MYFARM INVESTMENTS

INDUSTRY INSIGHT

Building resilience in the food and fibre sector.

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Proofing against shocks

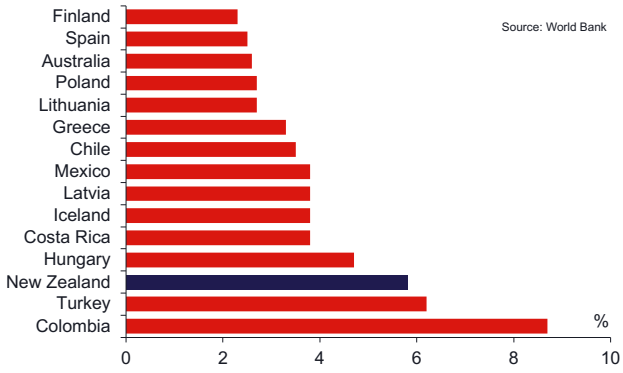
The food and fibre sector is an important driver of economic activity in New Zealand and a significant source of export earnings. It also has the potential to contribute to the government's growth and export goals. Recent developments in US tariff policy are in the process of redefining global trade relations, creating threats and opportunities for those in the sector. To take best advantage, participants should be looking to diversify into new markets, while simultaneously looking at ways to maximise cost efficiencies. Specifically:

- **Processors, marketers and exporters should be targeting offshore buyers that provide a sustainable source of demand and as such are able to deliver superior returns over the medium to long-term.**
- **At the same time, farmers and growers should be looking to boost operational resilience by adopting new digital technologies and processes that provide greater visibility along the value chain and deliver on-farm efficiency improvements.**
- **The shift is towards smart farming, where sensors, drones, artificial intelligence (AI), data analytics, robotics automation and the internet of Things (IoT) become the norm.**
- **Adopting these technologies will mean significant investment. Attracting such investment will require a margin above the prevailing risk-free rate.**
- **We think that many farmers and growers may find it difficult to secure this investment. That is likely to accelerate the corporatisation of farming, where bigger enterprises with scale and strong balance sheets dominate food and fibre production.**

Defining the sector.

Defining what constitutes the food and fibre sector can be challenging. Narrowly defined, it refers to agricultural activities that occur on the land. The focus here is on growing things. A wider definition might also include primary processing activities. In New Zealand, that would be about turning raw milk into dairy products such as whole and skimmed milk powder, as well as the slaughter and processing of meat from animals. It might also include activities such as the sorting, packing, storage and transportation of grains, fruits and vegetables from the farm or orchard to local wholesalers or exporters.

Figure 1: % Contribution to GDP



According to Stats NZ, agriculture, forestry and fishing directly contributed 5.4% to New Zealand's GDP in 2024.

Of course, the sector also supports downstream activity elsewhere in the economy, including processing and transport of produce. That's a big contribution. World Bank data suggests that New Zealand trails only Turkey and Columbia within the OECD.

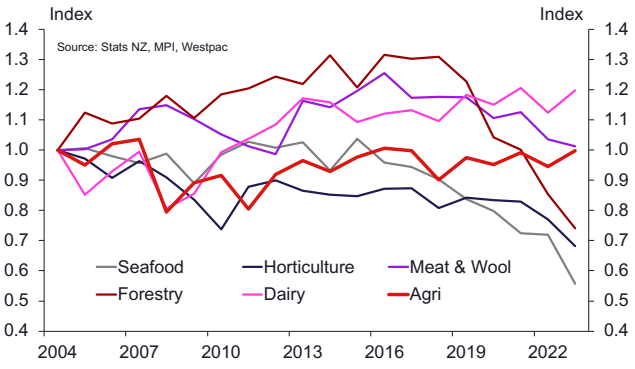
Much of this outsized contribution has to do with its success in the export market, with seven of New Zealand's top ten export categories tied to food and fibre.

That said, the performance of food and fibre exports has been somewhat mixed *(refer to appendix, table 1)*. While the value of exports has continued to trend higher over time, mainly because of strengthening global demand helping to push prices higher, volumes gains have been incremental at best.

These incremental gains largely reflect the ecological limits that apply to both land and livestock. Land available for agriculture has fallen from about 15.6m hectares in 2002 to 13.1m hectares in 2024 as competing uses that offer better returns have come to the fore. The number of farms in operation has fallen even faster, reflecting both changes in land use and higher average farm sizes as farmers and growers have sought to leverage economies of scale. The same trend is evident in livestock numbers that produce milk and provide meat.

The fact there has been an increase in export volumes largely reflects on-farm productivity gains. However, as detailed in a previous paper on **the productivity of New Zealand agriculture**, these gains have slowed over time, and productivity now is only a smidgen higher than it was 5 years ago.

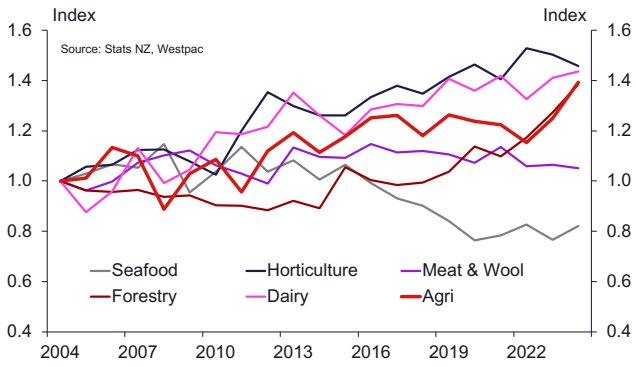
Figure 2: Capital productivity by sub-sector



The devil though is in the detail. Our own partial estimates suggest that capital productivity[1] for most sub-sectors has trended lower in recent years, with the biggest declines evident in forestry and seafood *(refer to appendix, table 1)*. The exception, of course has been the more heavily weighted capital-intensive dairy sector, which by our reckoning has seen an increase in productivity.

By contrast, our labour productivity estimates[2] suggest small gains in most sub-sectors, with the biggest increases recorded for forestry *(refer to appendix, table 1)*. For the most part, that's likely to be because of capital deepening, as farmers and growers have invested in new equipment. We also note that in most food and fibre sub-sectors, employment has edged lower over the past 5 years.

Figure 3: Labour productivity by sub-sector



What's needed to lift sector productivity.

In many cases, increasing productivity requires new investment. Historically, New Zealand's food and fibre sector has sourced that through new capital (from both domestic and international sources), bank debt and/or retained earnings.

Attracting that investment requires a margin above the prevailing risk-free rate (say bank deposits), reflecting the sector's range of operational risks and the inherent illiquidity of real asset investments.

From past experience, MyFarm estimates that the required margin ranges between 4% and 8%. But that depends on the specific business model employed, sector dynamics at play, and property-level risks. This translates into a total required return of 7% to 10% per annum across commercial investments in most sub-sectors within agriculture.

A key investment criterion is the presence of strong operating margins - ideally, operating costs should not exceed 50% of income. More productive assets generally offer higher operating margins *(refer to appendix, table 2)*. While sector-specific variations exist, maintaining a robust operating margin ensures that the biggest chunk of investor returns are sourced from cash profits, which also underwrite business resilience against weather, market, and operational shocks.

Historically, land values in New Zealand have tracked inflation. However, this relationship can break down, as seen in the dairy sector between 2014 and 2024. In a

1 Capital productivity for each sub-sector is calculated as a volume of exports per unit of net capital stock (which is defined as gross fixed capital stock less consumption of fixed capital). For the agricultural sector, we have used Stats NZ estimates of capital productivity.

2 Labour productivity for each sub-sector is calculated as a volume of exports per employee. For the agricultural sector, we have used Stats NZ estimates of labour productivity.

world where the risk-free rate is not structurally falling - unlike the 40-year decline from 1981 to 2020 - future land price appreciation must be anchored in genuine productivity gains, improved terms of trade, and/or structural land use changes (e.g., dairy conversions in the 1990-2010 period, or the more recent shift to forestry).

Applying an investment lens across the sector, several opportunities stand out. More specifically, sub-sectors and assets that combine strong cash returns, potential for productivity improvements, and resilience against market volatility are particularly attractive.

The case for investment in physical assets in the food and fibre sector.

Today's market conditions present a compelling argument for investing in real assets such as farms.

Several factors underpin this. Firstly, higher risk-free rates have meant a downward recalibration of asset prices. That means buyers today are entering at more conservative valuations compared to the artificially inflated prices seen when interest rates were either falling or at very low levels.

Secondly, inflationary pressures and currency volatility make real productive assets that generate tangible consumable goods, more valuable as stores of wealth and income streams.

Finally, structural global trends in food demand, supply constraints, and environmental considerations are strengthening the long-term fundamentals for agricultural investments.

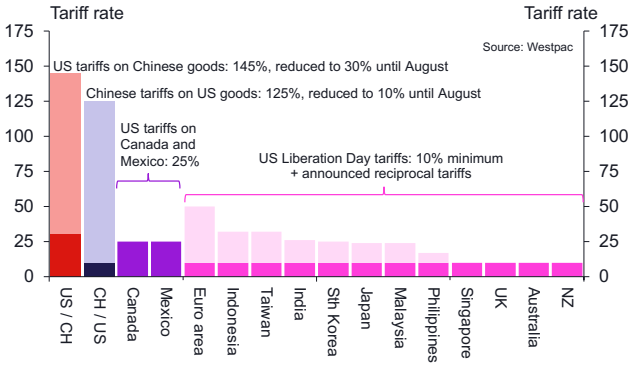
The value of an asset is essentially the present value of the future cashflows it generates divided by a discount rate. In periods where discount rates have risen, asset prices have adjusted downwards. However, over time, the cashflows from high quality assets in the food and fibre sector, especially those with strong operating fundamentals and opportunities for productivity gains, should compound in value.

As a result, investing now means buying future cashflows at a discount, positioning investors to benefit from both yield and capital appreciation over the medium to long term. Real assets like farms offer not only economic returns but also resilience, ordinarily protection against inflation, and a connection to tangible, productive enterprise.

Status of tariffs.

The 'Liberation Day' reciprocal tariffs on imports into the US (more formally known as the "America First Trade Policy Presidential Memorandum") announced on 2 April 2025 reflect a view within the current US administration that the global trading environment unfairly disadvantages US producers.

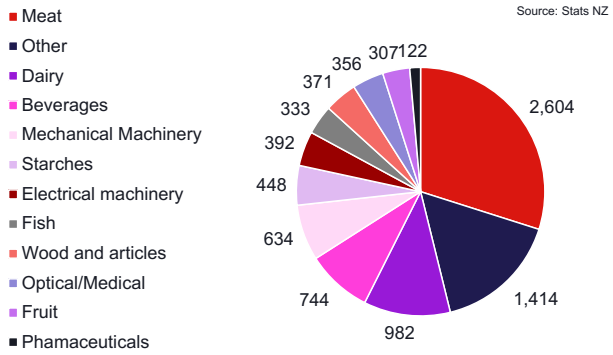
Figure 4: Current tariff landscape



News that New Zealand would be subject to a 10% tariff on products it sells into the US is unwelcome but not game changing. In relative terms, New Zealand got off lightly, with most other countries being initially subject to much harsher tariffs.

Given that it contributes about 55% to New Zealand merchandise exports to the US, agriculture sits at the pointy end of any adjustment to tariffs. Meat makes up about $2.6bn of total exports to the US, of which $1.8bn is beef, mostly frozen, and $0.6bn, sheep meat, mostly lamb. Dairy exports, largely whey and casein, make up just under $1.0bn, while wine exports, mostly Sauvignon Blanc from Marlborough, contributes a further another $0.8bn. Exports of fruit are a relatively minor contributor although Zespri is targeting the US as a growth market.

Figure 5: Exports to the US (2024) – NZ$m



At first blush this suggests that revenue from New Zealand's agricultural exports could fall as much as $500m directly because of the imposition of tariffs. Actual direct impacts though are likely to be a lot smaller.

How much smaller depends on a several factors, including how the New Zealand dollar performs. Currency weakness could partially offset the impact of tariffs. The opposite is also true. Also important is how demand for specific products exported to the US might change in response to higher prices. For some key agricultural products that New Zealand exports to the US, such as beef lean trimmings, that can be quite low. In such cases, we would expect the tariff to be shared, with the US importer and more likely the final customer paying the lion's share.

Transfer pricing arrangements may also reduce the impact of tariffs. A New Zealand exporter might, for example, sell goods to its US subsidiary at a much lower price and pay a tariff on that. The subsidiary would then sell at much a higher price in the US market, book the profit and then repatriate the proceeds back to its New Zealand parent.

Also important is the extent to which products can be diverted into other markets that offer better export returns than a tariffed US market. Exporters should already be looking to diversify export earnings to bolster resilience within the food and fibre sector. What also matters is whether there are any competitors in the US that could gain a competitive edge because of the imposition of tariffs.

In addition to these direct impacts, there are also likely to be more substantial indirect or second order effects. These second order effects are global, and would include aspects such as retaliatory tariff action, with China being key. The diversion of trade away from traditional markets, reduced trade volumes that result in weaker economic growth, and a slowdown in consumer spending and investment associated with heightened uncertainty could potentially dampen commodity prices, including those for our key agricultural exports. Consensus forecasts for global growth have already been revised downwards in recent months, while Westpac has revised down its own forecast for trading partner growth. At this stage the revisions are moderate, but these could become larger depending on the outcome of trade negotiations.

What farmers and growers should be focusing on.

To be clear, what really matters to farmers and growers is the price they receive at the farmgate, and the profit that they can generate from their operating businesses. Typically, these are closely related to export prices expressed in New Zealand dollar terms, minus a margin taken by downstream purchasers such as processors and marketers who sell to directly to offshore customers under contract or to agents and third-party distributors that operate in export markets.

To that extent, export prices effectively represent an upper limit on what downstream processors or marketers can reasonably pay their farmers and growers. If they pay above that, they will lose money. That suggests that any reduction in exporter incomes because of the imposition of tariffs will eventually be seen in farmgate prices. Exactly how much depends on the relative negotiating positions between farmers/growers and those that supply the export market.

Westpac's baseline forecast is that agricultural export prices will continue to rise over the next year or so, reflecting constrained supply in many markets. That said, the imposition of tariffs does increase the downside risk to these forecasts. Should export prices rise more slowly than we previously anticipated or begin to fall, farm profitability will come under pressure.

Figure 6: Working expenses – sheep and lamb farms (2024 prov.)

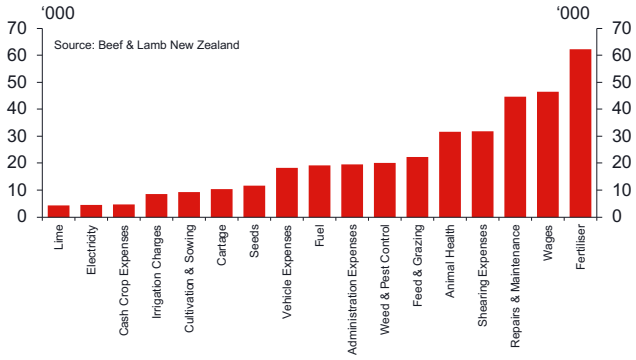
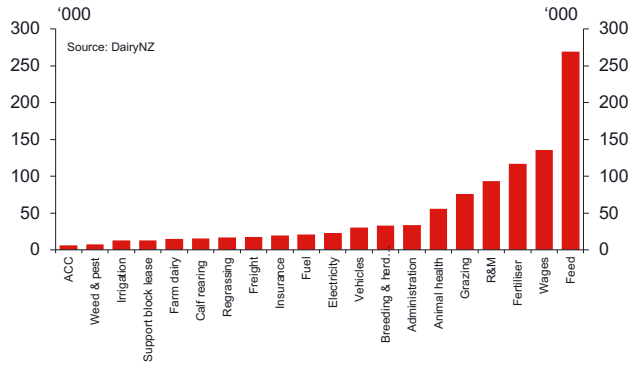


Figure 7: Working expenses – dairy farms (2022/23)



So what can be done to mitigate these threats?

We think those that operate in the food and fibre sector should be diversifying into other markets. Specifically, processors, marketers and exporters should be targeting offshore buyers that provide a sustained source of demand for agricultural products. While they may not offer the highest price at a specific point in time, consistency in demand is likely to result in superior returns over the medium to long-term.

Meanwhile farmers and growers should be focusing on costs. That is less about cost cutting, although in the short-term there is always scope for some judicious pruning, and much more about improving resilience through cost efficiency gains.

The goal here is to minimise unit costs of production, either by increasing output for a given level of costs or by reducing input costs for a given level of output. Lower unit costs of production effectively reduce the farmgate price needed for a farm to breakeven.

Ideally, minimising unit costs should also be help reduce emissions per unit of production (or farm emissions intensity). This can be achieved through the targeted application of fertilisers, animal quality improvements through breeding and ensuring that farmland is used in way that it is best suited. That might mean, for example,

that less productive and erosion prone land is planted with native trees. Continuing to reduce the impact of agricultural activities on the natural environment is critical for the long-term sustainability of the sector.

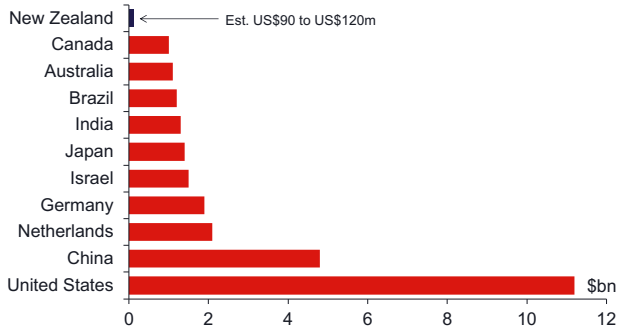
Increasing resilience.

Among other things, improving resilience requires farmers and growers to take a critical view of their operations. That's about understanding how systems of production are currently organised and what needs to be done to ensure the efficient conversion of inputs into outputs. That might mean the elimination of some practices and processes, changes to others and the establishment of new ones.

There is nothing new in that. Farmers and growers in New Zealand have long shown an openness to adopting new approaches and changing methods of production to achieve cost efficiencies. Think electric fencing, rotary milking sheds and precision irrigation systems. The "number eight wire" mentality still prevails in the food and fibre sector.

That openness is now extending to new digital technologies that have the potential to transform agricultural practices. While admittedly there are some farmers and growers that continue to cling to the tried and trusted, a growing number readily acknowledge the transformative benefits of digital technology. Of course, many want to see proof of concept before making any significant investments in this regard.

Figure 8: Estimates of investment in smart farming



Source: Grand View Research, Statista, Mordor Intelligence, Co-pilot

That acknowledgement in turn is resulting in a shift. Instead of using digital technologies to tease out efficiency gains from existing operations, farmers and growers are increasingly leveraging off these technologies within completely transformed processes to deliver much higher productivity and cost efficiency gains. Digitisation is giving way to digitalisation.

Smart farming.

Investment in smart farming.

The global smart agricultural market was worth US$10.1bn in 2024 and is expected to reach $22.9bn by 2023.

Source: Business Research Insights

Another estimate places the market at US$14.4bn in 2024 and is expected to grow to US$23.4bn by 2029.

Source: Markets and Markets

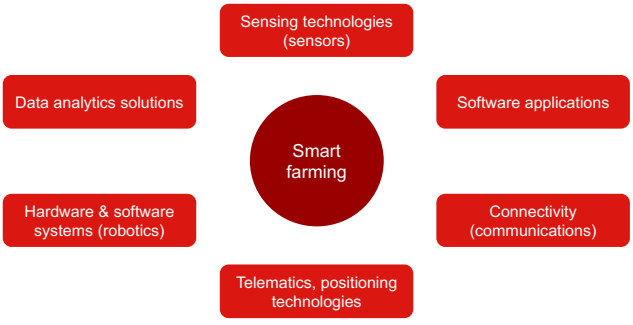
The digitalisation revolution is not new. It is happening in every industry, from financial services to manufacturing – food and fibre is no exception, although New Zealand does seem to be lagging its peers.

Smart farming refers to the use of digital technologies, such as such as sensors, drones, global positioning system (GPS), augmented reality (AR), AI, data analytics, robotics automation and IoT to increase cost efficiencies as well as maximise the resilience of supply chains and operational processes.

The application of these technologies is wide ranging.

Sensors, drones and data analytics, for example, are increasingly being used for the real time management, monitoring, measurement, and analysis (both historical and predictive) of on-farm performance. Collar technology is increasingly seen as a way of lifting productivity on dairy and beef farms. That not only allows for better decision making but also unlocks the potential of precision practices such as variable rate fertiliser application.

Figure 9: Components of smart farming



Source: Teamtweaks

Similarly, GPS, AR, AI and robotics are being used to automate a range of farming practices, from soil maintenance and weeding, through to fruit picking, post-harvest packing, crop planting, feeding, and milking. Examples include robots that mow orchards and manage spraying, the adoption of new planting systems that allow for increased tree density, the automation in kiwifruit packhouses, automatic milking systems and heat detection in dairy cattle to enhance reproductive performance.

These technologies are also being used to improve connectivity along the value chain. That is giving rise to new ecosystems or networks of connected suppliers, downstream processors/marketers and technology partners that provide greater visibility along the value chain. Participating farmers and growers are now able to anticipate potential issues well before they eventuate, allowing for greater operational agility and increased resilience to events such as the imposition of higher tariffs.

That is in addition to progress in other areas. Cutting edge genomics, DNA sequencing and precise genome editing technologies, for example, have long been used to improve the resilience of crops. Now they are being used to increase resilience to climate change. Genomics are being used to predict milk yields, the ease with which future generations will reproduce and susceptibility to disease. Sexed semen is creating the opportunity to breed from elite cows while allowing farmers to breed valuable beef cross offspring with a lower carbon and feed footprint. In conjunction with data analytics that allows for better decision making on breeding options, which in turn makes livestock more productive.

Rising capital intensity.

Smart farming means a change in input factors used in production processes. There are two issues to consider here – the quantity of factor inputs that will be needed (and the compositional effects that arise from that) and the quality of those factor inputs.

New Zealand agriculture is already capital intensive, reflecting the level of investment that has been made over time in new farm machinery embodying the latest technology amid scarce labour. That will remain important but will not be the sole focus. In the future, we think that investment in smart farming technologies will make agricultural production processes even more capital intensive.

At the same time, the requirement for labour and agricultural land is set to fall. In the case of the latter, the use of precision farming means higher yields and a lower requirement for land for given level of output. Essentially that frees up land for other uses or for industry expansion. Similarly, in a digitally driven operating environment, demand for unskilled and semi-skilled labour is set to fall. However, the opposite is likely to be true for already scarce skilled workers, especially those that can move beyond data analytics and provide informed advice to decision makers/farmers and growers on how to optimise farming practices. These skills will be in high demand, which will raise costs, especially so given that other sectors of the economy will be competing for them. Farming without implementing technology solutions could become problematic.

The investment required to operate in this new-fangled digital world will be significant, and it is quite likely that many small farmers could find this prohibitive. We think that could result in the continuing trend toward the corporatisation of farming, where bigger enterprises with scale and strong balance sheets dominate production. That is already well advanced elsewhere, especially in places like North America and countries like Brazil. Ditto in China and India, where corporatisation has been driven by food security goals and the adoption of digital technologies.

Summing up.

The redefining of global trade relations following changes in US tariff policy could well dampen commodity prices over the coming year, placing in downward pressure on-farm profitability. To see off this threat, the sector should be looking at bolstering its resilience. It can do this in two ways. The first is to diversify into new markets that provide a more consistent level of demand. These markets may not always deliver higher prices, but the ability to sustain demand is key to delivering improved returns over the medium to long term.

The second is to transform farming practices through the adoption of new digital technologies. That will not only help to minimise reduce unit costs of production but also deliver the productivity gains that the sector needs if it is to deliver margin that attracts new investment.

This transformation will require a level of investment which may well be beyond the capabilities of many small farmers. We think that could result in more corporate action, with the competitive landscape increasingly dominated by fewer but larger farms.

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Appendix.

Table 1: Food and fibre sector – aggregates

Sector	Exports (2024, Nominal, $bn)	Contribution to GDP (2024, %)	Net capital stock (2023, Nominal, $bn)	5-year average							
				Employment (2024, '000)	Enterprises (2024, '000)	Growth in exports volumes (%)	Growth in net capital stock (Constant, %)	Growth in employment (%)	Growth in enterprises (%)	Growth in capital productivity 2019-2023 (%)*	Growth in labour productivity 2020-2024 (%)**
Dairy	23.2	2.3	19.2	41.3	13.7	0.3	-0.1	-0.2	-1.5	1.9	0.5
- Primary	-	-	9.8	23.7	13.5	-	-	-0.6	-1.1	-	-
- Processing	-	-	9.4	17.6	0.2	-	-	0.5	1.1	-	-
Meat & grain	11.2	1.2	11.0	57.5	27.0	-1.4	1.7	-0.4	-1.0	-2.9	-0.9
- Primary	-	-	-	24.1	26.6	-	-	-2.2	-1.1	-	-
- Processing	-	-	-	33.4	0.4	-	-	1.0	3.0	-	-
Forestry/logging	5.7	0.5	4.5	27.3	5.5	-5.9	-10.6	-0.7	-1.4	-10.6	6.1
- Primary	-	-	-	4.8	3.7	-	-	-1.5	-1.9	-	-
- Processing	-	-	-	22.5	1.8	-	-	-0.5	0.4	-	-
Horticulture, fruit & wine	7.1	0.8	6.6	21.9	5.4	-0.5	3.2	-2.2	-1.2	-3.2	0.7
- Primary	-	-	-	18.4	5.3	-	-	-1.9	-1.3	-	-
- Processing	-	-	-	3.5	0.1	-	-	-3.2	2.0	-	-
Seafood	2.1	0.2	2.7	8.2	2.1	-3.4	6.3	-2.5	0.5	-8.9	-0.2
- Primary	-	-	1.9	2.8	2.0	-	7.9	2.1	0.9	-	-
- Processing	-	-	0.8	5.4	0.1	-	3.1	-4.8	-0.6	-	-

Source: Stats NZ, MPI

* Capital productivity is measured as volume of exports per unit of net capital stock - because net capital stock measures are only available up to 2023, productivity growth is reflected as the average annual change for the period from 2019 to 2023.

** Labour productivity is based on a volume of exports per unit of labour (person employed) - growth is reflected as the average annual change for the period from 2020 to 2024.

Table 2: Sector specific financial ratios

Sector	Income ($bn)	Expenditure ($bn)	Gross profit ($bn)	Total assets ($bn)	Equity ($bn)	Capital intensity ratio*	Operating margin (%)**	ROE (%)	ROA (%)
Dairy	17.8	15.2	2.6	71.0	28.6	4.0	22.1	10.0	4.0
Meat & grain	13.3	11.6	1.7	68.1	37.9	5.1	14.2	5.0	3.0
Forestry	6.4	6.3	0.1	32.0	20.4	5.0	13.3	0.0	1.0
Horticulture & fruit	6.0	5.3	0.7	21.8	10.3	3.6	9.5	8.0	4.0
Seafood	1.7	1.5	0.2	2.7	1.3	1.6	10.7	14.0	7.0

Sector	Average 5-year growth (% change)								
	Income	Expenditure	Gross profit	Total assets	Equity	Capital intensity ratio	Operating margin***	ROE	ROA
Dairy	6.1	5.6	14.7	1.9	5.1	4.3	24.2	11.2	4.0
Meat & grain	3.2	3.4	8.2	3.9	4.1	5.0	14.0	5.0	2.8
Forestry	-1.8	7.7	-23.1	7.7	7.1	4.1	19.0	8.6	5.2
Horticulture & fruit	6.1	7.9	1.5	10.5	7.7	3.3	14.2	11.4	5.6
Seafood	3.6	4.2	2.3	5.0	7.7	1.5	10.6	15.2	7.8

Source: Stats NZ - Annual Enterprise Survey (2023)

* Capital intensity is calculated as total assets divided by total income. It shows the value of assets required to generate a $ of income.

** Operating margin is calculated at operating income divided by revenue. It shows the a company's profit for every $ of sales.

*** Reflects average operating margin for the 5 years from 2019 to 2023.

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