beef+lamb new zealand

Mid-Season Update 2022-23

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Overview

Despite a very weak start to the season for exports and prices, conditions are expected to improve in the second half of the 2022-23 season, but there are downside risks. Generally, demand for red meat in key markets remains solid, but continued high inflation is impacting consumer demand and its uncertain how long this will last. Supply of red meat globally remains tight.

A large decrease in farm profitability is forecast for 2022-23, with factors such as a poor start to the season with lower farm-gate prices and continued upward pressure on farm expenditure combining to reduce profit margins. Farm profit before tax is estimated at $146,300, a 31 per cent decrease from 2021-22 and below the average of the past five years.

When inflation is taken into account, Farm Profit before Tax is estimated at $96,600, a 35 per cent decrease from 2021-22 (Figure 13).

Farmers have sought to reduce costs by deferring repairs and maintenance and reducing fertiliser usage, but inflation and increased farm input prices outweigh cost-cutting- initiatives. Farmer confidence is low as uncertainty about markets, increased costs due to inflation and the potential for further cost increases as a result of policy changes continues.

Red meat export returns are mixed as they decreased in the first four months of the season (down from record highs in 2021-22), especially for mutton. Lamb and beef prices also fell but not by the same magnitude as mutton. A fall in demand from China has driven the decrease in sheepmeat, but beef returns have only decreased slightly when comparing to the record start of last season, and a tightening of global beef supply has underpinned the global beef market with the very recent case of BSE (Mad Cow Disease) in Brazil.

The mixed market sentiment is supported by the outlook for the NZD, which is favourable for NZ exporters. A greater proportion of the strong prices in New Zealand's export markets will flow into farm-gate returns.

Inflationary pressure, is however, causing on-farm costs to lift sharply, eroding the benefit of relatively strong farm-gate returns. Also, there is uncertainty with mutton, because 85 per cent of New Zealand exports are to China. This has impacted export receipts by a third compared to the same period last season, which has been felt in farm-gate prices. The primary sector is also constrained by the shortage of labour in processing plants and on farms.

The sector continues to face uncertainty regarding climate change and environmental policy.

Cyclone Gabrielle has proven to be devastating for Northland, parts of Waikato and especially many East Coast farmers. Slips, silt, destroyed farm infrastructure and livestock losses were still, at the time of writing, not fully accounted for. The economic effects on the supply chain for agriculture will be felt for some years for these regions.

Economic Conditions

Overall, the outlook for global economic conditions is relatively weak, and uncertainty is high due to inflation. Positively, many of New Zealand's key red meat markets are wealthy countries that will weather the difficulties better than others. China, which finally relaxed its COVID-19-related rules is dealing with exploding infections. In addition, a reluctance to release, or delaying, economic data has made China very difficult to analyse.

Europe has benefitted from cheap Russian gas in the past, but since the invasion of Ukraine and subsequent sanctions imposed on Russia, tight gas supplies have heavily impact populations, especially in Germany, the world's fourth largest economy. There are multiple indicators that expensive energy prices are affecting the wider economy, for example, inflation was pushed higher. While the Northern Hemisphere winter was expected to be difficult for energy supplies, and preparation was underway, the winter was milder than expected so natural gas prices fell.

Global demand for New Zealand's primary sector exports has been robust. Red meat and dairy performed solidly in 2022. However, slowing economic recovery in key global markets, particularly stubbornly high inflation in most economies, has the potential to slow New Zealand's own recovery given our export reliance.

The New Zealand economy performed modestly throughout 2022 but was mired with inflation. Consumers faced higher than normal fuel costs and grocery costs. The Reserve Bank of New Zealand is trying to manage inflation by increasing the Official Cash Rate (OCR) and pursuing monetary tightening, which the RBNZ claims will continue throughout 2023, while attempting to not create an economic downturn.

Lamb and Mutton

Market fundamentals for New Zealand lamb and mutton exports are looking positive for the remainder of the 2022-23 season despite the weak start. Total lamb export receipts are forecast at $3.54 billion FOB, down 12 per cent on the record 2021-22.

Prices weakened from the highs achieved last season as demand softened and domestic supply strengthened. Demand in all key markets for New Zealand lamb is expected to recover to levels above historical averages despite the weak start. There is still a limited global supply of sheepmeat, and strong consumer demand that is supporting in-market prices to remain above historical averages.

The average FOB value per tonne for lamb exports is forecast to be $11,600,

dropping 11 per cent on 2021-22 but 6 per cent above the average of the previous five years.

A lower NZD/USD, in comparison to last season, is a supporting factor to the outlook for export performance in 2022-23.

Lamb exports are forecast to be down 2.5 per cent on 2021-22 at 284,000 tonnes shipped weight.

At an exchange rate of USD0.63, the average lamb price is forecast at 760 cents per kg for 2022-23, which is 12 per cent lower than last season but 2 per cent above the five-year average.

Mutton is in recovery mode in 2022-23, driven by weak demand from China in the first four months. In 2022-23, total mutton meat exports are expected to decline 3.9 per cent to 89,100 tonnes. The average value of mutton exports is estimated to decrease 15 per cent and total FOB receipts (including co-products) are expected to be down 16 per cent.

The expected lower value of NZD cushions the strong outlook for export performance in 2022-23.

The annual average mutton price for the 2022-23 season is forecast at 430 cents per kg, down 23 per cent on 2021-22, and 11 per cent below the five-year average.

Once China gets over its pandemic hurdles and despite positive demand signs, mutton still has a way to go before it achieves the levels it had in the previous two seasons.

Beef

The outlook for the global beef market is relatively positive, fuelled by strong demand, a lower exchange rate and a continuing favourable balance of demand over supply. However, an increase in Australian and Brazilian beef exports in 2023 does have the potential to apply competitive pressure to New Zealand beef exports in key markets. The positive BSE case in Brazil is expected to create greater opportunity for NZ beef exports into China for a portion of this season.

Export revenue from beef and veal in the 2022-23 season is forecast to be $5.04 billion FOB, down 8 per cent on the record 2021-22. The decrease results from a 0.5 per cent decline in the volume of beef exported and a 6.1 per cent decrease in the average export value.

At USD 0.63, the estimated 2022-23 average annual price is 611 cents per kg for P steer/heifer (270-295kg), 405 cents per kg for M cow (170-195kg), and 602 cents per kg for M bull (270-295kg).

Livestock Numbers

The total number of sheep at 30 June 2022 is estimated at 25.15 m, down 2.3 per cent on the previous June.

The number of beef cattle at 30 June 2022 is estimated at 3.84 m, down 3.1 per cent on the previous June. Beef cattle numbers have ranged between 3.72 and 3.97 m for the past five years.

The number of dairy cattle at 30 June 2022 is estimated to have decreased 4.3 per cent to 5.92 m.

B+LNZ uses official New Zealand agricultural data provided by Statistics New Zealand (SNZ) in modelling livestock production. The latest Census data[1] showed a greater decrease than expected across sheep and cattle livestock. It is unclear at this stage whether this is a result of the increased sale of sheep and beef farms into forestry as a result of the carbon price, but we could now be starting to see this impact come through. The B+LNZ Economic Service will update figures further when final data is released by SNZ in May 2023. It is also further noted that it is too early to quantify the impact of Cyclone Gabrielle on livestock numbers in affected regions at this date.

Wool

The outlook is for wool markets to remain uncertain, with industry participants reporting it is difficult to see demand from China differing from last year, so the forecast price movements are very close to the previous season. There is currently little evidence signalling improvement in demand for mid-micron and crossbred wool in the medium term.

Wool export revenue is expected to slightly decrease, despite a weaker NZD. Average export receipts at FOB are expected to decrease 0.8 per cent to $5,000 per tonne clean.

For the 2022-23 season, New Zealand wool exports are projected to increase 0.2 per cent to 87,000 tonnes clean.

Sheep and Beef Farms

Farm profitability is forecast to drop sharply this season, as lower farm-gate prices combine with significant cost increases thereby reducing profit margins. After adjusting for inflation, in 2022-23 Farm Profit before Tax is expected to decrease 35 per cent from 2021-22 to $96,900 and is lower than the period from 2018-19 to 2019-20 (Figure 13). It is noted however that farm profit in 2021-22 was exceptional, with record high farm-gate prices for sheepmeat and beef.

Farm profitability forecasts for 2022-23 were made prior to Cyclones Hale and Gabrielle and it will take time to quantify both livestock and financial impacts from the widespread devastation caused by the cyclones.

Farms impacted by floods face large costs to restore infrastructure, feed, stock, and other losses, some of which may be offset by insurance. Sheep and beef farmers already faced lower

[1] Provisional figures for 30 June 2022, released in December 2022.

revenue and increased costs prior to these climatic events.

Gross farm revenue for 2022-23 under an exchange rate scenario of USD0.63 is forecast to average $677,800 per farm, down 6.4 per cent on 2021-22. This is driven by a large decrease in sheep revenue and a moderate decrease in beef cattle revenue. This means those farms with a higher ratio of sheep to beef cattle will feel the drop in revenue more severely than those buffered by a relatively stronger outlook for beef cattle. For example, farms in Otago and Southland tend to have a higher ratio of sheep to cattle and have faced three consecutive La Niña summers with dry and extremely dry conditions impacting production.

Wool revenue is steady on last season and accounts for around 5 per cent of gross farm revenue on average.

Sheep revenue, which is forecast to contribute around 47 per cent of gross farm revenue on average, decreases 14.3 per cent to $319,700 per farm for 2022-23. Farm-gate prices for prime and store lamb decreased further than anticipated at the start of the 2022-23 season, and mutton prices also decreased significantly.

Cattle revenue decreases 3.1 per cent to $186,200 per farm for 2022-23 with farm-gate prices softening.

The weighted average total expenditure for all farms is estimated to increase 4.1 per cent to $531,500 per farm for 2022-23. Inflation continues to drive farm input prices prompting farmers to attempt to cut costs while balancing the production and physical elements of the farm.

Fertiliser, lime, and seeds expenditure is the largest area of expenditure and comprises around 19 per cent of total farm expenditure in 2022-23. Fertiliser, lime, and seeds expenditure increases 6.1 per cent to average $102,100 per farm. Farmers have reduced volumes of fertiliser applied however fertiliser prices remain high.

Interest expenditure increases 12.5 per cent to average $54,000 per farm, as interest rate increases require higher levels of debt-servicing and average overdrafts are expected to be higher this season than for 2021-22.

Farmer sentiment and overall confidence is low this season with uncertainty about environmental policy, expectations for increasing costs and additional regulatory costs to come in the not-too-distant future overriding historically high farm-gate prices.

Economic Conditions

The Global Economy

Inflation is continuing to be stubborn in 2023, but there are signs that worldwide central bank efforts are working as some indicators are showing that inflation is cooling. According to the IMF, about 84 per cent of countries are expecting to have lower CPI in 2023 compared to 2022. Also, food inflation in all forms (food at home, food at restaurants) is reducing from the price peaks achieved last year, which was contributing to inflation in most economies, however, it remains high compared to historical averages.

The coronavirus pandemic is still technically ongoing but due to vaccination rates in most countries, and overall COVID-19 fatigue in most populations, news outlets and people in general appear to care less about it.

Health and economic impacts from the pandemic have basically subsided and COVID-19-related restrictions have practically dissipated from most economies, and now including China, where they have ditched their Zero-COVID policies and let the virus spread throughout its population, causing economic strains on their health system.

Throughout 2022, high inflation stemmed from supply limitations due to labour shortages and supply chain congestion combined with a surge in aggregate demand due to unprecedented stimulus and quantitative easing. Now into early 2023, New Zealand and other economies are becoming hard to 'read' as there is still record high employment and solid retail spending, but high inflation and negative business sentiment. This opaque nature of the global economy at present has puzzled central banks and investors alike.

In January 2023, The International Monetary Fund (IMF) estimated world economic growth would decrease from 3.4 per cent for 2022 to 2.9 per cent in 2023. The rise in central bank rates to fight inflation and Russia's war in Ukraine continue to weigh on economic activity. The rapid spread of COVID-19 in China dampened growth in 2022, but the recent reopening has paved the way for a faster-than-expected recovery. Global inflation is expected to fall from 8.8 per cent p.a. in 2022 to 6.6 per cent in 2023 and 4.3 per cent in 2024, still above pre-pandemic (2017–19) levels of about 3.5 per cent.

Inflationary pressure in commodity markets, including agriculture, has levelled off the high peaks from 2022. However, in early 2023, iron and copper have found some strength again, indicating that China's industrial demand is picking up. Ironically, natural gas and heating oil prices have been decreasing during the northern hemisphere's winter primarily because temperatures were milder than expected.

The IMF estimates that growth in global trade is expected to decrease to 2.4 per cent in 2023, from 5.4 per cent in 2022, despite an alleviation of supply chain bottlenecks caused by COVID-19. Forecasts for 2024 signal a rebound in the growth in global trade to 3.4 per cent.

As mentioned, supply chain troubles seem to have alleviated as shipping costs are on par with pre-COVID levels. However, congestion and timing issues are still present due to labour shortages and absenteeism, still reducing the proportion of chilled exports being exported.

The increasing frequency of adverse climatic events around the world is a risk factor to the global economic outlook. In 2022, there was a wide range of extreme weather events and continuation of this trend will add further pressure to global supply chains and pose a threat to developing countries.

The Russian Invasion of Ukraine created a lot of economic uncertainty when it commenced, especially to food security globally with the rapid increase to fertiliser prices and energy costs. However, due to a milder than expected European winter and most European countries stockpiling resources before winter, natural gas was in abundance, causing prices to plummet. This has flowed onto fertiliser prices too as Urea prices are back to June 2021 levels and farmers globally are now restoring low fertiliser inventories.

There is evidence to suggest that there is significant upside support to demand due to record private savings in most economies, especially China. Pandemic-era fiscal support, still-tight labour markets and solid wage growth

Table 1 Global Growth Indicators

	Annual Average % Change, March Year					
	2019 %	2020 %	2021 %	2022 %	2023f %	2024f %
US	+2.7	+2.0	-2.7	+6.6	+1.7	+0.6
UK	+1.7	+0.6	-12.5	+12.7	+3.5	+0.2
Euro zone	+1.6	+0.4	-5.9	+6.9	+3.0	+0.6
Japan	+0.3	-0.9	-4.6	+2.4	+1.6	+1.4
China	+6.6	+2.5	+8.0	+5.4	+2.7	+4.3
South Korea	+2.6	+2.1	-0.5	+4.4	+2.7	+1.6
Australia	+2.5	+1.9	-2.2	+5.4	+3.6	+2.3
Trading Partners	+3.9	+1.8	+0.5	+5.6	+2.9	+2.7
New Zealand	**+3.4**	**+2.2**	**-1.4**	**+4.9**	**+2.8**	**+1.7**

Note: "Euro zone" are 15 Member States: Belgium, Germany, Ireland, Greece, Spain, Cyprus, Malta, France, Italy, Luxembourg, the Netherlands, Austria, Portugal, Finland and Slovenia.
"Trading Partners" account for about 85% of New Zealand's total merchandise trade.
e estimate, f forecast | Source: Statistics New Zealand, NZIER Quarterly Predictions

have created 'pent-up demand' that could be realised in 2023, and the effect would be felt on red meat exports.

Geopolitical relationships between China and other countries, in particular the US, will also continue to pose risk to the global economic outlook for 2023. New Zealand's primary sector exports will be sensitive to any deterioration of the relationship between China and New Zealand.

The FAO Food Price index fell for the tenth month in January 2023, to a new low since September 2021. Quiet import demand for dairy products and the subsequent future expectations of lower prices for said dairy prices have softened this index. Also, favourable weather conditions in Brazil and good harvesting progress in southeast Asia for sugar has driven the decrease. The FAO Meat Price index is down marginally in January compared to December but is still 1.3 per cent above the year earlier. The marginal decrease reflects increased supply of poultry and pork, despite HPAI outbreaks in poultry production and more availability of slaughter-ready pigs.

Highly-Pathogenic Avian Influenza (HPAI) is still having a significant impact throughout the world, and it is projected to be the worst outbreak on record in the US. USDA estimates HPAI has resulted in 58 million deaths, not just due to the virus, but in order to contain the virus within the laying hen and turkey population in the US. And lower supplies have led to egg prices increasing by 70% since January 2022. African Swine Fever (ASF) continues to be a problem not just in China, with global pork production still below 2018 levels.

China

Economic activity in China in late 2022 was very shaky. After an aggressive strategy to adhere to Zero-COVID policies, pressure from the population on the government forced its hand to relax COVID-related restrictions in December 2022. This was followed by a rapid rise in infections While the country's official current figure is nearly 90,000 deaths (as of mid-February 2023), many observers think this is a vast undercount. This theme continues into economic data too, as throughout 2022, economic data was published markedly less frequently than in previous years, which makes China very opaque to analyse.

IMF reported economic expansion of over 3 per cent for China in 2022 and forecasts this to increase to 5.2 per cent in 2023. Key drivers of the rebound in growth are general economy getting over the country's pandemic woes and the residential market returning to normalcy.

Despite the rapid spread of COVID and the residential industry downturn, new evidence suggests that the construction industry is rebounding because there is a resurgence in demand in export orders for NZ logs according to exporters. Whole milk powder prices strengthened again driven by Chinese demand, after declining prices for four months.

Total beef and sheepmeat imports for China were up 11 per cent in volume in 2022 compared to 2021. This reflects continued growth in their middle class as they have increasing disposable incomes. Pork imports during that same time reduced by over half, reflecting their domestic production rebounding and preferences changing to beef and sheepmeat.

As we have reported, China has been mired with a residential property market being close to collapse since early 2020. The authorities imposed new policies on property developers in early 2020 to rein in house price inflation in cities. Consumer sentiment plunged and that was made worse by the rapid spread of Omicron in late 2022. The IMF reports that real estate investment continues to contract. Developer restructuring is proceeding slowly and there is still a large backlog of houses to be built.

The lockdowns and residential slowdown also created record high savings and 'pent-up' demand that is yet to be properly released, which could be expressed in demand for eating away from home at restaurants and therefore demand for New Zealand's meat exports.

Government support is continuing with monetary and fiscal policies and vaccination targets for the elderly.

China seems to have returned to a state of equilibrium for pork demand as production and imports have almost returned to sustainable levels similar to pre-ASF levels. Canada is a large exporter of pork to China, but volume exported has decreased significantly since 2020 at the height of ASF. However, as mentioned, consumer preferences seem to have changed somewhat in favour of beef and sheepmeat products, so despite pork supplies returning to relative normalcy, there is still strong demand for other proteins.

With an ongoing commitment to long-term reductions in carbon emissions, energy will continue to be a key issue for China in 2023. However, there is a difference between committing to obligations versus still burning coal and approving new coal plants as the population has growing disposable incomes and with the rough final quarter of 2022 and energy transition being inherently inflationary, it would be difficult to see the state committing to anything concrete in the short term.

In the medium and long term, Asia, as a whole region, is projected to drive global consumption growth in meat protein. Growth in China, which is the key growth driver within Asia, will be driven by limited resource of land and water to support their own domestic production.

US

The US experienced high inflation like most other economies throughout 2022 but seems to be dealing with it better than most. The country's position worldwide as the de facto reserve currency and haven for investors has seen the value of the USD increase to multi-decade highs

against other currencies despite low consumer sentiment. This allows the US to effectively export its inflation to others and import cheap goods. Also, the prices of most fuel and non-fuel commodities have declined from their peaks, taking the heat out of US inflation.

The IMF (January 2023) reported that the US economy expanded 2 per cent in 2022, following an expansion of 5.9 per cent in 2021, due to inflation. The US economy is expected to grow 1.2 per cent in 2023 up from 1 per cent forecast in October's edition of IMF's World Economic Outlook.

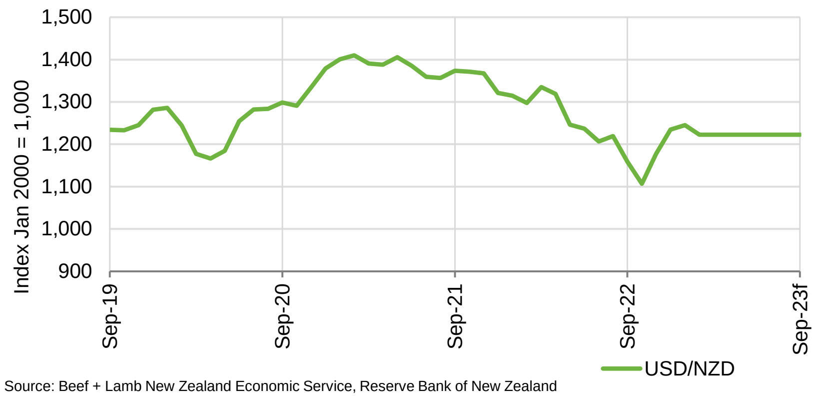
The pace of economic expansion in 2022 is hindered by significant monetary policy and inflation in response to hangover effects of COVID-19 and continued supply chain disruption. Rising inflation and buoyant nominal wage growth have been the drivers of sustained tightening monetary policy and will continue in the first quarter 2023. This will moderate the pace of economic growth but could see said tightening moderate in rest of 2023 as aggregate demand and inflation are showing signs to cool.

The US Federal Reserve has increased interest rates to cool inflation and, as mentioned, the US economy has been performing well with record low unemployment, despite high inflation. Both effects (and uncertainty in other economies) have resulted in the USD appreciating. A strong USD has had positive effects on the returns for New Zealand exports, and it is expected to continue in 2023. The NZD has appreciated from its lows back in October 2022 against the USD but is still in line with our forecasts.

Food prices have been a victim of inflationary pressure. In 2022, the index for food at home lifted 6.5 per cent over 2021, compared to an average of 1.5 per cent per annum over the prior ten years. The index for meat lifted 12.5 per cent over the year. The abundant money supply in 2021 meant that consumer demand was resilient against the higher prices. There is, however, some uncertainty regarding how inelastic demand (food prices rise high while quantity demanded did not change as much) will prove to be in 2022 as high prices persist.

The US is still feeling the effects of the harsh drought during summer 2022 that led corn prices to increase and the size of the cattle herd to decrease dramatically. According to the USDA, roughly 70 per cent of the US cattle herd is in drought-stricken areas and the US cattle inventory contracted by four per cent in 2022. The US cattle herd is 18 per cent less from 1970, though this overlooks productivity improvements in the industry over the past 53 years as US beef production has grown 26 per cent. These conditions – drought and feed costs – contributed to a larger than expected cattle slaughter (particularly breeding cows and heifers), which will lower supply in the long-term. NZ felt the impact of additional supplies of beef in both the US and in third-country export markets in the latter half of 2022. In 2023, those pressures are expected to ease as there will be less US supply.

Table 20 USD/NZD Index



Source: Beef + Lamb New Zealand Economic Service, Reserve Bank of New Zealand

The geopolitical relationship between the US and China continues to pose ongoing risks to the economic outlook. While the Biden administration eased some of the tension caused by the Trump administration's policies, the US continues to take an assertive position on China.

Trade negotiations between the US and China that will be favourable for agriculture have proved difficult to gain traction, with intellectual property protection and technology transfer, significant sticking points. The Biden administration is expected to pursue multi-lateral agreements in an attempt to engage China in trade reform.

New Zealand

Economic conditions in New Zealand are moderate and the country is looking to still deal with high inflation in 2023. Inflation is relatively lower compared to similar countries and unemployment is still at record low levels. NZIER reported in its Quarterly Survey of Business Opinion (December 2022 quarter) that a net 73 per cent of businesses surveyed thought there is going to be a deterioration in general economic conditions. However, January retail data from StatsNZ show that seasonally adjusted spending is still high and increasing. Overall, the economy is a mixed bag of businesses looking to batten down the hatches but consumers still spending and enjoying high wage growth.

The New Zealand labour market is exceptionally tight. The unemployment rate in the December quarter of 2022 was 3.4 per cent. This market is expected to potentially loosen in 2023 as tighter monetary policy generally flows into less business activity and therefore less hiring and more layoffs. The shortage of labour has been, and will continue to be, a constraint on economic growth for the agricultural sector in 2022-23 at all points of the supply chain.

The relaxation of border restrictions has slowly brought some much-needed expansion to the labour supply via immigration; however, emigration has resulted in potential employees leaving New Zealand as the borders re-opened. Migration statistics from StatsNZ for the December 2022 quarter showed net migration of 15,800, the highest since the COVID-19 pandemic commenced. Continuing labour shortages are expected to remain a constraint in many sectors in 2023.

Demand for new buildings softened in all construction types (except for government, which moderated) in the last quarter of 2022 and is expected to continue throughout 2023. NZIER reported that the building sector has become the most pessimistic sector surveyed. Cost pressures are moderate but still relatively high and the pipeline of new builds is running dry as architects have reported continued softening.

As mentioned, global dairy prices as measured by the GlobalDairyTrade index have been declining over the past few months but has remained at price levels above pre-COVID levels. Beef and sheepmeat prices decreased from their record highs achieved in 2021-22, especially for mutton and lamb, but as China gets over its pandemic hurdles, positive export performance will have a discernible impact on the New Zealand economy.

In calendar 2022, New Zealand farmers enjoyed a year with strong international demand that softened in the last quarter driven by slowing demand in China. But, as mentioned, the demand is expected to return in the short term in the outlook period. Offsetting this, farmers have also been hindered by relatively high inflation in input prices, labour shortages, and space at processing plants. The exchange rate is expected to support farm-gate returns but prices are not expected to return to record levels achieved in 2021-22. On-farm challenges include an increased frequency of adverse climatic events and the pace of ongoing environmental regulation.

There were two “unprecedented” major weather events in the North Island in the first two months of 2023:

1. Cyclone Hale; and
2. Cyclone Gabrielle.

Cyclone Gabrielle caused devastation to Northland and the East Coast with farmers being heavily impacted. Rerouted rivers, collapsed bridges, stock losses, and countless slips all affect on-farm infrastructure and livelihoods. At the time of writing, the effect on the agricultural economy is yet to be fully realised but what has been noted is that there has been a major impact on farm operations, stock and agricultural product movements, and overall wellbeing for farmers and associated industries, and their staff. Such effects will be felt for years.

Napier Port, one of the biggest ports in New Zealand and a part of the agricultural supply chain, reported that it was temporarily closed but was back to full operational capacity a week after the cyclone. The main problem facing the region now is the transport network connecting to the port, which could take months to fix.

Table 2 New Zealand Dollar Exchange Rates

	Annual Average		
Sep Year	USD	GBP	EUR
2020-21	0.71	0.52	0.59
2021-22	0.66	0.51	0.61
2022-23f	0.63	0.52	0.60
2022-23f % change	-4.7%	+1.7%	-1.8%

f forecast

Source: Beef + Lamb New Zealand Economic Service, Reserve Bank of New Zealand

Consumer Prices

The Consumer Price Index (CPI) in the December quarter lifted 1.4 per cent, which equates to 7.2 per cent on an annualised basis. Key drivers were housing and utilities and food prices, in which prices increased 14 per cent and 11 per cent respectively, for the year.

It is expected that inflation has hit its peak and will start to decrease. International commodity prices, including fuel and food prices have been decreasing and the tight monetary policy adopted by the Reserve Bank of New Zealand (RBNZ) is starting to affect business activity, as previously noted. NZIER forecasts that inflation will slowly decrease throughout 2023 and will moderate to 3.4 per cent in 2024.

Interest Rates

The RBNZ has increased New Zealand’s Official Cash Rate (OCR) from its low of 0.25 per cent in August 2021 to 4.75 per cent in January 2023. Analysts expect the RBNZ to continue to tighten monetary policy over the course of 2023 but to slow the rate of tightening due to the souring in business sentiment and the potential economic impacts of Cyclone Gabrielle. In January, the RBNZ said it is going to continue with tightening throughout 2023 since inflation is stubbornly high and employment is still at its effective maximum.

There are risks on either side of the OCR outlook. There is potential that higher interest rates will hit the housing market and business sentiment hard, and curb consumer spending, which would make a case for a slower pace to OCR hikes. There is also a risk to the RBNZ’s credibility because its own *Survey of Expectations* shows that two-year inflation expectations have picked up again. On the other hand, the RBNZ will be keeping a keen eye on inflation and how ingrained this has become, which makes a strong case for a steady pace of OCR hikes.

Despite the rapidly rising OCR, household net financial wealth and consumer spending are still looking

strong due to the border reopening. The RBNZ will be considering these factors when assessing how to cool demand.

Exchange Rates

Exchange rate forecasts are challenging even when global markets are stable. The uncertainty from the invasion by Russia of Ukraine and the economic impacts from worldwide inflation have created a volatile backdrop for foreign exchange projections and there is associated risk to the report's forecasts.

The NZD is forecast to depreciate against the USD, which is the major trading currency for New Zealand meat. The USD has also been revised down from the consensus we gathered compared to the New Season Outlook publication. This direction in the USD will have a measurable effect on export returns because 70 per cent of exports are denominated in the USD.

The value of the GBP and EUR have been revised up compared to the New Season Outlook, which was published in October. This reflects the European economies being generally better than indicated before winter commenced. There were fears that the ongoing war in Ukraine would exacerbate an energy crisis, but the winter was milder than normal, allowing investors and analysts to be slightly more bullish on the respective economies.

At the time of writing, there was no clear consensus on where the NZD would land in the outlook period. Several leading banks were still holding firm on the projections as presented in this report.

The outlook for the NZD is favourable for NZ exporters and the primary sector. That a significant proportion of exports is to countries against whose currencies the NZD is weaker is positive for farm-gate returns and cushion the reduction of demand reflected in schedule prices in the first quarter of the 2022-23 season.

Exchange Rate Sensitivity – 2022-23

In the 2022-23 season, the value of the NZD is expected to decline against the USD, the GBP, and the EUR (Table 2). The value of the NZD against the USD has the greatest effect. As noted, 70 per cent of New Zealand's red meat exports were traded in this currency in 2021-22. The Chinese yuan (CNY) accounted for seven per cent of red meat exports and the EUR and GBP accounted for eleven per cent and five per cent respectively.

Table 3 shows farm-gate prices under five different exchange rate scenarios. This approach provides an indication of the impact of exchange rate volatility on the prices paid to farmers The shaded column represents our forecasts of exchange rates for the major currencies and the related farm-gate prices used to derive the base estimates of export receipts and farm revenue in this report. The four other scenarios show the impact on farm-gate prices of variations of ±5 and ±10 per cent in the exchange rates for the USD, GBP, and EUR.

Meat and wool production are seasonal with most production sold from late November through to June, which means that the value of the NZD during this period is crucial to farmers and export companies.

Exchange rate movements have a significant leveraged effect on prices received by farmers. All other things being equal, a 10 per cent **depreciation** of the NZD against the USD (i.e., from 0.63 to 0.57) and the associated cross rates against the GBP and the EUR, **increases** the average lamb price received by farmers by 16.5 per cent. Alternatively, if the NZD **appreciates** by 10 per cent – from 0.63 to 0.69 against the USD – then the farm-gate lamb price **decreases** by 13.5 per cent.

Table 3 Exchange Rate Sensitivity

NZD Exchange Rates						Exchange Rate Change from USD 0.63 to USD 0.57	Exchange Rate Change from USD 0.63 to USD 0.69
USD	0.57	0.60	0.63	0.66	0.69	-10%	+10%
GBP	0.47	0.50	0.52	0.55	0.58	-10%	+10%
EUR	0.54	0.57	0.60	0.63	0.66	-10%	+10%
Farm-Gate Prices Received $ / head							
Lamb	169	156	145	135	125	+16.5%	-13.5%
Mutton	135	123	112	102	93	+20.8%	-17.0%
Steer/Heifer	1,985	1,837	1,703	1,582	1,472	+16.6%	-13.6%
Cow	969	897	831	772	718	+16.6%	-13.6%
Bull	2,112	1,954	1,812	1,683	1,566	+16.6%	-13.6%
All Beef	1,638	1,515	1,405	1,305	1,214	+16.6%	-13.6%
¢ / kg							
Lamb[1]	886	819	760	706	657	+16.5%	-13.5%
Mutton[1]	520	472	430	392	357	+20.8%	-17.0%
Steer/Heifer	705	652	605	562	523	+16.6%	-13.6%
Cow	482	446	414	384	358	+16.6%	-13.6%
Bull	704	651	604	561	522	+16.6%	-13.6%
All Beef	641	593	550	511	475	+16.6%	-13.6%
Fine[2]	2,614	2,407	2,220	2,051	1,898	+17.7%	-14.5%
Medium[2]	619	570	526	486	450	+17.7%	-14.5%
Crossbred[2]	340	313	289	267	247	+17.7%	-14.5%
All Wool[2]	550	506	467	431	399	+17.7%	-14.5%

1 includes wool and skin **2** wool ¢/kg greasy | Source: Beef + Lamb New Zealand Economic Service

Sheepmeat Outlook 2022-23 – Opportunities and Challenges

Opportunities

Growth occurring in high value markets, for example, Germany, Netherlands, France and the US. Added to this is record high savings levels in China due to recent COVID infection waves.

Consumption growth and demand for high quality protein is projected in Asian markets as the size of the middle class increase and a shift of more consumers into urban areas takes place.

There is increased consumer awareness regarding "claims-based" meats. This includes food safety, traceability, sustainability, animal welfare, grass-fed and antibiotic free. New Zealand's reputation as a producer of natural red meat positions our sheepmeat well to capitalise on this opportunity.

Global freight costs have eased throughout 2022 to pre-COVID levels.

A weaker NZD will increase the competitiveness of New Zealand exports

Challenges

In-market retail prices for lamb in the UK and Europe has surged causing some customers to substitute and reduce off their peaks achieved last season.

Opaqueness of China and hesitance to release economic data has made recent price movements and export performance hard to analyse.

Australia's competitive presence in global lamb market will increase in 2023 due to favourable weather and pasture conditions.

Global and domestic climate change policy driven by consumer behaviour could present challenges for agricultural production systems and potentially trade in the future.

Mutton exports being heavily reliant on China as they take 85 per cent of them, creating volatility.

High value chilled exports have decreased markedly, supply chain bottlenecks are still a major risk.

Lamb & Mutton Exports

Lamb

2022-23 Outlook

The 2022-23 lamb export season (October 2022 to September 2023) started poorly compared to last season. Global demand for lamb decreased off the record peaks due to cooling international demand. Such market forces caused us to revise down our forecast lamb prices from the New Season Outlook. The exchange rate is still working in the farmers' interest, cushioning the fall in prices.

The outlook for the remainder of the season is solid, despite the fall from price records. Prices are expected to rise off the lows of the first quarter but remain below record levels achieved last season. Global supply of lamb is expected to be higher, reflecting strong competitiveness in Australian production following a record 2022 due to optimal weather conditions and improved lambing percentages. However, global demand is expected to absorb the increased supply without significant price correction for the remainder of the season, mainly driven by China getting over their pandemic hurdles and the growing demand in the US market.

Lamb meat export receipts are forecast to decrease 13.1 per cent on 2021-22. This reflects a 10.9 per cent decrease in the average value of lamb. Lamb export volumes are forecast to be down 2.5 per cent on last season.

At $11,561 per tonne, the forecast for the average export value is still relatively high as it is six per cent above the five-year average.

A lower NZD/USD is a supporting factor to the outlook for export performance in 2022-23.

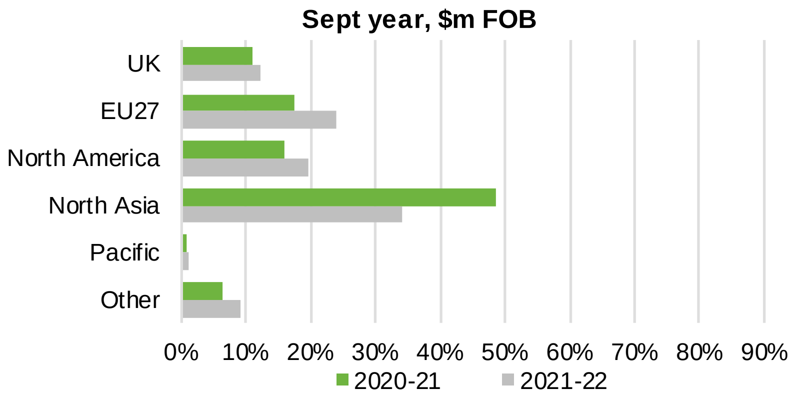
Chilled lamb exports decreased five per cent in the season to-date (January), compared to the same period in 2021-22. The previous season was low compared to historical averages too, and consensus from the industry suggests that chilled exports are too much a risk in the shipping environment, despite shipping costs being back to pre-pandemic levels.

Demand from the US and the UK for lamb in the first four months of the season was weakened by the continued high cost-of-living. Both countries are considered high-value and make up 15 per cent collectively of exports. Despite this softening demand, we expect consumer demand for sheepmeat will return to elevated levels as global supply remains tight.

Demand patterns from China will be a key driver of overall export performance for the season. In the first quarter of 2022-23, China accounted for 52 per cent of New Zealand's total lamb exports. As the average value of exports to China was $8,025 per tonne in the first four months of the season, i.e. October to January, reduced exports to other countries was felt in export returns and flow on to farm-gate prices.

The average value of lamb exports to China in the season to January was 20 per cent lower than in the same period in 2021-22 and three per cent lower than the five-year average. However, the volume supplied was up 20 per cent, translating into export receipts to this market being four per cent lower so far this season compared to the last.

Figure 1 New Zealand Lamb Export Value



Source: Beef + Lamb New Zealand Economic Service, New Zealand Customs, New Zealand Meat Board

Table 4 New Zealand Lamb Exports

	Lamb meat			Co-Products	Total Lamb	Lamb Meat
Sep Year	000 tonne	$ / tonne	$m FOB	$m FOB	$m FOB	%
2018-19	305	10,445	3,186	203	3,389	94%
2019-20	307	10,829	3,327	155	3,482	96%
2020-21	307	10,435	3,201	149	3,350	96%
2021-22	292	12,970	3,782	215	3,997	95%
2022-23e	284	11,561	3,286	254	3,539	93%
2022-23e % change	-2.5%	-10.9%	-13.1%	+18.0%	-11.4%	

* Lamb Meat value as a percentage of the value of Total Lamb exports, including Co- Products
e estimate, f forecast | Source: Beef + Lamb New Zealand Economic Service, Statistics New Zealand

About half the exports to China were breast and flap items, valued at $8,941 per tonne.

Growth in demand from the US for New Zealand lamb was a highlight for 2021-22, reaching a record high in product supplied at 31,000 tonnes. However, in the first four months of 2022-23 the volume was down 28 per cent compared to the same period in 2021-22 and 10 per cent below the five-year average. The US accounted for eight per cent of total New Zealand lamb exports by volume in the four months of 2022-23, down from 12 per cent the previous season.

However, the average export value of lamb exported to the US lifted 13 per cent compared to the same period last season. The average value of exports of higher-value products like racks increased. Although the volume of racks decreased by 21 per cent, the value per tonne lifted 22 per cent to NZD40,300 per tonne, which is a record high. Since racks make up almost a third of the volume of lamb exported to the US, they drive value in this market.

Export prices and volumes for lamb from the UK have been falling as cost-of-living has continued to bite in the UK. However, the EU-27 has been taking the product instead. This is evident through Netherlands, Germany, and France volumes increasing by 9, 17 and 2 per cent respectively. Despite average value per tonne being down across these countries, export receipts are the same or higher compared to the same period in 2021-22.

The EU-27 accounted for 15 per cent of the total volume of New Zealand lamb exports for the season to-date (October to January), up from 14 per cent for the same period in 2021-22. Export volumes were 20 per cent higher season-on-season and 12 per cent higher than the five-year average.

The average value of lamb exports to the EU-27 for the season to-date (January) decreased 3 per cent compared to the same period in 2021-22 and was 8 per cent lower than the five-year average. The EU-27 accounted for 46 per cent of total chilled New Zealand lamb exports for the season to date, up from 39 per cent for the same period in 2021-22.

The region is dominated by four markets: Netherlands, Germany, France, and Belgium.

The UK accounted for 7 per cent of total New Zealand lamb exports for the season to date, down from 12 per cent for the same period of 2021-22. Volumes fell 37 per cent on the same period last season and were down 46 per cent on the five-year average, reflecting the demand pull from China, the US, and other European countries.

The average value of lamb exports to the UK for the season to date fell 21 per cent on the same period in 2021-22 and was 5 per cent below the five-year average. The UK accounted for 10 per cent of total chilled New Zealand lamb exports, down from 21 per cent in 2021-22.

Demand and prices for sheepmeat co-products have experienced a strong recovery following the disruption of COVID-19. Demand for petfood, tallow and meat-and-bone meals are strong. Demand for skins and hides is recovering, reflecting improving demand from the automotive industry. The largest challenge to the offal market is that the shortage of labour is limiting their recovery in meat processing plants.

Mutton

2022-23 Outlook

At the start of the season, mutton exports fell from their multi-year highs, driven overwhelmingly by reduced demand from China, which accounted for approximately 80 per cent of total exports for the entire 2021-22 season and 86 per cent of total exports in the season to date.

The value of mutton exports has dropped significantly in the season to date, reflecting weakening Chinese demand. As China relaxed its COVID restrictions, more people got sick and opted not to go out to eat. Also, meat inventories seem to have reached their maximum, reducing demand from this market. Since an overwhelming majority of New Zealand's mutton exports are to China, the reduced demand has a significant effect on prices at the farm-gate, which farmers have seen as this season commenced.

As mentioned earlier in this report, there is a more positive outlook for mutton for the rest of the season, despite the decreased demand. China is expected to get over its pandemic hurdles and consumers are expected to go out to restaurants again. Also, the 'pent-up demand' as shown by elevated savings levels in China will be a motivating factor for consumers

Table 5 New Zealand Mutton Exports

	Mutton meat			Co-Products	Total Mutton	Mutton Meat
Sep Year	000 tonnes	$ / tonne	$m FOB	$m FOB	$m FOB	%*
2018-19	84	6,715	564	100	664	85%
2019-20	86	7,523	647	105	752	86%
2020-21	95	7,713	729	110	840	87%
2021-22	87	8,159	711	114	825	86%
2022-23e	84	6,942	581	113	695	84%
2022-23e % change	-3.9%	-14.9%	-18.3%	-0.3%	-15.8%	

* Mutton Meat value as a percentage of the value of Total Mutton exports, including Co-Products
e estimate | Source: Beef + Lamb New Zealand Economic Service, Statistics New Zealand

to demand mutton again and elevate prices to levels achieved in recent years.

Global mutton production was tight in 2022, as Australian producers continued to focus on flock rebuilding following several years of high drought-induced slaughter. Supply is expected to be more competitive in 2023. Australian mutton exports are expected to lift in 2023, as the national flock size has grown to levels not seen since 2007. New Zealand mutton production is expected to decline slightly on the previous season but make up for total tonnage exported in improved average carcass weights.

In 2022-23, total mutton meat exports are expected to decline to 84,000 tonnes. The average value of mutton exports is estimated to decrease 15 per cent and total FOB receipts (including co-products) are expected to decrease 16 per cent, returning to near historical averages after three years of high-than-usual value.

A lower NZD/USD supports the weaker demand outlook for export performance in 2022-23.

Lamb & Mutton - International Situation

Overview

The outlook for global sheepmeat trade for 2022-23 is uncertain, after a record 2021-22. Global prices plummeted off record peaks as the season commenced due to supply increasing and China's demand weakening. Export performance is expected to return to elevated levels as global supply remains tight.

A revival of the foodservice sector in key markets underpinned high consumer demand through 2022. Consumers wanted to go out to eat and demand more luxurious meats like lamb again after the pandemic years. Money supply has increased, and consumers have more to spend, which also created more demand but the unintended consequence of high inflation. The impact of continuing high prices on consumer demand will be a factor to watch in 2023.

Global supply is expected to increase on the back of stronger Australian exports in 2023, driven by more breeding ewes, optimal breeding conditions, and higher carcass weights for lambs nationwide. Meat & Livestock Australia (MLA) is forecasting lamb export production will lift based on these conditions and will cause competitive pressure for New Zealand lamb, however, there is sufficient product specification and market diversity between the two countries to limit the downside this may cause.

Chinese demand for sheepmeat is expected to continue to underpin export performance in the 2022-23 season. African Swine Fever (ASF) has played a pivotal role in shifting meat preferences for the Chinese consumer from pork to alternatives such as sheepmeat. However, sheepmeat consumption in China is still markedly smaller compared to pork. Even as Chinese pork supply increases, sheepmeat is expected to maintain market share gained during the period of pork deficit. However, as noted elsewhere in this report, the first four months proved that there can be volatility associated with the demand from China, as the mutton price plummeted.

Forecasts from the 2022 OECD-FAO Agricultural Outlook (June 2022) signal a slight increase (+1.6%) in global sheepmeat production in 2023 and further expansion in the longer term. Most of the expansion in production is forecast to be in low-income countries, led by China.

Global sheepmeat consumption is forecast to increase slightly (+1.5%) into 2023. Developing countries account for over three-quarters of global consumption and will underpin future consumption growth.

Disruption to shipping and global supply chain logistics experienced throughout 2021 and 2022 have basically subsided in the form of lower costs. The situation is expected a non-problem in 2023, except for timing and congestion problems, which have shown to provide some elevated risk for chilled lamb exports. Exporters have signalled that there is insufficient price premium to support some sea freighted chilled exports compared to previous seasons. On the other hand, air freight generally provides greater certainty but at a cost premium that eats into margins There are still some distributors who opt into it for very high-quality cuts.

China

China continues to dominate the outlook for the 2022-23 season. This market is expected to remain the leading destination for NZ sheepmeat and Chinese sheepmeat import demand is forecast to remain strong off the slow start to the season.

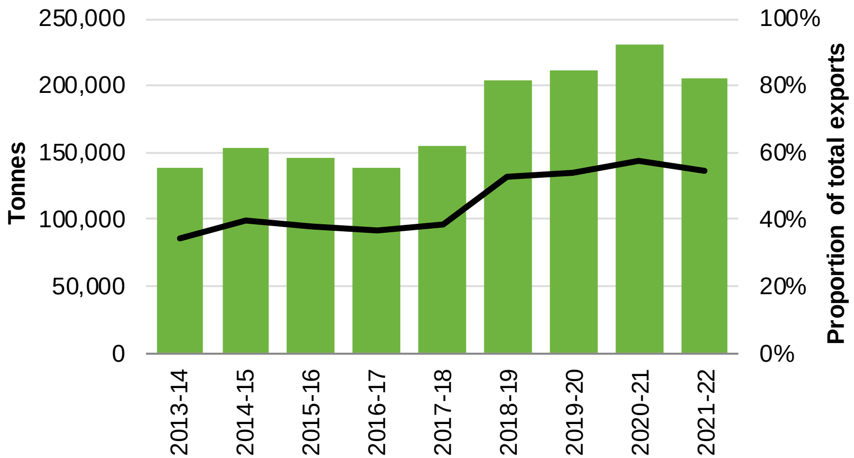
China experienced solid economic growth during 2022, which supported consumer spending on goods, including meat protein. The growing level of urbanisation, the growing affluence of Chinese consumers, combined with the decline in domestic pork because of ASF, has resulted in the Chinese consumer shifting preference to higher quality meat proteins such as sheepmeat and beef. This was until, as mentioned earlier in this report, the last quarter of 2022 where COVID-19 related restrictions were dropped and infections exploded, slowing demand for sheepmeat, and straining the health system.

Total sheepmeat consumption has lifted around 2.3 per cent in the past decade because of these factors. Despite this growth, sheepmeat remains a small, niche market, making up only four per cent of total consumption.

Even as the Chinese pig herd returns to relative normality in 2023, sheepmeat is expected to remain part of the Chinese consumer diet.

China is expected to experience a rebound of economic conditions in 2023, but another wave of COVID-19 could create volatility. New Zealand's

Figure 2 New Zealand Sheepmeat Exports to China (Sep Yr)



Source: Beef + Lamb New Zealand Economic Service, New Zealand Customs

reliance on China for sheepmeat exports increases its exposure to shifts in economic conditions, as we have seen on mutton prices in the first quarter of the 2022-23 season.

In 2022, China was the world's largest sheepmeat producer at 5.5m tonnes, according to OECD-FAO estimates. Domestic production accounts for most of the consumption. In 2022, 93 per cent of all consumption was produced domestically.

The dynamics of meat production, consumption and trade in China will continue to be a leading driver of New Zealand sheepmeat export performance in 2023 and beyond. For the outlook period, key factors will be signs of a weakening economy, geopolitical tension, and potential pandemic-related logistics disruption.

EU-27

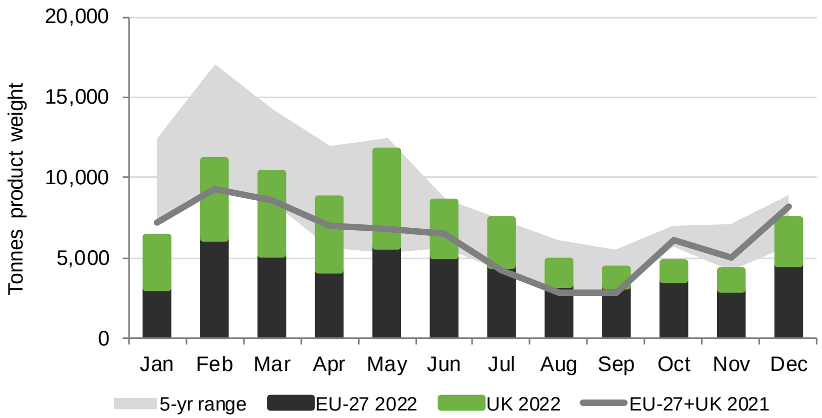
Combined, the EU-27 markets are the second largest destination for New Zealand lamb exports. The region is dominated by four countries: Netherlands, Germany, France, and Belgium.

In 2022, sheepmeat import demand from the EU-27 markets was disrupted by the uncertainty created by the Russian invasion of Ukraine, record high natural gas prices, and high inflation, but prices for NZ sheepmeat reached record highs.

Economic and import demand recovery was evident in the start of the 2022-23 as they experienced a milder winter. Import prices have eased from the record highs achieved in 2021-22, but demand has still been strong. Despite the continued threat of war, the EU-27 economy is expected to grow steadily in 2023 and be totally rid of COVID-era hurdles. This will support sheepmeat import demand.

Sheepmeat production in the EU-27 is expected to be limited in the long term largely due to tighter regulations related to environmental sustainability and animal welfare.

Figure 3 Monthly New Zealand Lamb Exports to UK+EU-27



Source: Beef + Lamb New Zealand Economic Service | New Zealand Customs

The post-Brexit tension in the trading relationship between the UK and EU-27 may provide more opportunity for New Zealand sheepmeat exporters to grow market share in the EU-27.

The EU Commission (2021) forecasts that per-capita sheepmeat consumption will lift marginally in the medium term. This reflects a diversification of meat consumption, away from pork and beef, and demographic changes in the EU population.

Sustainability, with its environmental, economic, and societal objectives, will play an increasingly prominent role in EU meat markets, for both producers and consumers. The EU's Farm to Fork policy is the basis of the European Green Deal, which aims to make agricultural systems healthy, environmentally friendly, and responsive to climate change. The implications of the developing policy are not yet clear. New Zealand exporters will be closely monitoring discussions on labelling requirements for imported product. While still expected to be a long way off, they have the potential to impose increased cost and time for New Zealand exporters should they be implemented.

Free Trade Agreement (FTA) ratification between New Zealand and the EU-27 remain ongoing. It is unlikely this agreement will deliver any notable impact for sheepmeat trade between the two regions in the 2022-23 season.

UK

By individual countries, the UK is New Zealand's second-largest export destination for lamb, but with demand-pull and Brexit, the US is very close to taking the second spot.

In 2022, the UK has experienced significant economic and political upheaval because of the lingering effects of Brexit and decades-high inflation. This uncertainty is expected to continue in 2023.

Domestic production is expected to lift in 2023, reflecting a carry-over from last year and a broadly stable lamb crop. Much of this production will be market-ready in the second half of the year providing a less competitive market during the period of peak supply for New Zealand production.

Domestic sheepmeat production accounts for around 80 per cent of consumption in the UK, with imports making up the remainder. New Zealand sheepmeat accounts for 60 per cent of total sheepmeat imports, and Ireland and Australia are second and third.

Sheepmeat consumption in the UK lifted during the pandemic years of 2020 and 2021. This reflects the dominance of the retail sector in this market, which remained unaffected by COVID-19 related restrictions. However, throughout 2022, and the outlook for 2023, indicates that consumption has and will decline. The volume of lamb sold via retail decreased 16 per cent in 2022 and is projected to decrease a further eight per cent in 2023. Inflation and overall sluggishness of UK economic growth correlates into how much lamb is demanded by consumers.

Lamb, and red meat consumption in general, is expected to gradually decline in the UK. Red meat production has increasingly been in the spotlight in the UK in relation to the industry impact on animal welfare, greenhouse gas emissions and food safety.

UK sheepmeat imports from New Zealand and Australia have declined for over five years reflecting significantly higher demand from China. Higher freight costs and shipping disruptions were also a factor in 2022. Imports are forecast to decline a further five per cent in 2023, with the above factors all remaining relevant.

The New Zealand-UK FTA is expected to be ratified in 2023. While the deal with New Zealand won't change trade significantly for sheepmeat from the current status, the UK/Australia FTA provided greater access for Australian sheepmeat and will result in an increase in Australian lamb in the UK market. The impact in 2023 is expected to be minimal, with volumes to be phased in over 15 years and with demand-pull elsewhere.

United States

Demand for imported lamb, and all meat protein, was exceptional in 2021-22 and in the first four months of 2022-23. US consumer demand for meat was fuelled by extensive fiscal support from the pandemic years but now tastes have shifted somewhat and consumers seem to be demanding more.

Lamb consumption in the US has also benefited from the shift in supply channels that has been an outcome post COVID-19. Prior to COVID-19 the foodservice sector was the dominant channel for lamb sales. During the pandemic distribution shifted into the retail channel. Lamb consumption has increased as the availability of lamb cuts in retail has lifted. As a result, New Zealand lamb exports to the US are expected to hold onto the retail space gained post-COVID-19 as well as recovering foodsector sales.

The growth of lamb sales in the retail sector has led to an increase in demand for chilled lamb products, as this is the dominant channel for chilled product. For the 2021-22 season, the US was 21 per cent of chilled lamb exports, the largest proportion of chilled exports, despite chilled exports plummeting. The US then continues to be a high-value market for lamb exports from NZ.

Tight supply supported the strong demand, creating an ideal market for import demand. US lamb production declined in 2022. Drought conditions in the western US significantly impacted sheep farmers resulting in flock liquidation and lighter average carcase weights of both lambs and sheep. Production is expected to slightly decline further into 2023 as drought conditions linger.

Lower domestic production, strong demand, and high prices for competing meat proteins have underpinned record domestic US lamb prices.

After a sharp rebound in exports occurred in 2021-22, the growth continued in the first four months of 2022-23. Despite the volume being 28 per cent lower in the first four months of 2022-23, average value increased 13 per cent to $22,000 per tonne, which is a record high and signals the premium position of sheepmeat in the US. This trend is expected to flow into 2023, although there is some wariness about whether the high retail prices may start to impact consumer demand. It is important to remember the relative strength of the USD against the NZD.

Frenched lamb racks account for approximately 30 per cent of New Zealand lamb exports to the US, followed by shoulders and legs.

There is potential that Australian lamb will be a more competitive presence in the US in 2023 because export volumes are forecast to lift significantly.

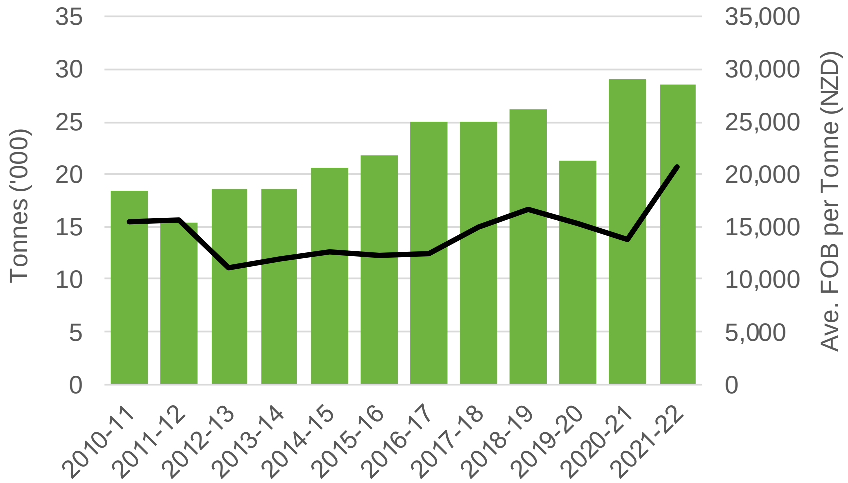
However, much like the UK and European markets, consumers and retailers are facing much higher inflation than in recent years and reducing their expenditure on higher-value meats, which leads to uncertainty for the outlook period.

Australia

Australia is New Zealand's primary competitor in global sheepmeat trade. The two countries dominate global sheepmeat exports, accounting for over 86 per cent of sheepmeat trade in 2022. Australia accounted for 47 per cent of global exports and New Zealand accounted for 38 per cent.

The outlook for the Australian sheepmeat sector is strong, underpinned by a continuing forecast of favourable climatic conditions, expanding production, and increasing

Figure 4 NZ Lamb Exports to the US (Sep year)



global demand for Australian sheepmeat.

The Australian sheep flock is estimated to expand to 78.75m head, its highest level since 2007. Driving this increase are optimal breeding conditions nationwide, improved lambing percentages and medium-term industry confidence at the farm gate level. Flock expansion is expected to continue past 2022, if climatic conditions allow.

In line with an expanding breeding flock, production and exports are forecast to lift rapidly in 2023. Lamb slaughter is forecast to reach 22.6m in 2023, a 2.7 per cent rise on the previous year. The average carcass weight is also forecast to increase in 2023, reflecting optimal weather conditions and structural genetic investment.

Mutton exports will increase in 2023 on 2022. Australian mutton exports are concentrated much like New Zealand mutton exports, as the top five destinations make up 75 per cent of exports.

As a result, New Zealand can expect to experience an increased competitive presence from Australian lamb in export markets during 2023 and beyond.

The US was the leading destination for Australian lamb in 2022, accounting for 26 per cent of total exports. Exceptionally strong demand from US resulted in a six per cent lift in export volumes on 2021. However, mutton exports to the US experienced a decline (-23%) compared to 2021. It is worth noting that 2021 was a bumper year for mutton exports to the US. The US market is expected to continue to be the focus for Australian lamb exports in 2023.

China accounted for 18 per cent of 2022 lamb export volumes. At 52 thousand tonnes, this was down four per cent on 2021. China was the leading destination for mutton exports, accounting for 40 per cent of the total volume.

Lamb consumption is declining in Australia, causing a higher proportion of production destined for international trade. Traditionally more than a third of lamb production is consumed domestically. In response to inflationary pressures, consumers are choosing cheaper cuts like chops, the demand for which increased in 2022.

The UK will become a market of increasing significance for Australian sheepmeat following the signing of the Australia-UK Free Trade Agreement (FTA) in December 2021. The FTA is expected to be in effect in early 2023 like New Zealand’s. While there is potential for this FTA to decrease the demand for New Zealand lamb imports in the UK, much will depend on the demand pull from other markets and the specification and cuts of lamb Australia may choose to export to the UK.

A challenge facing the Australian processing sector in 2023 will be a continued shortage of labour, which could affect the capacity of Australian abattoirs. But processors are expecting this to not be as much of an issue compared to early 2022 and 2021.

Lamb & Sheep Prices – Farm-gate

Lamb

Farm-gate returns for lamb in the remainder of the 2022-23 season are forecast to recover after falling sharply from record highs, reflecting strong market fundamentals and a favourable exchange rate.

The revised weighted average farm-gate price for lamb is forecast at $145 per head, or 760 cents per kg, which is 12 per cent lower than last season but 2 per cent above the five-year average. There is still however, quite a bit of uncertainty in the market due to the opaque nature of New Zealand's biggest customer, China.

Farm-gate prices for the first four months of the 2022-23 season (October 2022 to January 2023) dropped as supply increased strongly. The two key drivers of farm-gate prices for the beginning of the season were decreasing export prices off their record highs, reduced demand from China, US and the UK, and a strong start to the lamb processing season due to carry-over lambs from a slow processing winter.

Table 6 Lamb Price Sensitivity

		All Class Lamb Price		
Exchange Rate		$ per head	c per kg	
Low NZD				
USD	0.57			
GBP	0.47	169	886	**High**
EUR	0.54			
Mid NZD				
USD	0.63			
GBP	0.52	145	760	**Mid**
EUR	0.60			
High NZD				
USD	0.69			
GBP	0.58	125	657	**Low**
EUR	0.66			

Source: Beef + Lamb New Zealand Economic Service

A lower NZD/USD is also a key cushioning factor to higher farm-gate prices this season.

The strong start to the processing season as farmers were uncertain about weather conditions, a falling schedule, and some carry-over lambs means more lambs came forward in October and November. The flow of these lambs into processors were a driver of farm-gate price direction; supply increases, so processors were able to decrease the price.

The processing sector was thought to be over its pandemic hurdles at the start of the season with the strong start of lambs processed, despite the ongoing labour shortage. The border reopening has increased the labour supply somewhat, which alleviated some pressure. However, as mentioned earlier, Cyclone Gabrielle impacted the processing capabilities on the East Coast. what long term impact this has is unknown at present.

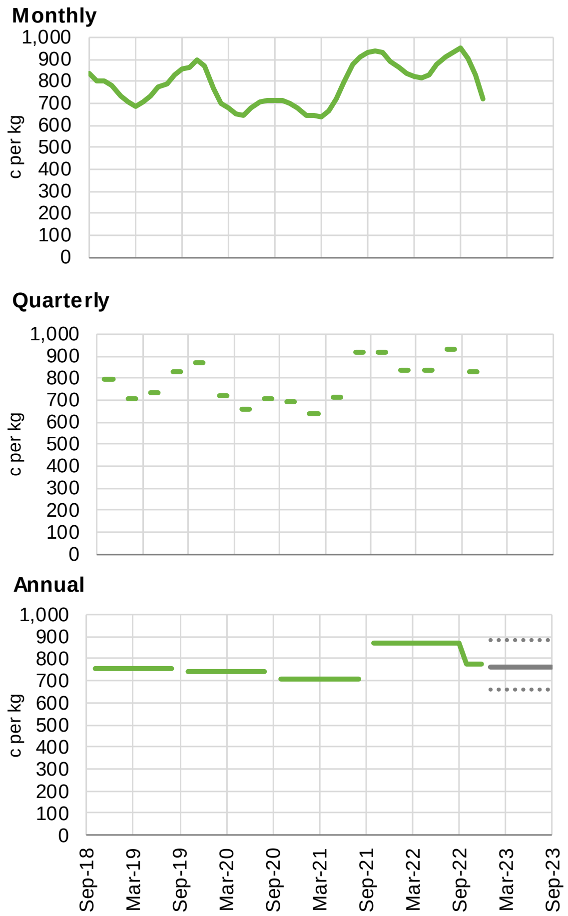
As noted earlier, international freight costs are now back to pre-pandemic levels. However, chilled lamb exports are still noticeably below historical averages because there is still too much risk associated with supply chain issues beyond production plants.

Mutton

The annual average mutton price for the 2022-23 season is forecast to drop by 23 per cent on 2021-22 to $112 per head or 430 cents per kg, which is 11 per cent below the five-year average.

The weak forecast for mutton is driven by the weak market demand from China. Mutton exports have a strong reliance on China, which does create higher risk to the downside in Chinese import demand and prices.

Figure 5 Weighted Average Lamb Farmgate Price



Source: Beef + Lamb New Zealand Economic Service

Lamb & Mutton Production

Table 7 Export Lamb Production

Sep Year	Lamb Crop million head	Slaughter million head	Carcase Weight kg	Production 000 tonne bone-in
2018-19	23.8	18.8	19.1	359.0
2019-20	23.2	19.1	19.0	363.5
2020-21	22.9	18.3	19.1	349.9
2021-22	22.0	17.8	19.0	338.3
2022-23e	20.2	17.3	19.1	329.8
2022-23e % change	-8.5%	-2.7%	+0.2%	-2.5%

e estimate, f forecast

Source: Beef + Lamb New Zealand Economic Service, Statistics New Zealand, New Zealand Meat Board

Lamb

The total number of lambs tailed in the spring of 2022 is estimated at 20.2 million head, down 8.5 per cent or 0.5 million head on the previous spring (Table 7).

The decline reflects a large drop in breeding ewe numbers, down 6.0 per cent and dry conditions in some regions in early 2022 affecting mating, which was particularly the case for Northland-Waikato-Bay of Plenty, Southland, and parts of Otago.

The number of lambs tailed in the North Island is estimated to decrease 9.5 per cent compared to 2021, while for South Island the decrease is also large at 7.5 per cent from 2021.

The national lambing percentage for 2022 is estimated at 125.4 per cent. Due to drought conditions for some regions, ewe performance at mating was sub-par and facial eczema (FE) also played a part in lower lambing percentages.

For the year ending September 2023, the number of lambs processed in export-approved premises is estimated to decline moderately (2.7%) to 17.3 million (Table 7).

The number of lambs processed in the first four months of 2022-23 was similar to that in the previous season. In the North Island, lamb processing started strongly as there were carry-over lambs from the winter but tapered off to be behind as more grass was available, which allowed farmers to hold onto lambs for longer.

However, the tale is different in the South Island. Processing was ahead of the previous year and the five-year average in the first four months. Dry conditions throughout most of the island forced many farmers to sell trading stock, and farm-gate prices were lower.

Export lamb production for 2022-23 is forecast to decline 2.5 per cent from 2021-22 to 329,800 tonnes bone-in (Table 7).

Farmer confidence varies. While farm-gate prices have decreased from record highs and farm input costs have surged, world supply of meat is still tight so there is room for upside. Farmers are wary of the volatility of weather events and uncertain about changing environmental regulation. Forestry is spreading into sheep farming land. All these factors will weigh on future expansion of the flock.

Mutton

The number of adult sheep processed in 2022-23 is expected to be down 5.6 per cent on 2021-22 (Table 8).

The decline reflects high numbers in the previous seasons, when farmers responded to the price signals provided by higher schedule prices.

The number of ewes processed in the first four months of the season was significantly down on the same period in 2021-22. The South Island drove the variance. The South was dry and there were reports that lambs took priority over mutton on ovine chains in processing plants as farmers have been exiting stock.

Export mutton production in 2022-23 is estimated to decline 3.9 per cent on 2021-22 (Table 8).

Table 8 Export Mutton Production

Sep Year	Breeding Ewes million head	Slaughter million head	Carcase Weight kg	Production 000 tonne bone-in
2018-19	17.2	3.4	26.8	90.5
2019-20	16.8	3.5	25.9	91.4
2020-21	16.6	3.8	26.2	100.2
2021-22	16.3	3.6	25.6	92.8
2022-23e	15.4	3.4	26.0	89.1
2022-23e % change	-6.0%	-5.6%	+1.7%	-3.9%

e estimate, f forecast

Source: Beef + Lamb New Zealand Economic Service, Statistics New Zealand, New Zealand Meat Board

Beef Outlook 2022-23 – Opportunities and Challenges

Opportunities

ASF continues to drive import growth for different meat proteins. Despite the reported recovery of China's pig herd, China's protein supply will remain in deficit during 2023.

A confirmed BSE (Mad Cow Disease) in Brazil will create demand for NZ's beef exports into China.

Consumption growth and demand for high quality protein is projected in Asian markets as the size of the middle class increase and a shift of more consumers into urban areas takes place.

There is increased consumer awareness regarding "claims-based" meats. This includes food safety, traceability, sustainability, animal welfare, grass-fed and antibiotic free. New Zealand's reputation as a producer of natural red meat positions our beef well to capitalise on this opportunity.

A weaker NZD will increase the competitiveness of New Zealand exports.

Challenges

Ongoing global labour shortages may limit meat processing capacity.

Opaqueness of China and hesitance to release economic data has made recent price movements and export performance hard to analyse.

Competitive presence of Australia and Brazil will increase in 2023.

Global and domestic climate change policy driven by consumer behaviour could present challenges for agricultural production systems and potentially trade in the future.

Foot-and-Mouth Disease (FMD) was discovered in Indonesia in 2022, heightening the risk of it arriving in New Zealand.

Economic uncertainty in most economies due to inflationary pressures is expected to continue throughout the 2022-23 season.

Beef & Veal Exports

2022-23 Outlook

It has been a relatively strong start to the 2022-23 season for beef export returns. Global demand for beef is still at high levels, fuelled by strong consumer demand and despite herd liquidation in the US because of drought. Solid market fundamentals have been supported by a favourable exchange rate. Average export returns for the first four months of the season (October 2022 to January 2023) were just below record highs.

The outlook for the remainder of the season is positive. Demand for beef in key markets – China and the US – is forecast to remain strong. Global beef supplies are forecast to remain tight in 2023, despite the US drought. Australian beef exports are expected to lift following extensive herd rebuilding, but on a global scale these are expected to be slightly offset by lower production from the US in the first half of the season.

For the 2022-23 season, total beef and veal export receipts are forecast to decrease 7.7 per cent compared to the record 2021-22. This is driven by a 6.1 per cent decrease in average export value. (Table 9)

The average export value is forecast to reach a near record high at $9,381 per tonne and is 17 per cent up on the five-year average. (Table 9)

A lower NZD/USD supports the strong outlook for export performance in 2022-23.

Beef export production is expected to decrease marginally for 2022-23, but still be four per cent up on the five-year average.

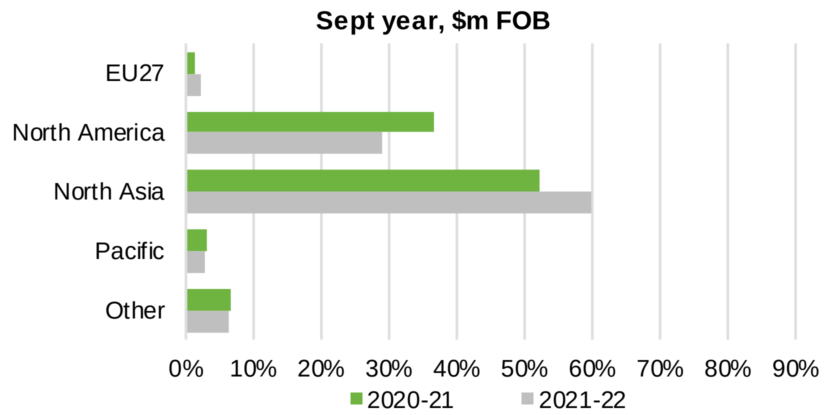
Demand from China will be a key driver of export performance for the season. In the first four months of the season, China was the leading destination for New Zealand beef exports, accounting for 43 per cent of total export volumes, down from 45 per cent in 2021-22.

The decrease is because demand has decreased slightly – from record levels achieved last season – and COVID infections have hindered consumer activity. Chinese import demand for beef is expected to remain solid through 2023, supported by both increasing beef consumption, delayed demand from a COVID impacted Chinese New Year and tighter supply of beef imports from Brazil, which voluntarily suspended exports because of a suspected new case of BSE.

The average export value of beef and veal exports to China remained high in the first four months of the 2022-23 season, decreasing one per cent on the same period in 2021-22 but being 15 per cent above the five-year average.

Secondary cuts make up the largest proportion of exports to China, and accounting for half the exports in the first four months of 2022-23. The

Figure 6 New Zealand Beef & Veal Export Value



Source: Beef + Lamb New Zealand Economic Service, New Zealand Customs, New Zealand Meat Board

Table 9 New Zealand Beef Exports

	Beef and Veal Meat			Co-Products	Total Beef	Beef Meat
Sep Year	000 tonne	$ / tonne	$m FOB	$m FOB	$m FOB	%
2018-19	453	7,451	3,377	531	3,908	86%
2019-20	464	8,189	3,797	511	4,309	88%
2020-21	504	7,672	3,867	547	4,414	88%
2021-22	480	9,987	4,794	663	5,457	88%
2022-23e	478	9,381	4,481	558	5,039	89%
2022-23e % change	-0.5%	-6.1%	-6.5%	-15.8%	-7.7%	

* Beef and Veal Meat value as a percentage of the value of Total Beef exports, including Co-Products
e estimate, f forecast | Source: Beef + Lamb New Zealand Economic Service, Statistics New Zealand

average export value of secondary cuts was $9,400 per tonne, down 3 per cent on the same period in 2021-22. Processing beef accounted for one-third of the volume for the first four months and the average export value was unchanged from 2021-22 at $9,100 per tonne. Loins accounted for four per cent of exports. The average value in the first four months was a record $13,400 per tonne, up 14 per cent on 2021-22. Bobby veal accounted for around seven per cent of exports with an average value of $5,900 per tonne, up 20 per cent on the same period in 2021-22.

The US continued to be a solid market for beef exports in the first four months of the season. Twenty-nine per cent of beef exports were to the US, now taking a definite second place to China. However, the average value of New Zealand beef exports to the US was 13 per cent lower than in the same period of 2021-22 at $8,600 per tonne.

The outlook for imported beef demand in the US remains positive for 2023, despite the increased domestic production. New Zealand beef exporters are expected to face increased competitive pressure from Australia in the second half of the year. While imported beef prices have eased, they are expected to remain above historical levels.

Processing beef made up approximately 85 per cent of New Zealand beef and veal exports to the US in the first four months of 2022-23, back to the historical levels. This reflects a decreasing volume of chilled beef exports (loins and secondary cuts), which halved in volume compared to the same period last season, reflecting the added risk with chilled exports this season.

The average export value per tonne for processing beef in the first four months of 2022-23 was $8,100 per tonne; 11 per cent down on 2021-22 and much lower than the average export value of processing beef exports to China at $9,100.

After China and the US, the next most significant markets are Japan (7%), Korea (6%) and Taiwan (3%). Export volumes to these three markets have been growing slowly over recent seasons and were steady in the first four months of 2022-23.

Demand and prices for beef co-products experienced a strong recovery following the disruption of COVID-19, last season, but are forecast to decrease in the outlook period to around historical averages. The largest challenge to the offal market is the continued shortage of labour.

Beef – International Situation

Overview

Towards the end of 2022, market fundamentals were relatively favourable for New Zealand beef exporters. Like sheepmeat, consumer demand and prices for beef in New Zealand's key markets levelled off from record highs achieved last season, but the decrease is markedly less compared to sheepmeat, meaning prices were above historical averages.

Global beef supply was tight through 2022, adding to import demand. While US beef production reached a record high because of a brutal drought in key beef producing states, factors such as weather, politics, policy, demand, and cattle diseases all placed enough downwards pressure on beef supply to offset US production. The continued contraction in Australian beef exports as the country's herd rebuilding continued were leading drivers to supply fundamentals in 2022.

China and the US are expected to continue to dominate global beef trade in 2023. In China, demand for beef has continued to grow and maintain market share despite increasing pork supply. ASF has played a critical role in shifting meat preferences for the Chinese consumer towards alternatives such as beef from pork, albeit that pork remains the dominant meat protein in China. There is now an emerging market for beef and consumption is expected to continue to lift independent of pork expecting to be back at normality, if not already.

Global beef production for 2023, as estimated by the USDA in February 2023, is expected to decrease one per cent on 2022. Despite Brazil, and Australia gaining global market share, the reduction in US, Uruguay, and Argentina exports offset this. Australia is expected to have completed its herd rebuilding and have high export production in 2023.

Despite losing steam over the Northern Hemisphere winter, cattle prices and feed costs are still elevated around the globe and will be a serious challenge for meat production margins in key beef-producing regions.

Higher feed and input costs combined with a tightening of global cattle supply led to record cattle prices in leading beef-exporting countries in 2022 and prices will likely remain elevated into 2023.

Key challenges that the global beef trade will face in 2022-23 include potential constraints on production capacity because of labour shortages, geopolitical relations between governments and the risk of a decline in health and economic outcomes if a new variant of COVID-19 were to spread.

China

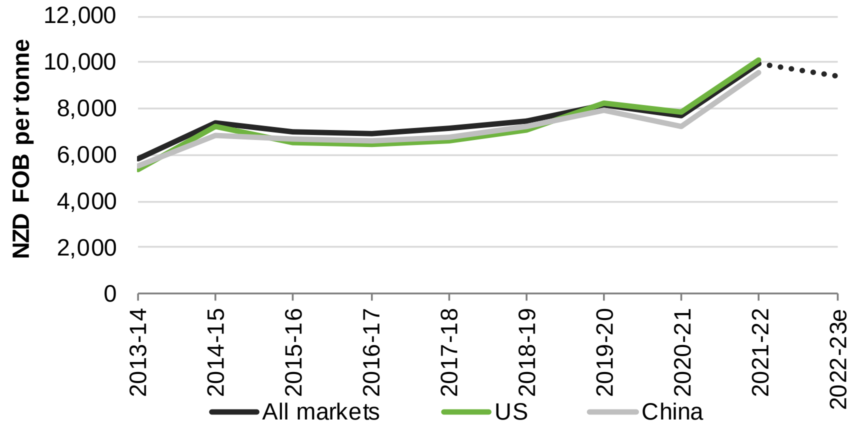
China consolidated its position as the world's largest beef importer in 2022. Its demand for imported beef has exceeded expectations, underpinned by strong economic recovery and a growing middle class following the disruption of COVID-19 in 2020 and continued pork shortages because of ASF. Tightening global beef supply has resulted in an acute imbalance of demand and supply, which suits beef exporters.

Despite the recent challenges of the waves of COVID-19 infections in China, USDA recently revised up Chinese import beef demand for 2023 to increase compared to 2022. The upwards revision was driven by beef imports being slightly higher than expected. Once China gets over its pandemic hurdle, the recovery for the restaurant sector and the 'pent-up' demand will drive increased demand. USDA notes that there have been upwards revisions for China pork production in 2023, but there are signs that it will still not meet fully rebounding consumption.

Chinese beef consumption in 2023 is forecast to be flat on 2022.

Against a backdrop of rising consumption, reliance on imports is considered a long-term trend. China lacks the ability to expand its productive capacity by the magnitude required to become self-sufficient. Resource constraints for land and water are the key limiting factors to production expansion. Production is still forecast to be flat on 2022.

Figure 7 New Zealand Beef Exports FOB Value - Sept Year



Source: Beef + Lamb New Zealand Economic Service, New Zealand Customs

South American beef accounted for just under three-quarters of the Chinese imported beef market in 2022. Brazil is the largest supplier, accounting for 41 per cent of total imports, while Argentina and Uruguay make up 18 per cent and 13 per cent respectively. New Zealand was the fourth-largest supplier in 2022 at eight per cent. Chinese imports of Australian beef have still not recovered to levels achieved in 2020, down 28 per cent since then to account for seven per cent of total imports in 2022. In contrast, Chinese imports of US beef continued to experience an explosion of growth, up over 500 per cent since 2020 so that the US accounted for seven per cent of China's beef imports, up from just one per cent in 2020.

In China, COVID-19 infections increased after the country dropped its zero-tolerance policy in late 2022 and will continue to pose a risk for supply chains and the flow of imports into the country.

Not all imported suppliers and their beef products are in direct competition will each other in China. Australian and New Zealand beef have historically been sold at higher price points than South American beef. COVID-19 caused a shift to this trend, however. With the EU market severely disrupted, South American countries diverted more of their higher-quality cuts to China at price points that are cheaper than Australian and New Zealand beef. US beef is also edging into the premium beef market in China, but its grain-fed product positions it separately from New Zealand's grass-fed beef. US beef is filling the gap in premium grain-fed supply previously filled by Australia.

The dynamics of meat production, consumption and trade in China will continue to be a leading driver of New Zealand beef export performance in 2023 and beyond. Key factors to monitor for the outlook period will be signs of a weakening economy, geopolitical tension, changes in supply patterns from South America and potential disruption caused by animal diseases.

United States

With pandemic woes in the rear-view mirror for the US, the beef industry is still drought-stricken by current weather conditions. Beef production was still elevated in 2022, as herd liquidation continued. This was against a backdrop of severe labour issues, supply chain disruption and surging inflation. The cattle herd in the US usually follows a cycle which an increase for 8-12 years is followed by a decrease and the trough trend started in 2022 and is expected to continue into 2024.

Beef production in 2022 is estimated to have lifted 1 per cent compared to 2021, taking total beef production to the highest level on record and reflecting the ongoing liquidation of capital stock.

USDA's most recent forecasts include a sharp decrease in 2023 for US beef production, following the effects of reducing numbers of capital livestock due to drought conditions.

Accompanying the lift in beef production was a continuing trend in both domestic and international demand for beef from 2022. The shift in demand challenged the ability of the processing sector to be able to meet the demand, which resulted in headwinds to domestic market supply at some stages during the year, all of which contributed to very strong wholesale beef prices. There are worries however whether the strong domestic demand can continue given high levels of consumer credit debt and relatively low savings rates.

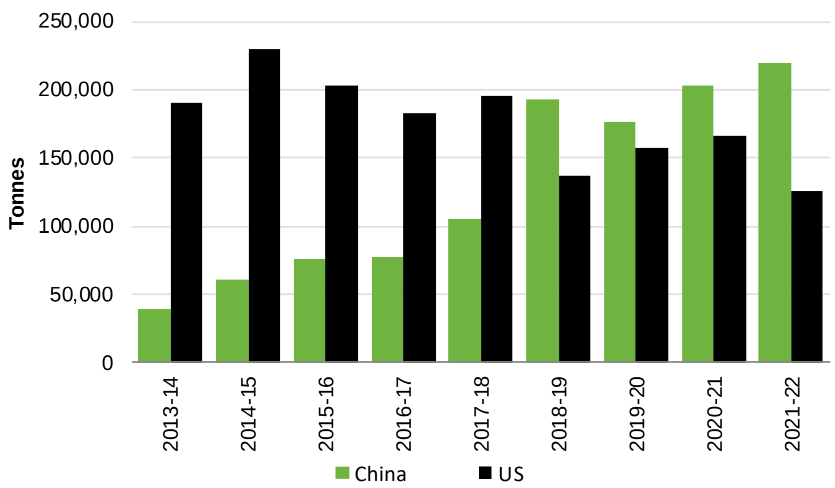
As at 1 July 2022, the total number of all cattle and calves was down 2 per cent compared to a year earlier.

While slaughter was high during 2022, average carcass weights were unusually high given drought conditions and costs.

In general, this bodes well for demand for imported New Zealand beef in the medium term. With declining domestic production and the pull of international demand lifting export volumes, US domestic market supply will be short.

US beef imports contracted in 2022, driven predominantly by increased domestic supply. Imports in 2023 are forecast to increase as domestic supply weakens, and imports from Brazil will increase as they have an export ban to China.

Figure 8 New Zealand Beef and Veal Exports to US and China (Sept year)



Source: Beef + Lamb New Zealand Economic Service, New Zealand Customs

According to USDA, US beef exports are forecast to drop 13 per cent in 2023, reflecting the flow-on effect of reducing production. Despite a still strong USD, USDA says there will be strong international demand for US beef.

While there is some uncertainty around US beef exports to China after the end of the Phase One Trade Agreement at the end of 2021, all forecasts signal that China will continue to be a key purchaser of US beef.

The processing sector has shown to be better placed to manage the supply chain in 2022 and without pandemic-era hurdles. Cattle supply consequently was high in response to drought conditions. Issues around labour and packing capacity will persist, but both are expected to improve through 2023. Meat processing and packing capacity is projected to lift with industry's investment resulting in expansions and new facilities.

Trends in the pork and chicken sectors have an impact on the beef market in the US. US domestic egg prices exploded throughout 2022 with outbreaks of HPAI. The associated supply shocks combined with strong egg demand pushed prices to record high levels. If this trend continues into 2023, we expect substitutions into other meats like pork or even beef, despite domestic beef prices being high.

The key takeaway for the New Zealand beef industry is that after high domestic cow slaughter, the supply of lean beef is expected to tighten in the coming year, but there will be competition from imports of Brazilian and Australian beef. Demand for beef and ground beef is expected to grow, and US importers will explore other markets to fill the supply gap. Imported prices are expected to remain firm.

Australia

The Australian beef sector is well positioned to be able to take advantage of herd rebuilding efforts and solid global market fundamentals in 2023. Continued rainfall and favourable seasonal conditions last year will ensure that there will be solid supply of both young and slaughter weight cattle over the next two years, regardless of seasonal outcomes. Overall, the cattle herd in 2023 will grow to its highest level since 2014, reaching 28.8m head, an increase of 1.1m or 4.5% year-on-year.

Australian beef exports declined in 2021 and 2022, with 2021 exports declining 13 per cent on 2020, then 2022 production declining four per cent. Forecasts indicate that 2023 will be a strong year for production therefore exports will consequently be strong.

Australia has relaxed its immigration policy. It is expected that a record number of migrants will arrive in 2023, expecting to help with the processing supply chain. The prices of other inputs and cost of production will be other major factors influencing Australian beef export performance.

New Zealand beef exporters gained some benefits from the absence of competition from Australian beef in key markets in 2021 and 2022, however, expanding export production in 2023 will increase the competitive pressure in key markets for New Zealand beef.

In 2022, Japan was the top destination for Australian beef, followed by China and South Korea. Despite the contraction in exports, volumes to China increased in 2022, which meant China took second place from Korea. However, Korea will be increasingly important to Australia as tariffs consistently drop in line with the Korea-Australia FTA. The US and China are expected to be the key markets where the increased presence of Australian beef will compete directly with New Zealand beef.

The UK now presents an opportunity for Australian beef following the agreement of the Australia-UK FTA that is expected to be ratified in the first quarter of 2023. The effects of this may not be felt for a while as aforementioned markets still have significant demand-pull.

Brazil

Brazil is a significant player in global beef trade and a serious competitor. It has enormous, long-term production potential supported by the opening of new land for grazing and increasing efficiency in beef production in existing areas. Also, Brazil's exports are growing faster than its production, as the exporting sector responds to international beef prices that have performed well in recent years.

Brazil is the second largest beef producer, following the US, and is estimated to increase exports by one per cent in 2023 and is projected to maintain its position as top exporter, accounting for 25 per cent of world beef exports. For 2022, beef exports are expected to increase 27 per cent year-on-year, following a year mired with drought in 2021.

In late February 2023, Brazil voluntarily suspended beef exports to China after a case of BSE (also known as "Mad Cow Disease") was confirmed in the northern state of Para. Suspension is part of an animal health pact previously agreed between China and Brazil and is expected to be temporary. It is a blow to Brazilian farmers, as China is the main destination for Brazil's beef exports. When this happened in 2022, it took around three months for exports to resume. Early estimates are that it could take a little less than that in 2023 because lessons learned from the 2022 occurrence will inform the response of both sides. This is a major shift in the global beef trade and will benefit NZ beef exports for a portion of the year but will be very inflationary for consumers everywhere. It is worth noting that exports to the US are not suspended because the two countries have more flexible agreements in place that align with WOAH standards, e.g., only suspend from specific region, processing plant etc.

Weak economic conditions and high inflation have resulted in high domestic meat prices and a decline in domestic beef consumption. Lower domestic consumption, combined with the

suspension of beef exports to several markets due to BSE and drought, suggest 2023 will be a challenging year for the Brazilian beef industry.

Like most other economies, Brazil had a strong recovery from COVID-19 in the second half of 2021, but throughout 2022 it has been dealing with inflation, lower economic sentiment for consumers and businesses, and the flow-on effects of the Russia-Ukraine war.

Brazil is picked to remain the leading exporter of beef in 2023, and forecast to have a growing market share, alongside Australia, of total world exports.

The low level of the Brazilian currency (the Real), which has been continuous since the beginning of the pandemic also continues to support the increase in exports.

In 2023, exporters of Brazilian beef are expected to refocus on China once the country addresses its BSE situation. Given the high volumes exported to the US in recent months, it is likely that the volume of beef imported from Brazil will have reached the level of tariff-free access available to “Other” countries, of which Brazil is one, by the end of the first quarter in 2023, hopefully aligning with reopening of trade with China.

Shifts in Brazilian beef production and trade have the potential to have a major impact on all beef exporting countries. As seen in recent years, there is a degree of volatility to the Brazilian beef trade, with unpredictable swings. This makes Brazil an important market to monitor.

Cattle Prices – Farm-gate

Farm-gate returns for cattle in 2022-23 are forecast to reduce slightly from the record highs achieved in 2021-22, reflecting solid market fundamentals and a weaker NZD.

The weighted average farm-gate price for all cattle is estimated at 550 cents per kg, 1.2 per cent below last season but 11.2 per cent above the five-year average.

Farm-gate prices for the first four months of the 2022-23 season (October 2022 to January 2023) were above historical levels. The two key drivers were high in-market prices and a lower exchange rate.

Market conditions are expected to remain positive for the remainder of 2022-23. Downside risk for farm-gate prices may arise from increased competition from Australia, and Brazil.

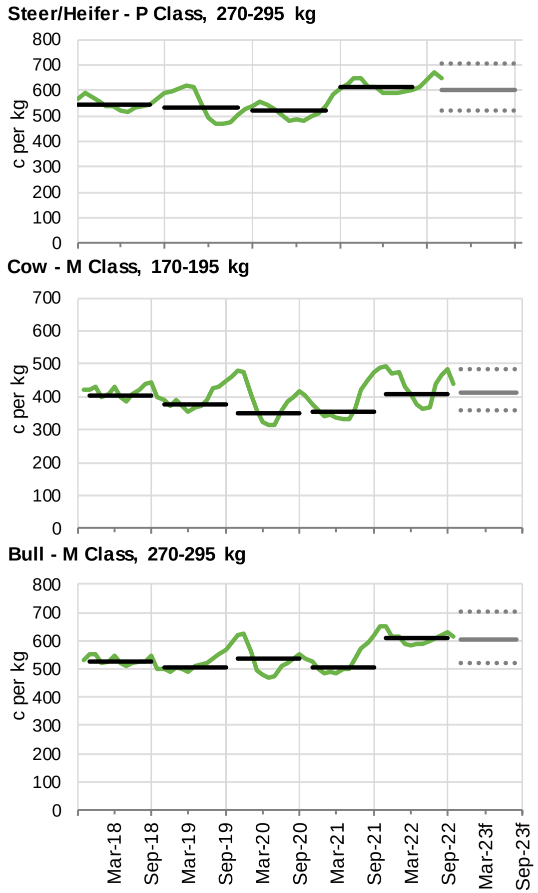
Supply chain disruption due to labour shortages and Cyclone Gabrielle will be a reality for processors. They will be wary of the risk as peak cow processing approaches, and when Fonterra implements its new calf policy, which is aimed at eliminating on-farm deaths.

The severe labour shortage in the processing sector resulted in significant delays to cattle processing in 2021-22 and this continued somewhat into 2022-23. However, traditional effects have caused backlogs this season, e.g. drought in the South Island. Processors have lobbied government for improvements to immigration policies for months.

Strong dairy product prices may result in a more spread, or smaller, dairy cow cull than last season, as dairy farmers endeavour to maximise their returns. This could result in upside to the M cow farm-gate price as an element of procurement competition enters processing. Climate and feed conditions in key dairying areas in autumn will also determine the spread numbers.

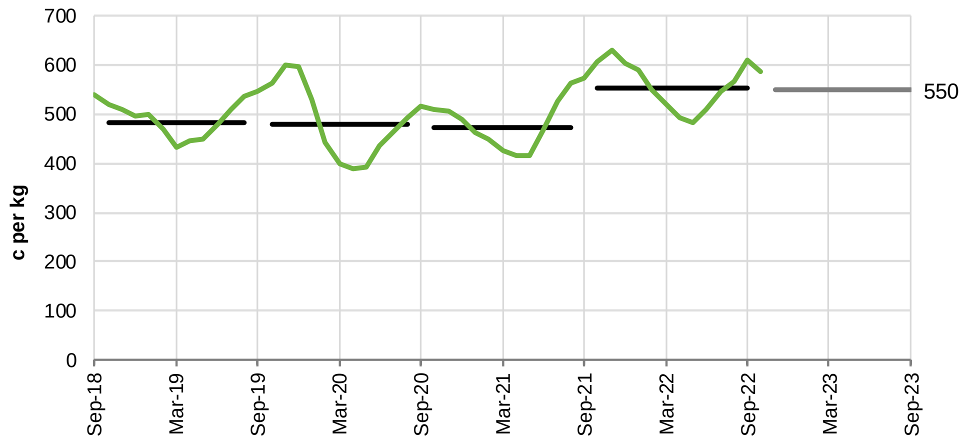
Across the classes, the estimated 2022-23 average annual farm-gate price is 611 cents per kg for P steer/heifer (270-295kg), 405 cents per kg for M cow (170-195kg), which includes a large component of cull dairy cows, and 602 cents per kg for M bull (270-295kg).

Figure 9 Weighted Average Cattle Farm-gate Price



Source: Beef + Lamb New Zealand Economic Service

Figure 10 Weighted Average All Classes Cattle Farm-gate Price



Source: Beef + Lamb New Zealand Economic Service

Beef Production

Table 10 Export Cattle Processing Composition

Sep Year	000 head				
	Steer	Heifer	Cow	Bull	Total
2018-19	565	474	1,018	555	2,612
2019-20	588	491	1,048	546	2,674
2020-21	669	550	1,034	553	2,806
2021-22	647	515	965	529	2,656
2022-23e	644	510	973	524	2,650
2022-23e % change	-0.5%	-1.0%	+0.8%	-1.0%	-0.2%

e estimate, f forecast
Source: Beef + Lamb New Zealand Economic Service, New Zealand Meat Board

Table 11 Export Cattle Carcase Weights

Sep Year	kg / head				
	Steer	Heifer	Cow	Bull	Total
2018-19	313	243	200	300	254
2019-20	312	243	202	299	254
2020-21	310	244	202	300	256
2021-22	309	246	202	300	256
2022-23e	311	244	201	300	256
2022-23e % change	+0.8%	-0.9%	-0.8%	-0.1%	-0.3%

e estimate, f forecast
Source: Beef + Lamb New Zealand Economic Service, New Zealand Meat Board

Table 12 Export Beef Production Composition

Sep Year	000 tonne bone-in				
	Steer	Heifer	Cow	Bull	Total
2018-19	177	115	204	166	662
2019-20	184	120	212	163	679
2020-21	208	134	209	166	717
2021-22	200	126	195	159	681
2022-23e	202	123	196	157	678
2022-23e % change	+1.2%	-2.7%	+0.2%	-1.2%	-0.4%

e estimate, f forecast
Source: Beef + Lamb New Zealand Economic Service, New Zealand Meat Board

Cattle Slaughter

For 2022-23, the number of cattle processed for export is estimated to be steady at 2.65 million head (Table 10).

The number of steers processed is expected to decline by 0.5 per cent. The 2022-23 forecast remains high historically reflecting continued input of dairy-beef steers.

The number of heifers processed is estimated to decline by one per cent to 510,000 in 2022-23.

The number of cows processed is forecast to increase 0.8 per cent, reflecting the slow return to normalcy as dairy farmers were chasing higher farm-gate milk prices last season, which reduces the dairy cull.

The number of bulls processed is estimated to decline one per cent to 524,000 in 2022-23.

Cattle Weights

On average, export cattle carcase weights are forecast to remain relatively stable in 2022-23. This assumes “normal” climatic conditions in 2022-23 (Table 11).

Beef Production

In 2022-23, New Zealand’s export beef production is forecast to decline 0.4 per cent. This reflects the trend in export processing numbers, given the steady average carcase weight (Table 12).

As mentioned, beef production is still elevated compared to historical averages and has been performing well for the past five seasons.

Livestock Numbers

Livestock numbers are estimated using Statistics New Zealand (SNZ) provisional Agricultural Census data (December 2022) combined with B+LNZ Sheep and Beef Farm Survey data and tracking of processing data. The latest SNZ livestock figures, which were provisional for 30 June 2022, show a greater decrease in livestock numbers than expected. B+LNZ will update livestock data when final figures are released in May 2023.

The increased sale of farms destined for forestry is a likely factor in the reduction in stock numbers, although there is generally a long lag between a farm sale and planting of trees. Once land has been planted, livestock usually move through the system onto other farms before being sent to processing (or processing may occur in stages as the farm is planted). Much depends on the circumstances on individual farms.

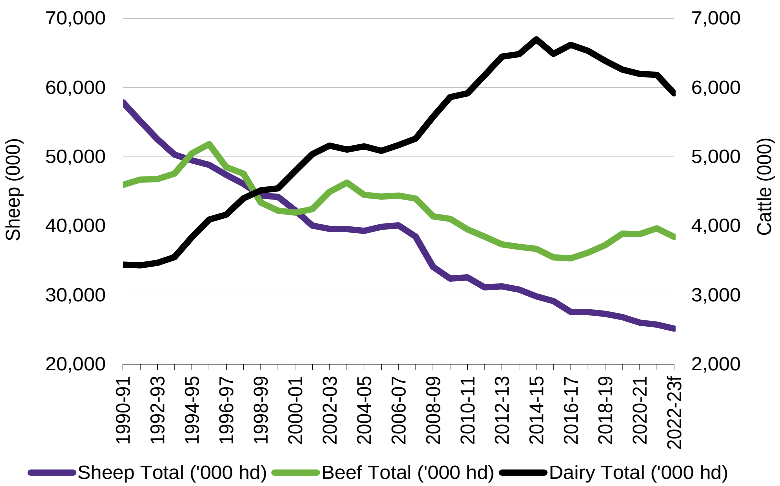
Sheep

The total number of sheep at 30 June 2022 was estimated at 25.15 million head, 2.3 per cent lower than the previous June. Within this, the number of breeding ewes declined 6.0 per cent and the number of hoggets increased 5.1 per cent.

In the North Island, the number of total sheep decreased 2.8 per cent to 12.33 million at 30 June 2022 and the number of breeding ewes decreased 6.6 per cent, a higher rate of decline than seen in past periods. The number of hoggets in the North Island increased 3.9 per cent (+173,000 head), driven by East Coast hogget numbers at 30 June 2022 up 9.0 per cent up on 30 June 2021.

In the South Island, the total number of sheep decreased 1.7 per cent to 12.82 million head. The number of breeding ewes decreased 5.4 per cent. The number of hoggets in the South Island increased 6.4 per cent to 4.36 million head, because the increase in Marlborough-Canterbury, as the region continued to rebuild sheep numbers after drought in 2020 and 2021, more than offset the decline in Otago-Southland.

Figure 11 Livestock Numbers



Source: Beef + Lamb New Zealand Economic Service | Statistics New Zealand

Table 13 Livestock Numbers (million head)

	Breeding Ewes	Hoggets	Total Sheep	Beef Cattle	Dairy Cattle
30 June 2021	16.33	8.56	25.73	3.97	6.19
30 June 2022e	15.35	9.00	25.15	3.84	5.92
21-22 to 22-23 % change	-6.0%	+5.1%	-2.3%	-3.1%	-4.3%

e estimate

Source: Beef + Lamb New Zealand Economic Service | Statistics New Zealand

Beef Cattle

The number of beef cattle at 30 June 2022 is estimated at 3.84 million, down 3.1 per cent on the previous June. This was largely driven by North Island farms through East Coast and Taranaki-Manawatū where numbers of breeding cows and beef weaners decreased.

In the North Island, the number of beef cattle decreased 3.6 per cent to 2.68 million at 30 June 2022. In the South Island, the number of beef cattle decreased 2.0 per cent to 1.16 million at 30 June 2022. The number of beef cows increased moderately, while the number of other cattle, including weaners, decreased.

Dairy Cattle

The number of dairy cattle at 30 June 2022 is estimated to have decreased 4.3 per cent to 5.92 million.

Cyclone Gabrielle Impact

At time of writing, impact on livestock numbers was unknown for East Coast, Northland, Coromandel, and other parts of the Waikato. Multiple instances of stock losses during floods were reported by media, particularly for the East Coast and around Hawke's Bay. Assessing feed supplies and stock water were immediate priorities on affected farms. The loss of fencing will impact the ability to account for stock. Furthermore, some livestock may be lost to other properties for example forestry blocks.

Wool[1]

Prices

The 2022-23 wool season (July 2022-June 2023) began with a relatively positive sentiment for wool prices. It followed the trend as 2021-22, but prices remained elevated for two months longer, which is positive for wool growers. The re-emergence of COVID-19 in China after the country relaxed COVID-19-related rules will most likely disrupt manufacturing and weigh on demand and prices.

The outlook remains uncertain, with industry participants reporting it is difficult to predict demand China will greatly differ from last season, and thus forecast prices are very close to the previous season. There is currently little evidence signalling improvement in demand for mid-micron and crossbred wool in the medium term.

The lower NZD is currently providing considerable support for wool prices.

The fine wool market is performing solidly, driven by ongoing demand for active sports and casual wear products made from fine wool.

The outlook for 2022-23 for fine wool prices is no change, following a 37 per cent increase in the previous season. Medium wool prices are forecast to be unchanged and strong wool prices are forecast to lift 1.4 per cent (Table 14).

Forecasting is challenging in the current environment. It is hoped there is a more pronounced demand shift in the outlook period and that there is upside to this forecast.

Exports

The outlook for 2022-23 is for the volume of wool that is exported to be up slightly on 2021-22, reflecting the trend in sheep numbers and build-up of wool in storage. Wool export revenue is forecast to decrease 0.6 per cent to $435 million. Average export receipts at FOB are expected to decrease 0.8 per cent to $5,000 per tonne clean (Table 15).

Table 14 Season Average Auction Wool Prices

	cents / kg greasy				
June Year	Fine	Medium	Strong	Lambs	All Wool
2018-19	1,859	714	266	408	381
2019-20	1,447	725	221	230	332
2020-21	1,114	421	170	169	254
2021-22	1,532	389	213	210	337
2022-23e	1,531	389	216	212	339
2022-23e % change	-0.1%	0.0%	+1.4%	+1.0%	+0.6%

e estimate | Source: Beef + Lamb New Zealand Economic Service, Wrightson Wool, New Zealand Wool Services International Ltd , Statistics New Zealand

Table 15 Auction Prices and Raw Wool Exports

	Auction Price	Wool Exports		
June Year	$ / kg clean	FOB $ / kg clean	000 tonnes clean	$m FOB
2018-19	5.19	5.86	93.8	548.9
2019-20	4.53	5.63	76.7	432.1
2020-21	3.47	4.15	95.4	395.7
2021-22	4.60	5.04	86.8	437.4
2022-23e	4.64	5.00	87.0	434.7
2022-23e % change	+0.7%	-0.8%	+0.2%	-0.6%

e estimate | Source: Beef + Lamb New Zealand Economic Service, Wrightson Wool, New Zealand Wool Services International Ltd , Statistics NZ

For the 2021-22 season (from July to June), New Zealand wool exports were down 9 per cent to 86,805 tonnes clean. For the 2022-23 season, New Zealand wool exports are projected to be about the same at 87,000 tonnes clean.

Export data for the first six months of the 2022-23 wool season show a 19 per cent increase in export volume to China, a 22 per cent decrease to the EU-27+UK, and overall wool exports were down 11 per cent compared to the previous season.

Table 16 Wool Production

June Year	Sheep million head	Shorn 000 tonnes greasy	Slipe 000 tonnes greasy	Total 000 tonnes greasy	Shorn Wool kg / head* greasy
2018-19	27.3	128.9	15.0	143.9	4.72
2019-20	26.8	109.9	15.8	125.6	4.10
2020-21	26.0	118.6	15.3	133.9	4.56
2021-22	25.7	113.6	15.4	129.0	4.41
2022-23e	25.8	113.7	15.5	129.2	4.41
2022-23e % change	+0.2%	+0.1%	+0.9%	+0.2%	-0.1%

*excludes wool on sheepskins

e estimate | Source: Beef + Lamb New Zealand Economic Service, Wrightson Wool, New Zealand Wool Services International Ltd , Statistics New Zealand

Production

For 2022-23, total wool production is estimated to increase slightly on the previous season. At 130,000 tonnes greasy, 2022-23 wool production would be 4 per cent below the five-year average. Slipe wool production is expected to increase 0.9 per cent on the previous season (Table 16).

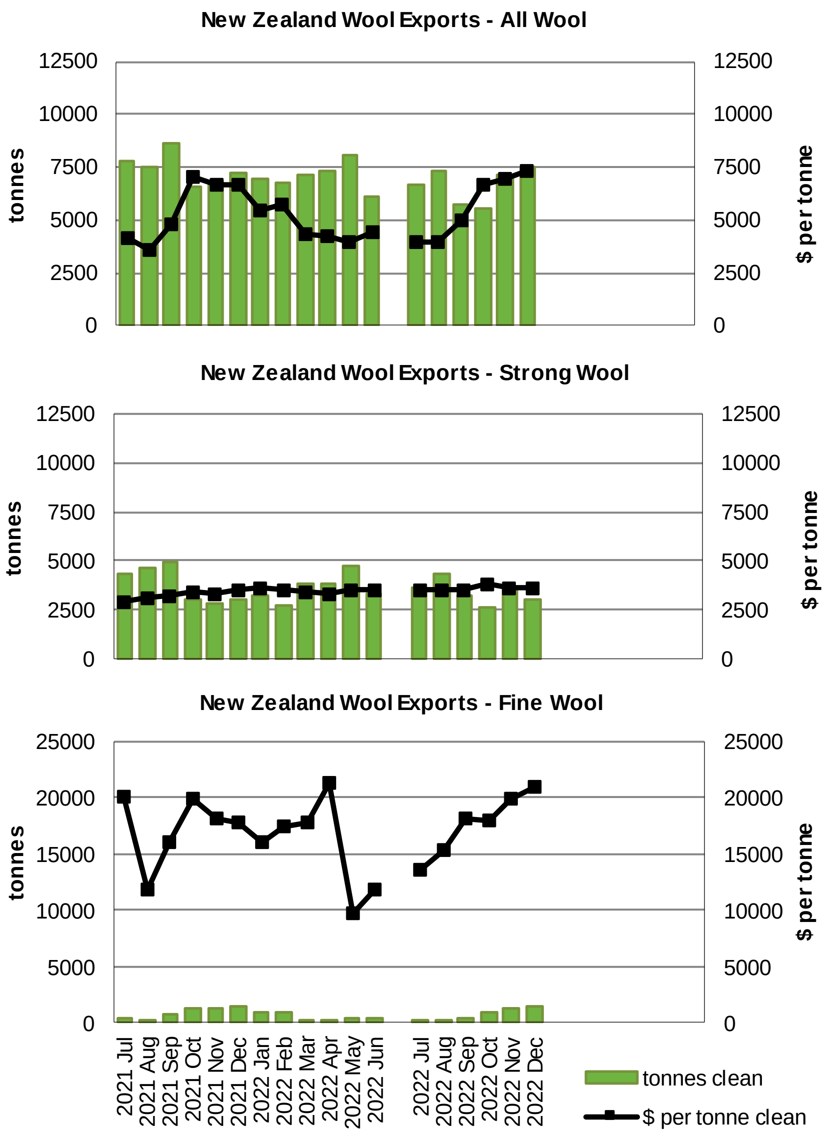
Shearing

Shearing expenditure is forecast to increase 6.7 per cent in 2022-23 to average $29,000 per farm or $6.14 a head (+8.1% increase on a per head basis).

On average, shearing costs exceed wool revenue for most Farm Classes. The exceptions are South Island High and Hill Country farms where wool revenue exceeds shearing expenditure due to the fine wools bred on those farms.

Access for shearers to East Coast, Coromandel and Northland farms affected by cyclone Gabrielle is limited – with inaccessible roading for some. March is typically when shearing occurs on hill and hard hill country farms. Timing of shearing can impact wool quality, in some cases, and this season has seen multiple climatic events, which may increase discolouration of wool and reduce potential revenue.

Figure 12 New Zealand Wool Exports



Source: Beef + Lamb New Zealand Economic Service

[1]Although there is no levy on wool, the Economic Service conducts basic analysis of wool because it contributes to sheep and beef farm revenue.

Farm Revenue, Expenditure & Profit – New Zealand

Farm profitability forecasts for 2022-23 were made prior to the impacts of Cyclones Hale and Gabrielle and it will take time to quantify livestock and financial impacts. Farms impacted by floods face large costs to restore infrastructure, feed, livestock, and other losses, some of which may be offset by insurance or relief payments from Government or a combination of both. Sheep and beef farmers already faced lower revenue and increased costs prior to these climatic events over summer adding to financial woes.

Figure 13 All Classes Sheep and Beef Farm Inflation-Adjusted[1] Farm Profit before Tax per Farm

p provisional | f forecast | [1]Adjusted to 2004-05 $ terms
Source: B+LNZ Economic Service | Sheep and Beef Farm Survey

Revenue – Per Farm

Gross farm revenue for 2022-23 is forecast to average $677,800 per farm, under an exchange rate scenario of USD 0.63, down 6.4 per cent on 2021-22. This is driven predominantly by a large decrease in sheep revenue and a moderate decrease in beef revenue.

Farm-gate prices softened for all species, especially for mutton and lamb, from the record highs achieved in 2021-22, impacting revenue.

Sheep revenue, which is forecast to contribute 47 per cent of gross farm revenue on average, decreases 14 per cent to $319,700 per farm for 2022-23. A poor start to the season, October and November saw a continual decline in farm-gate prices for lamb and mutton, with prices levelling out in January.

Cattle revenue is forecast to average $186,200 per farm for 2022-23, a decrease of 3.1 per cent. Cattle revenue is forecast to increase for the South Island but decrease by 5.8 per cent in the North Island, where [x70 per cent] of the country's beef cattle are located. Overall, cattle revenue is forecast to contribute around 28 per cent of gross farm revenue in 2022-23.

Farms with a higher sheep:beef cattle ratio will feel the drop in revenue more severely than those buffered by the relatively stronger outlook for beef cattle farm-gate prices. For example, farms in Otago and Southland tend to have a higher ratio of sheep to cattle, and consequently a larger drop in revenue is forecast, the region has also faced three consecutive La Niña summers with dry and extremely dry conditions impacting production.

On average, wool revenue is similar to 2021-22 as prices stabilise. Wool revenue accounts for five per cent of gross farm revenue on average, down from 15-16 per cent twenty years ago.

Dairy grazing revenue is estimated to increase to average $40,800 per farm in 2022-23. On average, dairy grazing revenue contributes 6 per cent of gross farm revenue.

Cash cropping is forecast to increase for 2022-23 to $67,700 per farm (+15%). On average, cash crop revenue accounts for 10 per cent of gross farm revenue, which is double

the contribution from dairy grazing. Cash crop revenue is particularly important for Marlborough-Canterbury farms and the South Island more than the North; in Marlborough-Canterbury cash crop revenue is estimated at 26 per cent of gross farm revenue.

Revenue – Aggregate

Aggregate Sheep and Beef Farm Revenue for 2022-23 is forecast at $6.2 billion, down 6.4 per cent. Gross farm revenue is spent on goods and services including wages, shearing contractors, and agricultural services, then tax, debt-servicing, and repayment and personal living expenses.

Expenditure – Per Farm

On average, total expenditure is estimated to increase by 4.1 per cent to $531,500 per farm for 2022-23. Expenditure in most categories is estimated to increase, with the largest increases forecast for interest, fertiliser, fuel, shearing and wages.

Farmers have sought to reduce costs by deferring repairs and maintenance and reducing fertiliser usage, but inflation and increased farm input prices outweigh cost cutting initiatives.

Expenditure on Fertiliser, Lime and Seeds is the largest area of expenditure on average and comprises around 19 per cent of farm expenditure in 2022-23. Fertiliser, lime, and seeds expenditure is forecast to increase by 6.1 per cent to average $102,100 per farm, 23 per cent above the average of the previous five seasons ($82,800 per farm).

Feed and Grazing expenditure, which covers the costs of purchasing grazing and making feed supplements because the amount of imported feed is negligible in sheep and beef farming, is forecast to average $22,600 per farm in 2022-23, steady compared with 2021-22. Feed and grazing costs are highly variable across the country and an average New Zealand figure masks regional differences due to drier conditions, the ability to cut surplus feed in spring and therefore have supplementary feed on hand and climatic events such as flooding. Climatic conditions such as devastating floods for East Coast, parts of Northland and Waikato, and dry conditions for Southland and parts of Otago will have a significant impact on feed and grazing costs and are not yet able to be quantified in this report due to the extent of damage still being discovered.

Repairs and Maintenance is forecast to decrease to an estimated $44,500 per farm in 2022-23, 7 per cent above the five-year average. Repairs and Maintenance are likely to be deferred where possible on farm with falling revenue and increases in other cost categories. However, given widespread damage to infrastructure with recent floods, repairs and maintenance is an expense that is likely to skyrocket for some farms and the impact will become clearer over the course of the year.

Interest expenditure increases 12.5 per cent to $54,000 per farm Term liabilities are forecast to be similar to 2021-22, however interest rates for new borrowings and overdrafts, and the mix of lending that is on fixed and floating interest rates, have increased pushing up interest expenditure, which accounts for around 10 per cent of total farm expenditure, on average.

Shearing expenses continue to climb, reaching $29,000 per farm on average for 2022-23, up 6.7 per cent. On a per head basis, the increase is 8.1 per cent – to $6.14 a head, which is nearly 20 per cent higher than the five-year average of $5.16. On average, wool revenue exceeds shearing expenses by an estimated $3,300 per farm for 2022-23. Shearing is a loss-making exercise for most farm classes, but profitable for some.

Expenditure – Aggregate

In aggregate, Sheep and Beef Farm Expenditure for 2022-23 is forecast at $4.9 billion, up four per cent on 2021-22.

Farm Profit before Tax

A large decrease in farm profitability is forecast for this season, with factors such as lower market prices and significant cost increases reducing profit. After adjusting for inflation, in 2022-23 Farm Profit before Tax is expected to decrease 35 per cent from 2021-22 and is lower than the period from 2018-19 to 2019-20 (Figure 13).

It should be noted that 2021-22 was an exceptional year for profit, with per farm profit before tax more than 50 per cent higher than the average of the previous five seasons.

Farmer sentiment and overall confidence is low this season as uncertainty about environmental policy persists, expectations are for increasing costs and additional regulatory costs to come in the not-to-distant future all overriding historically high farm-gate prices.

While Farm Profit before Tax contains the word "profit", it is required to meet taxation payments, personal drawings for family living expenses, debt repayments and the purchase of capital items for the farm business, such as farm machinery.

To provide some indication of the impact of changes in the exchange rate, three scenarios[2] are shown in Table 17.

- At the mid exchange rate (USD0.63), inflation-adjusted Farm Profit before Tax is $96,600 per farm in 2004-05 terms, down 35 per cent from 2021-22 (which was an exceptional season with the highest farm profit in real terms since 1972-73). In nominal terms, i.e., without adjusting for inflation, Farm Profit before Tax is $146,300 per farm, down 31 per cent on $213,400 for 2021-22.
- At the lower exchange rate (USD0.57), inflation-adjusted Farm Profit before Tax would be $188,100 per farm in 2004-05 terms, 27 per cent higher than $147,900 for 2021-22. In nominal terms, Farm Profit before Tax would be $234,000, 10 per cent up on $213,400 for 2021-22.
- At the higher exchange rate (USD0.69), inflation-adjusted Farm Profit before Tax would be $59,700 per farm in 2004-05 terms for 2022-23, 60 per cent lower than $147,900 for 2021-22. In nominal terms, Farm Profit before Tax would be $74,300, down 65 per cent on $147,900 for 2021-22.

[2] Exchange rate scenarios consider increased revenue **and** expenditure given a particular exchange rate. However, they do not account for changes in purchasing behaviour by farmers which would impact profitability.

Table 17 Sheep and Beef Farm Revenue and Expenditure
Weighted Average All Classes[1]

					Provisional	Forecast			Forecast % Change		
		2018-19	2019-20	2020-21	2021-22	2022-23	2022-23	2022-23	2021-22 to 2022-23		
						USD 0.57	USD 0.63	USD 0.69	USD 0.57	USD 0.63	USD 0.69
Revenue											
Wool		38,693	31,673	26,909	32,200	37,500	32,300	28,000	+16.5%	+0.3%	-13.0%
Sheep		306,786	320,255	292,953	373,100	378,200	319,700	271,800	+1.4%	-14.3%	-27.2%
Cattle		160,025	170,746	157,554	192,200	217,100	186,200	160,800	+13.0%	-3.1%	-16.3%
Dairy Grazing		30,957	34,662	35,229	37,000	40,800	40,800	40,800	+10.3%	+10.3%	+10.3%
Deer + Velvet		7,123	6,203	4,943	5,300	6,400	5,500	4,800	+20.8%	+3.8%	-9.4%
Goat + Fibre		26	72	81	0	0	0	0			
Cash Crop		61,561	64,307	66,272	59,100	67,700	67,700	67,700	+14.6%	+14.6%	+14.6%
Other		24,195	23,617	23,829	25,300	25,600	25,600	25,600	+1.2%	+1.2%	+1.2%
Total Gross Revenue	**$ per farm**	**629,366**	**651,535**	**607,770**	**724,200**	**773,300**	**677,800**	**599,500**	**+6.8%**	**-6.4%**	**-17.2%**
Expenditure											
Fert, Lime & Seeds		79,448	83,544	83,851	96,200	103,600	102,100	100,900	+7.7%	+6.1%	+4.9%
Repairs & Maintenance		41,021	42,540	42,668	46,200	45,200	44,500	44,000	-2.2%	-3.7%	-4.8%
Interest & Rent		76,193	76,597	70,254	66,300	72,900	72,700	72,700	+10.0%	+9.7%	+9.7%
Other Expenses		274,391	284,408	295,575	302,100	317,600	312,200	307,600	+5.1%	+3.3%	+1.8%
Total Expenditure	**$ per farm**	**471,053**	**487,089**	**492,348**	**510,800**	**539,300**	**531,500**	**525,200**	**+5.6%**	**+4.1%**	**+2.8%**
Farm Profit Before Tax[2]	**$ per farm**	**158,313**	**164,446**	**115,422**	**213,400**	**234,000**	**146,300**	**74,300**	**+9.7%**	**-31.4%**	**-65.2%**
EBITRm[3]	**$ per farm**	**239,397**	**246,571**	**190,530**	**284,682**	**312,400**	**224,171**	**151,900**	**+9.7%**	**-21.3%**	**-46.6%**
Real (2004-05$) Farm Profit[3]		**119,800**	**122,200**	**84,100**	**147,900**	**188,100**	**96,600**	**59,700**	**+27.2%**	**-34.7%**	**-59.6%**
Index of Real Farm Profit		1,636	1,668	1,148	2,019	2,568	1,318	815	+27.2%	-34.7%	-59.6%
Fertiliser Use	kg per SU	27.0	28.4	26.1	24.8	23.5	23.2	22.9	-5.1%	-6.5%	-7.6%
Prices											
Wool auction	¢ per kg clean	519	453	347	464	543	467	405	+17.0%	+0.6%	-12.7%
All wool[5]	¢ per kg greasy	299	281	202	253	292	251	218	+15.3%	-0.8%	-14.0%
Lamb	$ per head	142	139	133	165	169	145	125	+2.6%	-11.9%	-23.8%
Mutton	$ per head	122	124	127	146	135	112	93	-7.1%	-23.1%	-36.2%
Prime Steer/Heifer	¢ per kg	541	530	522	610	705	604	522	+15.5%	-1.0%	-14.4%

1 At 1July 2022 the average grazing area of commercial Sheep and Beef Farms, which are represented by the Weighted Average All Classes Sheep and Beef Farm, was 698 hectares. The average number of livestock on hand was 2,885 sheep, 395 beef cattle and 30 deer, totalling 4,525 Stock Units (breeding ewe equivalents)."

2. Farm Profit before Tax is required to meet personal drawings, taxation payments, debt repayments and the purchase of capital items.

3. Earnings before Interest, Tax, Rent and any salary paid to Manager(s)

4. Deflated by June year Consumer Price Index.

5. All shorn wool sales (auction 55% and private 45%) net of charges and freight.

Source: Beef + Lamb New Zealand Economic Service, Sheep and Beef Farm Survey

EBITRm

EBITRm is the abbreviation for Earnings before Interest, Tax, Rent and any wages paid to a manager (actual or family). It is a key measure of profitability. EBITRm per grazing hectare is a standardised measure that facilitates benchmarking because it places farm businesses on a consistent basis of being debt-free, owner-operator and freehold.

Table 18 shows per-farm measures of financial metrics, and Table 19 shows these measures per hectare.

North Island Summary

Sheep and Beef Farm Profit before Tax decreases 30 per cent to average $153,500 per farm for 2022-23. As 2021-22 was exceptional for profitability the decrease is large.

Gross revenue decreases by 9.2 per cent to $588,500 per farm on average. Sheep revenue decreases by 15 per cent to $273,700 due to lower average prices for prime and store lambs, and lower prices for mutton.

Cattle revenue decreases by 5.8 per cent to $236,300 per farm on average. While farm-gate cattle prices are forecast to soften from 2021-22 they are still above the five-year average.

Sheep revenue contributes around 47 per cent of gross farm revenue on average, while cattle revenue contributes around 40 per cent.

Dairy grazing revenue is forecast to increase 5.0 per cent to an average $27,200 per farm in 2022-23. Other revenue is forecast to increase 4.2 per cent to $47,300.

Total expenditure increases 1.7 per cent to average $435,000 per farm for 2022-23. Almost $50,000 higher than five years ago. Expenditure increases in almost all categories, particularly interest expenditure (+11.8%) and fuel (+10.2%). Farmers have deferred repairs and maintenance in 2022-23 and reduced fertiliser volumes to control costs.

Sheep and beef farm sales with intent to plant in forestry continues unabated. The issue is demoralising for farmers and others within the red meat sector. B+LNZ is forecasting significant economic damage to New Zealand's red meat sector, rural communities, and the economy as a result of the conversion of productive land into carbon farms.

South Island Summary

Sheep and Beef Farm Profit before Tax decreases 33 per cent to average $137,700 per farm for 2022-23.

Gross farm revenue decreases 3.7 per cent to average $786,100 per farm driven by decreased revenue from sheep.

On average, sheep revenue decreases by 13.8 per cent to $375,400 per farm as fewer prime and store lambs are sold at lower farmgate prices (compared to 2021-22). Farmgate mutton prices also decrease on 2021-22. Wool revenue is steady at an average $51,200 per farm.

Cattle revenue increases 3.5 per cent to $125,600 per farm as a slight softening in farmgate beef cattle prices are offset by slightly higher numbers sold. Sheep and cattle revenue contribute 48 per cent and 16 per cent of gross farm revenue respectively.

Cash crop revenue increases by 14.8 per cent to an average $134,200.

Total farm expenditure increases 6.1 per cent to average $648,400 per farm for 2022-23. Almost all categories of expenditure increase, notably fuel (+15.6%), fertiliser (+14.4%), and interest (+13.2%). As per North Island responses to reduced profit margins, farmers have deferred repairs and maintenance in 2022-23 and reduced volumes of fertiliser when possible.

Table 18 Regional Summary, All Classes Sheep & Beef Farm - $ per Farm

Region	2020-21 Profit	2021-22p Profit	2022-23f Revenue	2022-23f Expenditure	2022-23f Profit	2022-23f EBITRm[1]	Stock Units	Grazing Area (ha)
Northland-Waikato-BoP	84,542	175,700	481,900	347,300	134,600	185,600	3,600	380
East Coast	116,061	229,200	676,300	520,200	156,100	242,700	5,400	620
Taranaki-Manawatu	139,391	286,900	662,100	480,200	181,900	253,300	4,700	530
North Island	**108,543**	**219,900**	**588,500**	**435,000**	**153,500**	**221,600**	**4,500**	**490**
Marlborough-Canterbury[2]	124,112	198,100	954,000	805,100	148,900	253,600	4,800	1,020
Otago/Southland[2]	123,098	212,700	603,400	479,700	123,700	199,300	4,400	800
South Island[2]	**123,758**	**205,300**	**786,100**	**648,400**	**137,700**	**227,400**	**4,600**	**950**
New Zealand	**115,422**	**213,400**	**677,800**	**531,500**	**146,300**	**224,200**	**4,500**	**700**

p provisional, e estimate, f forecast | Exchange rate used in the estimate year is USD 0.63

Earnings before Interest, Tax, Rent and Salary paid to Manager(s)

Grazing area is inflated by High Country Farms, which average 8,096 hectares per farm

Source: Beef + Lamb New Zealand Economic Service | Sheep and Beef Farm Survey

Regional Comment – North Island

North Island regions were subjected to multiple climatic events in summer 2022-23, the impact of these is not yet quantified within the forecasts given here. B+LNZ sources farm physical and financial data from farmers ([Sheep and Beef Farm Survey)](), with over 500 farms throughout New Zealand with whom we work closely throughout the year.4.

In January 2023, cyclone Hale damaged farms in Northland and Gisborne. Following this, on Auckland Anniversary weekend, Northland, Auckland, Waikato, and Bay of Plenty experienced a deluge of rainfall and flooding.

Prior to a State of National Emergency being declared on 14 February, local state emergencies were declared for Northland, Auckland, Gisborne, Bay of Plenty, Waikato, and Hawke's Bay in the wake of Cyclone Gabrielle.

The impact and implications from Cyclone Gabrielle are not able to be quantified in this report. At the time of writing, the number of farms damaged, livestock lost, the extent of pasture and feed losses, and damage to farm infrastructure was not known. Therefore, it is difficult to calculate the scale of the impact on farm finances. The severity of impacts will be tempered by Government relief packages and insurance but the physical work clearing damaged farms will take many months.

Table 19 Regional Summary, All Classes Sheep & Beef Farm - $ per hectare

Region	2020-21 Profit	2021-22p Profit	2022-23f Revenue	2022-23f Expenditure	2022-23f Profit	2022-23f EBITRm[1]	Stock Units per ha.
Northland-Waikato-BoP	222	462	1,268	914	354	488	9.5
East Coast	187	370	1,091	839	252	391	8.7
Taranaki-Manawatu	263	541	1,249	906	343	478	8.9
North Island	**222**	**449**	**1,201**	**888**	**313**	**452**	**9.2**
Marlborough-Canterbury[2]	122	194	935	789	146	249	4.7
Otago/Southland[2]	154	266	754	600	155	249	5.5
South Island[2]	**130**	**216**	**827**	**683**	**145**	**239**	**4.8**
New Zealand	**165**	**305**	**968**	**759**	**209**	**320**	**6.4**

p provisional, e estimate, f forecast | Exchange rate used in the estimate year is USD 0.63

1 Earnings before Interest, Tax, Rent and Salary paid to Manager(s)

2 Grazing area is inflated by High Country Farms, which average 8,096 hectares per farm

Source: Beef + Lamb New Zealand Economic Service | Sheep and Beef Farm Survey

Northland–Waikato–Bay of Plenty

Gross farm revenue decreases 8.8 per cent to average $481,900 per farm for 2022-23. This is the result of decreased sheep and cattle revenue.

Sheep revenue decreases by 18.7 per cent to average $138,000 per farm for 2022-23. Prices for both store and prime lambs are well down on 2021-22, on average, and fewer prime and store lambs are forecast to sell.

Cattle revenue is forecast to decrease by 8.1 per cent in 2022-23 to average $255,500 per farm. Despite prices softening, forecast revenue is still above the five-year average. On average, cattle revenue makes up over half of gross farm revenue. An abundance of grass through much of the region has encouraged farmers to restock cattle with fewer to sell.

Total farm expenditure is forecast to by 1.6 per cent, to average $347,300 per farm for 2022-23. There are increases in most categories of expenditure, however farmers have reduced spending on fertiliser, repairs and maintenance and shearing to control overall expenditure.

Fertiliser expenditure decreases 10 per cent as the average tonnage of fertiliser applied decreases 19 per cent.

Feed and grazing expenditure is forecast to decrease slightly, by 8.6 per cent to $16,500 per farm. This is an area that may increase given flood damage to stored feed and pastures in parts of the region.

Shearing expenses reduce 4.3 per cent. On average, wool

revenue of $9,800 per farm is surpassed by shearing expenses of an estimated $12,600.

Interest expenditure increases 16 per cent to $34,000 per farm for 2022-23. A higher level of overdraft is required for 2022-23 compared to last season to manage cashflow.

On average, Farm Profit before Tax decreases in 2022-23 by 23 per cent to $134,600 per farm. Hard hill country farms (farm class 3) face the largest decrease in profit due to the higher sheep-to-cattle ratio on these farms.

On average, sheep and beef farms in the region carry 3,650 stock units on a grazing area of around 380 hectares, and thus have an average stocking rate around 9.6 stock units per hectare (SU/ha). Total farm area averages 472 ha meaning around 80 per cent of the farm is used to produce food and fibre.

East Coast

This forecast for East Coast was undertaken prior to Cyclone Gabrielle on 14 February, so as new information comes to hand the outlook for the region will be revised.

Gross farm revenue is forecast to decrease 7.0 per cent from the previous season to average $676,300 per farm for 2022-23, driven primarily by lower returns for sheepmeat. Hard hill and hill country farms have a higher ratio of sheep revenue than finishing farms and will take a harder hit to their revenue this season.

Sheep revenue decreases 12.7 per cent to $374,900 per farm on average for 2022-23. Lamb prices, both prime and store, are forecast to decrease from the high levels of 2021-22 and prices for mutton continue to fall. Sheep revenue contributes around 55 per cent of gross farm revenue, while cattle revenue contributes 35 per cent.

Cattle revenue is steady on last season, averaging $239,300 per farm for 2022-23.

Total farm expenditure is estimated to increase by 4.3 per cent for 2022-23 to an average $520,200 per farm (+$21,400). All categories of expenses are expected to increase except for fertiliser, which is the largest area of expenditure ($87,800), followed by repairs and maintenance ($61,100 and interest expenses ($59,900). Fertiliser expenditure is expected to decrease 1.7 per cent as farmers reduce volumes of fertiliser applied to cut costs. Repairs and maintenance expenditure increases 6.2 per cent on 2021-22.

Interest expenditure increases by 10.3 per cent as interest rates continue to climb. Average overdraft levels are forecast to increase from 2021-22.

Shearing expenses increase by 13.7 per cent to $33,900, exceeding revenue from wool by $14,500.

Farm Profit before Tax decreases by 32 per cent to $156,100 per farm for 2022-23**.**

On average, sheep and beef farms in the region run 5,390 stock units. Livestock occupy a grazing area of around 620 hectares, so the stocking rate averages around 8.7 stock units per ha. Farms in the region average around 780 ha total area meaning around 80 per cent is used to produce food and fibre.

Taranaki–Manawatū

Average gross farm revenue is forecast to decrease by 12 per cent to $662,100 in 2022-23, driven by a large decrease in sheep and cattle revenue from an exceptionally high earning season in 2021-22.

Sheep revenue decreases 16 per cent to $380,500, the second highest nominal sheep revenue on record for the region, as farm-gate prices for lamb and mutton decrease. More lambs were sold as store lambs instead of prime due to a challenging spring resulting in lighter weights pre-Christmas. Sheep revenue contributes around 58 per cent of gross farm revenue in 2022-23.

Wool revenue is forecast to increase 7.0 per cent to $25,900 per farm, which compares to $60,600 per farm in 2015-16**.**

Cattle revenue, which decreases by 10.4 per cent to $196,100, contributes around 30 per cent of gross farm revenue in 2022-23**.**

Dairy grazing revenue decreases 13.3 per cent to $15,600 per farm. Other revenue, which is a more significant contributor to gross farm revenue, decreases 7.0 per cent to $42,000 on average in 2022-23.

Total farm expenditure increases 2.6 per cent to average $480,200 per farm for 2022-23. All categories of expenditure are forecast to increase except for repairs and maintenance as some farmers defer spending in response to a decline in profit margins, while others continue with higher repairs and maintenance spending because gross farm revenue is higher than average.

Fertiliser expenditure – which is equivalent to 15 per cent of total farm expenditure – increases by 4.2 per cent as farmers reduce the volume of fertiliser applied but overall fertiliser prices remain high**.**

Interest expenditure accounts for around 11 per cent of total farm expenditure in 2022-23 and increases by 9.6 per cent, the largest increase within farm expenditure this season. Overdraft balances are expected to increase this season. Interest expenditure averages $52,700.

Shearing expenditure increases 5.8 per cent to $34,800 per farm.

Farm Profit before Tax decreases 37 per cent to $181,900 per farm for 2022-23, which is relatively high in nominal terms but a large decrease from the exceptional season in 2021-22. Real farm profit before tax is estimated at $119,400 for 2022-23.

On average, sheep and beef farms in the region run 4,690 stock units on a grazing area averaging 530 hectares, with a stocking rate of approximately 9.1 SU per hectare. The total area averages about 657 hectares, which means around 20 per cent of the farm is not grazed and may be covered in forestry, woody vegetation, wetlands, and other set-aside areas.

Regional Comment – South Island

Marlborough–Canterbury

Gross farm revenue increases 2.0 per cent to average $954,000 per farm for 2022-23, as cattle and crop revenue bolster falling sheep revenue.

Sheep revenue decreases 9.5 per cent to $347,000 per farm for 2022-23. Sheep revenue contributes 36 per cent of gross farm revenue in 2022-23. Wool revenue increases by 3.9 per cent to $52,700 per farm on average. For High country farms with fine wool to sell, revenue from wool is estimated at $600,500 per farm (with shearing costs equivalent to around 20% of wool revenue).

Cattle revenue increases 8.4 per cent to average $161,800 per farm as a softening of cattle prices from the high levels of 2021-22 is offset by more 1-1.5 year-old and 2-year-plus steers expected to be sold.

Cash cropping revenue, which contributes 26 per cent of gross farm revenue, increases 13.4 per cent to $243,800 per farm on average for 2022-23. Mixed finishing farms average 125 hectares of cash crop area and 98 hectares of small seeds in 2022-23. Grain contract prices are up on 2021-22 but with increased costs the margins are similar. Sixty-five per cent of total farm revenue is from cash crop and small seeds for this class of farm.

Dairy grazing revenue increases 14.3 per cent to $92,100 per farm on average, which is equivalent to almost 10 per cent of gross farm revenue.

Total farm expenditure increases 9.2 per cent to average $805,100 per farm for 2022-23. Five years ago, total farm expenditure was just below $640,000 per farm on average.

Fertiliser expenditure increases by a substantial 29 per cent, following a 21 per cent increase from 2020-21 to 2021-22. Fertiliser expenditure for 2022-23 is estimated at $128,400 per farm. With the importance of cropping for many farms in the region, fertiliser expenditure is difficult to reduce because the impact on revenue is high. Despite this difficulty, farmers again reduced the volume applied – in total and per hectare – but fertiliser expenditure increased because of the increase in the applied price of fertiliser.

Weed and pest control costs increase by 3.3 per cent to average $55,800 per farm in 2022-23 as prices for chemicals rise steeply.

Repairs and maintenance and cultivation and sowing expenditure increase by 2.5 per cent and 8.8 per cent respectively. Repairs and maintenance spending is elevated on some farms following floods in 2021, and for some further flooding in 2022.

Interest expenditure increases 16.3 per cent due to average $70,100 per farm for 2022-23. Term liabilities and overdraft levels are estimated to increase from 2021-22 but the main pressure on debt-servicing is from increased interest rates.

Farm Profit before Tax decreases 25 per cent to $148,900 per farm for 2022-23.

On average, sheep and beef farms in the region run about 4,820 stock units on a grazeable area of 1,020 hectares. High Country and foothill farms inflate the average area of farms in the region because Farm Class 1 High Country farms have a grazing area around 9,490 hectares for example, whereas Finishing-Breeding farms (Farm Class 6) have a grazing area averaging around 500 hectares.

Otago–Southland

Gross farm revenue decreases 12.6 per cent to average $603,400 per farm for 2022-23. The largest drivers are decreased sheep and cattle revenue. Revenue from wool and sheep combined accounts for nearly three-quarters of gross farm revenue.

Sheep revenue decreases 17.5 per cent to $411,500 per farm for 2022-23 due to lower farm-gate prices for prime and store lambs and for adult sheep combined with fewer sheep sold.

Wool revenue decreases 3.2 per cent to $45,400 per farm.

Cattle revenue decreases 6.8 per cent to average $85,600 per farm for 2022-23. The number of cattle on farm is steady on the previous season as farm-gate prices for cattle soften from the highs of 2021-22.

Total farm expenditure increases marginally by 0.4 per cent to $479,700 for 2022-22 with increased expenditure across most categories offset by reductions in spending on fertiliser and repairs and maintenance. Farmers are watching their budgets carefully and managing expenditure tightly.

Expenditure for repairs and maintenance decreases by 12.1 per cent in response to lower farm-gate prices and other expenditure areas increasing under inflationary pressure.

Fertiliser expenditure decreases 7.8 per cent as volumes applied are reduced. In particular, less nitrogen fertiliser, but more phosphate and lime, is applied.

Fuel expenses increase by 17.0 per cent, which means it is the largest mover, followed by interest expenditure which increases 9.0 per cent to average $52,100 per farm.

Farm Profit before Tax decreases 42 per cent to average $123,700 per farm for 2022-23, a very large drop in profitability from the high level in 2021-22 ($212,700). Real farm profit of $81,200 (farm profit adjusted for inflation), is more than 20 per cent below the 10-year average.

On average, sheep and beef farms in the region run 4,380 stock units on a grazeable area averaging 800 ha. As in other parts of the South Island, the average farm size is inflated by Farm Class 1 High Country farms, which average 6,175 hectares, whereas

Finishing-Breeding farms average 570 hectares and Finishing farms average 260 hectares.

A small portion of southeastern Otago experienced a meteorological drought in mid-February 2023 while the remainder of the region remained extremely dry. A dry summer for the region is the third consecutive year of dry and drought conditions. The estimates for 2022-23 sheep and beef farm financials shown here for Otago-Southland will change depending on the length and severity of dry conditions, although farmers anticipated a third dry summer and adjusted some farm practices. The consecutive dry periods will have an impact in 2023-24 because the performance of lighter-weight ewes is reduced through mating, and lambing percentages will likely decrease.