NEW ZEALAND ORGANIC MARKET REPORT 2012

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FOREWORD

It is a great pleasure for Organics Aotearoa New Zealand[1] to bring you our 2010 -2012 Organic Market Report. This is our 3rd report. Our first one was released in 2007. We now have 6 years of data tracking the rise and rise of organic production, consumption and exports in and from New Zealand.

Producing this report has required a high level of co-ordination and willingness to share. We like that – it demonstrates our ability to collaborate with all players and our dedication to growing the organic sector.

Our reports are part of our commitment to measure and monitor our growth and progress. This report, however, is unlike our previous reports, and reflects the growth and change that has occurred in the organic sector in the past three years. For the first time we have introduced our wider community of interest and influence into the report, adding value to our coverage of what we offer to New Zealand.

While the report is still predominantly quantitative, we have also introduced qualitative elements. The New Zealand 'organic market' now includes the micro level (home, community and school gardens, small family farms and lifestyle properties) as well as the macro level (commercial family farms, processing companies and corporate interests). Name the organic product; you can now buy it, whether from a farm gate, a farmers' market or a supermarket. We celebrate the diversity of our community, and want this to be a core message in our work. Everyone can participate in the organic market, everyone is welcome.

We continue to grow, we are innovative and we offer market leadership. This consistent growth, at approximately 8% globally per annum, makes us part of the fastest growing food sector in the world. Organics is now valued at over USD$60 billion and is estimated to be reaching USD$104.5 billion by 2015[2]."

This growth is fuelled by an insight we want to share for the good of New Zealand and the world. People all over the world want meaningful relationships and this includes sharing food that is safe, clean and true to label. Certified organic food from New Zealand ticks all these boxes. The world loves what we do; it wants a relationship with us. Enhancing this relationship means changing the way we think, act, and present ourselves. We can no longer be simply 'producer led' or 'market driven', because families who eat food want relationships with families who grow it. The growth of organics at all levels is an expression of this desire for a better relationship between producers and consumers, a rebuilding of a relationship of trust and care.

While we celebrate overall growth in the organic sector, we also seek continued improvement. There is work to do; we want to do better. From the results presented in this report we have identified two key areas of focus for OANZ over the next two years. The first is our communications around what

[1] OANZ provides national leadership and vision for the organic sector in Aotearoa New Zealand. Our main purpose is to co-ordinate the collective resources of the organic sector in the wider interests of New Zealand. When and as required, we advocate and negotiate on behalf of the member organisations to maintain and strengthen the internationally-recognised core organic principles of health, ecology, fairness and care.

[2] www.marketsandmarkets.com/Market-Reports/organic-foods-350.html

'organic' means, and the opportunities for health and wealth it presents for both producers and consumers. The second is the need to explore ways to prevent the consistent and persistent misuse of the term 'organic' in the marketplace. These are two key areas where we need to grow in expertise and authority.

Finally, we want to thank all those who participated in the research, shared their knowledge and contributed to the report. Special acknowledgement is extended to the Agribusiness Group for their continued commitment to research into organics, and also to Colmar Brunton who initiated the qualitative research into market perceptions – another first for this report.

We are also grateful for the originally funding support provided through the Ministry for Economic Development. Its functions have since been rolled into the Ministry of Business, Innovation and Employment.

Organics is a growth market globally with enormous potential to benefit New Zealand's economy, people, and environmental sustainability. We are developing a plan for building the sector and we welcome all enquiries and expressions of interest that may stem from this research report.

Brendan Hoare
Chair
Organics Aotearoa New Zealand

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This research project was funded by the Organics Aotearoa New Zealand Inc (OANZ) with funding support provided through the Ministry for Economic Development now the Ministry of Business, Innovation and Employmentand. The project was undertaken by The AgriBusiness Group in association with the University of Otago. We would also like to thank the organic producers, processors, service providers, exporters, retailers and certifiers who participated in the census. We would like to thank Colmar Brunton who undertook the qualitative research and also acknowledge and thank Nielsen Ltd for providing the results of their organic scan track data as well as the Ministry for Primary Industries (MPI) for the use of information collected as part of the Official Organic Assurance Programme. Finally, special thanks to David Wright and Philippa Jamieson for their copy editing.

EXECUTIVE SUMMARY

1 Introduction

The New Zealand Organic Market Report 2012 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 organic sectors and other recent sector developments. The report was commissioned by the peak organic sector organisation – Organics Aotearoa New Zealand Inc (OANZ).

2 The number of Organic enterprises are growing rapidly in New Zealand

In 2012 there were 1,221 licensees and 1,765 licensed certified organic operations in New Zealand – an increase of 6.6% and 24.6% respectively since 2009 and a 42% and 46% increase since 2007.

3 Organic land area is growing in New Zealand

From 2007 to 2012 the total land area under certification has increased by 67% (13.4% per annum). In the ten years from 2002 to 2012 the total land area under certification has increased by 128% (12.8% per annum). The total land area under organic certification in 2012 was 106,753 hectares. However, this represents a decline from the 124,463 hectares under certification in 2009.

4 Organic vineyards/horticulture are growing steadily in New Zealand

By 2012 there were over 100 vineyards growing grapes organically, representing 7.6% of all grapevines. The growers' association, Organic Winegrowers New Zealand, has declared a goal of raising that figure to 20% by the year 2020. Organic grapes are the fastest growing section of organic horticulture, which saw a total increase in land area (including grapes) of 37% between 2009 and 2012, to 11,188 ha.

5 Organic livestock production is growing in value in New Zealand

The land area under organic livestock production was 92,522 ha in 2012 – a 14.8% decline since 2009. However, this appears to have been due to the loss of a few less productive properties, as the value of dairy, meat and wool has increased over this period.

6 Organic exports from New Zealand are growing in value

- **Organic product exports** were between $215 and $225m in value in 2012 – approximately a 25% increase since 2009.

- **Fresh fruit and vegetables** are still the most important product category by value, accounting for more than $96m (45%) of total exports. (However this is a decrease in their proportional contribution to New Zealand organic exports, from 50% in 2009 and 73% in 2007.)
- **Dairy products** continue to be the second largest export category. The value of organic dairy exports has grown 33% since 2009.
- **Processed foods and ingredients** have grown 45% since 2009. The processed food and ingredients category now includes the largest number of export market participants of any category of this study.
- **Organic beverages, wine and beer** have grown 70% in value since 2009.
- **Meat and wool** have grown in export value by 11% since 2009, with a number of new participants entering this field.
- **Organic honey exports** have experienced a slight reduction in value since 2009.
- The value of exports in the 'other' category has grown by 144% by value since 2009.

7 Organic export markets are expanding

Europe, North America and Australia continue to be the sector's primary export destinations, together comprising 70% of all exports. However there has been significant growth in the export value to Asia with exports to Korea rising from 8% to 11% of total exports, while those to China increased from less than 1% in 2009 to 2.6% in 2012. Exports to other Asian countries, apart from Japan, doubled in value to $12.5m – 6% of total organic exports.

8 The domestic market for organics is growing

Estimates for the value of the domestic market for certified organic products range from $126m-$133m. Sales in 2012 of non-fresh organic products in supermarkets increased by 26.8% over 2009 figures, with a 7.5% increase from 2011, while sales of organic products in speciality retail shops were worth approximately $25.5m – almost twice as much as what they were worth just three years previously.

9 The total value of organics is growing

The total value of the organic sector in New Zealand is estimated to be between $340-$360 million. This figure is based on the combined value of exports of organic products from New Zealand and the retail sales of organic products within New Zealand. The value of the organic sector in New Zealand has grown about 25% since 2009.

10 The global appetite for organics is growing

The global market for organic food was estimated at $US59b in 2010 – a growth of 8% from 2009. In 2000 it was estimated at being US$17.9b. In the USA the sector grew at 7.7% in 2012 to a value of over $US28.6b, although in some other places (e.g. the UK) supermarket sales of

organic food have dropped slightly. This has been partially attributed to the effects of the global recession on those markets.

11 The organic global land area is growing

There are 37m ha of organically certified land globally (0.9% of the total) with another 43m ha of organic land principally certified for wild collection. The area of organic agricultural land has trebled since 1999.

12 Consumer take-up of non-food organic products is growing

Colmar Brunton's 'Better Business' annual survey of New Zealanders' attitudes and behaviours around sustainability shows a mainstreaming of environmental and social concerns. This is a reflection of what is happening in other parts of the world, as growing numbers of people become more aware of what goes into their body and onto their skin, especially when considering infants and young children. The New Zealand organic sector is set to benefit from these trends. Purchase of organic products has grown beyond food and drink to include personal care products and even pet food. That said, price and accessibility are key barriers for many consumers. Purchasing can be limited to a set of particular products or considered a bit of a luxury that is infrequent and occasion-based. Qualitative research undertaken to explore general public impressions of 'organics' also highlights a lack of understanding of organics, and what is for some people a sense of distance driven by impressions of organics being for the well-off or for a 'select club' of initiates who are in the know.

1.0 INTRODUCTION

This 2012 New Zealand Organic Sector Report is one of a series of reports typically produced every 2-3 years that aims to quantify and describe the development of the New Zealand organic sector with the first one in 1996. The reports were originally commissioned by the Organic Product Exporters of New Zealand (OPENZ). 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 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 on 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 of 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 was undertaken between July and October 2012 and 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. A case study on the growth of organic wine production provides a contrast to an analysis of some of the issues constraining the development of the organic pastoral sector. A case study on the establishment of a Māori organic verification scheme and the one on the development of 'grass roots' organic production through community gardens provide some insights into the cultural and social benefits associated with organic production. In addition, initial exploratory qualitative research was undertaken to understand some of the consumer perspectives impacting the organic sector, as a foundation for future investigation.

This report details the continued growth of the organic sector – in both the export and domestic markets. In some sectors the organic production area has declined slightly; however there has also been rapid growth in other sectors such as with grape production. Though the OANZ target of $500m has not been achieved yet, the New Zealand organic sector is well on the way to reaching this target in the next few years.

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 first phase of rapid growth in organics in New Zealand 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 elaborated in close relationship to the wider evolution of IFOAM[3] standards at an international level. The sector also was subject to strategic interventions by various government agencies, with a Joint Action Group around organics being formed in 1994 – which resulted in the formation of the Organic Products Exporters Group (OPEG) and later strategic 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 MAF (now 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 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 MAF (now 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 that was more specifically tailored to suit smaller, domestic market participants. This was later to prove a world leading initiative now known internationally as ‘participatory guarantee systems’.

[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

Censuses undertaken through the last ten years have shown continued rapid growth in organic export products as well as growth in the domestic market for organic products. Prior studies of the organic sector demonstrated the multiple areas in which rapid growth in organics 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 $120-130m with exports being dominated by horticultural exports. The 2010 report found that by 2009 exports had grown to $170-180m which was 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. This 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 have had variable results since the last report in 2009. This is partially in response to the global recession – but also the growth in some new markets for organic products. The most authoritative resource reporting these trends is the annual 'World of Organic Agriculture'[4] that is published by the International Federation of Organic Agriculture Movements (IFOAM) and the Research Institute of Organic Agriculture (FiBL) and includes information on 160 individual countries as well as information sourced from international organisations such as the United Nations International Trade Centre (UNITC) and the Food and Agriculture Organisation (FAO). Some information from the 2012 report:

Organic market –

- In 2010 the global market for organic food was estimated at $US59 billion – a growth of 8% from 2009. In 2000 the global market for organic food was estimated at US$17.9 billion.

[4] Willer, Helga and Lukas Kilcher (Eds.) (2012) The World of Organic Agriculture. Statistics and Emerging Trends 2012. FiBL-IFOAM Report. Research Institute of Organic Agriculture (FiBL), Frick, and International Federation of Organic Agriculture Movements (IFOAM), Bonn – www.organic-world.net/yearbook-2012.html

- The main regions of demand for organic products are North America (2010 US$28.6 billion) and Europe (2010 US$28b).
- In Europe 70% of organic sales occurred in France, the UK and Italy. The highest market share for organic sales is in Denmark with organic products comprising over 7% of all food and drink sales.

Organic Production –

- In 2010 there were 37m ha of organic agricultural land globally (0.9% of total agricultural land) with the largest areas of organically managed agricultural land being in Australia (12m ha), Europe (10m ha) and Latin America (8.4m ha). This represented a slight decrease (50,000 ha) from 2009 – but it still reflects a trebling of the area in organic land since 1999.
- In addition to organic agricultural land there are 43m ha of organic land area certified principally for wild collection.
- The countries with the most organic agricultural land are Australia (12m ha), Argentina (4.2m ha) and the United States (1.9m ha).
- The highest shares of organic agricultural land are in the Falkland Islands (35.9%), Liechtenstein (27.3%) and Austria (19.7%).
- There were 1.6m organic producers with approximately 80% in developing countries. Countries with the highest numbers of producers are India, Uganda and Mexico.

In the USA the Organic Trade Association (OTA) 2011 Organic Industry Survey[5] reported that the organic sector grew at 7.7% in 2010 to a value of over US$28.6 billion – while the total food sales grew at only 0.6%. Organic fruit and vegetables made up 39.7% of all organic sales and grew 11.8% between 2009 and 2010 while organic dairy was the second largest category and grew by 9% over this period for a value of US$3.9 billion. Other OTA research[6] reported that 78% of US families say that they purchase organic food with the strongest motivator for buying reported as the belief that organic products were healthier. A 2013 USA Price Waterhouse Cooper report[7] included the observation that organic lifestyles are not a passing trend and predicted that the trend will grow exponentially in the coming years.

In the UK the Soil Association reported[8] that sales of organic products fell by 3.7% in 2011 to £1.67 billion with 71.4% of sales through supermarkets. The report suggest that the decline was a result of a combination of the economic downturn affecting consumer spending, cuts by retailers in the range and shelf space for organic products and limited activity with supermarket own-label organic brands. There were some areas of growth including sales of organic lamb (up 16%) and organic wool (3%). There was also growth in organic product sales through box schemes, home delivery and mail order channels as well as in the restaurant and catering sector.

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[5] www.ota.com/pics/documents/2011OrganicIndustrySurvey.pdf
[6] www.organicnewsroom.com/2011/11/seventyeight_percent_of_us_fam.html
[7] www.pwc.com/en_US/us/advisory/customer-impact/assets/pwc-experience-radar-us-grocery-industry.pdf - page 19.
[8] Soil Association Organic Market Report 2012 – www.soilassociation.org/LinkClick.aspx?fileticket=5QS24GNSZTA=&tabid=116

In Australia the total value of the organic sector was estimated at AU$1.276bn in 2012[9] which includes an estimate of the total farm gate value of certified organic products of AU$300,637,412 coming from 2,117 certified farming operations. Most (92%) of sales were through supermarket based retailing reflecting the mainstreaming of organic sales. The value of organic imports was estimated to be over $220m while exports were estimated at approximately $126m with the main export products being organic beef and dairy products.

In Asia there were 2.8m ha of organic agricultural land in 2010 (IFOAM 2012), which was a 0.6m ha reduction from 2009 – principally a result of reductions in land area in India and China. A factor reported for part of this decrease was the introduction of Bt cotton in India and the contamination of organic areas (and their subsequent loss of certification), as well as the withdrawal of certification support schemes. In China a 2011 UNITC report[10] estimated that there was 2.03m ha of certified organic land in 2009, with total production valued at US$2.4b in 2008 of which US$500m was exported. Organic food imports were estimated at being about US$20m in 2009. Drivers for increased domestic consumption include demand from the foreigners living in China as well as emerging high income local people with a healthy lifestyle who are increasingly concerned about the nutritional value of food and the potential presence of pesticides. The South Korean market for organic food was estimated in 2009 at US$3.1b and has grown at 50% per year over the last 5 years. It is estimated[11] to be worth US$6b by 2020. The most established market for organic food in Asia is Japan, with an estimated[12] market size of US$1.3b, approximately – 1% of the total Japan food market.

EMERGING MARKETS – CHINA AND INDIA – DEMAND FOR NZ ORGANIC PRODUCTS

Lincoln University as part of the ARGOS research project has been conducting research to assess consumer attitudes, knowledge and perceptions towards food in China, India and the UK with a particular emphasis on attitudes to food from New Zealand. The attributes of food reviewed included the basic attributes such as quality and price but also environmental attributes. As part of this consumer attitudes to organic food were explored with some surprising results. Preliminary results show that organic attributes was the lowest rated of all attributes in the UK, with only 16% of respondents seeing it as very important, and two thirds of respondents not thinking of it as important. Whereas in India over half stated organic was very important and over 40% of Chinese respondents the same. This provides a very positive indication for the potential demand for New Zealand organic products in these markets.

Source: Prof Caroline Saunders, AERU, Lincoln University (currently unpublished findings)

[9] Australian Organic Market Report 2012, BFA publication 12/06 – www.bfa.com.au/Portals/0/Organic market report 2012-web.pdf
[10] Portocarrero, E, 2011, 'Organic food products in China: market overview', International Trade Centre, Geneva
[11] USDA GAIN Report Number: KS1114, Korea Organic Product Market Brief Update
[12] Japan Biofach report 2012 – bit.ly/X13QEV

In the Pacific Islands organic agriculture is being strongly promoted through Organic Pasifika[13] as a pathway to support local food security, address health and environmental issues as well as to develop farmer livelihoods and trade. Though organic production is currently relatively small there are a number of initiatives that will significantly boost organic production for both local consumption and trade.

Exploratory qualitative research in New Zealand found a range of views concerning organics, with positive impressions being driven by 'the absence of negatives' such as chemical spraying, and a depth of understanding of the wider set of standards that defines organics. However, an absence of such understanding amongst people who may be generally well disposed to 'organics' can leave them doubtful about the value proposition. The existence of products on supermarket shelves that feature fair trade and animal welfare standards can also provide consumers with some of the component benefits of organic production that may be subsumed and not readily identified as being part of the organic standards.

Organic Certification Trends

In 2010 there were 549 organic certifiers and 84 countries with organic regulations (IFOAM 2012). 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 the Global Organic Market Access[14] programme.
- The development of organic certification harmonisation tools such as the ‘Common Objectives of Organic Standards’ (COROS) tool.
- The recent equivalency agreement between the EU and US organic standards.

New Zealand is well 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 Organic FarmNZ – 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. Where exact data was not available, figures

[13] www.spc.int/lrd/index.php?option=com_content&view=section&layout=blog&id=24&Itemid=562
[14] www.goma-organic.org/

were extrapolated from the 2010 Organic Sector Report. Where used, these estimates represent less than 3% of the total figure in any category.

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.) In previous reports the number of organic certificates was also provided. Additional organic certificates were issued, for example, in cases where an existing operation expanded onto newly certified land. Due to changes in how the certifying agencies manage their licensee records, this figure is no longer available. 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 increased since the last organic sector report in 2009. The aggregated figures from the four certifying agencies show that there are now 1,221 licensees and 1,765 licensed operations.

Since the 2009 sector report, the number of licensees and operations has increased by 6.6% and 24.6% respectively. A faster rate of growth in operations compared to licensees likely indicates that growth in the sector between 2009 and 2012 is attributable more to the success of existing sector participants and the diversification of their activities than to new entrants into the organic sector. Since 2007 the number of licensees has increased 42.0% and the number of operations has increased 46.4%. Table 1 provides a review of the number of licensees and operators from 1997 to 2012.

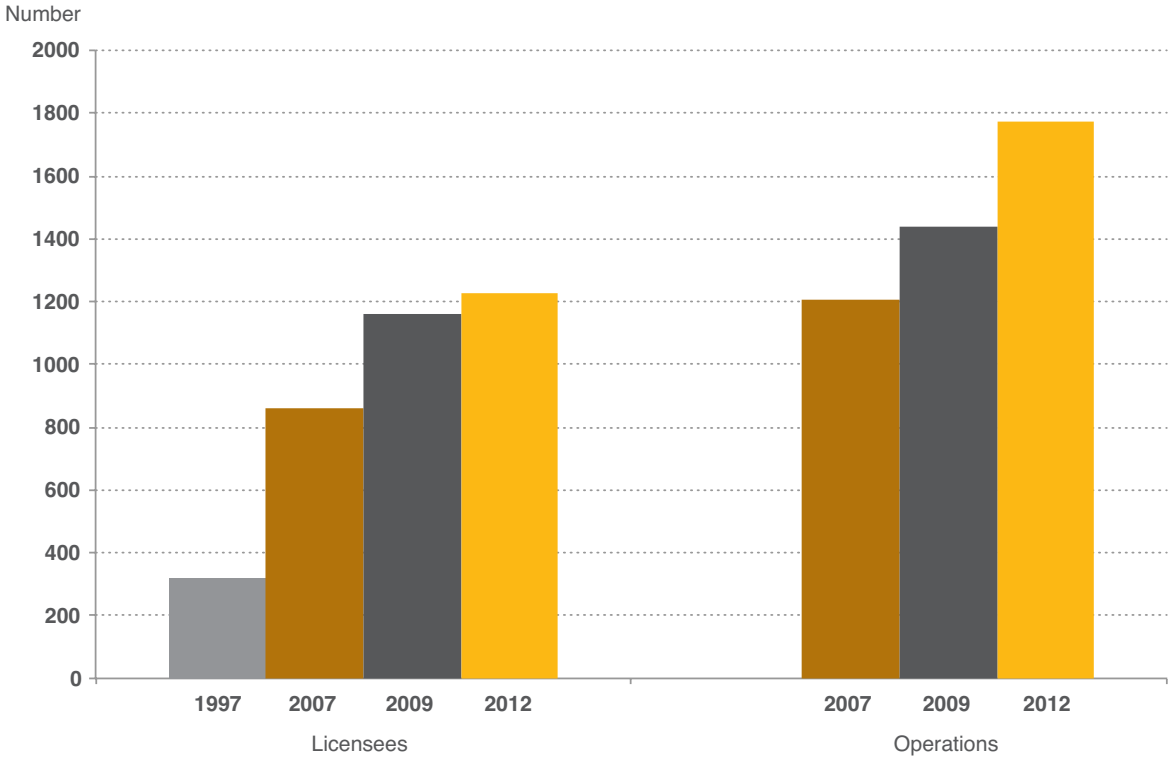
Figure 1 displays the number of licensees and operators identified in the 2007, 2009 and 2012 sector reports.

Table 1: Number of Organic Licensees and Operations, 1997-2012

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

**1997 figure from Saunders et al. (1997)*

Figure 1: Number of Organic Licensees and Operations, 1997-2012



Operations Under Conversion to Organic

In addition to the number of licensees and operations, certifying agencies were asked to provide figures on the number of operations under conversion to organic certification. Table 2 reports the number of organic operations under conversion. The process of 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 2012 on the number of organic operations under conversion are not comparable to figures from previous sector reports. In 2007 and 2009, the status of organic conversions was counted using organic certificates. As noted above, figures on organic certificates are now no longer available. Future sector reports will be able to use 2012 figures as a baseline for comparing the number of operations under conversion.

Table 2: Number of Organic Operations by Status, 2012

	2012
Full	1533
Under Conversion	232
Total	**1765**

Licensed Operations by Type of Activity

For the 2012 sector report, certifying agencies were asked to specify the number of organic operations within specified types of activity. While the total number of licensees and operations provided 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 3 reports the numbers of licensed operation by activity. Using these 2012 figures as a comparative baseline, future reports will be able to track the growth of specific activities within the organic sector. This information would enable an assessment of how the sector has developed and complement analyses of the market value of organic production discussed below.

Table 3: Number of Organic Operations by Activity, 2012

Livestock	168
Dairy	99
Horticulture	720
Apiary	18
Aquaculture	7
Import	12
Processing	274
Retail	18
Transport	12
Wholesale	24
Mixed/Other	413
Total	**1765**

While these figures may be indicative of the frequency of activity types within the New Zealand organic sector, the large number of 'mixed/other' operations leaves this measure requiring further research for an accurate understanding. The prevalence of mixed/other operations in certifier databases however does reflect the diversity present in organic production systems. While a number of mixed operations incorporate production and processing within a single operation, most operations within the 'mixed' category include some combination horticulture, livestock and apiary production. Depending on the degree of specification within certifier licensee databases, it may be possible within future sector reports to further refine these categories of activity (e.g. separating viticulture and horticulture) and to disaggregate the 'mixed/other' category into more precise categories of mixed activity operation.

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 or pastoral production.

Growth in the land area under organic certification between 1997 and 2009 occurred primarily within the category of livestock production. This is due both to the spatially extensive nature of pastoral agriculture and substantial growth in the number of organic livestock operations during this period. The use of 'livestock' and 'horticulture' as categories reporting land area, rather than more specific activity types, is due to data aggregation within certifier databases. This prevents further distinction between land uses. Additionally, certifiers' records often refer to a mix of products within a single parcel that prevents clear attribution of land area to activity.

Table 4 reports land area under certification by activity from 1997 to 2012.

Table 4: Land Area under Organic Certification by Activity, 1997-2012 and Growth per annum Between Reports

	1997	2002	2007	2009	2012
Land area – Livestock (ha)	6,210	39,564	52,070	108,586	92,522
Land area – Horticulture (ha)	4,945	7,322	5,045	8,175	11,188
Land area – Mixed/Other (ha)	805	-	6,768	7,702	3,043
Total	**11,960**	**46,886**	**63,883**	**124,463**	**106,753**

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

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

The total land area under organic certification in 2012 was 106,753 hectares. This represents a decline from the 124,463 hectares under certification in 2009. 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%. While the land area under certification for horticultural production grew 37% since 2009, land area for certified livestock production declined 15% and land area for mixed/other production declined 39% (though this may reflect land shifting from mixed/other to other categories since 2009). The decline that occurred in the pastoral sector and some of the issues relating this are reviewed in section 4.3 Organic Pastoral Sector Review. In the five years from 2007 to 2012 the total land area under certification has increased by 67% (13.4% per annum). In the ten years from 2002 to 2012 the total land area under certification has increased by 128% (12.8% per annum).

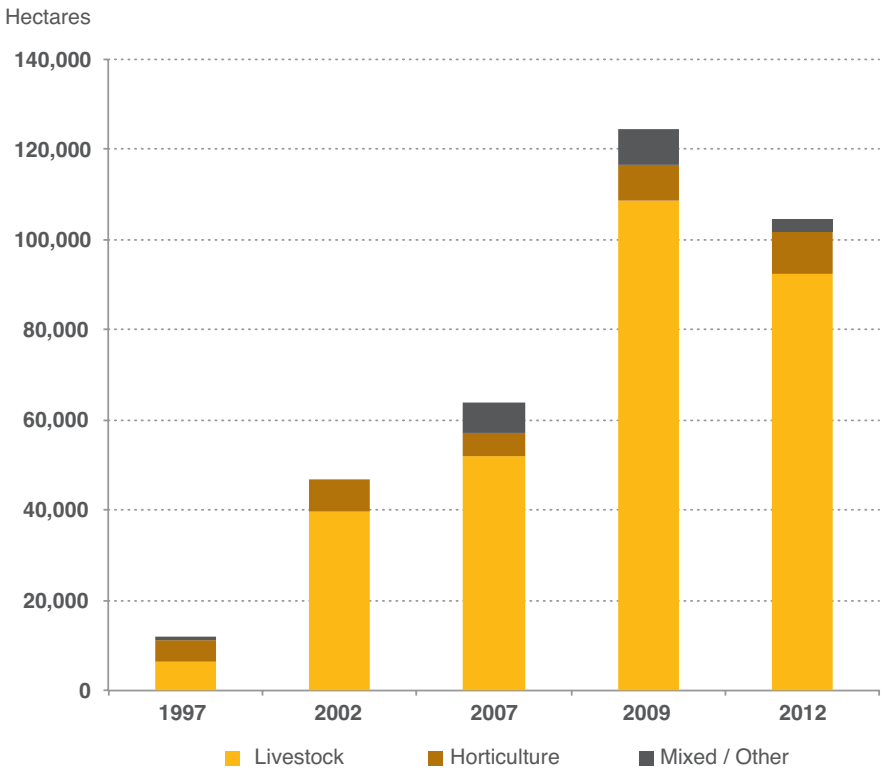
The land area dedicated to organic livestock production in 2012 was 92,522 hectares. For figures on land area under certification, the livestock category includes a range of farm types including dairy, lowland sheep and beef and high country sheep. The land area dedicated to livestock production

between 2009 and 2012 declined 14.8% (with a margin of error of ±5%). This decline in land area from 2009 can be contrasted with growth in the value of dairy (+32.5%) and meat and wool (+8.6%) exports between 2009 and 2012. This may indicate that the decline in land area in livestock production is a result of a small number of operations with large land areas exiting organic certification. Land area dedicated to livestock production has increased 77% since 2007 and 134% since 2002.

Organic horticultural production accounted for 11,188 hectares, or 10% of the total land area under certification. This represents an increase of 37% since 2009. Given a reduction in the land area attributable to mixed/other in this same period, some of this increase is likely the product of re-categorisation of some operations within certifier databases. Much of this increase is the result of the growth in organic viticulture production – see section 4.2 of this report for more detail on this.

Figure 2 displays the changes in land area under certification by activity from 1997 to 2012.

Figure 2: Land Area under Organic Operations by Activity, 1997-2012



Approximately 9% of horticultural land and 1% of farmed grassland in New Zealand is under organic certification. The total proportion of New Zealand land under organic certification remains relatively small compared to many other countries. However, it should be noted that comparing land area under organic certification between countries can be problematic given significant differences in both the type of production and the intensity of production in different contexts. Table 5 provides figures on land area under organic certification, land area in agricultural production and the percent of agricultural area under organic certification for New Zealand and ten other countries.

Table 5: Land Area under Organic Certification as a Share of Total Area in Agricultural Production for Selected Countries

Country	Land Area under Organic Certification (ha)	Land Area in Agricultural Production (ha)	Percent of Agricultural Area Under Organic Certification
Australia	12,001,724	409,029,000	2.9%
Italy	1,113,742	12,744,200	8.7%
United Kingdom	699,638	16,130,490	4.3%
Greece	309,823	8,280,000	3.7%
Peru	216,756	21,440,000	1.0%
Romania	182,706	13,753,050	1.3%
Tunisia	175,066	9,789,000	1.8%
Denmark	162,903	2,662,590	6.1%
Lithuania	143,644	2,648,950	5.4%
Hungary	127,605	4,228,580	3.0%
New Zealand	**124,463**	**11,490,000**	**1.1%**
Philippines	79,992	11,950,000	0.7%
Ireland	47,864	4,139,240	1.2%

**data from FiBL "World of Organic Agriculture" 2012.*

Future Growth

A 2012[15] survey undertaken as part of the ARGOS research programme provides some insights into the potential growth of organic production. 5% of those surveyed were currently organic or in conversion, a further 6% of respondents intended to use a certified organic management system, while 16% of respondents indicated a positive intention to use some organic methods in the future.

[15] ARGOS New Zealand Farm Sustainability Survey – www.argos.org.nz/pdf_files/FINAL_ARGOSNational Farm Survey_12_10.pdf

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 Products 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 is comprised of participants in organic production chains from input and service providers and packers and processors to exporters. Census questionnaires were sent to organic exporters and processors by post in September with a second mailing to non-respondents in October with follow-up telephone calls to non-respondents in October and early November. 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 2009 organic sector census.

Of two hundred and thirty-five processors, input and service providers and exporters identified, one hundred and sixteen responded to the questionnaire or follow-up calls. Of these responses twenty reported no certified organic activities for the 2011-2012 financial year. Eleven operators were removed from the census due to returned post or disconnected telephone numbers. After adjusting for the size of the study population for these ineligible operators, the final response rate for the census of exporters and processors was forty-seven percent. 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

A census of specialty organic food stores was conducted in order to develop an understanding of the volume of organic product sales and the characteristics of the products sold through this channel. The census was posted to shops in September. Thirty (36% valid response rate) organic specialty shops returned a completed census. A more accurate insight into the value of organic grocery sales through supermarkets was made possible using data from AC Nielsen on sales of organic grocery products through their Scantrack programme in New Zealand supermarkets. Further insights on the domestic market size were inferred from the export and producers' census as well as a review of trends in relation to the number of farmers' markets.

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 2012 census received a high level of responses and cooperation from market participants and provides an updated figure on the size of the organic export market.

Table 6 provides figures on the size of the organic export market from 1997 to 2012.

Table 6: Size of the Organic Export Market (New Zealand Dollars), 1997-2012

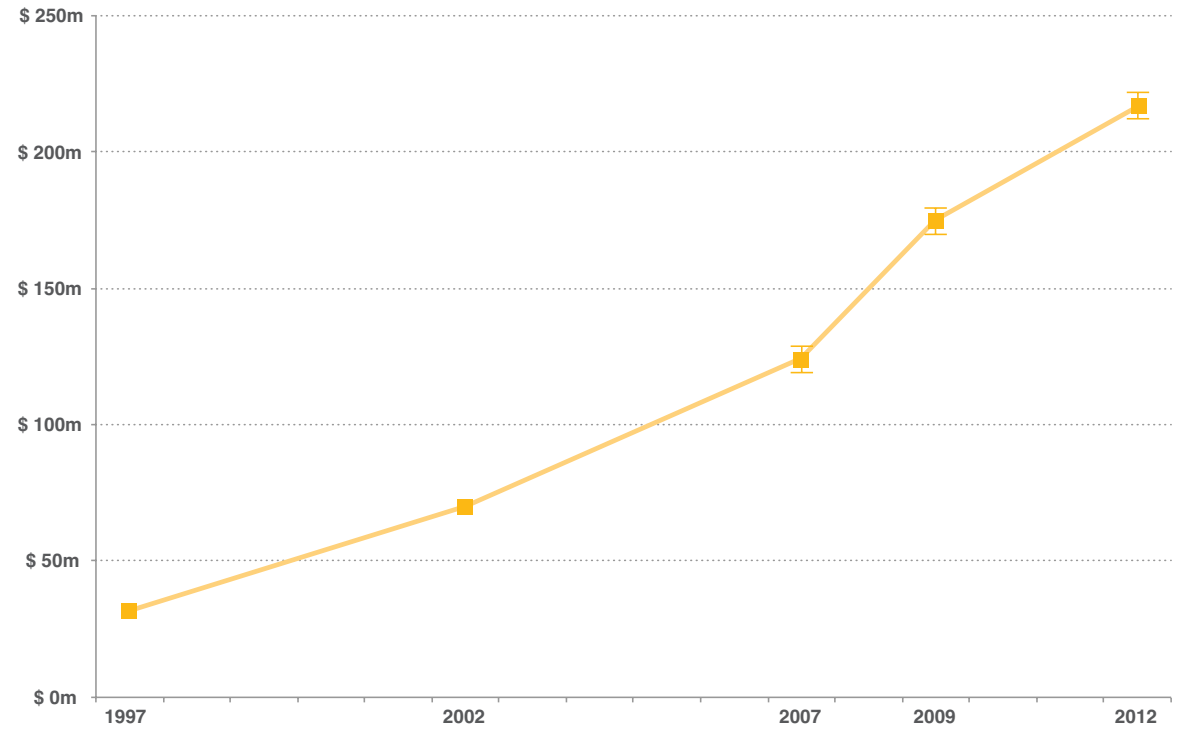
Year	Export Market Value
2012	215-225 million
2009	170-180 million
2007	120-130 million
2002	70 million
1997	32 million

**1997 & 2002 figures from OPENZ Surveys*

The reported export figure for 2012 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 2012, $176 million is comprised of responses to the census questionnaire. An estimate of $39-49 million was made 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 2012.

Figure 3: Size of the Organic Export Market (New Zealand Dollars), 1997-2012



Data collected during the 2012 census indicate a significant 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. 84% of those market players who responded to both the 2009 and 2012 censuses saw growth in their organic exports during the three-year period with the exception of those companies exporting honey.

This expansion comes despite some points of contraction in the organic export market. Some organic exporters active in 2007 and 2009 have reduced their organic exports while others have ceased exporting organic products or are no longer certified organic. The three years since the last sector report have been an uncertain period in the global organics market due to the lingering effects of recessions in key export markets, concerns about the reduced purchasing capacity of overseas consumers and the increased value of the high New Zealand dollar. Despite these concerns the export market has continued to grow – between 2009 and 2012 the organic export market grew approximately twenty-five percent.

Product Categories in the Organic Export Market

The organic export market has been dominated by fresh fruit exports with secondary contributions from dairy, processed foods, beverages, meat and wool and honey. Table 7 provides the value of organic exports by product category from 2007 to 2012. Table 8 provides the relative share of each category in the organic export market.

Table 7: Value of Organic Exports by Product Category (New Zealand Dollars), 2007-2012

Category	2007	2009	2012
Fresh Fruit and Vegetables	$88,360,000	$85,850,000	$96,860,000
Dairy	$6,990,000	$27,850,000	$36,950,000
Processed Foods and Ingredients	$6,120,000	$20,280,000	$29,350,000
Beverages	$3,890,000	$16,960,000	$17,840,000
Wine and Beer			$10,970,000
Meat and Wool	$8,920,000	$9,185,000	$10,120,000
Honey	$3,960,000	$8,320,000	$7,940,000
Other and Uncategorized	$2,170,000	$2,040,000	$4,970,000
Total	**$120,400,000**	**$170,485,000**	**$215,000,000**

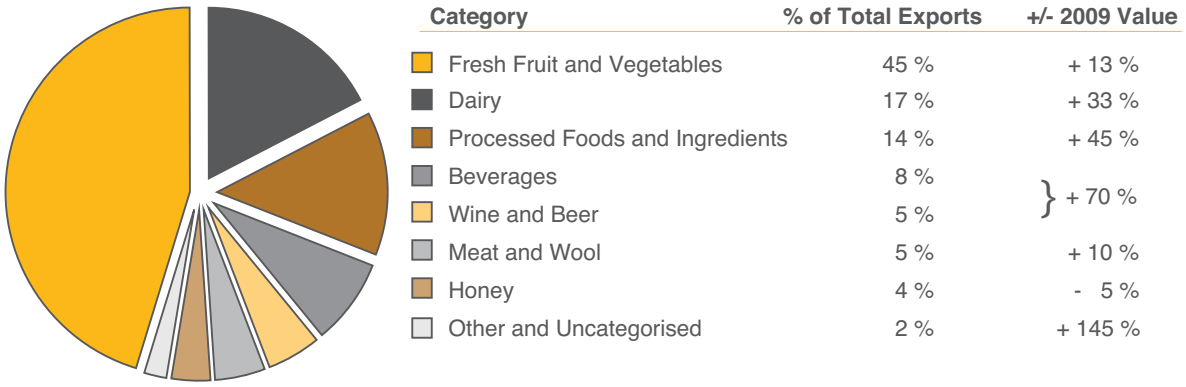
Table 8: Value of Organic Exports by Product Category, Percent, 2002-2012

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

Data collected during the 2012 organic sector census indicate that fresh fruit and vegetables remain the largest single product category, although its value relative to other categories has continued to decrease.

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

Figure 4: Value of Organic Exports by Product Category, 2012



Results from the 2012 census demonstrate growth in almost all product categories since 2009.

- Fresh fruit and vegetables continue to be the highest value category with more than $96 million in exports in 2012. This represents a growth of 13% from 2009. Kiwifruit and apples account for a substantial proportion of organic fresh fruit and vegetable exports.
- Dairy products continue to be the second largest export category. The value of organic dairy exports has grown 33% since 2009.
- Processed foods and ingredients have grown 45% since 2009. The processed food and ingredients category now includes the largest number of export market participants of any category.

- The beverages category used in the 2007 and 2009 censuses has been divided into two categories: beverages and wine and beer. The beverages category is now defined as all non-alcoholic, non-dairy beverages, and is characterised primarily by fruit juices. The combined value of the beverages and wine and beer category has grown 70% since 2009.
- Figures for the wine and beer category suffered from a disproportionate level of non-response to the census. Organic Winegrowers New Zealand suggest that 7.6% of land area under vines is certified or under conversion to organic. Assuming that export value is directly correlated to land area in viticulture would yield an estimate of organic wine exports of $44m.
- The meat and wool category experienced growth in export value of 11% since 2009. This category and is marked by the entrance of a number of new market participants.
- Honey experienced a slight reduction in export value (~$380,000) since 2009. 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.
- The value of other organic exports, including seafood, non-edible seeds, cosmetics and cleaning and treatment products grew 144% from 2009. 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. The organic honey and organic fresh fruit and vegetables categories have the largest proportion of organic export value to total export value. Comparison of processed foods and ingredients and uncategorized exports is not provided due to potential incompatibility between census categories and export categories available from Statistics New Zealand.

Table 9 provides figures for organic export value categories as a percentage of total exports.

Table 9: Value of Organic Exports by Product Category, Percent, 2002-2012

	Organic Export Value	Total Export Value	Export Value % Organic
Fresh Fruit and Vegetables	$96,860,000	$1,996,246,000	4.9%
Dairy	$36,950,000	$12,700,000,000	0.3%
Beverages	$17,840,000	$1,430,541,000	1.2%
Wine and Beer	$10,970,000	$1,177,304,000	0.9%
Meat and Wool	$10,120,000	$6,440,698,000	0.2%
Honey	$7,940,000	$120,000,000	6.6%

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 2002-2012. The first evaluation of the organic export market in 2002 revealed that Europe and Japan constituted two-thirds of total market value. The 2007 and 2009 sector reports identified the growth of exports to North American and Australia, as well as expansion in a number of markets in Asia.

Table 10 provides figures on the share of market value for export destinations from 2002 to 2012.

Table 10: Value of Organic Exports by Destination, 2002-2012

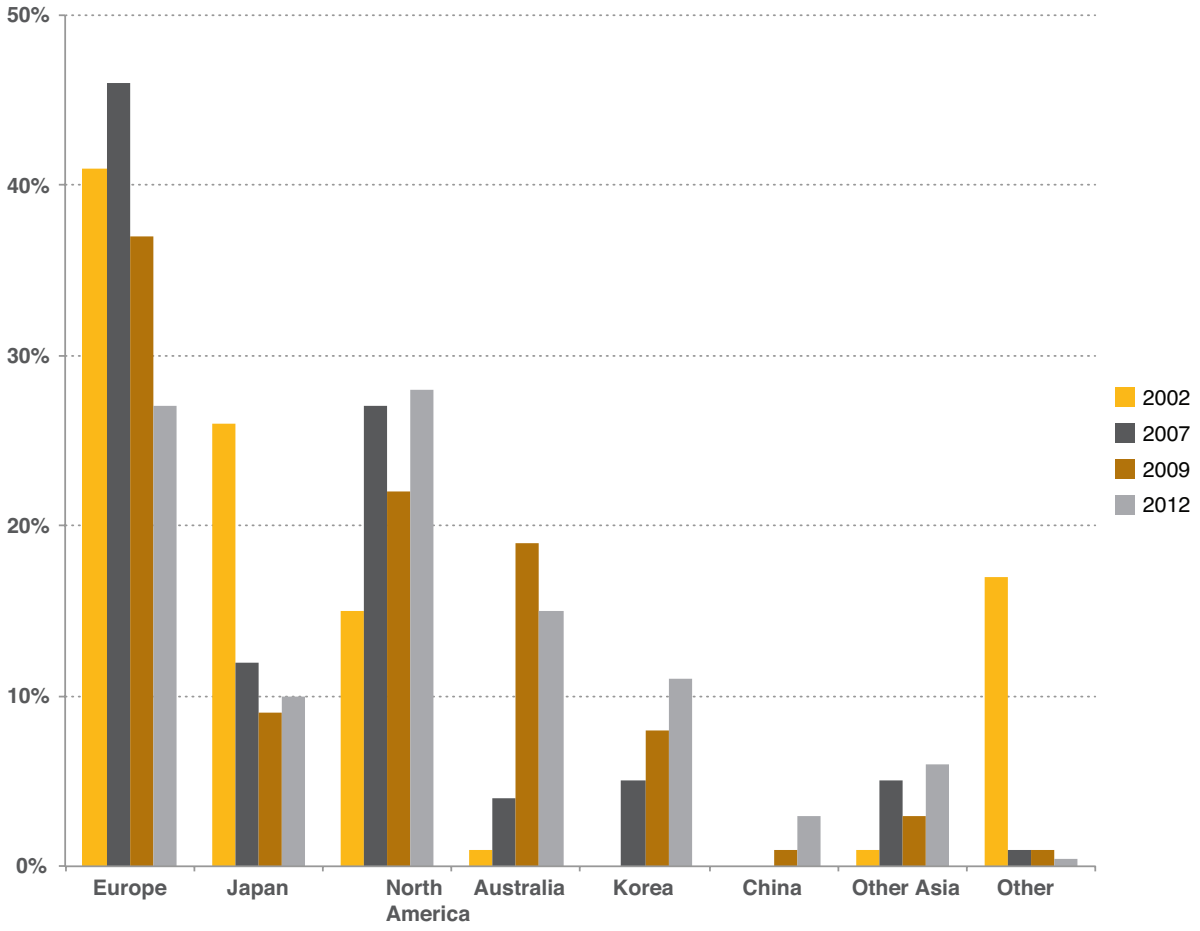
Export Destination	2002	2007	2009	2012
North America	15%	27%	22%	28%
Europe	41%	46%	37%	27%
Australia	1%	4%	19%	15%
Japan	26%	12%	9%	10%
Korea	-	5%	8%	11%
China	-	-	1%	3%
Other Asia	1%	5%	3%	6%
Other	17%	1%	1%	0%
Total	**100%**	**100%**	**100%**	**100%**

Europe, North America and Australia continue to be the sector's primary export destinations, together comprising 70% of all exports. North America and Europe are effectively tied as the largest export destination, separated by less than $3m in exports. While Japan, Korea, China and other Asian countries constitute 30% of exports, they are presented separately as they do not constitute a common economic market in the same manner as North American and Europe.

Data from the 2012 census shows significant growth in export destination value has occurred in Asia. Exports to Korea rose from 8% to 11% of total exports, and represent a value of ~$23 million New Zealand dollars. Exports to China grew from less than 1% of exports in 2009 to 2.6% of exports in 2012, and exports to other Asian countries (notably Taiwan, Singapore, the Philippines and Malaysia) doubled from 3% to 6% of total exports and are now valued at ~$12.5 million.

Figure 5 shows the change in the value of export destinations from 2002 to 2012.

Figure 5: Value of Organic Exports by Destination, 2002-2012



Organic Export Statistics from the Official Organic Assurance Programme

Statistics on the volume and value of exports are also 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 2012 Annual Report[16] included the following information:

- In 2011/12 there were 936 operators registered with MPI recognised third party agencies to produce organic products for export under the OOAP. This was a 0.4% increase from 2010/11.
- There were 75 operators registered with MPI as exporters – a 2% increase from 2010/11.
- See Appendix 1 for tables detailing trends in the volume of exports to markets covered by the OOAP.

[16] www.foodsafety.govt.nz/industry/sectors/organics/

Organic Production for the Domestic Market

In addition to their exports, organic processors and input and service providers were asked to provide data on their sales within New Zealand. For 2012, this totalled $68,700,000. These figures are directly comparable to export values and should be taken as an indication of domestic production value rather than final retail sales value. These figures do not include direct-to-consumer sales, organic food imports and small market operators such as farmers markets.

Table 11 shows the value of product categories of domestic production and the relative share of each category in total production for the domestic market.

Table 11: Value of Organic Production for the Domestic Market by Category, 2009-2012

Category	2009		2012	
Fresh Fruit and Vegetables	$2,344,888	4%	$4,070,000	6%
Dairy	$13,915,922	23%	$15,650,000	23%
Processed Foods and Ingredients	$17,611,731	29%	$32,620,000	47%
Beverages	$17,610,352	29%	$2,760,000	4%
Wine and Beer			$6,160,000	9%
Meat and Wool	$2,199,273	4%	$2,410,000	4%
Honey	$844,337	1%	$710,000	1%
Other and Uncategorized	$6,680,226	11%	$4,320,000	6%
Total	**$61,200,000**	**100%**	**$68,700,000**	**100%**

Results from the 2012 census show the persistence of significant differences in the relative importance of product categories for the New Zealand market and the export market. Processed foods and dairy products are major product categories in the domestic market, while fresh fruit and vegetables comprise a small proportion of their sales compared to the export market. This reflects the larger scale and export focus of the fresh fruit sector while exports are comparatively less important for the processed food sector. In relation to dairy – the organic production is still very small compared with the total value of dairy exports and it looks like a large amount of the existing production is used to supply the domestic market. The large proportion of production classified as “other” represents an agglomeration of niche operations that do not comprise major export activities. As is the case with export values, more specific reporting of these activities is not possible given the requirements of confidentiality for individual respondents. Processed foods and fresh fruit and vegetables both demonstrated significant growth since 2009. The production value of organic fresh fruit and vegetables increased 74% and the production value of processed foods grew 85%.

The Organic Domestic Market

Analysis of the organic domestic market was made though a census of organic specialty shops, reference to the AC Nielsen Scantrack programme results and a review of trends in farmers markets.

The census of organic specialty shops was conducted in 2012, repeating the methodology and questionnaire used in 2007 and 2009. The similarity of response rates between the 2007, 2009 and 2012 studies (see above) allows comparisons to be made about the growth of this important market channel across to preceding five year period. 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 2007 and 2009 censuses. The total value of organic sales at specialty shops for 2012 was approximately $25.5 million, or 98% higher than sales in 2009. Since the last sector census several established specialty retailers have significantly expanded their operations or the value of their sales of organic products.

The AC Nielsen Scantrack programme recorded that organic sales through supermarkets was worth ~$67.5 million in 2012 and ~$62.8 million in 2011. This figure does not include sales of fresh fruit, vegetables or meat. The 2012 figure represents an increase of 7.5% from 2011 and an increase of 26.8% from 2009.

Figure and Table 12 show the growth of sales value at specialty shops and supermarkets from 2007 to 2012.

Figure 6: Value of Organic Sales at Specialty Shops and Supermarkets, 2007-2012

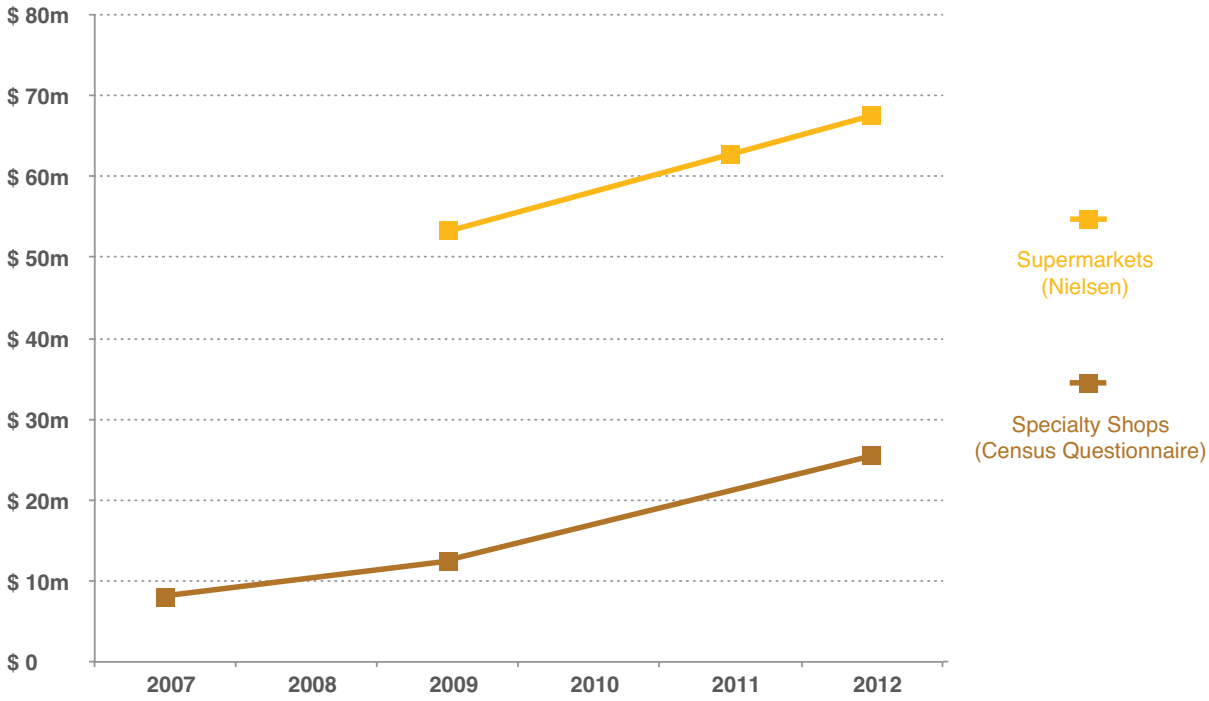


Table 12: Value of Organic Sales at Specialty Shops and Supermarkets, 2007-2012

	2007	2009	2011	2012
Sales via Supermarkets	-	$53,300,000	$62,841,650	$67,576,700
Sales via Specialty Shops	$8,574,889	$12,903,480	-	$25,508,000

Product Categories in the Organic Domestic Market

The relative share of total sales of organic products at specialty shops exhibits little change from 2009. 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 13: Product Categories of Organic Sales at Specialty Shops, 2007-2012

	2007	2009	2012
Processed Foods	-	38%	34%
Fresh Fruit and Vegetables	-	26%	27%
Meat	-	12%	13%
Dairy	-	9%	10%
Beverages	-	4%	2%
Cosmetics	-	5%	7%
Other	-	6%	7%

In relation to the domestic market an insight into the range of organic products being sold in supermarkets is provided in the 1,516 organic products that Nielsen tracks to quantify the total value of organic sales. This includes 132 types of organic baby food products, 82 types of organic bread, 107 organic coffee products, 61 types of organic pasta and 41 types of organic ice cream. The Nielsen scan track data does not however include the value of organic fresh fruit, vegetables or meat.

Product Characteristics in the Organic Domestic Market

The product characteristics of organic products sold at specialty shops remained relatively stable from 2009. The percentage of sales transactions that involve an organic product based on the estimates of census respondents was 67%. Respondents indicated a wide range of responses that likely reflects the diversity in the orientation and mission of specialty shops and their stock of non-organic products.

Figures on the source of organic products (by total sales value) for 2012 are broadly comparable to figures from previous years. Sales figures indicate a slight increase of imported products at the expense of domestic products since 2009, though both figures are comparable to the five-year average.

Table 14: Characteristics of Organic Sales at Specialty Shops, 2007-2012

	2007	2009	2012
Percent of sales that involve organic products	72%	68%	67%
Source of Organic Products			
Local	8%	17%	18%
Domestic, but not local	50%	65%	56%
Imported	42%	18%	26%
Type of Preparation of Organic Products			
Fresh	34%	45%	39%
Processed or manufactured	66%	55%	61%

Farmers' Markets in New Zealand

As of 2012 there are more than 40 farmers' markets operating throughout New Zealand. Farmers' markets are an important site for the sale of organic foods within the domestic market. Farmers' markets also provide a direct sales channel of organic and non-organic foods with lower barriers to entry and higher margins for producers and growers. The popularity of farmers' markets with the public is due to a variety of related factors, including popular demand for fresh, local produce, distrust of supermarket power, concern over industrialised food production, desire to help local producers and rural town regeneration and nostalgia (Cameron and de Vries, 2006). Many of these same factors are likely to be driving the growth of organic specialty retailing.

Given the diffuse structure of New Zealand farmers' markets, it is not possible to provide an estimate on the value of organic sales at farmers' markets. Farmers' Markets NZ Inc., the membership organisation of New Zealand farmers' markets 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. While obtaining figures on the value of organic sales at farmers' markets is possible, it would require a survey or census of participants at a range of markets throughout New Zealand. Given the diversity and scale of many farmers' market operations, obtaining such figures would also pose challenges around personal confidentiality and the robust estimation of aggregate totals. It should be noted that, unlike many countries, the labelling of organic products in New Zealand is not regulated which creates additional confusion.

Trends in the Domestic Market for Organics

Based on data from organic sales in supermarkets from the AC Nielsen Scantrack programme, the census of specialty shops and domestic production data from the census of processors and exports, it is possible to develop an estimate of the total size of the domestic market for organics. The reported value of organic sales at supermarkets and specialty shops is approximately $93m excluding sales of produce and meat at supermarkets (which are not reported in the Nielsen Scantrack programme.) An estimate of the value of organic produce and organic meat at supermarkets can be derived through the combination of two different estimation procedures.

First, for organic products other than produce and meat, supermarkets account for around 80% of sales. Based on the known value of approximately $10m of retail sales of organic produce and organic meat at specialty shops, an equivalent distribution of total sales between supermarkets and specialty shops in these categories would yield an estimate of supermarket sales of organic produce and organic meat of approximately $40m. Second, within the supermarket sales channel, around one-third of total sales value is attributable to produce and meat. Based on the known value of approximately $67.5m in organic sales (excluding produce and meat) at supermarkets, factoring an equivalent ratio in organic to conventional sales across all product categories suggests an estimate of supermarket sales of organic produce and organic meat of approximately $33m.

The total value of the domestic market for organic products is therefore likely to be between $126m and $133m. This figure represents the sum of three components: sales at specialty shops based on figures from the mailed census questionnaire, the known value of sales at supermarkets excluding produce and meat from AC Nielsen and an estimated value of sales of produce and meat at supermarkets. This figure does not include the value of sales at farmers' markets or other direct sales due to the dearth of data on these channels.

The total value of supermarkets sales totaled $17.4b in 2011.[17] Organic sales across all categories account for around 0.6% of the total value of supermarket sales. Of the total domestic market for organics, approximately 80% of sales, by value, occur through supermarkets. This is similar to organic sales in other markets such as Australia and the United Kingdom.

Value of the Total Organic Market in New Zealand

The total value of the organic sector in New Zealand is estimated to be about $350m. This figure is based on the combined value of exports of certified organic products from New Zealand and the retail sales of certified organic products within New Zealand. The total value of the certified organic sector in New Zealand has grown approximately 25% since 2009.

The process for estimating this figure differs from the estimation of total sector value in the 2007 and 2010 sector reports and is therefore not directly comparable to previous estimates. In the 2007 report figures for actual supermarket sales of organic products were not available and the estimate of domestic market value drew upon a survey of households and their organic purchases.

[17] New Zealand Retailers Association

The estimate of domestic market value in the 2010 report benefited from the availability of figures from the Nielsen ScanTrack programme but did not compare the proportion of domestic sales through specific channels with domestic markets in other countries. Estimates across each of the sector reports contain some uncertainty for both domestic production and export value due to non-response to the census questionnaire.

While estimates for missing data arising from non-responses can narrow the range of this uncertainty, some error in the estimation of export value, domestic production and sales at specialty retail shops is unavoidable. Additionally, the Nielsen ScanTrack programme does not, at present, include fresh produce or meat. The value or organic sales of fresh produce and meat at supermarkets is therefore an estimate, rather than a reflection of actual sales. The accuracy of estimates of the value of the New Zealand organic sector will continue to improve due to more comprehensive tracking of supermarket sales, refinement of census methodologies, improved census response rates and the extension of government assurance programmes.

4.0 CASE STUDIES

The following four case studies have been prepared by sector representatives in consultation with relevant stakeholders to review in more detail some interesting areas of recent development in the organic sector in New Zealand. The first looks at the development of community based organic gardening and the potential this has to contribute to broader social and environmental benefits. It reflects a type of organic production that generally escapes quantification through the census or surveys used for the preparation of this report, but as with organic home gardens is a growing and a significant form of organic production. There are also two case studies on organic sectors – organic grape and wine production which has shown rapid growth in the last few years, while the case study on organic pastoral production highlights some of the issues affecting the development of this sector. Finally there is a review of Hua Parakore, a recently developed Māori organic verification programme. This initiative illustrates the continued evolution of organic programmes to reflect local and cultural conditions and values.

4.1 COMMUNITY-BASED ORGANIC GARDENING – A GROWING TREND

Prepared by Christine Dann freelance researcher, writer and experienced eco-gardener[18]

A changing tradition of growing our own food

New Zealand has a long history of food gardening at home and in communities, but it is one which has seen big changes in recent decades, under pressure from powerful economic and social forces. These have pushed people away from growing their own food – and are pulling them back to it again. Organic community gardens are a prime example of this new trend. How did we get there?

Large gardens were the main source of vegetable foods for pre-colonisation Māori, and these were worked communally. Even after Māori began living in private houses with gardens in the latter half of the nineteenth century this tradition continued in rural areas, especially for important staples like kumara. It declined only with the rapid urbanisation of Māori after World War Two.[19]

With some exceptions (such as gardens associated with intentional communities)[20] community gardening by non-Māori did not begin until the 1990s. Before then there was a strong tradition of vegetable and fruit self-provisioning from private gardens,[21] while fresh produce was readily available from local greengrocers' shops, garden gates and/or itinerant vendors.

Home production appears to have been significant until at least the 1970s, with at least half of all households recorded as growing some of their own vegetable requirements in 1956 and 1971.[22]

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[18] ecogardenernz.blogspot.co.nz/

[19] Leach, Helen (1984) *1000 Years of Gardening in New Zealand*, Wellington: A.H. & A.W. Reed, pp 98-109. Moon, Paul (2005) *A Tohunga's Natural World: Plants, Gardening and Food*, Auckland: David Ling, pp 58-72 Māori urban migration – www.teara.govt.nz/en/maori-pakeha-relations/5

[20] For one such garden founded in 1941 and still flourishing today see www.riversidecafe.co.nz/farm/organicgardens.html

[21] Leach, Helen (1984) *1000 Years of Gardening in New Zealand*, Wellington: A.H. & A.W. Reed, pp 121-130

[22] Sources: *NZ Official Yearbook 1958*, p. 537; *NZ Official Yearbook 1974*, p. 418)

Since then there seems to have been a decline in home production, although as no national home food gardening statistics have been collected since the 1971 census it is not possible to say by how much. There have also been changes in access to purchased vegetables, with itinerant vendors disappearing, local greengrocers' shops being almost totally extinguished by supermarkets during the 1980s and 1990s,[23] and the first farmers' markets appearing at the turn of the 21st century. An important factor driving these changes has been the low price of oil during most of the past four decades, which has meant that raw produce could be imported cheaply, or sent long distances within New Zealand, while consumers could afford to drive many kilometres to do their food shopping.

During the same period urban populations have increased while rural ones have declined. There has also been a decline in formal education in the skills of growing and cooking fresh produce. Domestic skill teaching ('home science') was removed from the core national curriculum and replaced with the labour market-oriented subjects 'Food Technology' and 'Hospitality' in the late 1980s. Home gardening was never a core curriculum subject, and the secondary level horticulture curriculum became more technology and market oriented with the shift to National Certificates of Educational Attainment in 2002.[24] The ability of today's young adults to correctly recognise vegetables, let alone grow them or cook them, may have been severely damaged as a result.[25]

By the early 21st century private gardening had been defined as a recreational rather than a productive activity for official study purposes. In this regard the SPARC 2007-08 survey[26] found that while overall it was second only to walking as a form of recreation, only 28.3% of New Zealanders gardened at least once a week (the absolute minimum needed for food production). The vast majority did their gardening on their own property, with just under 2% connecting with other gardeners via a club or a centre. Recreational gardeners were more likely to be female, of European descent, and aged over 50. Young people, and those of Pacific Island, Asian and Māori descent were poorly represented.

Since that survey was done there appears to have been an increase in group gardening of various kinds. This includes gardens attached to marae, educational institutions, and churches which are gardened by members of the hapu, student body or congregation belonging to that organisation. There has also been an increase in the number of community gardens which are public and neighbourhood-based. Here public means open to anyone regardless of other affiliations, although the land they occupy is not necessarily publicly owned. In both types of garden those involved in the garden community make a decision on what percentage of the garden will gardened by the group, communally, and how much will be allocated to private plots.

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[23] Dann, Christine (2012) *Food@Home*, Christchurch: Canterbury University Press, pp. 72, 114

[24] For what has been examined and how in NCEA Agricultural and Horticultural Science Levels 1, 2 and 3 in recent years see www.nzqa.govt.nz/qualifications-standards/qualifications/ncea/subjects/ag-and-hort-science/levels/

[25] Paloma Migone, 'Too much junk on our plates', reporting on a Weight Watchers survey of 1000 New Zealanders in October 2012, www.stuff.co.nz/life-style/wellbeing/7794172/Too-much-junk-on-our-plates

[26] SPARC (2008) Sport and Recreation Profile: Gardening Findings from the 2007/08 Active New Zealand Survey, www.activenzsurvey.org.nz/Documents/sport- *profiles/Gardening.pdf*

Both types of garden are of interest for the multiple benefits they provide to those directly involved with them, but the public community gardens are of especial interest because of the benefits they can provide not just to those participating in them, but to whole neighbourhoods and even cities. Such benefits (which have been well-studied in the USA and Canada but not yet in New Zealand) include improving local recreational amenity and environmental quality, reducing petty crime, improving social cohesion, and improving affordable access to healthy foods (and healthy exercise).[27] Better understanding of and support for community gardens by municipal authorities need to be part of a New Zealand research and advocacy agenda for public gardening, as discussed below, but first – what information is already available on this relatively new phenomenon?

Christchurch South Community Gardens, 2011

The ecological, social and public health potential of organic community gardens

The gardens and gardeners in Christchurch (and in the rest of New Zealand) are diverse, being located in and drawn from high, medium and low decile areas. Wherever they are located, the gardens exhibit a similar style of design which meets the needs of the gardeners best. This consists of arrangements of small plots or beds which can either be allocated to individual gardeners to work, or designated for group use. Large compost bins and tool sheds are found in every garden, and there is usually a social space or spaces – a gazebo, shed, cottage or other form of shelter, a lawn or patio or a children's play area. Beyond these minimum requirements the extras are up to the gardeners' imaginations and funds. The Waitaki Community Garden in Oamaru, for example, has a large tepee for a social space and woven willow hedges and archways dividing the garden into sections. Glasshouses, potting sheds and worm farms are common, as are barbecues or clay pizza ovens. There may be ponds or tubs for water plants, or other water features. Larger gardens will have fruit trees as well as vegetable beds. Scarecrows, sculptures, carvings, mosaics and other creative works are also frequently found.

[27] Hou, Jeffery, Julie M Johnson, Laura J. Lawson (2009) *Greening Cities, Growing Communities Learning from Seattle's Urban Community Gardens*, Seattle: University of Washington Press

Most community gardens will not look as tidy as the Sustainable Backyard Garden in the Hamilton Gardens,[28] designed and constructed by community volunteers between 1999 and 2001 as a place to demonstrate organic, permaculture and sustainable living principles and practices, and now maintained by the Gardens staff. However, most of them are run on exactly the same organic principles and use the same organic practices. As well as being safer for the gardeners, and producing better quality food, these practices can make a significant difference to the biodiversity of the locality in which the garden is situated, and also to sustainable waste management. In 2007 an experiment at the Christchurch South Community Garden in processing kitchen waste from local households (delivered by the householders in covered buckets) found that – using only one-tenth of the 1,200 square metre garden for composting – 50 tonnes of waste could be processed.[29] This represents a huge saving in civic disposal costs and energy use, as well as creating a great resource (compost) for local use.

The social potential of community gardens may be as great as their ecological potential. The many positive social functions of the community gardens of Seattle have been well-documented[30] and seem to be occurring on a (so far) smaller scale in New Zealand. This includes the use of community gardens for therapy and job training (pioneered by Kelmarna Gardens in Auckland) and as places where those with intellectual and other disabilities can find a supportive and tranquil environment to contribute whatever they can to the community. They are also an excellent way of integrating new migrants into the local community – so much so that one large Christchurch organic garden run by a social services trust has transformed itself from being a mainly commercial to a solely community garden in the past three years.[31]

Community gardens also have an important role to play in providing high quality foods to those who might not otherwise be able to access them or afford them. Although New Zealand research on the public health benefits of community gardens has yet to be done, the Diabetes Project Trust is convinced of its value and its Gardens4Health programme currently provides gardening expertise to over 50 community gardens in Auckland as an important part of its Type II diabetes prevention work.[32] Some of these gardens are run by groups particularly at risk, such as those of Pacific Island and Indian descent.

An organic community garden research agenda – public health, social stability, ecological sustainability

The public health benefits of organic community gardens deserve serious research attention, since in the longer term they may well be the best way to ensure that a majority of the population has affordable access to quality foods in their neighbourhood – as well as some healthy exercise. Studying what is already being achieved with a view to how it could be improved would seem to be very useful work to do. Such research should include not just the physical benefits of the increased

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[28] See hamiltongardens.co.nz/collections/productive-collection/sustainable-backyard
[29] pers. comm., Christine Blance, City South Community Garden manager, 17.6.08
[30] Hou, Jeffery, Julie M Johnson, Laura J. Lawson (2009) *Greening Cities, Growing Communities Learning from Seattle's Urban Community Gardens*, Seattle: University of Washington Press
[31] See www.waioratrust.org.nz/- Health Services – Community Garden
[32] See www.dpt.org.nz/Grdn4health/g4hhistory.html and www.dpt.org.nz/Grdn4health/g4hgardens.html

consumption of nutritious foods from the garden, but also the mental and emotional benefits accruing to the individuals who participate in gardening, and the flow-on effects these have to the community they are based in.

Similarly, the social benefits of community gardens in New Zealand deserve more research. This could include the actual and potential roles of community gardens as education centres, economic incubators, recreational spaces, emergency centres and places for the delivery of support and development programmes for youth, the elderly and new migrants.

Finally, the actual and potential contributions of organic community gardens to urban ecological sustainability need to be studied much more closely. However, given that this work has already been done – to a high standard – in North America, it is certainly not necessary for New Zealand to wait on the collection of New Zealand data before pressing on with growing more community gardens. At this point in time, the main thing that seems to be preventing this from happening is not the lack of evidence of benefits, nor the lack of public desire to garden this way, but rather the slowness of municipalities to embrace and support community gardening as the source of multiple positive solutions to complex urban problems.

This seems to stem from a lack of understanding of the benefits of community gardens. The challenge for those who want to grow this organic sector is to educate the local body decision-makers, and get them to see what many green fingers, gardening together, can do for the city as a whole.

Waitaki Community Gardens, Oamaru, March 2012 (showing tepee, clay oven, and 'fedges' – woven willow hedging.

4.2 ORGANIC GRAPE AND WINE PRODUCTION

Prepared by Rebecca Reider, Organic Winegrowers New Zealand[33]

Vineyards have recently become one of the fastest-increasing areas of New Zealand's organic landscape. The amount of certified organic vineyard land has quadrupled in the last four years – from around 600 hectares in 2008, to over 2500 hectares at vintage 2012 (including those registered in conversion to organic). By 2012, over 100 vineyards were growing grapes organically, representing 7.6% of all grapevines growing in New Zealand. Growers' association Organic Winegrowers New Zealand has declared a goal of raising that figure to 20% by the year 2020.

Growth Patterns

There is no fixed price premium for organic wine, meaning the reasons for the shift are about more than the financial bottom line. Rather, several factors underlie the rise of organic production in New Zealand's vineyards:

- **Industry commitment to sustainability.** New Zealand Winegrowers now requires all vineyards to attain some form of environmental accreditation, whether organic or the industry's own Sustainable Winegrowing system.
- **Passion for quality.** Because good wine is sold on its quality, growers and winemakers are constantly seeking the finest grapes. Many believe that organic practices best express a vineyard's *terroir* – the blend of natural local influences that make each wine unique.
- **Wine industry economics.** Grape prices in New Zealand have fallen in recent years. As has occurred in other primary industries in the past, when conventional commodity prices fall, growers seek new niches, and some turn organic.
- **Appeal of organic practices.** As organic practices become more widely known and understood, they hold more attraction for growers.
- **Industry support for organic production.** Organic Winegrowers New Zealand (OWNZ), a national organisation for producers, is going strong, with 150 members nationwide. Led by a committee of growers, the association organises research, seminars and field days, communications and educational resources to encourage and support organic production. Since 2010, OWNZ and New Zealand Winegrowers (NZW) have worked together closely. Under a memorandum of understanding, NZW provides significant funding and staff support for OWNZ activities to support the "20% by 2020" goal, making the official industry body a national leader among all New Zealand primary production sectors in its commitment to organic growing.

[33] www.organicfocusvineyard.com/about-organic-winegrowers-new-zealand/

In the Vineyard

Organic practices and products have become increasingly accessible for growers. Biologically based sprays to prevent common diseases are widely available. Cover crops of specific flowers have been shown to attract beneficial insects that keep pests at bay. Certified organic soil and foliar nutrition inputs are numerous, and leftover grape pressings provide a good start for vineyards intrepid enough to make their own compost. The range of available undervine cultivation and mowing machinery continues to increase, offering various alternatives to the conventional practice of applying herbicide under the vines.

However, most organic growers say going organic is more about a shift in mindset than simply a substitution of practices. “When I first started to investigate organics I had a conventional approach that was based on substituting conventional products in the programme for organic ones,” says grower Anton Groffen of Matua Valley Wines in Marlborough. “I’ve since found that rather than substitution, it’s a whole shift in approach to management. This shift places a much larger focus on soil and vine health, good viticulture and generally having a good look at what is actually happening in the vineyard and getting to the cause of problems, rather than reacting afterwards.”

The organic wine industry is also notable for its strong embrace of biodynamics; biodynamics has become more widely practiced in organic vineyards than in any other commercial organic production systems in New Zealand. Nine vineyards are certified biodynamic or in process of certification with Demeter, and many more growers incorporate some biodynamic practices, such as using the biodynamic preparations and calendar, and incorporating the biodiversity of other plants and animals into their farming systems. Biodynamic producers Seresin Estate, one of the larger organic wineries in Marlborough, are known not just for their wines but for their olive oils and their ever-increasing range of animals, including chickens, goats, sheep which help leaf-pluck the vines, farmed worms, cows for milk and manure, and even Clydesdale horses to pull the compost tea sprayer in place of a tractor.

Buckwheat and Phacelia flowers planted between vine rows attract beneficial insects, a common practice to strengthen the organic vineyard ecosystem.

In an industry hard hit by crop price woes, growers naturally want to know what it will cost them to make the switch to organic. This, along with other questions raised by those considering organic conversion, is one of the drivers behind the Organic Focus Vineyard project, a current three-year research and demonstration trial organised by Organic Winegrowers New Zealand, funded by the Sustainable Farming Fund and New Zealand Winegrowers.

The focus vineyard project is monitoring representative vineyards in three winegrowing regions as they go through the organic conversion process. The focus vineyard managers document their experiences at field days and online (www.organicfocusvineyard.com). Meanwhile researchers are comparing the organic vineyards with parallel conventional vineyards across a range of variables. Results are still preliminary. However, initial reports from vineyards inside and outside of the project show that it is possible to grow organic grapes for a similar cost to conventional, without sacrificing yields or increasing pest and disease problems.

Growers examine newly organic vines at an Organic Focus Vineyard field day

In the Bottle

Different attitudes toward winemaking exist in the organic community. Some organic growers insist upon using only indigenous yeasts from their own vineyards, for example, as part of the process of crafting a wine reflective of their land's terroir.

Growing organic grapes is one step; making certified organic wine is another, and requires certification of the winery operation in addition to the vineyard. Some wineries do make both organic and non-organic wine, following rigorous procedures to keep the two separate.

Just what can be said on the bottle depends on the market. Limits on allowable chemical agents and on the amount of sulphur used in winemaking exist for various export markets. In the U.S., wine made with sulphur must be labelled "wine from organic grapes" rather than "organic wine." In the EU, under new regulatory criteria adopted in 2012, for the first time wine can now be sold as "organic wine."

Changing Times

When James and Annie Millton started their organic vineyard in Gisborne in 1984, it was a lonely road; they were the only ones doing it in New Zealand. Now they are internationally renowned as

some of the Southern Hemisphere's leading biodynamic wine producers, and James is chair of Organic Winegrowers New Zealand. To celebrate their 25th anniversary of organic growing, the Milltons released a new wine range called Crazy By Nature. Says James: "In 1984 they thought we were crazy. We've just spent the last 28 years proving to everyone that they were right. We are crazy. But now it seems everyone wants to be crazy too, and it's just what this planet needs."

Biodynamic grower, Organic Winegrowers New Zealand chair, and NZ's first certified organic winegrower James Millton.

4.3 ORGANIC PASTORAL SECTOR REVIEW

Prepared by Christine Dann in association with the Organic Dairy and Pastoral Group[34]

A holding pattern in the paddock

Organic exports from the pastoral sector (dairy, meat and wool) are currently just over one fifth of total organic exports. This is in sharp contrast to fresh fruit and vegetables (mainly apples and kiwifruit) which make up almost half of all organic exports. While dairy increased its share of total organic exports slightly between 2009 and 2012 (from 16% to 17%), meat and wool slid backwards, from 6% to 5%. In turn these percentages are almost a reversal of the situation for New Zealand's primary exports as a whole, where in the September year 2011-2012 dairy products were dominant (52% of total agricultural exports by revenue), followed by meat (20%), while all horticultural products were only 13%, and pipfruit and kiwifruit combined were just over 5%.[35]

The gains made in pastoral conversions as a result of the OANZ Advisory Scheme 2007-2009, which targeted pastoral farming, have not been maintained. There has been a slight drop in the number of organic pastoral farmers, and possibly in the number of organic pastoral hectares.

This sector's organic organisation, the Organic Dairy and Pastoral Group (ODPG), which was formed in 2007, currently has 230 members, around 160 of whom are pastoral farmers. Members are spread right across the country, but 90% of the dairy members are in the North Island and the majority of

[34] www.organicpastoral.co.nz/
[35] Figures calculated from the Primary Industries Production and Trade September Quarter 2012, current 21 December 2012, p. 2 www.mpi.govt.nz/news-resources/publications

sheep and beef members are in the South Island. South Island organic dairy producers are producing for domestic sale, rather than export. They include producers with on-farm dairy factories like Retro in Southland and Clearwater in South Canterbury.[36] In the North Island on-farm and retail processing of meat for domestic sale is stronger, with organic meat wholesaler and retailer Harmony Foods winning the 'Glammie' (Golden Lamb) award in 2010 with its product MacKenzie Organic lamb, grown near Cambridge.[37]

All organic dairy exports are currently processed at Fonterra plants in the Waikato. The difficulty in optimising the transport of milk from new organic farms in the lower North Island to the Waikato was the main reason why Fonterra dropped its lower North Island suppliers in 2011, and is not supporting any more conversions there. This rationalisation will probably check the steady and substantial rise of organic dairy exports (which grew in value by 33% between 2009 and 2012), although Fonterra says it is now looking at supporting more organic conversions closer to its processing plants, and making organic cheese for export, as it is more strongly in demand than other organic dairy products at this point in time.

Marketing Challenges and Opportunities

The uneven and disappointing rate of growth in the organic pastoral sector, and the differences in performance between the dairy sector and the meat and wool sector, requires a closer examination of the strength of the market for each type of product, the different ways in which the dairy and meat and wool sectors are organised and the marketing advantages which the dairy sector enjoys as a result.

Over 90% of New Zealand's dairy exports go through Fonterra, which took over the impressive international marketing structures and resources built up over 40 years by the NZ Dairy Board. In 2002 Fonterra began to slowly but systematically develop organic export markets and match them with domestic supply until by 2009 organic dairy exports were worth almost $28,000,000. In 2012 they were worth almost $37 million. Fonterra has a dedicated Global Organic Marketing Manager, and staff to assist with organic dairy conversions.

This is in sharp contrast to meat and wool exporting companies. There are over 200 companies with a meat export registration, many of them (including the two organic ones) very small. None of the four largest export meat companies (Silver Fern Farms, Alliance Group, ANZCO Foods and AFFCO) has an organics division, or senior staff dedicated to marketing organic products and supporting organic conversions, as Fonterra does. In the South Island, Silver Fern Farms, Alliance Group and ANZCO do the bulk of New Zealand's organic export meat processing; in the North Island most of the organic meat produced is for domestic sale.

Five years ago the only export market for organic meat from New Zealand was for prime lamb cuts going to UK supermarkets and there were no organic markets for lesser value cuts, beef, cull cows or sheep. The big exporting meat companies were also finding it difficult to source a consistent quality of organic product with a reliable continuity of supply. In 2009 the company Organic Futures[38] was set

[36] www.retroorganics.co.nz/; http://www.clearwaterorganic.co.nz/
[37] As examples see – www.tekainga.co.nz/; http://www.theorganicfarm.co.nz/
[38] www.organicfutures.co.nz

up by two South Island organic pastoral farmers to address these problems, as well as the low volumes of organic meat going to organic markets, by providing better matching and linking of producers, processors and markets. Working primarily with ANZCO, Silver Fern Farms and Alliance meat companies, it has been able to find genuine organic markets for increasing amounts of organic beef, and for organic cull animals and lesser value cuts. However, Organic Futures estimates that up to one-third of the prime organic meat produced in New Zealand is still going to conventional markets. It is working with ANZCO on developing an organic meat brand for high quality markets in Asia and the Pacific to help try and grow that market, and continues to look for more ways to service its clients and grow the organic meat sector.

Organic wool struggles along with the rest of New Zealand's wool industry at present. Wool represents only 2% of New Zealand's primary exports by revenue, and organic wool is probably less than one percent of that. Markets for coarse wools have been poor for decades and most organic coarse wools are not sold at an organic premium. While there is a diverse international and local premium market for organic fine wool products (which includes knitting yarns, clothing fabric, finished garments, baby wear and toys, blankets, and even breast pads), it is currently very small.

Production practices

Although there has been no increase in the number of organic pastoral farmers in the past three years, there has been an increase in knowledge about best organic pastoral practice. The most successful farms have taken a systematic scientific approach to what needs to be done to farm in a sustainable and profitable way without chemical inputs. Key elements that have to be understood, worked with, and improved include soil biology and chemistry, pasture diversity and nutritional quality, stocking rates and rotations, and flock and herd genetics. Getting all these right leads to high health animals with little or no need for veterinary chemicals. This knowledge has been and is being shared by best practice farmers via papers, articles, and websites, and through field days organised by ODPG members.[39]

Moving on up

Despite the lack of growth in pastoral organics in the past three years, the new chair of the ODPG elected in 2012, Glenn Mead, remains optimistic about the future of organic livestock farming. Glenn is a fourth generation farmer, with 20 years of experience farming in Northland, Waikato, Wairarapa and Otago. His 260 ha sheep and beef farm in South Otago has been certified organic with BioGro since 2007.

Glenn says, “I have given both kinds of farming a fair go, and I am now certain that organics is a better way of farming for the producer. It's also better for consumers, creating a superior quality product. Unfortunately,” he says, “that potential is currently being threatened by unsustainable farming practices, like genetic engineering. These may be highly profitable for large corporations but very

[39] The ODPG's website is www.organicpastoral.org.nz. The systematic and scientific approach to best practice pastoral farming taken by one large farm is covered in the paper 'A comparison of the organic and conventional livestock farming systems of Avalon Farming in West Otago', published in the *Proceedings of the New Zealand Grassland Association 68* and available on line at avalonorganic.co.nz/avalon_farming

damaging to the environment, and also to the economic as well as the ecological viability of New Zealand farms...This is the message I will be trying to get across to other farmers – along with the good news about how rewarding it is to farm organically, and how the ODPG is here to support farmers wanting to make the mindshift towards more sustainable ways of farming."

4.4 HUA PARAKORE– MĀORI ORGANIC VERIFICATION PROGRAMME

Prepared by Moko Morris, Te Waka Kai Ora[40]

Hua Parakore is an indigenous verification and validation system for mahina kai (food and food production) that is initiated and driven by Te Waka Kai Ora, (National Māori Organics Authority of Aotearoa). It is the realisation of a community driven kaupapa Māori research project located at the flaxroots within Te Waka Kai Ora regional areas. Gaining momentum, with communities and businesses who are increasingly aware and committed to a system, which transforms and supports a pathway for growers and producers to tell their kaupapa Māori production story. It is also a development opportunity in the form of indigenous food sovereignty.

Key Māori principles that determined the development of Hua Parakore included:

- Rangatiratanga / Self determination
- Wairua / Spiritual Health
- Whakapapa / connection to the natural world
- Maramatanga / enlightenment
- Te Ao Tūroa / Maintaining natural order

The methodology which informed the development of Hua Parakore integrated community consultation, case studies, focus groups, pilot studies and developmental phases. Guidance from the NZSA 8410.2003, New Zealand Standard for Organic Production – was sought and the Hua Parakore system maps to these standards.

Entering into Hua Parakore involves three stages, usually three years, with workbooks completed and submitted around the time of Matariki.

Te Kakano / Seed:

Open to all members of Te Waka Kai Ora including individuals, whānau, community, marae, kura, kohanga, schools, and other organisations.

Kakano members publically support and promote the aspirations of hua parakore, and receive support and information through resources.

[40] tewakakaiora.wordpress.com/

Tipuranga / The growing seedling:

Members commit to making the transition to a Hua Parakore production system. Producing a healthy product is a process, so both the land and the people are given time and support to go through this transformative process.

Hua Parakore / Pure product:

Formal recognition is bestowed upon land owners and caregivers of land when this is achieved. The use of the Hua Parakore mark is collectively recognised at a formal gathering of community where all present are satisfied Hua Parakore has been achieved.

Producers who currently hold organic certification status are entered at this stage.

A key distinguishing feature of Hua Parakore is that is it informed by locally owned and managed indigenous systems that encourage cultural practice appropriate to the individual, whānau, hapu. The workbooks resonate well with people; one Te Kakano member explains "*they (the workbooks) are an extension of our creation stories, the fundamentals of kaitiakitanga, and so telling our stories especially when including our tamariki, demonstrate to them, that food is best, direct from our gods, our atua, with no interference from other influences, no GE, no chemicals, no pesticides; just straight kai atua."*

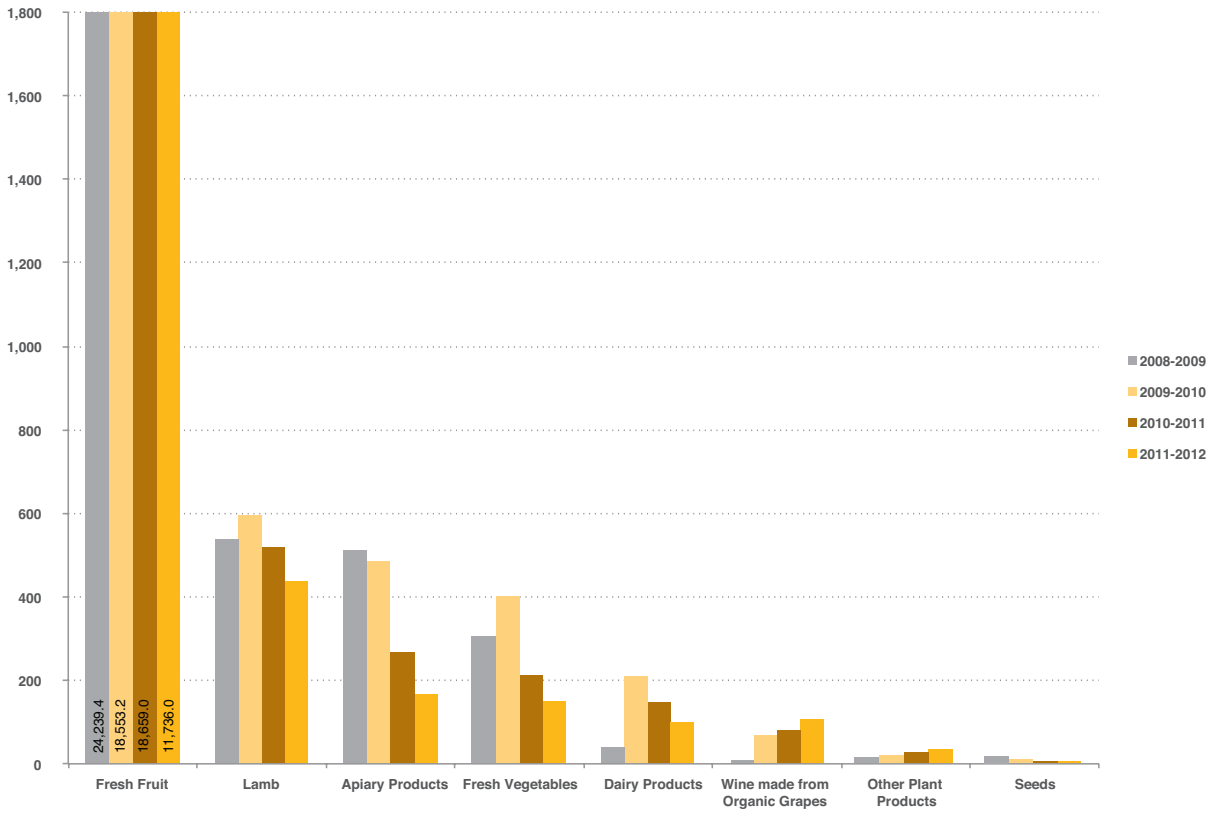
Initial market responses to Hua Parakore are encouraging, one pilot farm reporting, "since obtaining the Hua Parakore certification we have used the mark on our BioFarm yoghurt products whilst in Australia recently; in fact, we obtained distribution in the Australian market on the strength of our Māori organic certification [verification]."

Recent developments include an apiary and pastoral farming resource, which extends the Hua Parakore system, as well as overseas interest, with one Hawaiian farm visiting and signing up to come under the Hua Parakore framework. Much work is needed to continue to support and educate communities about the benefits of the Hua Parakore system, and to encourage not only a tikanga framework, but also one which supports a realistic business future. Retailers, institutions and smaller businesses have signalled their interest to engage and support Hua Parakore growers, by purchasing their products. The future role of Te Waka Kai Ora will be to advance these opportunities in ways which support people, the whenua and the promotion of organics in Aotearoa within a Hua Parakore system, ensuring the tikanga and cultural values are maintained.

APPENDICES

1 OFFICIAL ORGANIC ASSURANCE PROGRAMME TRENDS

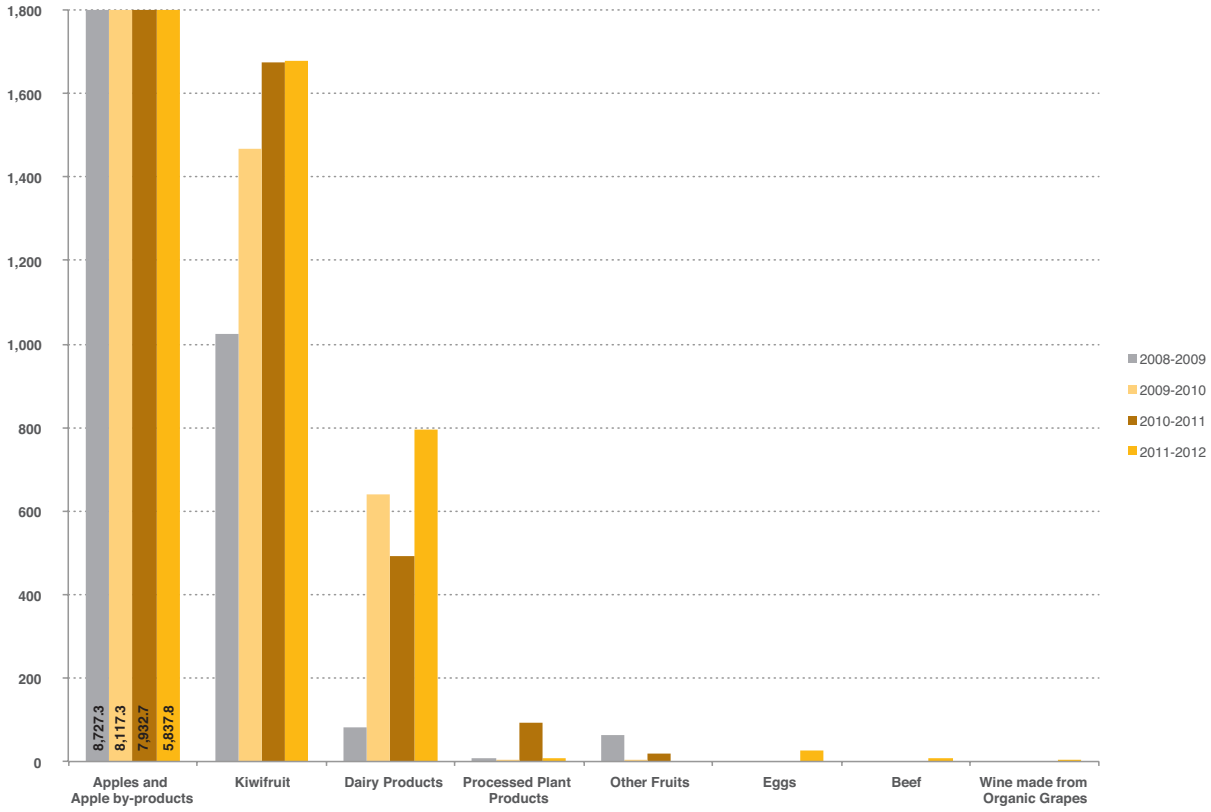
Table 15: Organic Exports to the EU under the MPI OOAP by product group (tonnes) 2008–2012



	Fresh Fruit	Lamb	Apiary Products	Fresh Vegetables	Dairy Products	Wine made from Organic Grapes	Other Plant Products	Seeds
2008-2009	24,239.4	540.6	519.5	307.4	32.8	10.6	17.7	19.1
2009-2010	18,553.2	595.4	493.8	403.6	209.8	72.4	22.8	6.6
2010-2011	18,659.0	523.3	261.0	209.0	170.4	89.0	27.8	3.0
2011-2012	11,736.0	416.3	178.2	151.1	113.0	119.4	31.3	5.1

Source: *MPI OOAP presentation to the Organic Exporters Assn. of NZ , AGM, October 2012.*

Table 16: Organic exports to the US under MPI OOAP by product group (tonnes) 2008–2012



	Apples & Apple by-products	Kiwifruit	Dairy Products	Processed Plant Products	Other Fruits	Eggs	Beef	Wine made from Organic Grapes
2008-2009	8,727.3	1,023.4	83.2	8.9	62.9			
2009-2010	8,117.3	1,469.3	638.5	2.4	0.4			
2010-2011	7,932.7	1,675.1	492.6	94.2	18.4			
2011-2012	5,837.8	1,678.6	793.9	8.2		26.0	8.3	3.5

Source: *MPI OOAP presentation to the Organic Exporters Assn. of NZ, AGM, October 2012*