46,703 | 60,678 | 58,204 | 53,146 | 58,865 | 66,699 | 77,087 |
| Support block lease | 1,403 | 2,206 | 1,834 | 1,666 | 1,380 | 2,840 | 1,817 | 891 | 3,194 | 2,613 |
| Fertiliser (including Nitrogen) | 21,454 | 18,608 | 18,616 | 21,151 | 25,577 | 27,222 | 24,985 | 29,510 | 36,403 | 29,937 |
| Irrigation | 2,135 | 3,991 | 2,462 | 2,043 | 5,126 | 6,117 | 4,720 | 4,303 | 3,312 | 4,630 |
| Regrassing | 2,560 | 2,502 | 2,442 | 3,026 | 4,270 | 3,428 | 3,776 | 4,651 | 6,009 | 4,668 |
| Weed & pest | 1,582 | 1,383 | 1,948 | 1,869 | 1,940 | 2,049 | 2,046 | 1,904 | 1,892 | 1,895 |
| Vehicles & fuel | 23,726 | 20,049 | 22,926 | 24,851 | 28,739 | 27,432 | 26,732 | 31,024 | 34,090 | 33,331 |
| Repairs & maintenance | 10,305 | 9,029 | 10,234 | 11,702 | 12,710 | 11,632 | 16,045 | 14,443 | 14,883 | 16,164 |
| Freight & general | 8,661 | 6,782 | 6,600 | 7,871 | 8,008 | 9,305 | 9,605 | 10,761 | 13,909 | 13,656 |
| Administration | 12,413 | 11,778 | 11,542 | 11,785 | 15,718 | 15,081 | 14,212 | 14,732 | 18,194 | 17,547 |
| Insurance | 4,255 | 4,906 | 4,254 | 4,970 | 5,351 | 5,614 | 6,223 | 6,798 | 7,492 | 7,882 |
| ACC | 3,248 | 3,054 | 2,937 | 2,982 | 3,918 | 2,399 | 5,084 | 5,379 | 5,304 | 5,058 |
| Rates | 1,253 | 526 | 512 | 302 | 549 | 656 | 417 | 553 | 719 | 904 |
| Farm working expenses | 353,672 | 300,088 | 301,168 | 356,128 | 451,327 | 439,763 | 451,984 | 489,795 | 554,471 | 546,296 |
| Cash operating surplus | 137,419 | 11,433 | 167,540 | 169,323 | 213,273 | 230,372 | 298,298 | 344,252 | 250,934 | 204,120 |
| ADJUSTMENTS ($): | | | | | | | | | | |
| Value of change in dairy livestock | 32,000 | 30,838 | 16,893 | 32,946 | 8,193 | 31,018 | -272 | 31,022 | 39,357 | 68,031 |
| Less labour adjustment | 77,508 | 73,553 | 72,041 | 80,608 | 80,071 | 82,559 | 91,240 | 100,776 | 102,774 | 104,061 |
| Plus feed inventory adjustment | 176 | 1,708 | -486 | 1,860 | 2,496 | -41 | 2,515 | 1,041 | 6,473 | 2,343 |
| Less owned support block adjustment | 1,245 | 695 | 508 | 251 | 299 | 479 | 611 | 1,010 | 860 | 0 |
| Less depreciation | 25,243 | 23,409 | 19,521 | 24,700 | 26,415 | 27,018 | 28,470 | 28,354 | 31,251 | 30,841 |
| Net Adjustments | -71,820 | -65,111 | -75,663 | -70,753 | -96,096 | -79,079 | -118,078 | -98,077 | -89,055 | -64,529 |
| OPERATING CASH & NON-CASH: | | | | | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Dairy gross farm revenue | 523,091 | 342,359 | 485,601 | 558,397 | 672,793 | 701,154 | 750,010 | 865,070 | 844,762 | 818,446 |
| Dairy operating expenses | 457,492 | 396,037 | 393,724 | 459,827 | 555,616 | 549,861 | 569,791 | 618,895 | 682,882 | 678,855 |
| Dairy operating profit | 65,599 | -53,678 | 91,877 | 98,570 | 117,177 | 151,293 | 180,220 | 246,175 | 161,879 | 139,591 |

Table 13.2: Cash Operating Surplus and Operating Profit - $ per cow

| Variable | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|---|---|---|---|
| PHYSICAL CHARACTERISTICS | | | | | | | | | | |
| Number of herds | 111 | 109 | 113 | 108 | 122 | 124 | 108 | 87 | 109 | 96 |
| Effective hectares | 132 | 133 | 132 | 137 | 151 | 144 | 140 | 140 | 147 | 145 |
| Peak cows milked | 383 | 379 | 372 | 391 | 452 | 431 | 424 | 422 | 437 | 434 |
| Stocking rate (cows/ha) | 2.9 | 2.8 | 2.8 | 2.8 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Kg milksolids sold | 151,044 | 144,587 | 143,685 | 147,143 | 184,909 | 175,656 | 182,030 | 171,282 | 181,551 | 185,071 |
| Milksolids sold per hectare | 1,144 | 1,085 | 1,089 | 1,072 | 1,222 | 1,219 | 1,300 | 1,227 | 1,239 | 1,275 |
| Milksolids sold per cow | 394 | 381 | 386 | 376 | 410 | 408 | 429 | 406 | 416 | 426 |
| PAYOUT RECEIVED ($/kg MS sold) | 2.88 | 1.88 | 2.82 | 3.21 | 3.17 | 3.45 | 3.65 | 4.54 | 4.14 | 3.96 |
| DAIRY CASH INCOME ($/cow): | | | | | | | | | | |
| Milk sales (net of dairy levies) | 1,134 | 719 | 1,091 | 1,209 | 1,299 | 1,408 | 1,567 | 1,843 | 1,722 | 1,689 |
| Net livestock sales (sales - purchases) | 142 | 94 | 163 | 129 | 168 | 139 | 190 | 125 | 108 | 30 |
| Other dairy cash income | 6 | 9 | 7 | 6 | 5 | 8 | 11 | 8 | 14 | 10 |
| Net dairy cash income | 1,282 | 822 | 1,260 | 1,344 | 1,472 | 1,555 | 1,768 | 1,975 | 1,843 | 1,729 |
| CASH FARM WORKING EXPENSES ($/cow): | | | | | | | | | | |
| Wages | 138 | 129 | 139 | 158 | 183 | 178 | 190 | 195 | 212 | 230 |
| Animal health | 92 | 76 | 84 | 88 | 96 | 96 | 102 | 118 | 120 | 121 |
| Breeding & herd improvement | 58 | 54 | 54 | 62 | 67 | 68 | 72 | 72 | 74 | 73 |
| Farm dairy | 17 | 17 | 19 | 19 | 20 | 22 | 20 | 21 | 23 | 23 |
| Electricity | 41 | 41 | 42 | 39 | 41 | 42 | 45 | 44 | 48 | 48 |
| Net feed made, purchased, cropped | 203 | 141 | 149 | 184 | 207 | 217 | 238 | 276 | 307 | 267 |
| Stock grazing | 131 | 111 | 92 | 119 | 134 | 135 | 125 | 139 | 153 | 178 |
| Support block lease | 4 | 6 | 5 | 4 | 3 | 7 | 4 | 2 | 7 | 6 |
| Fertiliser (including Nitrogen) | 56 | 49 | 50 | 54 | 57 | 63 | 59 | 70 | 83 | 69 |
| Irrigation | 6 | 11 | 7 | 5 | 11 | 14 | 11 | 10 | 8 | 11 |
| Regrassing | 7 | 7 | 7 | 8 | 9 | 8 | 9 | 11 | 14 | 11 |
| Weed & pest | 4 | 4 | 5 | 5 | 4 | 5 | 5 | 5 | 4 | 4 |
| Vehicles & fuel | 62 | 53 | 62 | 64 | 64 | 64 | 63 | 73 | 78 | 77 |
| Repairs & maintenance | 27 | 24 | 28 | 30 | 28 | 27 | 38 | 34 | 34 | 37 |
| Freight & general | 23 | 18 | 18 | 20 | 18 | 22 | 23 | 25 | 32 | 31 |
| Administration | 32 | 31 | 31 | 30 | 35 | 35 | 33 | 35 | 42 | 40 |
| Insurance | 11 | 13 | 11 | 13 | 12 | 13 | 15 | 16 | 17 | 18 |
| ACC | 8 | 8 | 8 | 8 | 9 | 6 | 12 | 13 | 12 | 12 |
| Rates | 3 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 2 |
| Farm working expenses | 923 | 792 | 810 | 911 | 1,000 | 1,021 | 1,065 | 1,160 | 1,269 | 1,259 |
| Cash operating surplus | 359 | 30 | 450 | 433 | 472 | 535 | 703 | 815 | 574 | 470 |
| ADJUSTMENTS ($/cow): | | | | | | | | | | |
| Value of change in dairy livestock | 84 | 81 | 45 | 84 | 18 | 72 | -1 | 73 | 90 | 157 |
| Less labour adjustment | 202 | 194 | 194 | 206 | 177 | 192 | 215 | 239 | 235 | 240 |
| Plus feed inventory adjustment | 0 | 5 | -1 | 5 | 6 | 0 | 6 | 2 | 15 | 5 |
| Less owned support block adjustment | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 0 |
| Less depreciation | 66 | 62 | 52 | 63 | 59 | 63 | 67 | 67 | 72 | 71 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Net Adjustments | -188 | -172 | -203 | -181 | -213 | -184 | -278 | -232 | -204 | -149 |
| OPERATING CASH & NON-CASH ($/cow) | | | | | | | | | | |
| Dairy gross farm revenue | 1,366 | 903 | 1,305 | 1,428 | 1,490 | 1,627 | 1,767 | 2,049 | 1,934 | 1,886 |
| Dairy operating expenses | 1,194 | 1,045 | 1,058 | 1,176 | 1,231 | 1,276 | 1,342 | 1,466 | 1,563 | 1,564 |
| Dairy operating profit | 171 | -142 | 247 | 252 | 260 | 351 | 425 | 583 | 371 | 322 |

Table 13.3: Cash Operating Surplus and Operating Profit - $ per effective hectare

| Variable | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|---|---|---|---|
| PHYSICAL CHARACTERISTICS | | | | | | | | | | |
| Number of herds | 111 | 109 | 113 | 108 | 122 | 124 | 108 | 87 | 109 | 96 |
| Effective hectares | 132 | 133 | 132 | 137 | 151 | 144 | 140 | 140 | 147 | 145 |
| Peak cows milked | 383 | 379 | 372 | 391 | 452 | 431 | 424 | 422 | 437 | 434 |
| Stocking rate (cows/ha) | 2.9 | 2.8 | 2.8 | 2.8 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Kg milksolids sold | 151,044 | 144,587 | 143,685 | 147,143 | 184,909 | 175,656 | 182,030 | 171,282 | 181,551 | 185,071 |
| Milksolids sold per hectare | 1,144 | 1,085 | 1,089 | 1,072 | 1,222 | 1,219 | 1,300 | 1,227 | 1,239 | 1,275 |
| Milksolids sold per cow | 394 | 381 | 386 | 376 | 410 | 408 | 429 | 406 | 416 | 426 |
| PAYOUT RECEIVED ($/kg MS sold) | 2.88 | 1.88 | 2.82 | 3.21 | 3.17 | 3.45 | 3.65 | 4.54 | 4.14 | 3.96 |
| DAIRY CASH INCOME ($/ha): | | | | | | | | | | |
| Milk sales (net of dairy levies) | 3,291 | 2,043 | 3,073 | 3,445 | 3,876 | 4,210 | 4,751 | 5,574 | 5,132 | 5,050 |
| Net livestock sales (sales - purchases) | 412 | 268 | 459 | 368 | 502 | 416 | 575 | 377 | 320 | 88 |
| Other dairy cash income | 18 | 25 | 18 | 17 | 15 | 23 | 33 | 24 | 43 | 31 |
| Net dairy cash income | 3,720 | 2,337 | 3,551 | 3,830 | 4,393 | 4,649 | 5,359 | 5,975 | 5,495 | 5,169 |
| CASH FARM WORKING EXPENSES ($/ha): | | | | | | | | | | |
| Wages | 401 | 366 | 391 | 451 | 547 | 531 | 577 | 591 | 633 | 688 |
| Animal health | 268 | 215 | 237 | 250 | 286 | 286 | 308 | 356 | 357 | 361 |
| Breeding & herd improvement | 167 | 152 | 152 | 176 | 200 | 202 | 218 | 217 | 220 | 218 |
| Farm dairy | 50 | 50 | 52 | 55 | 59 | 65 | 62 | 62 | 70 | 69 |
| Electricity | 120 | 116 | 117 | 112 | 123 | 126 | 136 | 132 | 142 | 144 |
| Net feed made, purchased, cropped | 588 | 401 | 420 | 525 | 619 | 648 | 721 | 834 | 914 | 799 |
| Stock grazing | 380 | 315 | 258 | 340 | 401 | 404 | 380 | 422 | 455 | 531 |
| Support block lease | 11 | 17 | 14 | 12 | 9 | 20 | 13 | 6 | 22 | 18 |
| Fertiliser (including Nitrogen) | 163 | 140 | 141 | 154 | 169 | 189 | 178 | 211 | 248 | 206 |
| Irrigation | 16 | 30 | 19 | 15 | 34 | 42 | 34 | 31 | 23 | 32 |
| Regrassing | 19 | 19 | 18 | 22 | 28 | 24 | 27 | 33 | 41 | 32 |
| Weed & pest | 12 | 10 | 15 | 14 | 13 | 14 | 15 | 14 | 13 | 13 |
| Vehicles & fuel | 180 | 150 | 174 | 181 | 190 | 190 | 191 | 222 | 233 | 230 |
| Repairs & maintenance | 78 | 68 | 78 | 85 | 84 | 81 | 115 | 103 | 102 | 111 |
| Freight & general | 66 | 51 | 50 | 57 | 53 | 65 | 69 | 77 | 95 | 94 |
| Administration | 94 | 88 | 87 | 86 | 104 | 105 | 102 | 106 | 124 | 121 |
| Insurance | 32 | 37 | 32 | 36 | 35 | 39 | 44 | 49 | 51 | 54 |
| ACC | 25 | 23 | 22 | 22 | 26 | 17 | 36 | 39 | 36 | 35 |
| Rates | 9 | 4 | 4 | 2 | 4 | 5 | 3 | 4 | 5 | 6 |
| Farm working expenses | 2,679 | 2,251 | 2,282 | 2,596 | 2,983 | 3,051 | 3,229 | 3,509 | 3,783 | 3,763 |
| Cash operating surplus | 1,041 | 86 | 1,269 | 1,234 | 1,410 | 1,598 | 2,131 | 2,466 | 1,712 | 1,406 |
| ADJUSTMENTS ($/ha): | | | | | | | | | | |
| Value of change in dairy livestock | 242 | 231 | 128 | 240 | 54 | 215 | -2 | 222 | 269 | 469 |
| Less labour adjustment | 587 | 552 | 546 | 588 | 529 | 573 | 652 | 722 | 701 | 717 |
| Plus feed inventory adjustment | 1 | 13 | -4 | 14 | 16 | 0 | 18 | 7 | 44 | 16 |
| Less owned support block adjustment | 9 | 5 | 4 | 2 | 2 | 3 | 4 | 7 | 6 | 0 |
| Less depreciation | 191 | 176 | 148 | 180 | 175 | 187 | 203 | 203 | 213 | 212 |
| Net Adjustments | -544 | -488 | -573 | -516 | -635 | -549 | -843 | -703 | -608 | -444 |
| OPERATING CASH & NON-CASH ($/ha): | | | | | | | | | | |
| Dairy gross farm revenue | 3,963 | 2,568 | 3,679 | 4,070 | 4,447 | 4,864 | 5,357 | 6,198 | 5,763 | 5,637 |
| Dairy operating expenses | 3,466 | 2,971 | 2,983 | 3,352 | 3,673 | 3,815 | 4,070 | 4,434 | 4,659 | 4,676 |
| Dairy operating profit | 497 | -403 | 696 | 718 | 775 | 1,050 | 1,287 | 1,764 | 1,104 | 961 |

## Table 13.4: Cash Operating Surplus and Operating Profit - $ per kg milksolids sold

| Variable | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|---|---|---|---|
| PHYSICAL CHARACTERISTICS | | | | | | | | | | |
| Number of herds | 111 | 109 | 113 | 108 | 122 | 124 | 108 | 87 | 109 | 96 |
| Effective hectares | 132 | 133 | 132 | 137 | 151 | 144 | 140 | 140 | 147 | 145 |
| Peak cows milked | 383 | 379 | 372 | 391 | 452 | 431 | 424 | 422 | 437 | 434 |
| Stocking rate (cows/ha) | 2.9 | 2.8 | 2.8 | 2.8 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Kg milksolids sold | 151,044 | 144,587 | 143,685 | 147,143 | 184,909 | 175,656 | 182,030 | 171,282 | 181,551 | 185,071 |
| Milksolids sold per hectare | 1,144 | 1,085 | 1,089 | 1,072 | 1,222 | 1,219 | 1,300 | 1,227 | 1,239 | 1,275 |
| Milksolids sold per cow | 394 | 381 | 386 | 376 | 410 | 408 | 429 | 406 | 416 | 426 |
| PAYOUT RECEIVED ($/kg MS sold) | 2.88 | 1.88 | 2.82 | 3.21 | 3.17 | 3.45 | 3.65 | 4.54 | 4.14 | 3.96 |
| DAIRY CASH INCOME ($/kg MS): | | | | | | | | | | |
| Milk sales (net of dairy levies) | 2.88 | 1.88 | 2.82 | 3.21 | 3.17 | 3.45 | 3.65 | 4.54 | 4.14 | 3.96 |
| Net livestock sales (sales - purchases) | 0.36 | 0.25 | 0.42 | 0.34 | 0.41 | 0.34 | 0.44 | 0.31 | 0.26 | 0.07 |
| Other dairy cash income | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.02 | 0.03 | 0.02 | 0.03 | 0.02 |
| Net dairy cash income | 3.25 | 2.15 | 3.26 | 3.57 | 3.59 | 3.82 | 4.12 | 4.87 | 4.44 | 4.05 |
| CASH FARM WORKING EXPENSES ($/kg MS): | | | | | | | | | | |
| Wages | 0.35 | 0.34 | 0.36 | 0.42 | 0.45 | 0.44 | 0.44 | 0.48 | 0.51 | 0.54 |
| Animal health | 0.23 | 0.20 | 0.22 | 0.23 | 0.23 | 0.23 | 0.24 | 0.29 | 0.29 | 0.28 |
| Breeding & herd improvement | 0.15 | 0.14 | 0.14 | 0.16 | 0.16 | 0.17 | 0.17 | 0.18 | 0.18 | 0.17 |
| Farm dairy | 0.04 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.06 | 0.05 |
| Electricity | 0.10 | 0.11 | 0.11 | 0.10 | 0.10 | 0.10 | 0.10 | 0.11 | 0.11 | 0.11 |
| Net feed made, purchased, cropped | 0.51 | 0.37 | 0.39 | 0.49 | 0.51 | 0.53 | 0.55 | 0.68 | 0.74 | 0.63 |
| Stock grazing | 0.33 | 0.29 | 0.24 | 0.32 | 0.33 | 0.33 | 0.29 | 0.34 | 0.37 | 0.42 |
| Support block lease | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | 0.02 | 0.01 |
| Fertiliser (including Nitrogen) | 0.14 | 0.13 | 0.13 | 0.14 | 0.14 | 0.15 | 0.14 | 0.17 | 0.20 | 0.16 |
| Irrigation | 0.01 | 0.03 | 0.02 | 0.01 | 0.03 | 0.03 | 0.03 | 0.03 | 0.02 | 0.03 |
| Regrassing | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 |
| Weed & pest | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Vehicles & fuel | 0.16 | 0.14 | 0.16 | 0.17 | 0.16 | 0.16 | 0.15 | 0.18 | 0.19 | 0.18 |
| Repairs & maintenance | 0.07 | 0.06 | 0.07 | 0.08 | 0.07 | 0.07 | 0.09 | 0.08 | 0.08 | 0.09 |
| Freight & general | 0.06 | 0.05 | 0.05 | 0.05 | 0.04 | 0.05 | 0.05 | 0.06 | 0.08 | 0.07 |
| Administration | 0.08 | 0.08 | 0.08 | 0.08 | 0.09 | 0.09 | 0.08 | 0.09 | 0.10 | 0.09 |
| Insurance | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.04 | 0.04 | 0.04 |
| ACC | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.03 | 0.03 | 0.03 | 0.03 |
| Rates | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Farm working expenses | 2.34 | 2.08 | 2.10 | 2.42 | 2.44 | 2.50 | 2.48 | 2.86 | 3.05 | 2.95 |
| Cash operating surplus | 0.91 | 0.08 | 1.17 | 1.15 | 1.15 | 1.31 | 1.64 | 2.01 | 1.38 | 1.10 |
| ADJUSTMENTS ($/kg MS): | | | | | | | | | | |
| Value of change in dairy livestock | 0.21 | 0.21 | 0.12 | 0.22 | 0.04 | 0.18 | 0.00 | 0.18 | 0.22 | 0.37 |
| Less labour adjustment | 0.51 | 0.51 | 0.50 | 0.55 | 0.43 | 0.47 | 0.50 | 0.59 | 0.57 | 0.56 |
| Plus feed inventory adjustment | 0.00 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.01 | 0.04 | 0.01 |
| Less owned support block adjustment | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 |
| Less depreciation | 0.17 | 0.16 | 0.14 | 0.17 | 0.14 | 0.15 | 0.16 | 0.17 | 0.17 | 0.17 |
| Net Adjustments | -0.48 | -0.45 | -0.53 | -0.48 | -0.52 | -0.45 | -0.65 | -0.57 | -0.49 | -0.35 |
| OPERATING CASH & NON-CASH ($/kg MS): | | | | | | | | | | |
| Dairy gross farm revenue | 3.46 | 2.37 | 3.38 | 3.79 | 3.64 | 3.99 | 4.12 | 5.05 | 4.65 | 4.42 |
| Dairy operating expenses | 3.03 | 2.74 | 2.74 | 3.13 | 3.00 | 3.13 | 3.13 | 3.61 | 3.76 | 3.67 |
| Dairy operating profit | 0.43 | -0.37 | 0.64 | 0.67 | 0.63 | 0.86 | 0.99 | 1.44 | 0.89 | 0.75 |

Table 13.5: Cashflow

| Variable | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|---|---|---|---|
| PHYSICAL CHARACTERISTICS | | | | | | | | | | |
| Number of herds | 111 | 109 | 113 | 108 | 122 | 124 | 108 | 87 | 109 | 96 |
| Effective hectares | 132 | 133 | 132 | 137 | 151 | 144 | 140 | 140 | 147 | 145 |
| Peak cows milked | 383 | 379 | 372 | 391 | 452 | 431 | 424 | 422 | 437 | 434 |
| Stocking rate (cows/ha) | 2.9 | 2.8 | 2.8 | 2.8 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Kg milksolids sold | 151,044 | 144,587 | 143,685 | 147,143 | 184,909 | 175,656 | 182,030 | 171,282 | 181,551 | 185,071 |
| Milksolids sold per hectare | 1,144 | 1,085 | 1,089 | 1,072 | 1,222 | 1,219 | 1,300 | 1,227 | 1,239 | 1,275 |
| Milksolids sold per cow | 394 | 381 | 386 | 376 | 410 | 408 | 429 | 406 | 416 | 426 |
| PAYOUT RECEIVED ($/kg MS sold) | 2.88 | 1.88 | 2.82 | 3.21 | 3.17 | 3.45 | 3.65 | 4.54 | 4.14 | 3.96 |
| CASHFLOW: | | | | | | | | | | |
| Net dairy cash income | 491,091 | 311,521 | 468,708 | 525,451 | 664,600 | 670,136 | 750,282 | 834,048 | 805,405 | 750,415 |
| Farm working expenses | 353,672 | 300,088 | 301,168 | 356,128 | 451,327 | 439,763 | 451,984 | 489,795 | 554,471 | 546,296 |
| Cash operating surplus | 137,419 | 11,433 | 167,540 | 169,323 | 213,273 | 230,372 | 298,298 | 344,252 | 250,934 | 204,120 |
| DISCRETIONARY CASH | | | | | | | | | | |
| Less rent (excluding support block) | 5,154 | 1,407 | 1,047 | 2,320 | 827 | 1,220 | 438 | 214 | 43 | 113 |
| Less interest | 31,805 | 37,949 | 34,629 | 31,626 | 36,976 | 27,516 | 21,389 | 19,725 | 29,384 | 39,163 |
| Less tax | 25,101 | 5,492 | 6,220 | 24,199 | 30,109 | 39,336 | 60,010 | 79,532 | 66,548 | 50,204 |
| Plus net non-dairy cash income | 2,511 | 2,243 | 1,798 | 1,996 | 2,659 | -1,380 | 5,060 | 906 | 1,611 | 2,231 |
| Plus net off-farm income | 3,817 | 4,546 | 2,281 | 4,071 | 5,230 | 10,975 | 8,513 | 12,921 | 12,018 | 11,674 |
| Discretionary cash | 81,687 | -26,626 | 129,723 | 117,245 | 153,250 | 171,895 | 230,034 | 258,608 | 168,587 | 128,545 |
| OTHER CASH INCOME | | | | | | | | | | |
| Plus introduced funds | 24,197 | 26,601 | 12,583 | 14,806 | -19,006 | -10,255 | 27,709 | -9,120 | 13,246 | 2,037 |
| Plus income equalisation | -6,091 | 5,707 | 1,412 | 0 | 470 | 0 | 596 | 0 | -817 | -14 |
| Cash available for living and growth | 99,793 | 5,682 | 143,718 | 132,051 | 134,715 | 161,640 | 258,338 | 249,488 | 181,016 | 130,568 |
| OTHER CASH EXPENDITURE | | | | | | | | | | |
| Less net capital transactions | 89,030 | 26,407 | 36,654 | 49,540 | 113,811 | 57,631 | 119,380 | 84,090 | 48,159 | 41,720 |
| Less net debt | -50,721 | 37,011 | 17,644 | 20,730 | -33,643 | 8,192 | 20,070 | 60,025 | 48,487 | -18,092 |
| Less net drawings | 83,335 | 56,461 | 57,721 | 74,517 | 67,169 | 65,458 | 76,247 | 79,739 | 90,535 | 89,566 |
| Cash surplus/deficit | -21,851 | -114,197 | 31,699 | -12,736 | -12,622 | 41,334 | 51,154 | 38,556 | 5,853 | 29,048 |
| CASHFLOW ($/kg MS) | | | | | | | | | | |
| Net dairy cash income | 3.25 | 2.15 | 3.26 | 3.57 | 3.59 | 3.82 | 4.12 | 4.87 | 4.44 | 4.05 |
| Farm working expenses | 2.34 | 2.08 | 2.10 | 2.42 | 2.44 | 2.50 | 2.48 | 2.86 | 3.05 | 2.95 |
| Cash operating surplus | 0.91 | 0.08 | 1.17 | 1.15 | 1.15 | 1.31 | 1.64 | 2.01 | 1.38 | 1.10 |
| DISCRETIONARY CASH ($/kg MS) | | | | | | | | | | |
| Less rent (excluding support block) | 0.03 | 0.01 | 0.01 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| Less interest | 0.21 | 0.26 | 0.24 | 0.21 | 0.20 | 0.16 | 0.12 | 0.12 | 0.16 | 0.21 |
| Less tax | 0.17 | 0.04 | 0.04 | 0.16 | 0.16 | 0.22 | 0.33 | 0.46 | 0.37 | 0.27 |
| Plus net non-dairy cash income | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | -0.01 | 0.03 | 0.01 | 0.01 | 0.01 |
| Plus net off-farm income | 0.03 | 0.03 | 0.02 | 0.03 | 0.03 | 0.06 | 0.05 | 0.08 | 0.07 | 0.06 |
| Discretionary cash | 0.54 | -0.18 | 0.90 | 0.80 | 0.83 | 0.98 | 1.26 | 1.51 | 0.93 | 0.69 |
| OTHER CASH INCOME ($/kg MS) | | | | | | | | | | |
| Plus introduced funds | 0.16 | 0.18 | 0.09 | 0.10 | -0.10 | -0.06 | 0.15 | -0.05 | 0.07 | 0.01 |
| Plus income equalisation | -0.04 | 0.04 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cash available for living and growth | 0.66 | 0.04 | 1.00 | 0.90 | 0.73 | 0.92 | 1.42 | 1.46 | 1.00 | 0.71 |
| OTHER CASH EXPENDITURE ($/kg MS) | | | | | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Less net capital transactions | 0.59 | 0.18 | 0.26 | 0.34 | 0.62 | 0.33 | 0.66 | 0.49 | 0.27 | 0.23 |
| Less net debt | -0.34 | 0.26 | 0.12 | 0.14 | -0.18 | 0.05 | 0.11 | 0.35 | 0.27 | -0.10 |
| Less net drawings | 0.55 | 0.39 | 0.40 | 0.51 | 0.36 | 0.37 | 0.42 | 0.47 | 0.50 | 0.48 |
| Cash surplus/deficit | -0.14 | -0.79 | 0.22 | -0.09 | -0.07 | 0.24 | 0.28 | 0.23 | 0.03 | 0.16 |

## Table 13.6: Capital Structure and Wealth Creation

| Variable | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|---|---|---|---|
| PHYSICAL CHARACTERISTICS | | | | | | | | | | |
| Number of herds | 111 | 109 | 113 | 108 | 122 | 124 | 108 | 87 | 109 | 96 |
| Effective hectares | 132 | 133 | 132 | 137 | 151 | 144 | 140 | 140 | 147 | 145 |
| Peak cows milked | 383 | 379 | 372 | 391 | 452 | 431 | 424 | 422 | 437 | 434 |
| Stocking rate (cows/ha) | 2.9 | 2.8 | 2.8 | 2.8 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Kg milksolids sold | 151,044 | 144,587 | 143,685 | 147,143 | 184,909 | 175,656 | 182,030 | 171,282 | 181,551 | 185,071 |
| Milksolids sold per hectare | 1,144 | 1,085 | 1,089 | 1,072 | 1,222 | 1,219 | 1,300 | 1,227 | 1,239 | 1,275 |
| Milksolids sold per cow | 394 | 381 | 386 | 376 | 410 | 408 | 429 | 406 | 416 | 426 |
| PAYOUT RECEIVED ($/kg MS sold) | 2.88 | 1.88 | 2.82 | 3.21 | 3.17 | 3.45 | 3.65 | 4.54 | 4.14 | 3.96 |
| DAIRY ASSETS AT OPEN | | | | | | | | | | |
| Land & buildings | 30,040 | 11,402 | 18,684 | 11,326 | 4,691 | 12,128 | 27,005 | 39,147 | 35,597 | 0 |
| Plant, machinery and vehicles | 126,212 | 125,820 | 117,301 | 128,521 | 140,793 | 137,363 | 150,045 | 143,249 | 158,672 | 172,406 |
| Livestock | 845,693 | 691,128 | 569,288 | 691,303 | 790,098 | 731,432 | 748,526 | 720,584 | 818,784 | 763,401 |
| Investments (excluding non-dairy) | 14,950 | 7,629 | 15,904 | 7,852 | 5,442 | 15,611 | 16,788 | 14,974 | 13,171 | 10,648 |
| Current assets | 138,435 | 103,524 | 46,993 | 95,392 | 116,653 | 93,939 | 134,284 | 148,911 | 162,320 | 150,532 |
| Total dairy assets at open | 1,155,330 | 939,503 | 768,170 | 934,394 | 1,057,677 | 990,474 | 1,076,649 | 1,066,865 | 1,188,545 | 1,096,988 |
| Plus non-dairy assets | 126,234 | 152,207 | 195,254 | 136,930 | 177,130 | 298,734 | 226,427 | 237,755 | 218,114 | 175,226 |
| Total assets | 1,281,564 | 1,091,710 | 963,424 | 1,071,324 | 1,234,807 | 1,289,208 | 1,303,076 | 1,304,621 | 1,406,659 | 1,272,214 |
| LIABILITIES AT OPEN | | | | | | | | | | |
| Term liabilities | 456,746 | 552,001 | 599,319 | 581,994 | 665,150 | 569,206 | 549,938 | 517,017 | 464,500 | 427,399 |
| Current liabilities | 88,015 | 95,703 | 89,844 | 73,944 | 107,777 | 104,477 | 102,998 | 79,044 | 106,047 | 101,729 |
| Total liabilities | 544,761 | 647,704 | 689,163 | 655,938 | 772,928 | 673,683 | 652,936 | 596,061 | 570,546 | 529,129 |
| Owners equity at open | 736,803 | 444,006 | 274,261 | 415,386 | 461,880 | 615,525 | 650,141 | 708,560 | 836,113 | 743,085 |
| DAIRY ASSETS AT CLOSE | | | | | | | | | | |
| Land & buildings | 45,015 | 10,361 | 19,483 | 11,326 | 14,637 | 31,423 | 54,315 | 39,268 | 35,445 | 0 |
| Plant, machinery and vehicles | 126,025 | 121,846 | 125,203 | 140,605 | 141,864 | 142,025 | 163,965 | 167,274 | 174,913 | 178,219 |
| Livestock | 731,576 | 594,679 | 734,331 | 667,438 | 787,504 | 766,899 | 752,807 | 837,179 | 819,653 | 822,917 |
| Investments (excluding non-dairy) | 17,568 | 7,796 | 23,409 | 8,439 | 10,920 | 16,278 | 17,935 | 15,121 | 15,960 | 13,551 |
| Current assets | 114,664 | 87,303 | 69,448 | 98,324 | 92,277 | 112,605 | 161,046 | 195,556 | 153,504 | 150,590 |
| Total dairy assets at close | 1,034,848 | 821,985 | 971,874 | 926,132 | 1,047,203 | 1,069,230 | 1,150,067 | 1,254,398 | 1,199,475 | 1,165,277 |
| Plus Non-dairy assets | 172,672 | 163,079 | 203,511 | 146,603 | 245,321 | 298,988 | 272,411 | 272,055 | 217,823 | 180,686 |
| Total assets | 1,207,520 | 985,064 | 1,175,385 | 1,072,735 | 1,292,524 | 1,368,218 | 1,422,479 | 1,526,452 | 1,417,298 | 1,345,963 |
| LIABILITIES AT CLOSE | | | | | | | | | | |
| Term liabilities | 507,467 | 589,012 | 581,675 | 561,264 | 698,793 | 561,014 | 529,868 | 456,992 | 416,013 | 445,492 |
| Current liabilities | 86,095 | 119,657 | 80,600 | 89,612 | 97,455 | 94,284 | 86,486 | 100,252 | 102,975 | 84,404 |
| Total liabilities | 593,562 | 708,669 | 662,275 | 650,876 | 796,248 | 655,298 | 616,353 | 557,244 | 518,988 | 529,896 |
| Owners equity at close | 613,958 | 276,395 | 513,110 | 421,859 | 496,276 | 712,919 | 806,125 | 969,209 | 898,310 | 816,067 |
| EQUITY | | | | | | | | | | |
| Growth in equity | -122,845 | -167,611 | 238,849 | 6,473 | 34,397 | 97,394 | 155,984 | 260,649 | 62,197 | 72,982 |
| Growth in equity from profit | 4,979 | -73,991 | 69,859 | 53,694 | 70,311 | 112,985 | 127,784 | 182,517 | 93,657 | 78,827 |
| Growth in equity from capital | -127,824 | -93,620 | 168,990 | -47,221 | -35,914 | -15,536 | 28,259 | 78,156 | -31,445 | -5,488 |
| Growth in equity % | -16.7 | -37.7 | 87.1 | 1.6 | 7.4 | 15.8 | 24.0 | 36.8 | 7.4 | 9.8 |
| Closing debt to asset % | 43.8 | 69.2 | 53.6 | 56.7 | 61.6 | 47.9 | 43.3 | 36.5 | 36.6 | 39.4 |
| Closing term liabilities per kg MS | 3.36 | 4.07 | 4.05 | 3.81 | 3.78 | 3.19 | 2.91 | 2.67 | 2.29 | 2.41 |

Table 13.7: Returns

| Variable | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|---|---|---|---|
| PHYSICAL CHARACTERISTICS | | | | | | | | | | |
| Number of herds | 111 | 109 | 113 | 108 | 122 | 124 | 108 | 87 | 109 | 96 |
| Effective hectares | 132 | 133 | 132 | 137 | 151 | 144 | 140 | 140 | 147 | 145 |
| Peak cows milked | 383 | 379 | 372 | 391 | 452 | 431 | 424 | 422 | 437 | 434 |
| Stocking rate (cows/ha) | 2.9 | 2.8 | 2.8 | 2.8 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Kg milksolids sold | 151,044 | 144,587 | 143,685 | 147,143 | 184,909 | 175,656 | 182,030 | 171,282 | 181,551 | 185,071 |
| Milksolids sold per hectare | 1,144 | 1,085 | 1,089 | 1,072 | 1,222 | 1,219 | 1,300 | 1,227 | 1,239 | 1,275 |
| Milksolids sold per cow | 394 | 381 | 386 | 376 | 410 | 408 | 429 | 406 | 416 | 426 |
| PAYOUT RECEIVED ($/kg MS sold) | 2.88 | 1.88 | 2.82 | 3.21 | 3.17 | 3.45 | 3.65 | 4.54 | 4.14 | 3.96 |
| RETURN ON DAIRY ASSETS % | | | | | | | | | | |
| Dairy operating profit | 65,599 | -53,678 | 91,877 | 98,570 | 117,177 | 151,293 | 180,220 | 246,175 | 161,879 | 139,591 |
| Plus owned support block adjustment | 1,245 | 695 | 508 | 251 | 299 | 479 | 611 | 1,010 | 860 | 0 |
| Less rent | 5,154 | 1,407 | 1,047 | 2,320 | 827 | 1,220 | 438 | 214 | 43 | 113 |
| Net return from dairy | 61,690 | -54,390 | 91,338 | 96,501 | 116,649 | 150,552 | 180,393 | 246,971 | 162,696 | 139,479 |
| Total dairy assets (less current) at open | 1,016,895 | 835,979 | 721,177 | 839,002 | 941,025 | 896,535 | 942,365 | 917,954 | 1,026,224 | 946,456 |
| Operating return on dairy assets % | 6.1 | -6.5 | 12.7 | 11.5 | 12.4 | 16.8 | 19.1 | 26.9 | 15.9 | 14.7 |
| TOTAL RETURN ON ASSETS % | | | | | | | | | | |
| Net return from dairy | 61,690 | -54,390 | 91,338 | 96,501 | 116,649 | 150,552 | 180,393 | 246,971 | 162,696 | 139,479 |
| Plus net non-dairy profit | 2,671 | 2,203 | 2,387 | 2,758 | 2,615 | 1,209 | 5,284 | 844 | 2,636 | 2,547 |
| Plus change in capital value | -171,303 | -147,670 | 135,959 | -84,007 | 82,092 | -31,459 | -27,117 | 60,109 | -69,170 | -36,437 |
| Total return | -106,942 | -199,857 | 229,684 | 15,252 | 201,356 | 120,302 | 158,560 | 307,924 | 96,163 | 105,588 |
| Total assets (less current) at open | 1,143,129 | 988,186 | 916,431 | 975,932 | 1,118,155 | 1,289,208 | 1,303,076 | 1,304,621 | 1,406,659 | 1,272,214 |
| Total return on assets % | -9.4 | -20.2 | 25.1 | 1.6 | 18.0 | 9.3 | 12.2 | 23.6 | 6.8 | 8.3 |
| TOTAL RETURN ON EQUITY % | | | | | | | | | | |
| Total return | -106,942 | -199,857 | 229,684 | 15,252 | 201,356 | 120,302 | 158,560 | 307,924 | 96,163 | 105,588 |
| Plus net off-farm income | 3,817 | 4,546 | 2,281 | 4,071 | 5,230 | 10,975 | 8,513 | 12,921 | 12,018 | 11,674 |
| Less interest | 31,805 | 37,949 | 34,629 | 31,626 | 36,976 | 27,516 | 21,389 | 19,725 | 29,384 | 39,163 |
| Total return for equity | -134,838 | -233,264 | 197,355 | -12,206 | 169,610 | 103,761 | 145,684 | 301,120 | 78,796 | 78,099 |
| Equity at open | 736,803 | 444,006 | 274,261 | 415,386 | 461,880 | 615,525 | 650,141 | 708,560 | 836,113 | 743,085 |
| Total return on equity % | -18.3 | -52.5 | 72.0 | -2.9 | 36.7 | 16.9 | 22.4 | 42.5 | 9.4 | 10.5 |

NOTES