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Report Highlights:

Since hitting peak numbers in 2016, the New Zealand national cattle herd has been very gradually declining and this is expected to continue in 2023. This is largely a result of policies associated with waterway exclusions, winter grazing restrictions, nitrogen leaching, and pricing agricultural emissions all impacting the sector and driving some land use change from livestock to forestry. FAS/Wellington is forecasting slightly lower adult cattle slaughter in 2023, although calf slaughter is expected to rise. Overall beef production and exports are also forecast to decline slightly. Although New Zealand beef exports are forecast to ease, they are still expected to remain strong as a result of robust demand in key markets, improved logistics, and a weak New Zealand dollar.

Executive Summary:

Since hitting peak numbers in 2016, the New Zealand national cattle herd has been gradually declining and this is expected to continue in 2023. The main contribution to the decline in recent years is government policies associated with waterway exclusions, winter grazing restrictions, and mitigating nitrogen leaching. In the long-term, the national beef industry also faces a challenge as a result of the New Zealand Government's intent to price agricultural emissions by 2025. Because of these factors, there has been a shift of some land out of beef and sheep farming and into forestry, and this trend is expected to continue. However, despite these factors current farm gate beef prices have held quite consistent for farmers, particularly compared to lamb. As a result, many farmers remain optimistic towards beef enterprises on farm and the decline in cattle is expected to be much more gradual than the fall in sheep numbers.

Because of the slowly shrinking herd, in 2023 FAS/Wellington is forecasting slightly lower adult cattle slaughter numbers. However, calf slaughter is expected to rise to the highest since 2015. This is due to the changing terms of supply for the country's largest dairy processor, where calves of farmers that supply milk to this processor can only be euthanized on-farm when there are humane reasons for doing so. This change is being implemented in 2023, and as a result more calves are expected to either enter the value stream at slaughter or enter into the beef herd.

Climatically, the year has got off to a turbulent start, as cyclones in the North Island severed logistics and processing in two major regions (accounting for 18 percent of the national beef herd). However, the full effect of the cyclone damage is still very unclear at the time of this report. In addition, the South Island has experienced a third dry summer, impacting pasture growth in the region. Although labor remains a consistent concern, COVID-19 impacts on beef processing waned in the second half of 2022 and is expected to have minimal impact on 2023.

Although beef exports are expected to fall slightly due to reduced slaughter, volumes are still expected to remain strong, and optimism is present in the industry post-pandemic. A weak New Zealand dollar, improved logistics, as well as expected strengthening import demand in the United States and continued demand in China are supporting export volumes.

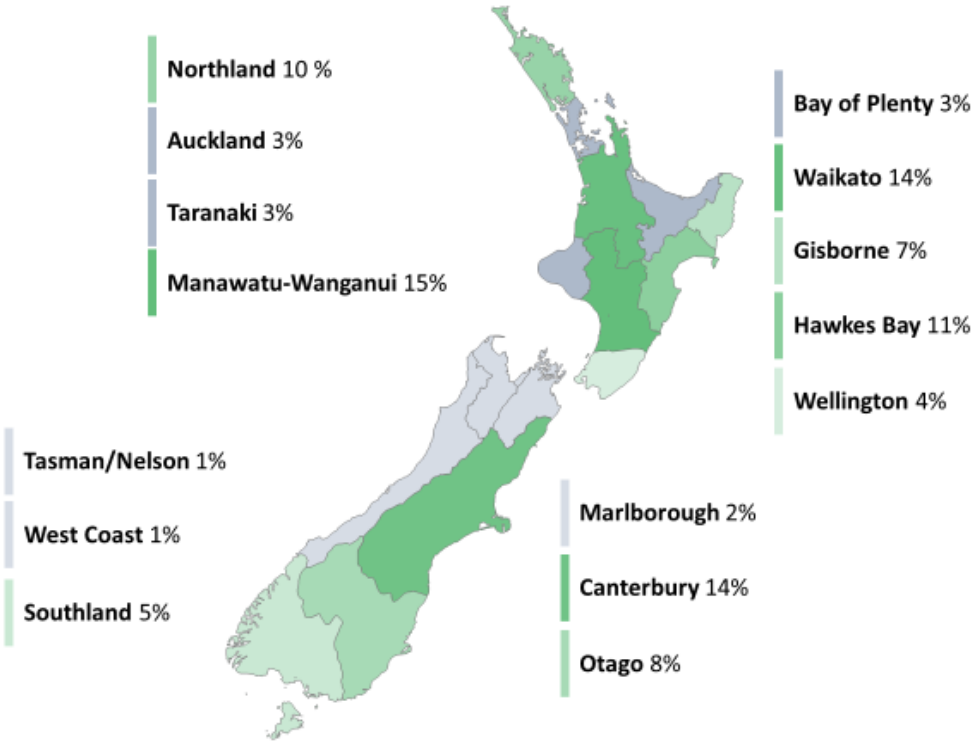
Note: The GAIN Marketing Year (MY) is the same as the calendar year (CY), January 1 to December 31. For the purpose of this report always refer to MY unless otherwise stated. For foreign exchange rate between New Zealand Dollar and United States Dollar, the rate used in this report is NZ$ 1.00 = US$ 0.62.

Background

New Zealand is a major beef producer and exporter, and typically is the sixth largest exporter in the world. The beef herd is spread throughout the country, with 70 percent situated in the North Island and 30 percent in the South Island (see Figure 1). The New Zealand cattle sector is unique because of its integration with the huge dairy industry, and approximately 70 percent of the adult cattle slaughtered each year (and essentially 100 percent of the calves slaughtered) have their origin in the dairy industry. Of the animals raised specifically for beef, many of them are dairy breeds or crosses.

With New Zealand's temperate climate, beef cattle production is almost entirely from pastural grazing, with only one major feedlot located in Canterbury. As a result, the vast majority of exports are grass-fed beef. Since the beef industry is pasture-based, and the dairy industry has a huge contribution to beef production (for example culled dairy cows), beef production and beef exports are highly seasonal in New Zealand. These peak before the winter in May and June, and then fall sharply until recovering in November and December with the onset of summer.

Figure 1: Beef Cattle by Region



Source: StatsNZ, FAS/Wellington

New Zealand Herd Size

National cattle numbers for both beef and dairy has been in a gradual decline since the national herd peaked at 6.1 million in 2014 and 2016. In the last three years the national dairy herd has been decreasing by less than one percent per year, while the beef herd has been static. A slow decline is anticipated to continue in the coming years, as government policy becomes more enforced around pricing agricultural emissions, carbon sequestration, and freshwater management. As a result of these policies, there will be increased focus on changing farming practices on specific land classes. In particular more marginal pastoral country that currently has sheep and beef but has potential for forestry would be the most effected. This is expected to result in some hill country land continuing to shift from livestock, reducing herd numbers. Some of the key factors impacting this trend include:

Agriculture Emissions Pricing: On October 11, 2022, New Zealand Prime Minister during this time - Jacinda Ardern - announced the Government's consultation document to establish a farm-level, split-gas levy to price agricultural greenhouse gas emissions. Modelling work that was completed has shown that this proposal should meet the government's Zero Carbon Act 2030 methane reduction target. However, the modelling highlighted that pricing agricultural emissions may cause a reduction in overall output from the red meat sector (estimated 20 percent less) and some reduced output from dairy (5 percent less). Much of this attributed to land use change from extensive pastoral operations into forestry. This would have a significant effect on the national beef herd numbers. As a result, the reaction from industry organizations and lobby groups was this would severely impact rural communities. However, the legislation is still yet to be passed through the Government and will not be in force until 2025, therefore the potential impact is still yet to be understood.

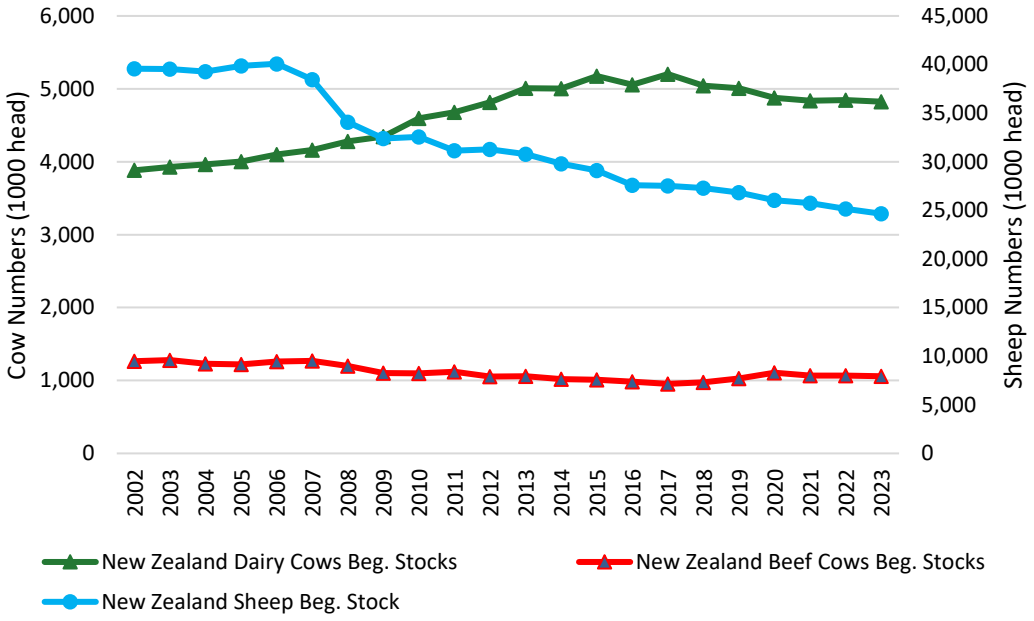
Carbon Sequestration: Since 2008, agricultural operations have been able to contribute to the Government's emissions trading scheme (ETS) through the establishment of forestry blocks of more than one hectare. Recognized forestry stands under the ETS are awarded units (NZUs), which can be sold to organizations to lower their greenhouse gas footprint, recognizing the benefits of forestry carbon sequestration. As a result, forestry has become more financially feasible for land-use on marginal-classed pastoral land typical for sheep and beef operations, where through planting, NZUs become available to sell and later landowners collect revenue at harvest. The recent Government announcement on emissions pricing still regards the ETS as the best recognized carbon sequestration method. As a result, industry is anticipating that even more sheep and beef farmland in the future will be destined for forestry planting as the country targets net zero emissions and introduces emissions pricing.

National Policy Statement for Freshwater Management 2020 (NPSFM): This statement sets out the objectives and policies for freshwater management under the Resource Management Act 1991 and also came into effect on September 3rd, 2020. The purpose of these regulations is to mitigate against the risk of sediment loss, phosphate runoff, nitrogen leaching and E.coli. The biggest impact for cattle is that it regulates by 2025 the exclusion of cattle from permanent and ephemeral waterways and the management of winter forage crops (intensive grazing). Historically, one of pastoral New Zealand agriculture major

strengths has been the natural asset for stock to access clean drinking water. As a result of these plans, the capital cost that will occur for farmers to implement permanent fencing and re-subdivision of properties, including the install of reticulated water schemes, will be substantial. This will no doubt become a tipping point to the long-term feasibility of extensive pastoral operations, including cattle, where most of the New Zealand beef production is derived.

These factors will have the largest impact on the New Zealand sheep and beef industry and are expected to cause a decline in the numbers of both sheep and cattle. Sheep farming is the largest land use competitor to beef cattle, and the national sheep herd continues to decline at a rate of two percent per year with no indication of a change in trajectory (see Figure 2).

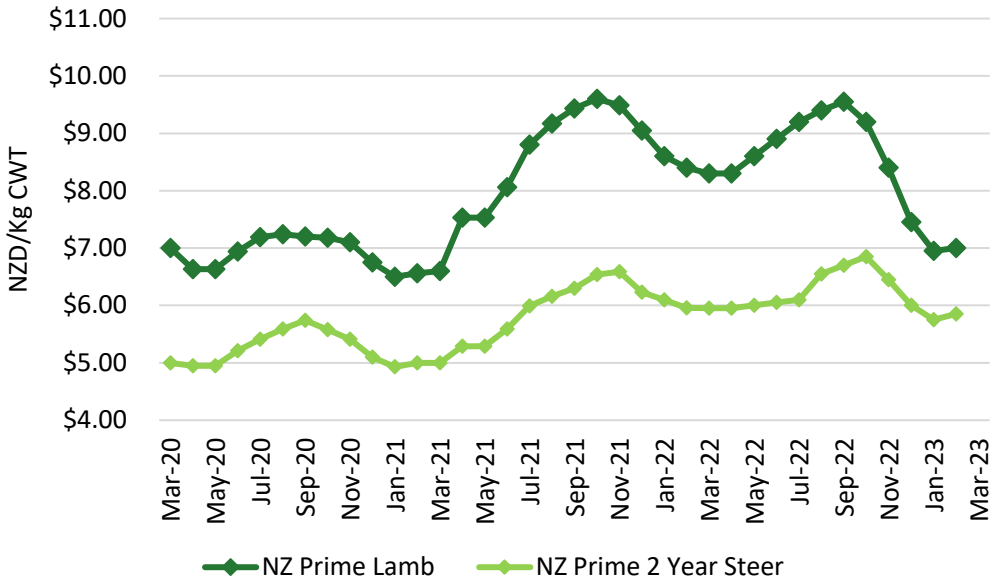
Figure 2: New Zealand Stock Numbers



Source: USDA - Products, Supply and Distribution (PSD) & StatsNZ

Industry analysts estimate that sheep numbers will continue to decline at a faster rate than cattle. Recent beef prices on-farm in relation to lamb has influenced farmers deciding between sheep and cattle. So far in 2023, the premium of prime lamb over prime steer has fallen to the narrowest level in the last three years, dropping to only about NZ$1.15 to NZ$1.20 per Kilogram (Kg) of carcass-weight equivalent (CWE) (US$0.71 to US$0.74 per Kg CWE). This is compared to a spread of NZ$2.85 per Kg (US$1.77) as recently as September 2022 (see Figure 3). In addition, sheep production continues to be impacted by very low wool prices and is even more impacted by labor issues for shearing and shepherding. As a result, many industry contacts have expressed that producers are likely to focus on maintaining cattle numbers over sheep.

Figure 3: New Zealand Farm Gate Price ($NZ/Kg)



Source: BakerAg

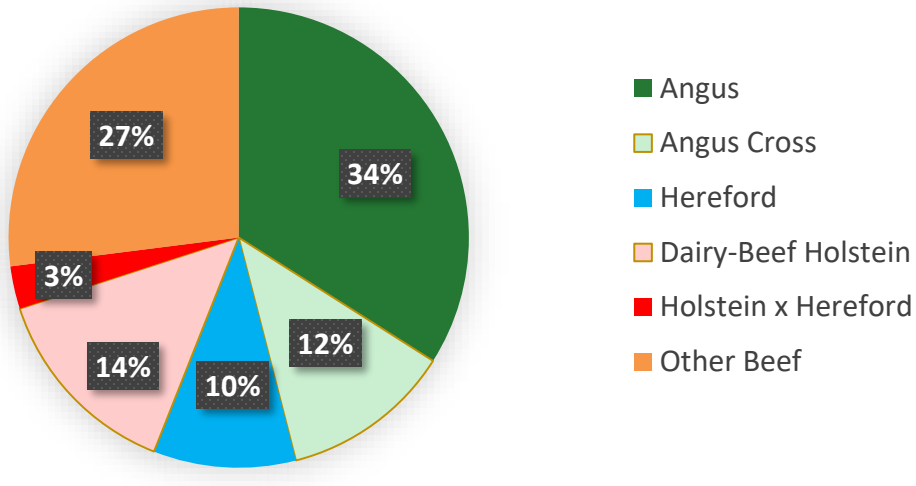
Cattle Slaughter

2023

FAS/Wellington has revised the total cattle slaughter estimate in 2023 to 4.64 million head, compared to 4.59 million in 2022. This has been driven by the anticipated increase in calf slaughter, which is a result of New Zealand's largest dairy processor adding in key clauses to its terms of supply, where starting in June 2023 calves of farmers that supply milk to this processor can only be euthanized on-farm when there are humane reasons for doing so. In addition, all of these farms must ensure all non-replacement calves enter a value stream - either to be grown out for beef, slaughtered for calf-veal, or for petfood. As a result, FAS/Wellington forecasts calf slaughter to rise to the highest level since 2015 at 1.95 million head.

With the mentioned changes around the terms of supply requiring all calves to enter a value stream, industry is anticipating a significant change in the breed composition of beef herds. Angus is the most popular breed for livestock farmers (see Figure 4). However, beef from dairy breeds as well as beef-dairy crosses are expected to continue to increase their share. Industry is also working on improving the genetics of dairy-beef crosses. Currently, most of the calves that are euthanized and do not enter the value stream are Jersey or Jersey cross.

Figure 4 – Beef Cattle Breeds

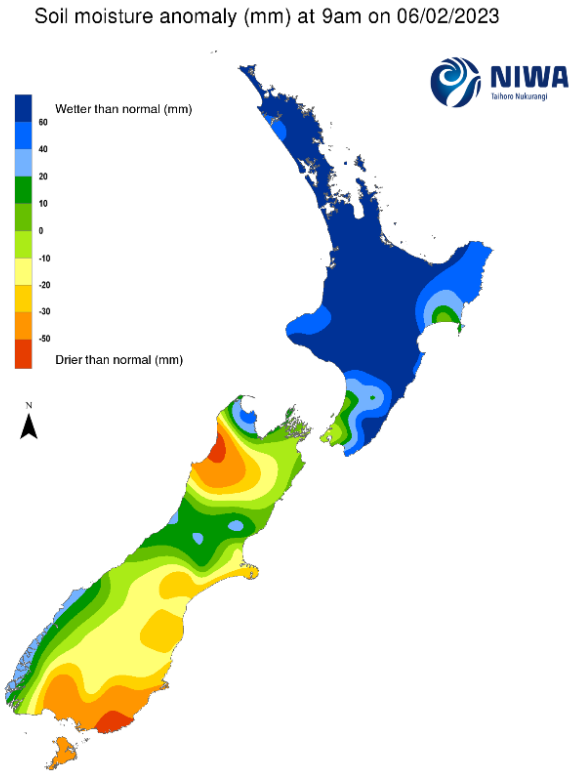


Source: Beef and Lamb NZ

Because of the slowly shrinking herd, cow and other adult cattle slaughter are expected to fall slightly from 2022. Current New Zealand Meat Board data is showing that for January 2023, the national adult cattle slaughter numbers are 24,860 head less than the previous January (10.5 percent behind). Typically, January accounts for about 8 percent of yearly slaughter.

The two main islands of New Zealand have experienced quite different starts to the season in climatic extremes (Figure 5). In mid-2022, the National Institute of Water and Atmospheric Research (NIWA) forecasted that the country would experience a third consecutive La Niña weather pattern. As a result of this, the North Island has in the past two months experienced extreme cyclones and heavy rain, while the South Island is encountering the effects of a third successive dry summer. In both early January and early February, two major cyclones impacted New Zealand: Hale, and Gabrielle. While Hale caused major flooding and damage in the Northland regions of the country, Gabrielle decimated and cut off the Hawkes Bay and Gisborne regions completely (which account for 18 percent of beef herd). As of the end of February, access from farms in much of Hawkes Bay and Gisborne regions remained limited, and multiple slaughter facilities closed due to the devastation caused by the cyclone. The impacts of the cyclones are still being assessed, however bottl necks at processing are anticipated to occur and impact slaughter numbers.

Figure 5: Soil Moisture February 2023



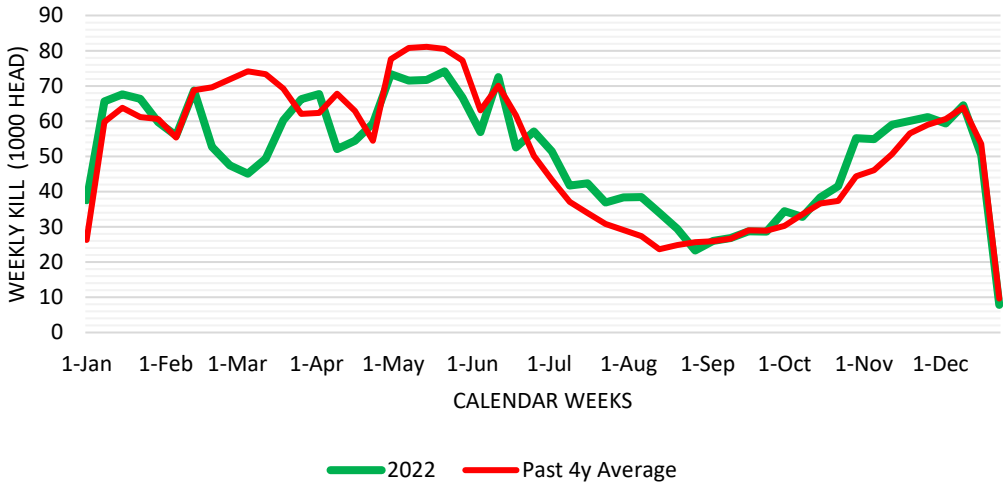
Source: NIWA

Although COVID-19 impacts have subsided at slaughter facilites, labor continues to be a challenge for farming operations and meat processing companies, already affecting kill numbers in certain regions in 2023. Even though international borders are now open for immigrant workers, the unemployment rate in the fourth quarter of 2022 was only three percent. As a result, the labor market has been very tight, especially for seasonal staff at slaughter facilities. Unfortunately, with rising interest rates and inflation anticipated in the coming year, many organizations are also anticipating an exodus of skilled staff to other sectors or to Australia.

2022

Year-end data from StatsNZ shows that 2022 cow (down nearly five percent), other adult cattle (down four percent), and calf slaughter (down less than one percent) all fell compared to 2021. Although slaughter in the first half of the year was even further behind (down 12 percent for cows and 6 percent for other adult cattle), there was a uplift in productivity during the second half of the year. The backlog of slaughter during the first half of the year was as a result of the impacts of the Omicron COVID-19 case surge in March and April, which severely affected livestock logistics and slaughter companies. However, slaughter numbers later in the year were significantly higher than normal (see Figure 6).

Figure 6: 2022 Weekly Beef Slaughter Numbers (excluding calves)



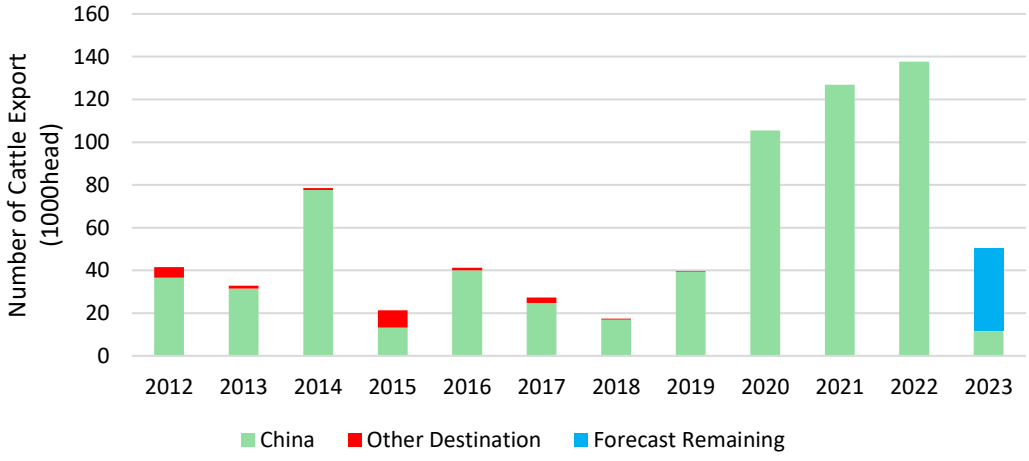
Source: NZ Meat Board

Cattle Exports

FAS/Wellington's forecast for New Zealand live cattle exports remains at 50,000 head. The cutoff date is April 30th, 2023, after which all live exports by sea from New Zealand will cease. In January 11,574 head were exported, and a strong pace of exports is expected to continue up to the cutoff date.

In 2022, a record 137,619 head of cattle were exported, all to China. These are mostly dairy cows and heifers destined for China's dairy sector.

Figure 7 – New Zealand Live Cattle Exports by Destination



Source: Trade Data Monitor and FAS/Wellington

Table 1: New Zealand Cattle Production, Supply and Demand

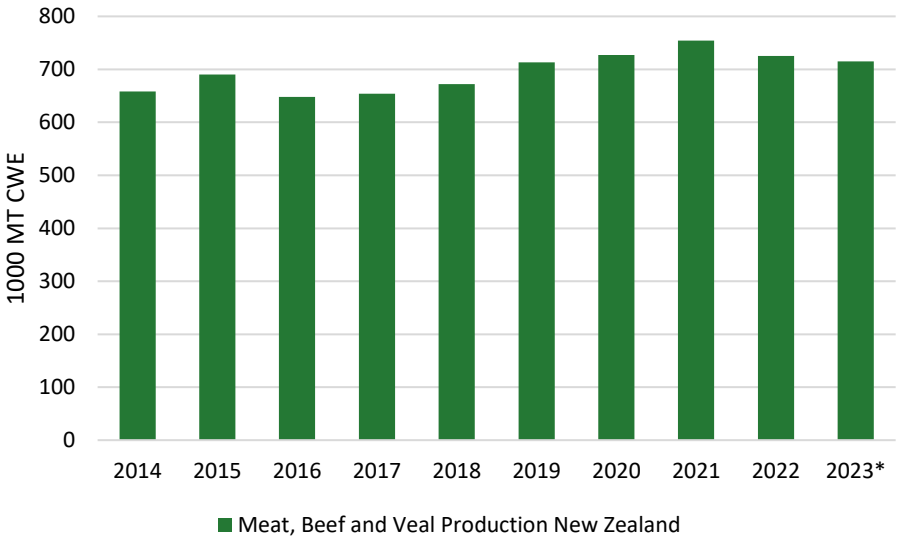
Animal Numbers, Cattle	2021		2022		2023	
Market Year Begins	Jan 2021		Jan 2022		Jan 2023	
New Zealand	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Total Cattle Beg. Stks (1000 HEAD)	10083	10083	10150	10150	10071	9965
Dairy Cows Beg. Stocks (1000 HEAD)	4836	4836	4846	4805	4825	4740
Beef Cows Beg. Stocks (1000 HEAD)	1067	1067	1067	1067	1060	1030
Production (Calf Crop) (1000 HEAD)	5183	5460	5121	5159	5050	5010
Total Imports (1000 HEAD)	0	0	0	0	0	0
Total Supply (1000 HEAD)	15266	15543	15271	15309	15121	14975
Total Exports (1000 HEAD)	133	127	135	138	50	50
Cow Slaughter (1000 HEAD)	1028	1028	985	980	1005	960
Calf Slaughter (1000 HEAD)	1892	1892	1880	1875	1850	1950
Other Slaughter (1000 HEAD)	1810	1810	1715	1737	1700	1725
Total Slaughter (1000 HEAD)	4730	4730	4580	4592	4555	4635
Loss and Residual (1000 HEAD)	253	536	485	614	500	500
Ending Inventories (1000 HEAD)	10150	10150	10071	9965	10016	9790
Total Distribution (1000 HEAD)	15266	15543	15271	15309	15121	14975
(1000 HEAD)						

Beef Production

2023

FAS/Wellington has revised the forecast for New Zealand beef production in 2023 to 715,000 metric tons (MT) carcass-weight equivalent (CWE) (Figure 8), which if realized would be down about two percent from 2022. This is primarily a result of lower expected adult cattle slaughter numbers. In addition, the national dressing out carcass weights are anticipated to drop from 158.5Kg (CWE) per head to 154.3 Kg (CWE) per head, compared to the previous year.

Figure 8: New Zealand Annual Beef Production



Source: PSD (*FAS/Wellington forecast)

The primarily reason for the lower slaughter weights is the anticipated significant increase in dairy calf slaughter. Another factor is that it is the third year in a row of dry summer conditions experienced in the South Island (see Figure 5). Similar to the last two years, an impact on carcass weights will likely be seen in the fall kill as a result of farms off-loading slaughter stock at lighter weights in order to prioritize feed for breeding stock.

As mentioned, labor is expected to continue to impact beef processing. However, while last year there was a bottleneck in the fall peak kill because of COVID-19 outbreaks, that is not expected to be the case this year and things have largely returned to pre-pandemic levels. There is some concern in the industry, though, about how beef processors will handle a much larger influx of calves to be processed in the coming years.

The cyclones during January and February are also expected to impact beef processing. As mentioned, the full extent of the cyclone damage experienced in Hawkes Bay and Gisborne remains still to be fully understood, however, with logistics and local processing remaining severed at the time of this report (two weeks following the event), this will be significant. There have been reports of processing space being made available elsewhere and third-party processing being carried out on behalf of the impacted processors to try keep continuity. The impacted regions represent 18 percent of the national beef herd, and over the last six years over 60 percent of its regional slaughter and beef production occurred in the first half of the year.

2022

New Zealand beef production in 2022 was 728,000 MT (CWE), down three percent from 2021. As mentioned, slaughter and beef production were considerably behind pace during the first half of the year because of COVID-19 impacts, which caused staffing shortages in processing facilities in the second quarter of 2022. However, although plant openings are largely seasonal, there was a prolonging of operation for the major processors to catch up. As a result, beef production in the second half of the year made up for lost ground and was able to largely offset the previous delays.

Domestic Consumption

FAS/Wellington forecasts domestic beef consumption in New Zealand in 2023 at 85,000 MT (CWE), which is similar to previous years (87,000 MT CWE in 2022). Domestic consumption only accounts for a small part (~11 percent) of national production. With less domestic production and strong export demand, it is not anticipated that consumption will increase. Along with the rest of the world, New Zealand consumers are experiencing price inflation at supermarkets, with prices as of January 2023 having increased ten percent year over year. As a result, this is expected to limit any growth of beef consumption, and instead encourage consumption of lower-cost animal proteins such as chicken.

Beef Exports

2023

FAS/Wellington forecasts 2023 beef exports at 640,000 MT (CWE), about two percent less than 2022 as a result of reduced beef production. However, a number of factors are expected to support continued robust export volumes. Demand for red meat continues to be strong globally, with many markets showing indications of sales volumes trending back towards pre-pandemic levels. Also, exporters have expressed optimism of increasing demand from the United States in the second half of the year. This is because there is anticipation that as U.S. herd rebuilding starts after a multi-year drought, that U.S. cow slaughter will also decline, necessitating increased imports of lean manufacturing beef. In addition, global recession and increasing interest rates are anticipated to affect customer spending away from higher-end cuts such as steaks, and as discretionary spending tightens it could drive demand towards grinding beef such as from New Zealand. And finally, the relatively weak New Zealand dollar is also supporting New Zealand beef export competitiveness (see Figure 9).

Figure 9: USD to NZD Exchange Rate

Source: Wall Street Journal

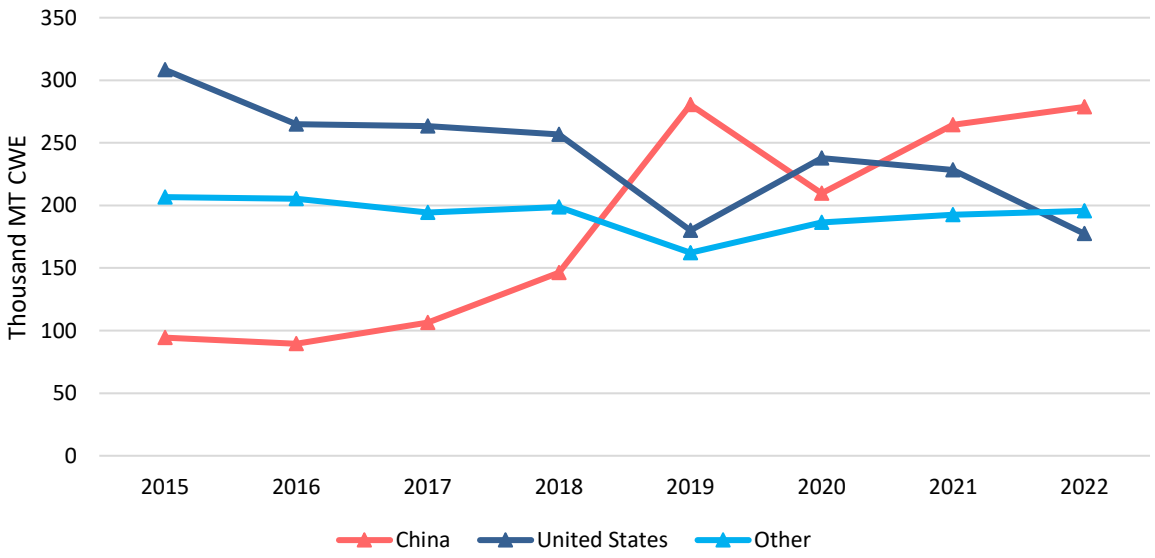
In January, beef exports from New Zealand were 56,180 MT (CWE), up over three percent on the January 2022 volume. About nine percent of annual exports are shipped in January.

2022

2022 exports were 652,000 MT (CWE), down five percent from 2021, but still the second highest volume on record. Although exports are typically very seasonal, more was exported during the second half of 2022 than usual because of the supply chain and slaughter disruptions encountered at the start of the year as a result of COVID-19.

China continued to be New Zealand's largest market for beef, taking almost 43 percent of total exports (see Figure 10) and shipments to China increased despite overall lower New Zealand beef exports globally. Exports to the United States saw the largest drop, down 22 percent and accounted for about 27 percent of total exports. This is a continuation of a longer-term trend, as in 2015 the United States was the largest importer and accounted for 50 percent of New Zealand exports. Japan remains the third largest market, growing in the last two years to over six percent.

Figure 10: New Zealand Annual Beef Exports by Volume



Source: Trade Data Monitor

Beef Imports

New Zealand imports a relatively small amount of beef, almost entirely from Australia. FAS/Wellington forecasts 2023 imports at 10,000 MT (CWE), nearly the same as 2022.

Table 2: New Zealand Beef Production, Supply and Demand

Meat, Beef and Veal	2021		2022		2023	
Market Year Begins	Jan 2021		Jan 2022		Jan 2023	
New Zealand	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Slaughter (Reference) (1000 HEAD)	4730	4730	4580	4592	4555	4635
Beginning Stocks (1000 MT CWE)	0	0	0	0	0	0
Production (1000 MT CWE)	754	754	725	728	720	715
Total Imports (1000 MT CWE)	10	10	11	11	10	10
Total Supply (1000 MT CWE)	764	764	736	739	730	725
Total Exports (1000 MT CWE)	683	685	647	652	630	640
Human Dom. Consumption (1000 MT CWE)	81	79	89	87	100	85
Other Use, Losses (1000 MT CWE)	0	0	0	0	0	0
Total Dom. Consumption (1000 MT CWE)	81	79	89	87	100	85
Ending Stocks (1000 MT CWE)	0	0	0	0	0	0
Total Distribution (1000 MT CWE)	764	764	736	739	730	725
(1000 HEAD) ,(1000 MT CWE)						

Attachments:

No Attachments