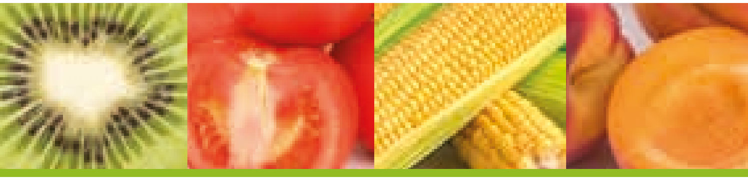
FreshFacts

NEW ZEALAND HORTICULTURE 2018



Horticulture™ New Zealand

Plant & Food RESEARCH
RANGAHAU AHUMĀRA KAI

Reporting basis: unless stated otherwise, all statistics are for the year ending 30 June 2018 and expressed as $NZ. Exports are given as free-on-board (fob) values. Imports are given as cost, insurance and freight included (cif). Historical values have not been adjusted for inflation.

Fresh Facts has been published annually since 1999 by The New Zealand Institute for Plant and Food Research Ltd. Further copies are available from: Plant & Food Research, Corporate Communications, Private Bag 92169, Mt Albert, Auckland, Tel: 09 925 7000, plantandfood.co.nz

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New Zealand horticulture – reaching new highs

This is the 20th edition of Fresh Facts. In the two decades since Fresh Facts began, New Zealand's horticulture industry has changed dramatically, with exports tripling from $1.7 billion to $5.5 billion, almost 10% of New Zealand's total merchandise exports.

More than a third (34%) of our horticulture export revenue is attributable to kiwifruit. Fifty-three countries around the world receive our iconic fruit, with a large proportion of our crop heading to Asia. Zespri® SunGold Kiwifruit has proven popular in these markets, and now accounts for around 40% of the crop.

Wine has also seen massive growth. Twenty years ago, there were fewer than 5,000 hectares of vineyard in New Zealand. Now, 35,000 hectares of vineyard produce exports valued in excess of $1.6 billion. Sauvignon blanc is still the main crop, but other wines, particularly Pinot noir, Chardonnay and Pinot gris, are also increasing in production.

Our industry is diversified, and continues to adapt to consumer and market needs to ensure New Zealand products remain in demand and sell at a premium overseas. The New Zealand apple industry is rated the best in the world, with a portfolio of new cultivars such as Jazz™ and Envy™ providing both diversification and increased value. The potato sector has also transformed, with a move from fresh potato exports to the majority of the $141 million of exports now being processed potato products. Over the years, onions, peas and squash have remained integral parts of our horticultural export mix.

Plant & Food Research is proud to be part of the success of the horticultural sector. We look forward to helping all our sectors realise their potential and deliver a smart green future for New Zealand.

David Hughes.

David Hughes
CEO, Plant & Food Research

Horticultural exports, year ended June *($ million, fob)*

	2000[a]	2005[b]	2010[b]	2015[b]	2017[b]	2018[b]
Fresh fruits						
- Apples	404.5	387.0	324.6	561.8	691.1	732.9
- Kiwifruit	462.0	720.2	995.7	1,181.9	1,663.9	1,860.7
- Avocados	25.2	29.0	59.9	115.5	147.5	97.9
- Cherries	5.6	10.5	22.7	52.3	71.3	84.1
- Other fresh fruits	65.3	41.0	52.0	70.6	84.6	84.7
Total fresh fruits	962.6	1,187.7	1,454.9	1,982.1	2,658.4	2,860.3
Processed fruits						
- Wine	169.8	432.7	1,036.8	1,406.2	1,658.5	1,692.9
- Fruit juices	24.7	34.5	31.7	46.5	60.9	42.7
- Other processed fruits	47.6	67.3	123.5	114.6	106.0	83.6
Total processed fruits	242.1	534.5	1,192.0	1,567.3	1,825.4	1,819.2
Fresh vegetables						
- Onions	78.6	61.6	113.4	81.5	111.9	92.6
- Squash	60.3	72.1	53.2	58.7	56.2	58.6
- Potatoes		12.3	15.9	20.3	21.9	26.4
- Other fresh vegetables	74.4	54.0	65.2	55.5	61.0	48.4
Total fresh vegetables	213.3	200.0	247.7	216.0	251.0	226.0
Processed vegetables (frozen/dried/other processes)						
- Peas	40.6	36.9	72.9	84.8	84.6	87.7
- Potatoes	17.9	56.9	82.0	92.5	93.8	114.9
- Sweetcorn	39.3	43.4	38.0	38.5	41.5	42.0
- Mixed vegetables (frozen)	29.1	36.0	36.1	34.2	25.6	25.3
- Other vegetables (frozen)		16.4	16.4	21.2	22.0	23.0
- Other vegetables (dried)		25.5	8.4	7.8	10.9	12.1
- Vegetable juices		6.6	19.4	30.3	28.8	31.7
- Other processed vegetables	47.5	42.6	47.9	65.8	59.2	62.4
Total processed vegetables	174.4	264.3	321.1	375.1	366.4	399.1
Other horticultural exports						
Flowers & foliage	46.2	38.5	35.1	22.9	21.1	20.3
Vegetable seeds	15.9	30.2	57.4	62.2	64.4	92.4
Seeds, plants & bulbs etc.	23.4	42.1	41.3	43.7	46.1	51.9
Sphagnum moss	15.3	8.8	6.1	5.2	4.7	4.7*
Total other horticultural exports	100.8	119.6	139.9	134.0	**136.2**	**169.3**
Total exports in current $	**1,693.2**	**2,306.1**	**3,355.6**	**4,274.5**	**5,237.5**	**5,473.9**
Horticultural exports						
as % of NZ merchandise exports	6.5	7.5	8.3	8.8	10.5	9.9

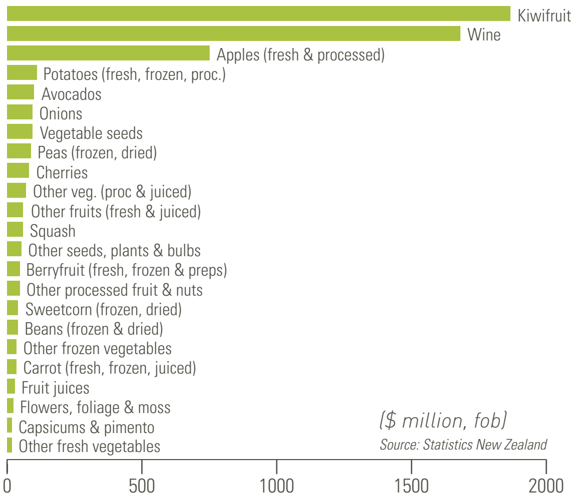
*Source: [a]Statistics New Zealand *Authors' estimate*

→ New Zealand horticultural produce exports in 2018 were a record $5.5b fob. The average value for the previous five years $4.4b fob.

→ Compared with the previous five years, 2018 export values in the ten categories that were 91% of total New Zealand horticultural produce exports (fresh, frozen and other processes) were: kiwifruit 2018 $1,867m, $583m above 5yr average (+45%); wine $1,693m, +264m (+18%); apples $754m, +$133m (+21%); potatoes $141m, +$27 (+24%); avocados $104m, +$6m (+7%); onions $93m, -$6m (-6%); vegetable seeds $92m, +$23m (+33%); peas $88m, +$5m (+6%); cherries $84m, +$36m (+75%); squash $59m, +$5m (+9%).

→ In 2018 five markets, each exceeding $500m (fob) value, accounted for more than two-thirds (68%) of New Zealand's total horticultural exports: Continental Europe $914m (2017: $778m), Australia $815m ($855m), the USA $713m ($726m), China $627m ($502m) and Japan $594m ($606m).

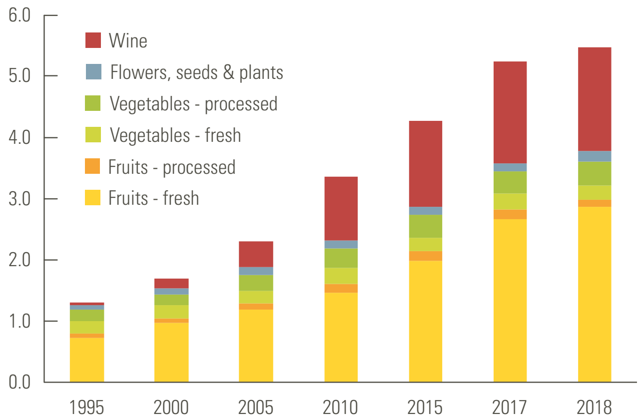
Horticultural exports 2018 *($ million, fob)*



→ Total investment in New Zealand's horticultural sector is estimated to be in excess of $54b (2015: $40b), inclusive of off-farm postharvest facilities. The total area in cultivated horticultural crops is estimated to be 135,000 hectares. Apples, wine grapes, kiwifruit, potatoes and vegetable seed growing covered 82,000 ha (60%). Whilst these five crops dominate and are more than 10,000 ha each with a collective export value in excess of $4.2 billion, the export values of some lesser area crops have increased markedly in the past five years:

- Avocados: 2018 Export volume 12,975 tonnes, fob value $97.9m (2013: 6,747t/$33.7m)
- Cherries: 2018 Export volume 4,244 tonnes, fob value $84.1m (2013: 1,308t/$21.3m)
- Hops: 2018 Export volume 722 tonnes, fob value $14.9m (2013: 684t/$8.5m).

Horticultural exports – *Years to June ($ billion, fob)*

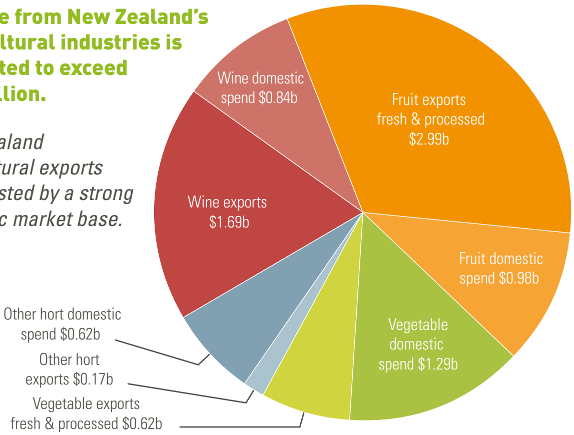


Source: Statistics New Zealand

Exports/imports

Produce from New Zealand's horticultural industries is calculated to exceed $9.2 billion.

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



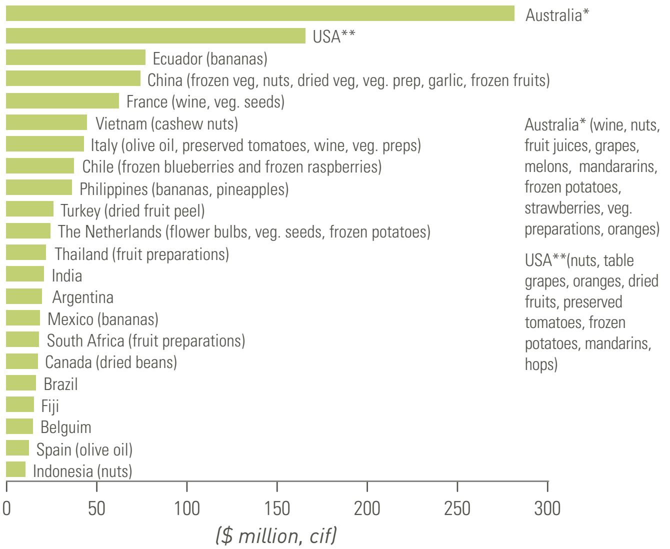
Source: Statistics New Zealand merchandise exports, with domestic market figures derived from the triennial Household Economic Survey (HES) 2016 and Statistics New Zealand estimate of mean number of private dwellings year to 30 June 2018.

Top 10 export destinations *($ million, fob)*

	2010	2017	2018	
Continental Europe	618	778	914	Kiwifruit, apples, wine, onions, carrot seed, honey*, radish seed
Australia	702	855	815	Wine, avocados, processed veg, potatoes, honey*, kiwifruit, beans, blueberries, peas, fruit preparations, sweetcorn
USA	352	726	713	Wine, apples, honey*, kiwifruit
China	100	502	627	Kiwifruit, honey*, apples, wine, cherries, frozen peas
Japan	483	605	595	Kiwifruit, squash, honey*, veg-juice, other frozen veg, sweetcorn, capsicums, wine, apples
UK	367	484	472	Wine, apples, honey*
Taiwan	108	250	244	Kiwifruit, apples, cherries
Canada	74	134	157	Wine, kiwifruit, apples
Korea	85	122	116	Kiwifruit, squash
Hong Kong	61	91	97	Apples, kiwifruit, honey*, wine

*Exports to European ports are combined as 'Continental Europe' because of cross-border distribution within the EU and neighbours. UK reported separately, recognising Brexit pending. Products listed in descending order of value and if value to the destination exceeded NZ $10 million fob. * Consistent with other entries in Fresh Facts, honey exports are not included in totals (Source: Statistics New Zealand).*

The origin of fruit and vegetable imports, 2018



Australia* (wine, nuts, fruit juices, grapes, melons, mandararins, frozen potatoes, strawberries, veg. preparations, oranges)

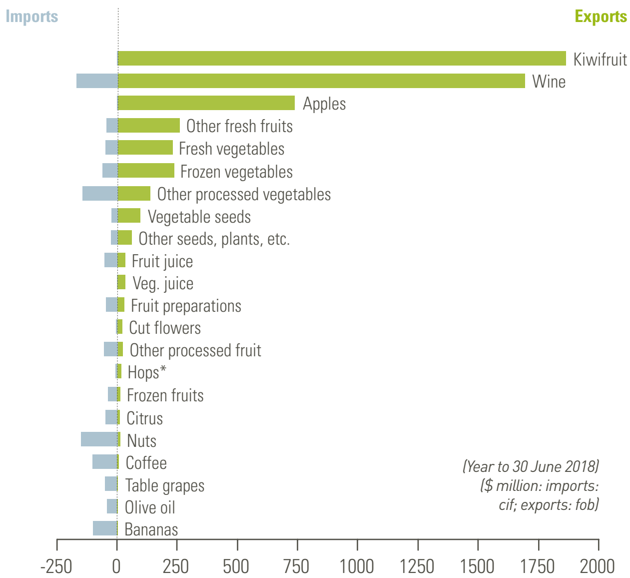
USA**(nuts, table grapes, oranges, dried fruits, preserved tomatoes, frozen potatoes, mandarins, hops)

The countries listed in this diagram send us more than $10m (cif) of fruit and vegetables.

Many of these crops are not grown in New Zealand. Others complement availability gaps in New Zealand's own seasonal production. Products named when import value exceeds $5m.

Source: Statistics New Zealand; Overseas Trade statistics for year ended June 2018.

Comparisons of imports and exports 2018 *($ million)*



Source: Statistics New Zealand; Overseas Trade Statistics

Export destinations

United Kingdom & Ireland

2018	2010	↑
$503m	$384m	$119m

Wine	$412m
Apples	$84m
Honey*	$44m

Continental Europe

2018	2010	↑
$914m	$611m	$303m

Kiwifruit	$514m
Apples	$180m
Wine	$156m
Onions	$41m
Seeds-carrot	$30m
Honey*	$26m
Seeds-other veg.	$15m
Seeds-radish	$13m
Tulip bulbs	$7m

Middle East

2018	2010	↑
$79m	$36m	$43m

Apples	$40m
Kiwifruit	$16m
Frozen veg.	$12m
Honey*	$7m
Wine	$5m

Asia

2018	2010	↑
$2,068m	$1,156m	$912m

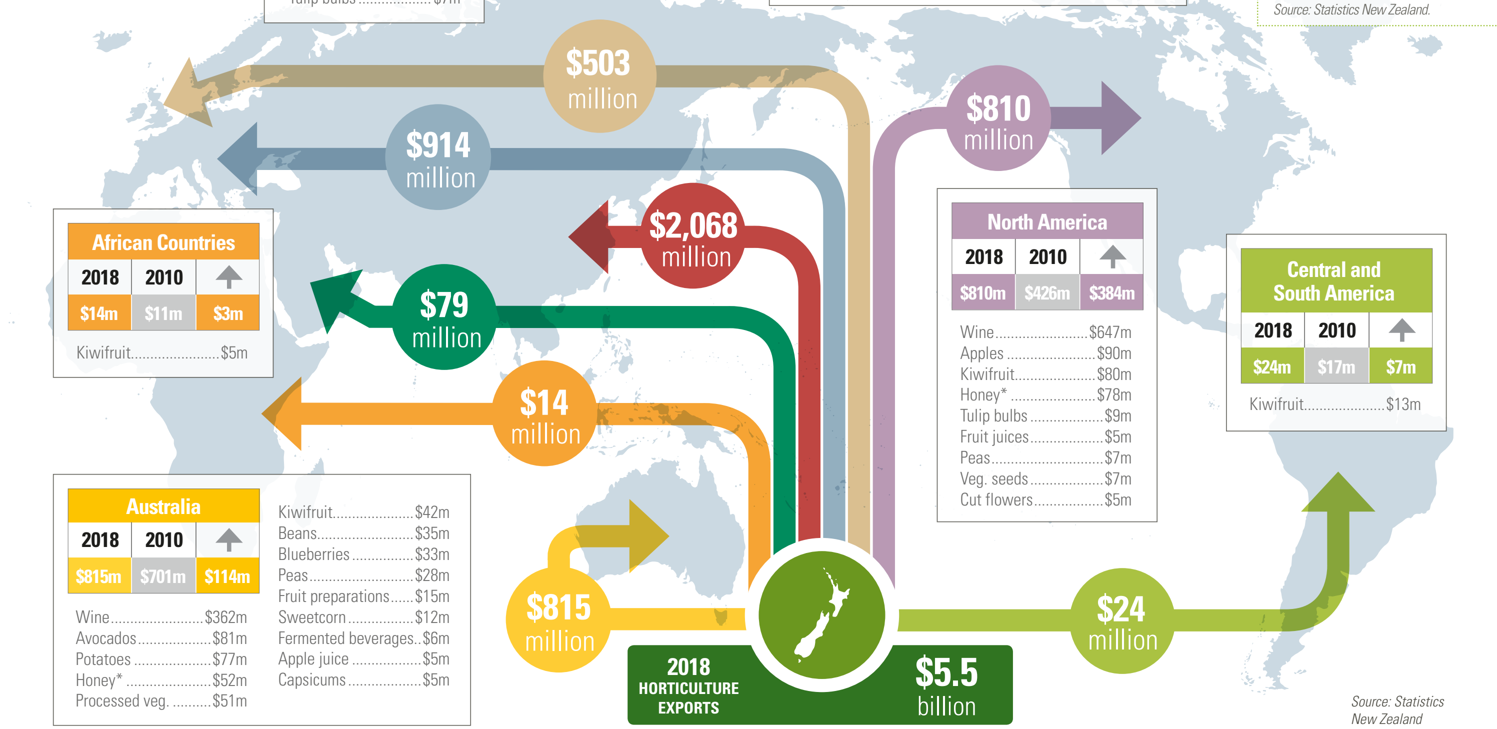
Kiwifruit	$1,188m
Apples	$325m
Honey*	$142m
Wine	$101m
Cherries	$82m
Squash	$57m
Peas	$40m
Onions	$35m
Veg. juices	$30m
Potatoes	$28m
Sweetcorn	$23m
Lilium bulbs	$19m
Avocados	$17m
Processed fruit	$17m
Capsicums	$15m
Fruit juices	$12m
Seeds-other veg	$11m
Seeds-radish	$10m
Strawberries	$8m
Orchids	$6m
Persimmons	$6m

Reference

Entries only included if value to a destination exceeded NZ $5 million.

*Honey exports of $348m (2010 $98m) are listed where value to a destination exceeded $5m and for consistency of reporting are in addition to total horticultural exports listed on page 2 and not included in the total country/region summary totals on these two pages.

Source: Statistics New Zealand.



African Countries

2018	2010	↑
$14m	$11m	$3m

Kiwifruit	$5m

North America

2018	2010	↑
$810m	$426m	$384m

Wine	$647m
Apples	$90m
Kiwifruit	$80m
Honey*	$78m
Tulip bulbs	$9m
Fruit juices	$5m
Peas	$7m
Veg. seeds	$7m
Cut flowers	$5m

Central and South America

2018	2010	↑
$24m	$17m	$7m

Kiwifruit	$13m

Australia

2018	2010	↑
$815m	$701m	$114m

Wine	$362m
Avocados	$81m
Potatoes	$77m
Honey*	$52m
Processed veg.	$51m
Kiwifruit	$42m
Beans	$35m
Blueberries	$33m
Peas	$28m
Fruit preparations	$15m
Sweetcorn	$12m
Fermented beverages	$6m
Apple juice	$5m
Capsicums	$5m

Source: Statistics New Zealand

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

Export destinations for New Zealand horticultural products – trends since 2010 *($ million, fob)*

- New Zealand-grown fruit, vegetables and flowers were exported to 128 countries in 2018 compared with 117 countries in 2010.
- Exports to 34 countries exceeded $10m (fob) in 2018, up from 25 countries in 2010.
- New Zealand also earned over $95m from horticultural machinery and components exports (2010: $52m), as well as additional income from royalties and licence agreements.

Trends

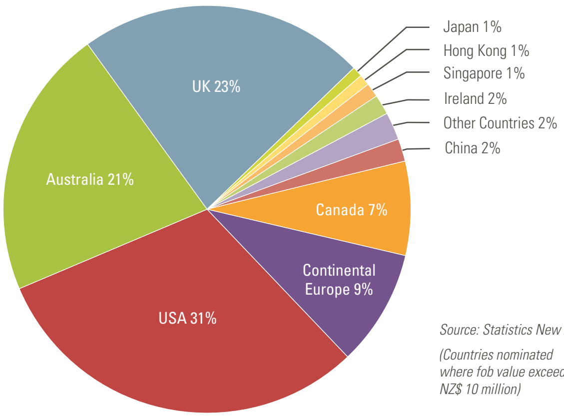
- In 2018 New Zealand fruit and vegetable exports to five markets exceeded $500m fob value: Continental Europe, Australia, the USA, China and Japan. These five export markets accounted for close to $3.7b and more than two-thirds (68%) of New Zealand's total horticultural exports in 2018.
- Exports to five other countries exceeded $100m: the UK $472m, Taiwan $244m, Canada $157m, The Netherlands $137m and Korea $122m. Horticultural exports to 24 other countries exceeded $10m, of which seven countries in Asia imported an average of $65m fob.
- The diversity of horticultural products exported is apparent in the 21 products exported to Asia each between $6m and over $1b, and to Australia with 14 categories between $5m and over $300m fob value.

Grape and wine production 2013 & 2018

Variety	Production area (ha)		Production (tonnes)	
	2013	2018	2013	2018
Sauvignon blanc	20,015	23,102	228,781	296,573
Pinot noir	5,488	5,653	31,775	35,095
Chardonnay	3,202	3,163	27,184	26,371
Pinot gris	2403	2,447	22,042	22,824
Merlot	1255	1,186	10,076	10,623
Reisling	787	707	5,932	3,776
Syrah	408	435	2,240	2,216
Gewurtztraminer	334	227	1,788	976
Cabernet Sauvignon	301	249	1,465	1,169
Malbec	142	119	825	782
Other white vinifera		195	3,146	3,125
Other red vinifera	119	95	1,083	959
Other and unknown	728	391	8,663	14,511
Total	35,182	37,969	345,000	419,000
Region				
Auckland/Northland	414	391	919	900
Waikato/Bay of Plenty	24	13	12	
Gisborne	1,599	1,274	15,567	13,000
Hawke's Bay	4,846	4,681	38,829	41,061
Wairarapa	991	1,000	4,798	4,592
Marlborough	22,819	26,007	251,630	313,038
Nelson	1,095	1,170	7,777	9,120
Canterbury/Waipara	1,435	1,475	8,348	11,157
Otago	1,959	1,904	8,407	11,358
Other and unknown		54	8,713	14,774
Total	35,182	37,969	345,000	419,000

Source: New Zealand Winegrowers Annual Report 2018. Varieties aggregated as 'other red' or 'other white' all had production < 500 tonnes in 2018

Wine exports by country 2018 *(% by value)*



Source: Statistics New Zealand

(Countries nominated where fob value exceeded NZ$ 10 million)

→ The creation of New Zealand Winegrowers Incorporated has resulted in New Zealand now being the only major wine-producing nation with a single industry body representing and advocating for its entire grape and wine industry.

Predicting Pinot noir flavour

Scientists have worked with panels of wine experts to understand which compounds in Pinot noir are associated with specific flavours and holistic wine quality assessments. Wines were subjected to descriptive sensory profiling, as well as untargeted analyses of volatile and non-volatile compounds. Several new relationships between compounds in Pinot noir wines and wine aroma, mouth feel and quality were identified. The research was a prelude to a successful MBIE-funded programme bid led by the Bragato Research Institute.

→ Important to New Zealand's wine success have been the combined effects of New Zealand's temperate maritime climate, the passion of its wine producers and the highly distinctive nature of its wine styles.

→ The characteristics of these regions can now be formally recognised by registration of the region's name under New Zealand's Geographical Indications (Wine and Spirits) Registration Act (the GI Act), with the key principles being that 100% of the wine must be from New Zealand, and at least 85% of the wine must be from the region, variety and vintage that appears on the label.

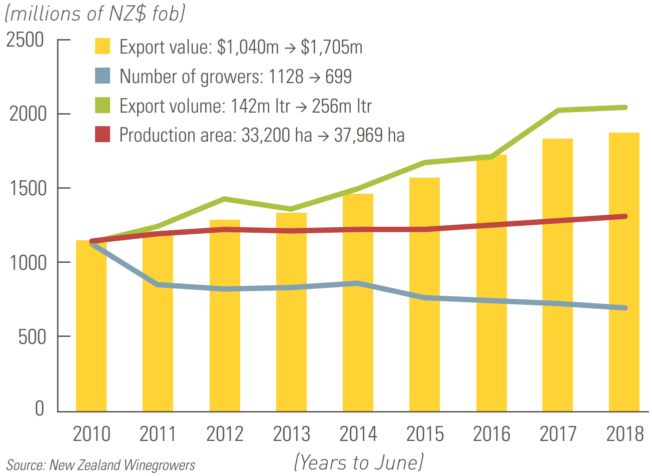
→ Wine tourism is increasing in New Zealand, with over 700,000 international visitors visiting the 279 wineries offering wine tasting experiences, tours, dining and accommodation in 2017. *Source: NZIER/MBIE*

→ The New Zealand wine sector hosts visiting sommeliers and wine writers who pass on their experiences:

"Sustainability is second-nature, and being carbon-zero and certified bio is something that everyone strives for, not to market their wines better but just because it's the mindset of the people." *Yeo Xi–Yang, Sommelier, Singapore.*

Growth in wine exports volume (litres) and value (fob):

2010 to 2018 compared with relative change in production area and number of growers *(relative change scaled to 2010 datum point)*



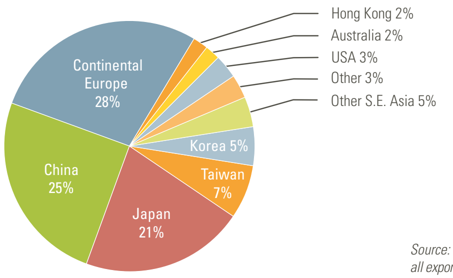
Source: New Zealand Winegrowers Annual Report 2018

Kiwifruit industry: Zespri Group Ltd
New Zealand grower and chain statistics to 2018

Season (ends 31 March)	2004/05	2009/10	2014/15	2016/17	2017/18
Crop volumes (million)					
Trays submitted*	85.8	107.0	97.3	148.9	125.8
Trays sold	79.7	98.5	95.2	137.7	123.2
General Statistics					
Yield (trays/ha)	7,847	8,546	8,662	11,838	9,913
Area planted# (ha)	10,934	12,525	11,233	12,578	12,692
Growers/suppliers‡ (no.)	2,760	2,711	2,540	2,435	2,405
Packhouses (no.)	88	71	50	50	56
Coolstores (no.)	89	77	62	73	67
Orchard Gate Return ($/ha)	34,738	39,142	57,369	68,868	79,361

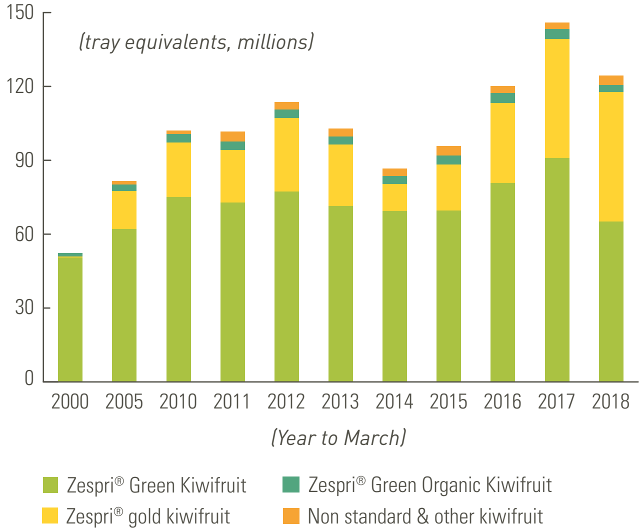
**A tray weighs 3.6 kg. # Producing hectares ‡ Refers to number of submitters*
Source : Zespri International Ltd Annual Review 2017/18.

New Zealand kiwifruit export markets *(year to 30 June 2018)*



Source: Stats NZ exports, all exporters y/e June

Zespri Group Ltd production profile (TEs) 2000 - 2018



Sources: Zespri International Annual Reviews, years to 31 March

The growth of Zespri® SunGold Kiwifruit

Zespri® SunGold Kiwifruit has had consistently strong performance in the markets over successive seasons. Zespri's analysis of future demand resulted in an additional 3,500 hectares of additional SunGold licences being released from 2018, with 700 hectares of SunGold and 50 hectares of SunGold Organic released for tender annually until 2022 (subject to annual review). This will supplement the almost 5,000 producing hectares of SunGold kiwifruit currently grown across the country.

- The value of New Zealand kiwifruit exports in 2018 was $1.86b fob which was $580m (46%) more than the average of $1.28b for the previous five years.
- New Zealand-produced kiwifruit were exported to 53 countries in 2018, with $1.19b (2017: $1.09b) to Asian countries, two importing more than $300m: Japan $397m (2017: $381m) and China $458m ($365m). Kiwifruit to the value of $512m ($422m) went to countries in Continental Europe.
- Zespri® Green Kiwifruit production fell 28% from 326,880t in 2017 to 234,360t in 2018 which was explained by Zespri as being "… characterised by greater-than-expected yield volatility". Despite the reduced volume, the average per-hectare return was 12% higher at a record $59,980 (2017: $53,555). Producing area of Zespri® Green Kiwifruit was 7,832ha.
- The gold-fleshed kiwifruit marketed as Zespri® SunGold Kiwifruit ('Zesy002') has replaced the previous variety Zespri® Gold Kiwifruit ('Hort16A') with volume increasing to 189,360t (2017: 174,600t), and the average per-hectare return increasing to $114,345 ($98,838) from 4,630ha. An additional 700ha was released in 2017.
- Producing hectares for all Zespri kiwifruit cultivars in 2018 was 12,692ha, with the average orchard gate return per hectare increasing to $79,361 (2017: $68,868).
- The 'Zespri Global Supply' initiative which aims to fill the gaps in New Zealand supply to international markets had a 2018 sales volume of 55,440t (2017: 59,760t); within that total, SunGold volume was 21,600t (19,440t). To increase SunGold volumes available in Europe, Zespri has increased licences by 1,800ha to now total 3,900ha in Europe.

*Sources: Zespri International Annual Reviews, y/e March; * data Stats NZ exports, all exporters y/e June*

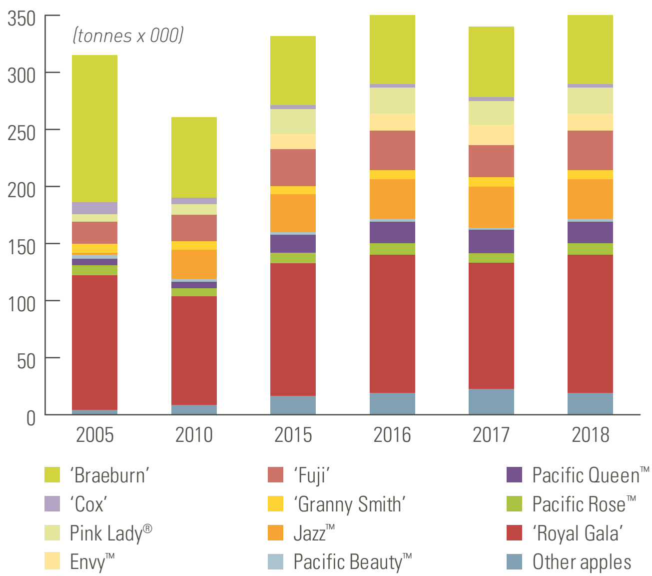
Apple statistics

Year ending 31 Dec.	2005	2010	2015	2017	2018
National export production ('000 tonnes)	315	260	331	343	377
Growing method: IFP	95%	94%	94%	93%	94%
Certified organic	5%	6%	6%	7%	6%
General statistics					
Export FOB $/TCE *(*)*	$12.88	$22.93	$32.83	$35.72	$36.39
Area planted (ha)	10,764	8,630	8,566	9,139	9,448
Export orchards (no.)	920	985	919	957	944
Export packhouses (no.)	85	62	56	54	57
No. of exporters		90	79	78	80

IFP: Integrated Fruit Production sustainability; TCE: tray equivalents 18 kg sale weight.
Source: New Zealand Apples & Pears Inc., (*) Statistics New Zealand, export fob. Year ending June 2018

- In 2018 New Zealand exported 383,500t* of apples to 65 countries, with a record fob value of $732m, being $41m more than 2017 and $141m more than the average for the previous five years. This was a strong performance in a competitive global market.
- World apple production in 2016 exceeded 89 million tonnes (MT); about half produced in China which in the past decade has increased apple production by about 18.4 MT (70% increase to have 74% of its production now in 'new' cultivars) compared with the rest of the world increasing by 4 MT. China is now ranked #5 in production efficiency. *[Sources: World Apple Review, 2018, *Statistics New Zealand, export fob. Year ending June 2018]*
- In the past 20 years global apple production has increased by 37MT whilst the volume of all fruits for fresh use and for processing increased 300 MT to 700 MT (72%) *[source: UN, FAO]* and world population increased by over 1.6 billion people (28.4%).
- Global trade in apples is about 8.8MT (10% of global production) of which China exports approx. 1.3MT (2016) (3% of its production) compared with New Zealand exporting 0.4MT.

Apple export production by variety: 2005 – 2018



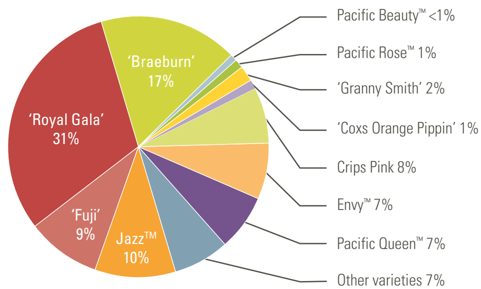
Source: New Zealand Apples & Pears Inc. Year ending 31 Dec. 2018

Maintaining quality of apple exports

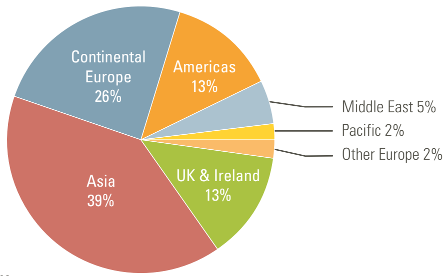
A world-first tool now allows growers to predict apples at risk of internal browning up to four weeks before harvest, providing marketers with early information to make storage and supply decisions. The model is being used in some growing regions in New Zealand and being piloted in other parts of the world. It ensures that only consistently high eating quality fruit reach the consumer.

- 'World Apple Review 2018': *"New Zealand the Innovator: Because of its relatively small size, heavy export orientation and distance from major markets, the New Zealand apple industry has long relied heavily on innovation to provide it with an edge over major competitors."* The publication ranked New Zealand #1 in International Competitiveness in 2017 & 2018 among 33 apple exporting countries scoring across 23 criteria, with percentage of 'New Varieties in Production', 2017 NZ 78.2% (avg all 33: 36.8%) and 'Average Yield per Hectare', 2015-17: NZ 61t, (avg 23.4t).

Apple exports by variety



Apple export destinations by region



Source for above charts:
New Zealand Apples & Pears Inc.
(Weight basis, year ending Dec. 2018)

Other fresh fruits

	Growers[a] (no.)	Planted area[a] (ha)	Crop volume[a] (tonnes)	Sales value ($m) Domestic[b] 2017/18	Sales value ($m) Export[c] (fob) 2018
Avocados *(year to 30 April)*	887	3,839	22,608	37.4	104.7
Berryfruits	240	3,127	22,385	45.2	43.2
- Blackcurrants	*32*	*1636*	*8,915*	*1.0*	
- Boysenberries	*19*	*206*	*2,700*	*5.0[c]*	
- Raspberries	*50*	*150*	*945*	*3.0*	
- Blueberries	*60*	*740*	*2,825*	*21.0*	*34.8*
- Strawberries	*150*	*275*	*8,000*	*22.3*	*8.3*
- Other berryfruits		*120*	*500*	*0.6*	*0.1*
Citrus	320	1,660	30,692	56.9	9.3
- Grapefruit	*18*	*15*	*302*	*0.3*	
- Lemons	*75*	*257*	*6,291*	*13.0*	*7.3*
- Limes	*47*	*27*	*410*	*2.0*	
- Mandarins	*140*	*556*	*11,310*	*24.6*	*0.4*
- Oranges	*121*	*783*	*11,708*	*16.0*	*1.5*
- Tangelos	*28*	*22*	*902*	*1.0*	*0.1*
Feijoas	225	181	1,500	4.0	0.2
Grapes - table		43			0.5
Hops	25	525	722		
Kiwiberries	28	35	200	0.3	4.2
Nashi	18	25	650	1.3	0.1
Nuts		1,344			0.8
- Chestnuts	*100*	*142*	*350*		
- Macadamias		*195*			
- Hazelnuts		*433*			
- Walnuts		*574*			
- Other nuts					*0.8*
Olives	300	2,172	3,000	3.2	
Passionfruit	50	20	90	0.4	0.6
Pears	76	361	4,822		11.7
Persimmons	50	138	1,500	1.5	9.5
Summerfruit	280	2,140	15,565	62.2	88.0
- Apricots	*52*	*445*	*2,256*	*5.9*	*2.9*
- Cherries	*88*	*726*	*5,898*	*9.1*	*84.1*
- Nectarines	*56*	*305*	*2,798*	*9.7*	*0.1*
- Peaches	*73*	*374*	*2,412*	*8.1*	*0.6*
- Plums	*78*	*290*	*2,201*	*6.4*	*0.3*
Tamarillos	40	100	450	2.4	0.1
Other fruit		250			0.3
Total fresh fruit *(excl. Kiwifruit, Grape Wine, Apples)*					**266.7**

Sources: [a]Sector estimates, [b]Sector estimates of first point of sale values, [c]Statistics New Zealand Overseas Trade Statistics. [d]Sector adjusted data for product group reporting period. Blank entries indicate either that the information is not available or items are valued at less than $100,000.

- Fresh fruit exports in 2018 were 877,700t worth $2.86b. The average value for fresh fruit exports for the previous five years was $2.1b.
- Kiwifruit exports $1.86b (2017: $1.66b) were 65% of the total fresh fruit export value; apple exports $732.9m ($691.1m) were a further 26%. Other fresh fruit exports were avocados $98m[c] ($156m), cherries $84m ($71m), blueberries $35m ($32m), and 23 other fresh fruit crops with a combined value of $50m.
- Fresh and processed fruit exports totalling $4.4 billion were $764m above the previous five-year average, the dominant crops being wine grapes and fresh kiwifruit and apples.

Future orchards for summerfruit

New apricot and cherry plantings under a new orchard planting system programme have shown potential yields of up to 24 tonnes per hectare in their third and fourth year from planting, compared with average yields of 15 tonnes per hectare from fully mature trees grown in conventional configurations. The high yields are the result of increased light interception induced by narrow row spacings and trees trained to grow in a two-dimensional planar formation.

Processed fruits

	Sales value ($m) Domestic[a] 2017/18	Sales value ($m) Export[b] (fob) 2018
Apple juice	80.0[c]	12.2
Avocado oil	2.1	6.1
Blackcurrant concentrate		4.4
Other fruit juices	92.1	19.9
Other fermented beverages		8.4
Dried fruits		4.3
Frozen fruits		11.3
- Blackcurrants		*1.3*
- Blueberries	2.8	*0.4*
- Boysenberries	2.7	*2.0*
- Kiwifruit		*5.2*
- Raspberries		*0.1*
- Other		*2.3*
Fruit preparations		29.6
- Apples		*9.2*
- Blackcurrants		*0.1*
- Kiwifruit		*1.3*
- Fruit mixture preps		*15.1*
- Pears		*0.2*
- Other		*3.7*
Hops	7.2	14.9[a]
Jams, jellies and purees		5.3
Nuts		9.3
Olive oil	12.0	0.5
Total processed fruit		**126.2**

Fruits used for processing is produced on the orchard areas described in the fresh fruit table. Sources: [a]Sector estimates of first point of sale values, [b]Statistics New Zealand, [c]Author's estimate. Blank entries indicate either that the information is not available or items are valued at less than $100,000.

- Cherry exports of $84m were $36m above the 2013 to 2017 average of $48m.
- Processed fruit exports, as frozen, as preparations or juice, (excluding wine and processed apples and kiwifruit) were $98m fob value, which was 25% less than the average fob value of $130m for the previous five years.
- 2018 avocado exports of $98m were $50m less than the 2017 record but $4m more than the 2013 to 2017 average export value of $94m. *(Source: StatsNZ y/e June 2018)*

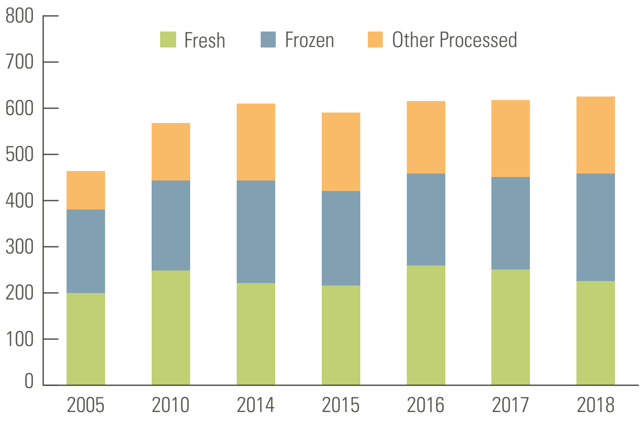
Fresh and processed vegetables

Sales value *($ million, fob)*

	Growers[c] (no.)	Planted[c] area (ha)	Crop volume[c] (tonnes)	Domestic[c] 2018	Exports 2018[g] Fresh	Processed[b]
Asparagus	42	570[c]	1,800	8.5	0.7	
Beans	30	1,200[c]	24,700	10.3		39.8
- fresh	*5*	*300*	*3,000*	*6.0*		
- processed	*25*	*900*	*21,700*	*4.3*		
Beetroot	28	380	27,500	8.0		
- fresh	*42*	*130*	*8,000*	*4.0*		
- processed	*8*	*300*	*21,500*	*10.8*		25.0
Brassicas	125	3,432[c]	115,700	80.3	2.0	
- Broccoli	*75*	*2,082[c]*	*24,700*	*35.0*		
- Cabbage	*75*	*804[c]*	*58,000*	*25.3*		
- Cauliflower	*20*	*546[c]*	*33,000*	*20.0*		
Capsicums	22	85[c]	21,000	25.0	21.0	
Carrots	54	1,410[c]	153,900	56.0		
- fresh	*20*	*800*	*88,000*	*40.0*	8.5	
- processed	*34*	*610*	*65,900*	*16.0*		1.8
Cucumbers[h]	51	71[c]	2,000	20.0		
Eggplant/Aubergines	20		1,000	8.5		
Garlic	10	210[c]	1,200	7.0	0.8	
Kumara[h]	48	2,541[c]	24,000	55.0		
Lettuces	162	1,582		42.0	0.6	
- outdoor	*140*	*1,532[c]*		*17.0*		
- greenhouse	*22*	*50[c]*		*25.0*		
Melons	20	273[f]	4,800	28.0	1.3	
Mushrooms[h]	7	25[c]	8,500	42.0	1.4	
Onions	92	5,227[c]	191,639	30.0	93.0	
Peas	440					
- fresh	*20*					
- processed	*120*	4,075[c]	44,000	25.0		87.7
Potatoes	171	10,344[c]	527,190	139.0	26.4	114.9
- fresh/table			*150,788*	*56.0*		
- processed			*354,360*	*83.0*		
Pumpkins	30	1,158[c]	38,000	13.0		
Shallots	4	30[c]	1,200	3.0	0.2	
Silverbeet/Spinach	10	2,082[f]	3,500	12.0		
Squash	24	6,642[c]	88,179	3.0	58.6	
Sweetcorn	179	3,871[f]	98,800	27.5	0.1	42.0
- fresh			*22,000*	*11.0*		
- processed			*76,800*	*16.5*		
Tomatoes	129	528	95,400	141.5		
- outdoor, processed	*6*	*408[c]*	*53,000*	8.5		3.1
- greenhouse	*123*	*120[c]*	*42,400*	200.0	9.6	
Truffles[d]	75	70	0.2	0.5		
Mixed vegetables	Made from combinations of the above crops.					25.3
Dried vegetables	Excluding peas, beans, corn.					11.3
Vegetable preps						3.3
Vegetable juices						31.7
- carrot juice[d]						*28.0*
- other veg. juices						*3.7*
Other vegetables[a]					2.2	10.5
Total	800[e]	45,466[f]			226.4	396.4

Crops areas are predominantly sector estimates. [a]Includes taro, celery, parsnips, spring onions, Asian vegetables (excl. Chinese cabbage), yams, witloof, leeks, vegetable shoots, shallots, swedes and some others. [b]Processing includes freezing, canning, juicing and artificial drying. [c]Sector estimates. Blank entries indicate that the information is not available. [d]Authors' estimates. [e]Growers produce multiple crops. [f]Statistics New Zealand Production Census crop areas as at 30 June 2017. [g]Statistics New Zealand from export entries. [h]Crop grown both outdoor and indoor/protected.

Vegetable exports 2005 – 2018 *($ million, fob)*



Source: Statistics New Zealand. Years ending 30 June.

→ In 2018 New Zealand exported $625.0m (2017: $617.4m) fob value of vegetables across more than 20 significant categories. This was the highest value of vegetable exports to date from New Zealand. Net weight of vegetable exports in 2018 was 486,300t (2017: 494,000t).

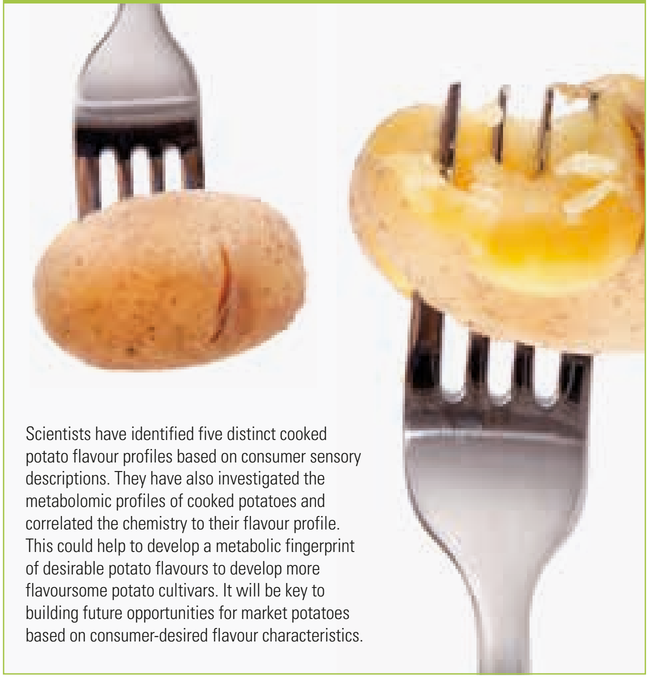
→ The dominant vegetable varieties exported in fresh, chilled, frozen, juiced or other processed forms were: potatoes $114.9m (2017: $112.8m), onions $92.6m ($111.9m), peas $87.7m ($84.6m), squash $58.6m ($56.2m), sweetcorn $42.0m ($41.5m), carrots and carrot juice $38.5m ($39.2m), beans $30.8m ($37.8m), beetroot $25.0m ($21.7m) and capsicums $21.0m ($28.7m). These nine categories, all with export values of more than $20m, had a collective value of over $500m and were more than 80% of all vegetable exports.

→ Fresh and processed vegetables were exported to 85 countries in 2018, with more than half (56.0%) to two countries:

- 33.6% to Australia: $210.1m (fresh veg. $7.7m, frozen $130.2m [potatoes $71.8m, peas $23,7m, mixed veg. $16.2m], vegetable preparations $57.8m [of beans: $28.6m]).
- 22.4% to Japan: $140.0m (fresh $65.2m [squash $39.2m, capsicums $14.6m]), frozen $28.0m, vegetable juice $28.8m (predominantly carrot).

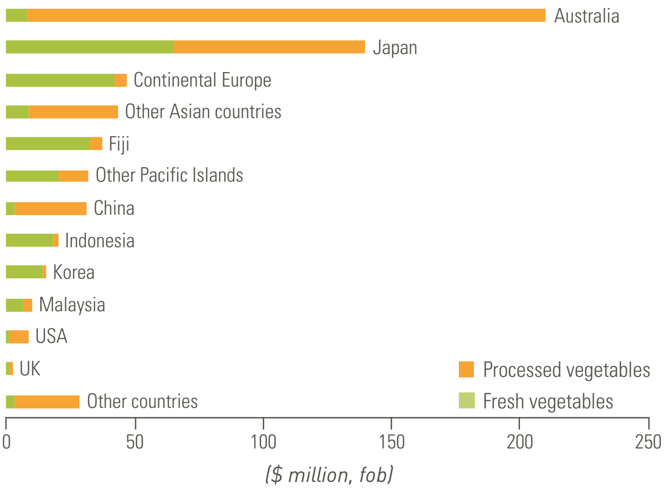
→ New Zealand imported 118,185t of vegetables in 2018 with a cif value of $263.8m (2017: 107,100t/$243.0m cif) from 80 countries. Largest volume vegetable imports were 25,869t of preserved tomatoes (Italy 12,154t, the USA 8,457t) and 19,850t of frozen potatoes (Continental Europe 7,618t, Australia 6,340t).

Flavoursome potatoes



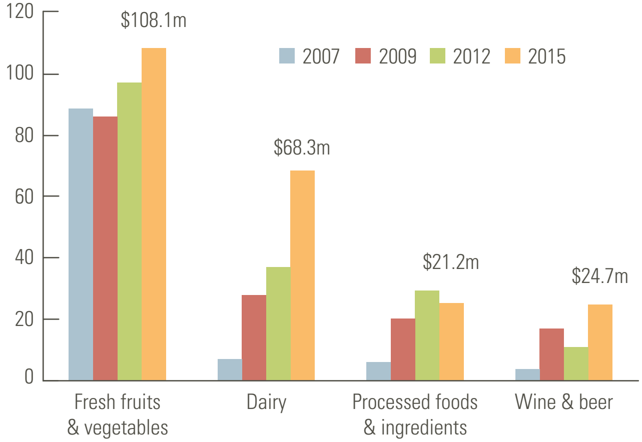
Scientists have identified five distinct cooked potato flavour profiles based on consumer sensory descriptions. They have also investigated the metabolomic profiles of cooked potatoes and correlated the chemistry to their flavour profile. This could help to develop a metabolic fingerprint of desirable potato flavours to develop more flavoursome potato cultivars. It will be key to building future opportunities for market potatoes based on consumer-desired flavour characteristics.

Destinations of New Zealand vegetable exports 2018



Source: Statistics New Zealand. Year ending 30 June 2018.

New Zealand exports of organically certified produce *($ millions)*

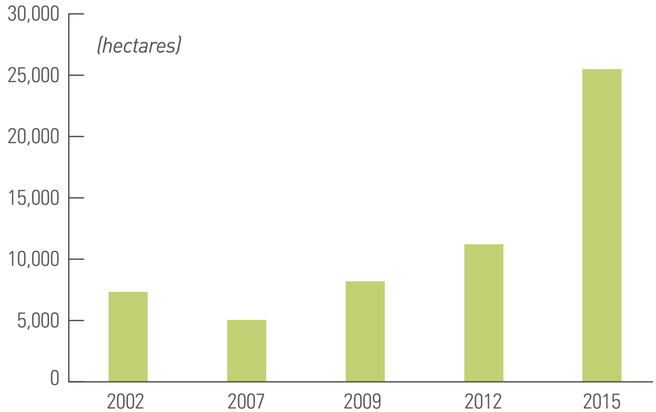


Source above and below: New Zealand Organic Market Report 2016. Years ending March.

Organic production

- New Zealand horticultural land area under organic certification increased by 128% in the three years from 2012 (11,188 ha) to 2015 (25,476 ha), reflecting significant growth principally in certified organic pipfruit and vineyard production. Planted areas of organic apples and kiwifruit have not increased since 2015.
- In 2015 there were 610 organic operations in horticulture, down 5% from 2012.
- Export values of organically certified fresh fruit and vegetables in 2015 were calculated to be $108m and 45% of total organic sector produce exports.
- In 2015, the New Zealand market for organic food, including both exported and domestically consumed, was estimated at between $457m and $467m. This compares with an estimated $350m in 2012 – a 30% increase.

New Zealand land area under organic certification, horticulture and viticulture



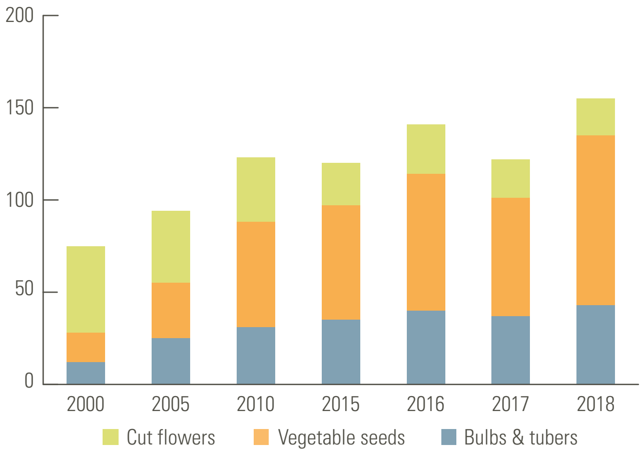
Exports of flowers, plants, seeds and other products *($ million,fob)*

	2000	2010	2015	2017	2018
Cut flowers					
- Chrysanthemums		0.2	0.1	0.1	0.1
- Hydrangeas		2.7	2.8	2.4	1.6
- Lilium	1.9	0.2	0.1	0.1	0.1
- Nerines	0.6	0.2	0.1	0.1	0.1
- Orchids	22.4	20.8	12.9	11.7	11.6
- Paeonies	0.5	1.7	2.0	2.7	3.3
- Pittosporum		1.2	0.5	0.6	0.5
- Proteaceae	1.4	0.9	0.3	0.3	0.3
- Sandersonias	3.1	0.2	0.1	0.1	0.1
- Zantedeschia (Calla lily)	7.7	3.7	0.9	0.3	0.3
- Other foliage	0.6	0.6	0.3	0.6	0.2
- Other cut flowers	8.5	2.7	2.8	2.1	2.0
Plants					
- Other live plants	5.6	6.6	4.8	4.8	4.8
- Edible plant parts					2.1
Seeds					
- Flower seeds	2.1	0.3	0.4	0.4	0.0
- Fruit seeds		1.9	2.4	3.1	1.9
- Cabbage seeds		5.0	4.7	6.5	4.3
- Carrot seeds		7.6	12.2	12.8	30.3
- Radish seeds		21.4	23.9	22.8	25.1
- Silverbeet seeds			4.0	2.4	3.4
- Other veg. seeds	15.9	23.4	17.7	19.9	29.3
- Tree seeds	1.6	1.5	1.0	1.4	0.9
Bulbs, tubers, corms					
- Lilium		16.8	24.2	20.6	26.0
- Sandersonias		0.7	0.2	0.2	0.3
- Tulips		9.6	9.7	15.3	15.8
- Zantesdeschia (Calla lily)	1.5	3.5	0.1	0.1	0.1
- Others	10.1	0.4	0.6	0.1	0.2
Sphagnum moss	15.3	6.1	5.2	4.7	4.7*
Total	98.8	139.9	134.0	136.2	169.4

*The term "bulbs" is used to include bulbs, corms, tubers, tuberous roots, crowns & rhizomes. *Authors' estimate.*
Source: Statistics New Zealand. Years ending 30 June.

→ Cut flowers and foliage 2018 exports of $20.3m were $10.8m less than the average of $31.1m for the previous decade and 48% less than the previous decade's peak export level of $39.2m in 2008. 2018 orchid exports were $11.7m (2008: $20.4m); paeonies $3.3m ($1.6m); hydrangeas $1.6m ($2.4m); calla lily $0.3m ($4.7m).

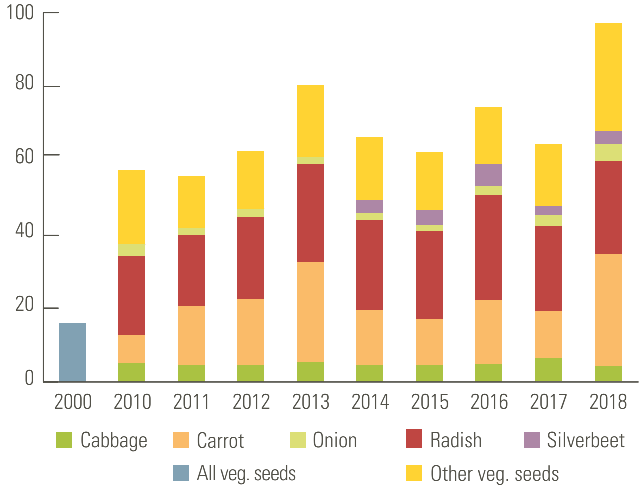
Exports of flowers, seeds and bulbs *($ million, fob)*



→ Vegetable seed exports of $94.2m in 2018 were 43.4% higher than the previous year (2017: $64.4m), increasing from $57.4m in 2010 and $15.9m in 2000. Compared with 2013, a previous export high, cabbage seed export in 2018 was worth $4.3m (2013: $5.3m); carrot seed $30.3m ($29.6m); radish seed $25.1m ($26.6m); onion seed $4.8m ($1.9m). In 2018 New Zealand imported vegetable seed to the value of $26.4m cif.

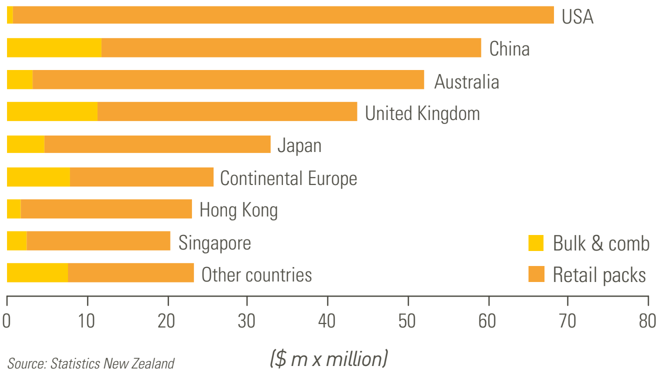
→ Of the 8,321 tonnes of vegetable seed (total value of $94.2m) exported in 2018 to 61 countries, $58.1m was to Continental Europe (The Netherlands $50.9m: carrot seed $29.1m, radish seed $10.6m), $21.9m to Asia (Korea $7.6m, Japan $6.3m, Viet Nam $3.2m), the USA $6.5m, African countries $2.4m (Algeria $1.7m) and Australia $2.3m.

Vegetable seed exports *($ million)*



Source for above graphs: Statistics New Zealand. Years ending 30 June.

Export destinations for natural New Zealand honey 2018 *($348m fob)*

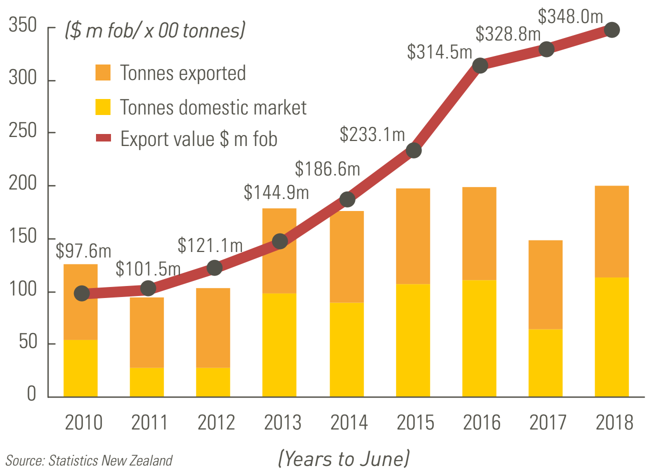


Source: Statistics New Zealand

A vital contributor to horticulture

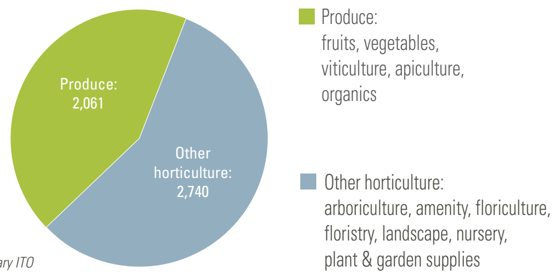
- → Bees are crucial to New Zealand's primary sector, pollinating approximately one third of our food sources.
- → Honey production in 2018, at 20,000t was up by 5,200t compared with 2017 but similar to 2016 (19,885t). The previous ten-year average was 14,225t. Average yield per hive was 22.3kg (2017: 18.7kg).
- → In 2018 New Zealand's honey exports went to 52 countries, with a total value of $348.0m fob (2017: $328.8m), 85% by weight in retail packs (2017: 81%).
- → As at June 2018 New Zealand's 9,173 registered beekeepers (2017: 7,814) had 895,860 hives, an increase of 100,282 on 2017 and a 160% increase on the number of hives in 2008 (344,123).

New Zealand natural honey exports 2010 - 2018



Source: Statistics New Zealand

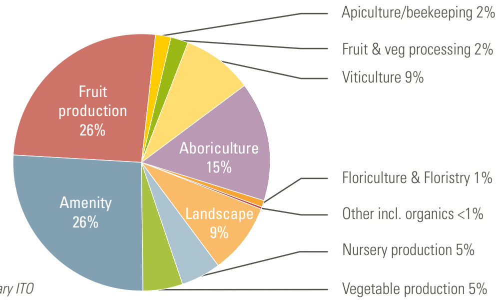
Persons in horticultural training 2018 *(year to December 2018)*



Source: Primary ITO

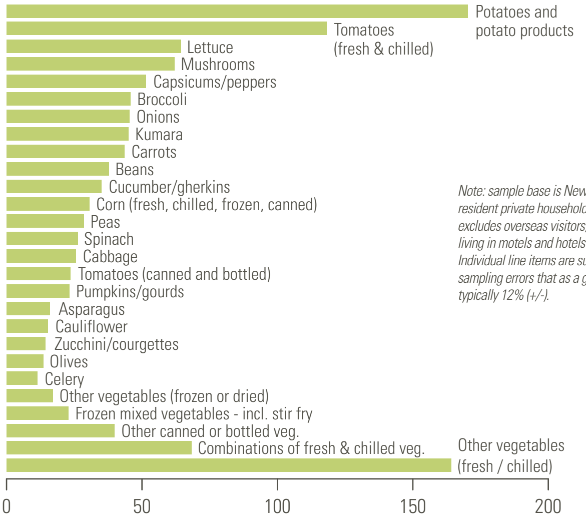
- → In 2018 trainees in the different fields of horticulture totalled 4,801.
- → Of the 2,061 in food/produce production, 1,230 were in fruit production and 418 were in viticulture (wine grape) production
- → In the non-food production sectors of horticulture, 1,261 trainees were in amenity and sports horticulture, 721 in arboriculture, 459 in landscape and 226 in nursery production training.

Trainees by category *(year to December 2018)*



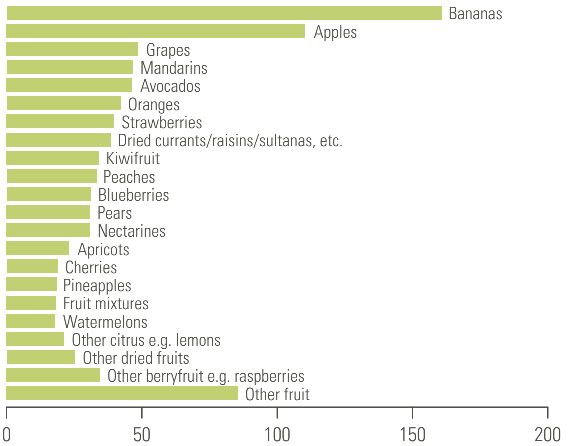
Source: Primary ITO

New Zealand consumer spending on vegetables *(2016, $ million)*



Note: sample base is New Zealand resident private households; i.e. excludes overseas visitors, people living in motels and hotels etc. Individual line items are subject to sampling errors that as a guide are typically 12% (+/-).

New Zealand consumer spending on fruit *(2016, $ million)*



Calculated aggregate annual expenditure by all private New Zealand households (local & imported produce, fresh / chilled / dried / canned / bottled / frozen)

In 2016 New Zealand households spent an estimated $3.0b on fruit, vegetables and wine, with:

- → $ 800m on fresh and chilled fruits
- → $ 160m on processed fruits
- → $ 930m on fresh and chilled vegetables
- → $ 330m on processed vegetables
- → $ 820m on wine

Source: Statistics New Zealand: triennial Household Economic Survey (HES), 2016. 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, 2018

	Crop area (ha)	On-farm ($ million)	Off-farm ($ million)	**Total ($ million)**
Apples, pears & nashi	9,809	1,830		
Wine grapes	37,969	7,670		
Kiwifruit	12,692	8,720		
Summerfruit	2,140	270		
Avocados	3,830	920		
Citrus	1,660	145		
Berryfruit	3,072	270		
Nuts	1,344	85		
Olives	2,172	190		
Hops	525	90		
Other fruit	815	70		
Total fruit	76,028	$20,260	$27,300	**$47,560**
Potatoes	10,306	645		
Peas & Beans	5,275	370		
Onions	5,227	325		
Squash	6,642	530		
Sweetcorn	3,871	250		
Broccoli, cabbages & cauliflowers	3,432	225		
Carrots	1,410	90		
Asparagus	521	35		
Lettuce	1,582	105		
Other vegetables	7,147	465		
Other seed growing	11,063	720		
Total vegetables (outdoor)	56,476	$3,760	$1,700	**$5,460**
Floriculture - outdoor	1,762	195		
Protected - greenhouse tomatoes	84	380		
- indoor vegetable crop	180	405		
- floriculture (under cover)	105	240		
Total floriculture & protected crops	2,131	$1,220	$300	**$1,520**
Total horticultural	134,635	$25,240	$29,300	**$54,540**

The above table is an estimate of the 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 2018 (pgs 8 to 16 incl.) with author adjustments for informal production. The numbers differ from Statistics New Zealand Agricultural Production Census hectares as at June 2017 (pgs 26 & 27). 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.

Land values are based on independent land valuation advice and industry and authors' estimates across crop types that collectively account for more than 75% of fruit production and more than 50% of vegetable production. Off-farm investment levels have been estimated from industry advice and guidance including integrated producers whose supply chain includes both production and post production.

- → There are wide variations in land values across New Zealand's horticulture: prime horticulture land in Hawke's Bay has estimated values of between $140k and $320k per hectare for apples. Also in Hawke's Bay, land for growing squash is typically $30k to $85k per hectare.
- → In the Gisborne region land for growing apples ranges in value between $140k and $285k per hectare with variety, returns and yields being major factors.
- → Emerging trends include:
  - – Protected cultivation: significant increase in the construction of covered structures for berry and vegetable production
  - – The value of innovation versus returns for traditional cultivars is reflected in kiwifruit: orchard values in the Bay of Plenty region can be $380k to $580k per hectare for the green cultivar compared with $850k to $1,100k for the gold cultivar.

Distribution of fruit by Regional Councils *(area planted, ha)*

As at 30 June 2017

Regional Council Year ended 30 June 2017	Apples	Wine grapes	Kiwifruit	Summerfruit	Avocados	Citrus	Berryfruit	Nuts	Olives	Other subtropical	Other fruits	Total fruits
Northland	20	C	551	8	1,647	313	35	45	118	129	155	3,021+
Auckland	84	836	494	31	281	121	164	86	128	65	13	2,303
Waikato	144	15	412	50	101	13	350	26	34	71	8	1,224
Bay of Plenty	67	75	9,227	7	1,834	62	42	28	26	62	17	11,447
Gisborne	186	1,245	282	12	48	1,136	1	15	C	137	12	3,074+
Hawke's Bay	4,746	3,616	121	633	20	41	116	8	120	142	9	9,572
Taranaki	3	C	C	6	23	2	3	11	C	14	2	63
Manawatu-Wanganui	C	88	116	13	3	1	20	25	34	28	2	330
Wellington	102	832	10	15	8	1	12	42	181	15	43	1,261
Tasman-Nelson	2,400	1,004	440	34	8	7	323	28	72	178	34	4,529
Marlborough	21	23,051	0	45	0	0	6	5	50	8	688	23,874
West Coast	0	C	0	11	0	0	6	1	0	8	0	26+
Canterbury	312	1,769	C	81	C	0	1,103	478	133	17	67	3,960+
Otago	427	1,173	C	1,144	C	0	36	144	19	21	36	3,001+
Southland	C	C	C	31	C	2	66	15	0	0	C	114+
Other/non allocated	104	277	52	19	8	0	37	0	6	4	1	506
Total New Zealand	**8,615**	**33,981**	**11,705**	**2,140**	**3,979**	**1,700**	**2,321**	**958**	**921**	**899**	**1,086**	**68,305**
2012	8,845	34,562	12,757	2,276	4,149	1,857	2,598	1,344	1,657	1,265	396	71,706
% change (2007 to 2017)	-7%	15%	-12%	-7%	-1%	-7%	-7%	-35%	-58%	-40%	173%	0%

C - Some data have been suppressed for reasons of respondent confidentiality. + incomplete data set because some crop data are suppressed. Source: Statistics New Zealand Agricultural Production Census - as at June 2007, 2012 & 2017. Note: variations between the data reported in this section with those reported for the individual horticultural sectors can in part be attributed to differences in definitions, sample size and time of sampling.

Distribution of vegetables by Regional Councils *(area planted ha)*

Regional Council Year ended 30 June 2017	Asparagus	Broccoli Cab & Caulis	Carrots	Peas & Beans	Lettuce	Onions	Potatoes	Squash	Sweet corn	Other veg	Total veg
Northland	0	29	3	3	1	2	8	8	84	1,223	1,361
Auckland	1	1111	255	51	625	1,919	2,242	300	29	1,400	7,933
Waikato	425	236	192	1	16	1,733	1,280	84	83	760	4,809
Bay of Plenty	4	10	0	1	0	0	0	0	14	28	57
Gisborne	1	482	0	167	263	C	C	1,920	1,893	353	5,081
Hawke's Bay	53	78	61	1,360	12	963	236	3,388	872	1,234	8,256
Taranaki	0	16	C	0	0	0	10	0	10	17	53+
Manawatu-Wanganui	191	695	191	224	315	281	984	6	25	735	3,647
Wellington	0	46	0	2	16	1	2	1	C	86	154+
Tasman-Nelson	2	292	13	6	136	46	9	1	32	490	1,027
Marlborough	1	8	92	184	0	33	1	0	637	165	1,120
West Coast	0	1	0	0	0	0	0	0	0	1	3
Canterbury	58	422	814	2,702	110	1,001	4,332	87	188	727	10,441
Otago	7	164	3	0	14	0	196	0	C	43	428+
Southland	0	12	226	0	1	0	140	0	0	314	693
Other	0	30	1	5	22	30	11	0	5	37	141
Total New Zealand	**820**	**3,622**	**2,047**	**7,858**	**1,250**	**5,718**	**11,578**	**6,837**	**4,664**	**5,313**	**49,707**
2012	820	3,622	2,047	7,858	1,250	5,718	11,578	6,837	4,664	5,313	49,707
% change (2007 to 2017)	-15%	-6%	-40%	-37%	17%	31%	-6%	-25%	-38%	22%	-9%

Distribution of indoor crops *(m^2; 000s)*

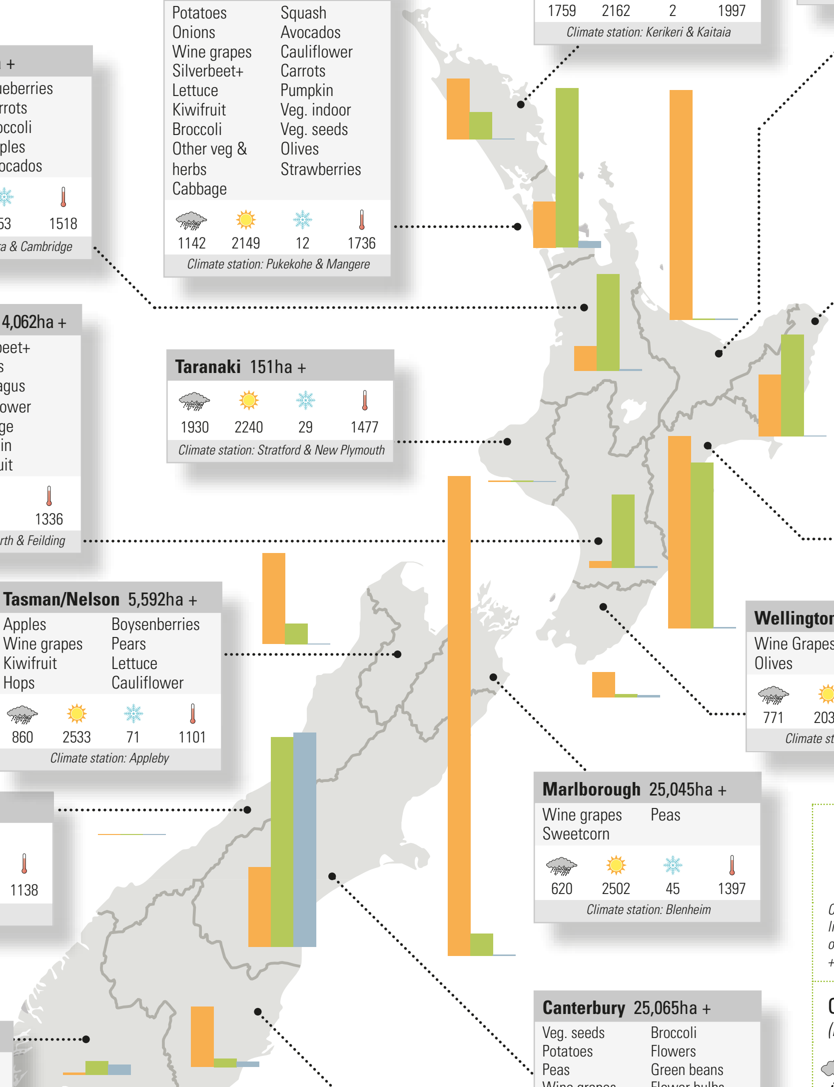
Regional Council	Capsicum	Cucumber	Lettuce/ Salad Greens	Mush-rooms (Cased)	Toma-toes	All other veg. & herbs (Indoors)
Northland	2	21	21	0	49	13
Auckland	403	111	207	23	388	246
Waikato	113	42	22	C	217	91
Bay of Plenty	42	0	16	1	2	12
Gisborne	0	0	0	0	0	0
Hawke's Bay	C	0	0	3	4	3
Taranaki	8	C	11	0	9	13
Manawatu-Wanganui	1	1	47	2	4	6
Wellington	0	3	41	2	1	15
Tasman-Nelson	27	0	13	0	93	10
Marlborough	0	0	14	0	19	30
West Coast	C	0	3	0	13	0
Canterbury	5	33	32	43	40	14
Otago	0	0	11	0	1	1
Southland	0	0	3	0	0	0
Other	9	1	0	10	0	0
Total New Zealand	**609**	**213**	**441**	**84**	**839**	**454**
2012	585	266	n/a	n/a	1,005	n/a
% change (2007 to 2017)	4%	-20%	n/a	n/a	-17%	n/a

See above notes

(1 ha = 10,000 m^2)

For more information visit www.statistics.govt.nz

Horticultural activities are distributed throughout New Zealand



Northland 4,423ha +

Avocados	Citrus
Kumara	Mandarins
Kiwifruit	Olives

1759	2162	2	1997

Climate station: Kerikeri & Kaitaia

Bay of Plenty 11,576ha +

Kiwifruit	Avocados

1266	2420	24	1905

Climate station: Tauranga & Hiruera

Auckland 10,568ha +

Potatoes	Squash
Onions	Avocados
Wine grapes	Cauliflower
Silverbeet+	Carrots
Lettuce	Pumpkin
Kiwifruit	Veg. indoor
Broccoli	Veg. seeds
Other veg & herbs	Olives
Cabbage	Strawberries

1142	2149	12	1736

Climate station: Pukekohe & Mangere

Waikato 6,116ha +

Potatoes	Blueberries
Onions	Carrots
Silverbeet+	Broccoli
Asparagus	Apples
Kiwifruit	Avocados

1192	2027	53	1518

Climate station: Ruakura & Cambridge

Gisborne 8,153 ha +

Sweet corn	Kiwifruit
Squash	Lettuce
Wine grapes	Lemons
Oranges	Apples
Broccoli	Peas
Mandarins	Tomatoes

1029	2294	28	1748

Climate station: Gisborne

Manawatu/Wanganui 4,062ha +

Potatoes	Silverbeet+
Broccoli	Carrots
Other veg & herbs	Asparagus
Lettuce	Cauliflower
Onions	Cabbage
Peas	Pumpkin
	Kiwifruit

932	1755	42	1336

Climate station: Palmerston North & Feilding

Taranaki 151ha +

1930	2240	29	1477

Climate station: Stratford & New Plymouth

Hawke's Bay 17,886ha +

Apples	Pumpkin
Wine grapes	Green beans
Squash	Potatoes
Peas	Peaches
Onions	Nectarines
Sweet corn	Plums
Other veg & herbs	Pears
	Kiwifruit
Tomatoes	Olives

747	2329	63	1807

Climate station: Whakatu & Napier

Tasman/Nelson 5,592ha +

Apples	Boysenberries
Wine grapes	Pears
Kiwifruit	Lettuce
Hops	Cauliflower

860	2533	71	1101

Climate station: Appleby

Wellington 1,523ha +

Wine Grapes	Apples
Olives	

771	2031	46	1303

Climate station: Martinborough

Westland 36ha +

2297	1936	32	1138

Climate station: Arapito

Marlborough 25,045ha +

Wine grapes	Peas
Sweetcorn	

620	2502	45	1397

Climate station: Blenheim

Southland 1,318ha +

Flower bulbs	Carrots
Other veg & herbs	Potatoes

1140	1790	103	584

Climate station: Invercargill Airport

Otago 3,700ha +

Wine grapes	Veg. seeds
Cherries	Potatoes
Apples	Nectarines
Apricots	Broccoli

359	2330	124	963

Climate station: Clyde & Cromwell

Canterbury 25,065ha +

Veg. seeds	Broccoli
Potatoes	Flowers
Peas	Green beans
Wine grapes	Flower bulbs
Onions	Sweet corn
Blackcurrants	Pumpkin
Carrots	Silverbeet+
Other veg & herbs	Olives
Walnuts	Hazelnuts
Apples	Lettuce

604	2059	67	959

Climate station: Lincoln & Rangiora

Reference

Fruit
Vegetables
Veg seeds & floriculture
Regional Boundary

Crop is named where the regional area exceeds 100ha and listed in decending order of hectares planted. Some 3,769ha of crops could not be assigned to a specific region.
+ = incomplete data set for region

Climate summaries

(Mean annual values for 2001-2010)

Rainfall (mm)	Sunshine (hours)	Ground (days)	Heat units (degree days)*

**One degree day is accumulated when the average daily temperature is above 10.0°C for one day e.g. An average daily temperature of 15.0°C will generate 5 degree day units.*

Source: Statistics New Zealand 2017 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.

For more information visit
niwascience.co.nz/ncc

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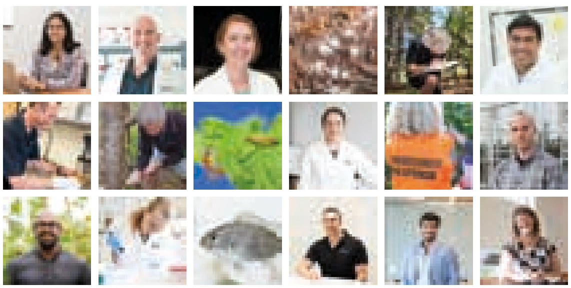

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About the Trust

The New Zealand Horticentre Trust was established in 2008 with the objective of providing 'A helping hand for horticulture.'

The Trust encourages Horticulture and Viticulture sector groups to apply for grants to assist them in the promotion of education, training & research in New Zealand.

The NZ Horticentre Trust has three principal sponsors, Horticentre, TasmanCrop and HortFertplus. These three principal sponsors have been providing quality products and services to commercial crop growers since the 1980's.

The NZ Horticentre Trust is proud to be supporting the Horticulture, Viticulture and Nursery sectors in NZ.

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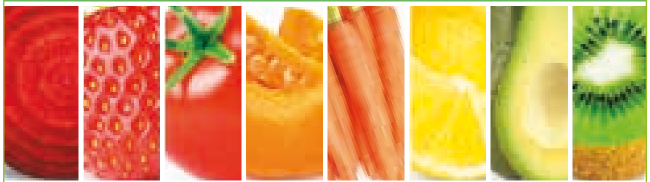

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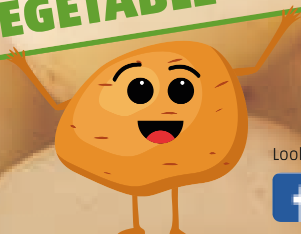

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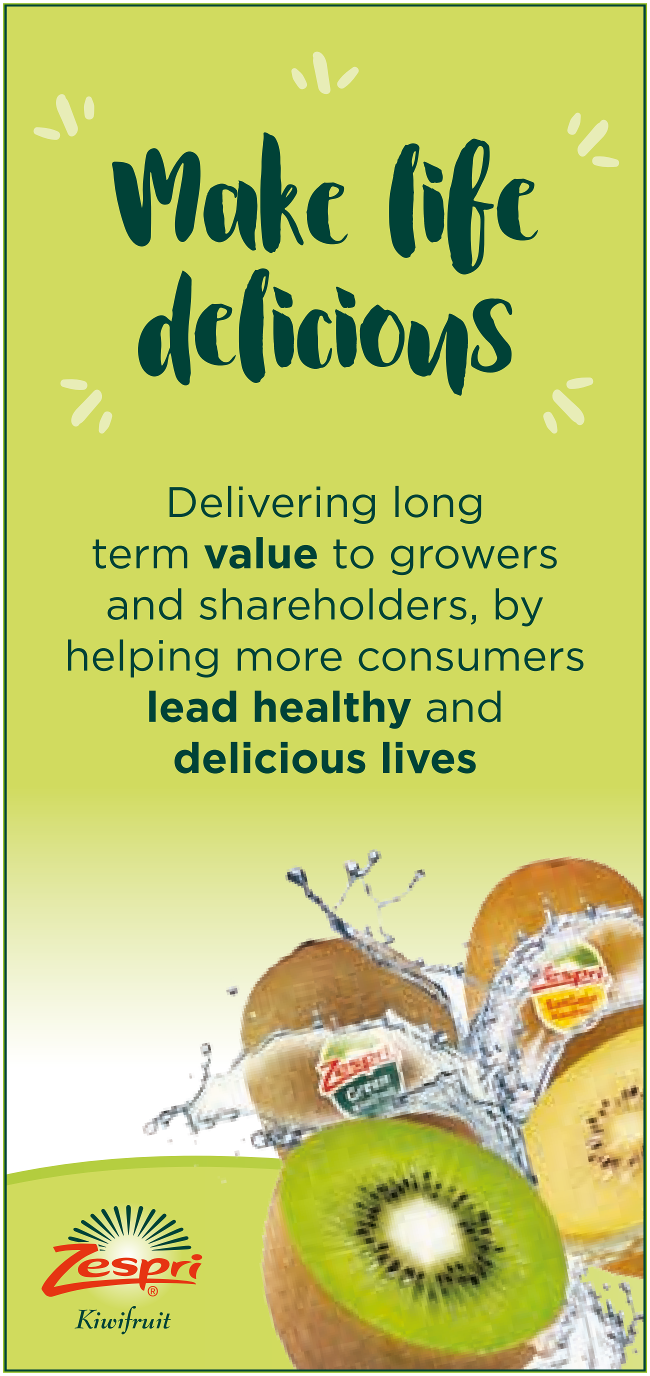
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Potatoes New Zealand

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Horticentre Charitable Trust

New Zealand Fruitgrowers Charitable Trust

T&G A BayWa Company

Zespri Kiwifruit

Ministry for Primary Industries
Manatū Ahu Matua

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12. *Multiple product group contacts for updating available domestic production data.*

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