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2016 New Zealand Organic Market Report



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Report developed by OANZ in partnership with:



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From the OANZ Chair and Chief Executive

Kia ora tatou,

Organics Aotearoa New Zealand (OANZ) is the national voice of the New Zealand organic sector. Our member organisations include organic producers, processors, consumers, exporters and domestic traders.

We are a diverse community, united by a common purpose and team effort, and we are committed to realising the growth opportunities that the organic sector offers for all New Zealanders.

It is with great pleasure that we share the 2016 Organics Aotearoa New Zealand Market Research Report. OANZ considers research, information and feedback to be essential elements of any successful venture and these have formed a critical part of the organic sector's approach since 1990.

This document is intentionally open source as we want the research to assist all organisations in charting new directions and/or correcting existing ones. It is a guide for ongoing progress, not just for the organic sector but for those increasingly associated with it.

Team efforts require acknowledgement. We are particularly grateful to our sponsors and all the report's contributors. We have 17 sponsors across the entire supply chain and it is no accident that our Gold Sponsors and some of our Silver sponsors are retailers and distributors of organics. This is a clear message to us all that the market wants more of what organics offer, and it mirrors a global trend. The New Zealand organic sector may currently struggle to meet demand but the commitment is there to rise to the challenge and continue to grow. The insights gained from this Market Report can help guide the way.

We would also like to acknowledge the Primary Production Select Committee and its Chair, Ian McKelvie, for hosting our launch in Parliament. We look forward to engaging with the Select Committee and other Ministers over the year and appreciate their support in promoting the opportunities and benefits organics offer – for New Zealand's people, environment and economy.

Yours sincerely,



Doug Voss
Chair



Brendan Hoare
Chief Executive Officer

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Foreword

Growth, diversity and confidence are cornerstones of our work at Organics Aotearoa New Zealand (OANZ)¹ and they are reflected in our 2016 Market Report. OANZ is growing and so is consumer demand for organic products. We celebrate the diversity in our member organisations and in the wider organic community. And we are quietly confident about the increasingly important role organics will play in our future global community. As the peak body for the New Zealand organic sector, OANZ is rising to meet the opportunities, responsibilities and challenges this will present.

The OANZ 2016 Organic Market Report is our fourth since 2007 and it is 100% funded by the private sector. True to form, we've designed all content to be open sourced. Electronic versions of the full and summary reports, PowerPoint presentations and short videos supporting our key messages can be found on our website: www.oanz.org. We hope all interested parties will digest, critique, share and use this information in making critical decisions around the sector's development and growth. We invite your feedback and welcome your full participation.

The report is both quantitative and qualitative. Since 2012 we have been measuring not only the standard indicators of domestic and export organic market size, but also consumer perceptions on matters which are increasingly important to New Zealanders and international markets.

Sustainability is now mainstream and new generations are driving its growth. Today's young people see a direct correlation between organics and the benefits of sustainability for people, the environment and Brand New Zealand. There is no reason why the sector's growth cannot and will not continue and it is a logical place for new talent to invest energy, drive and innovation. We welcome young energetic, creative and hard-working people into our community and OANZ.

Organic is not a brand; it is a whole market segment growing between 8%-20% annually, depending on product, channel and category. Organic fresh fruit, wine, dairy, processing and domestic retail sectors are thriving in New Zealand. Each of these is backed by a solid export sector that is diversifying into new markets, particularly Asia.

We are not surprised that organic growth sectors tend to be well organised, market-focussed and possessing internal control measures such as minimum environmental standards aligned with international organic certification requirements. The leading organic sectors are highly strategic, informed and pro-active.

International demand for our organic products is mirrored here at home by a domestic market which is also backing local and regional food economic strategies and demand for regional expression, such as the legitimising of GMO-free regions in Hawke's Bay, Bay of Plenty and Northland. Certified organic products are by definition natural, ethical, free-range, GMO-free, spray-free and/or Fair Trade, and our sector partners are working harder to communicate this fundamental message.

Increased growth and demand for organics, both at home and overseas are encouraging. However, there are areas where we are not growing – broad acre and fresh vegetable production, and the red meat sectors in particular. Over the last year, OANZ has engaged with specific sector groups including Horticulture New Zealand and Beef and Lamb New Zealand to address these short-falls by developing stronger relationships and joint strategies. As a result, Horticulture New Zealand recently joined OANZ, and we are in dialogue with Beef and Lamb.

Perhaps the biggest challenge for our sector is to ensure the organic message is told well. For those directly involved, the organic option is a profoundly simple one, yet we struggle with conveying this in clear language to everyday people. We also recognise we have multiple standards and poor government regulation to protect organics, and we accept we need to improve on what we do. The good news is that OANZ has created a cross-sector working group to develop a single national standard, and is also in discussion with government regarding regulation.

We thank all those who have given their time and participated in the research. Our requirement for openness is sometimes on the cusp of commercial sensitivity and intellectual property. Consequently the results may be slightly conservative, but given the expertise of our research team – the AgriBusiness Group and Colmar Brunton NZ – we are confident they are accurate.

Finally, without our sponsors there would be no report. In engaging and gaining their support we have opened dialogue, gained insights and built relationships that will be ongoing. Our focus for sponsorship in 2016 was retail, and lead retail chains in New Zealand have responded positively. They sense the change – on the ground in their stores and through their customers' scan data – and the results are clearly indicating that growth in organics is real, demand for diversity in products is actual and confidence to invest in organics is high.

Brendan Hoare
Chief Executive Officer Organics Aotearoa New Zealand

¹ Organics Aotearoa New Zealand (OANZ) is the national voice of the New Zealand organic sector. Our member organisations include organic producers, processors, consumers, exporters and domestic traders. As the organic sector's representative body, OANZ delivers leadership, coordination and advocacy at a national level. We actively promote organics as good for our health, our communities, our environment and our economy. See <http://www.oanz.org/about/about-oanz.html>

Acknowledgements

This project was funded by Organics Aotearoa New Zealand Inc (OANZ) with funding support provided by 17 sponsors. The project was undertaken by The AgriBusiness Group and Colmar Brunton NZ, and supported by contributing individuals who provided case studies.

AgriBusiness thanks the organic producers, processors, service providers, exporters, retailers and certifiers who participated in the census. They also acknowledge and thank Nielsen Ltd for providing the results of their organic Scantrack data, as well as the Ministry for Primary Industries (MPI) for the use of information collected as part of the Official Organic Assurance Programme.

OANZ thanks all sponsors for their support and belief in this significant project. We thank our Chair Doug Voss and Board member Barbara Harford for reviewing report content. Thanks to OANZ Communications Manager Niki Morrell for editing and styling the report, Moxie Communications for their design work and Paul Hewlett for guidance on media and PR. We thank Rebecca Reider, Dr Jayson Bengé, Matt Morris and Shep Elliott for contributing case studies. We also thank Leigh Catley, Roger Beattie, Commonsense Organics, Opawa Farmers' Market, Zespri and Taste Nature for sharing additional images. Thanks to Philippa Jamieson for her input concerning the report's cover and Dr Christine Dann for her proof-reading skills. Special thanks to Victor Grbic from Unitec for producing the audio soundtrack of our videos.



Executive Summary

1. Introduction

The 2016 New Zealand Organic Market Report is the latest in a series of reports quantifying and describing the New Zealand organic sector. It provides the results of a census of organic product exporters, information from organic certifiers as well as surveys of the domestic market. It also includes case studies on some groups within the organic sector and other recent developments. The report was commissioned by the peak organic sector organisation – Organics Aotearoa New Zealand Inc (OANZ).

2. The domestic market for organics is growing

An estimate of \$217 million for the value of the domestic market for certified organic products is based on organic grocery sales through supermarkets of \$167m, fruit and vegetable sales of \$25m, and sales through speciality organic shops of \$25m. Organic grocery sales through supermarkets have increased by 127% since 2012 and two out of three New Zealanders are buying organics at least some of the time. These products are not limited to food and beverages, nor are they all produced domestically. Sustainable purchasing will continue to increase, especially among Millennials/Gen Y.

3. Organic exports from New Zealand are growing in value

- Organic product exports were between \$240m and \$250m in value in 2015 – an increase of over 11% since 2012.
- Fresh fruit and vegetables are still the most important product category by value, accounting for more than \$108m (45%) of total exports.
- Pastoral products continue to be the second-largest export category. The value of organic pastoral exports has grown 45% since 2009.
- Processed foods and ingredients have declined 15% since 2012.
- Organic wine exports continue to grow rapidly.
- Organic honey exports have continued to significantly decline in value while the value of the “Other” category (e.g. seafood, non-edible seeds, cosmetics and cleaning products) has declined by 21% in value since 2012.

4. Organic export markets are expanding

Europe, North America and Australia continue to be the sector’s primary export destinations, together comprising 66% of all exports. There has been significant growth in the value of exports to Asia, with exports to China rising from 3% to 10% of total exports. Conversely, those to Japan decreased from 10% in 2012 to 6% in 2015.

5. Organic sector growth in New Zealand

In 2015, the New Zealand market for organic food, including that both exported and consumed domestically, was estimated at \$457m - \$467m. This compares with an estimated \$350m in 2012 – a 30% increase.

6. Organic vineyards/horticulture are growing steadily in New Zealand

The land area under organic horticulture continues to grow, with a 128% increase since 2012 from 11,188 hectares to 25,476 hectares. However, the number of organic horticulture operations declined by 5% over this period, which suggests that the organic horticultural operations are getting bigger. Key horticultural crops are grapes, apples and kiwifruit. In 2015 there were 2,022 ha of grape vine planting under organic certification, 5.78% of all vineyard land in New Zealand. One hundred and four vineyards were growing grapes organically, representing 12.5% of all grape growers and 69 wineries were certified organic (10% of total). See case studies on the organic wine and kiwifruit sectors in Section 4 of this report.

7. Organic livestock production is decreasing in area but growing in value in New Zealand

The land area under organic livestock production was 42,837 ha in 2015 – a 55% decline since 2012. Over the same period, there was a 15% decline in certified organic livestock operators. This suggests the loss of some larger, more extensive properties from organic certification, with the average size of organic pastoral farms decreasing from 346 ha in 2012 to 192 ha in 2015. The increased value of production from organic pastoral farms since 2012 also supports this. Furthermore, there may have been a shift to mixed farming classification by some livestock operators, which showed a 91% increase from 2012 from 3,043 ha in 2012 to 5,821 ha in 2015.

8. The number of certified organic enterprises has decreased in New Zealand

In 2015 there were 997 licensees and 1,500 licensed certified organic operations in New Zealand – a decrease of 18% and 15% respectively since 2012. However, it still is an overall 16% and 24% increase since 2007.

9. Certified organic land area has recently declined in New Zealand

The total land area under organic certification in 2015 was 74,134 ha. This represents a 30.5% decline from the 106,753 ha under certification in 2012. In addition, the number of operations under conversion to full organic status has declined from 232 in 2012 to 104 in 2015. However, from 2007 to 2015 the total land area under certification has increased by 16%.

1.0

Introduction

10. Organic brands are struggling to communicate their message in New Zealand

Seven in 10 consumers, across all age groups, cannot name any brand or organisation they consider as a leader in sustainability. There is a need to “unpack” organic certification for it to become meaningful, highlighting the fact that it covers multiple benefit areas, including free range, non-GMO/GE-free, natural ingredients, etc.

11. The global appetite for organics is growing

In 2014 the global market for organic food was estimated at \$US80 billion. This compares with \$US59 billion in 2010 and US\$17.9 billion in 2000. It reflects a 346% growth in organic sales since 2000 at an annual growth rate of approximately 25%. The largest markets in 2014 were the USA (US\$35.9 billion), Germany (US\$10.5 billion) and France (US\$6.8 billion). The demand for organic food in China is also increasing, with estimated organic retail sales worth US\$4 billion in 2014.

12. The organic global land area is growing

In 2014 there were an estimated 43.7m ha of organic agricultural land worldwide, an increase from the 37m ha reported in 2010. This is approximately .99% of total agricultural land with another 37.6m ha of non-agricultural organic land certified for wild collection.

This 2016 New Zealand Organic Market Report is one of a series of reports typically produced every two to three years that aims to quantify and describe the development of the New Zealand organic sector. The first report was produced in 1996.

The reports were originally commissioned by the Organic Exporters of New Zealand Inc² (OEANZ). Since 2007, Organics Aotearoa New Zealand Inc (OANZ), the umbrella organisation for the New Zealand organics sector, has been responsible for commissioning this research.

OANZ's roles include co-ordinating the development and promotion of the organic sector in New Zealand as well as acting as the primary source for information about the sector. OANZ has found the information obtained from this research of value for:

- Establishing the size, trends and character of the organic sector from which to inform both its and its constituent organisations' policies and strategies;
- Profiling and positioning the New Zealand organic sector with stakeholders;
- Providing the basis for the evaluation of the relative effectiveness of its strategies and policies;
- Clarifying the issues and needs of organic stakeholders.

The census undertaken to obtain information on organic production and the trade in organic products took place between December 2015 and February 2016. It utilised the same methodology as previous years to enable the comparison of the results with previous censuses.

In addition to reporting the census results, case studies on some interesting areas of development in the organic sector are included in this report.

The report details the continued growth of the organic sector – in both the export and domestic markets. In some sectors organic production has declined slightly; however there has also been rapid growth in other sectors, such as with horticultural production.

In 2002 the organic sector agreed on a strategy that set a target of NZ\$1 billion by the year 2013. Although this target was not realised, the sector is well on the way to achieving it in the next few years, with sustained overall year-on-year growth of 10%.

2.0

State of the New Zealand Organic Sector

2.1 Overview

The New Zealand organic sector has become formalised and developed only comparatively recently, as reflected in the establishment of organic certification in the 1980s which catalysed an increase in the production, trade and consumption of organic products.

Prior to that, organic production existed primarily through the activities of small-scale local sales, small farms and orchards, and co-operative schemes.

By the 1990s the New Zealand organic sector's first phase of rapid growth took place among export industries (primarily in fruit and vegetable exports) in close working relations with BioGro NZ as the first professional organic certifier. BioGro standards were related to the wider evolution of IFOAM³ standards at an international level.

The sector was also subject to strategic interventions by various government agencies, with a Joint Action Group around organics being formed in 1994. This resulted in the formation of the Organic Products Exporters Group (OPEG) and, later, support of the formation of Organics Aotearoa NZ (OANZ) as a strategic steering group for the sector.

The take-off of the organic sector in the 1990s was strongly influenced by the emergence of large export champions for organic export products. These were initially Watties Frozen Foods Ltd (later Heinz Wattie NZ Ltd) and the NZ Kiwifruit Marketing Board (later Zespri International Ltd). These early corporate participants were later joined by pipfruit exporter ENZA and dairy co-operative Fonterra, with other principally fresh vegetable exporters as major corporate investors in organic export growth.

Saunders et al. (1997) reported to MPI that organic production grew from \$1.1m in 1990 to NZ\$34m in 1997 (OPEG surveys indicated that around \$32m was for export), almost entirely driven by export initiatives by large companies seeking to supply new consumer demands in Europe, Japan and the US.

Around this growth a number of organic certifiers have emerged:

- **BioGro NZ.** The main certifier of products in NZ with strong involvement in the growth of the sector from the late 80s.
- **AsureQuality.** A certifier that emerged from the restructuring of MPI in the 1990s. Certifies across a range of products and standards and has an important organic certification service, particularly in pastoral production.
- **Demeter.** The certifier of biodynamically-produced organic products, now part of Demeter International, a world-wide biodynamic system.
- **Organic Farm NZ.** A certifier that emerged from a government tender to establish a certification system more specifically tailored to smaller, domestic market participants. This was later to prove a world-leading initiative now known internationally as 'Participatory Guarantee Systems'.

Censuses undertaken through the last 15 years show continued rapid growth in organic export products as well as growth in the domestic market for organic products.

Around this growth, a number of organic certifiers have emerged



³ IFOAM, the International Federation of Organic Agriculture Movements is the worldwide umbrella organisation for the organic movement, uniting more than 750 member organisations in 116 countries. Its main platforms are: international relations, the organic guarantee system, and facilitating network and market development. www.ifoam.org

Prior studies of the organic sector demonstrated the multiple areas in which rapid growth was taking place. The Centre for the Study of Agriculture, Food and Environment (CSAFE) – now the Centre for Sustainability, Agriculture, Food, Energy, Environment – at the University of Otago, undertook surveys of the Dunedin retail market for organic food in 1997, 1999, and 2001. The results published in Campbell and Ritchie (2002) showed an increase from around \$350,000 in 1997 to around \$2.1m in 2001.

Between 1996 and 2001, the Organic Products Exporters Group (later OPENZ and now Organic Exporters of New Zealand – OENZ) undertook an annual census of its membership to estimate the value of organic exports from New Zealand. Those annual censuses indicated a rapid increase in the value of organic exports.

In 1997, reported export data indicated a value of \$32m rising to \$70m in 2002 (Campbell and Ritchie 2002). In 2007, OANZ commissioned the first full census of the state of the organic sector in New Zealand (Grice et al. 2007) and its findings included the continued growth in total land area to 63,883 ha with 860 licensees. It estimated the export market as being between \$120m-130m with exports being dominated by horticultural exports.

The 2012 report found exports had grown to \$215m-225m and were still dominated by horticultural exports; however there was the emergence and growth of other categories with significant increases in dairy, processed food and beverage exports. There had also been a change in the main export markets, with Australia overtaking Japan as the third-largest export market. The domestic market had also increased, though the data was of poorer quality.

The 2016 report contains an update on this information and shows the continued growth and diversification of the New Zealand organic sector.

2.2 International Organic Sector Trends

Organic Production and Market Trends

International organic production and the market for organic products continues growth-positive trends.

Consumer demand is increasing, reflected in the significant market growth of 11% in the US, the world's largest organic market. More farmers cultivate organically, more land is certified organic, and 172 countries report organic farming activities (up from 170) as shown in the 2016 edition of the study "The World of Organic Agriculture" (data per end of 2014), published by FiBL and IFOAM – Organics International⁴. Some information from the 2016 report:

Organic market –

- In 2014 the global market for organic food was estimated at US\$80 billion. This compares with \$US59 billion in 2010 and US\$17.9 billion in 2000, reflecting a 346% growth in organic sales since 2000, at an annual growth rate of approximately 25%.
- The largest markets in 2014 were the USA (US\$35.9 billion), Germany (US\$10.5 billion) and France (US\$6.8 billion).
- The highest market share for organic sales is in Denmark with organic products comprising 7.6% of all food and drink sales. Switzerland (7.1%) and Austria (6.5%) also had high levels of organic product sales.

US\$80
billion
– the size of the
global organic
food market

⁴ Willer, Helga and Julia Lernoud (Eds.) (2016): *The World of Organic Agriculture. Statistics and Emerging Trends 2016*. Research Institute of Organic Agriculture (FiBL), Frick, and IFOAM – Organics International, Bonn <http://www.organic-world.net/yearbook/yearbook-2016.html>

Organic Production –

- In 2014 there were an estimated 43.7m ha of organic agricultural land worldwide, an increase from the 37m ha reported in 2010. This is approximately .99% of total agricultural land. The regions and countries with the largest areas of organically-managed agricultural land in 2014 were Australia (17.2m ha), Europe (11.6m ha), Latin America 6.8m ha (Argentina being the largest with 3.1m ha), Asia 3.6m ha, North America 3.1m ha and Africa 1.3m ha.
- In 2014, 63% of the organic agricultural land was in grassland/grazing, 20% in arable land (rice 3.4m ha, green fodder 2.6m ha, oilseeds 1m ha, vegetables .3m ha) and 8% in permanent crops (coffee .7m ha, Olives .6m ha, grapes .32m ha).
- In addition to organic agricultural land, there were an estimated 37.6m ha of non-agricultural land certified for wild collection.
- The highest shares of organic agricultural land are in the Falkland Islands (36.3%), Liechtenstein (30.9%) and Austria (19.4%).
- There were 2.3m organic producers with approximately 40% in Asia, 26% in Africa and 17% in Latin America. Countries with the highest numbers of producers are India, Uganda and Mexico.

In 2015,

83%

of US families
purchased organic
products at least
sometimes

In the USA, the Organic Trade Association (OTA) 2015 Organic Industry Survey⁵ reported that the organic sector grew 11.4% from 2013 to 2014 to a value of over US\$39.1 billion, approximately 5% of total USA food sales.

OTA research⁶ reported that in 2015, 83% of US families purchased organic products at least sometimes. The demographics of organic buyers reflect the demographics of the US population, cutting across all ages, income levels, and ethnic groups. A shortage of production was reported as a significant challenge for the increase in US organic sales (IFOAM 2016).

In the European Union (EU), retail sales of organic products were estimated at €23,943 in 2014 (IFOAM 2016), an increase from the previous year of 7.6%. There were 257,525 producers farming 5.7% of the total agricultural land organically.

In 2014 the area in organic land in the EU increased by 113,000 ha (or 2%). However, this was not evenly spread – for example, the organic land area in the UK decreased by approximately 7%⁷. This is in contrast to the sales of organic products in the UK. These increased by 4% in 2014 with sales of £1.86billion⁸.

There are some organic products categories that have established high levels of retail sales, including organic eggs with a market share of over 20% in France and Switzerland, and organic fruit and vegetables with between 9 to 15% of category sales in Germany, Switzerland and Austria, reported in 2014 (IFOAM 2016).

In Oceania, 17,343,181 ha were under organic certification in 2014, 40% of the global organic land area. This was farmed by 22,115 producers.

Australia is the dominant country in relation to both production and the market for organic products, with the total value of the organic sector estimated at A\$1.72 billion in 2014⁹ and an estimated compound annual growth rate between 2009 and 2014 of 15.4%.

In 2014, organic product exports were estimated at A\$340m with the main products being meat (A\$109m), processed foods (A\$79m), dairy products (A\$53m), wine/ beverages (A\$26m) and fruit/vegetables (\$24m). Imports were estimated at A\$225m, with New Zealand being suggested as a key supplier.

In 2014

Australia

was the country
with the
largest
area in organic
production globally

5 <http://ota.com/resources/organic-industry-survey>

6 *OTA US Families Organic Attitudes and Belief 2015 Tracking Study*

7 *Department for Environment, Food and Rural Affairs – Organic Farming statistics 2014 - https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/444287/organics-statsnotice-23jun15b.pdf*

8 *Soil Association UK Organics Market Report 2014 - <http://www.soilassociation.org>*

9 *Australian Organic Market Report 2014, http://austorganic.com/wp-content/uploads/2015/05/AO_Report_2014_web.pdf*

In 2014 Australia was the country with the largest area in organic production globally, with 22.69m ha owned by 1,707 primary producers. The area had increased by 53% between 2011 and 2014. Much of this increase was extensive grazing farms entering into organic production to meet the strong international demand for organic beef.

Asia in 2014 had the third-largest market for organic products, with much of the demand in countries such as Japan, Singapore, Taiwan and South Korea being serviced through imports. A key reported driver for the increasing demand for organic food is food safety, a result of various food scares that have occurred in the region over recent years.

China had the largest retail sales of organic products with 2014 sales of approximately NZ\$6 billion and exports of NZ\$750m. The second-largest Asian market was Japan, with retail sales of NZ\$1.6 billion in 2009. There is continued development in organic certification programmes in the region and harmonisation between many countries that enhance the potential for trade in organic products.

In 2014 the area of organic land in Asia was 3.567m ha (around .3% of the total agricultural land area in the region). Countries with the largest area are China with 1.9m ha and India with 650,000 ha.

Emerging Organic Markets – demand for NZ Organic products.

The Lincoln University-led Maximising Export Returns project¹⁰ is undertaking research on credence attributes, which are qualities believed by a consumer to be present in a product (such as its organic status) even though they are not directly observed with purchase. A research aim of the project is to understand how consumers in selected key export markets (including China, India, Indonesia, Japan and the United Kingdom) understand and value credence attributes associated with New Zealand land-based exports.

Research results¹¹ have shown that organic production is considered particularly important to participants in developing countries. Indonesian participants indicated a high rating of the importance of this factor, with 56% of participants considering this to be very important and a further 35% stating that this was important. Following this were responses from Indian (57% very important, 29% important) and Chinese respondents (33% very important, 48% important). Interestingly, the UK showed the lowest overall rating of all countries in the study, with only 13% stating that this was very important and 9% stating that this was an unimportant factor.

In the Pacific Islands, organic agriculture is being strongly promoted through the work of the Pacific Organic and Ethical Trade Community (POETcom) and Organic Pasifika¹² as a pathway to support local food security, address health and environmental issues, and develop farmer livelihoods and trade.

Though organic production is currently relatively small there are a number of initiatives that will significantly boost it for both local consumption and trade. These include the establishment of Participatory Guarantee Systems – a form of organic certification designed for smaller farmers, similar to the scheme operated by Organic Farm New Zealand¹³.

¹⁰ <http://www.lincoln.ac.nz/Lincoln-Home/Research/Research-Centres/Agribusiness-and-Economics-Research-Unit/MER/>

¹¹ *Consumer Attitudes to New Zealand Food Product Attributes and Technology Use in Key International Markets AERU Research Report no 333 May 2015 sourced -* <http://www.lincoln.ac.nz/PageFiles/24144/RR333.pdf?epslanguage=en-NZ>

¹² http://www.spc.int/Ird/index.php?option=com_content&view=section&layout=blog&id=24&Itemid=562

¹³ <http://www.organicfarm.org.nz>

The international demand for organic products remains strong, driven in part by consumers' desire to pay more for socially-responsible products

There were
87
countries with
organic regulations
in 2015, and
another
17
were drafting them

Table 1. Selected Pacific Countries - Organic Status 2014

Country	Certified Organic Area (ha)	Share of Agricultural Land (%)	Producer Number	Growth rate 2013 to 2014 %
Fiji	9,218	2.2	627	326%
Solomon Islands	5,302	6.3	1,018	306%
Samoa	40,477	14.3	658	21%
Tonga	1,997	6.4	1,326	402%
Vanuatu	6,594	3.5%	1,226	61%

Source IFOAM 2016

The international demand for organic products remains strong, driven in part by consumers' desire to pay more for socially-responsible products. A 2015 Nielsen global survey¹⁴ found that 66% of respondents were willing to pay more for products and services coming from companies committed to positive social and environmental impacts – up from 55% in 2014 and 50% in 2013. Fifty-seven percent of respondents were very heavily or heavily influenced by whether the product was made from fresh, natural and/or organic ingredients.

However, there is increased competition from non-organic certification to service these demands, including:

- Non GMO label – in the USA, sales of non-GMO labelled foods have increased by an average of approximately 70% each year from 2013 to 2015¹⁵ with non-GMO foods sales estimated at US\$200 billion in 2014¹⁶.
- Other sustainable certification – there is an increasing number of sustainability certification programmes, some of which compete with organic sales. The United Nations International Trade Centre - Standards Map¹⁷ lists over 170 sustainability standards and audit protocols.
- Some sustainability programmes, such as those developed by the Sustainability Consortium,¹⁸ are attracting broad support from many large companies and could provide increased competition in the future.

Within organics there is also the potential for additional segmentation, with an expanding interest in the expansion of organic certification to cover additional values and attributes as reflected in the IFOAM Organic 3 initiative¹⁹. The overall goal of Organic 3.0 is to enable a widespread uptake of truly sustainable farming systems and markets based on organic principles and imbued with a culture of innovation, progressive improvement towards best practice, transparent integrity, inclusive collaboration, holistic systems, and true value pricing.

¹⁴ <http://www.nielsen.com/us/en/insights/news/2015/sustainable-selections-how-socially-responsible-companies-are-turning-a-profit.html>

¹⁵ <http://www.fooddiver.com/news/organic-and-non-gmo-competition-or-counterparts-in-the-healthy-foods-movement/411818/>

¹⁶ <http://www.packedfacts.com/Non-GMO-Foods-8775964/>

¹⁷ <http://www.standardsmap.org>

¹⁸ <https://www.sustainabilityconsortium.org>

¹⁹ <http://www.ifoam.bio/en/organic-policy-guarantee/organic-30-next-phase-organic-development>

Organic Certification Trends

In 2015 there were 549 organic certifiers and 87 countries with organic regulations, with another 17 in the process of drafting regulations (IFOAM 2016). This has the potential for creating difficulties in the recognition and trade of organic products. However recent developments in relation to the mutual recognition of organic production standards and certification programmes will help to minimise these risks and enhance the global trade in organic food. These include:

- The development of regional and global organic standard equivalency initiatives fostered by IFOAM and other international agencies including the recent ASEAN project.
- The development of organic certification harmonisation tools such as the 'Common Objectives of Organic Standards' (COROS) tool.
- Emergence of bilateral agreements between exporting and target import countries. The EU/USA agreement that came into effect in 2012 is a significant example. New Zealand has established agreements with the EU, USA, Japan, Switzerland and Taiwan and has prioritised working on enhancing access into the USA (equivalence rather than recognition), South Korea, China and Canada²⁰.
- The recent equivalency agreement between the EU and US organic standards.

New Zealand is favourably positioned to take advantage of these developments through its well-established and respected Official Organic Assurance Programme operated by the Ministry of Primary Industries (MPI), and the wide range of accreditations held by the two main New Zealand organic certification agencies, BioGro NZ and AsureQuality.

2.3 Organic Certification in New Zealand

Provision of Data from Organic Certifying Agencies

The four active organic certifying agencies – AsureQuality, Bio Dynamic Farming and Gardening Association in New Zealand (Demeter New Zealand), BioGro New Zealand, and OrganicFarmNZ – were contacted to ascertain the extent of their current organic certification programmes. Representatives from these organisations provided figures compiled from their licensee databases on the number of licensees and land area under certification.

Measuring Organic Certification Activity

Several units of measurement can be used to assess trends in organic certification. Each farmer, grower, processor, transporter and retailer in the organic sector is counted as a licensee. Each operation across the production chain is counted separately as a licensed operation. A single licensee may have multiple licensed operations (e.g. if a grower produces organic apples and processes apples into organic apple juice this would be counted as a single licensee but as two licensed operations). As in previous sector reports, figures for the number of operations under conversion to organic were also collected.

Trends in Organic Certification Activity

The number of both organic licensees and organic operations has decreased since the last organic market report in 2012. The aggregated figures from the four certifying agencies show that there are now 997 licensees and 1,500 licensed operations.

Since the 2012 market report, the number of licensees and operations has decreased by 224 (18%) and 265 (15%) respectively. The slightly lower rate of decrease for operations compared to licensees likely indicates that existing sector participants are growing the number of operations. Though there has been a decrease from the last survey, since 2007 the number of licensees has still increased by 16% and the number of operations by 24%.

Table 2 provides a review of the number of licensees and operators from 1997 to 2015.

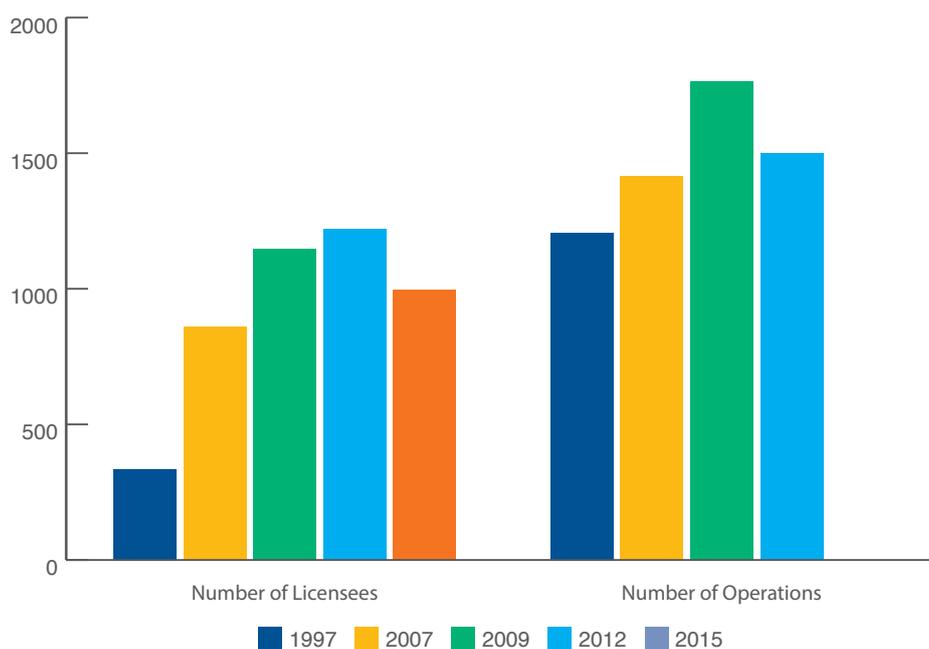
Figure 1 displays the number of licensees and operators identified in the 2007, 2009, 2012 and 2016 sector reports.

Table 2. Number of Organic Licensees and Operations, 1997-2015

	1997	2007	2009	2012	2015
Number of Licensees	335	860	1,145	1,221	997
Number of Operations		1,206	1,416	1,765	1,500
		% growth p/a	% growth p/a	% growth p/a	% growth p/a
		1997-2007	2007- 2009	2009-2012	2012-2015
Number of Licensees		16%	17%	2%	-6%
Number of Operations			9%	8%	-5%

*1997 figure from Saunders et al. (1997)

Figure 1. Number of Organic Licensees and Operations, 2007-2015



Operations Under Conversion to Organic

In addition to the number of licensees and operations, certifying agencies provided figures on the number of operations under conversion to organic certification.

Table 3 reports the number of organic operations under conversion.

Converting to organic production is a multi-year process that can offer an indication of future growth in the scale of organic production. Figures from 2015 on the number of organic operations under conversion are only comparable to figures from the 2012 report as the status of organic conversions relied on using organic certificates in the earlier census. In 2012, 24% of the total operations were under conversion while in 2015 only 7% were in transition.

Table 3. Number of Organic Operations by Status, 2012 - 2015

	2012	2015
Full	1533	1396
Under Conversion	232	104
Total	1765	1500

Licensed Operations by Type of Activity

For the 2016 sector report, certifying agencies specified the number of organic operations within particular types of activity. While the total number of licensees and operations shown above reveals the total number of participants in the organic sector, reporting operations by type of activity allows for a more refined assessment of the shape of the sector.

Table 4 reports the numbers of licensed operation by activity.

Table 4. Number of Organic Operations by Activity, 2012- 2015

	2012	2015	P.A Change
Livestock	168	139	-6%
Dairy	99	84	-5%
Horticulture	720	610	-5%
Apiary	18	9	-17%
Aquaculture	7	8	5%
Import	12	17	14%
Processing	274	285	1%
Retail	18	19	2%
Transport	12	8	-11%
Wholesale	24	42	25%
Mixed/other	413	317	-8%
Total	1,765	1,538	-4%

There has been a 4% annual decline in certified operations; however changes do vary between activities. Apiary production shows the most significant decline, with the number of certified apiaries declining by 50% between the two surveys. This is probably in response to the continued spread of the varroa mite into the South Island and the challenges of managing it with organic management practices.

The main primary production activities – livestock, dairy and horticulture – have also declined between 17% and 15% since the 2012 report. Of note is the 42% increase in the number of certified importers since the 2012 census and the comparatively stable numbers of processing and retail certified operators. The “Mixed/Other” category includes the certification of inputs for organic production, certified health and beauty care products, packhouses and other operators.

Apiary production shows the most significant decline, with the number of certified apiaries declining by

50%

Information on the number of exporters of organic products can be obtained through the number registered for exporting in the Ministry for Primary Industry’s Official Organic Assurance Programme (see Report Section 4.4). In 2015 there were 88 operators registered as exporters, while in 2010/11 there were 75.

Land Area under Organic Certification

One of the key measures used by IFOAM in evaluating the growth of organic agriculture worldwide is land area. This is particularly useful if figures are available that can be disaggregated into relative areas in horticulture, pastoral and mixed production.

Table 5 reports land area under certification by activity from 1997 to 2015.

Table 5. Land Area under Organic Certification by Activity, 1997-2015 and Growth per annum Between Reports

	1997	2002	2007	2009	2012	2015
Land area - Livestock (ha)	6,210	39,564	52,070	108,566	92,522	42,837
Land area - Horticulture (ha)	4,945	7,322	5,045	8,175	11,188	25,476
Land area - Mixed/Other (ha)	805		6,768	7,702	3,043	5,821
Total	11,960	46,886	63,883	124,443	106,753	74,134

	% growth p/a				
	1997-2002	2002-2007	2007-2009	2009-2012	2012-2105
Land area - Livestock (ha)	107%	6%	54%	-5%	-18%
Land area - Horticulture (ha)	10%	-6%	31%	12%	43%
Land area - Mixed/Other (ha)			7%	-20%	30%
Total	58%	7%	47%	-5%	-10%

* 1997 figure from Saunders et al.
 * 2002 figure from Agricultural Census

The total land area under organic certification in 2015 was 74,134 ha. This represents a 30.5% decline from the 106,753 ha under certification in 2012. The 2007, 2009 and 2012 figures on land area include estimates in place of missing data; these figures contain a margin of error of ±5%. However, complete figures were available for 2015.

The decrease in certified land area is due to a 55% decrease in the certified livestock area between the 2012 and 2015 census. The 15% decline in certified livestock operators over the same period suggests that some large, extensive pastoral operations may have ceased organic certification during this period. Feedback from certifiers supports this observation.

In contrast, the land area under certification for horticultural production has increased by 128% since 2012, reflecting significant growth principally in certified organic pipfruit and vineyard production.

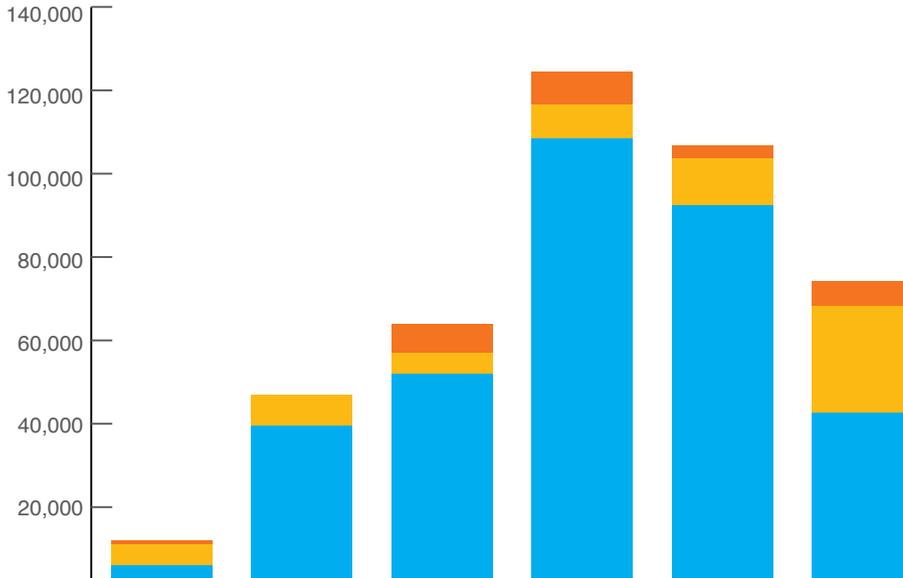
There has been a 91% increase since 2012 in the land area for mixed/other certified land. This could reflect a possible shift of some livestock operators to the mixed category but probably reflects the entry of some larger mixed (includes both livestock and horticultural) certified properties.

The land area under certification for horticultural production has increased by **128%** since 2012

There has been a **91%** increase since 2012 in the land area for mixed/other certified land

Figure 2 displays the changes in land area under certification by activity from 1997 to 2015.

Figure 2. Land Area under Organic Operations by Activity, 1997-2015



The total proportion of New Zealand land under organic certification remains relatively small compared with many other countries

An increasing area of horticultural land is certified organic, but less than 1% of farmed grassland in New Zealand is under organic certification²¹.

In relation to the organic horticultural area, the key sectors have between 5-7% of the total production area under organic production. However, classifications used for horticulture by the organic certification agencies appear broader than those used by Statistics New Zealand and other sources where the overall total horticultural area is concerned.

The total proportion of New Zealand land under organic certification remains relatively small compared with many other countries. It is worth noting that comparing land area under organic certification between countries could be problematic, given significant differences in both the type and intensity of production in different contexts.

²¹ Total horticulture area of 123,255 ha (sourced from Fresh Facts 2014) suggests organic horticulture is a higher than actual level. Total agricultural land area sourced from Statistics New Zealand 2014 survey

Table 6 provides figures on land area under organic certification, land area in agricultural production and the percentage of agricultural area under organic certification for New Zealand and 10 other countries.

Table 6. Land Area under Organic Certification as a Share of Total Area in Agricultural Production for Selected Countries (2014)

Country	Land Area under Organic Certification (ha)	% of Agricultural Area under Organic Certification
Australia	17,150,000	4.2%
Argentina	3,061,965	2.2%
USA	2,178,471	0.6%
China	1,925,000	0.4%
Spain	1,710,475	6.9%
Italy	1,387,913	10.8%
Uruguay	1,307,421	8.8%
France	1,118,845	4.1%
Germany	1,047,633	6.3%
New Zealand	74,134	0.52%

Sources: data from FiBL "World of Organic Agriculture" 2016.

2.4 Consumer Perceptions of Organics

Colmar Brunton's *Better Futures Report* is New Zealand's only annual report into consumer attitudes and behaviours in relation to sustainability. It charts the growing influence of responsible businesses on the everyday choices and purchase decisions Kiwis are making, highlighting:

- Social, environmental and economic issues that concern us most
- Businesses / brands that people see as leaders and high performers
- Significant shifts across generations
- Opportunities to build a more purposeful brand story that's aligned with the values of tomorrow's shoppers

The study commenced in 2009 and has involved feedback from 12,600 New Zealanders, with a nationally representative sample being interviewed each year. Questions cover key areas of sustainability including organics, and these data have formed the basis of this report.

The Values of a New Generation

Within the study are questions directly and indirectly relating to the organic sector and these insights are provided in this report.

In particular, the report highlights a new level of engagement with sustainability-related issues as they become mainstream and as a new generation – Gen Y, also known as Millennials – gain momentum and impact as consumers.

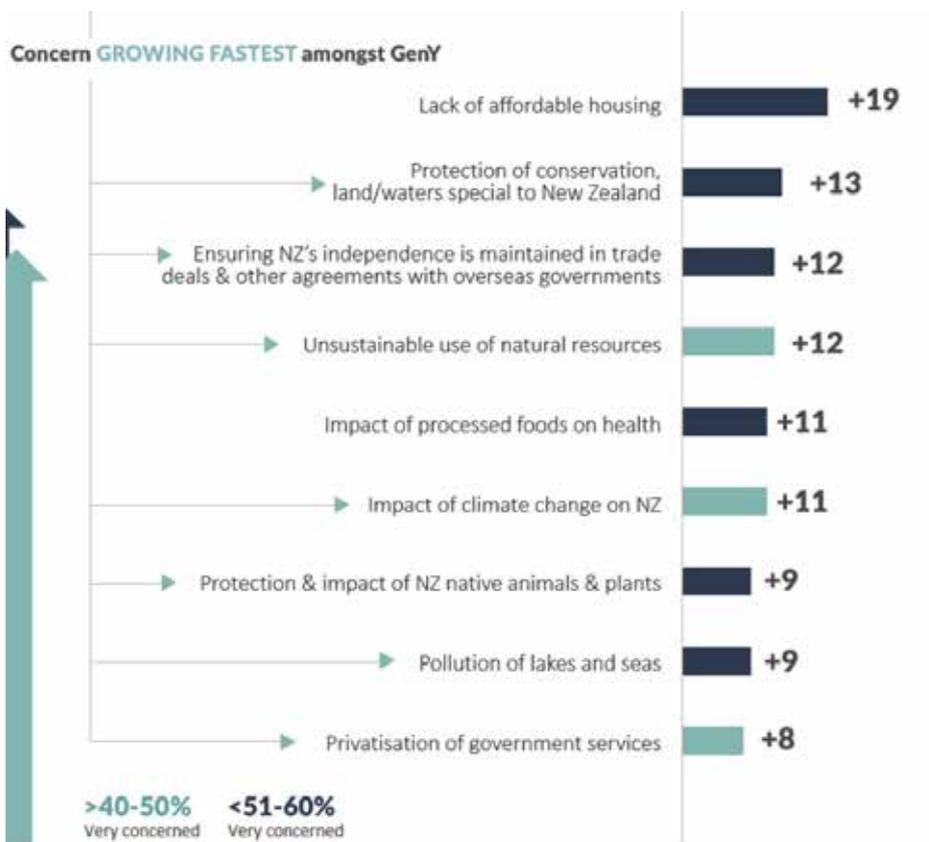
Globally, Gen Y is considered to be the most environmentally concerned generation yet. But less than half of Millennials in developed markets believe business has a strong commitment to being sustainable, that its leaders are committed to improving society or that it behaves in an ethical manner. The generation following (Gen Z) is taking it up another level again.

“Millennials, who will comprise 75% of the workforce by 2025, have large ambitions for business. They see a big gap between the potential of business to address the challenges facing society and the actual impact it is having” Deloitte Millennial Survey 2015

The range of concerns of younger New Zealanders includes personal health and wellbeing, protection of natural systems for future generations, and social equity.

Without explicit reference to the principles of organic agriculture, there are implicit commonalities in terms of the internationally-agreed organic principles²² of health, ecology, fairness and duty of care for future generations.

Globally,
Gen Y
is considered
to be the most
environmentally
concerned
generation yet



Source: Colmar Brunton Better Futures Report 2015 edition

These concerns are reflected in where people choose to work, what they buy and where they place their trust.

Three in four people want to work for businesses that are socially and environmentally responsible. Choosing to work for organisations that have a positive impact is a way that people across all generations can make a difference.

22 <http://www.ifoam.bio/en/organic-landmarks/principles-organic-agriculture>

However, there is also a growing distrust in the safety of everyday products we buy at the supermarket, especially when ingredients may be harmful to ourselves and our families.

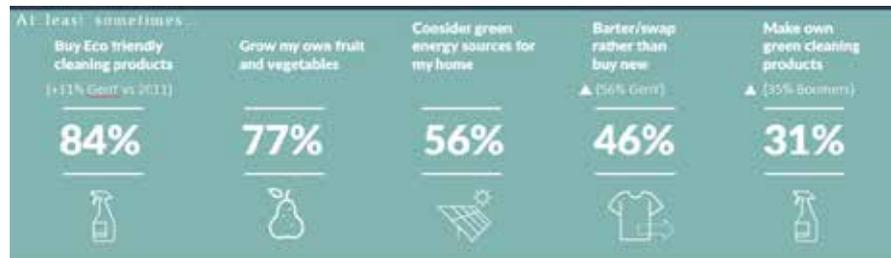


Source: Colmar Brunton Better Futures Report 2015 edition

The 2015 rating has declined 6% in the last 12 months, with a 10% decline amongst Gen Y.

Sustainability in our everyday lives

As a corollary of this, sustainable behaviours are now an everyday part of many consumers' lives.



Source: Colmar Brunton Better Futures Report 2015 edition

People – at least some of the time – are buying eco-friendly cleaning products (84%), growing veges (77%), and considering greener energy sources for their homes (56%). More are bartering and 'reusing' items that might once have been thrown away or bought new.

More organic and ethical products

The purchase of organic and ethical products is now well entrenched in consumer repertoires, and it is growing fastest among younger generations.

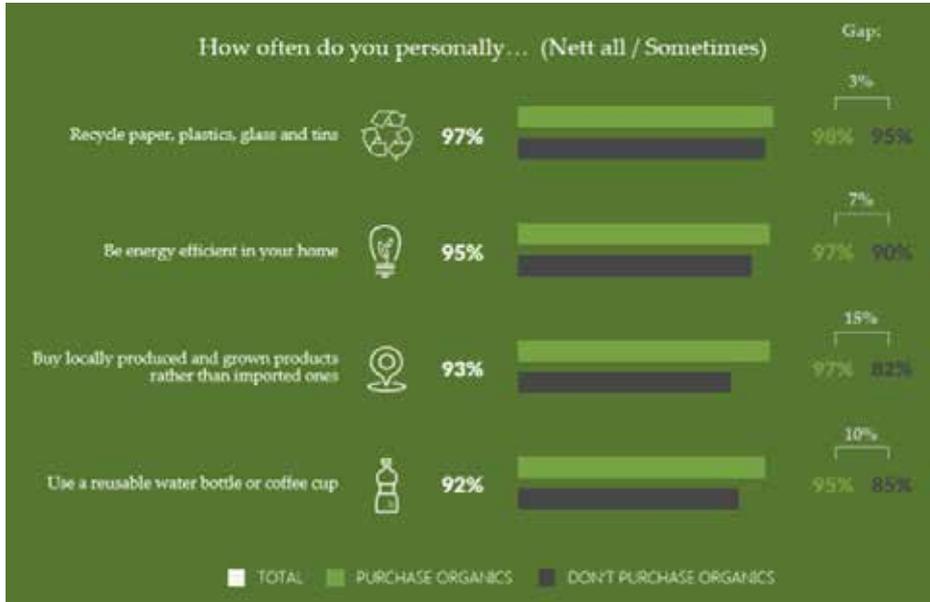
Two-thirds of New Zealanders are buying organics at least some of the time



Source: Colmar Brunton Better Futures Report 2015 edition

The heavier consumers of organics are more likely to be Early Adopters and Innovators: under 30 years, urban, key decision-makers for businesses, working full time, with no children. That said, the majority of us are dipping into organics as part of a more general behavioural shift that recognises real sustainability is about more than just recycling used cans and bottles.

Organic buyers are more likely to consider buying locally to be important than non-organic purchasers, and are also more engaged with other sustainable behaviours.

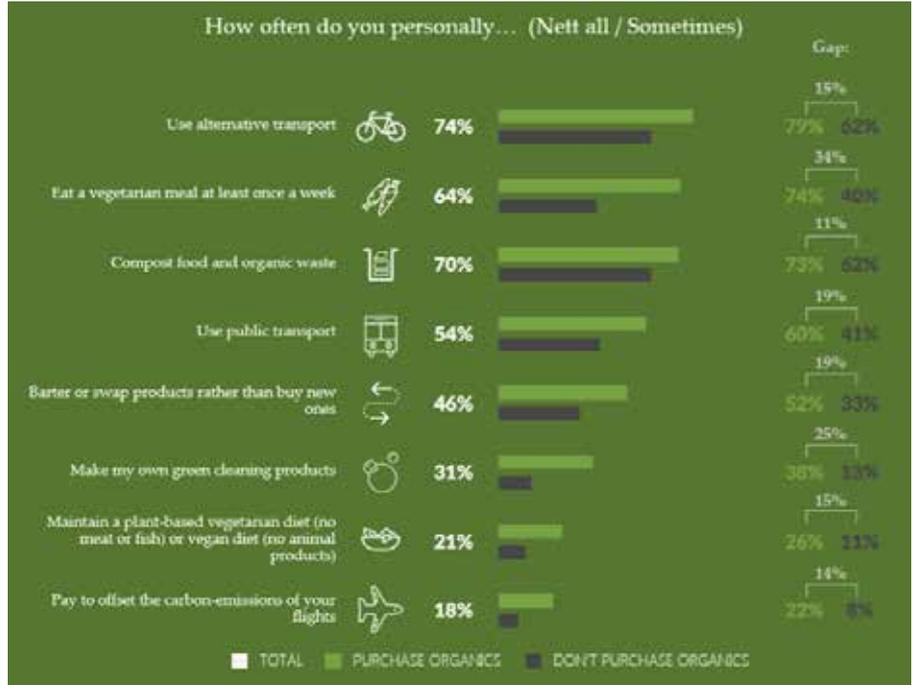


Source: Colmar Brunton Better Futures Report 2015 edition

Their preference for earth friendly-options extends into other categories, and into much wider aspects of their lives.



Source: Colmar Brunton Better Futures Report 2015 edition



Source: Colmar Brunton Better Futures Report 2015 edition

The appeal of organics

The main reason that 70% of organic buyers purchase organic foods and beverages is the clear health benefit for themselves and their families.

Organic products tend to be positioned at the premium end of the spectrum and are typically priced accordingly. However, that is changing according to Euromonitor International (August 2015) which highlights in its study *Organic Beverages In New Zealand* the fact that the number of standard brands available is increasing as the popularity of organic beverages grows.

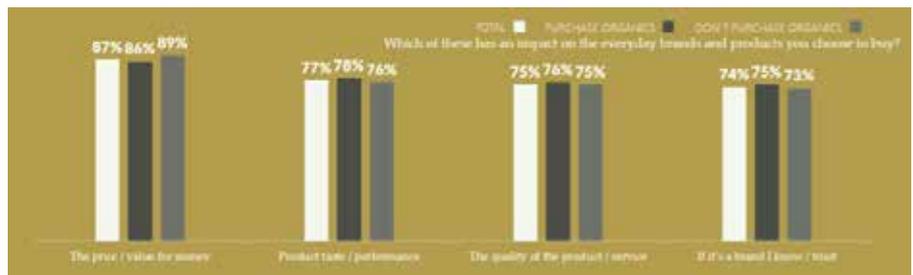
Importantly, organic buyers have a more balanced value-equation that goes beyond price and includes other factors as drivers of choice.

The main reason that **70%** of organic buyers purchase organic foods and beverages is the clear health benefit for themselves and their families



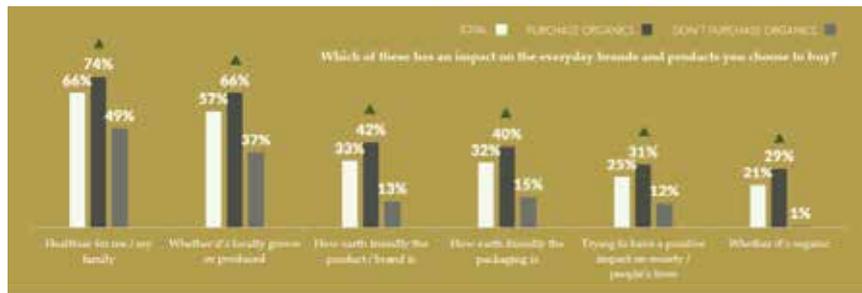
Source: Colmar Brunton Better Futures Report 2015 edition

That is not to say that price, quality and trust are not also key considerations in the purchase decision, but that there are wider considerations in play.



Source: Colmar Brunton Better Futures Report 2015 edition

Organic buyers consider factors that sit well beyond the immediate personal benefit to them.



Source: Colmar Brunton Better Futures Report 2015 edition

As well as health benefits, there are preferences for being locally-produced, earth-friendly production and packaging, and having a positive impact on other people's lives.

Existing engaged buyers and younger generations continue to place greater value on the organic/sustainable choice. When asked if they are willing to pay a *bit more* to get the best organic, sustainable and ethically produced products available, 64% of all people agree compared with 62% in 2014. This remains strongest overall with people who are already buying organics (76% agree). However, since 2014 the increase has been higher amongst Gen Y (+6%).

The role of organic certification

Themes of "trust" in what we buy and the broader impact of our purchases have been earlier identified. This suggests one role for organic certification, but currently for many consumers, there is incomplete knowledge of what it entails or how it is meaningful.

Right now, certification makes the most difference for those who "get it" and who understand what it means. For others, its meaning is not clearly established and its potential for reassurance and validation of key production criteria is yet to be activated.

There are a number of key attributes that make a product more appealing to consumers and may be recognised as important "on their own." These are illustrated in the following diagram:



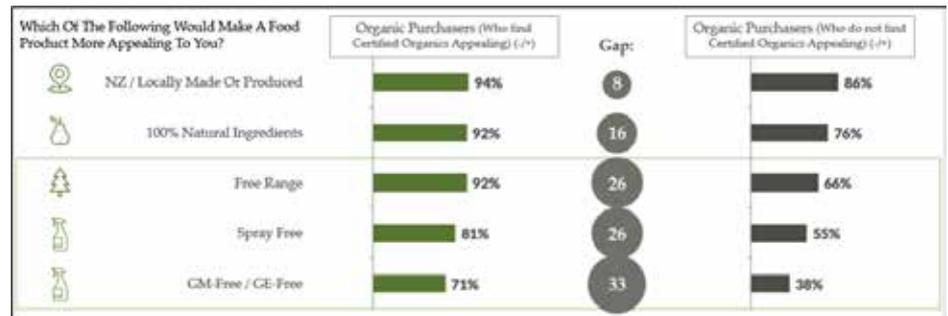
Source: Colmar Brunton Better Futures Report 2015 edition

“Unpacking”
organic certification
for it to become
meaningful for
the wider group
of consumers
involves highlighting
the fact that it
covers multiple
benefit areas

But focussing on any one of these benefits is not enough within the framework for organic certification, which includes multiple features as benefits.

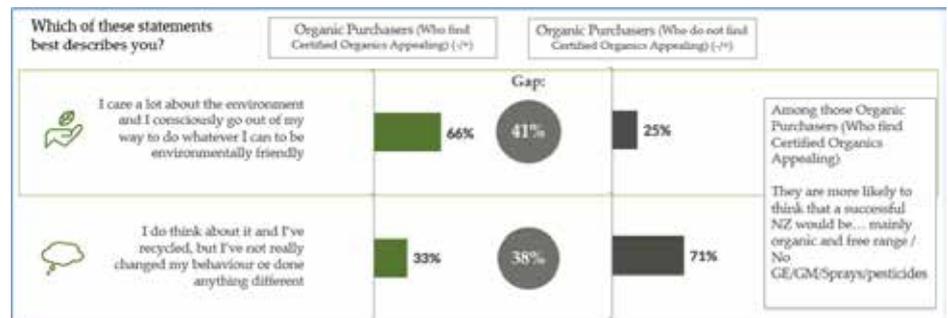
“Unpacking” organic certification for it to become meaningful for the wider group of consumers involves highlighting the fact that it covers multiple benefit areas: free range, non-GMO/GE-free, natural ingredients, etc.

Currently there is a marked difference in appeal between those organic purchasers who do find organic certification appealing, and those who do not.



Source: Colmar Brunton Better Futures Report 2015 edition

Those who “get it” associate greater societal and economic benefits with certified organics. Organic purchasers who find certified organics appealing are more likely to consider a successful New Zealand to be mainly organic, free range, and without GM, sprays and pesticides. They are also more likely to personally take on-board sustainable behaviours beyond just what they purchase.



Source: Colmar Brunton Better Futures Report 2015 edition

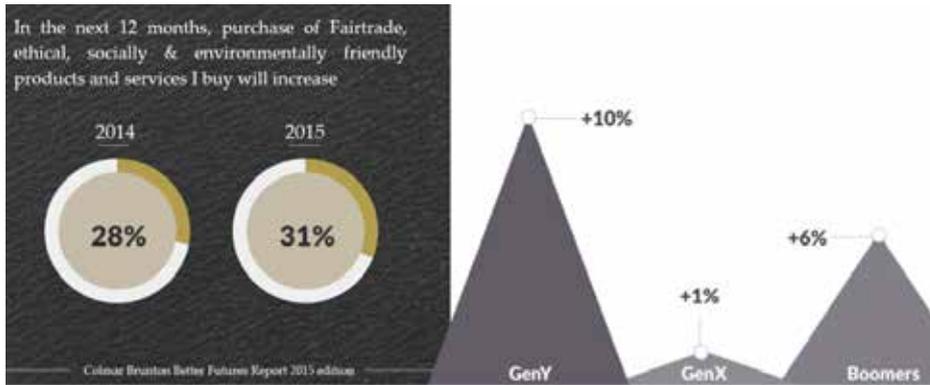
People’s willingness to spend

The Euromonitor International’s *Organic Beverages in New Zealand (2015)* report also notes that “the easing of consumer spending pressure toward the end of the review period also had a positive influence on the category.”

The economic situation people find themselves in will inevitably have some influence on what they do, and how they allocate their spending.

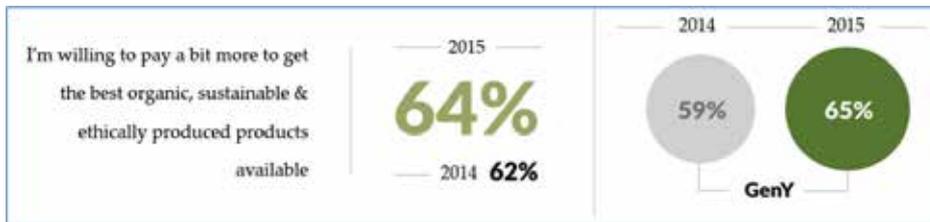
Since 2009, the *Colmar Brunton Better Futures Report* has included questions on people’s future disposition to spending on sustainable options. Despite economic uncertainty, the intention for many people has been to at least maintain spend even if they did not plan to increase it in the coming year.

Most recent data indicates sustainable purchasing will continue to increase, especially among Gen Y.



Source: Colmar Brunton Better Futures Report 2015 edition

Younger generations continue to place greater value on the sustainable choice. Although this is not limited to Gen Y, that group in particular has shown significant increases in the last year regarding spending disposition.



Communicating the organic story

There is an opportunity to drive further behaviour change among existing buyers of organics by informing them of the benefits of certification.

It appears the market is ready for more sophisticated stories around organics and what it means. However, it is easier to identify this challenge than to address and manifest it in the real world.

Internationally there has also been a view that organics may need to be complemented with other benefits to support premium pricing in overseas markets. Euromonitor International makes this point in the Certified Organic report (2012), saying "Organic itself is no longer enough and companies need to offer additional benefits or 'organic+' in order to keep consumers interested and thus paying the higher unit prices".

Given the New Zealand market's incomplete consumer knowledge of what certified organic encompasses, the need for additional benefits remains a moot point. Most recently, Euromonitor International's *Organic Beverages in New Zealand (2015)* report highlighted organic certification as a significant point of difference in a highly competitive and evolving sector. It says, "Organic certification represented a significant point of difference (for manufacturers) . . . and has increasingly become a key attribute among niche players and new local entrants into the market as they seek to capture consumer segments from the major players."

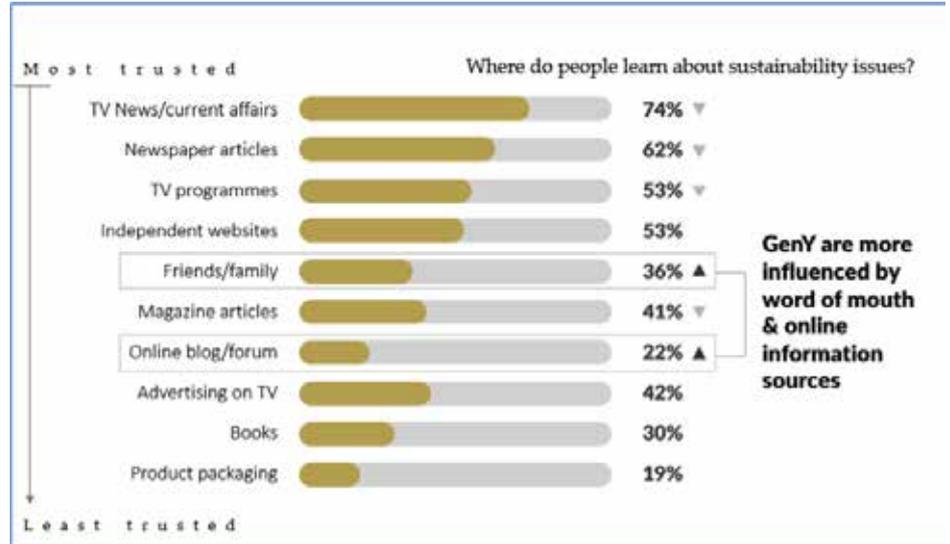
Most recent data indicates sustainable purchasing will continue to increase, especially among **Gen Y**

There is an opportunity to drive further behaviour change among existing buyers of organics by informing them of the benefits of certification

The context for communications

With limited budgets and limited attention spans of consumers, effective broad-reach communications are always going to be a challenge.

Mass media still dominates as an important source of information about sustainability issues for many people. But the growth of social media and word-of-mouth is also having an impact. It is not easy for brands to get it right and engage in these spaces but for Gen Y the online channels have increasing importance.

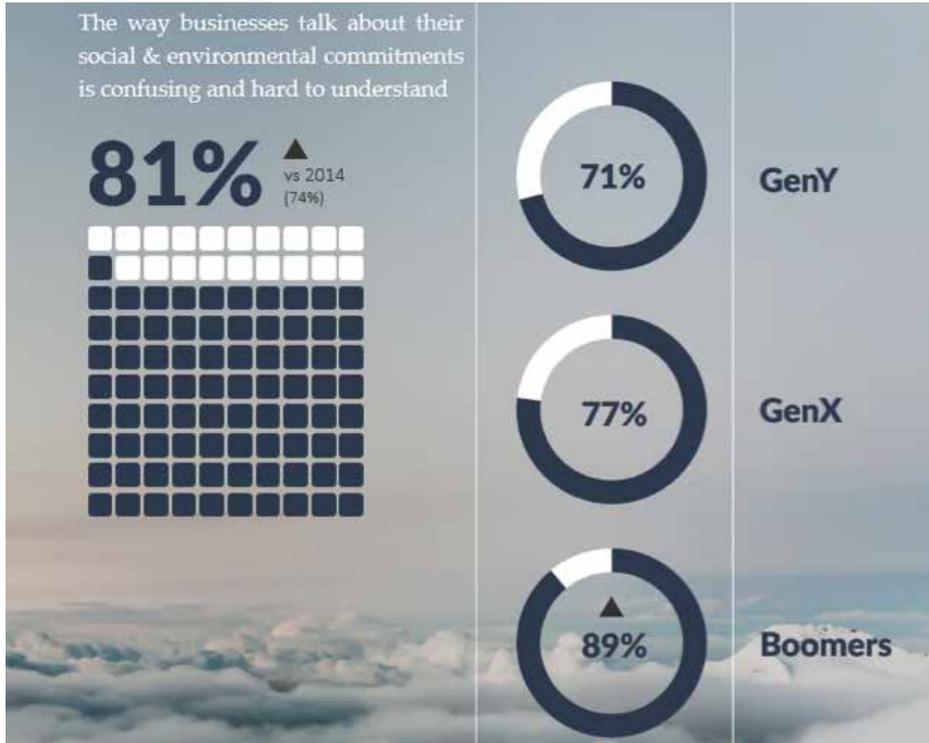


Source: Colmar Brunton Better Futures Report 2015 edition

Just how tough it is for companies and organisations to get their sustainability communications right is evidenced by the fact that seven in ten consumers – across all ages – cannot name any brand or organisation they consider as a leader in sustainability.

The way businesses are talking about sustainability issues is not making it easy for people to understand. That challenge is as likely to apply to organics as other sustainability messages.

**seven
in ten**
consumers –
across all ages
– cannot name
any brand or
organisation
they consider
as a leader in
sustainability



Source: Colmar Brunton Better Futures Report 2015 edition

Brands still play a significant role in driving consumer choices, and over recent times there has been a shift back to them, despite price being the key factor for some. This represents an opportunity for organic brands to take a lead and differentiate.

People want to choose brands with a purpose. They are asking *how do you make a positive difference in my life, and in the world at large?*

This is reflected globally in purposeful brands and organisations delivering better market share and profits than those who are not. Weaving the purpose into the brand story is happening more and more; demonstrating authenticity and genuine brand commitment, inspiring employees to embrace and share those values, and making it relevant to consumers – not just functionally but at the emotive level too.

By applying neuroscience to understand the characteristics that instantly come to mind when thinking of brands we prefer or reject, it is clear we are instinctively drawn to brands that are open, inclusive and have a values-driven approach. Such features have deep relevance for the organic story.

People want to choose brands with a purpose



Source: Colmar Brunton Better Futures Report 2015 edition

Sustainability has become mainstream

The challenge

Sustainability has become mainstream. New generations are driving a future where this is set to continue. Demand for sustainable products is on the rise, and more and more people want and prefer what the “organic option” delivers.

In 2015, two-thirds of New Zealand consumers were at some level connecting with organics in what they bought. They’re choosing natural, GE-free/GM-free, local, free range and spray free, but they don’t necessarily connect all these things with “organic” products. Certification adds another level of complexity that is not well understood.

The challenge is for organic brands to tell the story of the distinctive value that organic products deliver.

Consumers need to understand what “organic/certified organic” means in order to value it. This will differentiate true organics from the plethora of products that claim to be “natural” or “local”. This means supporting current businesses in the organics market to grow through:

Education: Telling the story of what organic is, and what it is not.

Marketing: Promoting a clear and recognisable symbol (à la the Heart Tick) that shows people at a glance the products they can trust as organic.

Investment: Working with the sector to increase supply in order to satisfy both local and global demand.



The Ceres Organics purpose-built facility in Auckland is on track to earn a Five Green Star rating for its eco-design. Photo: Ceres Organics

3.0

Organic Sector Market Analysis

3.1 Methodology

Organic Exporters and Processors

A list of certified organic exporters and processors was compiled from the membership of Organic Exporters of New Zealand, the New Zealand Food Safety Authority register of organic exporters, the licensee lists of organic certifiers, and internet searches.

The list comprises participants in organic production chains, including input and service providers, packers and processors, and exporters. Organic exporters and processors were invited to participate in an online census in December 2015. Reminders were sent over January and March and finally some individual non-responders were contacted directly.

Organic producers and exporters were asked to provide information regarding the value and destination markets for each of their certified organic products during the previous financial year, as well as the percentage of turnover attributable to certified organic products. The census methodology and questionnaire were designed to reproduce the methodology of the previous organic sector census.

Of 248 processors, input and service providers, and exporters identified, 109 responded to the survey or follow-up calls. Of these responses, 12 reported no certified organic activities for the 2014-15 financial year, while 49 were removed for other reasons including not exporting.

Export value estimations for key non-respondents were made based on available data on export volume, price per unit calculations and known values from previous years.

The New Zealand Domestic Market

The census of specialty organic food stores was conducted to develop an understanding of the volume of organic product sales and the characteristics of the products sold through this channel.

A list of specialty organic food stores was developed through an internet search with 59 businesses identified. The census, in the form of an online survey accessed through an email invite, was sent to organic retail shops in January 2016 with reminders sent over February.

Nine stores were no longer in operation or could not be contacted. Of the balance, 15 valid responses were received (30% valid response rate). However, it should be noted that most of the larger businesses did respond.

A more accurate insight into the value of organic domestic sales was made possible using data from AC Nielsen on sales of organic grocery products in supermarkets, through their Scantrack programme operated with the main New Zealand supermarkets.

Interviews with key informants, inferences from the export and producers' census, and a review of trends in relation to the number of farmers markets provided further insights on the domestic market size.

3.2 Census Results

The Organic Export Market

The organic export market is a key component of the New Zealand organic sector. Trends in the growth and development of the export market can be assessed using multiple points of comparison across a fifteen-year period. The 2015 census received a moderate level of response and cooperation from market participants and provides an updated figure on the size of the organic export market.

Table 7 provides figures on the size of the organic export market from 1997 to 2015.

Table 7. Size of the Organic Export Market, 1997-2015

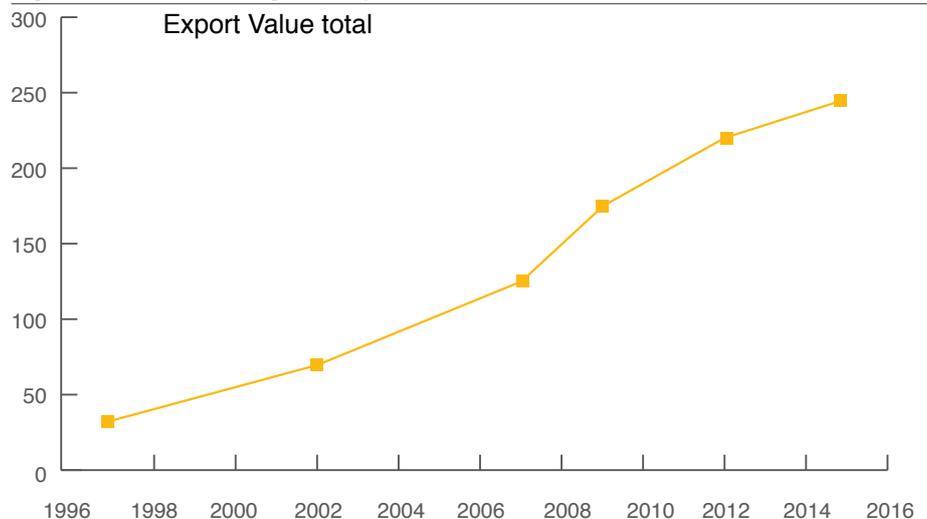
Year	Export Market Value
2015	\$240-\$250 million
2012	\$215-\$225 million
2009	\$170-\$180 million
2007	\$120-\$130 million
2002	\$70 million
1997	\$32 million

*1997 & 2002 figures from OPENZ Surveys

The reported export figure for 2015 combines actual reporting of export figures from the application of the census questionnaire, and estimates of non-reporting firms. Of the total figure of organic exports for 2015, \$202m directly relates to census questionnaire responses. An estimate of \$38m-48m was based on OANZ sources, industry consultants or sector group leaders. As a result, there is a strong degree of confidence in the total market estimate and its error range.

Figure 3 shows the growth of export market value from 1997 to 2015.

Figure 3. Size of the Organic Export Market (New Zealand Dollars), 1997-2015



Data collected during the 2015 census indicates a continued expansion in the organic export market. Organic exporting has grown both in the value of exports and in the number of market players active in exporting. Between 2012 and 2015 the organic export market grew by over 11%.

There is a strong degree of confidence in the total market

Between 2012 and 2015 the organic export market grew by over

11%

Product Categories in the Organic Export Market

Table 8 provides the value of organic exports by product category from 2007 to 2015.

Table 9 provides the relative share of each category in the organic export market.

Note that dairy and meat/wool have been combined in both tables to protect requests for confidentiality.

Table 8. Value of Organic Exports by Product Category, 2007-2015

	2007	2009	2012	2015
Fresh Fruit and Vegetables	88,360,000	85,850,000	96,860,000	108,120,000
Dairy	6,990,000	27,850,000	36,950,000	68,290,000
Meat and Wool	8,920,000	9,185,000	10,120,000	
Processed Food and Ingredients	6,120,000	20,280,000	29,350,000	25,180,000
Wine and Beer	3,890,000	16,960,000	10,970,000	24,740,000
Other Beverages			17,840,000	10,050,000
Honey	3,960,000	8,320,000	7,940,000	230,000
Other	2,170,000	2,040,000	4,970,000	3,900,000
Total	120,410,000	170,485,000	215,000,000	240,510,000

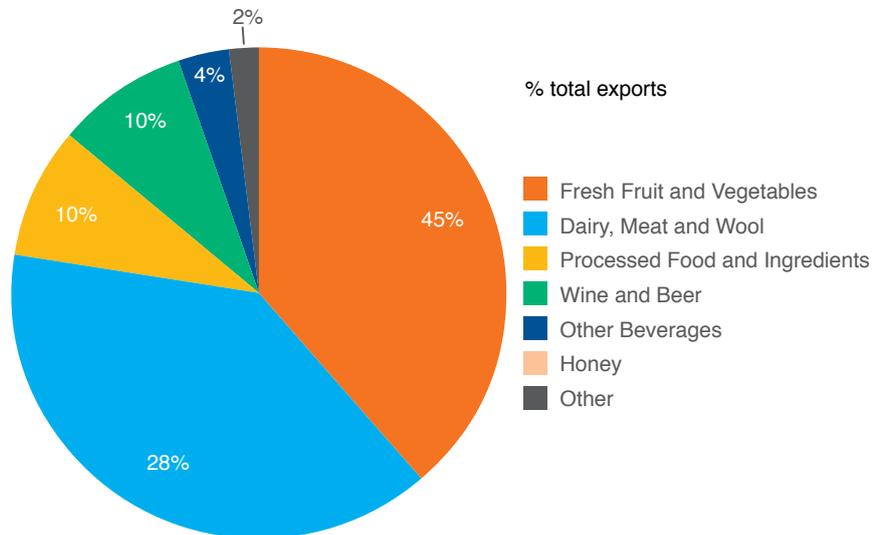
Table 9. Value of Organic Exports by Product Category, Percent, 2002-2015

	2002	2007	2009	2012	2015
Fresh Fruit and Vegetables	78%	73%	50%	45%	45%
Dairy	-	6%	16%	17%	28%
Meat and Wool	7%	8%	6%	5%	
Processed Food and Ingredients	8%	5%	12%	14%	10%
Wine and Beer	2%	3%	10%	5%	10%
Other Beverages	-	-	-	8%	4%
Honey	-	3%	5%	4%	0%
Other	5%	2%	1%	2%	2%
Total	100%	100%	100%	100%	100%

Fresh fruit and vegetables remain the largest single product category.

Figure 4 shows export categories as components of the overall export market.

Figure 4. Value of Organic Exports by Product Category, 2015



Results from the 2015 census demonstrate growth in almost all product categories since 2012.

Fresh fruit and vegetables continue to be the highest value category with 12% growth from 2012

- Fresh fruit and vegetables continue to be the highest value category with more than \$108m in exports in 2015. This represents growth of 12% from 2012. Kivifruit and apples account for a substantial proportion of these exports, with smaller volumes of other crops including blueberries and cherries. The value of organic vegetable exports has, however, continued to decline with only very small volumes of exports reported.
- Dairy, meat and wool have been combined into one category and are the second-largest export category. The value of pastoral exports has grown 45% since 2012. Some additional organic exports to China were not accounted for in this census, as they did not have organic status in that market. If they were included, total pastoral exports would have been higher.
- Processed foods and ingredients have declined by 15% since 2012. This may be a result of a decrease in the production and sale of arable and process vegetable crops, reflected in the decline of these types of farms being certified. It could also reflect the diversion of some production to service the New Zealand market.
- Wine exports continue to grow rapidly, (there are only very small exports of organic beer). Figures for the wine and beer category suffer from a disproportionate level of non-response to the census. The survey of organic certifiers identified 2,022 ha of grape vines planted which is 5.78% of the total vineyard land in New Zealand. Assuming that export value is directly correlated to land area in viticulture would yield an estimate of organic wine exports of \$76m. There are issues with this type of crude estimate in that not all organic grapes are made into organic wine.
- The beverages category is defined as all non-alcoholic, non-dairy beverages, and is characterised primarily by fruit juices. This has shown a decline from the 2012 census.

- Honey continues to decline in export value with a 97% reduction since 2012. A number of honey producers and exporters noted that they have either exited organic certification or have experienced a significant reduction in production volume due to the spread of varroa mite. This is also reflected in the certification statistics, with a 50% decrease in certified apiary operations.
- The value of other organic exports, including seafood, non-edible seeds, cosmetics and cleaning and treatment products declined by 22% from 2012. Aggregation of exports into this category was necessary to protect the confidentiality of market participants for products with a limited number of producers and exporters.

The relative importance of product categories in the composition of organic exports differs significantly from total New Zealand exports. Of comparable products, dairy and meat and wool are the two largest categories for total export value. Organic fresh fruit and vegetables categories have the largest proportion of organic export value to total export value. Processed foods and ingredients and uncategorised exports cannot be compared due to potential incompatibility between census categories and export categories available from Statistics New Zealand.

Table 10 provides figures for organic export value categories as a percentage of total exports.

Table 10. Value of Organic Exports by Product Category, Percent, 2002-2015

	Export \$ Total	Export \$ Organic	% Organic
Fresh Fruit and Vegetables	1,765,000,000	108,120,000	6.1%
Dairy	12,038,000,000	68,290,000	0.4%
Meat and Wool	7,181,000,000		
Wine and Beer	1,351,000,000	24,740,000	1.8%

Product Destinations for the Organic Export Market

Tracking the value of organic exports by destination reveals the development and change of the organic sector’s market from 2002-2015. The first evaluation of the organic export market in 2002 revealed that Europe and Japan constituted two-thirds of total market value. The 2007, 2009 and 2012 sector reports identified the growth of exports to North America and Australia, as well as expansion in a number of markets in Asia.



Europe, North America and Australia continue to be the sector's primary export destinations

Table 11 provides figures on the share of market value for export destinations from 2002 to 2015.

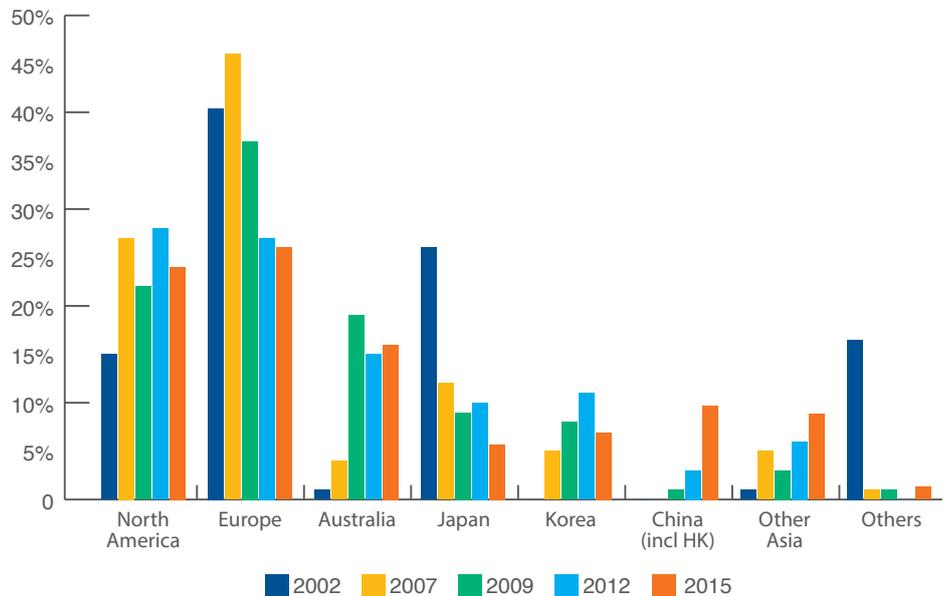
Table 11. Share of Organic Exports by Destination, 2002-2015

Destination	2002	2007	2009	2012	2015
North America	15%	27%	22%	28%	24%
Europe	41%	46%	37%	27%	26%
Australia	1%	4%	19%	15%	16%
Japan	26%	12%	9%	10%	6%
Korea	-	5%	8%	11%	7%
China (incl HK)	-	-	1%	3%	10%
Other Asia	1%	5%	3%	6%	9%
Others	17%	1%	1%	0%	1%
Total	100%	100%	100%	100%	100%

Europe, North America and Australia continue to be the sector's primary export destinations, together comprising 66% of all exports. The census shows continued growth in exports to Asia. However, organic exports to Japan are still declining while exports to China continue to grow strongly.

Figure 5 shows the change in the value of export destinations from 2002 to 2015.

Figure 5. Value of Organic Exports by Destination, 2002-2015



The Organic Domestic Market

The organic domestic market was analysed through a census of organic specialty shops, reference to the AC Nielsen Scantrack grocery results, a review of domestic sales from respondents to the export survey, and an appraisal of trends in farmers' markets.

The census of organic specialty shops was conducted in 2015, repeating the methodology and questionnaire used in 2007, 2009 and 2012. The similarity of response rates between the studies allows comparisons about the growth of this market channel. Estimates of missing data were conducted in limited cases where other information on specific shops was available. Extrapolation of reported figures was conducted in line with the response rates of the previous censuses.

The total value of organic sales at specialty shops for 2015 was approximately \$25,658m – very similar to sales reported in 2012.

The AC Nielsen Scantrack records of organic sales through all supermarkets is provided in Table 12. Note these figures do not include sales of fresh fruit, vegetables or meat.

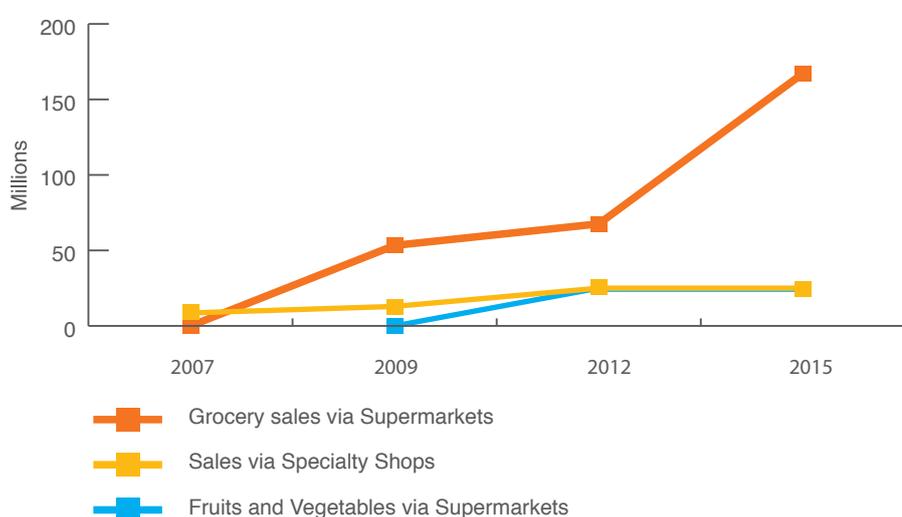
Table 12. Supermarket grocery sales of organic products

Year	Val sales	Unit sales ²³
2011	\$62,800,000	N/A
2012	\$67,500,000	N/A
2013	\$109,182,882	30,765,015
2014	\$130,106,081	34,904,323
2015	\$167,170,081	42,732,707

The 2015 figure represents an increase of 147% from 2012.

Figure 6 and Table 13 show the growth of sales value at specialty shops and supermarkets from 2007 to 2015. An estimate of supermarket organic fruit and vegetable sales was prepared based on responses to the specialty shop survey, export survey (domestic sales), and interviews with industry representatives. Estimates for fruit and vegetable sales for 2012 are provided but these are less accurate than those provided for 2015.

Figure 6 Value of Organic Sales at Specialty Shops and Supermarkets, 2007-2015



²³ Value sales are the \$ amount of organic products sold and Units are the individual units sold through eg 2 products sold at \$5 would account for \$10 of value sales and 2 unit sales

Table 13. Value of Organic Sales at Specialty Shops and Supermarkets 2007 - 2015

	2007	2009	2012	2015
Grocery Sales via Supermarkets	-	\$53,300,000	\$67,576,700	\$167,170,081
Fruit and Vegetables Sales via Supermarkets	-	-	-	\$25,000,000
Sales via Specialty Shops	\$8,574,889	\$12,903,480	\$25,508,000	25,660,000
Total				\$217,830,081

An increasing amount of the domestic demand is being supplied from the imports of organic products

The domestic consumption of organic products has increased significantly since the last census in 2012 (68% growth between the two censuses). The total size of the organic sector (domestic sales and exports) is estimated between \$457m - \$467m. This compares with an estimated \$350m in 2012 – a 30% increase since 2012, indicating that the domestic market is growing more rapidly than organic export production. Based on feedback from retailers, an increasing amount of the domestic demand is being supplied from the imports of organic products.

Product Categories in the Organic Domestic Market

There is little change in the relative share of total sales of organic products at specialty shops from 2012.

Total sales value remains dominated by processed foods and fresh fruit and vegetables. Meat and dairy products are also significant sources of sales value. A broad variety of products constitute the "Other" category, with a number of respondents indicating the popularity of organic cleaning and gardening products. While it was not possible given the form of responses provided to calculate these products as unique categories, future censuses of specialty shops may make this possible.

Table 14. Product Categories of Organic Sales at Specialty Shops - 2007-2015

	2009	2012	2015
Processed Foods	38%	34%	17.4%
Fresh Fruit and Vegetables	26%	27%	39.4%
Meat	12%	13%	12.9%
Dairy	9%	10%	
Beverages	4%	2%	6.4%
Cosmetics	5%	7%	9.4%
Other	6%	7%	14.5%
	100%	100%	100%

Farmers' Markets in New Zealand

Farmers' Markets New Zealand Inc (FMNZ)²⁴, the main organisation representing farmers' markets around the country, has around 25 independently owned and operated members with over 1,000 associated small food businesses. It is likely there are additional farmers markets that are not members.

FMNZ has established an authenticity scheme for its members to enhance the integrity and transparency of those involved in the markets. The scheme is based on three golden rules: a focus on food only, locally-sourced produce from a defined region, and the vendor must be directly involved in the growing or production process. It does not require organic production practices but many of the vendors involved do have organic certification, with Organic Farm New Zealand ²⁵ being especially popular.

A recently-published study of consumers at the Otago Farmers Market²⁶ provides insights on the profile of consumers that visited the market.

It identified three distinctly different consumer segments. The smallest group was those concerned with the tangible aspects of produce. Two other consumer segments driven more by differing experience-related motivations made up the majority of consumers. The first group of committed, loyal consumers was concerned with relationships with sellers and producers, and the second group was motivated by the opportunity to interact with other farmers' market attendees.

Another University of Otago study²⁷ found that in 2014, farmers' markets were the most expensive outlet for fruit and vegetable purchasing. However it noted they also have the advantage of expanding consumer choice by providing more access to local produce and a larger range of organic produce in greater quantities.

Given the diffuse structure of New Zealand farmers' markets, it is not possible to provide an estimate on the value of their organic sales. FMNZ does not track the membership of stalls at individual markets, the value of sales at markets or the share of sales that involve organic products.

Fraudulent Organic Claims

An ongoing issue with the marketing of high-value products is the presence of fraudulent claims for products that do not have the appropriate quality, origin or production systems certification. Organic products have third-party inspection systems and other systems to address this risk. However, fraud does occur.

Unlike many countries, New Zealand does not have regulations preventing non-organic food producers from using the word "organic" on their products. The Ministry for Primary Industry²⁸ advises that products labelled as organic in New Zealand, need to:

- Meet the standard regulatory requirements for the type of product (eg dairy, honey, meat, etc.).
- Comply with the Fair Trading Act 1986 in respect to using the term "organic" in labelling and marketing claims.

The Fair Trading Act 1986 requires that representations about food must be truthful, accurate and must not mislead a consumer. Producers must also be able to demonstrate that products labelled "organic" are produced organically and that if they claim to be certified organic, this needs to be backed up with an appropriate certificate.

²⁴ <http://www.farmersmarkets.org.nz>

²⁵ <http://www.organicfarm.org.nz>

²⁶ McNeil L, Hale O. Who shops at local farmers' markets? Committed loyal, experiencers and produce-orientated consumers *Australasian Marketing Journal* 2016.

²⁷ Pearson AL, Winter PR, McBreen B, Stewart G, Roets R, Nutsford D, et al. (2014) Obtaining Fruit and Vegetables for the Lowest Prices: Pricing Survey of Different Outlets and Geographical Analysis of Competition Effects. *PLoS ONE* 9(3): e89775. doi:10.1371/journal.pone.0089775

²⁸ <http://www.foodsafety.govt.nz/Industry/sectors/organics/selling/index.htm>

Many of the vendors involved do have organic certification, with Organic Farm New Zealand being especially popular

New Zealand does not have regulations preventing non-organic food producers from using the word "organic" on their products

In New Zealand there have been some prosecutions where companies have falsely claimed organic certification for products, including two butchers prosecuted in 2006²⁹ and an earlier warning to a juice company in 2003. However, there are questions³⁰ about how effective the enforcement of the Fair Trading Act has been in managing unsubstantiated claims of organic status in the domestic market³¹.

A recent example highlights the issue, where in response to the strong increased demand for organic milk, one new range of organic milk claimed organic status but at that time provided no validation for the claim on the packaging, raising questions³².

As part of the export and retail census, participants were asked for their experience in relation to fraudulent claims to gain an insight on the incidence of this occurring.

Table 15. Fraudulent organic claims census question response

Census	Census question	Yes	No	No Opinion
Exports	Are you aware of any fraudulent organic product claim in your export markets?	5	50	35
	Are you aware of any fraudulent organic product claim in the New Zealand market?	13	42	35
Retailer	Are you aware of any fraudulent organic claims in the New Zealand market?	4	12	5

The responses provide an indication of the relative occurrence of organic fraudulent claims with the reported occurrence in domestic markets being higher than in exports markets.

In relation to export markets, eggs and honey were two examples of products with fraudulent claims reported. In relation to the New Zealand market, fraudulent organic products reported included eggs, wine, dairy products, fruit and vegetables, processed products and honey. It was suggested that this occurred:

- In informal markets such as farmers' markets;
- With imported products;
- In supermarkets.

It is currently unclear what policies the major supermarket chains have in relation to labelling claims and the marketing of organic products.

Another aspect of this issue is whether the organic farmers and growers comply with the production standards and do not use prohibited inputs or management practices. Organic certification involves a third party auditing of the grower's/producer's/processor's operation.

In addition, processors, exporters and retailers of organic food often operate separate assurance systems to identify any non-compliant practices or inputs, to protect the reputation of their brand as well as the integrity of their supply chains. Some cases have occurred; however some of these have resulted from unintentional contamination (such as spray drift) rather than active cheating by the operator. Furthermore, other organic operators typically monitor their peers to ensure that organic standards are complied with.

29 <http://www.comcom.govt.nz/the-commission/media-centre/media-releases/2006/fakeorganicslandbutcherwithmeaty10>

30 <http://www.stuff.co.nz/life-style/food-wine/food-news/67916686/Are-Kiwis-being-duped-over-organic-food>
31 Note that organic exports from New Zealand to most significant markets, do not have this issue as they are managed through the MPI Official Organic Assurance Programme which is only open for certified organic products.

32 Article by Wendy Nissen, NZ Herald Nov 7 2015 http://www.nzherald.co.nz/lifestyle/news/article.cfm?c_id=6&objectid=11541346

4.0

Case Studies

The following case studies review in more detail some interesting areas of recent development in the organic sector in New Zealand.

4.1 Organic Grape and Wine Production

Prepared by Rebecca Reider, Organic Winegrowers New Zealand³³

The New Zealand organic wine industry is rapidly becoming known for its high quality wines made by passionate growers using refined, ecologically-astute growing practices.

In general, the New Zealand organic wine industry has consolidated its gains and is stronger than ever. Whereas three years ago a large proportion of organic vineyard land was still under organic conversion, today the majority of that land is fully certified organic. The number of wineries producing certified organic wines also continues to grow, with 69 wineries certified organic for the 2015 vintage. Winter 2015 saw the country's first Organic and Biodynamic Winegrowing Conference, a watershed event for the New Zealand wine industry, drawing 250 attendees for three days of talks wholly devoted to organic growing, winemaking and marketing.

The size of New Zealand's organic industry can be measured in various ways, including land area, number of growers involved and economic value. Together these metrics paint a picture of the sector as a whole. In terms of land area, currently 2,022 ha of vine plantings are under organic certification – a total of 5.78%³⁴ of all vineyard land in New Zealand. This is slightly above the global average; according to IFOAM, in 2014, 4.5% of vineyard land worldwide was certified organic.

The number of producers involved tells a slightly different story; as of vintage 2015, 12.5% of New Zealand grape growers – a total of 104 growers – had at least one certified organic vineyard. This reflects a general trend in the New Zealand organic wine sector: organic producers tend to be small to mid-size producers driven by wine quality rather than quantity. One notable exception to this is Villa Maria Estate, one of New Zealand's major wine brands, which by 2012 had 30% of its vines under organic production and has set a target of raising that figure to 50%.

In keeping with the above trend of artisanal producers going organic, the wine region with the greatest proportion of organic land is Central Otago, where over 16% of vineyard land is certified organic and/or biodynamic.

The majority of organic grape growers in New Zealand have their own wineries, ensuring that the organic fruit finds an organic home. Contract growers entering the organic industry often do not have a guaranteed organic destination for their fruit; this presents a decreased incentive for these growers to become organic, and is currently a significant barrier to organic conversion.

Currently
2,022 ha
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are under organic
certification – a
total of
5.78%
of all vineyard land
in New Zealand

³³ <http://www.organicwinenz.com>

³⁴ Based on a total area of 35,000 ha sourced from New Zealand Winegrowers Annual Report <http://www.nzwine.com/assets/sm/upload/bh/ph/9b/95/NZW%20Annual%20Report%202015.pdf>

Case studies

Recent rapid growth in New Zealand's organic wine sector has levelled off in the last two to three years

Not all certified organic grapes are made into organic wine. In an informal survey of 16 organic winegrowers, half of the growers reported that some of their organic grapes go into non-organic wines; on average, growers in the survey reported 21% of their organic grapes going into non-organic wines. Reasons for this included market reasons (some markets are less interested in organic certification), and mismatches between the organic status of vineyards and wineries. That is, organic wine producers sometimes need to buy in grapes and can't always find organic fruit, while in other years, organic growers with surplus fruit may have no option but to sell their grapes to non-organic wineries.

Companies exporting organic wine were also included in the census and estimates on exports are included in this report.

Recent rapid growth in New Zealand's organic wine sector has levelled off in the last two to three years; vineyards are still being converted to organic production, but at a slower rate than before. Some recent new entrants have left the organic sector after encountering initial yield difficulties and choosing to turn back rather than seek organic solutions. Anecdotal evidence and preliminary research suggest that some vineyards – depending on soil type, vine age and rootstock – are prone to yield losses during the organic conversion phase as vines' surface roots adapt to being cut by undervine cultivation. However, various organic growers have pioneered successful soil and vine-care strategies enabling vines to recover from these difficulties. Many organic growers report no yield losses during conversion.

Documenting Organic Production Outcomes

The country's first major research project on organic winegrowing concluded in 2015. The Organic Focus Vineyard Project, an interactive project designed to teach grape growers about the organic conversion process, was funded by the Ministry of Primary Industries' Sustainable Farming Fund and New Zealand Winegrowers, and was managed by Organic Winegrowers New Zealand.

The project tracked three vineyards over a three-year period as half of each vineyard was converted to organic production. Organic and conventional production outcomes were monitored and compared, while growers were invited to attend field days and witness the vineyards' progress. Although the size of the project was too small to make definitive statements about organic vs. conventional production, some clear trends emerged from the focus vineyards' experiences:

- Organic pest and disease control methods were generally as effective as conventional synthetic chemical controls, even in high-disease-pressure seasons, across all sites.
- Undervine weed management was generally the biggest technical hurdle in the conversion process, and accounted for the biggest cost differences between organic and conventional production.
- Organic wine quality was high; at the one focus vineyard site where the wines were most directly comparable, both the winemaker and field day attendees found the organic wines to be of higher quality.
- Production costs were mixed, with organic production costing more than conventional at two sites and less than conventional at the third.

The full report from the project is available at www.organicfocusvineyard.com

New Zealand producers report that demand for certified organic wines has particularly increased in Europe

The Market

The organic wine sector is structured quite differently from other organic production sectors in New Zealand. Individual organic wineries each export under their own brands. Unlike food commodities, premium quality wine is priced and sold based on quality, and is also often tied to the reputation of the producer. Therefore there is no fixed premium paid for a wine's organic status; organic status is one factor among many in determining wine price points and marketing.

However, an increasing amount of anecdotal evidence suggests that organic wines tend toward higher wine quality. Large grower Villa Maria has boosted the price point of wines from its organic vineyards, not in response to their organic status but in response to a jump in wine quality. Organic wines are routinely over-represented in New Zealand wine writers' "best of" lists assessing leading wines.

Consumer interest in organic wine is growing overseas. New Zealand producers report that demand for certified organic wines has particularly increased in Europe, and especially in Scandinavia. An equivalence agreement established in 2014 between New Zealand and the European Commission allows New Zealand organic wines to be labelled as organic wine in the EU. New Zealand was among the first countries to achieve this recognition.

Case studies



Winemakers Anna and Jason Flowerday in the buckwheat at Te Whare Ra, their certified organic vineyard in Marlborough. Photo: Te Whare Ra Wines



Certified organic Gewurztraminer grapes from Te Whare Ra in Marlborough. Photo: Te Whare Ra Wines

Case studies

4.2 Unprecedented Growth: the Ceres Story

The meteoric rise in demand for organic foods both here and globally has seen New Zealand's largest organic food brand Ceres experience 100% growth over the last five years.

The Managing Director of Ceres, Noel Josephson, says the company has had average increases in growth of around 20% for the past thirty years since it was established, but the last five have seen exponential growth.

"While the general food sector has crawled along reporting one to two per cent annual growth, the demand for organic food has catapulted since about 2009 as consumers become more aware of what's in their food, and what they don't want in their food," Josephson says.

"What we're seeing in New Zealand with the organics market is indicative of a global trend," he says. "We have been dealing with some of our international organics suppliers for decades and they are all experiencing unprecedented growth, which is very exciting for the industry."

Ceres is an Auckland-based company that provides a range of organic food products across a wide variety of food groups including beans and pulses, flours and grains, nuts, seeds, dried fruits, canned vegetables and fruits, as well as fresh produce. The company also distributes other popular health and beauty organic brands such as Dr Hauschka and Natracare.

Originally started as an organic vege co-op working out of a garage, Ceres now employs 150 people and leads the organics market in New Zealand with distribution across major supermarkets, health food and organics stores. It also has a growing presence in Australia and interests in Argentina and Thailand.

The business recently moved premises to a purpose-built facility that is on track to earn a Five Green Star rating for its eco-design, which included re-using and recycling the materials from the original building on the site.



"What we're seeing in New Zealand with the organics market is indicative of a global trend," he says. "We have been dealing with some of our international organics suppliers for decades and they are all experiencing unprecedented growth, which is very exciting for the industry."

Noel Josephson,
Managing Director of Ceres

4.3 Organic Dairy Production

Case studies

Prepared by Jon Manhire

Background

The establishment of large scale organic dairy production was a relatively late development in the evolution of the New Zealand organic sector. However, there were a number of pioneer organic dairy producers who had provided insights for its potential. Arguably, the early model of New Zealand dairy farming with its reliance on clover-based pastures, resilient breeds of cow and small family farms was very close to an ideal organic model.

In 2002 Fonterra, following preliminary development work by its predecessor the New Zealand Dairy Board, started its organic dairy programme with the recruitment of farmers in the North Island. By 2009 Fonterra had 127 farmers contracted for supply and was processing 10m kg/ms a year. Following a re-organisation in 2009, however, the number of suppliers declined to around 53 and production dropped to around 6m kg/ms³⁵.

The NZ Organic Dairy Farmers Co-operative was established in 2004 and in 2009 established the company Organic Dairy Ltd. This company operated a cheese processing plant in Taranaki but the venture was not successful, going into receivership in 2010³⁶.

There were 99 organic dairy farm operations reported in the 2012 New Zealand Organic Market Report and in 2015 another survey of certifiers identified 73 operators, which suggests a continued decline in numbers.

The Organic Dairy and Pastoral Group (ODPG), formed in 2007 to represent the interests of organic dairy and pastoral farmers. In 2012 it had 230 members, around 160 of whom were pastoral farmers. Membership has subsequently declined, reflecting the drop in organic pastoral farms and the administrative difficulties involved when the group is small and its members are spread out across the country.

Market

In 2013 organic dairy sales represented 11% of total global organic food and beverage sales with a value of £4.8 billion and a growth rate of 3.7% CAGR (Compound Annual Growth Rate 2007-12). At that date sales were dominated by Europe (£2.4 billion) and the USA (£1.9 billion) while only 10% of total sales were in other regions. The CAGR for these regions was estimated as 16.9%³⁷ with rapid growth in South Korea, China and India.

The global market for organic milk is projected to continue to grow at up to CAGR 12% in the future³⁸. High levels of organic milk sales as a percentage of total dairy sales were found in Denmark (24%), Sweden (12%), UK (7.5%), USA (5.9%) and Australia (4.5%). Key drivers for consumer purchase of organic milk include food safety, and the perceived positive impact of organic milk products and production systems on animal welfare, human health and the environment. In many markets the growth in the organic dairy category is increasing faster than conventional milk – which in some places is in decline.³⁹

The New Zealand market for organic milk and dairy products is also growing rapidly with a reported 50% increase in organic milk sales in 2014⁴⁰, and a survey reporting that 72% of New Zealanders would purchase organic milk if it was more affordable.

The global market for organic milk is projected to continue to grow

72%
of New Zealanders would purchase organic milk if it was more affordable

35 <http://www.stuff.co.nz/business/farming/dairy/71254726/Fonterra-desperate-for-high-value-organic-milk>

36 <http://www.stuff.co.nz/taranaki-daily-news/news/3760369/Okato-dairy-factory-being-sold-receivers>

37 OMSCO Organic Milk Report 2015 - http://www.omSCO.co.uk/_clientfiles/pdfs/MarketReport-2015.pdf

38 <http://www.prnewswire.com/news-releases/global-organic-dairy-products-market-2015-2019-300207496>

39 <http://www.choicesmagazine.org/choices-magazine/theme-articles/theme-overview/consumer-demand-for-organic-milk-continues-to-expand-can-the-us-dairy-sector-catch-up>

40 <http://www.ruralnewsgroup.co.nz/dairy-news/dairy-general-news/new-yoghurts-organic-milk-hits-sweet-spot-for-co-op>

Case studies

Production

Currently there are two main buyers of organic milk: Fonterra and the Organic Dairy Hub Co-operative (Dairy Hub NZ⁴¹). Dairy Hub NZ was established initially to help facilitate the marketing of organic milk from the Northland region. Since 2015 it has expanded to source and market milk on behalf of its members from other regions. It projected its milk supply would be more than 1m kg/ms by June 2015⁴² and over 2.5m kg/ms for the 2016/17 season. Thirty farmers signed contracts to supply the co-operative for the 2015/16 season.

A key initial market for the Hub is Green Valley Dairies⁴³ which has operated a processing factory and organic farm since 2003. Green Valley Dairies in turn supplies, amongst others, the very successful Lewis Road Creamery⁴⁴ which distributes a range of popular organic dairy products throughout New Zealand.

Fonterra also markets organic milk in the New Zealand market, with the nationwide release and competitive pricing of Anchor organic milk in 2015. It has also marketed organic Mainland cheese for some time. The company has specifications for a wide range of organic milk products for export, including milk powder, butter, protein and cheese⁴⁵.

Another significant market for New Zealand organic dairy products has been manufactured infant milk formula, with China being the principal market. A number of exporters were actively servicing this Chinese market until restrictions were put in place following a 2013 food scare. Currently, there appears to be only one company, GMP Dairy⁴⁶, which has the appropriate accreditation in China and is actively exporting.

In addition to these larger initiatives there are a number of smaller, typically integrated organic farm/processors that market a wide range of high-quality organic dairy products locally, such as Clearwaters Organic Dairy⁴⁷ in South Canterbury, Biofarm Products Ltd⁴⁸ in the Manawatu operated by the Tait-Jamieson family since 1986, Retro Organics⁴⁹ in Southland and Aroha Organic Cheese in Waihou, Northern Waikato⁵⁰.

Comparative Farm Performance

Between 2003 and 2009 the Agricultural Research Group On Sustainability (ARGOS) undertook a comparative study of the environmental, economic and social impacts of farms converting to organic production, which involved 12 organic/conventional paired farms in the Waikato/Bay of Plenty, Taranaki and Manawatu. Another project – Grow Organic Dairy (GOD)⁵¹ – which ended in 2013, undertook detailed analysis of nine organic dairy farms with similar results. Some of the findings⁵² included:

- There was no statistically-significant difference in the financial performance between the ARGOS organic and conventional dairy farms, even though organic production levels were significantly lower. The GOD farms produced on average 15% less milk solids per hectare and 8% less per cow over the five-year study period. However, with regard to peak and average production of milk solids per cow per day, the difference between the organic and benchmark farms was less than 1%. The organic cows ate 8-9% less feed than the benchmark but their feed conversion efficiency was only 4% less. The GOD farms in terms of profitability and wealth creation were mostly doing as well as, or slightly better than, the benchmark farms.
- On ARGOS organic farms, operating expenses were approximately 79% of conventional farms, principally due to lower input costs such as fertiliser, feed and animal health inputs.

There was no statistically-significant difference in the financial performance between the ARGOS organic and conventional dairy farms, even though organic production levels were significantly lower

41 <http://www.organicag.co.nz/dairy-hub-nz>

42 <http://farmersweekly.co.nz/article/organic-hub-starts-with-30-spokes?p=212>

43 <http://www.gvd.co.nz>

44 <http://www.lewisroadcreamery.co.nz>

45 <https://www.fonterra.com/nz/en/Our+Products/Our+Ingredients/Applications/Organic+Products>

46 <http://www.gmpdairy.com/nz-infant-formula-making-a-comeback-in-china/#>

47 <http://www.clearwaters.co.nz>

48 <http://biofarm.co.nz>

49 <http://www.retroorganics.co.nz>

50 <http://www.organicgoatcheese.co.nz>

51 <http://www.organicpastoral.co.nz/GOD+Project/Healthy+Livelihoods.html>

52 <http://www.argos.org.nz>

Case studies

- Both projects' organic farms imported approximately 50% of the fertiliser nutrients that conventional farmers did and had lower modelled nitrogen leaching than conventional farms. Overseer results showed that N losses on the GOD farms were well below 25 kgN/Ha/year.

A recently-published comparative analysis of New Zealand, Dutch and Irish dairy systems⁵³ to identify potential strategies for minimising nitrogen pollution found a number of advantages associated with organic dairy farm practices including:

- The Dutch organic dairy farm example included in the comparison had the highest eco-efficiency (kg/ms kg N) and achieved a nitrogen surplus well below levels known to affect water quality.
- Typical organic dairy farm practices such as sowing multi-species pastures, maintaining clover content, using N-efficient crops, and crop rotation were identified as significant strategies for managing N surpluses.

In 2015 Fonterra announced it was paying an additional \$1.50 per kg/ms for certified organic milk – made up of a \$1.05 per kg/MS organic premium and a \$.45c per kg/MS payment for the costs of maintaining organic certification⁵⁴. Later in the season the premium increased to a total of \$1.75 kg/MS⁵⁵. This was a significant premium over the conventional milk farmgate forecast price at the time, of \$3.85 kg/MS compared with the \$5.60kg/MS for organic suppliers – a 68% premium.

Future

The future for organic dairy farming looks positive, with a number of factors encouraging its development.

Market Demand

There is strong international market demand for organic dairy products. This is reflected in the significant market premium for organic milk powder, which was reported in 2015 as retailing at \$14,600 per tonne compared with \$2,800 per tonne for non-organic product⁵⁶. Organic production also provides access to niche markets which typically don't have the significant price fluctuations that are common in the conventional commodity market.

Domestically there also appears to be opportunities for growth in the consumption of organic milk. In 2015 only 2.5% of the total milk sold in New Zealand was organic, compared with much higher levels in other western countries' markets⁵⁷. Detailed information⁵⁸ for organic milk sales for the first six months of 2015 supports a rapid growth in sales, with organic milk having a reported 5.8% of the total white milk category and nearly all the growth in the milk market coming from organic milk sales.

Environmental Impact

As outlined, there is increasing concern about the environmental impacts from highly intensive dairy farming, especially in relation to water pollution. Organic farming, being significantly less intensive with lower nitrogen and phosphorus inputs, provides an alternative pathway to meeting increasingly strict regulations established to protect water quality, reflecting societal expectations for cleaner streams and rivers.

Financial Returns

Strong market demand and competition for organic milk is reflected in comparatively high prices. In 2016 Fonterra organic milk suppliers can opt for milk prices linked to market returns for organic products, rather than the traditional price premiums.⁵⁹ This could provide significantly increased returns for organic dairy farms.

In 2015 only
2.5%
of the total milk sold
in New Zealand
was organic,
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much higher levels
in other western
countries' markets

53 Pinxterhuis, J. B., et al. "Eco-efficient pasture based dairy farm systems: a comparison of New Zealand, The Netherlands and Ireland." *Grassland and forages in high output dairy farming systems. Proceedings of the 18th Symposium of the European Grassland Federation, Wageningen, The Netherlands, 15-17 June 2015*. Wageningen Academic Publishers, 2015.

54 <http://www.fonterra.com/>

55 <http://www.stuff.co.nz/business/farming/dairy/71254726/Fonterra-desperate-for-high-value-organic-milk>

56 <http://www.stuff.co.nz/business/farming/dairy/71254726/Fonterra-desperate-for-high-value-organic-milk>

57 <http://www.ruralnewsgroup.co.nz/dairy-news/dairy-general-news/new-yoghurts-organic-milk-hits-sweet-spot-for-co-op>

58 <http://stoppress.co.nz/news/lewis-road-creamery-cries-over-copied-milk-goodman-fielder-aims-slice-premium-market>

59 <https://www.fonterra.com/nz/en/Hub+Sites/News+and+Media/Media+Releases/FONTERRA+INTRODUCES+MARKET-LINKED+PRICE+FOR+ORGANIC+MILK>

Case studies

4.4 Over 500 Organic Products: the Countdown Story

The popularity of organic products is continuing to grow, with almost half of Countdown's customers picking up an organic item as part of their shop over the last year.

Our three biggest selling organic products are:

1. Banana Fairtrade Organic 850g
2. Naturalea Organic Whole Milk 1L
3. Macro Organic Almond Milk 1L

With sales increasing by over 20% and the number of customers buying organic products increasing by around 5% over the last financial year, we're working hard to make sure we meet the demand.

To do this, we're continuing to extend our organic product range, particularly through our own brand product, Macro.

The Macro range, which currently includes around 40 organic products, is sold exclusively at Countdown and is becoming increasingly popular with the number of customers purchasing these products rising by over 15%.

With the increased demand for organic and health food products, we are continuing to extend our product range, improve our store layout and create dedicated health food sections in even more of our stores. Over 75 of our stores now have these dedicated health food sections, with an aim to roll these out into 129 stores by 2017.

Our customers want their organic products to be easily accessible and cost effective. With over 500 organic products on offer in a range that is continuing to expand, Countdown is a great place to shop organic.



The Macro range, which currently includes around 40 organic products, is sold exclusively at Countdown and is becoming increasingly popular with the number of customers purchasing these products rising by over 15%.

4.5 Kiwifruit

Case studies

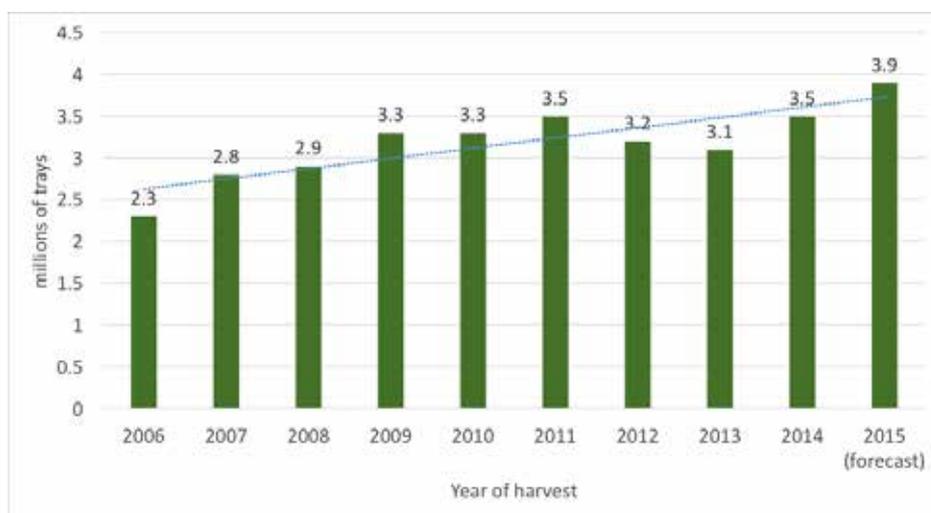
Prepared by Dr Jayson Benge, The AgriBusiness Group

The kiwifruit data presented here has been sourced from Zespri Annual Reviews and the February 2016 Kiwiflier (forecast values), unless stated otherwise.

Background

Historically, New Zealand's kiwifruit sector has delivered a high proportion of organic fruit relative to other sectors. In the early 2000s, organic kiwifruit made up as much as 5-6 % of the total crop submitted for export. In recent years, it has fluctuated between 3% and 4%. The volume of organic kiwifruit exported and sold by Zespri has increased in the last decade, from 2.3m trays to a forecast record of around 3.9m trays in 2015 (Figure 1). In 2014, Zespri Organic Kiwifruit earned around NZ\$50m in sales (Source: Zespri).

Figure 7. Zespri global volumes of Organic Green fruit



Production base

Number of orchards

There are approximately 190 orchards producing organic kiwifruit, operated by around 80 growers. Around 170 of these produce Organic Green kiwifruit, while around 40 produce Organic Gold kiwifruit (many of the orchards produce both). The overall number of producing organic orchards has not changed since 2009.

There was a notable decline in the number of producing Organic Gold orchards between 2010 and 2013 due to Psa, which particularly affects the Hort16A variety. During this time growers switched to the more tolerant gold variety of Gold3 (marketed as "SunGold"). Now the number of orchards growing Gold kiwifruit organically is similar to pre-Psa levels, if not slightly higher. In 2015 there was a decline in the number of Organic Green orchards due to conversion to conventional (Source: Zespri).

Production

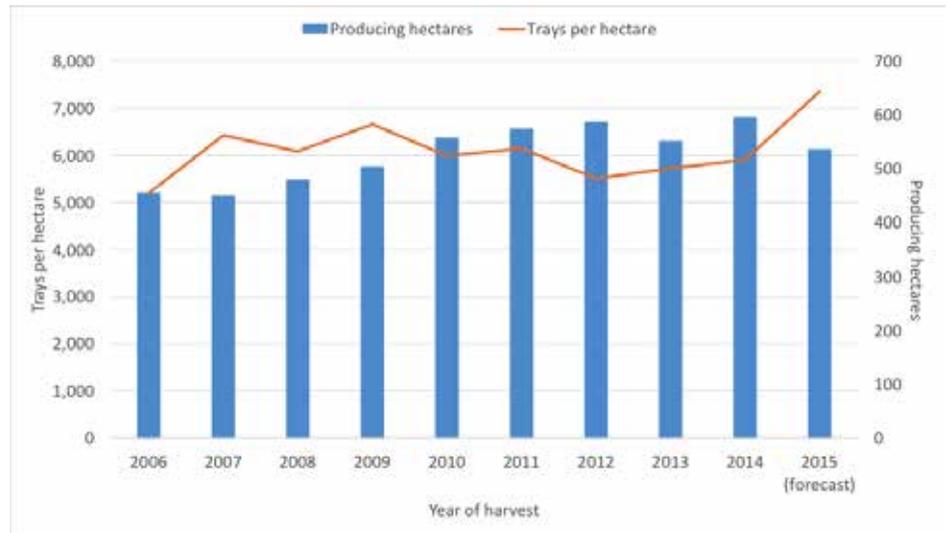
Since 2007, the total area of producing Organic Green orchards has generally increased from around 450 ha to 600 ha. The average yield has been around 6,100 trays/ha for the same period, with a record average yield forecast for the 2015 crop (Figure 8)⁶⁰.

The area of Organic Gold has recovered to above pre-Psa levels (~80 ha) with the average yields also recovering towards pre-Psa levels, which was around 8,700 trays/ha in 2009.

⁶⁰ Separate Organic Gold production data is not available in Zespri publications because it is a small amount and is lumped together with conventional gold.

Case studies

Figure 8. Producing hectares and average production for Organic Green kiwifruit in NZ.



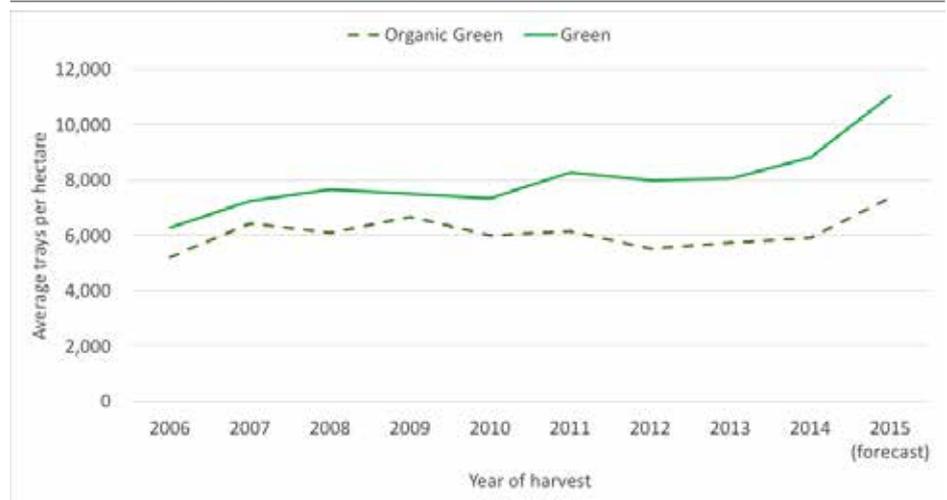
The returns for organic fruit in recent years have been good relative to previous years

Comparative Orchard Performance

Organic Green orchards have typically produced around 80% of that of their conventional counterparts due to lower croploads and smaller fruit size. A challenge for organic kiwifruit producers in recent years has been the apparent increasing gap in yield (Figure 8), as well as maintaining premiums over conventional fruit, which has been delivering good returns (Figure 9).

That said, the returns for organic fruit in recent years have been good relative to previous years (Figure 4) and the forecast orchard gate returns (OGR⁶¹) for the 2015 crop will result in a premium higher than for the last couple of seasons. Also, the average cash surplus – referred to as Net Orchard Return (NOR) by the industry – for Organic Green orchards is expected to be similar to that of their conventional counterparts (Table 16).

Figure 9. Average production for organic and convention Green kiwifruit in NZ.



61 Orchard gate return (OGR) is a measure of gross income as it does not take into account on-orchard production costs.

Figure 10. Average Organic Green and Green OGR per tray, and % premium for Organic Green as measured by the difference in average OGR (per tray).

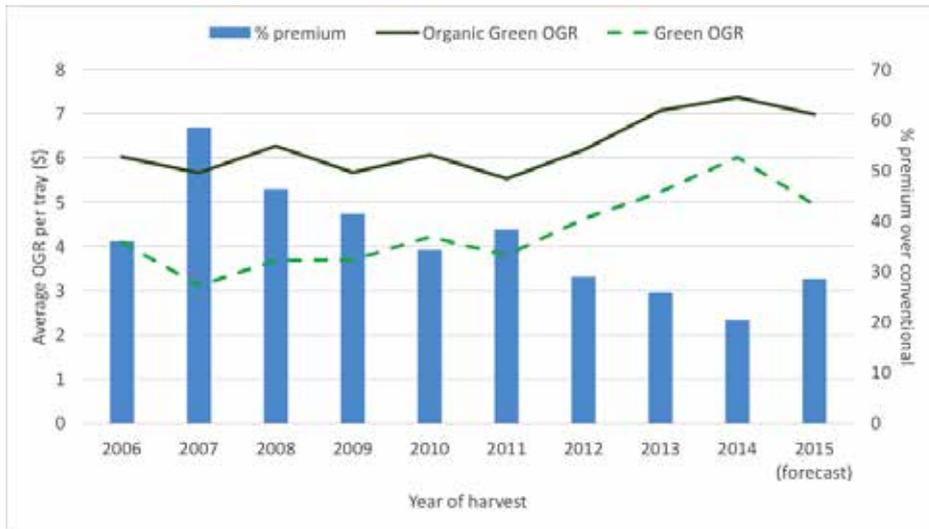


Table 16. Forecast 2015/16 Net Orchard Returns (NOR) for Green and Organic Green kiwifruit (data sourced from Zespri 5 Year Outlook Document – February 2016).

	Green	Organic Green
Top 25% yield/ha	13,900	10,200
Ave yield/ha	11,044	7,400
Lower 25% yield/ha	6,600	4,600
Top 25% NOR	>=\$34,800/ha	>=\$35,300/ha
Average NOR	\$22,709/ha	\$22,534/ha
Lower 25% NOR	<=\$9,700/ha	\$14,100/ha

Marketing

The following is adapted from Zespri’s 5 Year Outlook document published in February 2016:

Situation and challenges

The sales of organic food around the world is a positive trend with strong growth rates underpinned by broad consumer desire for healthy, nutritious, safe, and good-tasting foods. The core markets for Zespri organic kiwifruit remain North America, Europe and Japan, which account for around 80% of global sales by volume. Organic sales in China, Korea, Taiwan and South East Asia will grow rapidly but off a low base.

Marketing and market development

Zespri market and onshore teams are seeking to maximise the returns for organic supply through:

- Developing organic market opportunities outside of the traditional markets.
- Optimising specialist organic distribution and targeted marketing to pursue growth in organic sales in Japan and optimise value captured in Europe.
- Taking a lead role with organics within the product portfolio in North America.
- Developing a customer base at premium pricing for Organic Gold3.



Case studies

Environmental benefits

There is increasing concern about the environmental impacts of farming, especially in relation to water quality. Organic orcharding, which uses less soluble fertilisers, provides an alternative pathway to meet increasingly strict regulations established to protect water quality.

Previous research conducted by The Agriculture Research Group On Sustainability has shown that biodiversity and soil quality on New Zealand kiwifruit orchards is good. However, these are even better on organic orchards. Agrichemicals used on organic orchards are safer and have lower potential environmental impact. These are significant draw cards for organics.

Looking forward

The following is taken directly from Zespri's Annual Review 2015:

- Volumes are predicted to remain around the current level of 3.5 million trays for the foreseeable future. Yields achieved by organic growers have been impacted significantly by Psa over recent years and the current production level of 6,000 trays per hectare constrains returns.
- There has been some conversion away from organic to conventional, mostly associated with orchard sales and particularly strong returns for conventional Green. The balance between the premiums earned by conventional Green versus Organic Green tends to be self-moderating as growers migrate between categories and we expect conversion to conventional will reduce over the next few years.
- Zespri Organic SunGold Kiwifruit is an exciting new product for the organic business. In 2014/15, Zespri introduced this offering across a range of markets as a platform to generate future growth in organic volumes.

Summary

In recent years, organic kiwifruit production in New Zealand has been strong in terms of yields and returns. High returns and yields for conventional fruit, and maintaining the organic premium, is a major challenge for the category.



“Organics is about consumers wanting to ensure chemicals are not in the essential products they buy each day”
 Steve Bayliss, Foodstuffs New Zealand Ltd's Group General Manager Marketing.



4.6 Consumer Desires Drive Organic Offer: the Foodstuffs Story

It's a tongue-twister of a word but “premiumisation” – consumer demand for basic foods with added value – perfectly encapsulates Foodstuffs' growing investment in organics.

“Organics is about consumers wanting to ensure chemicals are not in the essential products they buy each day,” explains Foodstuffs New Zealand Ltd's Group General Manager Marketing, Steve Bayliss.

“We are seeing clear needs emerging,” says Bayliss. “Needs that directly relate to health and wellbeing, lifestyle, personal interests, and how Kiwis like to be perceived by their friends and family.”

Foodstuffs' research has found that among consumers who highly value organic products are individuals who like to exert “control” over their diet. This control may be borne out of a desire to consume products with a known provenance, and that are chemical-free, but also in many cases health issues such as gluten and dairy intolerances drive the customer's need to control the type of food that is being consumed. Others place value on “wellbeing”, which means the food they consume must be better for their body as well as the environment, while some customers see the decision to buy organic products simply as the “sophisticated” choice.

Key factors driving the buying choices of these often interrelated groups include greater health consciousness, ever-increasing environmental awareness, and a basic human desire to trust the food they're eating and know what went into it before it reached the supermarket shelves.

Bayliss says Foodstuffs is committed to providing customers with choice, and although demand for organics varies from store to store, the flexibility of the owner-operator model and the co-operative's ability to source locally means the group is well-placed to deliver a wide range of organic options to its New World and PAK'nSAVE customers.

“Our owner-operators are predominately local guys and girls who speak daily with their customers to learn about what they want. Our buyers work hard to identify good quality products across fresh and grocery to meet these needs.”

Up until the last couple of years, organic growth was steady. However, we are now seeing significant growth in this area. For example, Upper North Island PAK'nSAVE stores are reporting sales growth in grocery of 24%.

Case studies

Wellington City Council reported

30
community gardens in its area in 2016

In 2013, Christchurch community garden volunteers worked an estimated **106,912** hours annually – equating to over **\$1.5** million of investment

4.7 Community and School Organic Production

Prepared by Dr Matt Morris

The many benefits of community gardening – the production of fruit and vegetables communally – were described in the New Zealand Organic Market Report 2012.

It appears that the growth in popularity of such growing spaces, and the existence of gardens in schools, has continued to increase since that time. Data remains patchy, but is strongly indicative.

Community Gardens

In 2007 there were an estimated 20 community gardens in the whole of New Zealand⁶². By 2011, Auckland alone was thought to have 'well over' 50⁶³, while the Canterbury Community Gardens Association reported 29 community gardens in the greater Christchurch area in 2013⁶⁴. In 2015 Auckland's numbers had grown to 90, with Dunedin on 10⁶⁵, and the Wellington City Council reported 30 community gardens in its area in 2016.⁶⁶

The growth of community gardens is linked to many factors but a prime driver since the early 1990s has been food insecurity. This history can be accessed partly through food bank use. In the first three months of 1991, for example, Salvation Army food parcel help rose 76%. By 1993 there had been a tenfold increase.⁶⁷

In Lower Hutt, a single food bank handed out 4400 food parcels in the year to June 1994, up from 640 in 1989.⁶⁸

The 2002 National Children's Nutrition Survey found that 50% of New Zealand households experience low or medium food security⁶⁹. Then, fruit and vegetable prices rose by 12.5% between October 2007 and October 2008⁷⁰, which seemingly drove another wave of community gardening development.

An example of this can be seen at the University of Canterbury. Preliminary research there in 2014 found that of a sample of 300 tertiary students, 70% reported barriers to accessing nourishing food, the chief barrier being cost (87%). The majority reported missing fruit and vegetables from their diets (53% and 58% respectively).⁷¹

This study helped to quantify a well-known phenomenon amongst this demographic; and one solution developed already was the University's own community garden, set up in 2002.

Over 660kg of fruit and vegetables were produced at this community garden in 2015 (10% more than in 2014). The 579 instances of volunteering in the garden recorded that year represented a 43% increase over 2014.⁷²

Across the greater Christchurch region, in 2013 volunteers worked an estimated 106,912 hours in community gardens annually – a significant economic and social contribution⁷³. If this was valued at the minimum wage, it equates to well over \$1.5m of investment annually – a significant community response to a pressing community issue.

62 Te Ara, *The Encyclopaedia of New Zealand*, <http://www.teara.govt.nz/en/gardens/page-6>. Accessed 4 March 2016

63 Kirsten Warner, *Down to earth: Community gardens around the city*, *New Zealand Herald*, 5 November 2011

64 Bailey Peryman, *A discussion document on community gardening in the Greater Christchurch area* (Christchurch, Canterbury Community Gardens Association, 2013)

65 Sean Connolly, 'Growing Together', *Otago Daily Times*, 9 November 2015

66 <http://wellington.govt.nz/recreation/enjoy-the-outdoors/gardens/community-gardens> accessed 4 March 2016

67 Jane Kelsey, *The New Zealand Experiment* (Auckland, Auckland University Press and Bridget Williams Books, 1995), p.292

68 Mike Moore, *Children of the Poor* (Christchurch, Canterbury University Press, 1996), p.19

69 Smith, C., Parnell, W., and Brown, R., 'Family Food Environment: Barriers to Acquiring Affordable and Nutritious Food in New Zealand Households' (2010)

70 Statistics New Zealand, 'Food Price Index: October 2008', p.5 <http://www.stats.govt.nz/products-and-services/hot-off-the-press/food-price-index/food-price-index-oct08-hotp.htm>. Accessed 24 November 2008

71 Kate Walsh, 'Understanding students' accessibility and barriers to nourishing food' (Christchurch, University of Canterbury Sustainability Office, 2014)

72 Katie Nimmo and Matt Morris, 'UC Sustainability Office Report 2015', p.5 http://www.sustain.canterbury.ac.nz/documents/UC_%20Sust_Report_2015.pdf. Accessed 4 March 2016

73 Peryman, *op.cit*

Case studies

Indeed, some of these community gardeners have entered into the formal business community as they start up social enterprise ventures based around elements of the food value chain. A former coordinator of the University of Canterbury's community gardens is now an organic farmer (Rattletrack Organic Farm), supplying farmers markets and a local organic food processor (The Urban Monk) that operates as a social enterprise.

Likewise, a former coordinator of the Sumner Community Gardens has now started Cultivate Christchurch, based at an inner city organic urban farm that not only supplies local restaurants but also acts as a vocational training space.

School Gardens

Research into school gardening nationally is non-existent, but anecdotally the presence of organic vegetable and fruit gardens in schools is on the increase as well.

4.7.1 Ōtākaro Orchard

Since the Canterbury earthquakes, Christchurch has been reconsidering what it means to be a garden city in the twenty-first century. Feeling the impact of disruption to the food system at that time, many people have become acutely aware of how important a resilient local food economy and system is.

To this end, a large-scale collaboration has emerged in the form of the Food Resilience Network. This includes organisations such as the Christchurch City Council and the Canterbury District Health Board, along with numerous NGOs.

In 2015 this collective developed a proposal for the Canterbury Earthquake Recovery Authority (CERA) to create a community orchard, garden and food hub in the central city. This proposal was successful, and the site – known as Ōtākaro Orchard – was officially opened by Prime Minister John Key on 13 February 2016.

Also in attendance were two cabinet ministers, the Mayor of Christchurch, several Christchurch City Councillors, as well as many representatives from the various organisations making up the Food Resilience Network.

The vision for this \$3m site is for a community-oriented public space that not only produces food and hosts a social enterprise café that uses some of this food, but also acts as an education centre, a hub and a 'shop front' for the region-wide food resilience movement.

Ōtākaro Orchard is situated at 227 Cambridge Tce, between Manchester and Colombo Streets.

The presence of organic vegetable and fruit gardens in schools is on the increase



Ōtākaro community garden

(L-R) Matt Morris (Food Resilience Network), Rt Hon John Key and Hon Nicky Wagner (MP for Christchurch Central) get stuck in at the Ōtākaro Orchard opening.



4.8 The Challenge of Meeting Demand: the Fresh Direct Story

It is our great pleasure to sponsor the 2016 edition of the New Zealand Organic Market Report.

This report measures and monitors the state of the New Zealand organic sector, both at production and consumption levels, in New Zealand and overseas. We believe that tracking progress is important and valuable, and, if the report mirrors what we have been experiencing at Purefresh Organic* for the last 20 or so years, the New Zealand organic story is indeed a successful one.

When we dreamt of a brand of fresh fruit and vegetables for New Zealand consumers back in 1997, we were driven by the vision of a future where all Kiwis could walk around the produce department of their preferred shopping outlet and have the choice of an organic option for every type of produce that was on display.

The quest to realise our dream is not over yet. Despite continuous growth and expanding markets both locally and overseas, we need to ensure we meet our customers' ever increasing demand for variety and choice that is fuelled by both habit and a craving for innovation. New Zealand organic production needs to keep up with new local and global food trends in order to continue to grow the market for New Zealand fresh produce.

Kiwis deserve the best New Zealand has to offer and they increasingly are choosing to put organics in their shopping basket. At Purefresh we are making sure consumers have meaningful, tasty and healthy choices.

We are proud to be part of this year's report and look forward to contributing to the ongoing growth of the NZ organic market in 2016 and in years to come.

*Purefresh Organic is Fresh Direct's own brand of certified organic fruit and vegetables.

4.9 An Organic Chef's Perspective

Case studies

Prepared by Shep Elliott, head chef and part-owner with brother Jesse, of Ti Kouka Café in Wellington.

We chose to go organic because a major part of our philosophy, and that of our cafe, is to support and encourage the production and use of healthy food. We believe that slower growing practices and sustainable farming, without enhancements, alterations and looks-based screening, will ultimately provide a better environment for our children and future generations of our kids.

On a small scale (for now, while farmers are working on technique and red-tape), we are able to enjoy a truly unique range of vegetables and meats that are fresher and more flavoursome.

Challenges and compromise

This commitment is not without its challenges. Firstly, it is still a lot harder to get hold of organic food and the range is more limited than non-organic. So across our menu we do still include the use of non-organic products to fill the holes.

Financially, it is certainly more difficult, due to the produce being more expensive. While most people say they would be happy to pay more to have organics in restaurants and cafes, in reality this is not always the case as the food portions will universally have to be smaller and, therefore, the concept of value for money seems less apparent. We understand that the value is in the flavour but not everyone is on board with that.

From both sides it is a difficult cost to cover but if more cafes/restaurants/retailers change a few items at a time, people will begin to gain understanding of the products and the movement will gain momentum.

Trends around organics in the restaurant trade

Organics themselves are the trend. Given that there is only a small range of products obtainable with any consistency in New Zealand, just having them available is the trend. Based on questions from our customers, the key things they want to see are organic meat (poultry specifically) and eggs. Our wait staff are frequently asked about organic eggs.

I have no doubt that in other countries where organics are more widely available, there will be specific trends happening within the industry.

Incentives for more chefs to choose organics

Other chefs and more eateries/retailers using organic produce would be a huge influence. All these things ever take is enough people on board for it to become the norm.

Another good way to influence chefs would be to introduce learning within training establishments so that young and/or trainee chefs can be shown, taught and taste the difference for themselves. They can then go into their professional careers with a wider understanding of what could, should, and hopefully will be available to them in the future.

While most people say they would be happy to pay more to have organics in restaurants and cafes, in reality this is not always the case

Organics themselves are the trend



Shep Elliott's food featuring local, sustainable and organic ingredients is in big demand at Ti Kouka Café



On the menu at Ti Kouka Café, Wellington

Case studies

4.10 Organic Export Statistics from the Official Organic Assurance Programme

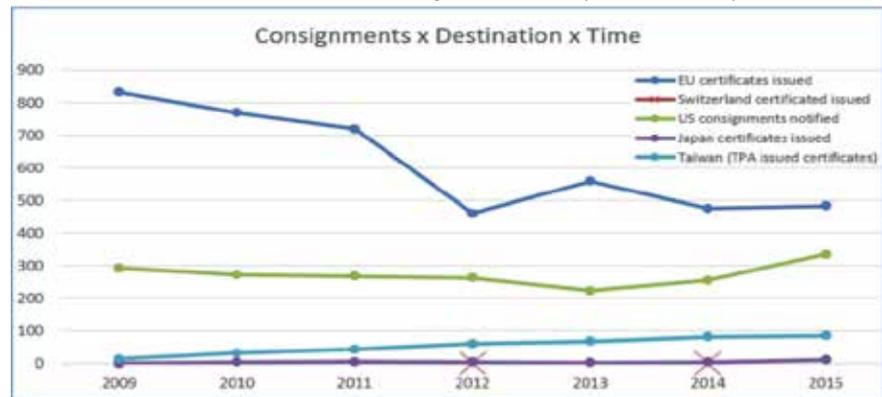
Statistics on the volume and value of exports are captured by the Ministry for Primary Industries (MPI) through the Official Organic Assurance Programme (OOAP), which covers exports to the EU, USA, Japan, Taiwan and Switzerland. This provides an independent reference to check the relative accuracy of the census undertaken for this report.

The 2015 Annual Report included the following information:

- In 2014 there were 487 operators (compared with 936 in 2011/12) registered with MPI-recognised third party agencies to produce organic products for export under the OOAP.
- There were 88 operators registered with MPI as exporters (75 in 2010/11).
- Declaration figures provided by exporters using the OOAP programme for 2014/15 totalled \$100.6m. This was an increase of approximately \$23m (30%) from 2014/15.

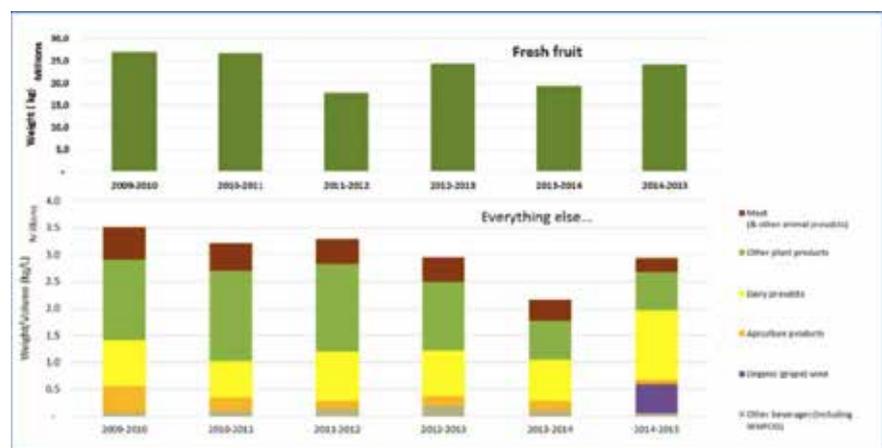
Figure 11. Number of consignments to markets under the OOAP (2009-2015)⁷⁴

The OOAP also collects data on the weight/volume of products that provides an insight



into trends in exports for markets covered by the OOAP.

Figure 12. Volume (kg or L) of different products types exported under the OOAP (2009-2015).



This provides a rough check on the information collected for the export survey. The changes in volume for fresh fruit exports align with the export values collected through the export survey as well as other products – for example, the growth in organic dairy exports and decline in organic honey exports.

74 Official Organic Assurance Programme 2014/15 Annual Report for Registered Organic Exporters, MPI Nov 2015

Conclusion

The 2016 Organics Aotearoa New Zealand Market Report findings support OANZ's understanding of growing and diversifying domestic and export markets. This expansion is strongly connected with consumers' desire to connect with sustainably produced and processed products. New Zealand is perfectly placed to fully capitalise on the opportunity to grow its organic sector and share this growth both domestically and overseas. All indicators signal that this is the correct thing to do.

We are comfortable with a more than 11% total per annum growth since 2012 and acknowledge some sectors are growing even faster than this. Our export markets are growing at over 3% per annum but the domestic grocery sales through supermarkets is the real mover, with a staggering 127% growth since 2012. That's 42% per annum, driven by consumer demand for a wider range of certified organic products. Note, however, that not all of these products are produced in New Zealand and they are not limited to food and beverages.

There are now very clear pathways showing how to grow New Zealand's wider primary sector. They include developing minimum environmental standards, encouraging premium standards like organic, and brilliant story-telling through authentic marketing.

Building lasting and committed relationships throughout the supply chain is essential for wider primary sector success. The organic sector has expert knowledge through accomplished growers and farmers; internationally-recognised certification systems that ensure our premium products can access any global port; and savvy marketers and traders to ensure lucrative markets can be accessed.

Kiwifruit, pip fruit, wine and leading brands are exemplars of this approach. They have self-organised, developed national minimum standards, and reaped the rewards. Each of these progressive operators is expanding – viticulture being the most recent example, with an impressive 128% increase in certified organic product over three years. The resulting premiums are creating greater profits. Dairy, in the early stages of transitioning to organic, is also demonstrating it too can adjust its methods and practices, bringing measurable benefits to the environment and significant returns to its farmers.

It is rare for so many primary sector groups to intentionally and voluntarily decide to converge. OANZ's membership

is very diverse, ranging from consumer interests that lead national campaigns, to our country's largest exporters; and from micro and major retailers through to certification agencies. We celebrate the difference, listen to what others say and are confident of the benefits that diversity brings. It is, after all, a key component of healthy ecosystems.

The sector is not without its challenges. Although we have solid growth, this is from fewer licensees. We have identified, and our Market Report findings confirm, that we have work to do in the fresh vegetable and meat sectors. We also need to communicate the multiple benefits of organics more clearly. We know from international examples that by simplifying the transition to organics, more producers will engage. All these issues are being addressed by OANZ, either through working groups or open dialogue with peak body sectors like Horticulture New Zealand, New Zealand Winegrowers, Beef and Lamb New Zealand, DairyNZ, and the Federation of Māori Authorities and government agencies.

Our strategies are not only organisational and structural, however. To truly realise the growth potential for the sector, OANZ is now engaging politically with related Ministries, Ministers and appropriate government bodies including the Primary Production Select Committee.

The 2016 Organic Market Report findings show that certified organic is a sustained global shift in consumer consciousness, and New Zealand stands to benefit immensely from increased engagement. Given the "clean, green" image associated with our country, such a move would appear to be a natural and inevitable way to proceed. However in doing so, the need to safeguard the integrity of the organic sector and guarantee the authenticity of its claims becomes more pressing than ever. We cannot afford to get it wrong because we will be dealing with established growing markets and clear consumer behaviours that are sophisticated, deliberate and discerning.

OANZ is ready to lead and realise the growth potential of the New Zealand organic sector but we need support – not just at an individual level but on a nationwide scale. We invite you to get involved.

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