# Economic and social value of New Zealand's red meat sector

Beef + Lamb New Zealand &
Meat Industry Association

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# Foreword

Tēnā koutou katoa,

The red meat sector is a cornerstone of Aotearoa New Zealand. The findings of this report reinforce the sector's importance to our national economy, employment and community wellbeing.

This report offers a robust, evidence-based assessment of the economic and social contribution of the sector, including production, processing and exporting.

As a sector, we are one of New Zealand's largest manufacturing employers and a cornerstone of Māori and Pacific Peoples' workforce participation.

We generate $12.8 billion in export earnings annually, which flows through our economy and has a powerful multiplier effect – expanding out to $47.8 billion in total expenditure across the country.

Since the last time similar research was commissioned in 2020, the sector has navigated significant challenges including tariffs, extreme weather events and overseas conflicts. This culminated in 2023 with farmers recording the second lowest on-farm profit (before tax) in 50 years. We have since seen a marked turnaround with the highest on-farm profit (before tax) in 50 years.

Improved profitability has a powerful ripple effect. Every day, on average, our farmers and processors spend $64 million in local communities and industries across New Zealand. When you take indirect spending into account, $133 million a day is being poured into New Zealand's economy.

This means tangible support for thousands of local businesses and the jobs they provide, underpinning rural economies and generating income for a variety of businesses across wider New Zealand. Ours is a significant contribution to the economic stability of the entire country – a positive benefit for all New Zealanders.

Looking forward, there is no doubt the sector can unlock significant additional value for New Zealand by continuing to grow our productivity on-farm and in processing, and adapting to meet the demands of a changing and growing world.

As a small trading nation New Zealand is often at the whim of international events and geopolitics. Despite the high degree of uncertainty this brings, the market fundamentals for red meat are strong.

Globally, demand for red meat is expected to continue to grow. The advent of diet drugs that require people to prioritise nutrient-dense food could be a game changer in terms of the value consumers place on products like red meat.

Aotearoa New Zealand will continue to depend on export returns from high-value sustainably produced food exports. The insights shared in this report will inform decision-making and help unlock further potential within the red meat sector.

When our sector does well, New Zealand benefits – not just this season, but well into the future.

Kate Acland
Chair
Beef + Lamb New Zealand

Nathan Guy
Independent Chair
Meat Industry Association

# Executive summary

New Zealand's red meat sector has a foundational role in the economy, acting as a cornerstone of the primary sector, generating significant economic activity, employment, and export earnings countrywide. The red meat sector represents the activity of both livestock production and meat processing. This captures sheep and beef livestock production and the value created from on-farm production through to meat processing and export-ready products.

## Economic contribution of New Zealand's red meat sector

At a glance, in 2025, New Zealand's red meat sector supported total:

> **Expenditure** of $48.7 billion
>
> **Gross domestic product (GDP)** of $17.5 billion
>
> **Employment** of 120,580 full-time equivalents (FTEs).[1]

This reflects a large and economy-wide contribution, with activity supported across supply chains, service industries, and households throughout New Zealand. More than half of this contribution occurs beyond the sector's immediate operations, highlighting its strong linkages across the wider economy into industries and associated services such as fertiliser and animal health inputs, packaging materials, transport and logistics, and financial and insurance services.

> Total GDP supported by the red meat sector represented four percent of New Zealand's GDP and total employment supported represented five percent of all jobs in New Zealand.

The scale of employment supported by the red meat sector is particularly significant, with over 120,000 jobs supported across New Zealand, and more than half of these jobs generated beyond farms and processing through supply chains and household spending.

> At estimated levels of activity, every $1 million of direct expenditure in New Zealand's red meat sector supported around five jobs across the economy in 2025.

[1] Appendix B provides a detailed methodology of our analysis and Appendix C includes a glossary of technical terms used.

## Supporting regional economies across the country

The economic contribution of New Zealand's red meat sector is particularly valuable in regional communities, where livestock production and meat processing are concentrated and strong. In these regions, the sector plays a central role in supporting economic activity and employment, not only through farms and processing plants but also through the businesses and services that depend on them. This includes local suppliers, transport and logistics providers, contractors, and a wide range of service industries that rely on a stable rural economy.

As a result, the red meat sector contributes to the continuity and resilience of regional economies, supporting year-round employment, sustaining local businesses, and underpinning the viability of smaller towns and communities. Its role is particularly visible in regions such as Taranaki–Manawatū, Canterbury, and Otago–Southland, where the sector represents a significant share of economic activity and employment.

For example, the importance of the red meat sector at a regional level is reflected in its share of regional economic activity and employment:

- **Taranaki–Manawatū**: 8 percent of regional GDP and 11 percent of total employment
- **Canterbury**: 5 percent of regional GDP and 6 percent of total employment
- **Otago–Southland**: 11 percent of regional GDP and 12 percent of total employment.

## Participation of Māori and Pacific Peoples in New Zealand's red meat sector

Māori and Pacific Peoples form an important part of the sector's workforce, particularly among younger age groups, making them central to the sector's future labour supply. At Census 2023, there were 42,146 individuals directly employed in New Zealand's red meat sector.

> Of these individuals, 10,578 (25 percent) identified as Māori and 4,788 (11 percent) identified as Pacific Peoples.[2]

Māori and Pacific Peoples employed directly in the red meat sector are proportionately much younger than the overall red meat sector in New Zealand.

[2] Individuals can identify as more than one ethnicity.

> Māori and Pacific Peoples together accounted for 56 percent of those working in the red meat sector aged 15-29 years.

These patterns highlight the importance of workforce development, retention, and progression pathways for maintaining the sector's long-term capability. This is particularly true for the meat processing industry, which holds a strong concentration of Māori and Pacific Peoples, acting as a key source of employment and income.

> Māori and Pacific Peoples are particularly important specifically within New Zealand's meat processing industry, representing more than 50 percent of the national meat processing workforce.

## Impact of afforestation

Afforestation and land-use change involve important economic and employment trade-offs. The average employment of red meat farms and forestry is relatively similar when expressed as FTEs per 1,000 hectares, but there is a distinct difference in when this employment would occur.

> Over a measured thirty-year time period, on average, red meat sector farms contribute 4.8 FTEs per 1,000 hectares, compared to 4.6 FTEs per 1,000 hectares of forestry land.

Farms generate employment on a continuous, annual basis, and the red meat sector generates export earnings on an ongoing basis. By contrast, forestry typically generates both employment and export revenue primarily at harvest, around 25-30 years after planting. An implication of continued conversion to forestry is the reduction in workforce stability, which can also weaken demand for local services. Consequently, this makes it harder for rural towns to retain people and skills.

Forestry plays an important role in New Zealand's climate change response by contributing to carbon sequestration and emissions mitigation objectives and can generate ETS revenue over time. This revenue reflects payments for carbon sequestration rather than the production of export goods, and is typically smaller in scale, more delayed, and less closely linked to ongoing economic and export activity than income generated through livestock production and the wider red meat sector. Policymakers must balance this dynamic by weighing the differing employment patterns, revenue profiles, and regional impacts associated with alternative land uses, alongside broader considerations such as climate mitigation, land-use certainty, and long-term economic resilience.

## Looking ahead

The findings confirm that New Zealand's red meat sector continues to deliver substantial economic and social value, supporting export earnings, regional economies, and employment across the country. While the sector has always faced ongoing challenges such as global uncertainty, land-use change, and evolving workforce dynamics, its scale, integration, and regional reach mean it remains a key component of New Zealand's economic landscape. This report provides a robust, transparent evidence base to inform policy development, industry strategy, and public discussion about the role of the red meat sector in New Zealand's current and future economy.

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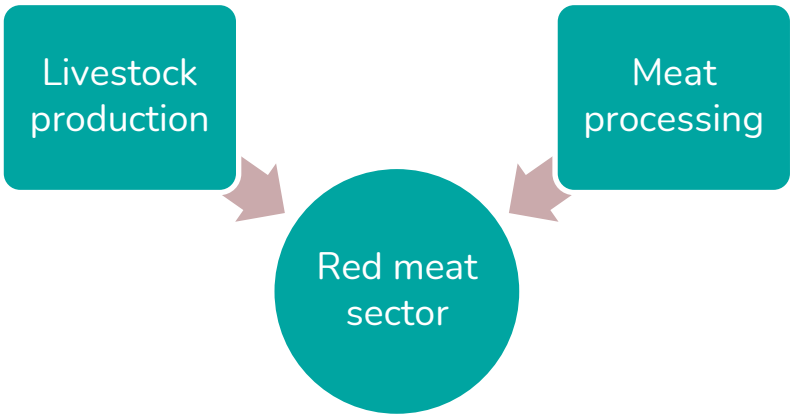
# 1 Introduction

Beef + Lamb New Zealand (B+LNZ) and the Meat Industry Association (MIA) commissioned Business and Economic Research Limited (BERL) to provide an independent assessment of the economic and social value of New Zealand's red meat sector. This report builds on earlier work commissioned by B+LNZ and MIA to understand the role of the red meat sector in New Zealand's economy and society.[3] While our report builds on this earlier research, the requirements of the project, our methodological approach, and data sources differ. This means the numbers in the two reports should not be compared directly.

## 1.1 Our approach

For the purposes of this assessment, we have defined the red meat sector as the combination of livestock production and meat processing, as represented in Figure 1. This captures sheep and beef livestock production, and the value created from on-farm production, through to meat processing and export-ready products.

*Figure 1 Industry composition of the red meat sector*




Source: BERL analysis

Our analysis includes: a national and regional economic impact assessment (EIA) using input-output (IO) modelling and multiplier analysis; an investigation of the workforce participation of Māori and Pacific Peoples in New Zealand's red meat sector; and the implications of afforestation for employment intensity, workforce stability, and regional resilience.

[3] In 2020, SG *Heilbron Economic and Policy Consulting* (SGH) was commissioned to undertake an assessment of the economic and social contribution of the red meat sector (SGH, 2020).

## 1.2 What is an economic impact assessment (EIA)?

An EIA is a tool used to understand how an industry, activity, or sector contributes to the economy. It quantifies the economic activity generated by that sector both through its own operations and through its connections with the wider economy, such as supply chains and household spending.

In this report, an EIA is used to estimate the contribution of New Zealand's red meat sector using a consistent and transparent framework. It shows the scale and distribution of economic activity currently supported by the sector using three core indicators:

- **Gross domestic product (GDP)**: Otherwise known as industry value added, GDP measures the net contribution the red meat sector makes to the New Zealand economy. It reflects the value created through production after accounting for the cost of intermediate inputs, such as fuel, fertiliser, and services purchased from other businesses.
- **Expenditure**: Expenditure measures the total spending associated with the red meat sector, including spending by livestock producers and meat processors on goods and services needed to operate. This includes physical inputs (e.g., fertiliser, feed, packaging materials) and services (e.g., transport and logistics and veterinary services) and reflects the level of economic activity generated through purchasing and production, rather than the net value added to the economy.
- **Employment**: Employment is measured in full-time equivalents (FTEs), which represent the number of full-time jobs supported by the red meat sector. FTEs convert part-time and seasonal work into a common unit, allowing employment impacts to be compared consistently across industries and regions.

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*Together, these measures show how much spending the sector generates, how much value it adds to the economy, and how many jobs it supports.*

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Further detail on these measures, along with other technical terms used in this report, is provided in a glossary in Appendix C.

# 2 New Zealand's red meat sector

The red meat sector is foundational to New Zealand's economic prosperity because it is a cornerstone of the primary sector and the country's income. It serves as a key economic engine of the country. The red meat sector is integrated into a wide range of supply chains and associated services, which support communities and an array of economic activities. Through these linkages, the sector supports both economic activity and employment well beyond the farm gate, particularly in regional New Zealand. This section provides a brief overview of the economic performance of New Zealand's red meat sector as context for the remainder of the report.

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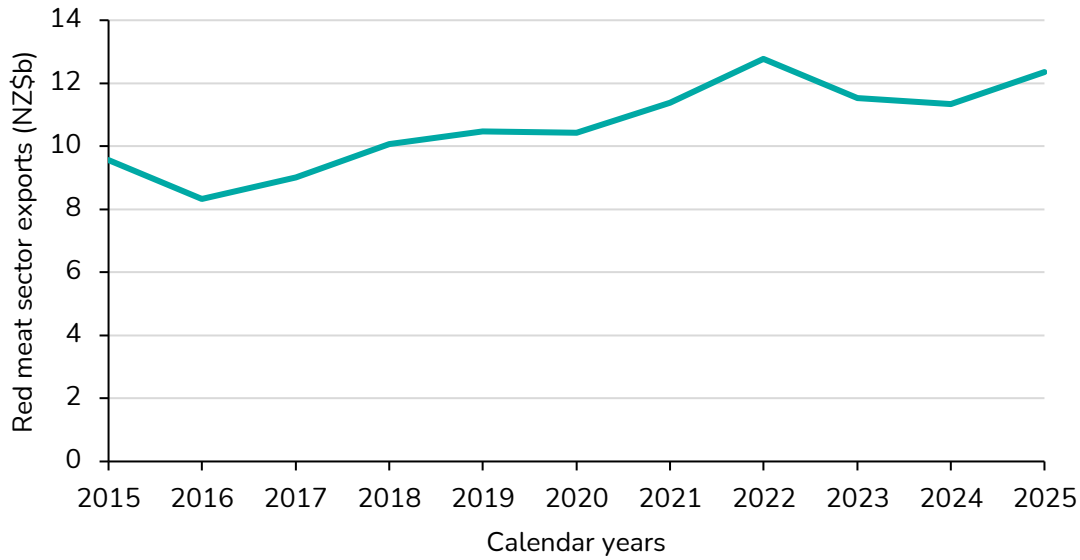
The past five years for New Zealand's red meat sector have reflected a changing and disruptive landscape with impacts felt from land-use change, adverse weather events, global shocks, and shifting global trade and consumer dynamics. New Zealand is susceptible to external shocks and has high sensitivity to the demand and supply of major trading partners. This is particularly true for the red meat sector because estimates suggest that around 95 percent of lamb production and 90 percent of beef production is exported (MIA, 2026). Figure 2 presents the performance of red meat sector exports since 2015, illustrating the changing environment specifically since 2021.

*Figure 2 Export value from red meat sector exports, 2015-2025*




Source: Stats NZ – BERL analysis

Global commodity prices, currency movements, and the policies of key trading partners have significantly influenced the export and on-farm performance of New Zealand's red meat sector between 2021 and 2026.

Despite a strong season in 2021-22, profitability weakened in the subsequent few seasons as the sector battled high interest rates, elevated input costs, and weaker demand from key markets. High on-farm input costs (Table 1), specifically phosphate and urea fertiliser and interest costs, notably weighed on farm margins. Cumulatively on-farm input prices increased 29.6 percent in the five years to 2024-25.

*Table 1 Red meat on-farm inflation*

| | On-farm inflation | |
|---|---|---|
| Season | Index | Percentage change |
| 2014-15 | 1,323 | +1.1 |
| 2015-16 | 1,296 | -2.0 |
| 2016-17 | 1,294 | -0.2 |
| 2017-18 | 1,320 | +2.0 |
| 2018-19 | 1,359 | +3.0 |
| 2019-20 | 1,364 | +0.4 |
| 2020-21 | 1,350 | -1.1 |
| 2021-22 | 1,487 | +10.2 |
| 2022-23 | 1,729 | +16.3 |
| 2023-24 | 1,778 | +2.8 |
| 2024-25 | 1,768 | -0.6 |

Source: B+LNZ (2025)

The effects of increased input costs were further compounded by declining commodity prices between 2022 and 2024, particularly for sheepmeat, which reached a low in the 2023-24 season. A slow economic recovery in China, a major export destination, resulted in lower levels of demand and a decrease in farm-gate prices. This was in parallel to increased supply and competition globally, including from Australia, Brazil, and Argentina.

After weathering this period, the 2024-25 season was more positive. Beef cattle herds in the United States (US) had contracted significantly, increasing demand for imported beef in the US and driving up global beef prices. Sheepmeat prices recovered due to a combination of strong demand in Europe and the US and some recovery in sheepmeat prices in China. There was also strong demand from Europe and the United Kingdom (UK), along with the US. These developments internationally benefitted New Zealand beef exporters, with export values reaching record highs in

2025 (Rabobank, 2025). Additionally, lower interest rates contributed to a modest reduction in farm input prices.

Prices have remained elevated into 2026, and the initial outlook remains strong, albeit significantly dependent on global developments and shocks. The conflict in the Middle East (US-Israel-Iran) is resulting in immediate and long-term implications for the global economy, which have materialised quickly in New Zealand.

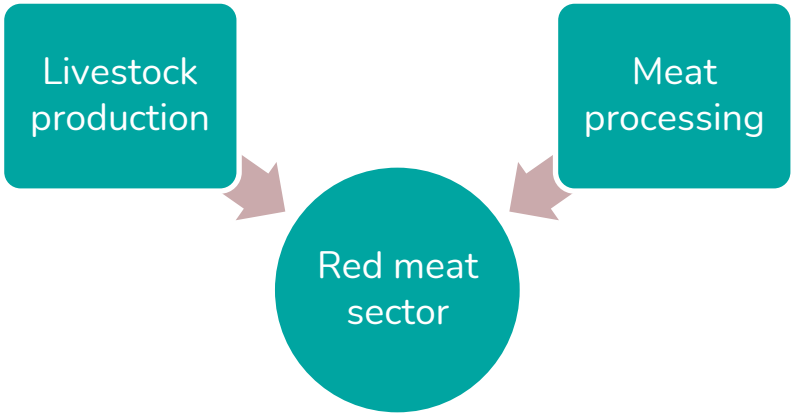
> Volatile and uncertain periods require a pragmatic approach to designing robust policy and supporting effective, innovative practices.

The strong performance of New Zealand's red meat sector over the previous two years will provide a level of resilience in the face of heightened uncertainty. This resilience is already evident in the sector, which weathered the second lowest inflation-adjusted on-farm profit (before tax) in 50 years in the 2023-24 season and is now forecast to have the highest profit in 50 years for the 2025-26 season (prior to the Middle East conflict).

# 3 Economic contribution of the red meat sector

This section presents our estimate of the economic contribution of New Zealand's red meat sector, which is made up of livestock production (sheep and beef farming) and meat processing (Figure 3).[4] Livestock production supplies animals for processing, while meat processing transforms this production into products for domestic consumption and export. Neither activity operates in isolation, and both are required for the sector to generate economic value. This analysis highlights the scale and distribution of economic activity currently supported by the sector in 2025.

*Figure 3 Industry composition of New Zealand's red meat sector*




Source: BERL

## Analysis note

We isolate the multiplier effects for specific regions in New Zealand, namely the North and South Islands, along with the Taranaki-Manawatu, Canterbury, and Otago-Southland regions.[5] The total impact of the regional multiplier effects does not sum to the total impact for New Zealand. This is because regional multipliers are calculated independently for each region and do not account for overlapping economic activity or interregional trade.

This can result in double counting if data are aggregated nationally. Similarly, the total impacts from livestock production and meat processing cannot be aggregated to reflect the total impact of the red meat sector.

[4] We describe what an EIA is in Section 1.2. All estimates are to the year end March 2025.

[5] More disaggregated estimates for the livestock production and meat processing industries are presented in Appendix A.

## 3.1 Contribution to the New Zealand economy

New Zealand's red meat sector is an integrated component of the wider economy. Its core activities of farming and processing are interconnected and linked across sectors from financial and insurance services to logistics, animal health, and manufacturing. Understanding its complete role in the economy is best represented by considering the full flow of expenditure, employment, and value creation across the whole economy, not only the direct activity from on-farm production and processing.

### 3.1.1 Total impact

> In 2025, New Zealand's red meat sector generated $17.5 billion in GDP and supported a total of 120,580 FTEs. This represented four percent of New Zealand's total GDP and five percent of total employment in New Zealand.

New Zealand's red meat sector – the combined activity from the livestock production and meat processing industries – is a significant contributor to economic activity and employment in the economy. The total impact, presented in Figure 4, details the full breadth of this contribution highlighting both the direct economic activity and the extent of value created as this activity flows through the supply chain and circulates in the economy.

*Figure 4 Economic impact of the red meat sector in New Zealand, 2025*[6]


Source: BERL analysis

[6] Individual components may not sum to totals due to rounding.

### 3.1.2 Direct impact

> The direct economic activity created by New Zealand's red meat sector in 2025 included $23.5 billion in expenditure, contributing $6.3 billion in GDP, and supporting 48,250 FTEs.

The direct impact represents the immediate economic activity and employment generated by New Zealand's red meat sector through the production, processing, and sale of sheep and beef products. These activities form the backbone of New Zealand's red meat sector, directly contributing to GDP and supporting jobs on farm and at meat processing facilities.

> At the estimated levels of activity, every $1 million of direct expenditure in the red meat sector supported an estimated 5.1 FTEs across New Zealand in 2025.

### 3.1.3 Flow-on impact

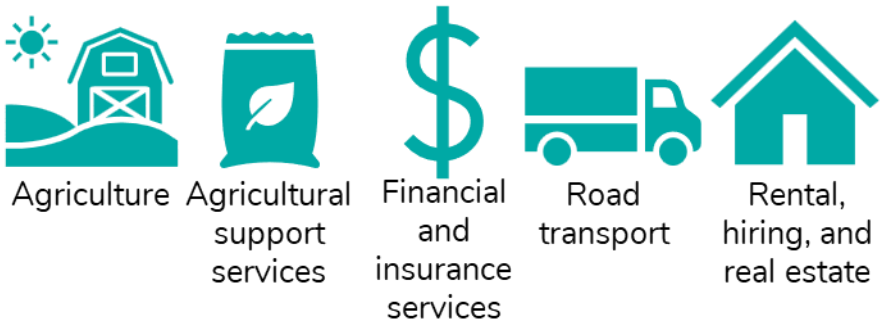
Flow-on impacts describe how the direct production and expenditure activity generate additional economic activity through both indirect effects in the supply chain and induced effects from household spending of wages. Together, these effects capture the economy-wide contribution.

> The total flow-on economic impact of New Zealand's red meat sector was $25.3 billion in expenditure, contributing around an additional $11.2 billion in GDP, and supporting a further 72,330 FTEs.

#### Indirect impact

The indirect impacts capture the additional economic activity generated through the red meat sector's supply chain as it creates demand in supporting industries and associated services such as fertiliser and animal health inputs, packaging materials, transport and logistics, and financial and insurance services. It reflects the extensive and integrated role of the red meat sector across industries. Figure 5 pictures the industries that are key sources of the additional expenditure (or spending) generated through the red meat sector's supply chain.

*Figure 5 Key sources of indirect impacts to expenditure in New Zealand's red meat sector, 2025*



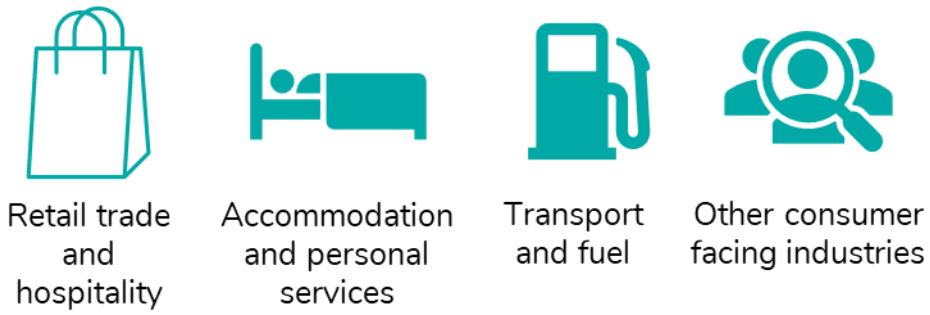

Source: BERL analysis

As parts of the supply chain, these industries provide services, materials, and other inputs necessary for the red meat sector to function (and vice versa). The range of industries presented reveals the extent of the network attached to New Zealand's red meat sector, from key inputs, such as animal health products and fertiliser supplied through agricultural support to refrigerated trucks and cold storage logistics in road transport. The sector is a strongly integrated component of the economy.

### Induced impact

The induced impacts reflect the additional economic activity generated as households spend income earned through both the direct and indirect phases of the red meat sector. Wages and salaries, along with farm revenue, provide household income, which is then spent on goods and services across the economy. This household income is primarily spent in the sectors presented in Figure 6.

*Figure 6 Key sources of induced impacts to expenditure in New Zealand's red meat sector, 2025*




Source: BERL analysis

These impacts are distributed broadly across the economy and are not limited to the industries in the red meat sector. While induced effects tend to be smaller than direct and indirect impacts on a per dollar basis, they illustrate how income circulates through the economy, supporting employment and output in sectors that are otherwise not directly connected to the red meat sector.

## 3.2 Contribution in the North Island

### 3.2.1 Total impact

Around 58 percent of the direct economic activity generated by New Zealand's red meat sector was attributed to the North Island.[7] This was estimated at $13.7 billion in 2025 (Figure 7). As this initial spending circulates within the North Island economy, namely along the supply chain and through households, significant flow-on effects are generated.

> The North Island red meat sector generated $9 billion in total GDP in 2025 and supported a total of 63,837 FTEs.

*Figure 7 Economic impact of the red meat sector in the North Island, 2025*


Source: BERL analysis

### 3.2.2 Direct impact

The direct impacts represent the immediate economic activity and employment generated by the red meat sector in the North Island through the production, processing, and sale of products from the sector.

> At the estimated levels of activity, every $1 million of direct expenditure in the red meat sector supported an estimated 4.7 FTEs across the North Island in 2025.

[7] Only direct economic impacts can be aggregated between regions. Appendix B describes this in more detail.

In 2025, the red meat sector was a major driver of economic activity in the North Island. The sector's direct activity, including livestock production and meat processing, generated an estimated $13.7 billion in expenditure, contributed $3.6 billion to GDP, and supported 28,375 FTEs.

### 3.2.3 Flow-on impact

Beyond this direct activity, the red meat sector also supports a wide range of flow-on economic activity across the North Island. Flow-on impacts describe how production activity and expenditure generate additional economic activity through indirect effects in the supply chain and induced effects from household spending of wages.

This includes the businesses that supply goods and services to the sector, as well as the economic activity generated through household spending by those employed directly and indirectly. These impacts reflect the extent to which the red meat sector underpins activity in industries such as animal health, machinery, fertiliser, logistics, insurance, and finance. Together, these effects capture the economy-wide contribution.

> The total flow-on economic impact of the North Island's red meat sector was $12 billion in expenditure, contributing around $5.4 billion in GDP, and supporting 35,462 FTEs.

## Regional focus: Taranaki-Manawatū

The Taranaki-Manawatū region supports a large concentration of sheep and beef farm businesses, alongside processing and associated industrial activity that services both local production and livestock sourced from surrounding regions. The region accounted for 29 percent of direct economic activity in the North Island's red meat sector, generating $4 billion in direct expenditure in 2025 (Figure 8). This expenditure created $1.1 billion in direct GDP and directly supported 9,210 FTEs. In turn, the direct expenditure circulates through the economy and generates flow-on impacts as industries, firms, and individuals spend and invest.

> The Taranaki-Manawatū red meat sector generated a total of $2.5 billion in GDP in 2025 and supported a total of 19,337 FTEs. This represented eight percent of total GDP and 11 percent of total employment in Taranaki-Manawatū.

*Figure 8 Economic impact of the red meat sector in Taranaki-Manawatū, 2025*[8]


Source: BERL analysis

Of the $4.0 billion in direct expenditure generated in Taranaki-Manawatū, livestock production accounted for $1.8 billion and meat processing accounted for $2.2 billion.[9] Treated as separate industries, the total economic impact is as follows:

Livestock production:

- Total GDP of $1.4 billion
- Total employment of 7,883 FTEs.

Meat processing:

- Total GDP of $1.7 billion
- Total employment of 14,063 FTEs.

[8] Individual components may not sum to totals due to rounding.

[9] The total impacts from livestock production and meat processing cannot be aggregated together.

## 3.3 Contribution in the South Island

### 3.3.1 Total impact

> The South Island red meat sector generated $6.6 billion in total GDP in 2025 and supported a total of 46,151 FTEs.

Around 42 percent of direct economic activity created by New Zealand's red meat sector was attributed to the South Island at $9.8 billion in 2025 (Figure 9). This included the immediate economic activity from livestock producers and meat processors in the South Island, such as on-farm spending on labour, feed, animal health and fertiliser, as well as processing-related activity such as labour, packaging, and plant operations.

*Figure 9 Economic impact of the red meat sector in the South Island, 2025*


Source: BERL analysis

### 3.3.2 Direct impact

The direct impact considers the immediate economic activity from livestock production and meat processing.

> At the estimated levels of activity, every $1 million of direct expenditure in the red meat sector supported an estimated 4.7 FTEs across the South Island in 2025.

In 2025, the red meat sector was a major driver of economic activity in the South Island. The sector's direct activity, including livestock production and meat processing, generated an estimated $9.8 billion in expenditure, contributed $2.7 billion to GDP, and supported 19,866 FTEs.

### 3.3.3 Flow-on impact

From the initial injection of economic activity, such as spending on labour and feed, flow-on effects are generated as activity flows through the supply chain (indirect) and households spend their wages and salaries (induced). Collectively, this forms the total economic impact in the region and illustrates the regional economy-wide contribution of the South Island's red meat sector.

#### Flow-on impact

> The total flow-on economic impact of the South Island's red meat sector was $9.3 billion in expenditure, contributing around $3.9 billion in GDP, and supporting 26,285 FTEs.

This represents the combination of activity created by:

- Livestock producers and meat processors purchasing goods and services from other South Island businesses and industries within the supply chain
- Household spending supported by incomes earned directly and indirectly through the red meat sector. In the South Island, these effects are particularly visible in provincial towns, where income generated in the livestock production and meat processing industries supports retail, accommodation, health, education, and other community services.

## Regional focus: Canterbury

The red meat sector in the Canterbury region consists of a combination of hill country and finishing farms, serving as a key component of the regional economy and New Zealand's red meat sector.

The region accounted for 43 percent of direct expenditure in the South Island's red meat sector, with $4.2 billion in 2025 (Figure 10). This direct expenditure has flow-on effects in the regional economy as spending diffuses across the supply chain and through households.

> The Canterbury region's red meat sector generated a total of $2.9 billion in GDP in 2025 and supported a total of 19,127 FTEs. This represented five percent of total GDP and six percent of total employment in Canterbury.

*Figure 10 Economic impact of the red meat sector in Canterbury, 2025*[10]


Source: BERL analysis

Of the $4.2 billion in direct expenditure in Canterbury generated by the red meat sector in 2025, livestock production accounted for $2.2 billion and meat processing accounted for $2 billion.[11] Treated as separate industries, the total economic impact is as follows:

Livestock production:

- Total GDP of $1.9 billion
- Total employment of 9,382 FTEs.

Meat processing:

- Total GDP of $1.7 billion
- Total employment of 11,727 FTEs.

[10] Individual components may not sum to totals due to rounding.

[11] The *total* impacts from livestock production and meat processing cannot be aggregated together and will not reflect the total impacts of the red meat sector.

## Regional focus: Otago-Southland

Alongside Canterbury, the Otago-Southland region forms the backbone of the South Island's red meat sector. The Otago-Southland region accounted for nearly half of direct expenditure within the red meat sector in the South Island. It created $4.8 billion in direct expenditure in 2025. Once flow-on effects through the supply chain and households are considered, this initial expenditure supports significant economic activities across the Otago-Southland region (Figure 11).

> The Otago-Southland region's red meat sector generated a total of $3 billion in GDP in 2025 and supported a total of 21,722 FTEs. This represented 11 percent of total GDP and 12 percent of total employment in Otago-Southland.

*Figure 11 Economic impact of the red meat sector in Otago-Southland, 2025*[12]


Source: BERL analysis

Of the $4.8 billion in direct expenditure in Otago-Southland generated by the red meat sector in 2025, livestock production accounted for $2.2 billion and meat processing accounted for $2.5 billion.[13] Treated as separate industries, the total economic impact is as follows:

Livestock production:

- Total GDP of $1.7 billion
- Total employment of 8,726 FTEs.

Meat processing:

- Total GDP of $2 billion
- Total employment of 15,007 FTEs.

[12] Individual components may not sum to totals due to rounding.

[13] Industry totals do not equal the red meat sector total due to rounding.

# 4 Workforce and community impacts

While the red meat sector makes a significant economic contribution to New Zealand, its role in supporting employment and sustaining communities is also material to understanding its overall value within New Zealand.

This section examines the workforce and community impacts of New Zealand's red meat sector, with a particular focus on who is employed in the sector, where those jobs are located, and how employment opportunities are shaped by land-use change. Specifically, it considers the participation of Māori and Pacific Peoples across livestock production and meat processing, as well as the implications of afforestation for employment intensity, workforce stability, and regional resilience. This analysis provides insight into how the sector supports labour market participation and community viability beyond aggregate economic measures.

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## Employment measures: EIA (FTEs) versus Census

Sections 4.1 and 4.2 draw on Census 2018 and 2023 data to examine the characteristics of people employed in the red meat sector, including ethnicity, age, employment status, and region. As a result, the employment figures presented here differ from the employment estimates in Section 3.

The EIA estimates employment using FTEs, which standardises full-time, part-time, and seasonal work into a common measure of labour input. This approach is appropriate for estimating economic contribution and for comparing employment impacts across industries.

By contrast, the workforce analysis in Sections 4.1 and 4.2 uses headcount employment from Census data, which counts people employed in the red meat sector regardless of hours worked. This enables analysis of workforce composition and community impacts, including ethnicity, age structure, and employment status, which cannot be assessed using FTE-based measures.

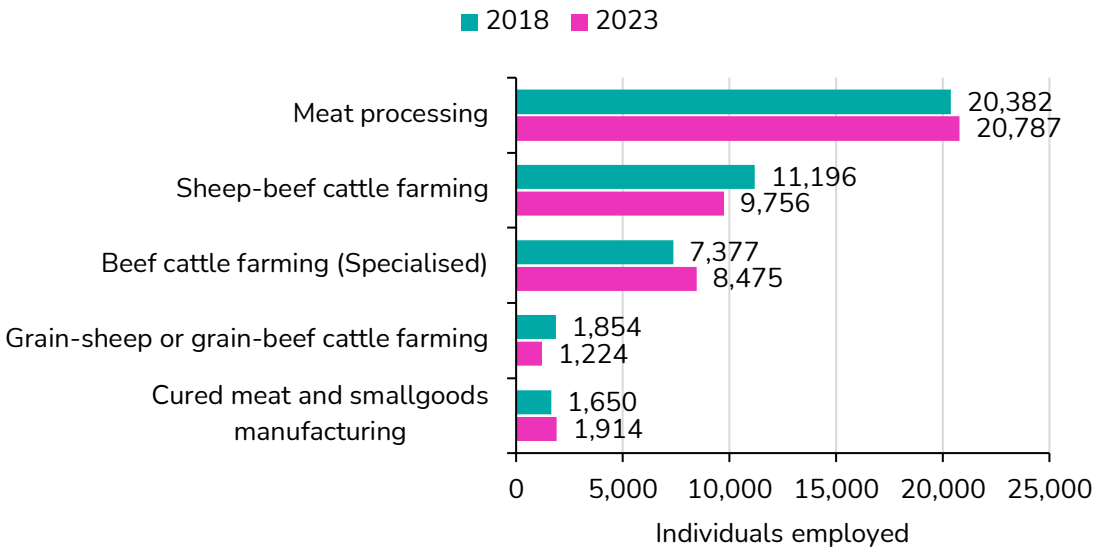
While the two measures are conceptually different, the resulting employment estimates are broadly consistent, providing confidence in both the scale of employment captured in the EIA and the workforce patterns described.

## 4.1 The red meat sector workforce

In New Zealand in 2023, according to Census 2023, 42,156 individuals were directly employed in the red meat sector. This represented 22 percent of the entire primary sector. [14]

The largest number of people were employed in the meat processing, sheep-beef cattle farming, and beef cattle farming (specialised) industries (Figure 12).

*Figure 12 Employed individuals in New Zealand's red meat sector, by industry, 2018-2023*




Source: Census 2018 and 2023 – BERL analysis

## 4.2 Focus on Māori and Pacific Peoples workforce in the red meat sector

Māori and Pacific Peoples are significant contributors to New Zealand's primary industries, and they are well represented in the regions where livestock production and meat processing are key sources of employment.

Understanding workforce participation by ethnicity helps provide a more complete picture of the social and regional footprint of the red meat sector, alongside its economic contribution.

[14] Employed refers to employees, employers, and self-employed individuals (excl. unpaid family worker). Entire primary sector includes agriculture, mining, and food production sectors.

Māori and Pacific Peoples make up around one-third of the red meat sector's direct workforce and over half of the people employed directly in meat processing.[15] They represent a significant share of younger workers and are concentrated in roles and regions that are central to the sector's ongoing operation.

> Of the 42,156 individuals directly employed in New Zealand's red meat sector in 2023, 10,578 (25 percent) identified as Māori and 4,788 (11 percent) identified as Pacific Peoples.

Examining employment patterns for these groups therefore provides insight into the future workforce pipeline, rather than a commentary on the current workforce composition. This focus supports an understanding of how the sector's labour supply may evolve over time, and where workforce development, retention, and skills pathways may be most consequential. Mirroring the national picture, both ethnicities were largely concentrated in the meat processing industry (Table 2).

> Of the 20,787 people employed in meat processing nationally in 2023, 7,386 were Māori (35 percent) and 4,077 (20 percent) were Pacific Peoples, representing more than half of the meat processing workforce.

*Table 2 Māori and Pacific Peoples employed in the red meat sector, 2018 and 2023*[16]

| | Māori | | Pacific Peoples | | New Zealand | |
|---|---|---|---|---|---|---|
| Industries | 2018 | 2023 | 2018 | 2023 | 2018 | 2023 |
| Meat processing | 7,833 | 7,386 | 3,009 | 4,077 | 20,382 | 20,787 |
| Sheep-beef cattle farming | 1,557 | 1,626 | 87 | 156 | 11,196 | 9,756 |
| Beef cattle farming (Specialised) | 768 | 1,047 | 78 | 126 | 7,377 | 8,475 |
| Grain-sheep or grain-beef cattle farming | 120 | 90 | 6 | 21 | 1,854 | 1,224 |
| Cured meat and smallgoods manufacturing | 321 | 429 | 375 | 408 | 1,650 | 1,914 |
| **Total** | **10,599** | **10,578** | **3,555** | **4,788** | **42,459** | **42,156** |

[15] Individuals can identify as having more than one ethnicity, therefore this workforce share of Māori and Pacific Peoples combined represent only an approximate estimate.

[16] Employed refers to employees, employers, and self-employed.

Source: Census 2018 and 2023 – BERL analysis

There are several distinct patterns of growth between 2018 and 2023 within red meat sector industries that were more pronounced for Māori and Pacific Peoples.

Overall, total Māori employment across the sector remained broadly stable over the period, with a negligible net change despite underlying shifts between industries. In contrast, Pacific Peoples employment increased strongly, rising by 35 percent overall, reaching 4,788 in 2023. This indicates a growing concentration of Pacific Peoples workers within the sector, given that at the national level employment growth decreased slightly.

For Māori, employment growth between 2018 and 2023 was strongest in:

- Specialised beef cattle farming, up 36 percent to 1,047
- Cured meat and smallgoods manufacturing, up 34 percent to 429.

Employment counts in both these industries also increased nationally, but at a lower rate, increasing by 15 percent and 16 percent respectively. The declines in the meat processing industry (down six percent) and grain-sheep or grain-beef farming (down 25 percent) for Māori resulted in little net change at the aggregate level. This suggests a degree of internal reallocation rather than contraction in Māori employment in the red meat sector overall.

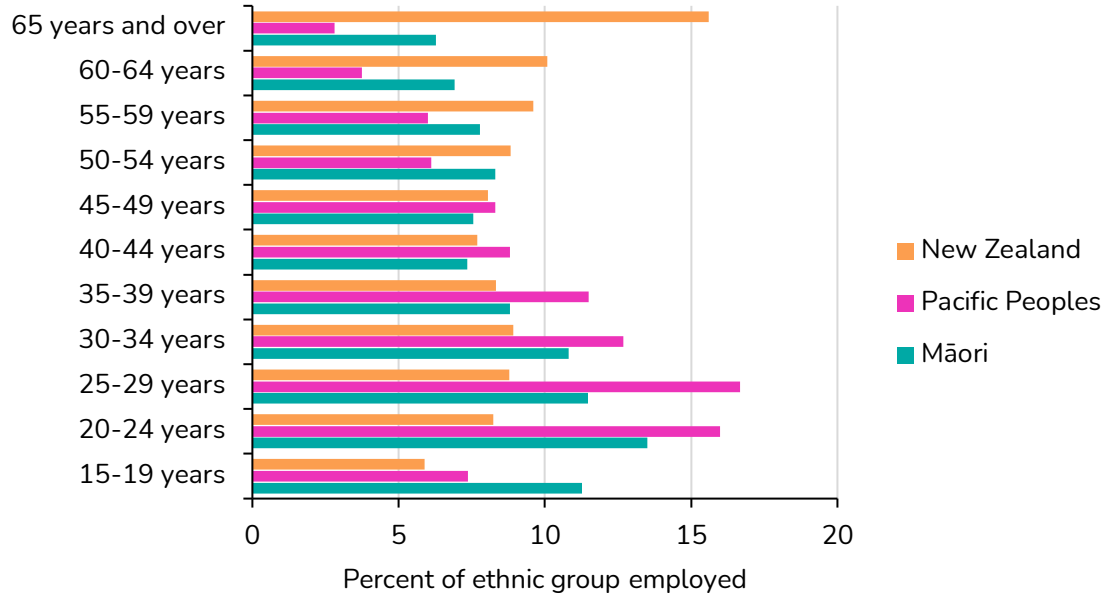
Pacific Peoples employment growth was much more pronounced. The largest absolute and proportional increase occurred in meat processing, where employment rose by 35 percent. Very strong percentage growth was also observed in smaller farming categories, such as grain-sheep or grain-beef farming, although these changes were from a low base.

Across both ethnic groups, the meat processing industry remains the dominant employer, particularly for Pacific Peoples. This reinforces the industry's role as a key source of waged employment, rather than farm ownership or self-employment. Farming-based roles remain comparatively smaller in scale, although some sub-sectors show signs of gradual expansion.

## Age structure of the Māori and Pacific Peoples workforce

Figure 13 indicates that the Māori and Pacific Peoples red meat sector workforces are proportionately younger than the overall workforce in the red meat sector in New Zealand. This largely reflects the age structure of both ethnicities, rather than differences specific to the red meat sector.

*Figure 13 Age distribution of employment by ethnicity in New Zealand's red meat sector, 2023*




Source: Census 2023 – BERL analysis

Māori and Pacific Peoples together accounted for 56 percent of the total red meat sector that is between 15-29 years of age. Māori representation was particularly strong in the youngest age cohort (15-19 years), while Pacific Peoples also had a pronounced presence among workers aged under 35.

As age increases, the combined share of Māori and Pacific Peoples in the red meat sector workforce declines. By the 45–54 age group, their representation was materially lower and, among workers aged 60 and over, Māori and Pacific Peoples accounted for a relatively small share of total employment. This pattern largely reflects the younger age structure of Māori and Pacific Peoples in the general population and does not, on its own, indicate differences in retirement behaviour, job tenure, or employment conditions within the sector.

The implications of this distribution are twofold. First, it highlights the central role Māori and Pacific Peoples play in the future labour supply of the red meat sector, particularly in processing and early-career roles. Second, it underscores the importance of retention, skills development, and progression pathways, as the sector's long-term capability will depend on whether younger workers remain engaged and progress within the industry over time.

### Employment status and region

Table 3 presents the employment status of Māori and Pacific Peoples in the red meat sector in 2023.

*Table 3 Red meat sector employment of Māori and Pacific Peoples by employment status, 2023*[17]

| | Employee | Employer | Self-employed | **Total** |
|---|---|---|---|---|
| **North Island** | | | | |
| Māori | 7,521 | 57 | 336 | **7,914** |
| Pacific Peoples | 2,763 | 0 | 45 | **2,808** |
| All individuals | 19,416 | 1,635 | 4,890 | **25,941** |
| **South Island** | | | | |
| Māori | 5,544 | 42 | 285 | **5,871** |
| Pacific Peoples | 1,647 | 0 | 0 | **1,647** |
| All individuals | 12,045 | 1,086 | 2,460 | **15,591** |
| **New Zealand** | | | | |
| Māori | 9,654 | 303 | 621 | **10,578** |
| Pacific Peoples | 4,599 | 57 | 132 | **4,788** |
| All individuals | 31,584 | 2,991 | 7,581 | **42,156** |

Source: Census 2023 – BERL analysis

Across both groups, employment is overwhelmingly concentrated in waged roles, with employees accounting for the largest number of workers. Self-employment and employer roles together represented a much smaller share of total participation (25 percent combined). For both ethnicities, employment was most strongly represented in the North Island. This concentration reflects both population distribution and the location of processing activity, reinforcing the North Island's central role in sustaining the future workforce of the red meat sector.

## 4.3 The impact of the afforestation challenge

A feature of New Zealand's primary sector in recent decades has been the conversion of sheep and beef farmland to exotic forestry. Between January 2017 and March 2025, just over 300,000 hectares of sheep and beef farmland were converted to forestry (Orme & Associates, 2025).[18] This has occurred alongside changes in commodity markets and policy settings, including the Emissions Trading Scheme (ETS).

[17] North and South Island totals do not sum to the New Zealand total because some individuals could not be assigned to a region.

[18] This includes only whole of farm purchases.

## Reduced export intensity

The implications are broad and consequential. When farms in the livestock production industry are converted to forestry, it reduces the export and employment potential of the red meat sector and lowers the overall export intensity of land within the primary sector. In the year to March 2025, the red meat sector exported $12.4 billion in goods, more than double forestry sector exports of $4.8 billion.[19] From New Zealand's total merchandise exports of $74 billion, around 17 percent were from the red meat sector.

## Changes in employment levels and timing

There are also notable implications for job opportunities from afforestation. Over thirty years, on average, sheep and beef farms contribute 4.8 FTEs per 1,000 hectares, compared to 4.6 FTEs per 1,000 hectares of forestry land. The average employment of farms and forestry is relatively similar when expressed as FTEs per 1,000 hectares, but there is a distinct difference in *when* this employment occurs.[20]

Farms generate employment on a continuous, annual basis, and the red meat sector generates export earnings on an ongoing basis. By contrast, forestry typically generates both employment and export revenue primarily at harvest, around 25–30 years after planting. Farms provide continuous employment because farm operations require ongoing labour for livestock management, maintenance, and day-to-day production.

In contrast, forestry employment is heavily concentrated at the time of harvest (at approximately 25-30 years), with comparatively low labour demand until harvest. Around 60 percent of the estimated 4.6 FTEs per 1,000 hectares occurs at harvest.

An implication of continued conversion to forestry is the reduction in workforce stability, which can also weaken demand for local services. Consequently, this makes it harder for rural towns to retain people and skills. While forestry can generate ETS revenue over time, this revenue stream is smaller, less regular and more delayed than the ongoing export earnings and regular economic activity generated by livestock production. In addition, ETS-related revenue is typically less associated with ongoing local economic activity than production-based land uses, as it does not

[19] Forestry exports include wood, timber, and other physical forestry products.

[20] Our methodology for this analysis is detailed in Appendix B. We also triangulated our results by testing different methodologies and arrived at similar outcomes.

require the same intensity of labour or supporting services. This can have implications for the scale and continuity of local economic activity, including demand for services in rural communities.

### Weaker regional economic spillovers

Livestock production has strong local and regional multiplier effects, supporting veterinary services, transport, rural suppliers, processing plants, and community services. Forestry, by contrast, typically has fewer ongoing linkages with local service industries between planting and harvest.

As land is converted to forestry, spending and employment become more sporadic, weakening the economic base of rural towns and reducing demand for local businesses and services.

### Land-use change and economic trade-offs

Forestry plays an important role in New Zealand's climate change response by contributing to carbon sequestration and emissions mitigation objectives. And, for some landowners, it can offer more predictable returns with lower ongoing labour requirements. The economic and employment impacts of afforestation also vary by region, reflecting differences in land use, population distribution, and the location of processing and service industries.

At the same time, the analysis above highlights that land-use change involves trade-offs. Compared with livestock production, forestry generates export earnings and employment that are more delayed and intermittent. This has implications for the timing, stability, and scale of economic activity supported in rural economies. Recognising these trade-offs is important for understanding how land-use decisions shape export performance, workforce stability, and regional economic resilience over time.

# 5 The red meat sector is a valuable contributor to the economy

Through the combined activity of livestock production and meat processing, the red meat sector supports substantial economy-wide expenditure, contributes materially to GDP, and sustains many FTEs nationwide. Its contribution is significant in both scale and reach, integrated across the country. At a glance, in 2025, New Zealand's red meat sector supported total:

> **Expenditure** of $48.7 billion
>
> **GDP** of $17.5 billion
>
> **Employment** of 120,580 FTEs.

The sector's contribution extends well beyond farms and processing plants. Flow-on effects through supply chains and household spending support a wide range of industries in New Zealand, including transport and logistics, manufacturing, professional services, retail, and other service activities. With 120,580 FTEs supported either directly or through flow-on effects, the red meat sector is critical to sustaining employment within the broader economy.

The value of the sector is also seen regionally in key producing and processing regions such as Taranaki–Manawatū, Canterbury, and Otago–Southland. In these regions, the red meat sector underpins employment and supports local supply chains. The continuity of activity generated by the sector is especially important for sustaining regional businesses and services over time.

The red meat sector plays a foundational role domestically in New Zealand, creating significant economic activity and supporting a wide range of employment. But its strong international orientation, with more than 90 percent of production being exported, also emphasises its role in both supporting the domestic economy through this local activity and through export growth. With ongoing global uncertainty, evolving demographics and workforce dynamics, and pressures on land use, this report provides a robust and transparent evidence base to inform policy, industry decision making, and discussion about the sector's role in the economic and regional future of New Zealand.

# Appendix A Additional economic impact tables

This appendix provides the separated estimates for the economic impact of livestock production and meat processing industries, which collectively form the red meat sector – the "main" industry presented in Section 3.

When each industry is viewed in isolation, all related economic activities and impacts are counted for that specific industry alone. This means that overlapping contributions (e.g., shared supply chains or services) between livestock production and meat processing are fully included in each industry's total. Whereas for the combined red meat sector estimate, the inter-industry transactions between livestock production and meat processing are not treated as movements of economic activity.

## New Zealand

### Livestock production

> The New Zealand livestock production industry generated a total of $9.8 billion in GDP in 2025 and supported a total of 50,034 FTEs.

*Table 4 Economic impact of livestock production in New Zealand, 2025*

| | Direct | Flow-on | **Total** |
|---|---|---|---|
| Expenditure ($b) | 10.1 | 12.7 | **22.7** |
| GDP ($b) | 4.0 | 5.8 | **9.8** |
| Employment (FTEs) | 19,518 | 30,516 | **50,034** |

Source: BERL analysis

### Meat processing

> The New Zealand meat processing industry generated a total of $14.1 billion in GDP in 2025 and supported a total of 90,698 FTEs.

*Table 5 Economic impact of meat processing in New Zealand, 2025*

| | Direct | Flow-on | **Total** |
|---|---|---|---|
| Expenditure ($b) | 13.4 | 26.1 | **39.5** |
| GDP ($b) | 2.3 | 11.7 | **14.1** |
| Employment (FTEs) | 28,731 | 61,967 | **90,698** |

Source: BERL analysis

## North Island

### Livestock production

> The North Island livestock production industry generated a total of $4.6 billion in GDP in 2025 and supported a total of 24,203 FTEs.

*Table 6 Economic impact of livestock production in the North Island, 2025*

| | Direct | Flow-on | **Total** |
|---|---|---|---|
| Expenditure ($b) | 5.3 | 5.2 | **10.5** |
| GDP ($b) | 2.1 | 2.4 | **4.6** |
| Employment (FTEs) | 11,396 | 12,806 | **24,203** |

Source: BERL analysis

### Meat processing

> The North Island meat processing industry generated a total of $6.8 billion in GDP in 2025 and supported a total of 44,767 FTEs.

*Table 7 Economic impact of meat processing in the North Island, 2025*

| | Direct | Flow-on | **Total** |
|---|---|---|---|
| Expenditure ($b) | 8.4 | 11.3 | **19.7** |
| GDP ($b) | 1.5 | 5.3 | **6.8** |
| Employment (FTEs) | 16,979 | 27,788 | **44,767** |

Source: BERL analysis

## Taranaki-Manawatū

### Livestock production

> The Taranaki-Manawatū livestock production industry generated a total of $1.4 billion in GDP in 2025 and supported a total of 7,883 FTEs.

*Table 8 Economic impact of livestock production in Taranaki-Manawatū, 2025*

| | Direct | Flow-on | **Total** |
|---|---|---|---|
| Expenditure ($b) | 1.8 | 1.6 | **3.4** |
| GDP ($b) | 0.7 | 0.7 | **1.4** |
| Employment (FTEs) | 3,801 | 4,082 | **7,883** |

Source: BERL analysis

### Meat processing

> The Taranaki-Manawatū meat processing industry generated a total of $1.7 billion in GDP in 2025 and supported a total of 14,063 FTEs.

*Table 9 Economic impact of meat processing in Taranaki-Manawatū, 2025*

| | Direct | Flow-on | **Total** |
|---|---|---|---|
| Expenditure ($b) | 2.2 | 3.3 | **5.5** |
| GDP ($b) | 0.3 | 1.4 | **1.7** |
| Employment (FTEs) | 5,409 | 8,654 | **14,063** |

Source: BERL analysis

## South Island

### Livestock production

> The South Island livestock production industry generated a total of $4.0 billion in GDP in 2025 and supported a total of 20,002 FTEs.

*Table 10 Economic impact of livestock production in the South Island, 2025*

| | Direct | Flow-on | **Total** |
|---|---|---|---|
| Expenditure ($b) | 4.8 | 4.9 | **9.7** |
| GDP ($b) | 1.9 | 2.2 | **4.0** |
| Employment (FTEs) | 8,121 | 11,881 | **20,002** |

Source: BERL analysis

### Meat processing

> The South Island meat processing industry generated a total of $4.5 billion in GDP in 2025 and supported a total of 30,965 FTEs.

*Table 11 Economic impact of meat processing in the South Island, 2025*

| | Direct | Flow-on | **Total** |
|---|---|---|---|
| Expenditure ($b) | 5.0 | 8.3 | **13.3** |
| GDP ($b) | 0.8 | 3.7 | **4.5** |
| Employment (FTEs) | 11,745 | 19,220 | **30,965** |

Source: BERL analysis

## Canterbury

### Livestock production

> The Canterbury livestock production industry generated a total of $1.9 billion in GDP in 2025 and supported a total of 9,382 FTEs.

*Table 12 Economic impact of livestock production in Canterbury, 2025*

| | Direct | Flow-on | **Total** |
|---|---|---|---|
| Expenditure ($b) | 2.2 | 2.3 | **4.6** |
| GDP ($b) | 0.9 | 1.0 | **1.9** |
| Employment (FTEs) | 3,632 | 5,750 | **9,382** |

Source: BERL analysis

### Meat processing

> The Canterbury meat processing industry generated a total of $1.7 billion in GDP in 2025 and supported a total of 11,727 FTEs.

*Table 13 Economic impact of meat processing in Canterbury, 2025*

| | Direct | Flow-on | **Total** |
|---|---|---|---|
| Expenditure ($b) | 2.0 | 3.3 | **5.3** |
| GDP ($b) | 0.3 | 1.4 | **1.7** |
| Employment (FTEs) | 4,417 | 7,310 | **11,727** |

Source: BERL analysis

## Otago-Southland

### Livestock production

> The Otago-Southland livestock production industry generated a total of $1.7 billion in GDP in 2025 and supported a total of 8,726 FTEs.

*Table 14 Economic impact of livestock production in Otago-Southland, 2025*

| | Direct | Flow-on | **Total** |
|---|---|---|---|
| Expenditure ($b) | 2.2 | 1.9 | **4.2** |
| GDP ($b) | 0.9 | 0.9 | **1.7** |
| Employment (FTEs) | 4,060 | 4,666 | **8,726** |

Source: BERL analysis

## Meat processing

> The Otago-Southland meat processing industry generated a total of $2.0 billion in GDP in 2025 and supported a total of 15,007 FTEs.

*Table 15 Economic impact of meat processing in Otago-Southland, 2025*

| | Direct | Flow-on | **Total** |
|---|---|---|---|
| Expenditure ($b) | 2.5 | 3.6 | **6.2** |
| GDP ($b) | 0.4 | 1.6 | **2.0** |
| Employment (FTEs) | 6,275 | 8,732 | **15,007** |

Source: BERL analysis

# Appendix B Methodology

This appendix presents our methodological approach to the following analysis included in the report:

- Estimate of the economic contribution of New Zealand's red meat sector using IO multiplier analysis
- Approach to analysing the employment effects of afforestation in New Zealand.

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## Economic contribution of New Zealand's red meat sector

Our selected methodology for estimating the economic contribution of New Zealand's red meat sector, including livestock production and meat processing, was input-output (IO) multiplier analysis. Our methodology describes how we updated the IO framework to the 2024 year, how national and regional multipliers were derived, and how the red meat sector was defined within the broader industry classifications used in official statistics.

The intent is to provide transparency on what the research entailed, how it was carried out, and the key assumptions and data sources underpinning the analysis.

### Overview of IO framework

Stats NZ publishes national IO tables approximately every six to seven years. These tables describe the flows of goods and services between industries, households, government, and the rest of the world, and form the basis for estimating economic multipliers used in economic impact analysis.

The most recent national IO tables are for 2020. To ensure the analysis reflected more up-to-date economic conditions, the 2020 tables were updated to align with the latest available national accounts data, that being 2024. The updated tables were then used to derive national and regional multipliers for use in this report.

### Updating the national IO tables

The national IO tables were updated from 2020 to 2024 using a structured, multi-step process:

1. Incorporation of latest national accounts data

Consolidated national accounts data for 2024 were obtained from Stats NZ. This provided updated totals for key components of the economy, including:

- Household and government consumption
- Compensation of employees and operating surplus
- Imports and exports
- Capital investment and taxes.

These components form the core control totals required within an IO framework.

2. Updating industry output levels

Industry-level production GDP data was used to estimate changes in total output for each industry between 2020 and 2024. This ensured that industry scale within the IO table reflected observed changes in economic activity over the period.

3. Reconstruction and balancing of the IO matrix

The updated control totals and industry output estimates were combined with the structural relationships embedded in the 2020 IO tables to reconstruct the 2024 IO matrix. The table was then balanced so that, for each industry, total inputs equalled total outputs.

4. Employment data for multiplier estimation

Industry-level employment data for 2024 was compiled. While employment data is not directly part of the IO tables, they are required to calculate employment multipliers consistent with the updated production structure.

Once balanced, the updated national IO table was transformed into a new set of 2024 multipliers for use in our analysis.

## Updating regional IO tables

Using the updated national IO table, we also updated 2020 regional IO tables to 2024. This process used regional employment, production (GDP), and other relevant economic data to:

- Estimate each region's share of national industry output
- Allocate national production, imports, and exports to the regional level
- Reflect differences in regional economic structure and trade linkages.

Each regional table was balanced after updating, and consistency checks were undertaken to ensure that the sum of regional activity aligned with the national IO framework. Regional multipliers were then derived for use in region-specific analysis within the report.

## Defining the red meat sector within the IO framework

The official industry classifications from the Australian and New Zealand Standard Industrial Classification (ANZSIC) used in our IO tables does not separately identify livestock production or meat processing as standalone industries. Instead, these activities are embedded within broader industry groupings. As a result, bespoke sector definitions were required for this project.

**Livestock production**

Livestock production sits within the broader sheep, beef cattle, and grain farming industry. To isolate livestock production:

- Data from the B+LNZ Economic Service Sheep and Beef Farm Survey was used regarding average per-farm expenditure and revenue across multiple categories
- Regional farm counts were applied to scale per-farm data to total industry values at both national and regional levels.

This approach enabled estimation of:

- Total output and intermediate input use
- Employment and operating surplus
- Imports associated with production.

The result was a split of the original industry into two distinct components: a livestock production industry and a grain farming industry. This provided a clear and internally consistent representation of livestock production within our applied IO framework.

**Meat processing**

Meat processing is part of the broader meat and meat product manufacturing industry. Because detailed revenue and expenditure data was not available to directly isolate meat processing, an alternative approach was applied:

1. Removal of poultry processing

Annual Enterprise Survey (AES) data and employment statistics were used to estimate the size of the poultry processing industry, which was then removed from the broader meat processing category.

2. Allocation based on slaughtering activity

Livestock slaughtering data from Stats NZ, including national and regional counts and carcass weights, were used to estimate the share of remaining processing capacity attributable to sheep, beef, and other livestock (e.g., goats, pigs, and deer).

3. Derivation of meat processing structure

The estimated share of processing capacity devoted to livestock production was applied to the residual meat processing industry to derive the size and input structure of the meat processing industry at both national and regional levels.

This method assumes similar resource use per unit of carcass weight across livestock types. While a simplifying assumption, it provides a reasonable and transparent proxy for allocating processing activity where more granular data is not available.

### Estimating the combined red meat sector

Livestock production and meat processing were modelled as separate industries within the updated IO framework. However, estimating the economic contribution of the combined red meat sector required additional steps to avoid double counting the economic flows between these two closely linked industries.

To address this, a matrix was constructed using the updated IO table and the observed inter-industry relationships. This approach identified the set of industry-level shocks required to reproduce the total output of both industries simultaneously, while netting out internal transactions between farming and processing.

The resulting estimates therefore represent the combined economic contribution of the red meat sector to the New Zealand economy, without overstating impacts due to intermediate flows within the sector itself.

## Employment effects of afforestation analysis

The following subsection describes our approach to analysing the employment effects of afforestation in New Zealand that is presented in Section 4.3. Specifically, we describe how we

estimated and compared employment intensity for sheep and beef farming and commercial forestry, expressed as FTEs per 1,000 hectares.

Our selected approach was broadly a farm-level expenditure and IO modelling approach. We also cross-checked results by undertaking a national industry employment analysis using Stats NZ data.

### Farm-level employment estimation using expenditure data

Employment associated with sheep and beef farming was estimated using employment and expenditure data covering all classes of sheep and beef land across New Zealand.

To represent a typical year of activity, expenditure and employment data were averaged over the most recent five years. This "average year" approach smooths short-term volatility arising from climate, prices, and farm system variation.

Over the five year period, the average sheep and beef farm has 708 hectares. Employment and expenditure were therefore scaled to a 1,000-hectare equivalent to enable direct comparison with forestry.

- **Direct on-farm employment**: Scaling the average farm to 1,000 hectares yields 2.2 FTEs of direct employed on-farm labour.
- **Indirect employment from on-farm expenditure**: The remaining on-farm expenditure (including feed, animal health, shearing, fertiliser, transport, and cartage) was allocated across relevant industries using IO tables. This expenditure supports an additional 2.6 FTEs in upstream and service industries.

Combining direct and indirect employment gives a total of 4.8 FTEs per 1,000 hectares for sheep and beef farming.

## Commercial forestry

Employment associated with commercial forestry was estimated using privately supplied per-hectare expenditure data. These data covered the full forestry rotation and included costs associated with:

- Planting
- Three rounds of pruning and trimming
- Harvesting

- Ongoing repair and maintenance.

Because many forestry activities occur once, or a small number of times, over a 30-year rotation, expenditures were converted into an annualised equivalent to allow comparison with the annual expenditure profile of sheep and beef farming:

- Non-harvest expenditures were divided by 29 years
- Harvest expenditure was divided by 30 years.

This produced an estimate of average annual expenditure per hectare over the full rotation.

As with sheep and beef farming, IO tables were used to translate this annualised expenditure into employment across the economy. This resulted in an estimated 4.6 FTEs per 1,000 hectares for commercial forestry.

Importantly, around 60 percent of this employment is attributable to harvesting activity, which occurs at the end of the rotation rather than being distributed evenly over time. This contrasts with sheep and beef farming, where employment is sustained consistently year to year. As a result, while average employment levels appear similar, the temporal distribution of employment differs materially between land uses.

## Alternative approach: national industry employment cross-check

As a cross-check and test on the farm-level analysis, an alternative method was applied using national employment data by industry.

This approach focuses on direct employment only and does not include indirect employment generated through supply chains. Firstly, annual employee counts from Stats NZ were converted into FTEs.

Using this data, national direct employment was estimated as follows:

- Livestock production: 21,633 FTEs
- Meat processing: 29,040 FTEs
- Forestry and logging: 4,602 FTEs
- Wood product manufacturing: 18,519 FTEs.

These employment totals were then related to land use:

- Forestry land: 1.79 million hectares

- Livestock production land: 7.3 million hectares (from a total of 8.6 million hectares, excluding forestry on farms and land not used in day-to-day farming activities).

Using this national approach, on-farm (or on-land) direct employment was estimated at:

- 3 FTEs per 1,000 hectares for beef and lamb
- 2.6 FTEs per 1,000 hectares for forestry and logging.

If we included direct manufacturing employment as well, we estimated:

- 7 FTEs per 1,000 hectares for beef and lamb farming, plus meat processing
- 12.9 FTEs per 1,000 hectares for forestry and logging, plus wood product manufacturing.

This suggests that employment in the sheep and beef sector is more evenly split between farming and processing, while employment in the forestry sector is much more heavily concentrated in downstream wood product manufacturing.

This national-level analysis does not include indirect employment arising from goods and services supplied to either sector.

# Appendix C Glossary

*Table 16 Glossary*

| Term | Definition |
|---|---|
| Afforestation | The establishment of a forest by planting trees on land that has not recently been forested (often contrasted with reforestation, which is re-establishing forest on recently forested land). |
| Direct impacts | Direct impacts capture the economic activity that occurs within the sector being analysed. |
| Economic spillovers | The wider flow-on effects of an activity that extend beyond the directly affected sector or organisation, impacting other industries, regions, or households in the economy. |
| Employment (FTEs) | Employment is measured in FTEs, which convert full-time, part-time, and seasonal jobs into a common unit. One FTE represents the workload of one full-time job over a year, allowing employment impacts to be compared consistently across industries and regions. |
| Expenditure | Expenditure measures the total spending associated with an activity or sector. In this report, it reflects spending by livestock production and meat processing industries on goods and services required for production, such as inputs, services, and operating costs. It does not represent net economic contribution. |
| Flow-on impacts | Flow-on impacts refer collectively to the indirect and induced impacts generated beyond the sector itself. They capture how economic activity in the sector supports wider employment, income, and production across the economy. |
| Gross domestic product (GDP) | GDP measures the net economic contribution of an activity to the New Zealand economy. It reflects the value created after subtracting the cost of intermediate inputs. GDP is also referred to as value added and is directly comparable with national GDP statistics. |
| Indirect impacts | Indirect impacts arise from the supply chain that supports the sector. This includes economic activity generated by businesses that provide goods and services to the red meat sector. |
| Induced impacts | Induced impacts result from the household spending of wages and salaries earned by workers employed directly or indirectly by the sector. This spending supports further economic activity across the wider economy. |
| Input-output (IO) modelling | A modelling framework that summarises the inter-relationships between industries in an economy and shows how a change in one industry's activity can affect other industries it interacts with. |
| Multiplier analysis | A method for estimating the total economic impact of an activity by capturing its direct effects and the flow-on effects across the economy (measured in terms of expenditure, GDP, and employment). |
| Total impacts | Total impacts represent the sum of direct, indirect, and induced impacts, showing the overall contribution of the sector once economy-wide linkages are considered. |

Source: BERL

# Appendix D References

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