



Situation and Outlook for Primary Industries

December 2016

NOTES

MPI welcomes feedback on this publication and further copies may be requested via Stats_Info@mpi.govt.nz
Annual figures are for the year ended June, unless otherwise noted.
Currency figures are in New Zealand dollars, unless otherwise noted.
Export data sourced from Statistics New Zealand.
Some totals may not add due to rounding.

Publisher

Ministry for Primary Industries
Economic Intelligence Unit
Pastoral House, 25 The Terrace
PO Box 2526, Wellington 6140, New Zealand
Tel: 0800 00 83 33

This publication is available on the Ministry for Primary Industries website at
<http://www.mpi.govt.nz>

Further copies may be requested from **sopi@mpi.govt.nz**

ISBN No. 978-1-77665-433-8 (print)
ISBN No. 978-1-77665-434-5 (online)

Disclaimer

While every effort has been made to ensure the information in this publication is accurate, the Ministry for Primary Industries does not accept any responsibility or liability for error of fact, omission, interpretation or opinion that may be present, nor for the consequences of any decision based on this information.



This work is licensed under the Creative Commons Attribution 3.0 New Zealand licence. In essence, you are free to copy, distribute and adapt the work, as long as you attribute the work to the Crown and abide by the other licence terms.

To view a copy of this licence, visit <http://creativecommons.org/licenses/by/3.0/nz/>. Please note that no departmental or governmental emblem, logo or Coat of Arms may be used in any way which infringes any provision of the Flags, Emblems, and Names Protection Act 1981. Attribution to the Crown should be in written form and not by reproduction of any such emblem, logo or Coat of Arms. Photographs may not be reproduced without permission.

Minister's Foreword



Hon Nathan Guy
Minister for
Primary Industries

I am very pleased to release the *Situation and Outlook for Primary Industries* (SOPI) December 2016. This highlights again the strength of our primary industries, and the benefits of our diversified primary sector.

Overall primary industry revenue is forecast to decrease slightly this year due to lower meat and wool revenue, but rebound strongly in 2018.

It's very pleasing to see the global dairy market rebounding after a difficult few years. The average payout for dairy farmers is now expected to be well above break-even for most, and there is also continued strong growth for sectors like horticulture, forestry and arable.

As a Government we've worked hard to help the primary sector grow. We've invested heavily in irrigation and water storage, improved trade access, and research and development. The Primary Growth Partnership in particular is driving world-leading innovation.

At the same time we have a big focus on protecting the sector from biosecurity threats. Last month we released the *Biosecurity 2025 Direction Statement*, which will shape the long-term strategic direction of biosecurity in New Zealand.

This updated SOPI occurs less than a month after the severe earthquake which struck the north of the South Island just after midnight on 14 November. Within a few days of the earthquake I announced a package of at least \$5 million to support the primary sector and \$2 million towards scientific research on pua and crayfish stocks along the Kaikoura coast.

The earthquake and this year's SOPI are good reminders again of just how important the wider primary sector is to New Zealand's economy.

A handwritten signature in blue ink that reads "Nathan Guy".

Hon Nathan Guy

Director-General's Introduction



Martyn Dunne
Director-General,
Ministry for
Primary Industries

The *Situation and Outlook for Primary Industries* assesses the current and expected performance of New Zealand's primary industries. The short-term outlook is for the continued strong growth in our horticulture sectors and welcome indications of recovery in our largest sector, dairy. Production and price increases are expected to drive growth over the outlook period to 2021.

SOPI is one of our key publications. From 2017, MPI will begin publishing SOPI on a quarterly basis, with releases in March, June, September, and December. This increased frequency will provide opportunities to better track the performance of our sectors, provide more relevant data and commentary, and inform decision-making across government and industry.

The upheaval of the earthquake on 14 November is a reminder of the importance of preparedness and resilience. MPI continues to work with the primary sectors to ensure that our core systems, including biosecurity, food and trade, are able to stand the test of such events. To do so, we must assess how emerging trends will impact on our ability to deliver on our responsibilities.

The growth of tourism, for example, provides both opportunities and challenges. As a special section in this SOPI shows (see pages 8-9) the increase in air freight capacity associated with passenger flight arrivals improves access to markets for a range of high value goods. It also places increased pressure on our border services, which must be managed effectively to maintain the integrity of our biosecurity system.

Getting the balance right will ensure MPI delivers on our purpose of growing and protecting New Zealand.

A handwritten signature in blue ink that reads "Martyn Dunne".

Martyn Dunne



Contents

Minister's Foreword	1
Director-General's Introduction	1
Overview	3
Taking Flight: Growing export value through air freight	8
Dairy	10
Meat and Wool	14
Forestry	18
Horticulture	20
Seafood	24
Arable	26
Other Primary Sector Exports and Foods	28
Appendix: Primary Industries in the New Zealand Economy	30

Overview



-0.8%

Primary industry export revenue is forecast to decrease slightly in 2017 to \$36.7 billion, but is forecast to increase by 12.5 percent in 2018 as dairy prices continue rising from the lows of 2016.



+3.0%

Low global agricultural commodity prices and lower economic growth in trade partners create headwinds for New Zealand primary industry export growth.



+3.0%

Dairy export revenue is forecast to rise 3.0 percent in 2017. Dairy prices are beginning to rise, but production is projected to fall by 1.7 percent.



-10.8%

Meat and wool export revenue is forecast to fall 10.8 percent in 2017 as beef production volumes fall back to sustainable levels and prices fall.



+3.7%

Demand from China and an increase in wood available for harvest are expected to help forestry exports reach \$5.3 billion in 2017, and exceed \$6.0 billion by 2020.



+4.2%

Expanded plantings are expected to increase future export volumes for wine and apples, while additional Gold3 kiwifruit licences will help drive horticulture export revenue past \$6.0 billion by 2020.



+1.3%

Strong international demand for seafood is expected to keep prices rising, leading to export revenue rising to \$2.0 billion by 2019.



-12.1%

A thriving international vegetable seed industry provides growth opportunities for the arable sector, but low domestic demand and prices for grain remain a challenge.



-4.5%

Other primary sector export revenue including processed foods, honey, and live animals, is forecast to fall 4.3 percent to \$2.3 billion in 2017 as lower volumes are shipped to Australia, China, and Hong Kong.

TABLE 1: EXPORT REVENUES BY SECTOR (\$ MILLIONS), 2013-2021

YEAR TO 30 JUNE	Actual				Forecast				
	2013	2014	2015	2016	2017	2018	2019	2020	2021
DAIRY	13 139	17 791	14 050	13 289	13 690	17 030	18 300	19 450	20 650
MEAT & WOOL	7 794	8 162	9 001	9 201	8 210	8 520	8 710	8 880	9 130
FORESTRY	4 527	5 199	4 682	5 140	5 330	5 630	5 900	6 150	6 400
HORTICULTURE	3 540	3 780	4 165	4 982	5 190	5 460	5 810	6 020	6 340
SEAFOOD	1 546	1 500	1 562	1 766	1 790	1 890	2 020	2 120	2 190
ARABLE	225	228	177	205	180	205	215	230	245
OTHER	1 691	1 677	2 089	2 376	2 270	2 500	2 650	2 770	2 890
TOTAL	32 461	38 338	35 727	36 959	36 660	41 235	43 605	45 620	47 845
Y/Y % Change	+0.5%	+18.1%	-6.8%	+3.4%	-0.8%	+12.5%	+5.7%	+4.6%	+4.9%



Overview

SHORT TERM OUTLOOK HINGES ON SUSTAINED RECOVERY IN DAIRY PRICES

New Zealand's primary industry exports are forecast to decrease by 0.8 percent to \$36.7 billion for the year ending June 2017. Falls in beef and lamb production due to lower stock numbers, combined with weak global meat prices, drive our neutral short-term outlook.

Strengthening global prices for horticultural, forestry, and dairy products provide an offsetting boost to New Zealand's primary industry export revenue for the current year. We expect dairy prices to continue to recover over the remainder of the season as global supply and demand rebalance. Rising dairy prices are expected to more than offset a forecast production fall for the current season.

POSITIVE SENTIMENT AND GLOBAL TRENDS DRIVING LONGER TERM GROWTH

Over the next few years, New Zealand's primary sector export earnings are forecast to increase by an average of 5.4 percent per year, reaching \$47.9 billion by the year ended June 2021. This forecast is underpinned by strong increases in both prices and production across most primary sectors, particularly dairy, forestry, and horticulture.

Positive sentiment across our primary industries is reflected in significant investment in expanding future production capacity. In addition, increasing urbanisation and rising incomes in emerging economies, increasing protein consumption, and rising demand for year-round fresh, safe, and high quality food should support continued growth in primary industry exports.

Population growth and demographic changes also present us with additional opportunities to sell our products. Fast growing populations in Africa and the Middle East provide a clue as to where future demand is going to come from. New Zealand is also well positioned to cater to the world's fast growing Muslim population, with a trusted halal certification system and a reputation for quality products.

MIXED OUTLOOK FOR MAJOR TRADING PARTNERS

The New Zealand economy is performing well, expanding 2.8 percent during the year ended June 2016 with all industries (except for mining) growing over this time.

However, some of our major trading partners' economies are not growing as strongly.

Global economic growth remains a downside risk to some of our price forecasts, as strong export prices partly depend on the economic performance of our trading partners, which fuels demand for our products. As shown in the table on page 6, stagnating EU economies have led to sluggish GDP growth across the OECD, while US growth has also been below expectations. The US and the EU are the destinations for nearly a quarter of our exports, so lower growth there affects New Zealand's export prospects.

On the other hand, the Chinese economy continues to grow strongly, despite slowing in recent years. China buys around 22 percent of our total primary sector exports so their growing economy stimulates demand for products such as mutton, logs, fruit, and dairy products.

Other emerging markets are showing mixed performances, with economies most dependent on commodity exports having the least positive outlooks. Oil exporters have been hit hard by falling prices and the large economies of Brazil and Russia remain in recession.

The current environment of low and slowing economic growth, combined with low interest rates and little monetary policy wriggle room for many economies has created economic uncertainty in many areas of the world. This economic uncertainty has manifested itself in protectionist sentiment in some cases, such as the Brexit vote and public pressure in the US leading to the president-elect promising to stop the Trans-Pacific Partnership when he takes office. This sentiment is of concern for New Zealand as we are a small, export-focused nation that relies on open trade to remain competitive.

GLOBAL OIL AND GRAIN PRICES REMAIN LOW

Low commodity prices, particularly for oil and grain, are a bit of a double-edged sword for our primary sector exports. If the current low oil prices continue into the future, major oil importers such as the US, China, and Japan will have more funds available to import non-oil products. However, this also means that major oil exporters (the top 20 of which buy 19 percent of our dairy exports) face decreasing purchasing power for imported goods such as milk powder.



Low grain prices (resulting from recent good growing conditions and high stocks) have helped lower costs of production for livestock industries globally. Grain is a major input to dairy and meat production, especially in the US and EU, so lower grain prices feed through to lower meat and dairy prices.

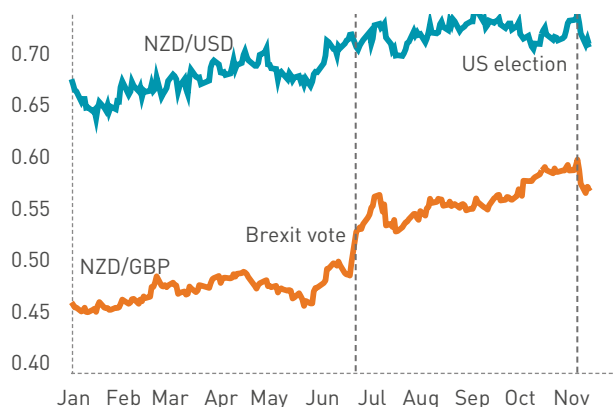
Commodity prices can be strongly affected by swings in supply, which is particularly evident in the dairy industry where moderating global supply has driven recent price increases. We expect that these higher prices will be maintained in the longer term, leading to a healthy returns from dairy exports from 2018 onwards. However, dairy will likely continue as one of the more volatile markets, with small changes in the supply/demand balance having a significant impact on prices.

NEW ZEALAND DOLLAR RISING OVER PAST YEAR

The New Zealand dollar (NZD) has generally been increasing against other key currencies since the start of the year. The exchange rate with the US dollar (USD) has been less volatile than previous years, despite some volatility around the US election. At 0.71, the NZD/USD exchange rate is currently 9 percent higher than the start of the year, and is forecast to fall back slightly to 0.70 in 2017.

The NZD gained 13 percent against the British pound (GBP), in the aftermath of the Brexit referendum in June. The pound has fallen against all its major trading partners, which appears to have been a structural shift. Approximately 3.6 percent of our primary products are traded with the UK, including 21 percent of lamb and 25 percent of wine.

FIGURE 1: EXCHANGE RATE MOVEMENTS IN 2016



INTRODUCING THE NEW ZEALAND PRIMARY PRODUCTS PRICE INDEX

MPI has developed the New Zealand Primary Products Price Index (NZPPPI) to provide a simple measure of New Zealand's primary product exports in US dollars.

The NZPPPI is weighted towards the mix of New Zealand's primary product exports. It also shows our expectations of future price levels, independent of volume forecasts.

The NZPPPI is developed to be broken down into indices for each sector, which will show how prices have varied over time in comparison to the aggregate index. These will be available, in time, from the MPI website for analysis.

COMPARING THE NZPPPI TO THE WORLD BANK AGRICULTURE INDEX (2010=100)

The NZPPPI is useful for analysis of trends in prices at an aggregate level for the primary sector. As it is recorded in US dollars, it can also be compared to global prices and indices (as shown below).

The NZPPPI does not necessarily tell the total picture of the export story as it isolates only price changes. This means that New Zealand exports can "outperform" the NZPPPI forecasts by increasing export volume or moving to higher value export products. This is highlighted in years like 2016, where on the whole, prices fell, but the total value of exports increased.

FIGURE 2: COMPARING THE NZPPPI TO THE WORLD BANK AGRICULTURE INDEX (2010=100)

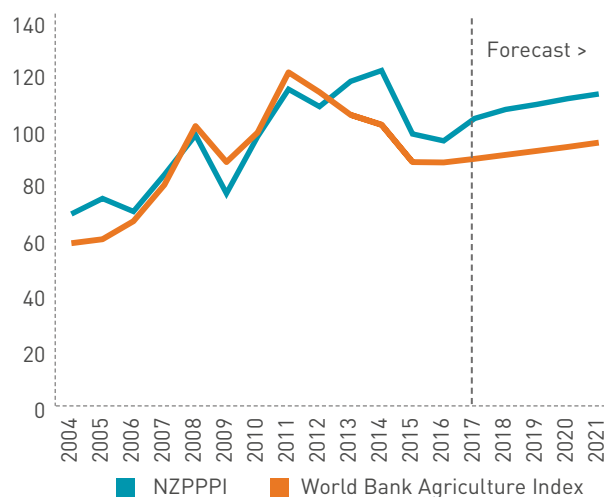


TABLE 2: TRADING PARTNERS ECONOMIC OUTLOOK DASHBOARD, 2016

Trading partner	Primary Industry Exports From New Zealand	Growth in total imports from all countries	GDP Growth	Projected 10-year Annual Population Growth Rate
China	▲ \$8.3 billion	▼ -2.9%	▼ + 6.9%	+ 0.2%
EU (incl. UK)	▲ \$4.3 billion	◀▶ 1.4%	▲ + 2.0%	+ 0.1%
USA	▲ \$4.3 billion	▲ 13.6%	◀▶ + 2.4%	+ 0.7%
Australia	▲ \$4.1 billion	◀▶ 4.8%	▼ + 2.4%	+ 1.2%

KEY: ▲ increasing ◀▶ unchanged ▼ falling

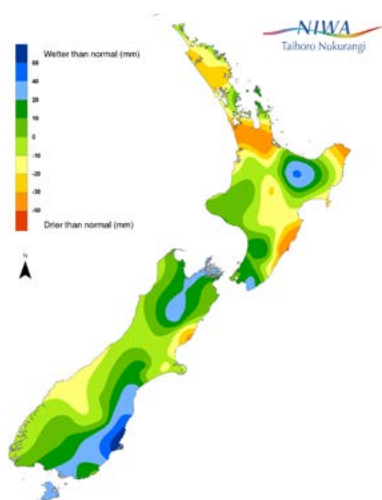
In addition to global factors there are a number of domestic factors that can have a significant impact New Zealand's primary sector exports. Domestic conditions primarily influence production (and therefore export volumes) as New Zealand is not large enough to influence market prices for most commodities other than dairy.

New Zealand's pasture-based system for dairy, meat, and wool is heavily dependant on weather and growing conditions, as is our horticulture industry. Weather events at different stages of the production cycle can significantly impact our final output.

SPRING PRODUCTION SLOWED BY WET WEATHER

Above average rainfall through the winter and spring for much of the country has meant a slow start to the growing season. This has affected milk production and lamb growth, mainly in parts of the North Island, Otago, and Southland.

FIGURE 3: SOIL MOISTURE ANOMALY (MM) AS OF 6 DECEMBER 2016



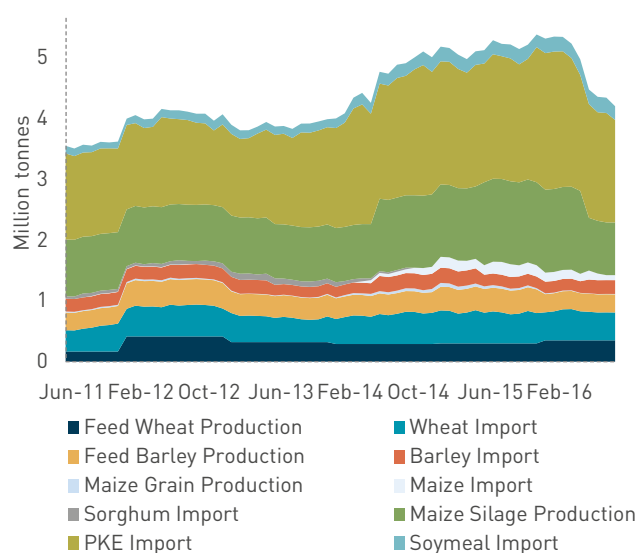
These wet conditions have also delayed the planting of some fodder, arable, and vegetable crops in the North Island which could flow onto production delays in the summer and autumn.

FEED INPUTS PLENTIFUL DESPITE WET SPRING

Supplementary feed, which accounts for roughly 18 percent of total feed inputs for the dairy industry, has been plentiful due to lowered demand in the dairy industry and low global grain prices. However, in the past 12 months there have been declines in imports, especially for palm kernel expeller (PKE), and a lowered harvest for feed barley and maize silage.

Although there are ample feed stocks, the decline in imports and lowered harvest has seen stocks edge downwards. The supply and demand correction may be hastened if more bullish forecasts for milk prices lead to higher demand for supplementary feed.

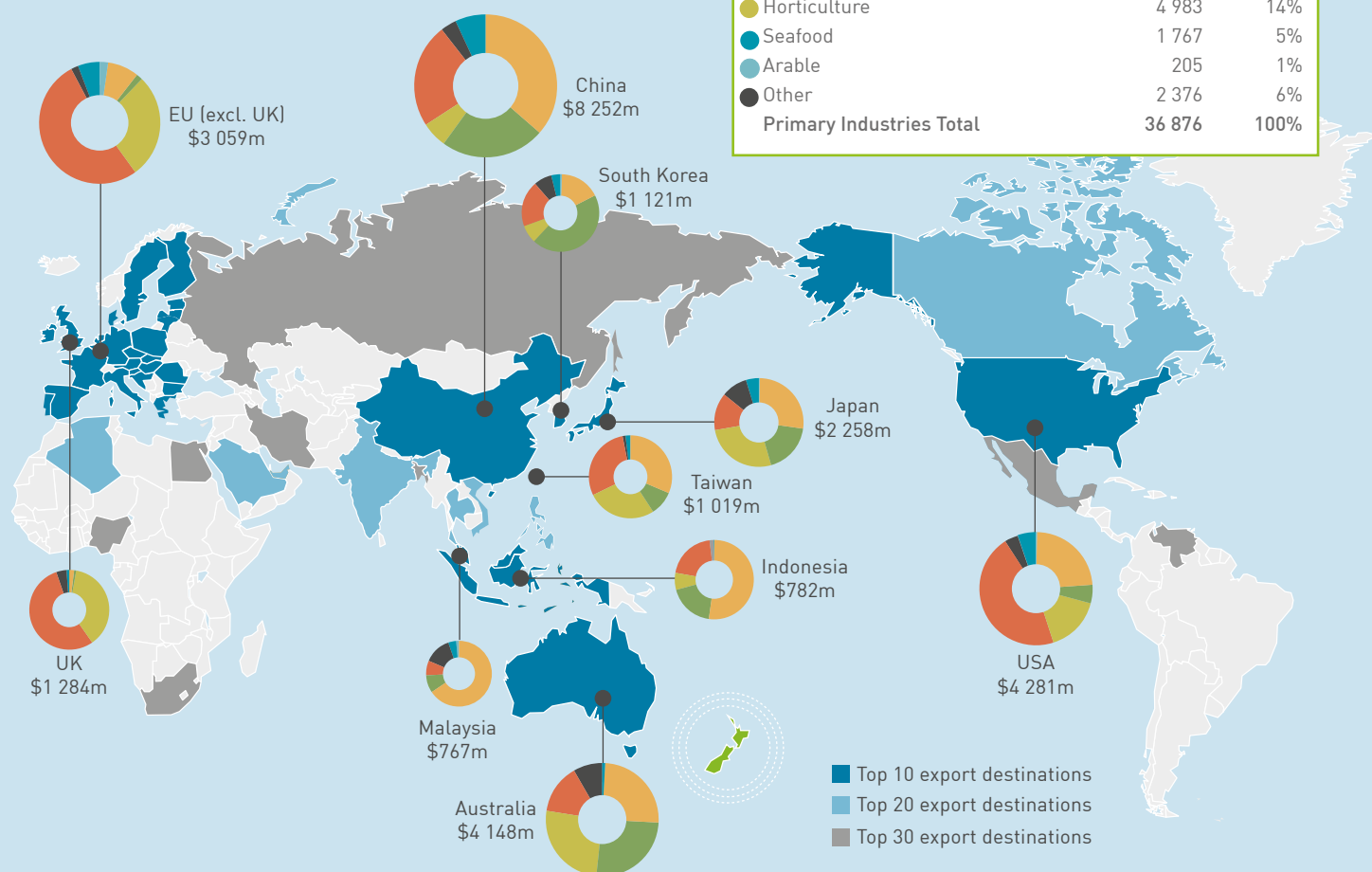
FIGURE 4: FEED PRODUCTION AND IMPORTS – ROLLING 12 MONTH TOTAL



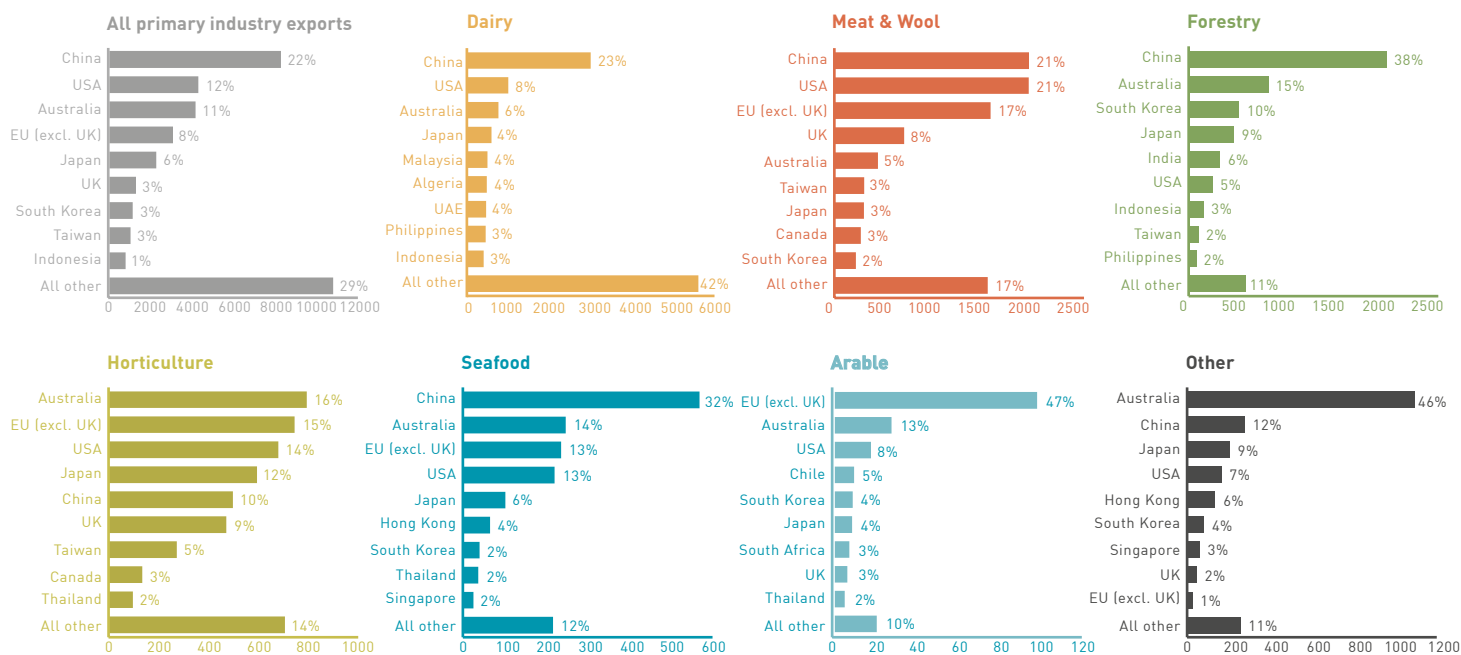


Top 10 Export Destinations

Product	Total Export Revenue \$ million (June 2016)	% of Total
Dairy	13 290	36%
Meat and Wool	9 209	25%
Forestry	5 046	14%
Horticulture	4 983	14%
Seafood	1 767	5%
Arable	205	1%
Other	2 376	6%
Primary Industries Total	36 876	100%



TOP MARKETS (NZ\$ millions, year ended June 2016)



Taking Flight

Growing export value through air freight

Since the Dunedin set sail for the UK in 1882 with the first shipment of frozen New Zealand lamb, sea freight has been, and remains, the core means for our products to reach our export markets.

Today, however, \$1.8 billion of New Zealand's \$37 billion primary industry exports reach their destination by air rather than sea. Not only that, but air freighted exports have increased nearly 3 times faster than sea freight over the past five years, and we expect this trend to continue.

Continued growth in air freight will depend on building consumer demand and continued improvement in transport links.

In this special feature, and throughout this report, we take a look at the factors enabling these opportunities and how exporters have realised opportunities across our sectors.

Air freight is at least 10 times more expensive than sea freight, so it's only economical to ship primary industries products by air if they have a short shelf life or are high-value consumer goods.

Fresh and High-Value

At \$317 million in annual export revenue just last year, live rock lobster (also known as crayfish) is New Zealand's most valuable air freighted export product, 99 percent of which is destined for China. Prices exceeded \$100 per kg in 2016.

Most air freighted live lobster travel in the hold of passenger jets in containers designed to replicate their natural habitat. In a turnaround period of between 5 and 7 days between capture and delivery to market, New Zealand exports of live lobster are highly sought at premium restaurants in China's major cities. 78 percent of New Zealand rock lobster is shipped to Shanghai, followed by Guangzhou and Beijing.

In addition to rock lobster, air freight exports for fresh pacific salmon, cherries, and innovative processed foods have shown the most growth over the last four years.



On average, air freighted products are **18X** more valuable than sea freighted products

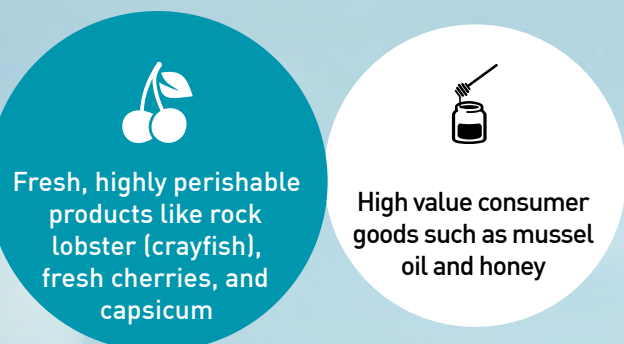
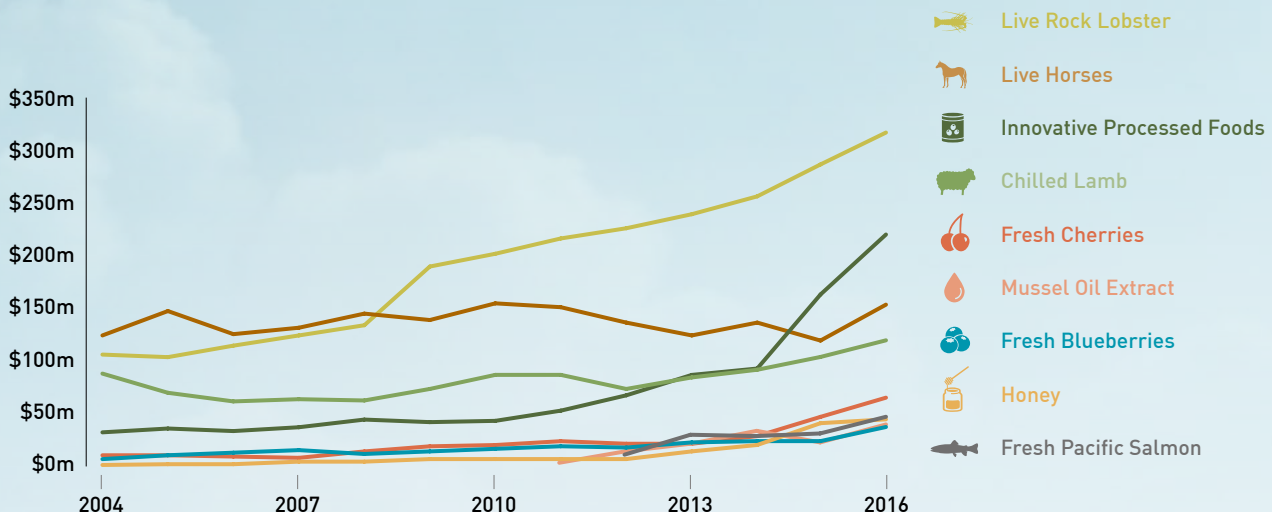


FIGURE 5: VALUE OF AIR FREIGHT EXPORTS BY PRIMARY PRODUCT



Key factors lifting air freight success

Rising Consumer Awareness and Demand



Increased tourism numbers and e-commerce

Total tourist arrivals have increased by 33 percent since 2011. This, plus rapidly expanding e-commerce channels, has helped raise awareness of New Zealand's primary sector products.



Rising incomes in key markets

Urbanisation and rising incomes in China and elsewhere are stimulating additional demand for high-quality imported food such as fresh produce and chilled meat.



Trade agreements

New Zealand's FTA with China has been a game-changer for all primary sector exports, but especially air freighted exports. Air freighted exports have increased from \$17 million to \$539 million since signing an FTA with China in 2008. New Zealand exports live lobster direct to China, whereas other countries such as the US and Canada also export lobster to China, but in frozen form at half the price. A recently signed deal with South Korea could provide similar opportunities for New Zealand.



Better Transport Links and Market Access

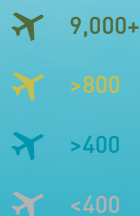


More direct flights to more destinations

Since 2008, the number of international departures from New Zealand has increased by over 20 percent. A large proportion of air freight exports are transported in the cargo holds of passenger planes rather than dedicated cargo planes. Growth in international flights, particularly direct to China from Auckland, has been essential to increasing exports by cutting transport times. Further capacity will depend on new passenger routes to new destinations and additional flights to existing ones.



Passenger Flights Departures
year ended June 2016



Source: Statistics New Zealand



Dairy



Global demand and supply are beginning to show signs of stabilising, with average prices traded at the Global Dairy Trade auctions at their highest level since March 2015.



Opening dairy cow numbers are expected to fall for the second year in a row, down 1.7 percent for the 2016/17 season, following a 2.3 percent fall in the previous season.



New Zealand's all company average farm-gate milk solids price (including Fonterra's forecast dividend of \$0.50 to \$0.60) is forecast to rise to \$6.41 per kilogram of milk solids for the year ending May 2017.



We expect New Zealand's milk solid production to fall 1.7 percent in the 2016/17 season before rebounding in the following season.

WET SPRING DRIVING A PRODUCTION FALL

- A wetter than usual spring is behind an expected 1.7 percent fall in milk solid production for the 2016/17 season. October (peak) production was down 6.1 percent compared to the previous year due to waterlogged pasture, particularly in the Waikato. See figure 6 on page 11.
- Wet spring weather is also reported to have had a negative effect on silage production. In addition, many farmers will not be in a position to purchase much supplementary feed after two financially challenging

seasons. This creates a downside risk to our production forecast if we have a dry summer.

- A forecast fall in milking cow numbers will also contribute to lower production this season. Opening cow numbers are expected to be down 1.7 percent on the previous season following a record cow cull in the June 2016 year.
- We expect production to rebound 3.8 percent in the following season, assuming weather conditions allow production per cow to rise up to normal levels. An expectation of higher global dairy prices may also incentivise New Zealand farmers to increase production in 2018.

TABLE 3: DAIRY EXPORT REVENUE, 2013-2021 (\$NZ MILLION)

YEAR TO 30 JUNE	Actual				Forecast				
	2013	2014	2015	2016	2017	2018	2019	2020	2021
Whole milk powder	5 104	8 393	5 385	4 609	4 820	6 490	7 010	7 450	7 920
Butter, AMF, & cream	1 910	2 699	2 219	2 378	2 810	3 520	3 770	4 010	4 250
Skim Milk & Butter Milk Powder	1 832	2 285	1 762	1 347	1 510	1 930	2 080	2 210	2 340
Casein & protein products	1 674	1 925	2 129	1 834	1 570	1 800	1 930	2 050	2 180
Cheese	1 441	1 482	1 557	1 720	1 640	1 790	1 920	2 040	2 160
Infant formula	555	401	415	685	680	740	800	850	900
Other dairy products	623	607	582	716	660	750	800	850	900
Total exports	13 139	17 791	14 050	13 289	13 690	17 030	18 300	19 450	20 650
% Change	-1.8%	35.4%	-21.0%	-5.4%	+3.0%	+24.4%	+7.5%	+6.3%	+6.2%

TABLE 4: DAIRY FARM PRODUCTION, MILK PRICES, AND EXPORTS, 2013-2021

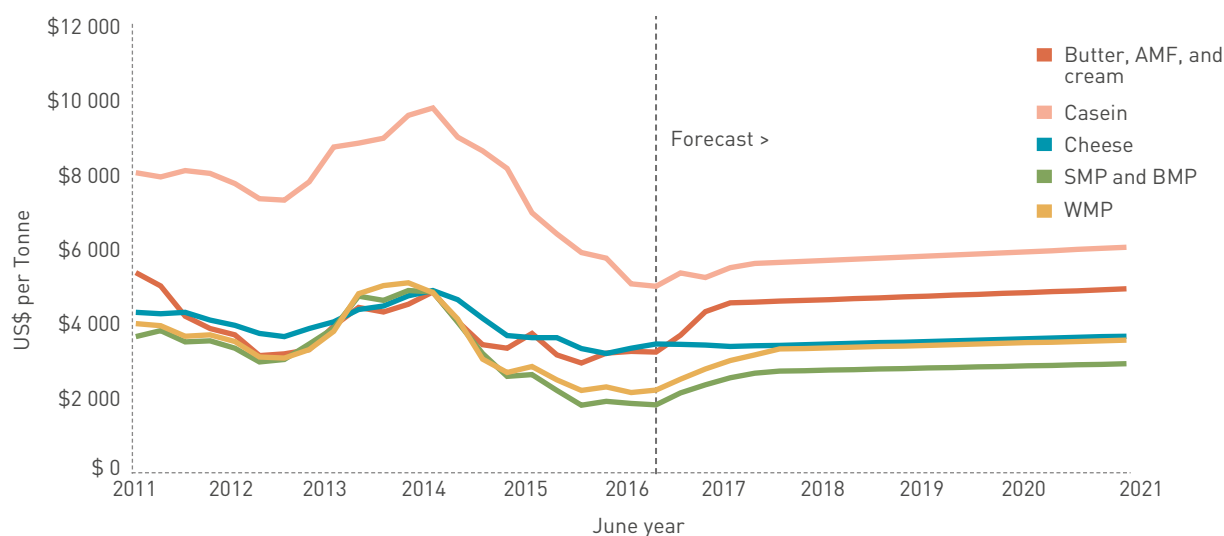
YEAR TO 30 JUNE	Actual				Forecast				
	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cows and heifers in calf or in milk (million)	5.00	5.18	5.06	4.97	4.98	5.00	5.09	5.15	5.21
Milk solids production (million kg)	1 658	1 825	1 890	1 862	1 830	1 900	1 960	2 020	2 080
Milk price (cents per kg of milk solids)	608	840	461	424	641	715	713	772	794
Total export value (\$ million)	13 139	17 791	14 050	13 289	13 690	17 030	18 300	19 450	20 650
Total export volume (thousand tonnes)	2 942	2 980	3 046	3 232	3 200	3 320	3 420	3 520	3 630
Average export price (\$ per kg)	4.47	5.97	4.61	4.11	4.28	5.14	5.35	5.52	5.69

NZ EXPORTS RISE AS GLOBAL PRICES RECOVER

- Dairy export values are forecast at \$13.7 billion for the year ending June 2017, up \$0.4 billion from the June 2016 year as rising prices more than offset a fall in export volumes. A production recovery coupled with an expected continued increase in global dairy prices drives our dairy forecast up to nearly \$17.0 billion for the year ending June 2018.
- New Zealand's dairy inventories were run down during the year ended June 2016, boosting export volumes by 6.1 percent in a year where production fell 1.5 percent. Unlike last year, we do not expect inventories to play a large part in export volumes for the year ending June 2017.

- Global supply and demand are beginning to show signs of rebalancing. EU production has been slowing since June, while production is expected to fall in most other major milk exporting countries this year, mainly in response to price signals.
- One exception to this is the US, where production remains high. This has little impact on global markets at the moment due to strong domestic demand.
- Chinese dairy demand is on the rise, with a record volume of dairy products imported during the year ended September 2016 despite falling milk powder imports. China is importing greater volumes of butter, cheese, and liquid milk from Europe, as well as more liquid milk from New Zealand.
- Strong world demand for butter is expected to continue as western consumers show a preference for natural fats over processed fats.

FIGURE 6: NEW ZEALAND DAIRY EXPORT PRICES (\$US PER TONNE)





EU OUTLOOK IS UNCERTAIN

- Despite recent production falls, annual production is still up 2.5 percent for the 12 months ended September 2016. This has resulted in increased production of Skim Milk Powder (SMP), Butter, and Whole Milk Powder (WMP).
- The European Commission announced a voluntary milk supply reduction scheme earlier this year, offering a package of 150 million euro to their farmers. For each litre of milk that EU farmers do not produce they receive a direct payment of 0.14 euro. A further 350 million euro has been allocated to EU member states, who can allocate these funds to encourage farmers to reduce production as they see fit.
- EU milk deliveries are already down 1.9 percent for the September 2016 quarter compared to the same time last year so it will be interesting to see what impact the supply reduction scheme will have on the remainder of the season. There is a risk that current high prices will encourage EU farmers to begin increasing production despite the scheme.
- A lot of the increased SMP and butter production has been going into intervention stocks, with EU exports of SMP actually falling compared to the previous year.
- As at 30 September 2016 there were 355 080 tonnes of SMP in intervention stocks, with a further 72 950 tonnes in Private Storage Aid (PSA). There is also 90 144 tonnes of butter currently held in PSA.

- This product will need to be sold in coming years, which should keep global dairy prices relatively subdued in the medium-term. Butter, which has a shorter shelf-life than SMP, is already being sold out of PSA, with almost 17 000 tonnes sold during September 2016. Butter prices have been holding up due to strong demand, but there is some downside risk in the first half of 2017 when large quantities of butter in PSA will be due for sale which coincides with the seasonal peak in European butter production.

GDT RESULTS MOVING IN THE RIGHT DIRECTION

- Recent Global Dairy Trade (GDT) auction results are beginning to reinforce the idea that global supply and demand are rebalancing. Weighted average prices for all dairy products have risen strongly over the past three months and are at their highest level since March 2015.
- Both a reducing global milk supply and increased Chinese demand are contributing to these higher dairy prices. In addition, Fonterra has announced plans to divert more milk into value-added products, leaving less available for lower-value powder manufacturing.
- This changing product mix is illustrated in New Zealand's exports to China. In the June 2014 year, 83 percent of our dairy exports to China were milk powders. This has fallen to 65 percent in the June 2016 year as exports of other dairy products such as liquid milk and ice cream have increased.

FIGURE 7: WEIGHTED AVERAGE PRICES FOR DAIRY PRODUCTS (GLOBAL DAIRY TRADE AUCTIONS USD/MT)

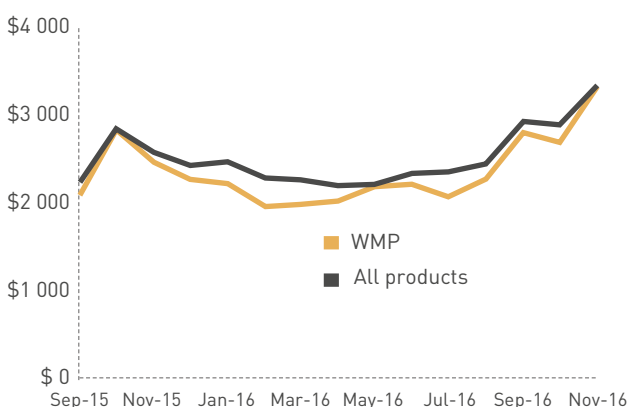
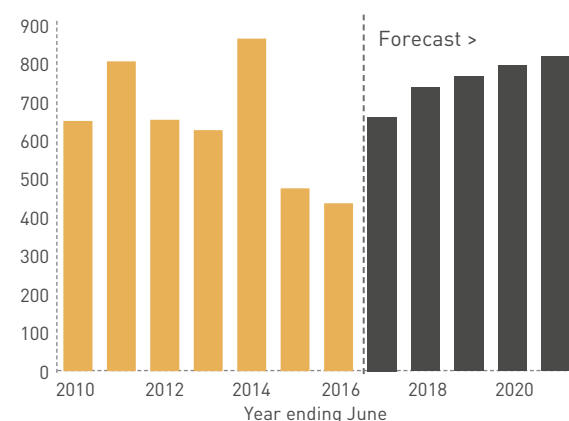


FIGURE 8: AVERAGE MILK SOLIDS PAYMENT (CENTS PER KILOGRAM INCLUDING DIVIDEND)



DOMESTIC PRICE OUTLOOK IMPROVING

- In the wake of recent global price movements and supply signals, New Zealand's all company average farm-gate milk solids price is forecast to rise to \$6.41 per kilogram of milk solids for the season ending May 2017 (including dividends where applicable). This is up from our previous forecast of \$4.85, which was released in June 2016.
- Dairy NZ estimates this year's average break-even price¹ for New Zealand dairy farmers to be \$5.05 per kilogram of milk solids. We expect that most farmers would be making a profit for the 2016/17 season under our latest payout forecast.
- Whether the final payout is higher or lower than our forecast depends on how the global supply and demand balance plays out over the next few months. We are particularly interested in the European supply situation,

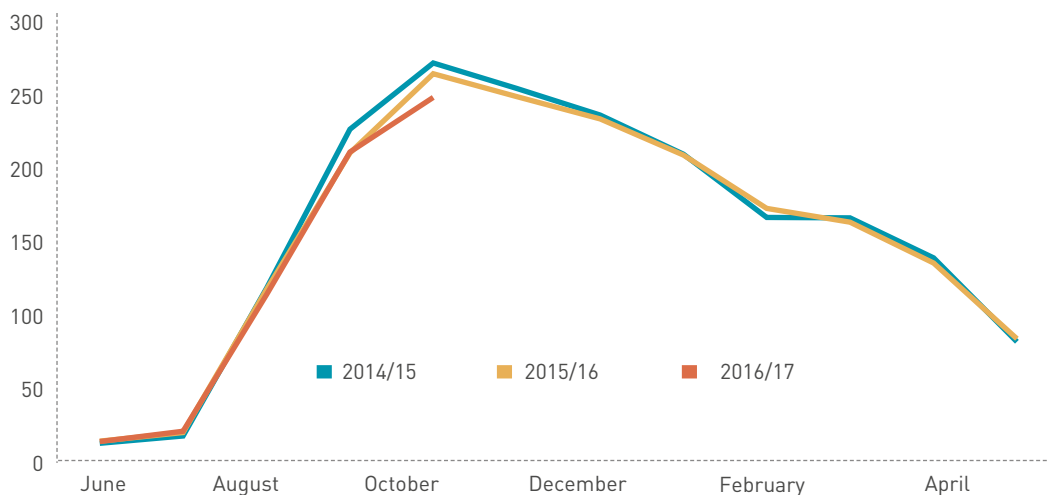
¹ Including farm working expenses, interest and rent, tax and drawings, and net of livestock and other income received.

and whether EU policy makers are able to influence global prices through their interventions.

The NZX milk price futures market is also showing positive signs, with the most recent activity for the 2016/17 futures contract (the current production season) exceeding \$6.00 per kilogram of milk solids (excluding any dividends).

- Since opening in May 2016, 14.5 million kilograms of milk solids (0.8 percent of forecast production) have been traded on the NZX futures market for the 2016/17 season so far.
- Our price forecast (including dividends) increases to \$7.15 for the 2017/18 season in anticipation of global prices firming at recent higher levels.
- There is a downside risk that further price increases could be met with a quick supply response from European farmers, preventing prices from climbing to higher levels.

FIGURE 9: NEW ZEALAND MONTHLY MILK SOLIDS PRODUCTION (MILLION KILOGRAMS MILK SOLIDS)





Meat and Wool



Beef production is forecast to fall back to 2014 levels as the dairy herd resumes its growth trend, leading to a decrease in cull cows. Lamb production is estimated to decrease 3 percent in 2017.



Beef and lamb export prices are both forecast to fall in 2017 as global tradeable supply expands faster than import demand.



Despite a negative short term price outlook, over a longer timeframe beef and lamb prices should be supported by rising global demand for imported meat.

MEAT AND WOOL PRODUCTION LOWER, PRICES LOWER

- Meat and wool exports are forecast to reach \$8.2 billion in the year ending June 2017, a decrease of 10.8 percent from the previous year. This is slightly lower than our previous forecast from June 2016.
- This spring's lamb crop is estimated to be 3 percent lower than last year, which is a result of fewer breeding ewes carried over from last season and facial eczema issues in parts of the North Island.
- Global prices for most types of meat are forecast to continue falling, which is impacting beef and lamb export prices.

- Meat and wool exports to China have decreased 14 percent in the year to September 2016, to \$1.8 billion. This decline has been most keenly felt in mutton and wool products, both of which are reliant on Chinese demand.
- Unlike mutton and wool, beef exports to China have increased in the past year, where rising volumes have offset slightly lower prices. Assuming this trend continues, as global beef prices decline and Chinese demand for beef continues to increase, China could develop into a reliable secondary (to the US) market for New Zealand beef exports.

TABLE 5: MEAT & WOOL EXPORT REVENUE, 2013-2021 (\$NZ MILLION)

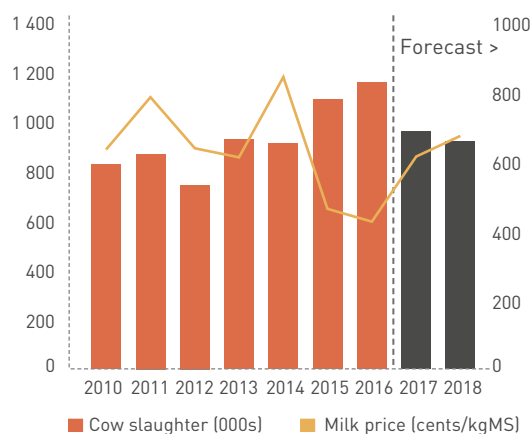
YEAR TO 30 JUNE	Actual				Forecast				
	2013	2014	2015	2016	2017	2018	2019	2020	2021
Beef & Veal	2 143	2 199	2 980	3 095	2 590	2 600	2 630	2 650	2 710
Lamb	2 263	2 485	2 504	2 569	2 230	2 320	2 350	2 400	2 510
Mutton	395	488	418	419	370	360	370	380	390
Wool	654	726	809	761	670	710	730	740	760
Venison	171	187	174	182	160	190	190	200	200
Other meat	435	438	466	503	540	590	630	660	690
Hides & skins	608	624	570	510	500	500	520	530	540
Animal by products	511	484	573	595	610	640	670	680	700
Animal fats & oils	162	130	118	125	110	120	130	130	130
Animal products for feed	229	209	216	247	270	280	290	310	320
Carpets and other wool products	223	191	172	195	170	200	200	190	170
Total exports	7 794	8 162	9 001	9 201	8 210	8 520	8 710	8 880	9 130
% Change	+0.2%	+4.7%	+10.3%	+2.2%	-10.8%	+3.8%	+2.2%	+2.0%	+2.8%



BEEF & VEAL FACE GROWING GLOBAL COMPETITION

- Beef production is forecast to decline by 50 thousand tonnes to 625 thousand tonnes as fewer dairy cows are sent to slaughter in 2017.
- Production was about 50 thousand tonnes higher than usual each of the past two years due to record dairy cow culling resulting from low dairy prices (see Figure 10). Assuming the dairy herd resumes growing as forecast (see page 11), beef production volumes will naturally fall back to previous levels.
- Strong beef prices over the past two years have helped stabilise the beef herd, which is estimated to total 3.6 million as of 30 June 2016. However, schedule prime beef prices are forecast to fall from \$5.39 to \$4.70 in 2017 and remain below \$5 for most of the forecast period.
- If beef prices fall as forecast, there may be less incentive to restock and total cattle numbers may continue their slow decline.
- After peaking at \$7.86 in July 2015, average beef export prices have slipped 20.5 percent, which is reflected in our forecast export price of \$6.50 in 2017. Given ample global supplies, export prices are expected to remain in this lower range for the next two seasons.

FIGURE 10: BEEF AND DAIRY COW SLAUGHTER (THOUSAND ANIMALS)



- Nearly half of New Zealand's beef exports are destined for the US, where domestic production has increased as that country recovers from drought. As a result, demand for imported beef has fallen.
- Over a longer timeframe, New Zealand and Australian beef may face stronger competition in the US market not only from recovering US production, but also from Brazil, which has recently gained market access into the US.
- Brazil has also achieved market access into China, a rapidly growing market for New Zealand beef. This may also keep prices subdued, but the growth of the

TABLE 6: BEEF CATTLE NUMBERS, BEEF PRICES, EXPORT VOLUMES AND VALUES, 2013-2021

YEAR TO 30 JUNE	Actual				Forecast				
	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total beef cattle (opening stocks in millions)	3.73	3.70	3.67	3.55	3.58	3.55	3.46	3.38	3.34
Schedule prime beef price (\$/kg)	4.00	4.03	4.92	5.39	4.67	4.68	4.81	4.97	5.15
Production (000 tonnes)	627	626	676	673	622	621	612	599	594
Export volume (000 tonnes CWE ¹)	536	544	599	613	567	570	562	550	545
Export volume (000 tonnes PW ²)	374	380	420	430	398	400	394	385	382
Export price (NZ\$/kg PW)	5.73	5.79	7.10	7.20	6.50	6.51	6.68	6.88	7.10
Export value (NZ\$ million)	2 143	2 199	2 980	3 095	2 590	2 600	2 630	2 650	2 710

1 Carcass-weight equivalent of shipped product weight. 2 Product weight as shipped.



Detailed livestock slaughter and meat production statistics can be found on the MPI website
www.mpi.govt.nz/news-and-resources/open-data-and-forecasting/agriculture/



Chinese market may be able to accommodate increased competition.

- Global demand for meat and other high-protein products is expected to continue rising, especially in emerging markets. This should support demand for New Zealand's beef products over the medium term.

SHEEP POPULATION FORECAST TO STABILISE

- Over the next few years, New Zealand's total sheep population is forecast to stabilise at just over 28 million, with 18.5 to 19.0 million breeding ewes. However, fewer lambs were retained from last season leading to lower opening stock numbers this year.
- While spring conditions this year are more favourable, the number of lambs tailed is expected to be down 3 percent this spring, due to a decrease in breeding ewes, wet weather in some parts of the country, and facial eczema issues in parts of the North Island.
- Lamb production is forecast to fall 6.6 percent to 355 thousand tonnes as more lambs are retained in 2017, before recovering towards 370 thousand tonnes over the next four years.
- Average lamb schedule prices are forecast to fall from \$5.12 to \$5.00 per kilogram liveweight. Beef + Lamb New Zealand forecast sheep and beef farm revenue to decrease for the third straight year, primarily due to

falling sheep and wool revenue. This may limit opportunities for farmers to invest in restocking.

- Lamb and mutton production and exports are expected to start slowly this year with plenty of pasture available and low schedule prices providing less incentive to sell stock earlier in the year.
- Lamb export volumes are forecast to be lower in the current season, but then recover and stabilise at around 300 thousand tonnes once sheep flocks have a chance to rebuild over the next year.

LOW LAMB AND MUTTON PRICES

- Despite lower production in New Zealand, lamb and mutton export prices are forecast to fall again in 2017.
- The United Kingdom and continental Europe account for over 50 percent of New Zealand's lamb exports. While the full impacts of Brexit will take years to resolve, one immediate impact has been the falling British pound, which increases costs for British importers.
- Mutton exports, which are more dependent on the Chinese market than lamb, have also been impacted by rising production and falling prices inside China.

TABLE 7: SHEEP NUMBERS, LAMB PRICES, EXPORT VOLUMES AND VALUES, 2013-2021

YEAR TO 30 JUNE	Actual				Forecast				
	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total sheep (opening stocks in millions)	31.26	30.79	29.80	29.12	28.25	28.20	28.35	28.20	28.08
Schedule lamb price (cents/kg)	4.77	5.46	5.28	5.12	4.97	4.93	5.05	5.13	5.34
Production (000 tonnes)	376	379	384	380	355	360	365	369	371
Export volume (000 tonnes CWE ¹)	380	372	365	391	351	366	366	370	370
Export volume (000 tonnes PW ²)	314	306	298	320	288	300	300	303	303
Export price (NZ\$/kg PW)	7.21	8.11	8.41	8.02	7.76	7.75	7.82	7.93	8.27
Export value (NZ\$ million)	2 263	2 485	2 504	2 569	2 230	2 320	2 350	2 400	2 510

¹ Carcass-weight equivalent of shipped product weight. ² Product weight as shipped.



WOOL EXPORTS SLOW GOING, BUT MERINO WOOL CONTINUES TO PERFORM

- Wool export volumes are projected to decrease 6 percent in 2017. Even with lower production, inventories are building as a result of lacklustre demand.
- Average export prices are also forecast to fall 6 percent. China usually buys over half of New Zealand's wool, but over the past year our wool exports to China were down 33 percent. Until demand from China resumes, it will be difficult for wool prices to recover.
- The story is different for fine wool such as merino, which accounts for 9 percent of exports. While export prices for strong wool (over 31 microns) have decreased 11 percent in the past year, fine wool (under 25 microns) has increased 2 percent.

VENISON: LOWER PRODUCTION, MORE CHILLED EXPORTS

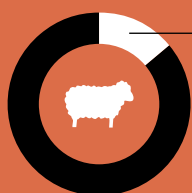
- Venison exports are forecast to decrease 12.2 percent to \$160 million in 2017, as lower production volumes offset higher prices.
- With venison production volume down 9 percent in the year to September 2016, it appears that deer farmers may be retaining hinds to rebuild herds and stags for velvet production.
- Deer antler velvet exports reached \$42 million in the year ended June 2016, up 11 percent from last year.
- Expanding chilled exports have been driving increases in overall deer sector returns over the past year. More venison exports are going out as chilled rather than frozen (from 16 percent in 2015 to a forecast 20 percent in 2017).

- In addition, chilled venison prices have been stronger than frozen venison, having risen slightly over the past year to over \$22 per kg, while frozen venison export prices have been steady at under \$10 per kg.

EXPORT GROWTH IN OTHER MEAT INCLUDING EDIBLE OFFAL

- Other meat exports continue to rise rapidly, exceeding \$500 million in the year ended 2016. This growth has been aided by strong poultry export volumes and expanding demand from Asia for edible offal.
- Rising edible offal prices over the past few years have been driven by rising demand from Japan for beef tongues, plus steady trade with other destinations. This trend is expected to continue.
- New Zealand poultry production reached 211 thousand tonnes in 2016. Only 9 percent of production is exported, but that figure is rising relatively quickly as some producers have focused on exports as a growth opportunity.
- Poultry meat export revenue exceeded \$89 million in 2016 despite falling prices. Volumes exported increased 25 percent in 2016, and further growth is expected in 2017.
- Co-products exports are forecast to increase over 8 percent this year to \$645 million. While sausage casing exports have fallen in recent years, beef and lamb tripe exports are increasing rapidly. Since late 2014, New Zealand has been the only country with access to sell tripe into the Chinese market.
- Exports of hides & skins are forecast to be higher than usual for the second year in a row due to high cow slaughter rates over winter. While prices were quite low last year, they appear to be recovering so far this year.

Chilled Lamb Just in Time For The Holidays

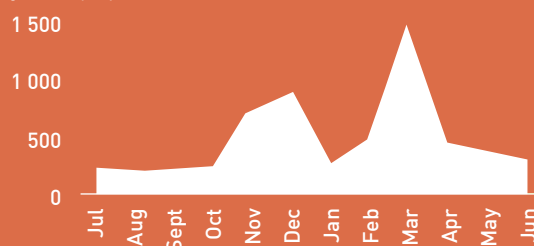


14% of New Zealand's chilled lamb is exported by air rather than sea, adding up to \$119 million annually. Almost all air freighted lamb is destined for the UK and other European destinations.

European demand for chilled New Zealand lamb peaks over the Christmas and Easter periods, and these are the two times during which most chilled lamb is shipped via air. There is a balancing act between letting lambs gain as much weight as possible and getting them onto British supermarket shelves in time for the holidays, which is where air transport helps make sure this demand can be met. Export prices for chilled lamb are typically 50 percent higher than frozen lamb, whether it is shipped by air or by sea. This price premium makes the added cost of air freight worthwhile.

Chilled lamb exports peak in December and March

Average monthly export volume (tonnes) 2011-2016





Forestry



New Zealand forestry exports are forecast to reach \$5.3 billion in 2017, and more than \$6.4 billion in 2021.



An increasing supply of harvestable wood over the next 5 years is driving an increase in the export forecast.



Log export volumes reached a record level in the year to September 2016.



Log export prices are expected to increase as demand in the Chinese housing market picks up.

SITUATION AND OUTLOOK

- In 2016, strong domestic demand for residential construction and log exports contributed to harvest volumes reaching the highest levels since 2014.
- In the coming five years and beyond, forest product exports are expected to continue to be driven by increasing harvest volumes.
- Various Wood Availability Forecast (WAF) scenarios produced by MPI suggest a harvest that could range between 29 million m³ and 42 million m³ annually during the next five years. These scenarios imply, depending on domestic consumption, a harvest rising to slightly over 31 million m³ by 2021. This is shown in Figure 11 on the next page.

- Pulp and sawn timber exports have increased during the past 12 months. Sawn timber exports to China recovered with a 21 percent increase in the year to September 2016, while pulp exports to China also increased.
- High export prices are driving increasing harvest volumes, and recent record export log volumes. Log exports to China, India and South Korea have increased to make September year end log export the highest ever.
- New Zealand log exporters are increasing their market share in India and are now the largest log supplier into that market. Hardwood supply from Asia is decreasing and it's likely that this will be filled by softwood suppliers like New Zealand.

TABLE 8: FORESTRY EXPORTS 2013-2021

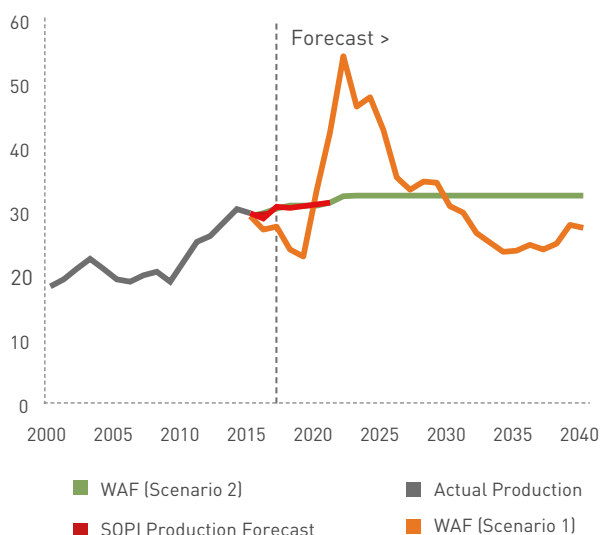
YEAR TO 30 JUNE	Actual				Forecast				
	2013	2014	2015	2016	2017	2018	2019	2020	2021
Logs	1 855	2 541	2 059	2 224	2 480	2 560	2 700	2 820	2 950
Sawn Timber & Sleepers	880	885	779	892	930	1 030	1 080	1 130	1 170
Pulp	552	611	634	689	630	670	710	740	780
Paper & Paperboard	546	519	520	569	540	580	600	620	640
Panels	436	407	451	512	500	530	550	570	590
Chips	67	51	52	64	50	60	60	60	60
Other Forestry Products	190	185	186	190	190	200	200	210	220
Total exports	4 527	5 199	4 682	5 140	5 330	5 630	5 900	6 150	6 400
% Change	+4.6%	+14.9%	-9.9%	+9.8%	+3.7%	+5.6%	+4.8%	+4.2%	+4.1%



CHINA IMPORT MARKET REMAINS STRONG

- China is the largest market by volume for New Zealand's export logs and sawn timber, most of which are used in the construction sector.
- A lift in China's housing market has caused improved sentiment right through the construction sector and construction starts are up 8 percent for the year to October 2016. Log and sawn timber exports are now increasing to meet that demand.
- We are now projecting a decrease in the unsold inventory of houses for smaller Chinese cities in 2016, which lowers the downside risk to our log export forecast.
- On the supply side, China's domestic log production is being impacted significantly by tighter restrictions on natural forest harvest. This is leading to very high prices for logs in some regions.
- Sawn timber imports from Russia are now extremely cheap due to new investment in production capacity and lower currency. This will spur more sawn timber production while log exports from Russia to China will decrease.
- As expected, Canadian supply into China is decreasing as production is re-directed toward the growing US market. This presents more opportunities for New Zealand logs to gain market share.

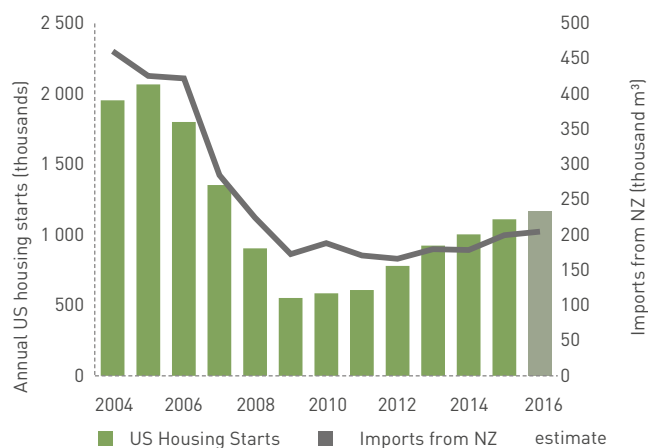
FIGURE 11: WOOD AVAILABILITY AND PRODUCTION FORECAST (MILLION CUBIC METRES)



MIXED OUTLOOK FOR PROCESSED PRODUCTS

- Sawn timber exports to the US are marginally higher in quantity, but higher prices have led to a 12 percent increase in export revenue.
- US housing starts are at the highest rate since the global financial crisis (GFC), and continued growth in this sector will drive further increases in demand. However, New Zealand clearwood exports may not reach pre-GFC highs due to reductions in domestic pruned log production and processing capacity since 2008.
- New Zealand is well placed to increase the supply of unpruned industrial sawn timber to growing markets in South East Asia, providing there is continued economic growth in that region.
- Panel exports face headwinds with slowing demand in Japan, which takes 40 percent of export panels from New Zealand. Low building rates and a declining population mean, long term, Japan will decline as a market for panel exports.
- Exporters also face strong competition from Chinese panel exports into Japan and other markets.
- China continues to be the largest export pulp market for New Zealand. China is expected to be a growth market for pulp trade in the coming years as paper consumption increases.

FIGURE 12: US HOUSING STARTS, 2002-2016





Horticulture



New Zealand's horticulture exports are forecast to reach \$6.3 billion by 2021.



The wine industry continues to grow markets offshore and innovate onshore.



Apple and pear exports are on track to reach \$1.0 billion in 2021.



Kiwifruit exports are now forecast to approach \$2.2 billion by 2021.



Demand from Asian markets is driving growth in cherry, avocado and berry exports.

OVERVIEW

- Growth in export value to \$6.3 billion by 2021 will be led by kiwifruit and supported by strong ongoing growth prospects for wine and apple and pear exports.
- Vineyard expansion, the release of more Gold3 kiwifruit licences and the replanting and expansion of apple orchards are driving expected strong volume growth.

KIWIFRUIT YIELDS EXPECTED TO DROP IN 2017

- Kiwifruit exports are forecast to decrease 4.4 percent to \$1.6 billion in 2017, after a record crop the previous year. MPI forecasts kiwifruit export values will exceed \$2.2 billion in the year to June 2021.

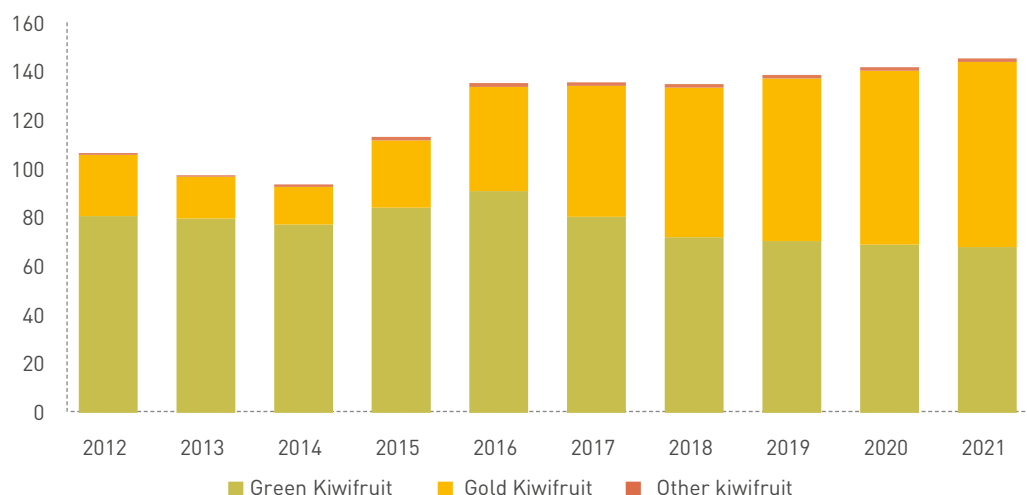
- Most of the increased production over the past two years was driven by maturing gold kiwifruit orchards recovering from the Psa bacterial disease, and record levels of green export volumes which were achieved on the back of good climatic conditions.
- Production of green kiwifruit is expected to fall in 2017 as lower spring flower numbers signal orchard productivity falling back to more normal levels.
- As figure 13 on the following page shows, gold kiwifruit production is expected to continue to grow, albeit at slower rates as orchards reach maturity. 400 hectares of Gold3 kiwifruit licences were released in 2016 with more expected over the next three years, half of which is expected to be grafted onto existing green rootstock.

TABLE 9: HORTICULTURE EXPORT VALUES (NZ\$ MILLIONS) 2013-2021

YEAR TO 30 JUNE	Actual				Forecast				
	2013	2014	2015	2016	2017	2018	2019	2020	2021
Kiwifruit	934	931	1 182	1 673	1 600	1 750	1 900	2 010	2 160
Wine	1 204	1 323	1 408	1 558	1 670	1 750	1 800	1 850	1 900
Apples & Pears	484	547	571	701	770	830	900	970	1 010
Fresh & Processed Vegetables	600	606	588	612	620	640	640	660	670
Other Horticulture	318	373	416	438	530	500	570	520	600
Total exports	3 540	3 780	4 165	4 982	5 190	5 460	5 810	6 020	6 340
% Change	-0.4%	+6.8%	+10.2%	+19.6%	+4.2%	+5.2%	+6.4%	+3.6%	+5.3%



FIGURE 13: KIWIFRUIT EXPORT VOLUME BY VARIETY (MILLION TRAYS, YEAR ENDED JUNE)

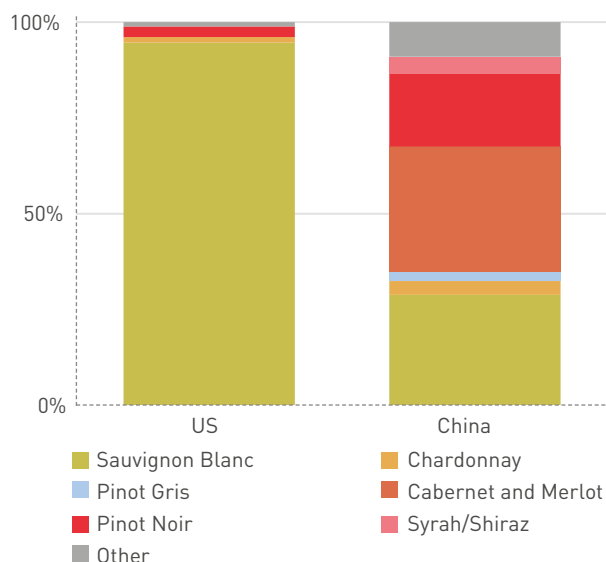


- Increased kiwifruit production for export has led to double-digit growth in a number of smaller markets such as Taiwan, Russia, South Korea, India, United States, Vietnam and Israel.
- This growth has been supported by innovative market initiatives in 2016, which included the partnership with fellow New Zealand fruit marketer ENZA to drive sales in South-East Asia.
- The EU, Japan and China remain our largest export markets and most of the future export growth is expected to be focused in these markets, particularly China, while other smaller markets will continue to be developed.

WINE PRODUCTION AND EXPORTS CONTINUE TO GROW

- Wine exports are forecast to reach \$1.7 billion for the year ended June 2017, a seven percent increase from the previous year. The earthquake on 14 November damaged a number of wine storage tanks in the Marlborough region, the source of 74 percent of New Zealand's wine production. Consequently industry anticipate a loss of around 2 percent of the 2016 vintage. More significantly, some wineries will have difficulty making the necessary tank repairs or replacements in time for the next harvest, which commences in March 2017. It is too early to say what impact this may have on the 2017 vintage and exports.
- Strong demand in core markets and a relatively weak New Zealand dollar are supporting prices. Exports to the US market continue to trend upwards. New Zealand is the fastest growing source of imported wine by value to this market. At \$US8 per litre, New Zealand is second only to France in average import price. Growth is linked strongly to demand for Marlborough Sauvignon Blanc.
- Growth in export earnings from China has slowed over recent years following the introduction of Chinese Government measures focused on reducing government expenditure. However, a small number of New Zealand wine companies remain committed to growing the long term opportunity in this market for both red and white varietals.
- Figure 14 contrasts the US and China markets by wine varietal. Most wine exports to the US are Sauvignon

FIGURE 14: NZ WINE EXPORTS BY VARIETY TO THE US AND CHINA





Blanc from Marlborough, while the Chinese market prefers a much wider variety of wines, including reds, from a greater diversity of New Zealand regions. Export revenue from the US has grown 23.7 percent from 2015 to 2016, compared to 3.5 percent from China.

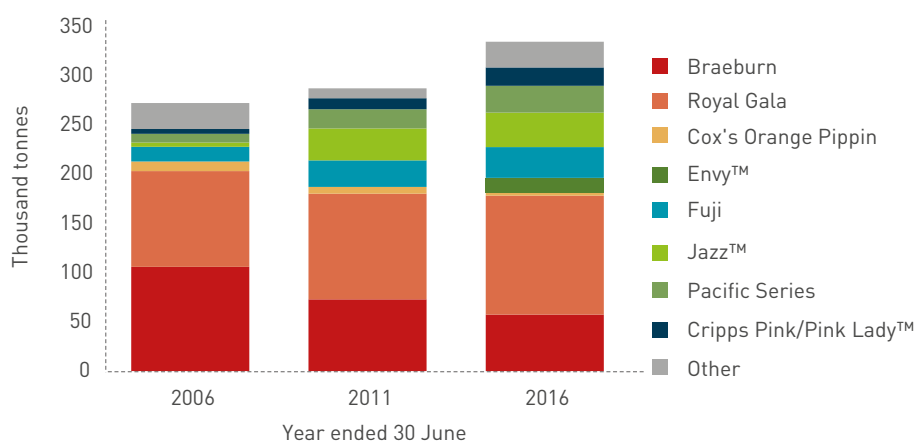
- The strong forecast growth in export revenue to \$1.9 billion by 2021 is related to a potential 5000 hectare (25 percent) increase in Marlborough's vineyard area towards 2020. The wine industry is working on strategies to manage related demand for seasonal labour and accommodation which are essential for supporting these export growth plans.
- A newly created regional research institute for wine in Marlborough is destined to be the centre for wine research in New Zealand. The institute is designed to encourage collaboration between researchers from across New Zealand and internationally to support the growth and continuing success of the New Zealand industry.

APPLE & PEAR EXPORTS ON PACE TO EXCEED ONE BILLION

- Apple and pear exports topped \$700 million in the year ended June 2016. Exports are expected to surpass 360 000 tonnes in 2017; this volume of exports was last achieved in 2004. Weather conditions were favourable during flowering leading to good fruit set.

- We are taking a conservative view in our outlook for export prices in New Zealand dollar terms for 2017 and beyond, with modest year on year increases compared with recent years.
- The New Zealand apple and pear sector has experienced four consecutive years of good profitability. This outcome, alongside increasing demand for high quality fruit from Asian markets is driving investment and expansion across the supply chain.
- Growers and post-harvest operators are investing in technologies and practices to continually improve fruit quality and lift productivity. Such investments include new orchard production and training systems, picking platforms, hail netting, use of reflective mulch, and modern, automated fruit sorting systems.
- Orchard replanting and new plantings are expected to continue. Replanted orchards will deliver higher production through increased tree density. Grower surveys have indicated that the apple and pear planted area could reach 11 000 hectares by 2020, up from around 9800 hectares currently.
- Apple and pear varieties with intellectual property protection account for an estimated 50 percent of the total planted area. Several New Zealand grown varieties have trademarks, including strains of Fuji and Gala/Royal Gala. Trademarks have longer lives than plant variety rights, so the success of these varieties should be sustainable.

FIGURE 15: APPLE EXPORT VOLUME BY VARIETY 2006-2016





- On-going changes in variety mix and further expansion into higher-paying markets (particularly Asia) are expected to lift export prices. However, these increases will be tempered by the following factors:
 - the need for better alignment of supply with market demand for niche varieties such as New Zealand Queen;
 - rising global apple supply providing increased competition;
 - a forecast higher New Zealand dollar against the euro and British pound compared with the 2016 exporting season.

VEGETABLE EXPORT GROWTH TO BE LED BY ONIONS

- Favourable spring weather conditions in the South Island helped most vegetable crops to be planted to schedule, but a cloudy, wet spring in parts of the North Island either delayed planting or slowed down the germination and early growth of some crops.
- Modest growth is expected for fresh vegetable export volumes in the short to medium term, led by increased onion exports. Growers are increasing their plantings of red onions, aimed as a premium product for markets in Asia.
- The processed vegetable sector is stable overall with contracted volumes for the 2016/17 season being maintained at similar levels to recent years.

OTHER HORTICULTURE

- Export growth from other horticultural products is expected to be led by rising volumes of high value cherry, blueberry and other berry exports.

AVOCADO EXPORTS FORECAST TO REACH RECORD LEVELS IN 2017

- An "on-year" in the biennial bearing pattern of avocados supports expectations of export volumes rising to a record 4.9 million trays in the year ending June 2017. As a result export values are expected to increase over 80 percent to a record \$149 million.
- Export pricing in 2017 is holding strong and tracking at similar levels to last year in the Australian market, even with the significant lift in volumes.
- The New Zealand avocado industry is developing new markets with September 2016 quarter data showing significant growth in Japan, South Korea, Taiwan, and India when compared to the previous two years (2014 and 2015).



Fresh Cherry Exports Flying to New Places

\$65m



Fresh Cherry
air freighted export
value in the year to
June 2016



Air access to Asian markets is vital to the success of the rapidly expanding cherry industry in Otago. New Zealand cherries command premium prices in markets due to their superior quality and freshness compared to competing suppliers. The re-emergence of Christchurch International Airport as a critical transport hub following the earthquakes in 2011 has been a key recent development for the industry.

To retain their premium value, cherries are air freighted direct to markets within 24 hours of harvest. Flights to Asia from Christchurch or Auckland International Airports are either direct or via connecting flights in Australia.

Production reaches peak season in January which coincides with Chinese New Year celebrations. However cherries compete for aircraft space with other seasonal fruits and seafood exports from the South Island who are also targeting the Chinese celebration period.

For the 2017 season, global leader Chile is expected to air freight a quarter of its total export crop, roughly 25 000 tonnes. This is over five times the size of New Zealand's expected export crop in 2017.



Seafood



NZ seafood exports are forecast to reach NZ\$1.8 billion in the year ending June 2017.



About 78 percent of the total seafood export value comes from wild capture fisheries, which have limited volume growth potential due to sustainability constraints. We are forecasting a growth in aquaculture, particularly salmon.



Export prices (in USD) are starting to recover following a softening since mid-2014 and are expected to rise further alongside an improving global economic outlook, combined with the limited supply potential of wild capture fisheries.

FORECAST UPDATE

- New Zealand's seafood export earnings were up by 13 percent (\$204 million) on last year to \$1.8 billion in the year ended June 2016. This was primarily driven by a 17 percent rise in prices due to a depreciating New Zealand dollar.
- Seafood sector export earnings are expected to grow by 4.4 percent per year and reach \$2.2 billion in the year ending June 2021. Forecast growth in total seafood

export values are expected to be underpinned by an increase in prices (3.2 percent per year), and volumes (1.2 percent per year).

SEAFOOD PRODUCTION STEADY

- Production from wild capture fisheries contributes nearly 80 percent to the total seafood export revenue. However, there is a limited scope for production growth from wild capture fisheries due to sustainability constraints.

TABLE 10: SEAFOOD EXPORT REVENUE, 2013-2021 (\$NZ MILLION)

YEAR TO 30 JUNE	Actual				Forecast				
	2013	2014	2015	2016	2017	2018	2019	2020	2021
Wild capture Volume (000 tonnes)	283.6	257.2	284.3	271.0	267.9	269.0	275.7	279.8	280.7
Wild capture Price (\$/kg)	4.41	4.52	4.36	5.07	5.18	5.43	5.62	5.77	5.93
Wild capture Revenue (\$NZ million)	1 250	1 161	1 240	1 375	1 390	1 460	1 550	1 620	1 660
Aquaculture Volume (000 tonnes)	42.3	39.6	36.6	38.3	42.3	42.6	44.3	46.3	46.9
Aquaculture Price (\$/kg)	7.01	8.56	8.78	10.22	9.65	10.17	10.57	10.89	11.24
Aquaculture Revenue (\$NZ million)	296	339	322	392	410	430	470	500	530
Total Volume (000 tonnes)	325.9	296.8	321.0	309.3	310.2	311.5	320.0	326.2	327.5
Total Price (\$/kg)	4.74	5.06	4.87	5.71	5.79	6.08	6.30	6.50	6.69
Total Revenue (\$NZ million)	1 546	1 500	1 562	1 766	1 790	1 890	2 020	2 120	2 190
% Change	+0.1%	-2.9%	+4.1%	+13.1%	+1.3%	+5.6%	+6.9%	+5.0%	+3.3%

- We expect a slight improvement in wild capture export volumes in the latter part of the outlook period as fisheries are expected to rebuild, resulting in an average 0.7 percent increase in export volumes per year.
- Aquaculture, however, has growth potential. We expect an increase in salmon production from this year as two new farms owned by New Zealand King Salmon are already operational. Production from the third farm will be available in 2018.
- Mussel production still relies on wild caught juveniles, availability of which depends on climatic cycles. Hatchery-bred juveniles are expected to gradually come online from 2018 and support more reliable mussel production. As a result, aquaculture export volumes are forecast to grow by 4.1 percent annually during the outlook period.

GROWING DEMAND IN KEY EXPORT MARKETS

- Key export markets continue to be China (32 percent of the total value), Europe (16 percent), Australia (14 percent), the US (13 percent) and Japan (6 percent). Demand from China, Europe and the US has increased compared to the last year. Exports to the European market has grown 31 percent during the year ending June 2016, surpassing Australia for the first time. Demand from the Australian market in terms of value has remained resilient, despite a depreciating Australian dollar against NZD.

- Global prices (in USD) for seafood have softened since mid-2014 and have remained weak over the past year due to subdued consumer demand. However, prices have risen in recent quarters – a 2 percent rise in the June 2016 quarter and 5 percent in September 2016 quarter – and are expected to continue to recover alongside an improving global economic outlook.
- There is an emerging trend that the average per unit price for wild capture fisheries is growing faster than that of aquaculture species. This is likely be a reflection of the limited supply potential from wild capture fisheries. The price growth for wild capture is good news for New Zealand, as wild capture fisheries accounts for about 78 percent of our total seafood export revenue.
- Export prices in NZD are expected to increase by 3.2 percent per year during the outlook period, driven by a weakening currency and small steady increases in the underlying USD price.



High Value Mussel Oil



Mussel Oil \$3 000/kg

received for air freighted
green lipped mussel oil
export products

10/kg-\$20/kg received for alternative
fish oil products

New Zealand
exported
\$40 million
in mussel oil
products in 2016

up from
\$3 million
in 2011

Unlike most other seafood products shipped by air, mussel oil is processed rather than fresh. It can be profitably air freighted because it is one of the most expensive primary sector products at \$3 000 per kg. Mussel oil is an emerging source of fish oil used in nutritional supplements. While fish oil is traditionally sourced from salmon, herring and other fish, mussel oil is unique to New Zealand. Oils extracted from Green Lipped New Zealand mussels are a high value product as they are a potent source of Omega 3 fatty acids and are said to have anti-inflammatory benefits.

New Zealand exported \$40 million in mussel oil products in 2016, up from \$3 million in 2011.



Arable



Export seed revenue is expected to fall to \$180m in 2016/17, similar to 2014/15, driven by a stronger New Zealand dollar and weaker demand for herbage seeds.



The longer term outlook is more positive with a steady improvement in export revenue expected as overseas stocks of herbage seeds reduce and the demand for the high value vegetable seeds continues to grow.



Little improvement is expected in the domestic grain market in 2016/17 with demand from the dairy sector expected to remain subdued and prices mirroring the low international grain prices.

SITUATION AND OUTLOOK

- Weather conditions in the South Island were ideal for planting most crops and they are reportedly doing well. An exception was the wet January that affected carrot seed planting and could reduce harvest volumes. The wet spring in the North Island delayed some planting, particularly maize in the Waikato.
- There is high ongoing demand for vegetable seed, and New Zealand's southern hemisphere latitude make it suitable for multiplying seed crops for international seed companies in the northern hemisphere off season.
- New Zealand is not the cheapest seed producer but it has a reputation for being a reliable producer of high quality seed. It also has the advantage of producing non-genetically modified crops which are valued in Europe.

FORECAST UPDATE

- A process to resume brassica seed exports to China has begun with a draft Official Assurance Program (OAP) provided to the Chinese for consideration. Brassica seed exports were embargoed in 2011 following finding Black-leg fungus in a New Zealand seed export consignment.
- Demand for export herbage seeds has been weak with high inventories held overseas and low commodity prices resulting in farmers deferring sowing pastures. Low yielding harvests this year in the US and Australia and an average harvest in Europe could lead to increased demand for New Zealand seed in 2017/18.
- Little improvement is expected in domestic grain prices in 2016/17. There is more positivity in the dairy sector with the lift in the milk price, but lower stocking rates, plenty of grass, and constrained budgets are keeping the demand for feed wheat and barley low. Following a record world cereal harvest, world prices are expected to remain at low levels. This will make it difficult for

TABLE 11: ARABLE EXPORT REVENUE, 2013-2021 (\$NZ MILLION)

YEAR TO 30 JUNE	Actual				Forecast				
	2013	2014	2015	2016	2017	2018	2019	2020	2021
Vegetable seed	80	66	62	74	70	75	80	90	95
Ryegrass seed	68	55	49	46	40	45	45	45	50
Clover/Legume seed	21	20	22	20	20	20	20	20	20
Other grains and seeds	55	87	44	65	50	65	70	70	75
Total exports	225	228	177	205	180	205	215	230	245
% Change	+30.4%	+1.3%	-22.1%	+15.5%	-12.1%	+13.9%	+4.9%	+7.0%	+6.5%



New Zealand grain growers to compete against imported grain.

- The planted area of barley is reported to be back on previous years, but not by as much as previously expected as growers were unable to arrange alternative crops. Less malting barley has been planted with falling beer consumption reducing demand.

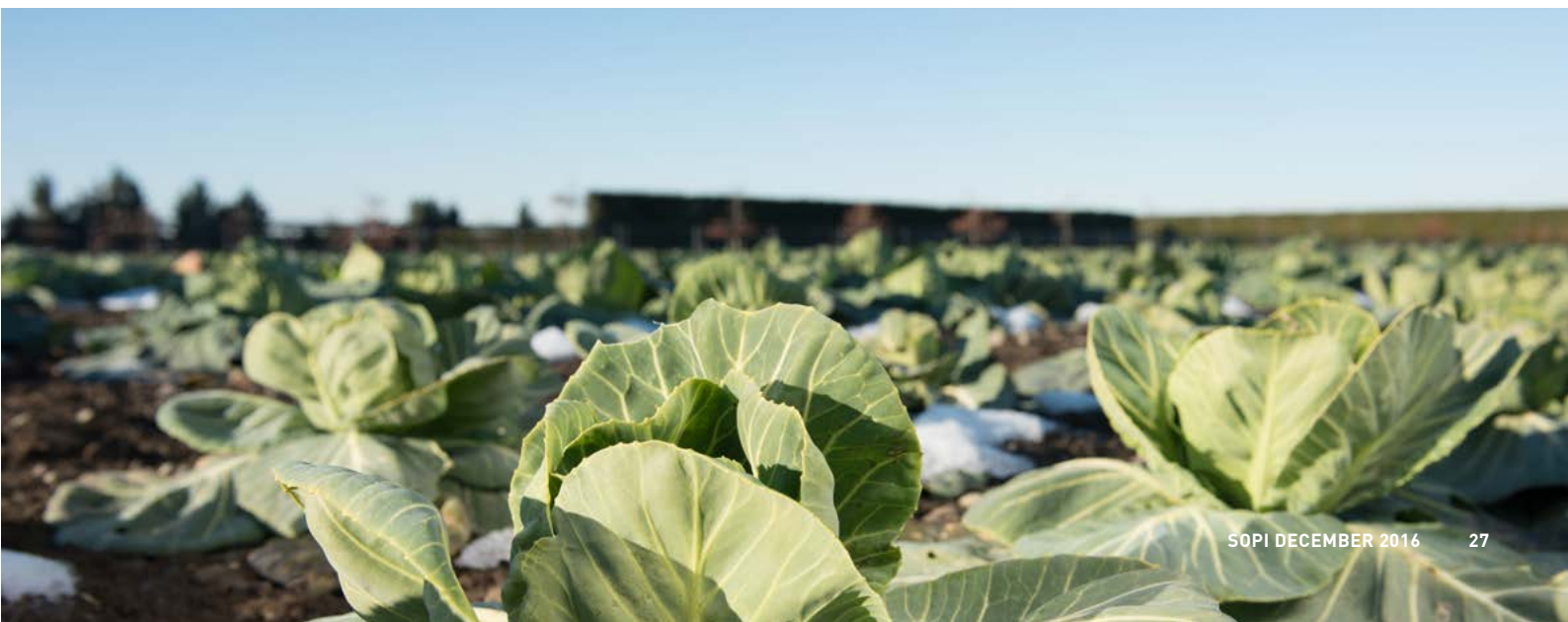
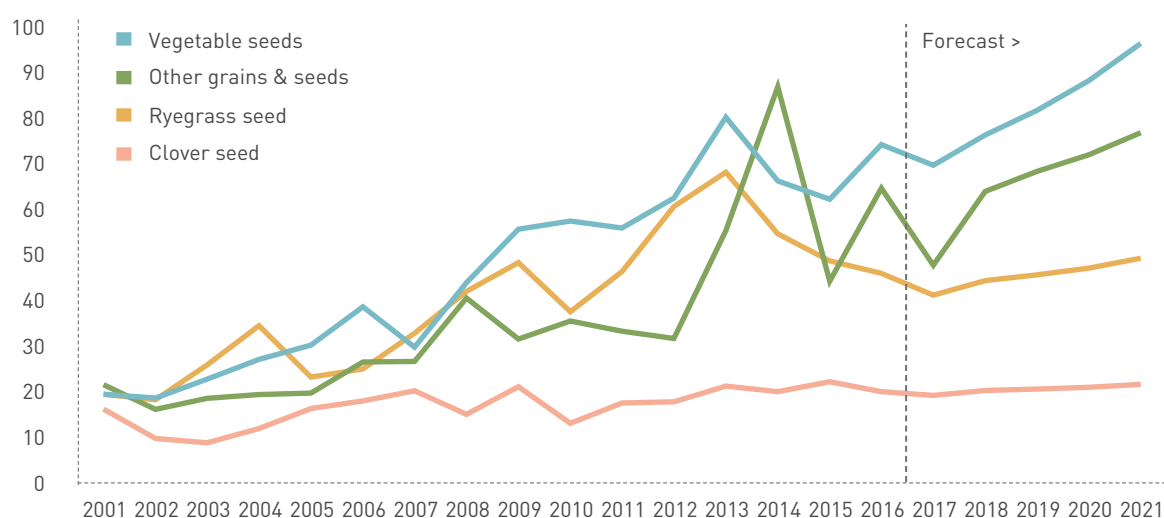
OPPORTUNITIES FOR ARABLE EXPORT GROWTH

- Growth opportunities are being investigated by seed companies in high value, gluten free superfood niche crops such as quinoa, chia, hemp, and buck wheat.
- The Ministry for Business, Innovation and Employment intends to review the Plant Varieties Act 1987. Updating the Act to provide greater protection of plant

Intellectual Property will give international seed companies confidence to send their best seed to New Zealand. The higher yielding seeds would give better returns for farmers.

- New Zealand and Australian Ministers of food safety are planning to meet in 2017 to consider changing food standard laws to allow human consumption of hemp seed. It is currently grown in New Zealand for oil. Hemp seed is a high value seed worth three-to-five times more than linseed.
- There have been considerable mergers and acquisitions occurring among the top companies in the global seed market. Bayer has acquired Monsanto, Dow Chemical is in the process of a global merger with DuPont, and Swiss seed giant Syngenta is close to being acquired by China National Chemical Corp. This could drive some changes in the seed market.

FIGURE 16: ARABLE EXPORT REVENUE 2001-2021 (\$NZ MILLION)





Other Primary Sector



Export revenue for Other Primary Sector Exports and Foods are forecast to reach \$2.3 billion in 2017 and to approach \$2.9 billion over the next four years.



Honey export volumes have decreased and honey stocks in New Zealand are increasing. Export volumes have slowed particularly to Australia, China and Hong Kong.



Demand for innovative processed foods is slowing, but exports of cereal products are increasing.

OVERVIEW

- Recent trends indicate that exports of other primary sector products is forecast to fall 4.3 percent in 2017 to \$2.3 billion.
- Lower volumes of honey and innovative processed foods are the main drivers of this outlook, but this is expected to be short-lived as this sector returns to growth in 2018 and beyond.
- Exports are forecast to recover in 2018 and beyond, reaching nearly \$2.9 billion by 2021.
- This category includes a wide range of products such as live animals, honey, and processed foods such as chocolate and tomato sauce.

INNOVATIVE PROCESSED FOOD VOLUMES DROPPING

- While prices for innovative food products are continuing to rise, volumes have dropped from their June 2016 peak.
- Our key export partners by value for these products are Australia (40 percent), China (15 percent), and Hong Kong (4 percent).
- Over the past two years, there has been rapid expansion in innovative processed food exports to China and Hong Kong, while exports to our core Australian market has grown steadily.
- Over the past quarter, however, exports to China have held steady while exports to Australia and Hong Kong have fallen off. Assuming this trend continues, export revenue may fall from \$679 million in 2016 to \$590 million in 2017.

TABLE 12: OTHER EXPORT REVENUE, 2013-2021 (\$NZ MILLION)

YEAR TO 30 JUNE	Actual				Forecast				
	2013	2014	2015	2016	2017	2018	2019	2020	2020
Innovative Processed Foods	339	330	468	679	590	670	720	750	770
Sugar & Confectionery Products	263	290	293	312	320	340	360	370	390
Honey	145	187	233	315	310	360	390	420	460
Cereal Products	264	253	253	271	280	280	300	310	330
Live Animals	238	208	370	242	230	240	250	250	260
Soups & Condiments	196	192	183	187	190	200	210	210	220
Other Products	246	217	289	370	350	400	430	450	470
Total exports	1 691	1 677	2 089	2 376	2 270	2 500	2 650	2 770	2 890
% Change	+9.2%	-0.8%	+24.6%	+13.7%	-4.5%	+10.1%	+6.0%	+4.5%	+4.3%

Exports and Foods

- We anticipate that this decrease is temporary, and that there will be a return to higher levels of growth in the medium term.

HONEY VOLUMES SLOWING BUT PRICES STILL RISING

- The New Zealand honey crop produced in 2016 has been estimated at almost 20 thousand tonnes, up 1 percent from 2015. As hive numbers were up 19 percent, the harvest per hive was well down from last year. This reduction in yield per hive is likely to be the result of this past year's El Niño weather pattern, irregular flowering of certain crops, and hive overstocking issues.
- While honey export prices have continued to rise, export volumes have fallen significantly in the past quarter. Industry are reporting rising levels of inventory, so export volumes have the capacity to recover quickly. Export volumes have particularly decreased to our core markets in China, Hong Kong, and Australia.
- MPI is planning to implement a science-based definition for mono-floral and multi-floral mānuka honey, following consultation in 2017. Exported honey is expected to be required to comply with this definition by the middle of 2017. Until this work is finalised, it is not possible to predict the potential impact on honey exports.

SUGAR AND CONFECTIONERY AND SOUPS AND CONDIMENTS EXPORTS HOLD STEADY

- Exports of sugar and confectionery, and soups and condiments were steady in 2016 at just under \$500 million combined. Trends indicate that export growth in these sectors is forecast to be slow over the forecast period.

LIVE ANIMAL EXPORTS FORECAST TO REMAIN STEADY

- Racehorses are the key live animal type exported by New Zealand. Around 2500 horses leave each year with a value of \$154 million in the year to June 2016. Our main export partners are Australia, Hong Kong and Singapore.
- Growth in the value of live chicken exports for breeding is continuing, aided by New Zealand's lack of many established chicken diseases and new market access into China. The value of live chicken exports doubled in 2016 to \$26.3 million and this growth is expected to continue.

CEREAL PRODUCT EXPORTS TO CHINA ARE GROWING

- Cereal product exports totalled \$271 million in 2016, and Australia continues to be a reliable destination for almost 80 percent of our exports.
- Led by sweet biscuits and breakfast cereal, exports to China are small but growing fast. While the total value of cereal product exports to China was \$11 million in the year ended June 2016, exports nearly in the September quarter alone reached \$5 million.

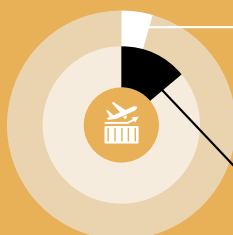
CONTINUED GROWTH IN OTHER PRODUCTS

- Products in this category are a mixture of various low volume niche products.
- This sector has been growing quickly, having increased from \$217 million in 2014 to \$370 million by the year ended June 2016. This growth has not carried into 2017 so far, as rising exports to Japan and the US has been more than offset by a decline in exports to Australia.

Honey increasingly exported by air



Retail honey air freighted exports totalled
\$44 million
for the year ended June 2016



Air freight has increased from **4.5%** of retail honey export value in the last 10 years

to **14%** due to increasing demand from Asia



Recent export demand in the Asia-Pacific region is expected to continue to drive prices and returns for New Zealand exporters

Appendix

Primary Industries in the New Zealand Economy

78.4%

of exports

Over 78 percent of New Zealand's merchandise exports are from the primary sectors. This figure has increased over the past five years from 72 percent in 2012, indicating that the primary industries will continue to be the dominant exporting sector for the foreseeable future.



16%

of employment

16 percent of New Zealand's workforce is employed in production, manufacturing, and support services in the primary sector. While the largest number of these jobs are located in Auckland, Canterbury, and Waikato, the regions with the highest percentage of the workforce in the primary sector are Tasman, Marlborough, Gisborne, and Hawke's Bay.



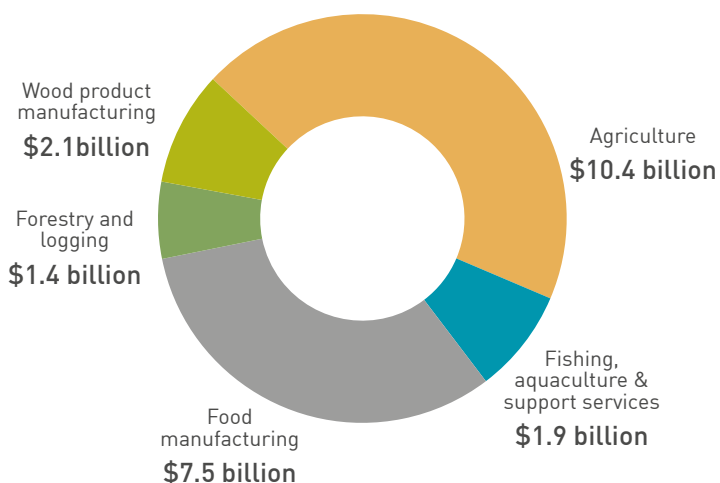
10.3%

of GDP

The primary industries contribute over \$23 billion annually to the New Zealand economy, which is 10.3 percent of New Zealand's total GDP of \$227 billion.



FIGURE 17: PRIMARY INDUSTRIES GDP BY SECTOR,
YEAR ENDED JUNE 2016



More primary industry data can be found on the MPI website:

www.mpi.govt.nz/news-and-resources/open-data-and-forecasting/

Forestry

- Wood Availability Forecast
- National Exotic Forestry Description
- Quarterly production and log prices.

Agricultural Greenhouse Gas Inventory

Agriculture

- Agriculture Production Statistics
- Livestock slaughter statistics

Historical and forecast export volumes, values and prices



CHANGES IN FORECAST SINCE LAST PUBLICATION

Since our last publication in June 2016, our outlook for 2017 export is \$1.1 billion lower, mainly due to revised exchange rate estimates provided by the Treasury.

However, we now expect that higher dairy prices and strong demand for our fruit exports will lead to greater than expected export revenue (compared to SOPI 2016) from 2019 onwards.

FIGURE 18: EXPORT FORECAST CHANGES FROM JUNE (\$BILLION)

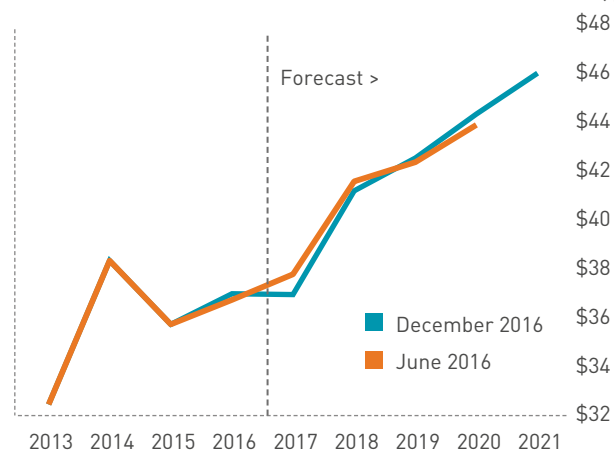


TABLE 13: EXPORT FORECAST COMPARISON (NZ\$BILLION)

		Actual				Forecast				
YEAR TO 30 JUNE		2013	2014	2015	2016	2017	2018	2019	2020	2021
Dairy	December 2016	13 139	17 791	14 050	13 289	13 690	17 030	18 300	19 450	20 650
	June 2016	13 139	17 791	14 050	13 230	13 814	16 626	17 055	17 735	-
	Difference	-	-	-	+ 59	- 124	+ 404	+ 1 245	+ 1 715	-
Meat & Wool	December 2016	7 794	8 162	9 001	9 201	8 210	8 520	8 710	8 880	9 130
	June 2016	7 794	8 162	9 001	9 055	8 345	8 510	8 534	8 804	-
	Difference	-	-	-	+ 146	- 135	+ 10	+ 176	+ 76	-
Forestry	December 2016	4 527	5 199	4 682	5 140	5 330	5 630	5 900	6 150	6 400
	June 2016	4 527	5 199	4 682	5 069	5 645	6 012	6 116	6 325	-
	Difference	-	-	-	+ 71	- 315	- 382	- 216	- 175	-
Horticulture	December 2016	3 540	3 780	4 165	4 982	5 190	5 460	5 810	6 020	6 340
	June 2016	3 540	3 780	4 165	5 015	5 335	5 448	5 545	5 726	-
	Difference	-	-	-	- 34	- 145	+ 12	+ 265	+ 294	-
Seafood	December 2016	1 546	1 500	1 562	1 766	1 790	1 890	2 020	2 120	2 190
	June 2016	1 546	1 500	1 562	1 789	1 821	1 965	2 033	2 117	-
	Difference	-	-	-	- 23	- 31	- 75	- 13	+ 3	-
Arable	December 2016	225	228	177	205	180	205	215	230	245
	June 2016	225	228	177	202	208	218	229	243	-
	Difference	-	-	-	+ 3	- 28	- 13	- 14	- 13	-
Other	December 2016	1 691	1 677	2 089	2 376	2 270	2 500	2 650	2 770	2 890
	June 2016	1 689	1 677	2 089	2 374	2 609	2 796	2 847	2 936	-
	Difference	-	-	-	+ 2	- 339	- 296	- 197	- 166	-
Total exports	December 2016	32 461	38 338	35 727	36 959	36 660	41 235	43 605	45 620	47 845
	June 2016	32 461	38 338	35 727	36 734	37 777	41 575	42 359	43 886	-
	Difference	-	-	-	+ 225	- 1 117	- 340	+ 1 246	+ 1 734	-

Notes

