## FreshFacts

## NEW ZEALAND HORTICULTURE




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Reporting basis: unless stated otherwise, all statistics are for the year ending 30 June 2013 and expressed as $\$ N Z$. Exports are given as free-on-board (fob) values. Imports are given as cost, insurance and freight included (ciff). Historical values have not been adjusted for inflation.
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Cover photograph: Sauvignon blanc grapes

## New Zealand horticulture - sustainable success


#### Abstract

The horticulture industry continues to play a vital role in New Zealand's economic growth. Total horticultural produce value is now approximately $\$ 6.7$ billion and horticultural exports account for 8\% of total merchandise exports.


Crops are increasingly diversified, with significant export values in close to 40 varieties of fruit - including citrus, pipfruit, summerfruit, berryfruit and subtropicals, as well as more than 40 varieties of ornamentals and vegetables grown for export as food, flowers, bulbs and seeds.

Pacific Rim countries are an increasing export focus for New Zealand. In 2013 these markets accounted for more than 71\% of horticultural exports, compared to $59 \%$ in 2000. Asia is a key player in this growing market, taking 32\% of exports, with a particular appetite for NZ kiwifruit.

The success of New Zealand's horticultural export industries has been founded on a keen understanding of market needs and a passion for delivering high quality produce that commands a healthy premium - meeting increasingly stringent phytosanitary and sustainability requirements with products that deliver the taste, flavour, convenience and food safety demanded by discerning consumers worldwide. Plant \& Food Research is proud to support this premium market positioning through a suite of research programmes across the value chain.


This document is available online at www.freshfacts.co.nz

## Exports/imports

Horticultural exports (\$ million, fob)

| Year ended June | $1985{ }^{\text {a }}$ | $1995{ }^{\text {b }}$ | $2005^{\text {b }}$ | $2011^{\text {b }}$ | $2012^{\text {b }}$ | $2013{ }^{\text {b }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fresh fruit |  |  |  |  |  |  |
| - Apples | 108.2 | 343.6 | 387.0 | 363.3 | 341.6 | 475.3 |
| - Kiwifruit | 171.9 | 320.8 | 720.2 | 962.6 | 1,045.7 | 934.0 |
| - Avocados | n/a | n/a | 29.0 | 51.3 | 96.9 | 33.7 |
| - Other fresh fruits | 28.4 | 57.6 | 51.5 | 79.7 | 75.7 | 80.4 |
| Total fresh fruits | 308.5 | 722.0 | 1187.7 | 1456.9 | 1559.9 | 1523.4 |
| Processed fruits |  |  |  |  |  |  |
| - Wine | 3.0 | 42.0 | 432.7 | 1085.4 | 1,171.1 | 1,202.4 |
| - Juices - fruit | 9.6 | 30.5 | 34.5 | 40.0 | 59.2 | 50.5 |
| - Jams | n/a | n/a | 18.1 | 42.7 | 36.5 | 33.8 |
| - Other processed fruits | 40.3 | 44.3 | 49.2 | 79.4 | 84.3 | 77.7 |
| Total processed fruits | 52.9 | 116.8 | 534.5 | 1247.5 | 1351.1 | 1364.4 |
| Fresh vegetables |  |  |  |  |  |  |
| - Onions | 17.7 | 92.6 | 61.6 | 110.2 | 62.1 | 90.8 |
| - Squash | 14.6 | 57.7 | 72.1 | 64.0 | 65.0 | 50.7 |
| - Other fresh vegetables | 11.6 | 49.8 | 66.3 | 96.0 | 86.2 | 84.4 |
| Total fresh vegetables | 43.9 | 200.1 | 200.0 | 270.2 | 213.3 | 225.9 |
| Processed vegetables |  |  |  |  |  |  |
| - Peas (frozen) | 22.0 | 34.3 | 36.9 | 81.7 | 83.5 | 79.7 |
| - Potatoes (frozen) |  | 14.1 | 56.9 | 89.0 | 101.9 | 94.5 |
| - Sweetcorn (frozen/dried) | 9.5 | 30.6 | 43.4 | 40.6 | 41.8 | 38.3 |
| - Mixed vegetables (frozen) | 4.6 | 23.9 | 36.0 | 40.7 | 47.5 | 40.8 |
| - Other vegetables (frozen) |  |  | 16.4 | 17.9 | 25.3 | 23.6 |
| - Other vegetables (dried) |  |  | 25.5 | 7.6 | 8.6 | 7.6 |
| - Vegetable juices |  |  | 6.6 | 22.8 | 27.8 | 31.2 |
| - Other processed vegetables | 20.9 | 75.6 | 42.6 | 43.5 | 42.7 | 62.0 |
| Total processed vegetables | 57.0 | 178.5 | 264.3 | 343.8 | 379.1 | 377.7 |
| Other horticultural exports |  |  |  |  |  |  |
| Flowers \& foliage | 10.5 | 49.9 | 38.5 | 35.6 | 32.1 | 32.4 |
| Vegetable seeds | n/a | n/a | 30.2 | 55.9 | 62.5 | 80.2 |
| Seeds, plants \& bulbs etc. | 2.1 | 17.4 | 42.1 | 40.8 | 43.2 | 40.3 |
| Sphagnum moss | 6.3 | 17.3 | 8.8 | 4.5 | 3.9 | 4.0* |
| Total other horticultural exports | 18.9 | 84.6 | 119.6 | 136.8 | 141.7 | 156.9 |
| Total exports in current \$ | 481.2 | 1,302.0 | 2,306.1 | 3,455.2 | 3,645.1 | 3,648.3 |
| Horticultural exports |  |  |  |  |  |  |
| as \% of NZ merchandise exports | 4.4 | 7.0 | 7.5 | 7.5 | 7.8 | 8.0 |

Source: "Bollard (1996) "Statistics New Zealand "Estimate
$\rightarrow$ Total horticulture merchandise exports in 2013 were over $\$ 3.6$ billion, a value similar to that for 2012 horticultural produce exports. Horticulture is now $8 \%$ of New Zealand's total merchandise exports.
$\rightarrow$ The mix between products changed, with increases of the value of apples $(+\$ 134 \mathrm{~m})$, wine $(+\$ 31 \mathrm{~m})$, onions $(+\$ 29 \mathrm{~m})$ and vegetable seeds $(+\$ 18 \mathrm{~m})$, offsetting reductions of export values of in kiwifruit ( $-\$ 112 \mathrm{~m}$ ), avocados ( $-\$ 63 \mathrm{~m}$ ) and squash (-\$14m).
$\rightarrow$ In the ten years 2002 to 2012, land in horticulture increased by 10,200 hectares $(+9 \%)$ to 123,480 ha, with the larger changes in horticultural varieties by area being wine grape $+17,220$ ha, kiwifruit +800 ha and pipfruit, predominantly apples,
$-4,000$ ha. In the same decade there was a small decrease in the area of vegetables cultivated, $-3,000$ ha ( $6 \%$ ). Yield improvements are expected to have more than compensated for the small reduction in area of vegetables.
Source: Stats NZ: Agricultural Production Census, 2002 \& 2012.

Horticultural exports 2013 (\$ million, fob)

| Apples (fresh \& processed) |  |  |  |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
| $\square$ Other processed fruit \& nuts |  |  |  |
| - Potatoes (fresh, frozen, proc.) |  |  |  |
| - Onions |  |  |  |
| - Peas (frozen, dried +) |  |  |  |
| - Vegetable seeds |  |  |  |
| - Other veg. (proc. \& juiced) |  |  |  |
| - Other frozen vegetables |  |  |  |
| - Squash |  |  |  |
| - Beans (frozen \& dried) |  |  |  |
| - Other seeds, plants \& bulbs |  |  |  |
| - Berryfruit (fresh, frozen \& preps) |  |  |  |
| - Capsicums \& pimento |  |  |  |
| - Sweetcorn (frozen, dried +) |  |  |  |
| - Flowers, foliage \& moss |  |  |  |
| - Avocados |  |  |  |
| - Jams |  |  |  |
| - Other fresh vegetables |  | $1 \$$ million |  |
| Summerfruit (cherries, apricots +) |  | Source: Statistic |  |
| Other fruit (fresh \& juiced) |  |  |  |
| 1 | 1 | 1 |  |
| 300600 | 900 | 1200 | 1500 |

$\rightarrow$ At more than $\$ 1.2$ billion, wine exports were $33 \%$ by value of New Zealand horticultural produce exports in 2013.
In addition to fruits, vegetables, flowers, seeds and bulbs exported as shown in the above table, the New Zealand horticultural sector also exported:
$\rightarrow$ Natural honey exports of $\$ 144.9 \mathrm{~m}$ was an increase of $\$ 14.8 \mathrm{~m}$ (13.5\%) on 2012 (2008 $\$ 62.6 \mathrm{~m})$. Bees and their pollination are an integral part of New Zealand's horticulture.
$\rightarrow$ Export of horticultural machinery and components, primarily for cleaning, sorting and grading fresh and dried fruits and vegetables valued at $\$ 79.1$ million were exported in 2013 (2008 \$47.2m). Income to New Zealand companies in the form of royalties and licence agreements are in addition to component exports.

Horticultural exports - Years to June (\$ million, fob)


Source: Statistics New Zealand

## Exports/imports



Produce from New Zealand's horticultural industries calculated to be approx. $\$ 6.7$ billion

New Zealand horticulture exports are assisted by a strong domestic market base.


Source: Statistics New Zealand; Overseas Trade statistics, plus domestic market figures from triennial Household Economic Survey (HES) 2013 applied to a number of households at 30 June 2013

Top 10 export destinations (\$ million, fob)

|  | Exports <br> 2005 | Exports <br> 2012 | Exports <br> 2013 |  |
| :--- | ---: | ---: | ---: | :--- |
| Australia | 335 | 881 | 791 | Wine, avocados, potatoes-frozen, kiwifruit, mixed <br> frozen veg., peas-frozen, jams, veg. preps-beans, <br> blueberries, fermented beverages, apple juice, <br> beans-frozen, other fruit preparations, honey, <br> sweetcorn-frozen, capsicums, veg. preps-potatoes, <br> other veg. preparations |
| Japan | 472 | 559 | 468 | Kiwifruit, squash, capsicums, veg-juice, wine, <br> orchids, honey |
| USA | 232 | 374 | 415 | Wine, apples, kiwifruit, honey |
| UK | 288 | 344 | 349 | Wine, apples, honey |
| EU (centralised <br> distribution) | 240 | 248 | 228 | Kiwifruit, apples |
| China | 15 | 134 | 167 | Kiwifruit, wine, honey |
| Netherlands | 116 | 82 | 141 | Apples, wine, onions, seeds-carrot |
| Taiwan | 76 | 109 | 116 | Kiwifruit, apples |
| Canada | 24 | 83 | 98 | Wine |
| Spain | 82 | 72 | 80 | Kiwifruit |

[^0]The origin of fruit and vegetable imports, 2013


Source: Statistics New Zealand; Overseas Trade statistics for year ended June 2013.
Comparisons of imports and exports 2013 (\$ million)


Source: Statistics New Zealand; Overseas Trade statistics


## Export destinations

## Horticulture helps build New Zealand's profile in many overseas markets

Export destinations for New Zealand horticultural products trends since 2005 (\$ million, fob)
$\rightarrow$ Fruits, vegetables and flowers were exported to 120 countries in 2013. In 2005 New Zealand horticultural produce was exported to 106 countries.
$\rightarrow$ Exports to 29 countries exceeded $\$ 10$ million (fob) in 2013 , up from 20 countries in 2005.

## Trends

$\rightarrow \quad$ In 2013 New Zealand fruit and vegetable exports to five markets exceeded \$300m (fob) value: Australia, Japan, UK and Ireland, Continental Europe and North America.
$\rightarrow$ These five export markets accounted for over $\$ 2.27$ billion (64\%) of New Zealand's total horticultural exports in 2013.
$\rightarrow$ Of the further 10 countries to which New Zealand exported more than $\$ 50$ million of horticultural produce in 2013, seven are in Asia/South East Asia.
$\rightarrow$ The diversity of horticultural products that formed the growth in exports to Asia is evident in the table below listing 22 products each exceeding $\$ 5$ million (fob) value.

Source: Statistics New Zealand

## Grape and wine production 2008 \& 2013

| Variety | Production area (ha) |  | Production (tonnes) |  |
| :--- | ---: | ---: | ---: | ---: |
|  | 2008 | 2013 | 2008 | 2013 |
| Sauvignon blanc | 13,988 | 20,429 | 169,613 | 228,781 |
| Chardonnay | 3,881 | 3,253 | 33,346 | 27,184 |
| Pinot gris | 1383 | 2,477 | 12417 | 22,042 |
| Reisling | 917 | 796 | 8,547 | 5,932 |
| Gewurtztraminer | 316 | 334 | 2,101 | 1,788 |
| Other white vinifera | 400 | 121 | 5,060 | 2,493 |
| Pinot noir | 4,650 | 5,425 | 32,878 | 31,775 |
| Merlot | 1363 | 1,262 | 10,166 | 10,076 |
| Cabernet Sauvignon | 516 | 331 | 2,270 | 1,465 |
| Syrah | 278 | 419 | 1,452 | 2,240 |
| Other red vinifera | 396 | 311 | 2,734 | 1,908 |
| Muscat varieties | 135 | 50 | 1,697 | 634 |
| Other and unknown | 1,087 | 525 | 2,719 | 8,682 |
| Total | 29,310 | 35,733 | 285,000 | 345,000 |
| Region |  |  |  |  |
| Auckland/Northland | 534 | 406 | 1,808 | 919 |
| Waikato/Bay of Plenty | 147 | 24 | 192 | 12 |
| Gisborne | 2,142 | 1,608 | 23,911 | 15,567 |
| Hawke's Bay | 4,899 | 5,093 | 34,284 | 38,829 |
| Wairarapa | 855 | 972 | 4,105 | 4,798 |
| Marlborough | 15,915 | 23,232 | 194,639 | 251,630 |
| Nelson | 794 | 1,032 | 7,002 | 7,777 |
| Canterbury/Waipara | 1,732 | 1,454 | 6,881 | 8,348 |
| Otago | 1,552 | 1,909 | 9,495 | 8,407 |
| Other and unknown | 740 | 3 | 2,683 | 8,713 |
| Total | 29,310 | 35,733 | 285,000 | 345,000 |
|  |  |  |  |  |

Source: New Zealand Winegrowers Annual Report 2013.
Wine exports by country 2013 (\% by value)

$\rightarrow$ Whilst exports to Australia, UK and USA were $78 \%$ of 2013 NZ wine exports, market diversification to second-tier destinations such as Northern Europe and Asia now exceed the total value of all wine exported ten years ago (2003).

Growth in wine exports and wineries 2005 to 2013


Sources: New Zealand Winegrowers Annual Report 2013.
$\rightarrow$ New Zealand wine grape production has increased 3.5 times in the past decade from 74,800 tonnes (2003) to 345,000 tonnes (2013), and wine exports by value (fob) are now 33\% of New Zealand's horticultural exports.
$\rightarrow$ The wine industry reports that packaged exports grew by $4 \%$ to exceed $\$ 1$ billion and bulk shipments fell $22 \%$ and are now less than $30 \%$ of total wine exported.
$\rightarrow$ The Marlborough region produced $73 \%$ of New Zealand's total wine production in 2013 and the majority of the Sauvignon blanc harvest, the variety that comprised $66 \%$ of the total grape harvest.
$\rightarrow$ The average yield in 2013 of 9.7 tonnes per hectare was above the ten-year average of $8.6 \mathrm{t} / \mathrm{ha}$.

## Predicting grape production

Meeting market demand, while delivering a consistent high quality product, is vital in preserving the position of New Zealand wine in the global marketplace. Grape production can vary by $50 \%$ year on year, making it difficult to estimate wine production and ensure production and marketing efforts maximise profitability. Research has demonstrated that potential grape production can begin to be estimated based on meteorological data 15 months before harvest, information now being used by Sauvignon blanc growers to manage production. In 2013, vine management based on early prediction allowed growers to manage grape production to produce 345,000 tonnes, about $30 \%$ higher than the previous year and slightly above the long-term average.


## Kiwifruit industry: Zespri Group Ltd

New Zealand grower and chain statistics to 2013

| Season (ends 31 March) Crop volumes (million) | 2000 | 2005 | 2010 | 2011 | 2012 | 2013 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Trays submitted* | 54.2 | 85.8 | 107.0 | 105.9 | 119.5 | 105.7 |
| Trays sold | 51.8 | 79.7 | 96.5 | 98.1 | 109.1 | 101.3 |
| General Statistics |  |  |  |  |  |  |
| Yield (trays/ha) | 5,295 | 7,847 | 8,546 | 8,255 | 9,556 | 8,621 |
| Area planted* (ha) | 10,234 | 10,934 | 12,525 | 12,825 | 12,502 | 12,263 |
| Growers/suppliers ${ }^{\ddagger}$ (no) | 2,681 | 2,760 | 2,711 | 2,706 | 2,662 | 2,636 |
| Packhouses (no) | 118 | 88 | 71 | 67 | 63 | 59 |
| Coolstores (no) | 106 | 89 | 77 | 83 | 79 | 76 |
| Orchard Gate Return (\$) | 15,366 | 34,738 | 39,142 | 41,830 | 45,206 | 51,153 |

*A tray weighs 3.6 kg . 'Producing hectares ' Refers to number of submitters
Source : Zespri Group Ltd. Annual Review.
$\rightarrow$ New Zealand-produced fresh kiwifruit exports were valued at $\$ 934$ million in 2013, a decrease in value of $\$ 111 \mathrm{~m}$ (10.6\%) on 2012 exports, and $2.9 \%$ less than 2011 exports of $\$ 962 \mathrm{~m}$.
$\rightarrow$ In 2013, New Zealand-produced kiwifruit was exported to 53 countries (2012: 56 countries), with 10 countries each importing more than $\$ 20$ million fob value (2012: 10 countries).
$\rightarrow$ The largest export markets for New Zealand kiwifruit in 2013 were Japan $\$ 262.4 \mathrm{~m}$ fob by value (2012: \$325.4m), EU central distribution $\$ 187.4 \mathrm{~m}(\$ 214.9 \mathrm{~m})$, China $\$ 107.3 \mathrm{~m}(\$ 93.9 \mathrm{~m})$, Taiwan $\$ 81.5 \mathrm{~m}(\$ 70.4 \mathrm{~m})$ and Spain $\$ 74.7 \mathrm{~m}(\$ 70.4 \mathrm{~m})$. These five markets and channels accounted for $76.4 \%$ of total 2013 kiwifruit exports. Exports to all other markets were individually less than \$50m.
$\rightarrow$ Because of seasonal impacts and a bacterial canker disease specific to kiwifruit, Pseudomonas syringae pv. actinidiae (termed Psa), Zespri Group reported a $7.1 \%$ reduction in volume produced.
$\rightarrow$ Psa is present in a number of countries including Italy, Japan, South Korea and Chile. There is no current cure for the disease. In New Zealand, the industry-funded entity 'Kiwifruit Vine Health Incorporated' is leading the New Zealand response to Psa and there is a comprehensive research and development programme involving researchers from New Zealand and around the world working to develop strategies to combat this disease.
$\rightarrow$ The New Zealand kiwifruit industry's dominant 'Hayward' variety ('green' kiwifruit) appears to be relatively tolerant to the disease and new varieties are being progressed.
$\rightarrow$ Producing hectares reported by Zespri Group Ltd in 2013 were Zespri Green kiwifruit: 7,982ha, Zespri Organic Green: 5,508 ha; Zespri Gold and Organic Gold ('Hort 16A'): 10,213 ha, Zespri SunGold ('Zesy002'/Gold3) and Organic SunGold (Gold 3): 174 ha, Zespri Charm ('Zesy003'/Gold 9) 193 ha, Zespri Sweet Green ('Zesh004' Green 14): 135 ha.

Sources: Zespri Group Ltd, MP1, Statistics New Zealand
New Zealand kiwifruit export markets (year to 30 June 2013)


Zespri Group Ltd production profile (TEs) 2000-2013


Source: Zespri Group Ltd. Annual Reports \& Annual Reviews


More than 4,000 hectares of the new gold kiwifruit cultivar, 'Zesy002', commonly known as Gold3, have now been licensed in New Zealand with more than 50 million trays of the new fruit, marketed as Zespri SunGold Kiwifruit, expected to be produced annually by 2018. The new cultivar was fast-tracked through commercial launch in response to the identification of the bacterial disease Psa in New Zealand in 2010, and is now seen as a cornerstone in the Psa recovery pathway. Another gold cultivar, 'Zesy003', known as Gold9 and marketed as Zespri Charm Kiwifruit, has also been released to growers, with more than 150 hectares licensed so far.

Apple statistics

| Year ending 31 Dec. <br> Crop volumes ('000 tonnes) | 2006 | 2008 | 2010 | 2011 | 2012 | 2013 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| National export production | 265 | 261 | 260 | 300 | 285 |  |
| Growing method: IFP | $94 \%$ | $94 \%$ | $94 \%$ | $94 \%$ | $96 \%$ |  |
| Certified organic | $6 \%$ | $6 \%$ | $6 \%$ | $6 \%$ | $4 \%$ |  |
| General statistics |  |  |  |  |  |  |
| National IFP weighted FAS returns | $\$ 20.02$ | $\$ 24.44$ | $\$ 22.22$ | $\$ 20.47$ | $\$ 22.71$ |  |
| (\$/TCE) |  |  |  |  |  |  |
| Area planted (ha) | 8,996 | 8,538 | 8,630 | 8,470 | 8,324 | 8,372 |
| Export orchards (no.) | 680 | 509 | 431 | 406 | 391 | 370 |
| Export Packhouses (no.) | 73 | 70 | 62 | 70 | 65 |  |
| No. of exporters | 96 | 93 | 99 | 90 | 88 |  |

Timing: much of the production from the 2013 apple crop was exported after 30 June 2013, the reporting period of this edition. IFP: Integrated Fruit Production sustainability; TCE: tray equivalents 18 kg sale weight FAS: Free Alongside Ship (the value of the product at ship side). Source: Pipfruit New Zealand
$\rightarrow$ The 2012 apple export crop of 285,049 tonnes produced from 8,324 hectares was the second largest produced in the last five years, although 5\% smaller than the 2011 crop.
$\rightarrow$ The planted area for apples increased by 48 hectares to 8,372 ha and although a less than $1 \%$ increase, it was a reversal of decreasing planted area of apples. In 2004, the planted area in apples was 12,585 ha.
$\rightarrow$ 'Royal Gala' and 'Braeburn' varieties are now down to $44 \%$ of planted area but still achieved 55\% of export volume. Pipfruit New Zealand Inc. report that New Zealand growers are gradually responding to market demands, replacing Braeburn with varieties such as Envy ${ }^{\text {m }}$, Ambrosia ${ }^{\circledR}$, Rockit ${ }^{\circledR}$, HoneyCrisp, Smitten ${ }^{\circledR}$, SweeTango ${ }^{\text {Tm }}$, Kanzi ${ }^{\oplus}$, and Koru ${ }^{\circledR}$.
$\rightarrow$ Average IFP apple export returns in 2012 were $\$ 22.71$ per TCE across all varieties and count sizes. Pacific Rose ${ }^{\text {m" }}$ achieved the highest weighted return of $\$ 30.06$ per TCE and Pacific Queen ${ }^{\text {m" }}$ return was $\$ 29.64$ per TCE.

Apple export production by variety: 2006-2012


Apple export destinations by region (Weight basis, 2012)


Apple exports by variety (Weight basis, 2012)


Source: Pipfruit
New Zealand Inc.
$\rightarrow$ For the first time, in 2012 exports to New Zealand's traditional pipfruit markets in Europe (UK \& continental Europe) fell to less than $50 \%$ of total exports ( $43.3 \% / 125,100 \mathrm{t}$ ), and exports to Asia increased to $34.7 \%$ ( $100,400 \mathrm{t}$ ). In $2007,181,900 \mathrm{t}$ went to UK/Europe and $46,000 \mathrm{t}$ went to Asia.
$\rightarrow$ Of the 65 packhouses for export apples in 2012 (2011:70), the largest seven each packed more than 500,000 trays and collectively packed $50 \%$ of the crop. The smallest 15 packhouses all packed fewer than 50,000 trays and collectively $2 \%$ of the crop. In 1999 there were 150 packhouses.
$\rightarrow \quad \ln 2012$ there were 88 exporters of New Zealand pipfruit (99 in 2010), 56 of whom collectively exported $4 \%$ of the crop, whereas the nine largest collectively exported $71 \%$ of the crop.

Source : Pipfruit New Zealand Inc. For more information contact uww.pipfruitnz.co.nz

## Delivering clean fruit for export

Produce shipments must meet the phytosanitary requirements at market borders, and the presence of insect pests can potentially close doors to apple exports. A new apple washer system using individual cups and a unique rotary wand system, designed by Compac ${ }^{\circledR}$ Sorting equipment, was commissioned by Mr Apple New Zealand Limited, one of the largest packhouses in the Hawke's Bay region. Rigorous testing of this machine led to the development of protocols to ensure optimal washing with minimal damage to the fruit, and showed the new machine was effective in removing a wide variety of quarantine actionable pests.

## Other fresh fruits

|  | Growers ${ }^{\text {a }}$ (no.) | Planted area ${ }^{\text {a }}$ <br> (ha) | Crop volume ${ }^{\text {a }}$ (tonnes) | $\begin{aligned} & \text { Domesticb } \\ & \text { 2012/13 } \end{aligned}$ | $\begin{gathered} \text { Exportc (fob) } \\ 2013 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Avocados | 1,600 | 4,179 | 33,997 | 28.7 | 33.7 |
| Berryfruit | 240 | 3,032 | 21,898 | 45.8 | 27.5 |
| - Blackcurrants | 34 | 1688 | 8,403 | 5.7 |  |
| - Boysenberries | 21 | 204 | 3,100 | 4.8 |  |
| - Raspberries | 50 | 150 | 945 | 3.0 |  |
| - Blueberries | 60 | 700 | 2,450 | 10.4 | 22.7 |
| - Strawberries | 110 | 170 | 6,500 | 21.3 | 4.7 |
| - Other berryfruits |  | 120 | 500 | 0.6 | 0.1 |
| Citrus | 421 | 999 | 28,657 | 46.9 | 6.1 |
| - Grapefruit | 18 | 8 | 300 | 0.3 |  |
| - Lemons | 59 | 178 | 5,137 | 4.0 | 2.2 |
| - Limes | 25 | 12 | 300 | 1.0 |  |
| - Mandarins | 285 | 361 | 10,358 | 25.3 | 2.5 |
| - Oranges | 213 | 406 | 11,762 | 15.5 | 1.3 |
| - Tangelos | 31 | 34 | 800 | 0.8 | 0.1 |
| Feijoa | 200 | 251 | 500 | 1.7 | 0.2 |
| Grapes - table |  | 37 |  |  | 0.2 |
| Hops | 18 | 375 | 684 |  |  |
| Kiwiberries |  | 27 | 163 | 0.2 | 1.3 |
| Nashi | 25 | 30 | 791 | 1.5 |  |
| Nuts |  | 1484 |  |  | 1.4 |
| - Cashews |  |  |  |  | 0.1 |
| - Chestnuts | 100 | 310 | 350 |  |  |
| - Macadamias |  | 242 |  |  |  |
| - Walnuts |  | 498 |  |  |  |
| - Hazelnuts |  | 434 |  |  |  |
| Olives | 400 | 2,173 | 4,000 |  |  |
| Passionfruit | 40 | 17 | 110 | 1.3 | 0.3 |
| Pears |  | 441 | 4,381 |  | 8.8 |
| Persimmon | 50 | 250 | 2,250 | 4.0 | 7.5 |
| Summerfruit | 258 | 1,830 | 14,778 | 52.1 | 28.5 |
| - Apricots | 58 | 332 | 3,283 | 9.8 | 6.7 |
| - Cherries | 87 | 646 | 2,535 | 10.8 | 21.2 |
| - Nectarines | 57 | 307 | 3,644 | 13.6 | 0.1 |
| - Peaches | 76 | 328 | 2,903 | 10.7 | 0.3 |
| - Plums | 78 | 217 | 2,413 | 7.2 | 0.2 |
| Tamarillos | 40 | 110 | 264 | 1.3 | 0.2 |
| Other fruits |  | 250 |  |  | 0.1 |
| Total fresh fruits (excl. Kiwifruit, Grape Wine, Apples) |  |  |  |  | 115.8 |

 entries indicate either that the information is not available or items are valued at less than \$50,000
$\rightarrow \quad$ In 2013 fresh fruit exports of $\$ 1.53$ billion (2012: \$1.56bn) were dominated by kiwifruit $61 \%$ $\$ 934 \mathrm{~m}$, apples $31 \%$ \$475, avocados $\$ 33.7 \mathrm{~m}$, summerfruit $\$ 28.5 \mathrm{~m}$, and berryfruit $\$ 27.5 \mathrm{~m}$. Other fruits totalled $\$ 26.1 \mathrm{~m}$ export value.
$\rightarrow$ Avocado exports fell dramatically from $\$ 96.9$ million in 2012 to $\$ 33.7$ million in 2013, with the largest of 23 export markets being Australia, where New Zealand avocado exports fell from $\$ 83.8 \mathrm{~m}$ in 2012 to $\$ 28.3 \mathrm{~m}$ in 2013, due in part to high domestic volumes in Australia.
$\rightarrow$ The fresh and chilled berryfruit market in New Zealand had a combined value of an estimated $\$ 86.4 \mathrm{~m}$. The berryfruit export market is dominated by blueberries $\$ 22.7 \mathrm{~m}$, with $92.5 \%$ by value exported to Australia.

Processed fruits
Sales value (\$m)

|  | Domestic ${ }^{\text {a }}$ | Export ${ }^{\text {b }}$ (fob) |
| :---: | :---: | :---: |
|  | 2012/12 | 2013 |
| Apple juice | 45.9 | 23.6 |
| Avocado oil | 0.2 | 2.2 |
| Other fruit juices | 92.1 | 24.3 |
| Other fermented beverages |  | 14.9 |
| Dried fruits |  | 3.1 |
| Frozen fruits |  | 12.8 |
| - Blackcurrants |  | 2.8 |
| - Blueberries | 4.0 | 3.0 |
| - Boysenberries | 2.7 | 3.5 |
| - Kiwifruit |  | 2.2 |
| - Raspberries |  | 0.3 |
| - Other |  | 1.0 |
| Fruit preparations |  | 29.5 |
| - Apples |  | 9.7 |
| - Blackcurrants |  | 0.3 |
| - Kiwifruit |  | 2.0 |
| - Fruits mixture preps. |  | 11.7 |
| - Pears |  | 0.2 |
| - Other |  | 5.6 |
| Hops | 3.2 | 8.5 |
| Jams, jellies and purees |  | 33.8 |
| Nuts |  | 8.0 |
| Olive oil | 2.3 | 0.4 |
| Total processed fruits |  | 161.1 |

Fruits used for processing is produced on the orchard areas described in the fresh fruit table. ${ }^{\text {a Sector estimates of first point }}$ of sale values, "Statistics New Zealand Overseas Trade Statistics. Blank entries indicate either that the information is not available or items are valued at less than $\$ 50,000$.
$\rightarrow$ Exported fruit preparations, often used as ingredients in yoghurts and other foods, were valued at $\$ 29.5 \mathrm{~m}$ in 2013 (2012: $\$ 33.1 \mathrm{~m}$ ).
$\rightarrow$ Citrus domestic and export sales had an estimated combined value of $\$ 53 \mathrm{~m}$ in 2013, the majority being for domestic market use that is close to eight times the value exported.
$\rightarrow$ Summerfruit export value of $\$ 28.5 \mathrm{~m}$ was down from $2012(\$ 31.9 \mathrm{~m})$. Dominant export varieties were cherries $\$ 21.2 \mathrm{~m}(\$ 21.0 \mathrm{~m})$ and apricots $\$ 6.7 \mathrm{~m}(\$ 10.2 \mathrm{~m})$. Domestic New Zealand market sales were significantly larger and calculated to be $\$ 52.1 \mathrm{~m}$. The combined exports \& domestic market value for summerfruit was $\$ 80.6 \mathrm{~m}$.

New flavours for beers


The New Zealand hops industry exports around $85 \%$ of its hops, which together with domestic market sales generate around $\$ 12$ million annually whilst supplying less than $1 \%$ of the world hops market and supporting New Zealand premium/craft beer exports, a market expanding at $15 \%$ per year. The industry is aiming to double its global contribution by 2025 through the introduction of hops with new flavours that command a premium on the global marketplace. New cultivars developed in the hop breeding programme have a range of unique flavour characteristics, from citrus notes to herbaceous spicy aromas, of particular interest to the rapidly expanding international specialty and craft brewing sector.

Fresh and processed vegetables
Sales value (\$ million, fob)


Crops areas are predominantly sector estimates. alncludes taro, celery, parsnips, spring onions, Asian vegetables (excl. Chinese cabbagel, yams, witloof, leeks, vegetable shoots, shallots, swedes and some others. bProcessing includes freezing, canning, juicing and artificial drying.. "Sector estimates. Blank entries indicate that the information is not available. ${ }^{\text {d }}$ Many growers produce multiple crops. ${ }^{\text {e Statistics New Zealand from export entries. Blank entries indicate either that the information is not available or }}$ items are valued at less than \$50,000. Sources: Horticulture NZ; Statistics New Zealand Overseas Trade statistics.
$\rightarrow$ New Zealand produced an estimated 1.4 million tonnes of vegetables in 2013 of which 500,000 tonnes were exported. Domestic consumption was over 900,000 tonnes.
$\rightarrow$ Five product groups were 69\% of total vegetable production: potatoes $525,000 \mathrm{t}$ ( $94,000 \mathrm{t} / 18 \%$ exported fresh/frozen/processed), onions $196,000 \mathrm{t}$ ( $181,500 \mathrm{t} / 93 \%$ exported fresh), brassicas $92,000 \mathrm{t}(1,250 \mathrm{t} / 1 \%$ exported), squash $91,500 \mathrm{t}(79,100 \mathrm{t} / 86 \%$ exported fresh), and carrots $78,000 \mathrm{t}$ (20,700 t/27\% exported fresh/frozen/juiced).
$\rightarrow$ Of the total of $\$ 603.6$ million of fresh and processed vegetables that New Zealand exported to 76 countries in $2013,63.5 \%$ was to Australia $\$ 240.5 \mathrm{~m}$ (fresh $\$ 15.1 \mathrm{~m}$, frozen $\$ 141.3 \mathrm{~m}$ [potatoes $\$ 52.6 \mathrm{~m}$, mixed veg. $\$ 32.7 \mathrm{~m}$, peas $\$ 31.2 \mathrm{~m}$ ], vegetable preparations $\$ 72.7 \mathrm{~m}$ ) and Japan $\$ 142.7 \mathrm{~m}$ (fresh $\$ 76.6 \mathrm{~m}$ [squash $\$ 35.2 \mathrm{~m}$, capsicums $\$ 26.8 \mathrm{~m}$ ], frozen $\$ 23.9 \mathrm{~m}$, vegetable juice $\$ 29.4 \mathrm{~m}$ ).
$\rightarrow$ Frozen vegetable exports were $27 \%$ of total vegetable exports by weight ( $134,800 \mathrm{t}$ ) but $57 \%$ by value ( $\$ 214$ million fob) and a similar value to that of frozen vegetables exported from 2008 through 2011. 2012 frozen vegetable exports were $151,800 \mathrm{t}$, valued at $\$ 242.2$ million.

Vegetable exports 2000 to 2013 (\$ million, fob)


Source: Statistics New Zealand
$\rightarrow \quad \ln 2013$ New Zealand imported $\$ 189.3$ million of vegetables (2012: $\$ 207.3 \mathrm{~m}$ ). 2013 imports consisted of fresh vegetables $\$ 35.0 \mathrm{~m}$ (melons $\$ 10.7 \mathrm{~m}$ ), frozen $\$ 48.4 \mathrm{~m}$ (frozen potatoes $\$ 28.9 \mathrm{~m}$ ), and $\$ 49.8 \mathrm{~m}$ of other vegetables ( $\$ 27.0 \mathrm{~m}$ as preserved tomatoes).
$\rightarrow$ An example of the two-way trade that exists between countries is with frozen potatoes. In 2013 New Zealand exported $\$ 52.5 \mathrm{~m}$ (fob) to Australia and imported $\$ 18.5 \mathrm{~m}$ (cif) from Australia. Produce not grown in New Zealand, seasonality and different presentations and processes often complement locally grown and processed produce.
$\rightarrow$ Preserved tomato imports of $\$ 27.0 \mathrm{~m}$ in 2013 (2012: \$32.2m) came from 32 different countries, with the largest values imported from Italy $\$ 11.2 \mathrm{~m}$, USA $\$ 7.5 \mathrm{~m}$ and China $\$ 2.8 \mathrm{~m}$.


Destinations of New Zealand vegetable exports 2013 (\$ million, fob)


## Potatoes for boiling, crisping or chipping

New Zealand produces 525,000 tonnes of potatoes each year, with a value of $\$ 560$ million. Around $17 \%$ of the value is generated by exports of processed potatoes, mainly French fries. New cultivars developed by the potato breeding programme are tailored for the New Zealand market. Resistance to pests and diseases - such as the tomato-potato psyllid, powdery scab and potato virus $Y$ - is important, as are quality, yield and other production traits. For the process market, potatoes that have the right shape and size are preferred, whereas the fresh market requires potatoes that are attractive and have good taste profiles. Nine new cultivars developed in New Zealand have been released since 1995, the most successful being 'Moonlight', suitable for processing into French fries, which is planted in around $12 \%$ of New Zealand's total potato production area.


## Organic production

$\rightarrow$ New Zealand land area under organic certification in horticulture increased by $37 \%$ in the three years from 2009 ( 8,175 ha) to 2012 ( 11,188 ha), in part reflecting increased organic grape production, with over 100 vineyards growing grapes organically (7.6\% of all grapevines, 2012). Total land area in New Zealand under organic certification in 2012 was 106,753 ha.
$\rightarrow \quad \ln 2012$ there were 720 organic operations in horticulture.
$\rightarrow$ Exports of organically certified fresh fruits and vegetables in 2012 were calculated to be $\$ 97$ million and $45 \%$ of total organic sector produce exports.
$\rightarrow$ Domestic market sales of organic fresh fruits and vegetables were calculated to have increased from $\$ 2.3$ million in 2009 to $\$ 4.0$ million in 2012, a $74 \%$ increase in three years and accounting for $5 \%$ of all organic produce sold at supermarkets and specifically organic sector stores. Additional organic produce is sold direct-to-consumers and at farmers' markets, of which there are approximately 45 across New Zealand.

New Zealand exports of organically certified produce (\$ million)


Source above and below: 2012 New Zealand Organic Sector Report
incl. beverages
New Zealand land area under certification, horticulture and viticulture


Exports of flowers, plants, seeds and other products (\$ million, fob)

| Selected HS Items | 1990 | 2000 | 2010 | 2011 | 2012 | 2013 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cut flowers |  |  |  |  |  |  |
| - Chrysanthemums |  |  | 0.2 | 0.2 | 0.2 | 0.5 |
| - Hydrangeas |  |  | 2.7 | 2.7 | 3.4 | 3.0 |
| - Lilium |  | 1.9 | 0.2 | 0.3 | 0.1 | 0.1 |
| - Nerines |  | 0.6 | 0.2 | 0.1 | 0.1 | 0.1 |
| - Orchids | 8.2 | 22.4 | 20.8 | 21.7 | 18.5 | 19.6 |
| - Paeonies |  | 0.5 | 1.7 | 1.7 | 1.8 | 1.6 |
| - Pittosporum |  |  | 1.2 | 1.0 | 1.6 | 1.6 |
| - Proteaceae | 0.5 | 1.4 | 0.9 | 1.0 | 0.8 | 0.6 |
| - Sandersonia | 0.2 | 3.1 | 0.2 | 0.2 | 0.1 | 0.1 |
| - Zantedeschia ${ }^{\text {(Cala liy) }}$ | 1.9 | 7.7 | 3.7 | 3.2 | 2.6 | 2.1 |
| - Other Foliage | 0.7 | 0.6 | 0.6 | 0.8 | 0.5 | 0.6 |
| - Other cut flowers | 7.8 | 8.5 | 2.7 | 2.8 | 2.4 | 2.5 |
| Plants |  |  |  |  |  |  |
| - Other live plants | 2.5 | 5.6 | 6.6 | 5.9 | 6.4 | 6.2 |
| Seeds |  |  |  |  |  |  |
| - Flower seeds | $<0.1$ | 2.1 | 0.3 | 0.6 | 0.3 | 0.5 |
| - Fruit seeds |  |  | 1.9 | 1.0 | 1.4 | 1.6 |
| - Cabbage seeds |  |  | 5.0 | 4.6 | 4.7 | 5.4 |
| - Carrot seeds |  |  | 7.6 | 16.0 | 17.8 | 27.0 |
| - Radish seeds |  |  | 21.4 | 19.1 | 22.0 | 26.6 |
| - Other veg. seeds | 2.1 | 15.9 | 23.4 | 16.2 | 18.0 | 21.3 |
| - Tree seeds |  | 1.6 | 1.5 | 1.0 | 1.0 | 0.8 |
| Bulbs, tubers, corms |  |  |  |  |  |  |
| - Lilium |  |  | 16.8 | 16.4 | 23.3 | 20.2 |
| - Sandersonias |  |  | 0.7 | 1.4 | 0.6 | 0.7 |
| - Tulips |  |  | 9.6 | 10.1 | 9.3 | 9.4 |
| - Zantesdeschia (callaliy) |  | 1.5 | 3.5 | 3.9 | 0.5 | 0.2 |
| - Others | 2.0 | 10.1 | 0.4 | 0.4 | 0.5 | 0.7 |
| Sphagnum moss | 11.0 | 15.3 | 6.1 | 4.5 | 4.0 | 4.0* |
| Total | 36.9 | 98.8 | 139.9 | 136.8 | 141.9 | 157.0 |

The term "bulbs" is used to include bulbs, corms, tubers, tuberous roots, crowns \& rhizomes. *Author's estimate. Source: Statistics New Zealand.
$\rightarrow$ Cut flowers valued at $\$ 31.8 \mathrm{~m}$ were exported to 38 countries in 2013 (Japan $\$ 18.2 \mathrm{~m}$, the USA $\$ 4.9 \mathrm{~m}$, Hong Kong $\$ 1.7 \mathrm{~m}$ ). Cut flower imports in 2013 totalled $\$ 1.5 \mathrm{~m}$ (cif) from 22 countries.
$\rightarrow$ Orchids were the dominant cut flower export crop, with $\$ 19.6 \mathrm{~m}$ (fob) exported to 33 countries (Japan \$12.2m, the USA \$3.5m).


Exports of flowers, seeds and bulbs (\$ million, fob)


Source: Statistics New Zealand
$\rightarrow$ Vegetable seed exports have significantly increased in value from $\$ 43.9$ million in 2008 to $\$ 80.3 \mathrm{~m}$ in 2013 , an increase of $83 \%$.
$\rightarrow$ Carrot seed exports totalling $\$ 27.0 \mathrm{~m}$ in 2013 went to 16 countries: Netherlands $\$ 24.6 \mathrm{~m}$, France $\$ 1.4 \mathrm{~m}$. Radish seeds totalling $\$ 26.6 \mathrm{~m}$ went to 24 countries (Netherlands $\$ 7.4 \mathrm{~m}$, Korea $\$ 5.8 \mathrm{~m}$, Japan $\$ 4.0 \mathrm{~m}$, France $\$ 2.2 \mathrm{~m}$ ).
$\rightarrow$ Vegetable seeds valued at $\$ 21.2 \mathrm{~m}$ were imported from 44 countries in 2013 (2012: $\$ 20.0 \mathrm{~m})$; The Netherlands $\$ 5.2 \mathrm{~m}$, Japan $\$ 3.6 \mathrm{~m}$, Australia $\$ 2.1 \mathrm{~m}$ and France $\$ 1.8 \mathrm{~m}$.
$\rightarrow$ Bulbs valued at $\$ 4.7 \mathrm{~m}$ were imported from 10 countries, $\$ 4.5 \mathrm{~m}$ of which came from The Netherlands (lilium $\$ 2.1 \mathrm{~m}$, tulip bulbs $\$ 0.9 \mathrm{~m}$ ). The Netherlands is a major trading centre and distribution hub in Europe for seeds and bulbs.

Vegetable seed exports (\$ million, fob)


New Zealand honey production 2013 (17,823 tonnes)


Source: AsureQuality Ltd
$\rightarrow$ Bees are crucial to New Zealand's primary sector, pollinating approximately onethird of our food sources and playing a significant role in determining crop yields.
$\rightarrow$ Honey production was a record 17,825 tonnes in 2013, 7,440 tonnes more than in 2012 and almost 5,300 tonnes above the 6-year average (2008 to 2013) of 12,526 tonnes. The record honey crop was due to a better than average yield in all regions plus an increase of over 29,000 hives, reflecting new commercial beekeepers entering the industry and existing operations increasing hive numbers primarily for manuka honey production. As at June 2013 New Zealand's 4,279 registered beekeepers had 452,018 hives.
$\rightarrow$ The value of New Zealand's honey exports further increased in value to $\$ 144.9 \mathrm{~m}$ in 2013 (2012 \$121.1m) with the major export markets being the UK \$31.5m (2012 \$33.5m), Hong Kong \$19.8m (\$15.1m), China \$15.4m (\$4.2m), Australia \$14.6m $(\$ 12.5 \mathrm{~m})$, Singapore $\$ 14.6 \mathrm{~m}(\$ 11.9 \mathrm{~m})$, Japan $\$ 11.0 \mathrm{~m}(\$ 10.8 \mathrm{~m})$, the USA $\$ 10.6 \mathrm{~m}$ $(\$ 6.9 \mathrm{~m})$, and less than $\$ 5 \mathrm{~m}$ to each of 45 other markets.

New Zealand natural honey exports 2005-2013


Source: Statistics New Zealand

People in horticultural training, per year 2001-2013


Source: Primary ITO

The numbers of horticultural trainees increased $65 \%(1,841)$ in 2013 compared with 2012, and now double 2007 trainee numbers. Trainee numbers in all categories increased from 2012 numbers, with the largest being Fruit Production +560 (559 to 1,119), Vegetables +344 (292 to 636), Amenity (e.g. sports grounds) +338 (936 to 1,274), Landscape +192 (211 to 403), Arboriculture (trees/shrubs/vines) +143 (280 to 423).

Trainees by category (year to December 2013)

Source: Primary ITO.



New Zealand consumer spending on vegetables (\$ million) llocal \& imported produce, fresh / chilled / dried / canned / bottled / frozen


New Zealand consumer spending on fruits (\$ million)
Calculated aggregate annual expenditure by all private New Zealand households (local \& imported produce, fresh / chilled / dried / canned / bottled / frozen)


Source: Statistics New Zealand: triennial Household Economic Survey (HES), 2013
In 2013, New Zealand households spent an estimated $\$ 2.4$ billion on fruit, vegetables and wine, with:
$\rightarrow \$ 670$ million on fresh and chilled fruit
$\rightarrow \$ 137$ million on processed fruit
$\rightarrow \$ 920$ million on fresh and chilled vegetables
$\rightarrow \$ 235$ million on processed vegetables
$\rightarrow \$ 690$ million on wine

Source: Statistics New Zealand: triennial Household Economic Survey (HES), 2013. N.B. survey is of households only and excludes overseas visitors, people living in hotels and motels, etc., and excludes restaurants and takeout meals.

Investment in the horticultural industries, 2013

|  | Crop area (ha) | On-farm (\$ million) | Off-farm (\$ million) | Total (\$ million) |
| :---: | :---: | :---: | :---: | :---: |
| Apples, pears \& nashi | 8,850 | 726 | 580 |  |
| Wine grapes | 35,733 | 5,528 | 15,202 |  |
| Kiwifruit | 12,263 | 2,085 | 1,565 |  |
| Summerfruit | 1,830 | 146 | 110 |  |
| Avocados | 4,179 | 334 | 200 |  |
| Citrus | 999 | 80 | 65 |  |
| Berryfruit | 3,032 | 243 | 160 |  |
| Nuts | 1,484 | 119 | 36 |  |
| Olives | 2,173 | 174 | 115 |  |
| Other subtropical fruits | 692 | 55 | 30 |  |
| Hops | 375 | 30 | 75 |  |
| Other fruits | 250 | 20 | 12 |  |
| Total fruits | 71,860 | \$9,540 | \$18,150 | \$27,690 |
| Potatoes | 10,590 | 635 | 480 |  |
| Peas \& Beans | 8,172 | 450 | 225 |  |
| Onions | 5,340 | 320 | 240 |  |
| Squash | 6,300 | 347 | 260 |  |
| Sweetcorn | 4,664 | 257 | 190 |  |
| Broccoli, cabbages \& cauliflowers | 3,800 | 210 | 160 |  |
| Carrots | 2,600 | 143 | 110 |  |
| Asparagus | 470 | 26 | 20 |  |
| Lettuce | 1,300 | 72 | 55 |  |
| Other vegetables | 6,990 | 385 | 290 |  |
| Total vegetables (outdoor) | 50,226 | \$2,845 | \$2,030 | \$4,875 |
| Floriculture - outdoor | 589 | 35 | 18 |  |
| Protected - high tech | 85 | 340 | 100 |  |
| - greenhouse tomatoes | 120 | 360 | 110 |  |
| - low/medium tech | 260 | 390 | 120 |  |
| - floriculture (undercover) | 340 | 510 | 50 |  |
| Total horticultural | 123,480 | \$14,020 | \$20,578 | \$34,598 |

The above table focuses on estimating the level of investment that has been made in the productive area of New Zealand horticulture and related postharvest facilities.
Crop area figures are predominantly industry estimates of planted areas per crop for the year to June 2013 (pgs 8 to 16 incl.) and differ from StatsNZ Agricultural Production Census hectares as at June 2012 (pgs 26 \& 27).
Land values are based on independent land valuation advice, Viticulture Monitoring Report 2013 (Fruition.net.nz) and MPI Farm Monitoring Reports 2012. No adjustment has been made for non productive farm/orchard/vineyard areas that are typically $15 \%$ of total area and up to $80 \%$ for crops such as floriculture under cover.
Off-farm investment levels have been estimated from industry advice and guidance including integrated producers whose supply chain inc/udes both production and post production
$\rightarrow$ Total investment in New Zealand's horticultural industry is estimated to be approximately $\$ 34.6$ billion inclusive of off-farm postharvest facilities for cleaning, sorting, packaging and processing produce from an estimated 123,500 hectares of cultivated horticultural crops in fruits, vegetables and flowers.
$\rightarrow$ New Zealand's largest investment in horticulture by crop type is in viticulture with the hectares in wine grapes equating close to half the total area for fruit production and $29 \%$ of the total productive area in horticulture inclusive of vegetables and floriculture. Wine grapes also have the highest ratio of off-farm investment in the form of grape handling and wineries. Significant aggregation of vineyards and off-farm processing facilities has occurred: in 2003 tonnes crushed per winery was 178 tonnes; in 2013 tonnes crushed per winery was 495 t .

## Regional resources












 Year ended 30 June 2012 Year ended 30 June 2012
Northland Northland
Auckland Waikato Bay of Plenty Gisborne Hawke's Bay

## Manawatu-Wanganui

Wellington

Tasman-Nelson
Marlborough

| Regional Council | $\begin{aligned} & \text { Asparagus } \\ & \text { Ca } \end{aligned}$ | Cab \& Caulis |  | Peas \& Beans | Lettuce | Onions | Potatoes | Squash | Sweet com | $\begin{aligned} & \text { Other } \\ & \text { vee } \end{aligned}$ | $\begin{aligned} & \text { Total } \\ & \text { veg } \end{aligned}$ | Capsicum | umber | $\begin{aligned} & \text { Lettuce/ } \\ & \text { Salad } \end{aligned}$ | $\begin{aligned} & \text { Mush- } \\ & \text { rooms } \end{aligned}$ | $\begin{aligned} & \text { Tomar } \\ & \text { toes } \end{aligned}$ | $\begin{aligned} & \text { All other } \\ & \text { veg. \& herbs } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year ended 30 June 2012 |  |  |  |  |  |  |  |  |  |  |  |  |  | Greens | (Cased) |  | (1ndoors) |
| Northland | C | 28 | 6 | 2+ | C | C | 22 | C | 84 | 1,354 | 1,496+ | C | 18 | 21 | C | 109 | 21+ |
| Auckland | c | 940 | 194 | 79 | 469 | 1,621 | 1,444 | c | 38 | 572 | 5,357 | 327 | 144 | 63 | c | 483 | 38 |
| Waikato | 459 | 75+ | 166 | $2+$ | 73 | 1,837 | 2,074 | c | 42 | $298+$ | 5,026+ | 85 | 46 | 31 | c | 348 | 43 |
| Bay of Plenty | C | 53+ | 0 | C | 0 | C | C | c | 15 | $94+$ | 162+ | c | c | 29 | C | 6 | c |
| Gisborne | 0 | C | 0 | 283+ | C | C | C | 2,406 | 2,493 | 429+ | 5,611+ | 0 | 0 | 0 | 0 | C | 0 |
| Hawke's Bay | 110 | 85 | C | 2,506 | 10 | 662 | 589 | 3,248 | 1,050 | 537+ | 8,997+ | 3 | 2 | 1 | c | 6 | 2+ |
| Taranaki | C | C | C | C | c | C | 23 | C | C | C | 23+ | C | 0 | C | 0 | c | C |
| Manawatu-Wang. | 173 | 859 | 429 | 43 | 339 | 392 | 1,260 | 241 | 23 | $472+$ | 4,231+ | C | c | C | 0 | c | ${ }^{4+}$ |
| Wellington | 0 | 39+ | C | $1+$ | 41 | C | 19 | C | C | 32+ | 132+ | 1 | c | 1 | 0 | c | $7+$ |
| Tasman-Nelson | 4 | $346+$ | c | C | 132 | 55+ | 13+ | $14+$ | 37+ | 203+ | 804+ | 50+ | c | 7 | 0 | c | c |
| Marlborough | C | C | c | 742 | c | C | 2 | C | 601 | 109+ | 1,454+ | C | 0 | c | 0 | c | C |
| West Coast | 0 | 0 | 0 | 0 | c | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 31 | 35 | c | 49 | 28+ |
| Canterbury | 29 | 323 | 823 | 4,155 | 23 | 1,035 | 5,754 | c | 255 | 651 | 13,048 | C | C | 9 | C | 6 | C |
| Otago | C | 149 | C | C | 25 | 4 | 153 | C | C | 2 | 333 | 0 | 0 | C | 0 | c | C |
| Southland | 0 | C | 300 | 0 | C | C | 210 | 0 | 0 | C | 510 | 84 | 28 | 41 | 152 | 174 | 116 |
| Other | 45 | 1,238 | 129 | 333 | 138 | 167 | 28 | 942 | 63 | 560 | 2,723 | 572 | 269 | 238 | 152 | 1,181 | 359 |
| Total New Zealand | 820 | 3,622 | 2,047 | 7,858 | 1,250 | 5,718 | 11,578 | 6,837 | 4,664 | 5,313 | 49,707 | 585 | 266 | n/a | n/a | 1,005 | n/a |
| 2007 | 871 | 3,875 | 1,320 | 7,515 | 1,309 | 4,594 | 10,050 | 7.774 | 6,210 | 6.261 | 49,779 |  |  |  |  |  |  |
| \% | -6\% | -7\% | 55\% | 5\% | -5\% | 24\% | 15\% | -12\% | -25\% | -15\% | 0\% | -2\% | 1\% |  |  | 18\% |  |

## Regional resources

Horticultural activities are distributed throughout New Zealand

Gisborne 9,080 ha +
Squash Kiwifruit
Wine grapes Peas Mandarins Apples $2294 \quad 28$

| Hawke's Bay 20,570 ha + |  |
| :---: | :---: |
| Apples | Peaches |
| Wine grapes | Pumpkin |
| Squash | Nectarines |
| Peas | Kiwifruit |
| Sweet corn | Pears |
| Onions | Plums |
| Potatoes | Asparagus |
| Green beans | Apricots |
| Olives |  |
| \%"\% |  |
| 7472329 | 631807 |
| Climate station: | Whakatu \& Napier |

## Wine Grapes Olives


Climate station: Martinborough

## Reference



| Canterbury 16,854 ha + |  |
| :---: | :---: |
| Potatoes | Sweetcorn |
| Peas | Broccoli |
| Wine grapes | Olives |
| Onions | Apples |
| Blackcurrants | Hazelnuts |
| Carrots | Cooking Herbs |
| Green beans | Pumpkin |
| Walnuts |  |
| 蒝 |  |
| 6042059 | $67 \quad 959$ |
| Climate station: Lincoln \& Rangiora |  |

## Fruit

 Vegetables_ Regional Boundary
Crop is named where the regional area exceeds 100 hectares and listed in decending order of hectares planted. Some 3,769 ha of crops could not be assigned to a specific region.

+ = incomplete data set for region


## Climate summaries

(Mean annual values for 2001-2010)

*One degree day is accumulated when the average daily temperature is above $10.0^{\circ} \mathrm{C}$ for one day e.g An average daily temperature of $15.0^{\circ} \mathrm{C}$ will generate 5 degree day units.

Source: Statistics NZ 2012 Agricultural Production Census. Climate information copyright holder and source: National Institute of Water and Atmospheric Research Ltd (NIWA). Data from multiple climate stations have been used to build near-complete data sets for the decade.


Plant \& Food RESEARCH
RANGAHAU AHUMĀRA KAI



The New Zealand Hortïcentre Trust


Ministry for Primary Industries
Manatū Ahu Matua


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[^0]:    Products listed in descending order of exports and if the value to the destination exceeded $\$ 10$ million fob. Consistent with other entries in Fresh Facts, honey exports are not included in totals. Source: Statistics New Zealand.

