USDA United States Department of Agriculture
Foreign Agricultural Service

GAIN Global Agricultural Information Network

Voluntary Report – Voluntary - Public Distribution **Date:** January 03, 2023

Report Number: NZ2022-0020

Report Name: New Zealand Sheep Production and Trends

Country: New Zealand

Post: Wellington

Report Category: Livestock and Products

Prepared By: Robere Hall

Approved By: Levin Flake

Report Highlights:

New Zealand is the second largest exporter of lamb meat in the world, only slightly below Australia, and also one of the top exporters of wool. Today the national sheep herd is far less than half of its peak of approximately over 70 million in the 1980s, having declined to only 26 million today. Despite the national flock continuing to decline, during the last decade meat production and exports have remained stable. Wool continues to be generally a challenging by-product for the sheep industry, and in many instances it is proving more costly at a farm level to shear (harvest the wool) than the financial returns from selling it. The New Zealand sheep farming industry is expected to be heavily impacted by soon-to-be-imposed government policies, including on agricultural emissions pricing.

Executive Summary:
New Zealand is the second largest exporter of lamb meat in the world, only slightly below Australia, and also one of the top exporters of wool. New Zealand exports approximately NZ$3.8 billion (US$2.6 billion) of lamb every year, and NZ$540 million (US$370 million) of wool. Since the arrival of the early settlers, sheep farming expanded in New Zealand and until early 1990 it was the country's economic backbone due to the value of exports of meat and wool. However, in recent decades dairy farming has surpassed sheep farming as the country's largest agricultural industry.

Today the national sheep herd is less than half of its peak of approximately over 70 million in the 1980s, falling to only 26 million today. Despite the national flock continuing to decline, during the last decade meat production and exports have remained stable. This is as a result of continued enhancement in genetics as well as continuously improving farm operational systems.

Wool, however, continues to generally be a challenging by-product of the sheep industry. Unlike Australia, where the total value of wool exports is often similar to that of lamb exports, this is not the case in New Zealand. The majority of breeds in New Zealand produce mid to coarse micron wool, the price of which in recent years has been very low. In fact, in many instances it is proving a more costly exercise at a farm level to shear (harvest the wool) than the financial returns from selling it.

The sheep farming industry is expected to be heavily impacted by soon-to-be-imposed government policies, especially for agricultural emissions pricing. This is especially the case as many of the country's sheep farms are situated in remote more marginal country, land which is also attractive for pine forestry. This is expected to force the industry to continue to adapt, and for example, the industry has responded with low emissions sheep research and breeding programs. Despite continued innovation, the sheep industry is believed to be one of the industries that will be most impacted by this legislation.

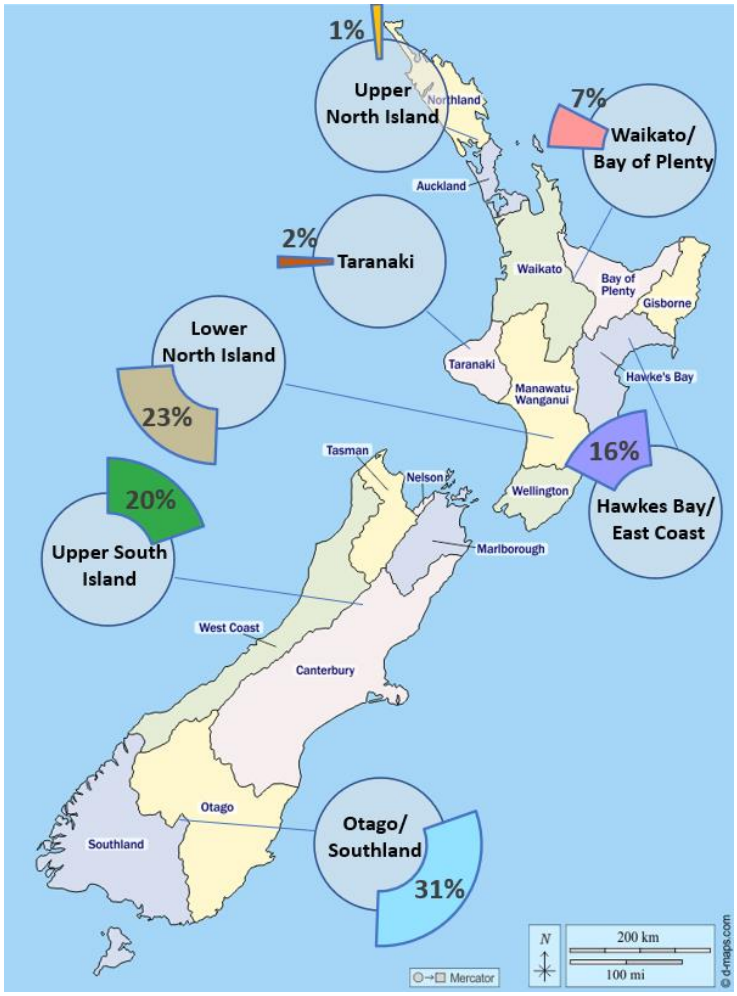
Note: The GAIN Marketing Year (MY) is the same as the calendar year (CY), January 1 to December 31. For the purpose of this report always refer to MY unless otherwise stated. For foreign exchange rate between New Zealand Dollar and United States Dollar, the rate used in this report is NZ$ 1.00 = US$ 0.63.

Background

The first sheep in New Zealand arrived with the first explorers to New Zealand in the late 1700s. However, the first farms were not operational until the 1840s, and expanded across the country over the next 100 years, with large clearings of native bush (vegetation) undertaken to make way for pastoral sheep farms. From the beginning the industry was focused on exports, with the first ever refrigerated shipment of meat sent to the United Kingdom in 1882. During the last 100 years the country has developed their own breeds adapted to the New Zealand climate.

Sheep meat and wool exports provided the country with its largest source of agricultural (and national) revenue for almost a century, until the dairy industry surpassed the sheep industry in the early 1990s. Sheep farming in New Zealand has synergies with beef cattle farming, due to the complimentary pastoral grazing behaviours of the two species, and as a result many farms include both cattle and sheep. Today there is approximately 23,400 sheep and beef farming operations covering 45 percent of the total agricultural area.

Figure 1: Distribution of New Zealand's Sheep Flock

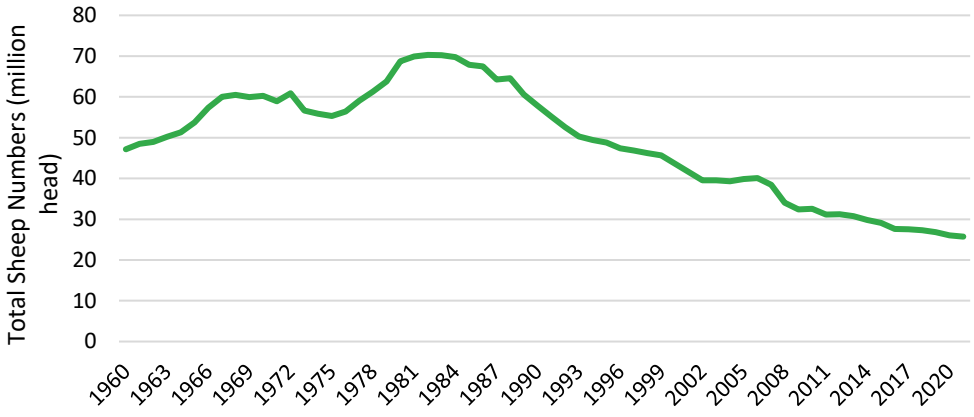


Source: StatsNZ, base map from d-maps.com

National Numbers

Sheep farming in New Zealand was most profitable in the 1950s and 60s and following this period the national herd peaked in 1982 at 70.3 million head. However, in the 1980s a change in government and economic reforms saw the removal of farming subsidies, which was the catalyst for the beginning of the decline in sheep numbers. Today the national herd has fallen to approximately 26 million head (Figure 2).

Figure 2: National Herd Numbers



Source: StatsNZ

This decline is expected to continue over the next decade. This is as a result of many of new rules and regulations around stock exclusions, winter grazing management and emissions pricing. Although many of these regulations pending are primarily targeted towards cattle, they could significantly impact sheep farming practice and potentially come under similar scrutiny in the future.

Emissions pricing will have a major impact on sheep farming operations, as although cattle are regarded as larger emitters of biogenic methane, much of the farmland utilized for sheep farming is ideal country for forestry plantations for sequestration and carbon credits. Therefore, land use competition for traditional sheep farming land will increase in the future, as revenue from emissions trading could prove more feasible. Government modelling forecasts that with the introduction of emissions pricing implemented in 2025, by 2030 there could be a 20-percent decrease in sheep and beef production. However, rapid forestry expansion will be constrained by limited number of tree stocks available per year, and as a result the continued decrease in sheep numbers is anticipated to be gradual.

Future/Outlook

Despite the expected continued decline in sheep numbers, production and exports of lamb meat are not expected to fall at the same rate, due to continued productivity improvements. In fact, there is some expectation that despite falling numbers, meat production could remain stable, although wool is predicted to continue to decline. Some of the reasons for expected productivity increases include:

Genetic Gain

New Zealand is regarded as a global leader in red meat genetics, primarily in the sheep sector. Much of the sustained export volumes with decreasing numbers can be attributed to genetic breeding initiatives. Since 1998 the country has consolidated its industry performance recording and genetic evaluations into one database. This has allowed for greater selection for superior genetics to grow profitability, and now sustainability for the industry. Some examples of genetic work and traits carried out by breeders are growth rates, wool micron, birth weights, pasture conversion efficiency and more recently, methane reduction traits.

Hair/Wool-less Sheep Breeds

With challenges around the low-farm gate returns from mid and coarse micron wool (non-Merino), there are now government funded trials taking place that are focused on breeds that do not require shearing at all. These are shedding or hair growing breeds that have been previously quite unique and geographically isolated in New Zealand. The opportunity with these breeds is not only the removal of the constraints of shearing and managing the fleece, but also the breed survivability in warmer regions of New Zealand, such as the far north, where common breeds struggle. In addition, these breeds are typically high meat yielding as energy is no longer being utilized for production of wool by the animal.

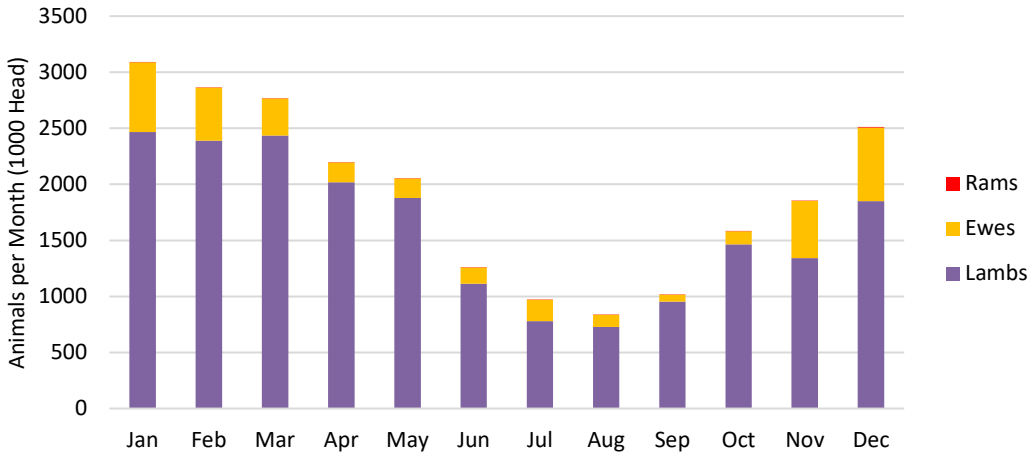
Improving pastures

When sheep farming began in New Zealand, the industry relied, and to some extent still does, on native pasture species. In more recent times the introduction of new grasses, legumes, and forage crops has resulted in vastly improved performance, shifting nutritional focus for sheep grazing to a higher protein and metabolizable energy diet. As a result, improved agronomy and nutrition on sheep farming operations has contributed and is expected to continue to drive live weight gain for meat production.

Processing

Sheep slaughter facilities are very seasonal in production in line with the New Zealand pasture growth curve (Figure 3). As a result, many of the staff who work at the facilities across the country are seasonal workers, which is increasingly becoming more of a challenge for many companies with maintaining a skilled workforce. Because of labor constraints, innovation and large amounts of investment is being applied by lamb processing and export companies in regard to automating and mechanizing much of the processing. In addition, most slaughter companies do pay premiums for meat over June to August when production levels are at their lowest, as an incentive to keep facilities operational.

Figure 3: New Zealand Seven Year Average Monthly Kill



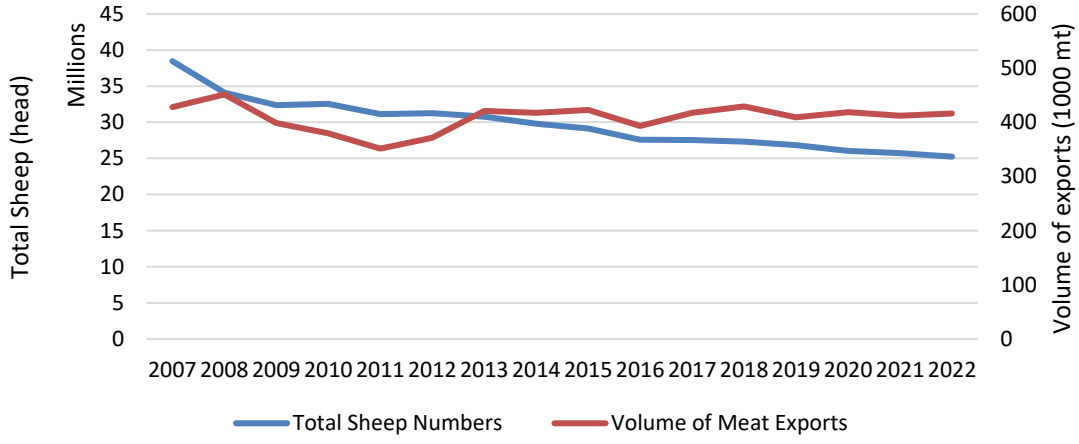
Source: StatsNZ

Production

Meat

Despite the gradually shrinking New Zealand herd from over 31 million in 2012 to about 25.7 million at the end of 2021, lamb production over the same period has stayed consistent at an average kill of 455,070 metric tons (MT) of carcass weight (CWE) and global exports at an average of 411,227 MT CWE per annum.

Figure 4: New Zealand Sheep Numbers vs Meat Exports



Source: StatsNZ and Trade Data Monitor LLC

At a processor level, nationally there re approximately 35 slaughter facilities, all within close proximity to those farming regions specializing in sheep slaughter. There are 15 processor companies that are part of the Meat Industry Association, the largest of these being: Silver Fern Farms, ANZCO, Alliance Group and AFFCO.

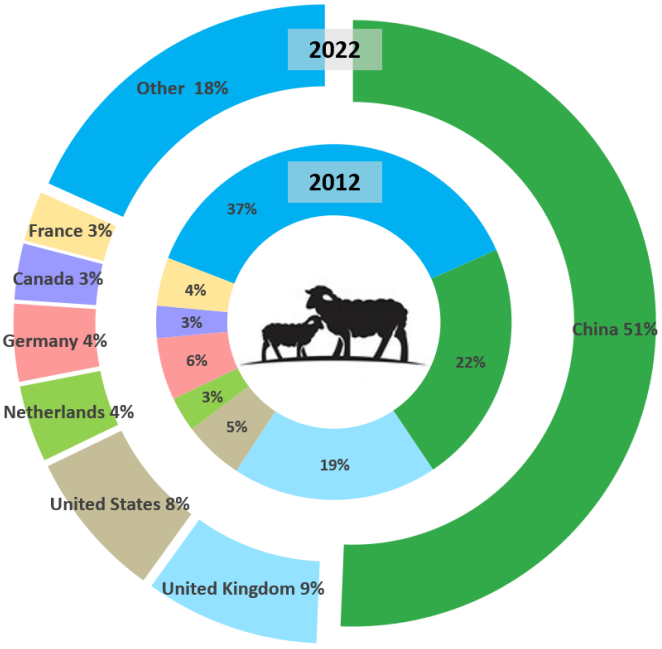
Sheep slaughtering facilities in New Zealand since the 1970s embarked on meeting national regulatory standards for Halal. This allowed for the access to export to middle eastern markets, with currently nearly half of red meat exports from New Zealand being halal certified.

Since 2008 there has only been one live export by sea of sheep from New Zealand, which sailed in June 2015 to Mexico. All live exports of animals by sea from New Zealand are set to cease as of April 30, 2023. This is as a result of continuous pressure around animal welfare and more recently the loss of the vessel Gulf Livestock 1, which sank in 2020 in a typhoon enroute to China after departing New Zealand.

International Trade

New Zealand's lamb and mutton exports in 2022 are expected to reach NZ$4.4 billion (US$2.8 billion) in revenue, after averaging NZ$3.8 billion (US$2.4 billion) over the last 10 years. In the past decade, there has been a strong shift in export destination from New Zealand, with China becoming the largest growth market, now consisting of 50 percent of the total sheep meat exports (see Figure 5). The United Kingdom, however, has seen the biggest contraction in market share since 2012. Over 92 percent of lamb and mutton produced in New Zealand is exported to overseas markets.

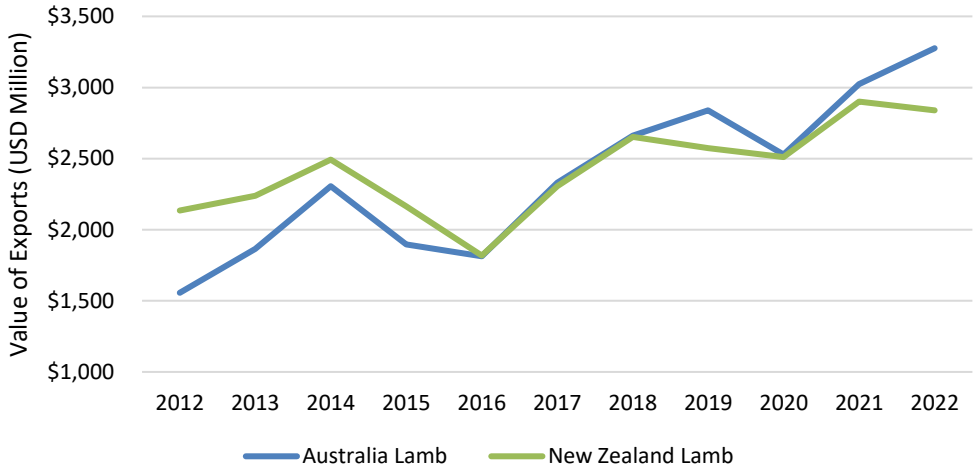
Figure 5: New Zealand Lamb Export 2012 to 2022



Source: Trade Data Monitor LLC

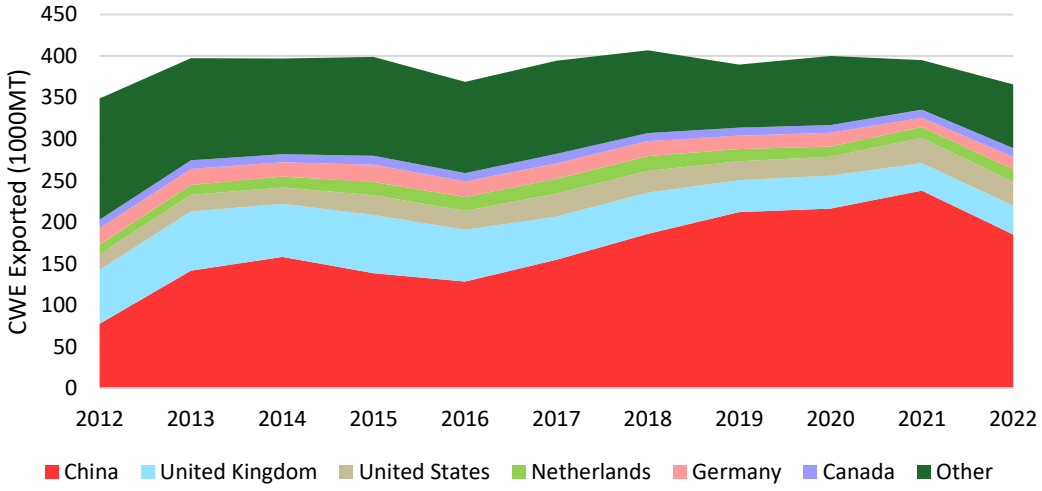
New Zealand and Australia are the two largest lamb exports, with exports by value from both countries climbing in recent years (see Figure 6). These two countries account for practically all U.S. imports of lamb, with Australian lamb account for 70 to 75 percent of the market share and New Zealand occupying 25 to 30 percent.

Figure 6: New Zealand vs Australian Lamb Exports by Value, 2012 to 2022



Source: Trade Data Monitor LLC

Figure 7: New Zealand Lamb Export Volumes 2012 to 2021



Source: Trade Data Monitor LLC

As mentioned, exports to China have shown the most growth for New Zealand in recent years, growing at a compounding annual rate of 12 percent since 2012 (see Figure 7). As mentioned, in the past decade

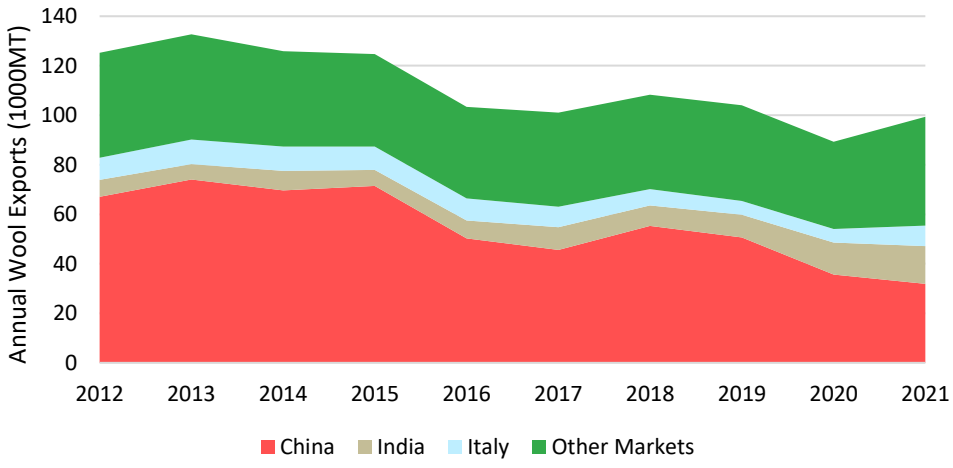
the share of exports to the United Kingdom has dropped. In 2022, New Zealand concluded negotiations on a Free Trade Agreement (FTA) with the United Kingdom that included lamb. This FTA would increase the quota size of New Zealand lamb by 35,000 MT CWE in the first year of entry, rising to 50,000 MT CWE after five years and then liberalized after 15 years. At the same time there was also an FTA negotiated with the European Union, which concluded exporters would have an additional quota phasing from 5,429 MT CWE to 38,000 MT CWE over seven years. This is on top of existing WTO duty-free quota access to the EU of 125,769 MT CWE.

Wool

The majority of New Zealand's sheep are predominantly bred for the purpose of meat with wool as a by-product. However, there are a few regions where merino fine-wool breeds are still farmed. Wool in recent years has become a financially challenging commodity for non-fine-wool sheep farmers. There has been tension between the commodity price of mid and coarse micron wool and the increasing cost of shearing the wool, and in most instances farmers make no profit from wool production. Furthermore, the wool must be removed annually at the very minimum in order to abide by animal welfare laws.

New Zealand's wool exports have been experiencing a downward trend (see Figure 8). With no substantial wool milling facilities in the country, the majority of wool is exported to global textile industries. In the last decade China's share of New Zealand wool exports has decreased from 54 percent to 33 percent, while the textile industry in India has grown in demand from 5 to almost 18 percent of New Zealand's exports.

Figure 8: New Zealand Global Wool Exports

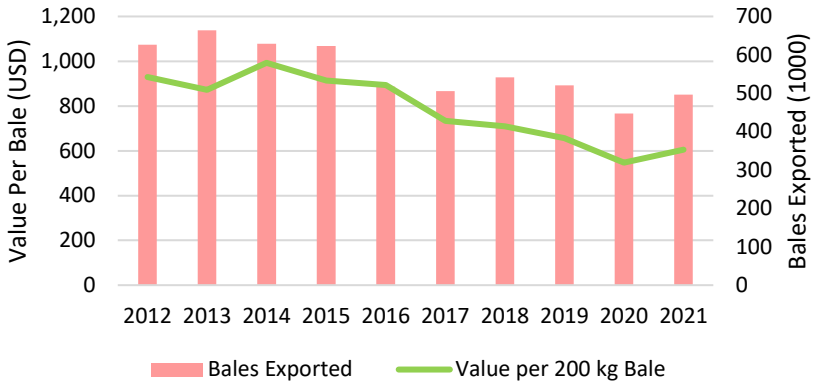


Source: Trade Data Monitor LLC

Over the last decade with the gradual decrease in the national herd, bales of wool exports have decreased correspondingly. The price for wool has continued to fall since it experienced its market peak this

millennium in 2011 of NZ$6.58 (US$4.07) per Kg. The current price for coarse wool is below NZ$2.00 (US$1.20) per Kg, which is equivalent to the cost of shearing.

Figure 9: New Zealand Wool Exports Value per Bale (200kgs)



Source: Trade Data Monitor LLC

Recently, the HWEN recommendation to the New Zealand Government included suggestions to recognize wool growing as carbon sequestration on-farm. If this is considered and measured, it could dramatically change the value proposition of wool as an on-farm enterprise.

HS Codes

Meat	***Wool***
020442	510121
020422	510111
020441	510129
020443	510320
020423	510119
020430	510130
020410	
020421	

Attachments:

No Attachments.