

Food & Beverage Information Project 2011 Sector Stream – Produce

Final Report
October 2011; v1.29

www.foodandbeverage.govt.nz

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We work with organisations to help them grow. For corporations, that often means developing strategies for revenue growth. For governments, it means working on national economic development. For non-profits, it means helping to grow their social impact.

We address all the problems that are involved in growth: strategy, marketing, pricing, innovation, new product development, new markets, organisation, leadership, economic competitiveness.

We bring to our clients specialised industry and functional expertise. We invest significant resources in building knowledge. We see it as our mission to bring this knowledge to our clients and we publish much of it for the benefit of others.

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The Coriolis name

The coriolis force, named for French physicist Gaspard Coriolis (1792-1843), may be seen on a large scale in the movement of winds and ocean currents on the rotating earth. It dominates weather patterns, producing the counterclockwise flow observed around low-pressure zones in the Northern Hemisphere and the clockwise flow around such zones in the Southern Hemisphere. *To us it means understanding the big picture before you get into the details.*

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The objective of this report is to provide a **factual** source of high quality **information** on the current situation in the New Zealand **produce** sector for four audiences:

- **Investors** (domestic or international)
- **Industry** participants (firms & individuals)
- **Government** (across all roles and responsibilities)
- **Scientific researchers** (academic, government & firm)

It creates a common set of **facts** and **figures** on the current situation in the industry.

It draws conclusions on potential industry **strategic directions** and highlights **opportunities** for further **investment**.

It forms a part of the wider Food & Beverage Information Project and will be updated annually.



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GLOSSARY OF TERMS

This report uses the following acronyms and abbreviations

A\$/AUD	Australian dollar	N.H	Northern Hemisphere
ABS	Absolute change	NZ	New Zealand
ANZSIC	AU/NZ Standard Industry Classification	NZ\$/NZD	New Zealand dollar
AU	Australia	R&D	Research and Development
Australasia	Australia and New Zealand	S Asia	South Asia (Indian Subcontinent)
b	Billion	SE Asia	South East Asia
CAGR	Compound Annual Growth Rate	S.H	Southern Hemisphere
C/S America	Central & South America (Latin America)	SS Africa	Sub-Saharan Africa
CRI	Crown Research Institute	T/O	Turnover
CY	Calendar year (ending Dec 21)	US/USA	United States of America
E Asia	East Asia	US\$/USD	United States dollar
EBITDA	Earnings before interest, tax, depreciation and amortization	UK	United Kingdom
FAO	Food and Agriculture Organisation of the UN	YE	Year ending
FY	Financial year (of firm in question)	YTD	Year to date
£/GBP	British pounds	Sources	
JV	Joint venture	AR	Annual report
m	Million	Ce	Coriolis estimate
n/a	Not available/not applicable	Ci	Coriolis interview
NA/ME/CA	North Africa / Middle East / Central Asia	K	Kompass
Nec/nes	Not elsewhere classified/not elsewhere specified	Ke	Kompass estimate

METHODOLOGY & DATA SOURCES

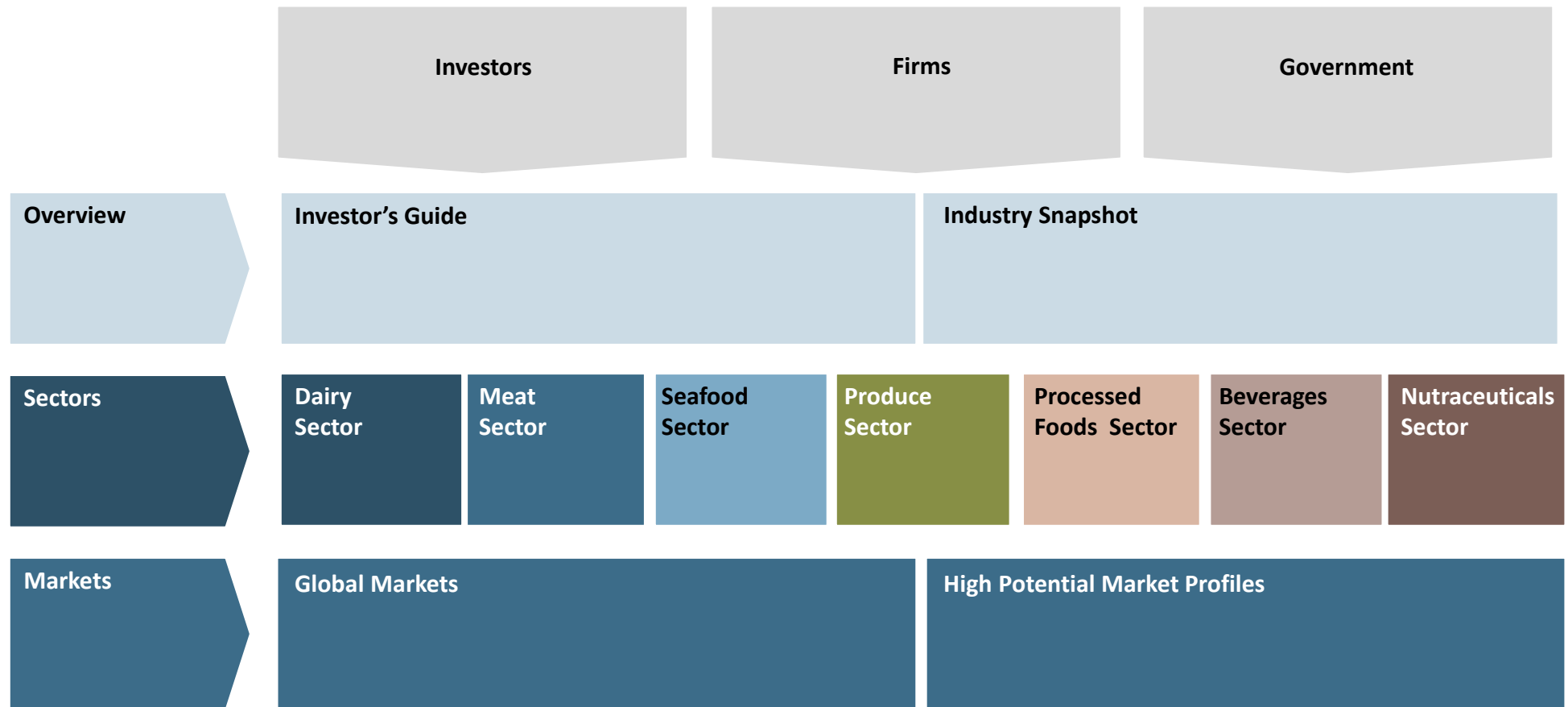
Data was from a variety of sources, and has a number of identified limitations

- This report uses a range of information sources, both qualitative and quantitative.
- The numbers in this report come from multiple sources. While we believe the data are directionally correct, we recognise the limitations in what information is available.
 - In many cases different data sources disagree (e.g. Statistics New Zealand vs. FAO vs. UN Comtrade).
 - Many data sources incorporate estimates of industry experts.
 - As one example, in many cases, the value and/or volume recorded as exported by one country does not match the amount recorded as being received as imports by the counterparty [for understood reasons].
- In addition, in some places, we have made our own clearly noted estimates.
- Coriolis has not been asked to independently verify or audit the information or material provided to it by or on behalf of the Client or any of the data sources used in the project.
 - The information contained in the report and any commentary has been compiled from information and material supplied by third party sources and publicly available information which may (in part) be inaccurate or incomplete.
- Coriolis makes no representation, warranty or guarantee, whether express or implied, as to the quality, accuracy, reliability, currency or completeness of the information provided in the report.
- All trade data analysed in all sections of the F&B Information project are calculated and displayed in US\$. This is done for a range of reasons:
 1. It is the currency most used in international trade
 2. It allows for cross country comparisons (e.g. vs. Denmark)
 3. It removes the impact of NZD exchange rate variability
 4. It is more comprehensible to non-NZ audiences (e.g. foreign investors)
 5. It is the currency in which the United Nations collects and tabulates global trade data
- The opinions expressed in this report represent those of the industry participants interviewed and the authors. These do not necessarily represent those of Coriolis Limited or the New Zealand Government.
- If you have any questions about the methodology, sources or accuracy of any part of this report, please contact Tim Morris, the report's lead author at Coriolis, on +64 9 623 1848

F&B INFORMATION PROJECT

The New Zealand Food & Beverage Information Project is designed to be the foundation of facts and figures on which a range of audiences can build

Structure of the New Zealand Food & Beverage Information Project
(2011)



PRODUCE SECTOR ANALYSIS

This analysis of the New Zealand produce sector forms a part of the wider Food & Beverage Information Project

Structure of the New Zealand Food & Beverage Information Project
(2011)

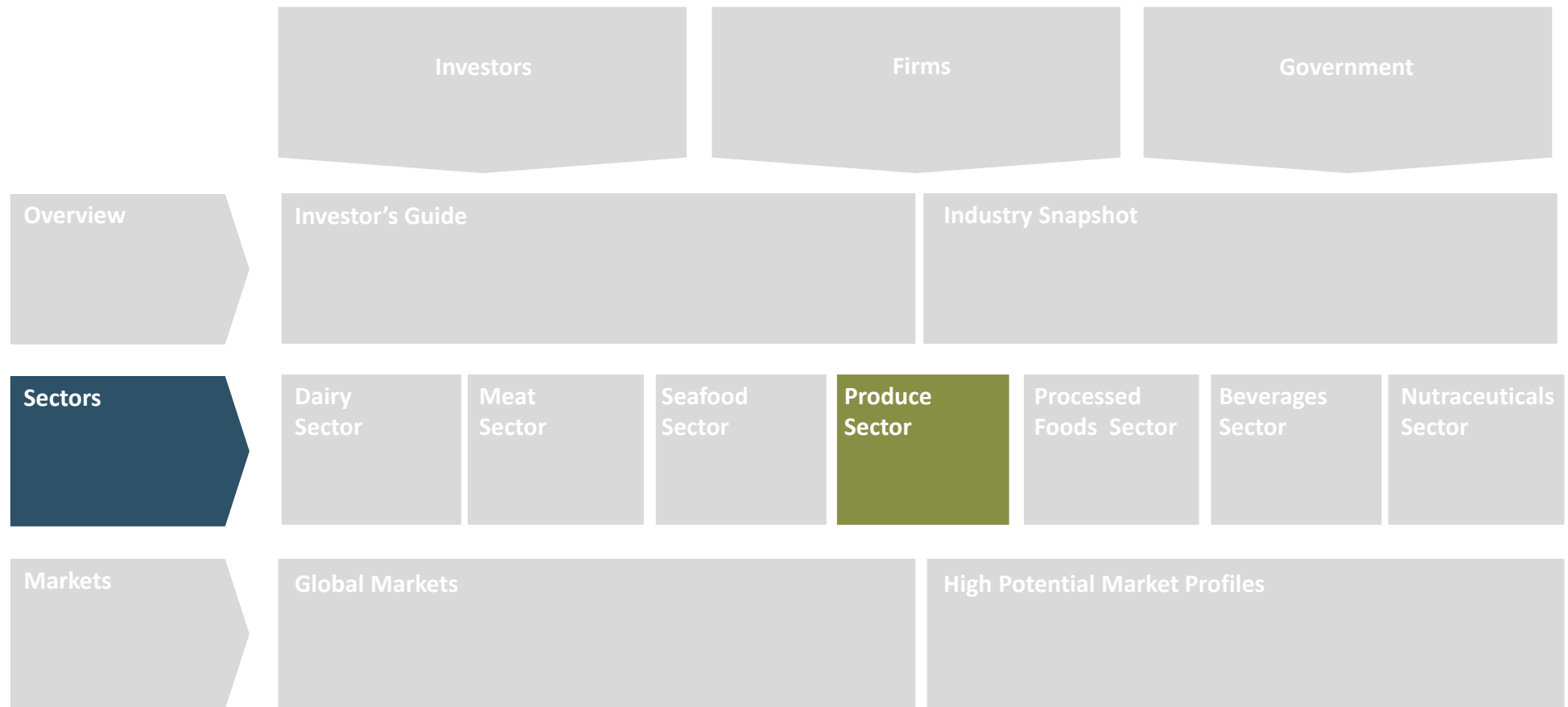




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PRODUCE – SITUATION

New Zealand is a major player in kiwifruit and apples; the industry is currently undergoing consolidation to increase scale and productivity

New Zealand

- New Zealand has an environment conducive to horticulture
 - The size of Italy with the population of Singapore
 - Surrounded by the Pacific Ocean – has the light of Spain with the climate of Bordeaux
 - This climate will moderate the effects of global warming (relative to large continents)
- The country's farmers are highly productive and efficient
 - The country has no agricultural subsidies
 - Regulation is generally rational and light handed; however additional compliance costs are imposed by markets and retailers around the world, increasing total cost
- New Zealand has two significant export species, kiwifruit and apples; together they are 70% of the export value of fresh produce

Kiwifruit

- New Zealand was the first country to commercialise the kiwifruit (and gave it its name); it is now the third largest producer globally
- Kiwifruit are primarily packed by grower-owned co-operatives; these are consolidating rapidly driven by the increased capital cost of a packhouse (equipment, technology, etc.); the top four packers now account for 50%+ of volume
 - Packhouses are backwards integrating into fruit production through leasing and management contracts with orchards, particularly those of "hobby" farmers

- All kiwifruit (except those to Australia) are exported through Zespri, a grower-owned monopsony¹; this structure is strongly supported by growers but disputed by competing apple exporters; Zespri is ~13x larger than its nearest global kiwifruit competitor

Apples

- The apple industry is highly competitive and undergoing rapid consolidation around large grower/packer/shippers; the top 8 packhouse operators account for about two thirds of volume
 - Packhouses are backwards integrating into production to ensure supply and quality and more than a third of total apple area is now controlled by the top 10 packers
- The number of smaller family farms has decreased and area has fallen significantly over the last 10 years. Despite this production has been maintained due to increased productivity

Other fruit

- While New Zealand produces a wide range of other fruits and nuts, only a few are achieving any significant growth; avocados, berries, and olives stand out for generally positive metrics

Vegetables

- "Fresh" vegetable exports are primarily onions
- New Zealand is a mid-sized producer of vegetables for processing and export
- Frozen french fries a strong success with top three global firms invested in country; opportunities for further growth

PRODUCE – SITUATION

Chile is the key competitor in fruit (both apples and kiwifruit); there are still lots of growth opportunities available for New Zealand into Asia across all F&V

Competitors

- In fresh, New Zealand competes in the first instance with other temperate countries in the S.H. seasonal window: Australia, Chile, Argentina, South Africa & Southern Brazil. Secondly, the S.H. competes on the edges, with N.H. temperate production
- Global production of most F&V is relatively stable; the major exception is China which has dramatically increased its production of most major F&V over the past 20 years
 - The impact of Chinese production growth has primarily been felt in some processed products (e.g. apple juice concentrate) rather than premium fresh F&V
 - Chinese yields are still low and quality is an issue; this will change over the next 20 years as systems and processes improve
- Very few fresh vegetables cross borders; most are produced and consumed in their country of origin; cross-border trade is more common in preserved/processed vegetables, particularly from temperate regions to tropical ones. In processed vegetables, New Zealand competes primarily with rich Northern Hemisphere countries (e.g. Netherlands, Canada)
- Globally, fresh fruit and vegetable packing is extremely fragmented with a huge number of medium-to-small packers operating
 - Firms of any scale only exist around key tropical fruits (bananas and pineapples)

- New Zealand packhouses compete primarily with either co-operative or family-owned packhouses in other countries
- F&V preserving and processing is more consolidated, driven by economies of scale in processing equipment
- New varieties continue to be developed by competitors
 - Summerkiwi, Kiwigold/Jingold, and Greenlight among many other in kiwifruit
 - Kanzai, Honeycrisp, Cameo among many others in apples

Consumers/Markets

- Broadly speaking, the world can be separated into temperate and tropical production regions
 - F&V consumption vary by region; people generally cook and consume what they produce
 - For most F&V, the major producing countries are the major consuming countries and also the major counter-seasonal importers (where relevant)
- China represents an opportunity not a threat for New Zealand in premium counter-seasonal supply for the foreseeable future
- SE Asian markets are a rapidly growing opportunity (e.g. Indonesia, Thailand, Philippines, Vietnam) as they are pure importers of temperate F&V; per capita consumption evidence from Singapore, Malaysia and Taiwan suggest significant further growth potential exists

PRODUCE – QUANTITATIVE SCORECARD

New Zealand produce exports are performing well, driven by growth in Asia and the Australia/Pacific Islands region

Key metrics	# (2010)	CAGR (00-10)	CAGR (09-10)	ABS (09-10)	
Turnover¹ (NZ\$m; 09)	\$3,338m	5%	8%	\$254m	
Exports² (US\$m)	Vegetable	\$302	6%	18%	\$47
	Fruit	\$1,046	8%	4%	\$40
Enterprises	Vegetable	1,294	-7%	-20%	-314
	Fruit	6,445	-1%	-9%	-604
Employment¹	Vegetable	6,650	-1%	0.5%	-30
	Fruit	16,975	-1%	-11%	-1,995
Turnover per employee	\$141,291				

Key markets	% (2010)	US\$m (2010)	CAGR (00-10)	CAGR (09-10)	ABS (09-10)
East Asia	39%	\$524	9%	19%	\$84
SE Asia	6%	\$86	9%	32%	\$21
Europe	31%	\$408	4%	-13%	-\$61
North America	7%	\$88	2%	2%	\$2
Australia/PI	14%	\$194	12%	25%	\$38
Other	3%	\$47	13%	6%	\$3
Total	100%	\$1,347	7%	7%	\$87

Key products	US\$m (2010)	CAGR (00-10)	CAGR (09-10)	ABS (09-10)
Kiwifruit	\$687m	10%	6%	\$39m
Apples	\$235m	3%	-9%	-\$22m
Avocados	\$38m	14%	10%	\$3m
Total fruit	\$1,046	8%	4%	\$40m
Onions/Garlic	\$86m	9%	71%	\$35m
Peas	\$55m	6%	8%	\$4m
Capsicum	\$27m	14%	19%	\$5m
Total Vegetables	\$302	6%	18%	\$47m

Key firms	Employ (#; 10)	Turnover (NZ\$m; 10)
Zespri	150	\$1,542m
T&G	2,000	\$599m
MG Marketing	350	\$574m
Fresh Direct	300	\$208m
Leaderbrand	240	\$139m

Key competitors Country	Key firms
South Africa	Capespan
Chile	Copefruit (co-op) Trinidad David Del Curto
Italy	Intesa (co-op) Apofruit (co-op) Kiwi-Uno (private)

PRODUCE – SWOT ANALYSIS

Future growth and success is dependant on continued innovation around new varieties and cultivars and improvements in industry structure

Strengths	Weaknesses
<ul style="list-style-type: none"> - Track record of success in new fruit development (e.g. kiwifruit) - Track record of success in breeding of new cultivars (e.g. Braeburn, Zespri Gold) - Counter seasonal to Northern Hemisphere in a narrow climatic window only shared by 4-5 competitors (Chile, Argentina, South Africa, Sothern Brazil and Australia) - Proximity to fast growing Asian markets - Strong biosecurity; free from many diseases and pests - High yields per hectare/high levels of export packout in export fruits relative to peers - Unsubsidised industry competing successfully in world markets - Industry rapidly consolidating into fewer, larger growers operating at scale - Transition to integrated grower/packer/shipper model underway - Supportive, collective industry structure in kiwifruit 	<ul style="list-style-type: none"> - Low/no ability to supply fruit year-round - Water, access and availability - Higher cost structure than others in seasonal window (e.g. Chile) - Too much area still in older varieties (e.g. Braeburn apples, Hayward kiwifruit) that are now widely produced by competitors and not IP-controlled - Still too many smaller orchards and farms; peer group benchmarking strongly suggests NZ needs fewer, larger farms (cost structure prohibitive) - Failing to nurture emerging Horizon 2 products to scale (e.g. avocados) - Poor current funding model for new cultivar development - Poor current commercialisation model for new cultivars emerging from breeding programs - Legal separation of apple and kiwifruit exporting (also a strength depending on point-of-view) - Small scale niche player, limits availability of key agrichemicals available
Opportunities	Issues/Threats/Risk
<ul style="list-style-type: none"> - Further develop “Fresh” fruit, especially high value, high return fruits (e.g. berries) - Continued growth of middle-class in Asia - Aging baby boomers focusing on healthy living eating for illness prevention - Growth of nutraceuticals and functional foods - Potential of the Australian market - Continued work on FTAs to develop tariff free markets (e.g. ASEAN); especially focussing on the high volume, high impact products and markets - Growing demand for fresh, convenient produce especially into Asian markets - Continued orchard-level technological innovation (e.g. Hi-Cane) and management improvement (e.g. girdling) leading to increased yields, automated pruning 	<ul style="list-style-type: none"> - Growing production of apples, kiwifruit and other horticulture in China - Biosecurity retarding or preventing introduction of new genetics and new species - Phytosanitary protocols limiting extent and speed to market - Re-export of produce labelled “Made in New Zealand” endangering NZ reputation - Climatic conditions impact production rates - Further disease outbreaks (cf. PSA) - Other global centres of fruit development coming up with better products

PRODUCE – POTENTIAL STRATEGIC DIRECTIONS

Five potential strategic directions are identified for the produce sector

Situation creating opportunity	Resulting potential strategic direction	Opportunity	Challenges
<ul style="list-style-type: none"> - 76% of kiwifruit production still green - 68% of apples area still old varieties such as Gala and Braeburn - Most other fruit & vegetables produced not IP controlled varieties 	1. Transition remaining old varieties into newer <u>IP controlled varieties</u>	<ul style="list-style-type: none"> - Grow new improved varieties not available to competitors - Achieve superior returns per hectare 	<ul style="list-style-type: none"> - Cost of investment in marketing - Ownership of IP - Long-term relationship where grower takes most of the risk - Poor current commercialisation model
<ul style="list-style-type: none"> - Key competitors continue to improve and catch up with New Zealand - Input costs continue to increase - Retailer push back on price increases - Consumers buy from a basket based on price and quality 	2. <u>Continuous improvement</u> is required across the value chain for New Zealand to stay competitive	<ul style="list-style-type: none"> - NZ historically a global leader in efficiency and productivity - Improve faster than competitors - Embrace rather than resist integrated grower/packer/shipper model where it makes sense¹ 	<ul style="list-style-type: none"> - “She’ll be right” attitude - Cyclical nature of industry returns; difficult to regain efficiencies on downturn - Skills and capabilities; education-levels of workforce
<ul style="list-style-type: none"> - Fruit packing technology changing and improving rapidly - Requirements of some retailers increasing in complexity - Competitors pack a wider range of fruit decreasing their fixed cost/unit 	3. Further <u>rationalisation</u> of packhouses	<ul style="list-style-type: none"> - As a general rule, larger packhouses have lower costs than smaller ones - Reduce cost through increased efficiency 	<ul style="list-style-type: none"> - Geographic limitations on consolidation - Egos and attitudes
<ul style="list-style-type: none"> - There are only a handful of Government-mandated exporting bodies left globally - IP-controlled varieties effectively create same power 	4. There may some day be a post-monopsony kiwifruit industry; if so this will require a <u>long-term plan</u> for an orderly transition	<ul style="list-style-type: none"> - Recreate best attributes around IP-controlled varieties - Remove potential trade negotiation impediments - Transition away from widely grown green 	<ul style="list-style-type: none"> - Not repeating past mistakes in marketing board deregulation (cf. Israel, South Africa and NZ apples)
<ul style="list-style-type: none"> - Large number of smaller, emergent new species and opportunities - Many have technological or scientific barriers to growth 	5. Focus on high potential <u>emerging Horizon 2 products/species</u>	<ul style="list-style-type: none"> - Build another “kiwifruit” industry - Focus more resources on fewer opportunities - Rally around emerging successes 	<ul style="list-style-type: none"> - Common criteria for identification of emerging successes - Time and resources required - “Herding cats”

PRODUCE – POTENTIAL AREAS FOR INVESTMENT

Opportunities for new and/or external investment primarily for those with transferrable skills or global networks

Apples

- Industry has consolidated around two key regions: Hawkes Bay and Nelson; opportunities outside these regions less clear
- Two largest apples exporters have changed hands in the last year
 - #2 Mr Apple to Direct Capital
 - #1 T&G/ENZA to ? (currently for sale)
- Opportunities for further consolidation among smaller packhouses, particularly around regional consolidation
- New emerging third generation IP-controlled varieties have high potential for growth, particularly in Asia
 - New Zealand has a strong track record of developing successful new varieties of apples; for example NZ developed Gala and Braeburn now account for 1/6 apples trees planted globally (outside China)

Kiwifruit

- Industry consolidated around Bay of Plenty region; opportunities outside this region are more speculative
- Industry almost totally grower-controlled, limiting opportunity for outside investor participation; further packhouse consolidation highly probable going forward (cf. recent cancelled Eastpack/Satara merger)
- Current Zespri structure prevents new investors from operating outside the system; participation in the New Zealand kiwifruit industry is effectively participation in the Zespri system
- Low/no likelihood of government removing monopsony in short to medium term due to strong grower support and five years of industry turmoil required for transition to open system

- Experience of other countries suggests deregulation will occur in next cyclical industry crisis as a “solution”
- Kiwifruit less advanced than apples in new IP-controlled variety development
 - Zespri Gold kiwifruit a strong success for New Zealand and doing well in Asia
 - Other recent new varieties appear to be tweaks (e.g. Green 14) yet to be proven either in production economics or the market (cf. Tomua¹)
 - Lack of red variety key failure of breeding program to date

Other fruit and nuts

- International investors with strong transferrable skills in the avocado sector could help the industry realise its potential
- Berries have clear opportunities for growth but long run potential is unclear; investors with transferrable skills should explore
- Olives will likely only ever be a marginal, niche activity due to lack of scale and huge plantings elsewhere due to high EU subsidies (cf. Spain)
- Wide range of other fruit and nuts that has yet to demonstrate clear market success

Vegetables

- Strong opportunities for further investment by major global value-added vegetable processors
- NZ strongly competitive with key temperate producer/exporters such as the Netherlands, Canada, the US, France, etc.; EU producers should consider NZ as an Asia-Pacific production base



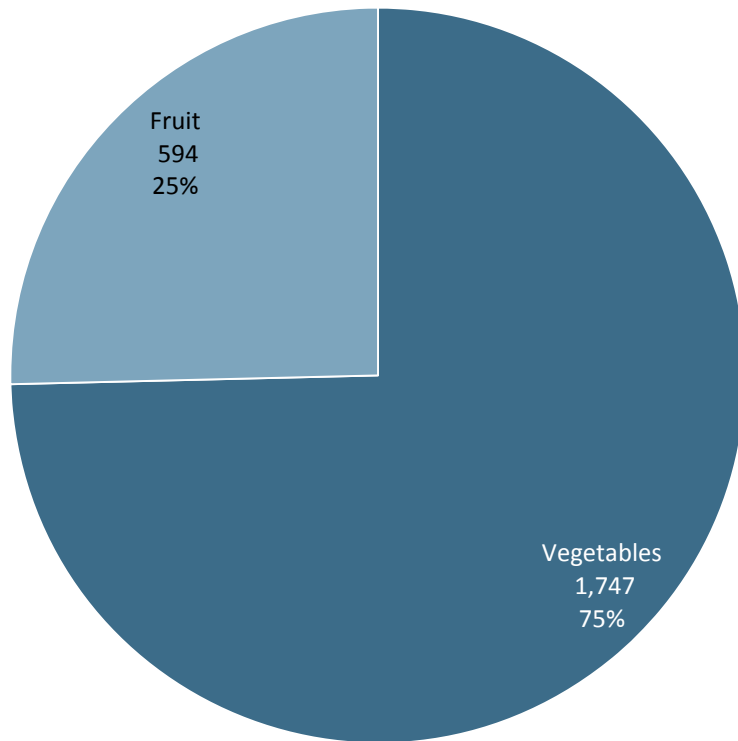
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FRUIT AND VEGETABLE (F&V) – GLOBAL SITUATION

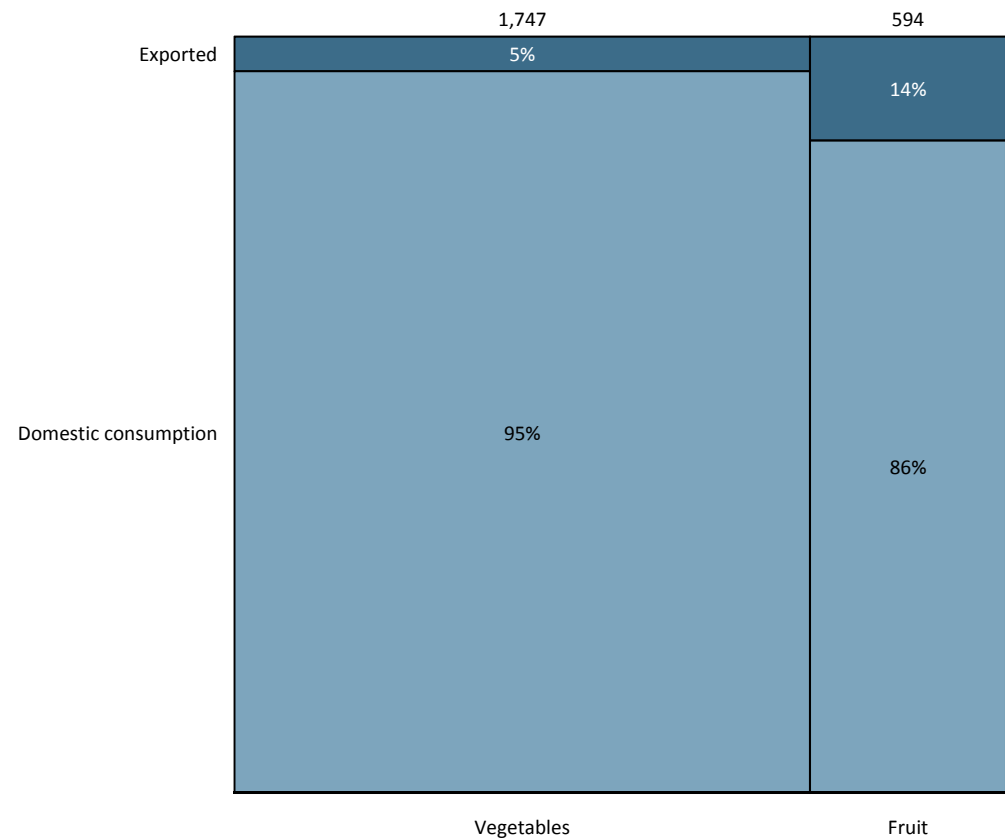
Vegetables account for 75% of global F&V production and fruit 25%; however where 1/7 kgs of fruit is exported (14%), only 1/20 kgs (5%) of vegetables cross borders

Structure of global fruit & vegetable market
(tonnes; % of tonnes; 2009)



Total = 2,342m tonnes

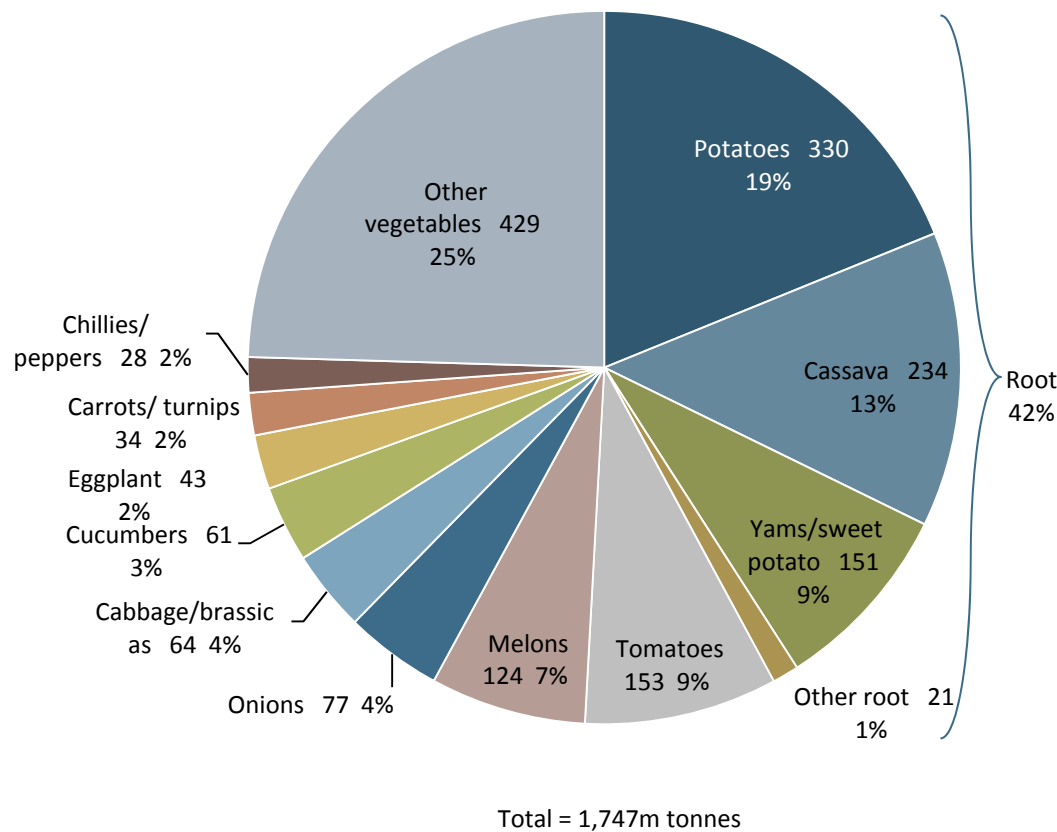
Total global F&V production by type
(tons; m; 2009)



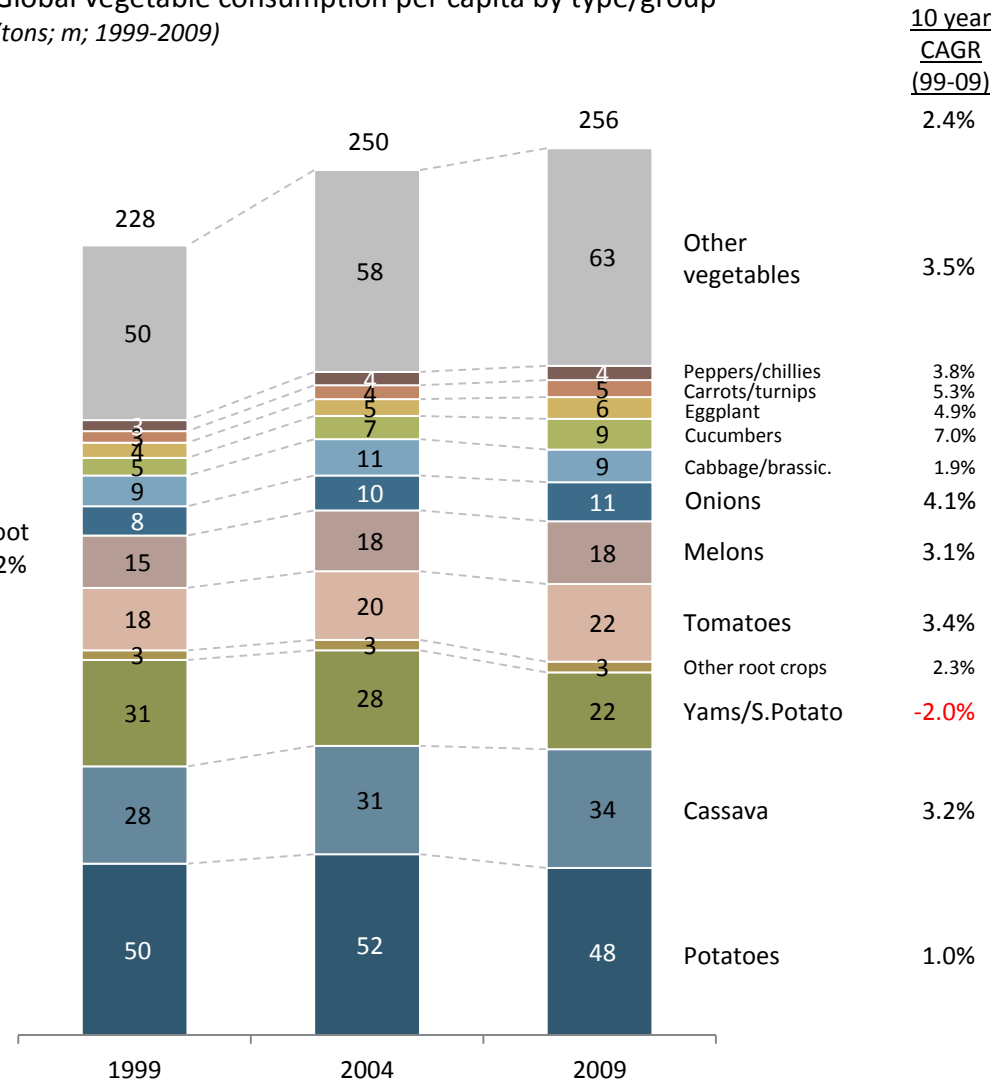
VEGETABLE – GLOBAL PRODUCTION & CONSUMPTION

Global vegetable consumption is fragmented, with root crops accounting for 42% and a wide range of other vegetables accounting for the remainder

Total global vegetable production by fruit type/group
(tons; m; 2009)



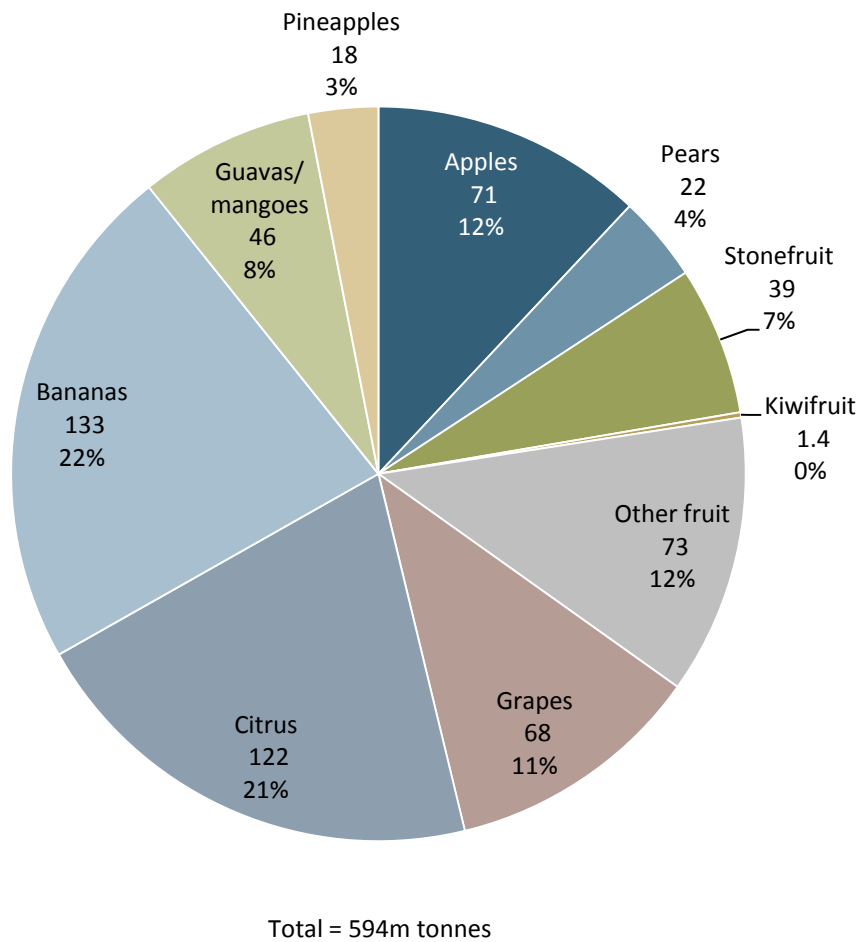
Global vegetable consumption per capita by type/group
(tons; m; 1999-2009)



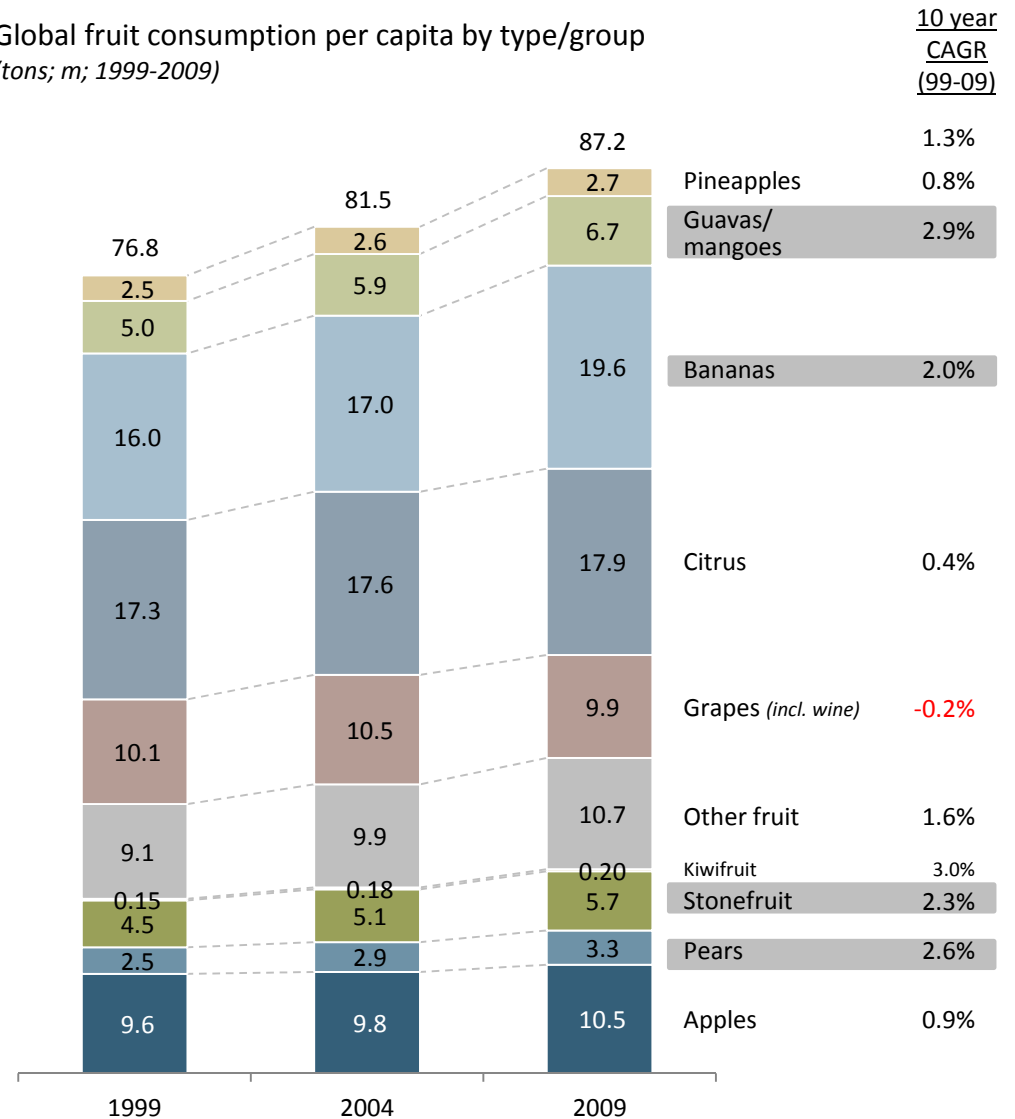
FRUIT – GLOBAL PRODUCTION & CONSUMPTION

The global fruit bowl is dominated by a handful of major fruit; per capita fruit consumption is growing, driven by guavas/mangoes, bananas, stonefruit and pears

Total global fruit production by fruit type/group
(tons; m; 2009)

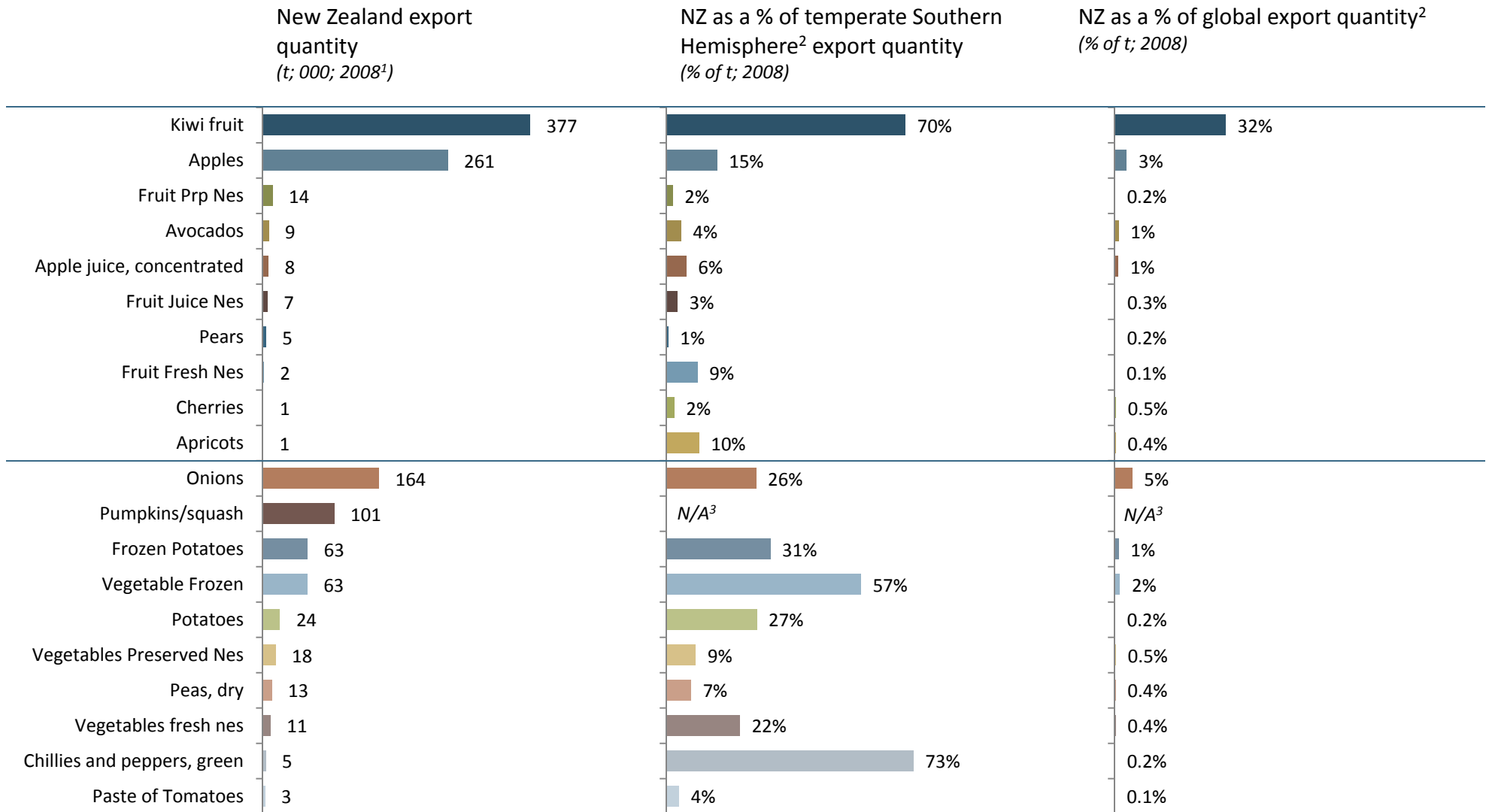


Global fruit consumption per capita by type/group
(tons; m; 1999-2009)



NZ SHARE OF GLOBAL PRODUCTION & EXPORTS

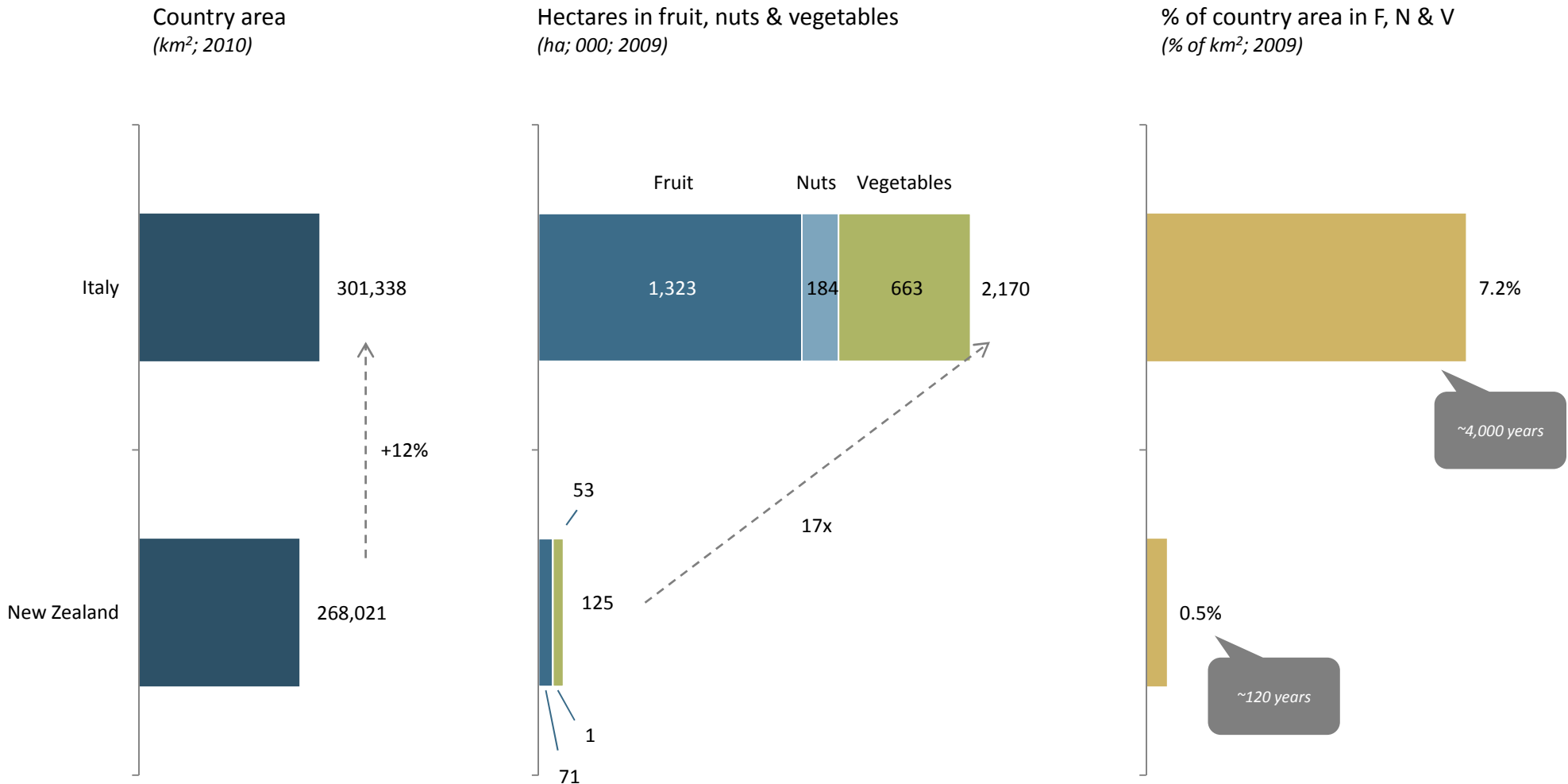
In fruit, New Zealand is a significant force in kiwifruit, a relatively minor player overall in apples, and almost non-existent otherwise; in vegetables it has good strength in a handful of counter-seasonal onions and potatoes



Nes = Not elsewhere specified

ITALY VS. NEW ZEALAND

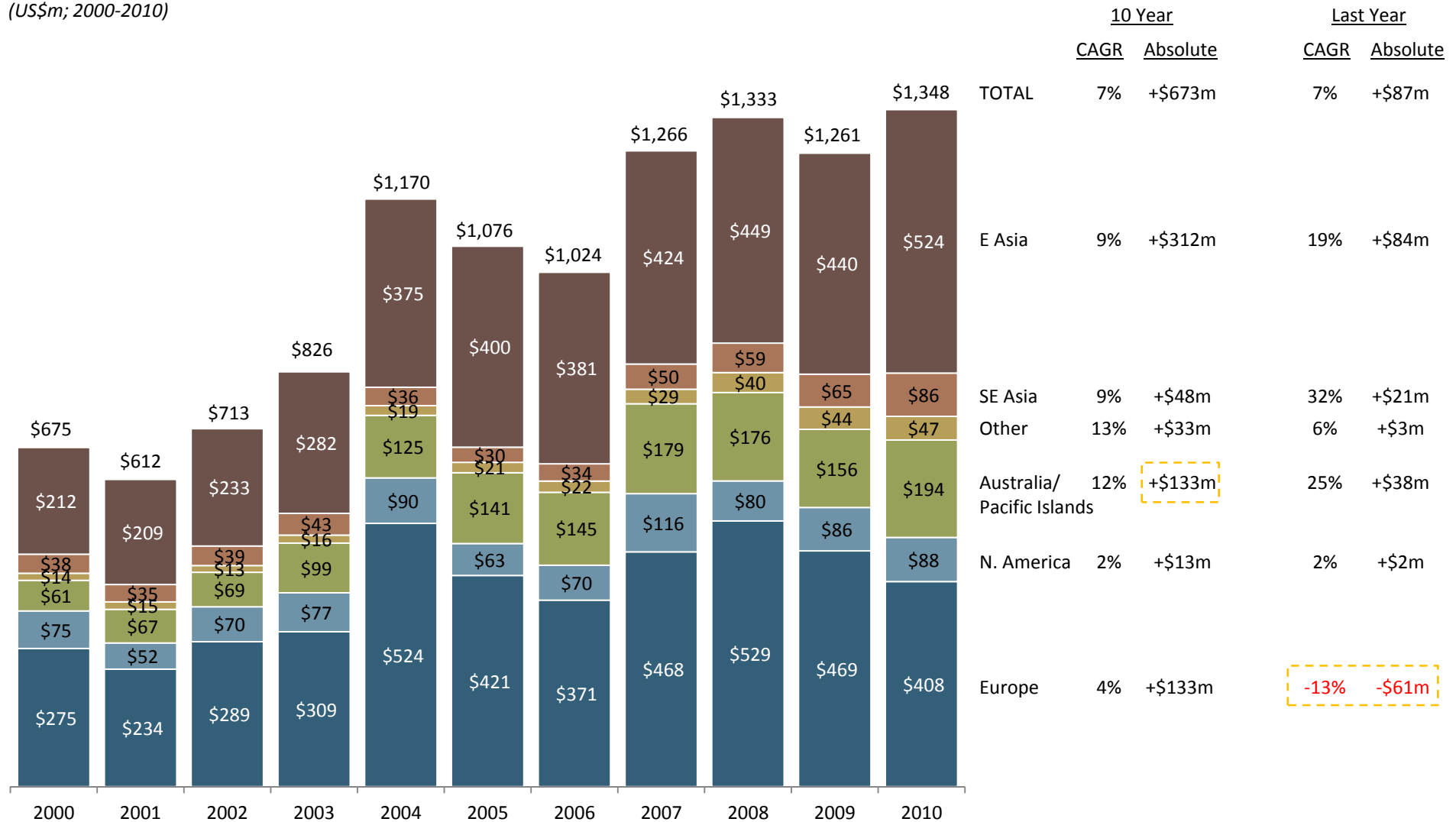
Benchmarking New Zealand with Italy – a country of a similar size – suggests that there is more potential for growth in fruit, nuts and vegetables



PRODUCE – EXPORTS BY REGION

Most markets (excluding the EU) are showing steady growth, East Asia has overtaken Europe as the largest export region

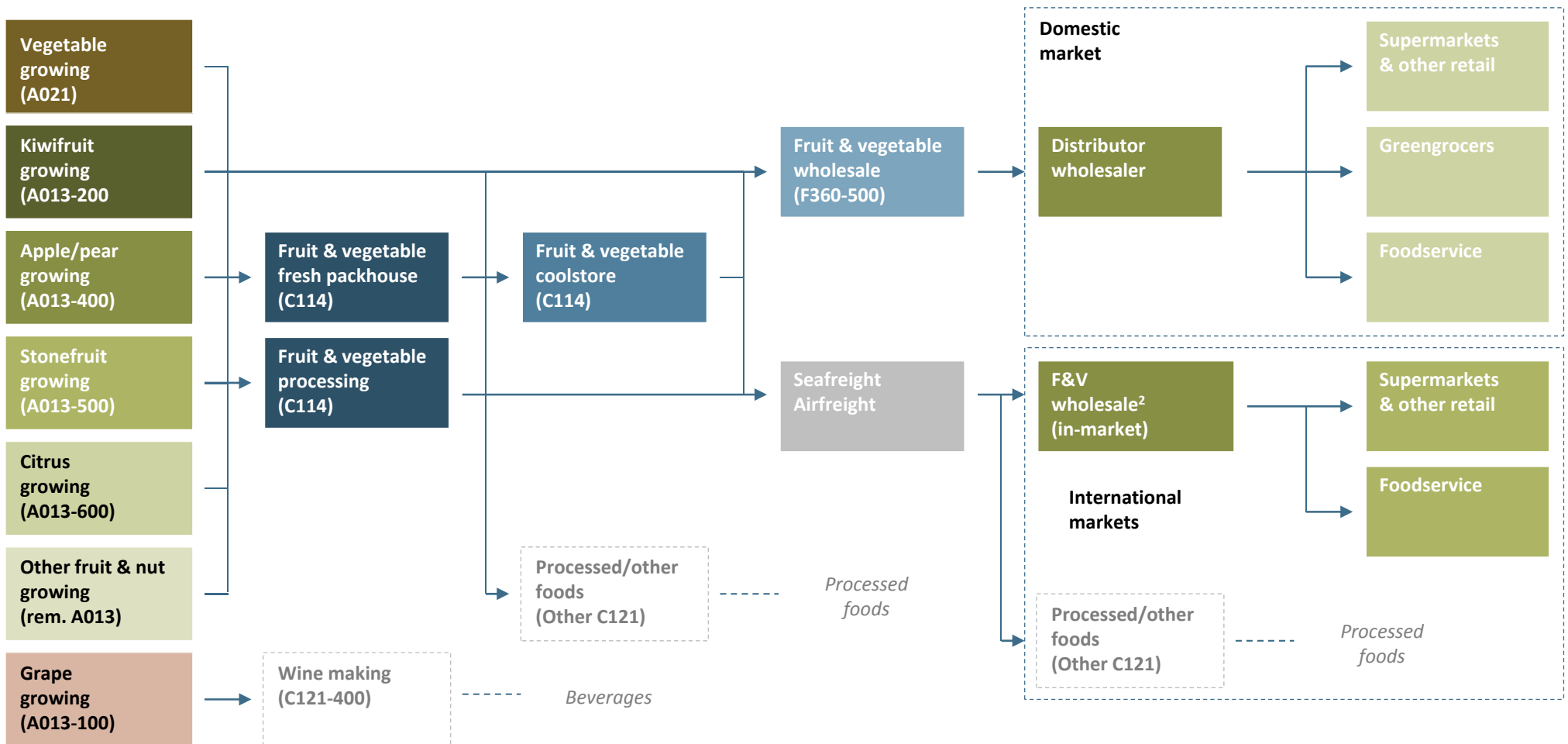
New Zealand produce export by region
(US\$m; 2000-2010)



PRODUCE – SUPPLY CHAIN

New Zealand fruit and vegetables either travel to the consumer in a fresh/whole form or are processed; processed foods range from simple preservation (e.g. whole frozen) through to total conversion (e.g. wine)

Simplified model of New Zealand fruit & vegetable supply chain
(model; ANSZIC codes as available)

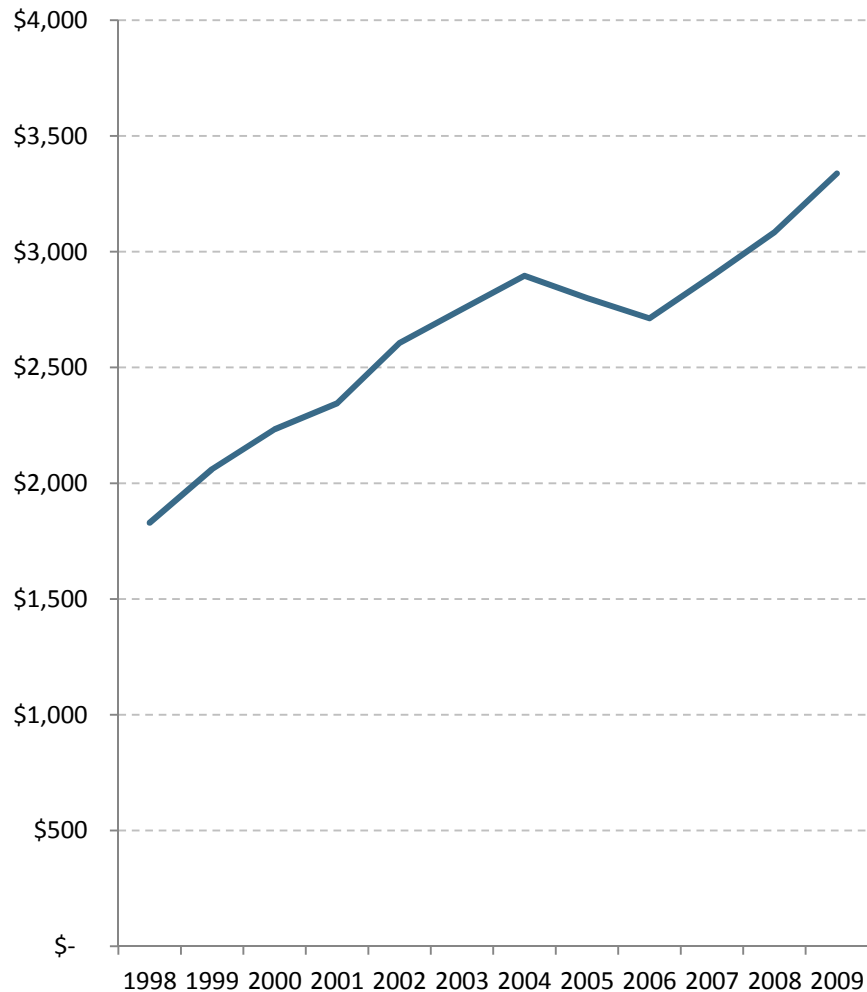


PRODUCE – INDUSTRY AGGREGATE TURNOVER

Total horticulture/fruit growing has been growing turnover at 3% per annum for the last five (available) years [04-09]; we have no available data on F&V processing

Aggregate produce growing turnover

(NZ\$, m; nominal, non-inflation adjusted; 1998-2009)



Horticulture and fruit growing

<u>10 year</u> <u>CAGR</u> <u>(99-09)</u>	<u>Last year</u> <u>CAGR</u> <u>(08-09)</u>	<u>ABS</u> <u>(08-09)</u>
3%	8%	\$254

Comments

- Data is farmer returns at farmgate from growing only, not fruit & vegetable packing and processing

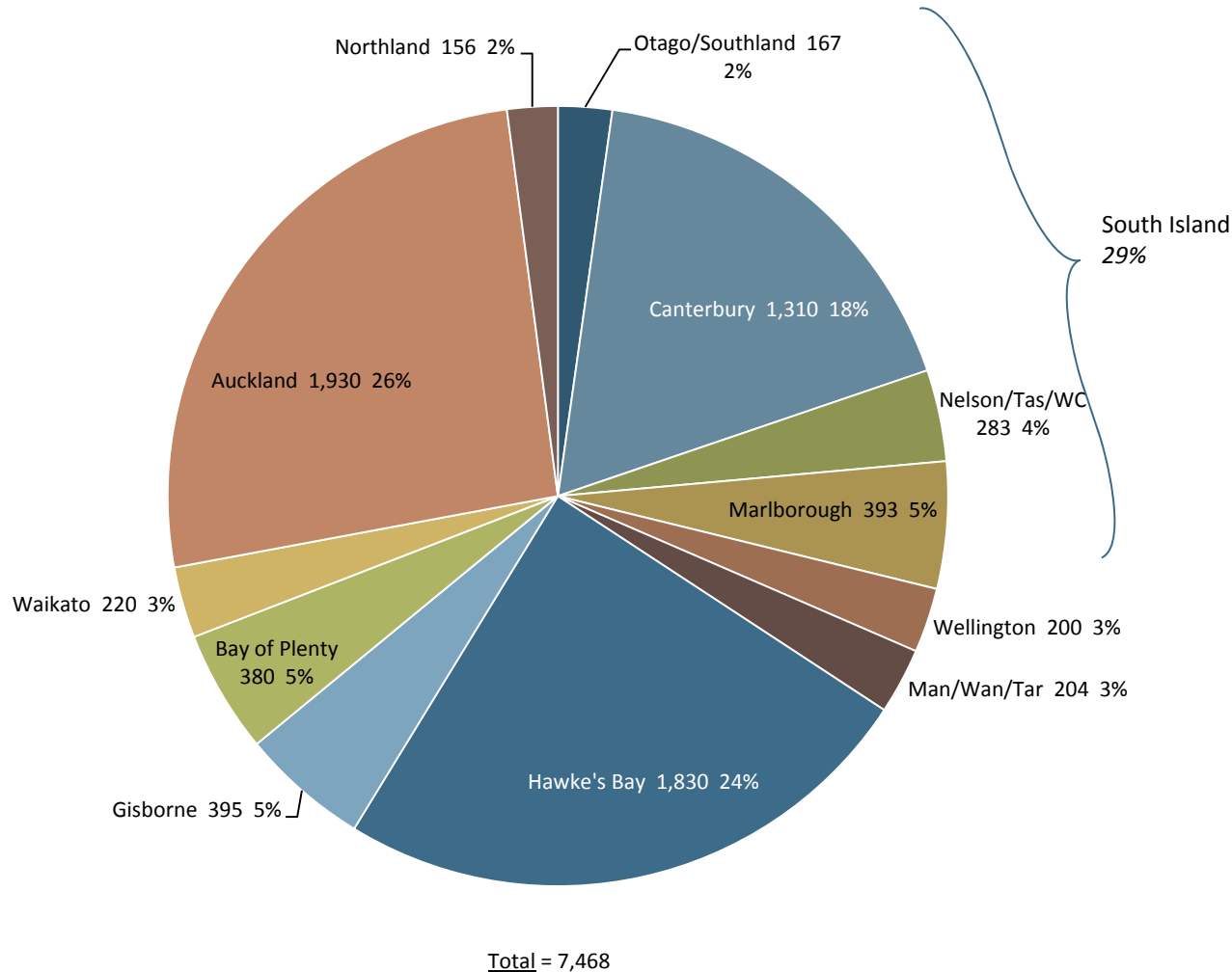
Notes/Definitions

- Horticulture growing uses SNZ Annual Enterprise Survey (AES) supplementary tables 4 (various years); this includes cropping
- 2009 is the most recent available; 2010 likely available Oct 2011
- Fruit & vegetable processing not available in SNZ data
- Includes ANZSIC groups A011, A012, A013

F&V PROCESSING & WHOLESALING – EMPLOYMENT BY REGION

Employment in fruit and vegetable processing and wholesaling is concentrated in the major growing regions and Auckland

Number of persons employed in F&V processing and wholesaling in New Zealand by region
(people; 2010)



Comments/Notes

- Data strongly tied to plant locations

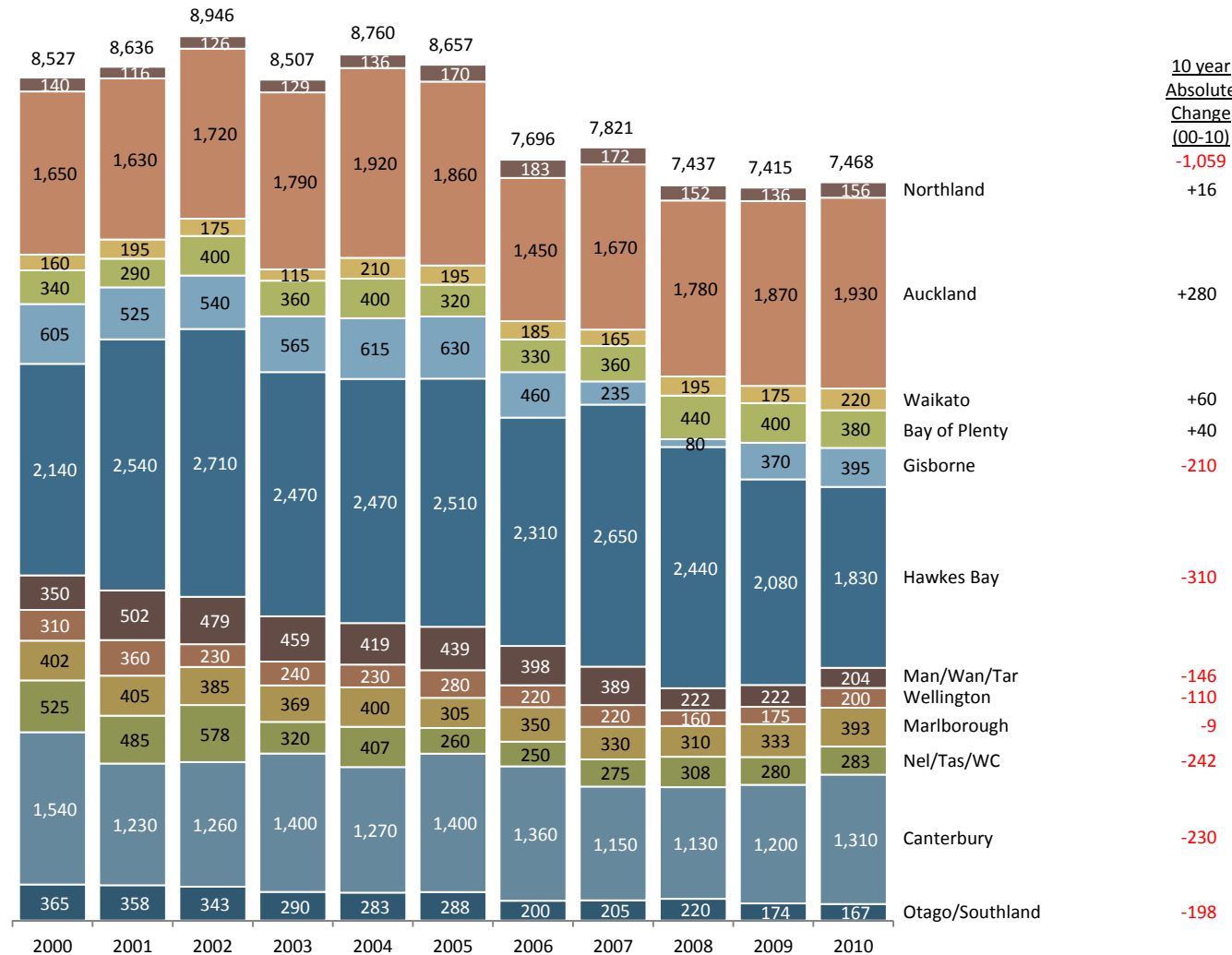
Notes/Definitions

- Uses C114 Fruit & vegetable processing and F360500 Fruit & vegetable wholesaling
- Does not include growing (shown elsewhere in document)
- Statistics New Zealand calculates its statistics based on the predominant business activity of the enterprise
- A firm that is defined as “beverage manufacturing” at the enterprise level may have a subsidiary at the geographic level that is classified as “grape growing”
- Data here is “geographic” units not “enterprise” units
- Nelson/Tasman/West Coast
- Manawatu/Wanganui/Taranaki
- Wellington region includes north to the Kapiti and Masterton districts

F&V PROCESSING & WHOLESALING – EMPLOYMENT BY REGION

Auckland stands out for employment creation in F&V processing and wholesaling; most other regions down

Number of persons employed in F&V processing and wholesaling in New Zealand
(people; 2000-2010)



Comments/Notes

- Clear productivity/efficiency gains occurring

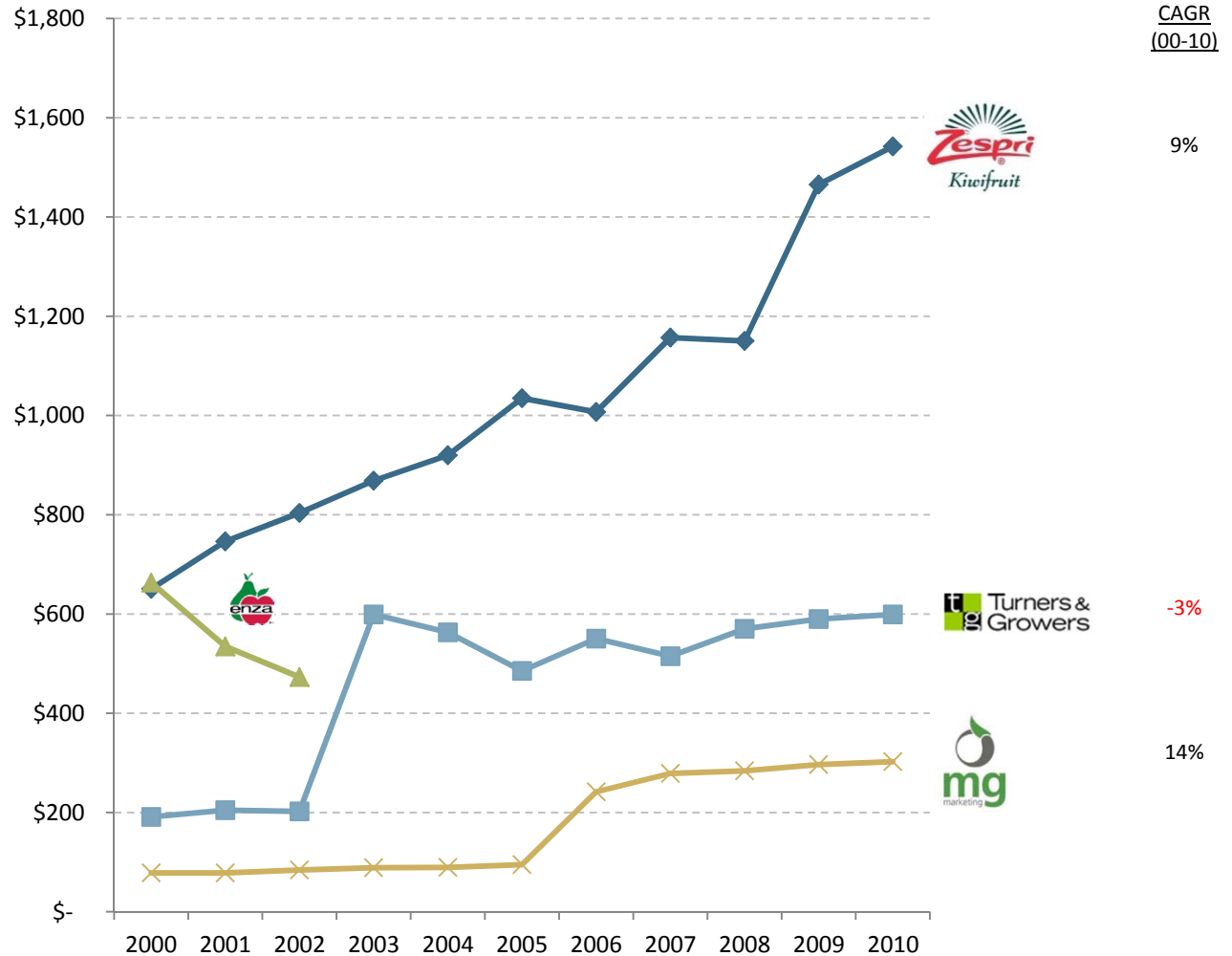
Notes/Definitions

- Uses C114 Fruit & vegetable processing and F360500 fruit & vegetable wholesaling
- Does not include growing (shown elsewhere in document)
- Nelson/Tasman/West Coast
- Manawatu/Wanganui/Taranaki
- Wellington region includes north to the Kapiti and Masterton districts
- See note prior page

PRODUCE – TURNOVER OF KEY FIRMS

Turnover growth across key produce firms has been mixed

Turnover of select large produce industry firms
(NZ\$m; 2000-2010 as available)



Comments

- Both T&G and Market Gardeners have significantly higher sales if commission wholesale product is included; as these firms do not take “possession” of this product, it is not included in their accounts (or this chart)
- Both T&G and MG report their “auction” sales but not continuously over this period
- T&G sales: gross sales \$847m/revenue \$599m
- MG sales: gross sales under management \$574m/revenue \$303m
- If it were included it would drive down profit %

Notes/Definitions

- T&G excludes 6month year to Dec 02 when FY was changed
- T&G aggregates T&G and ENZA revenue for 10 year CAGR

Last 10 yr
CAGR
(00-10)

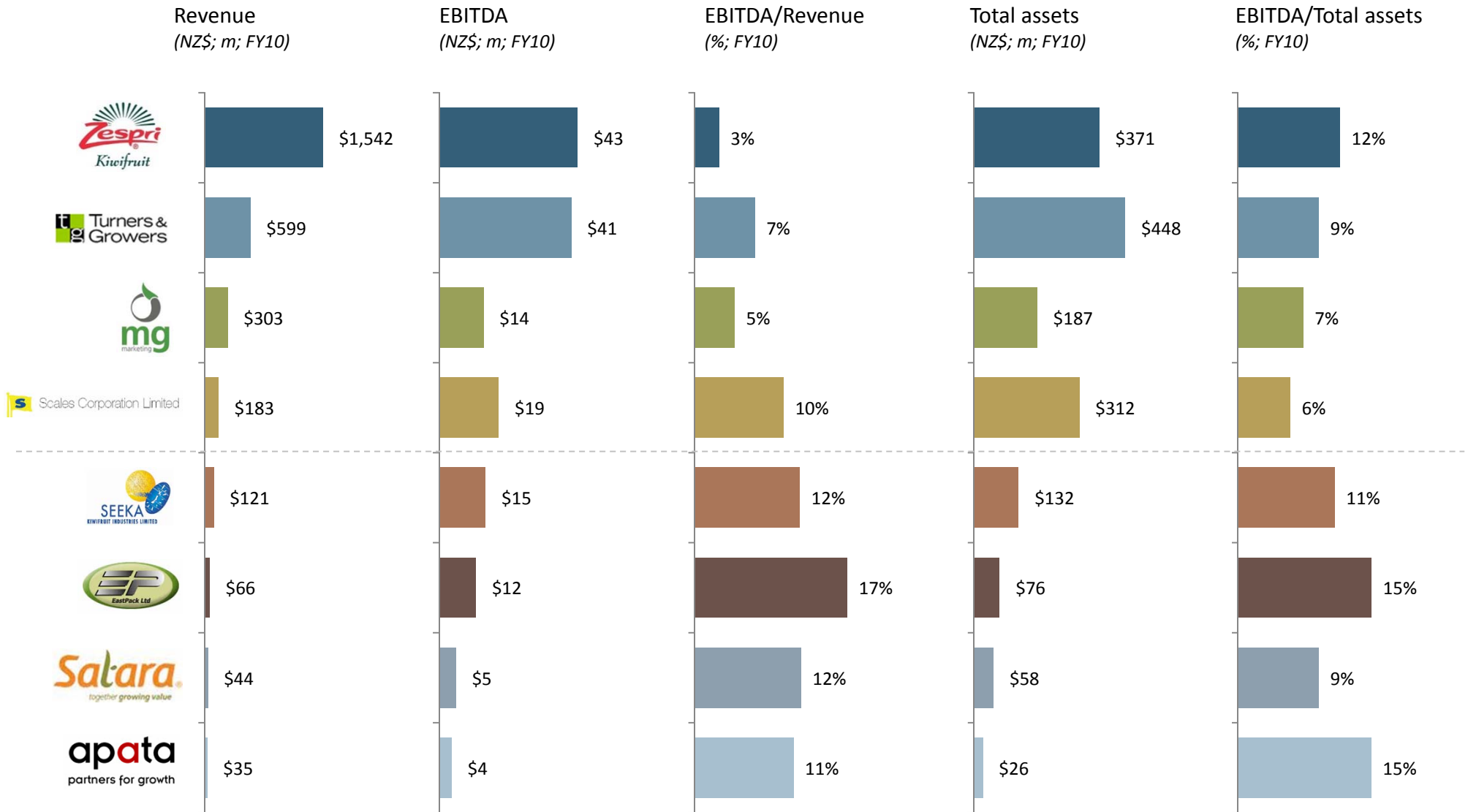
9%

-3%

14%

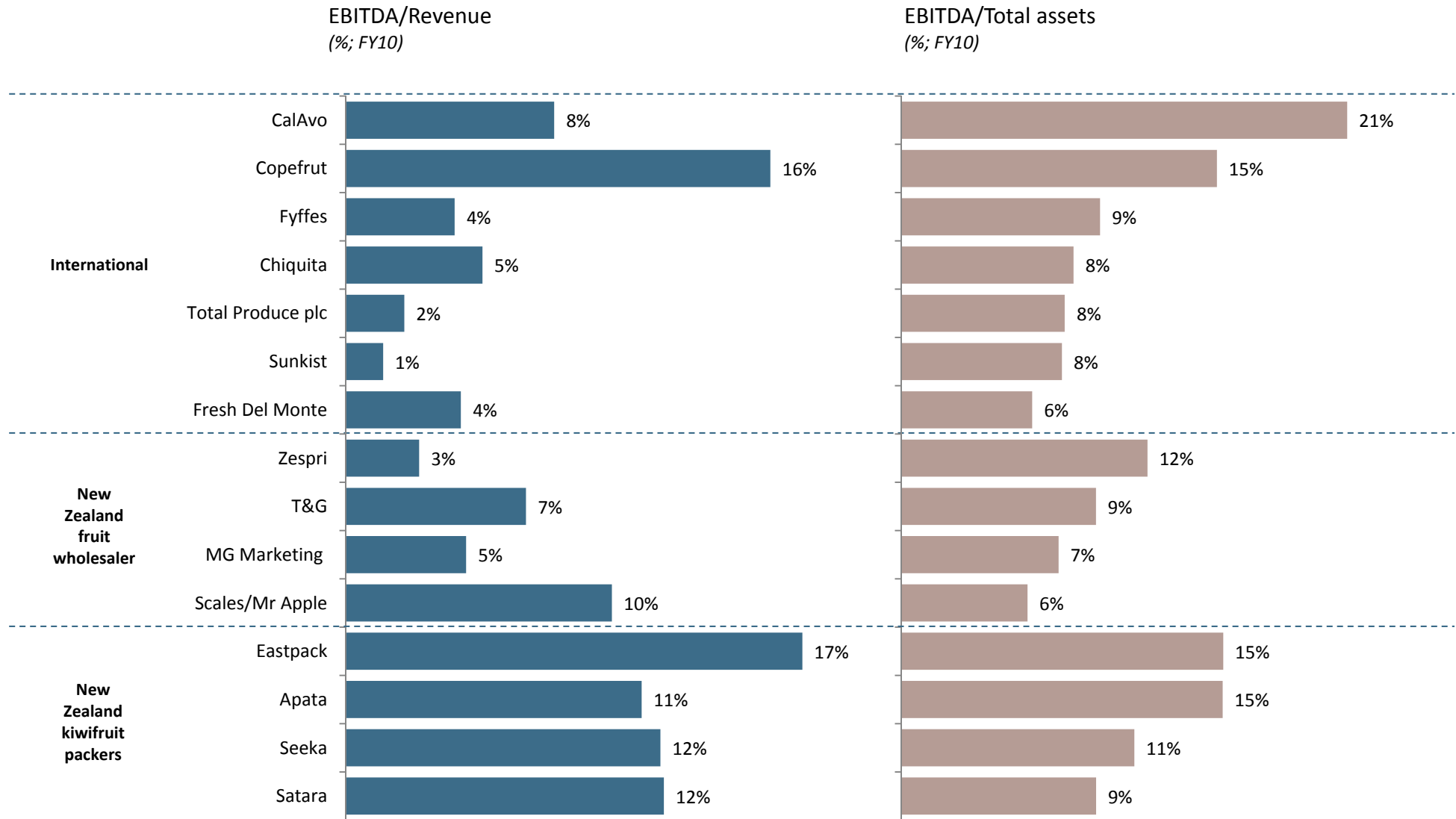
PRODUCE – FIRM PROFITABILITY BENCHMARKING

Financial performance of key firms varies



PRODUCE – FIRM PROFITABILITY BENCHMARKING

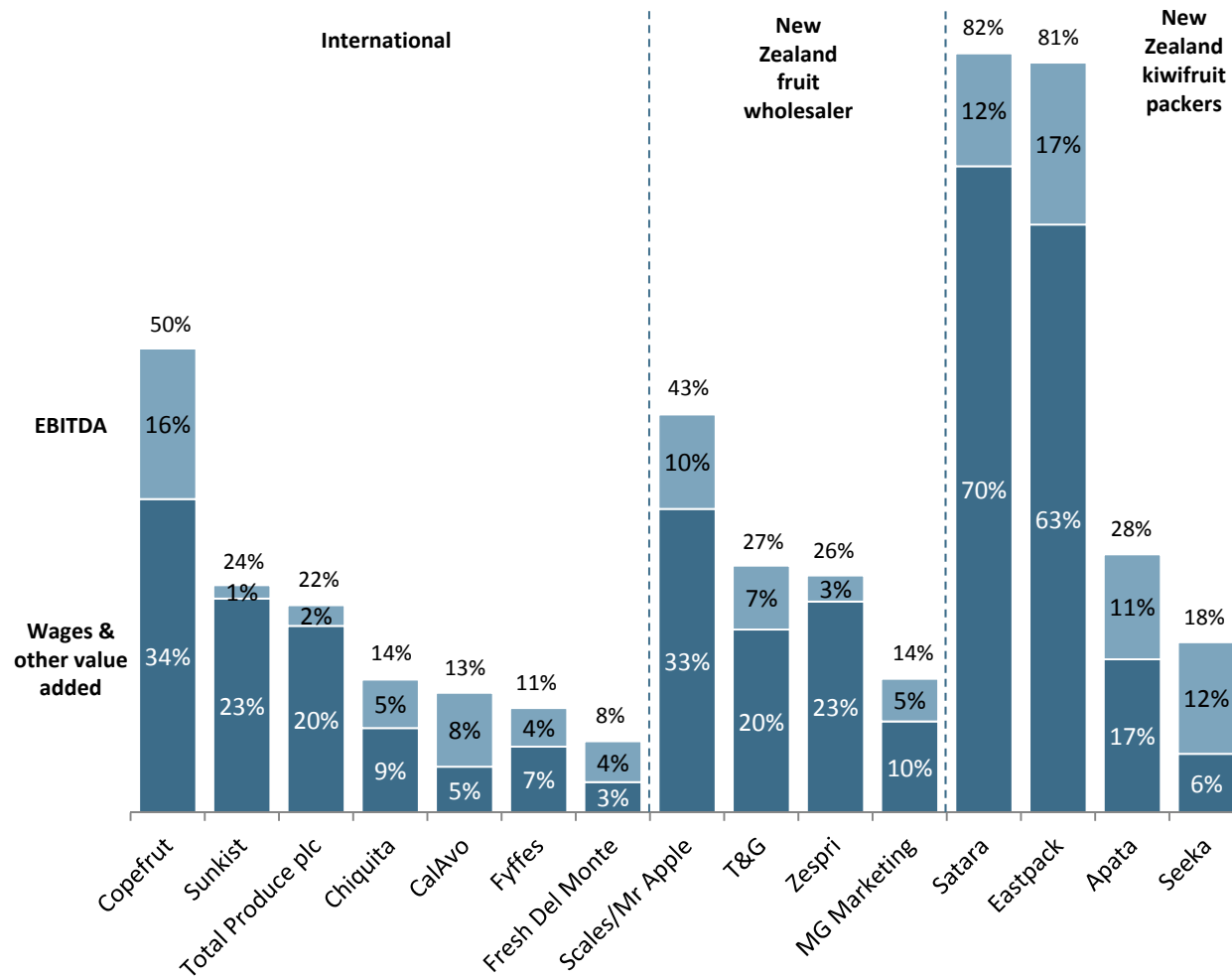
New Zealand firms generally perform well relative to global peers



PRODUCE – VALUE ADDED

Peers indicate there may be more opportunities to add value

Benchmarking value added: key New Zealand firms vs. select global produce companies
(% of sales; FY10)



Comments

- The high value add for NZ kiwifruit packers is a result of their not taking possession of the fruit; factoring in effective fruit “sales” would reduce results)
- Too much shouldn’t be read into this chart; results here are highly dependent on business model; for example cooperative contract (e.g. Sunkist) vs. global fruit trader(Fresh Del Monte)
- There are very few listed companies globally in the produce industry; around the world fruit and vegetables are dominated by cooperatives and family owned firms
- Three of the foreign firms here are coops (Copefrut, CalAvo, & Sunkist)

Notes/Definitions

- To economists value-added is the “difference between the cost of materials purchased by a firm and the price for which it sells those goods”; this is almost/ effectively gross profit (which is what we use here)
- Gross profit itself is then paid out as a return on labour (wages), other non-COGS and a return on capital (EBITDA)
- Gross domestic profit (GDP) is a measure of the gross value added; when we propose increasing New Zealand’s GDP, we are effectively proposing to increase the amount of value added



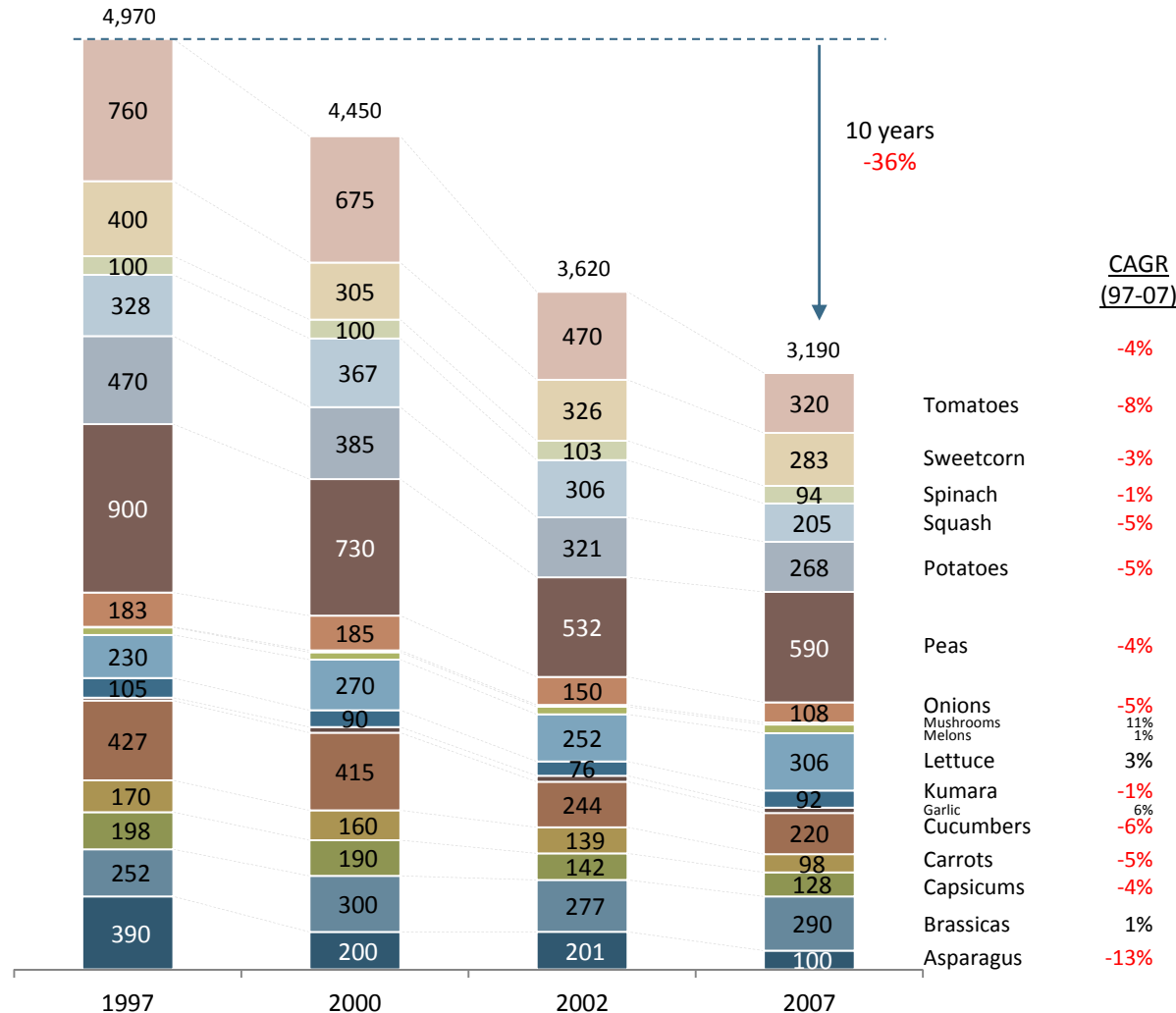
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VEGETABLES – # OF GROWERS

The number of vegetables growers in New Zealand fell by **-36%** in the decade 1997-2007

Aggregate number of vegetable growers in New Zealand by specified crop
(# of growers of specified crop; actual; 1997-2007)



Comments

- One grower can grow more than one vegetable; the count here is the number of growers of each crop (so will include double counting of individual growers)
- Growers can move in and out of specific crops on a seasonal basis (within the limit of soil and climate)
- The state of New Zealand vegetable statistics – both absolutely and in comparison with peer group countries – varies from very bad to diabolical; this is due to past budget cuts
- The data presented here is cobbled together from a wide range of sources and represents our best attempt at a synthesis
- Data includes Coriolis estimates of missing values
- Data should be treated as indicative/directional

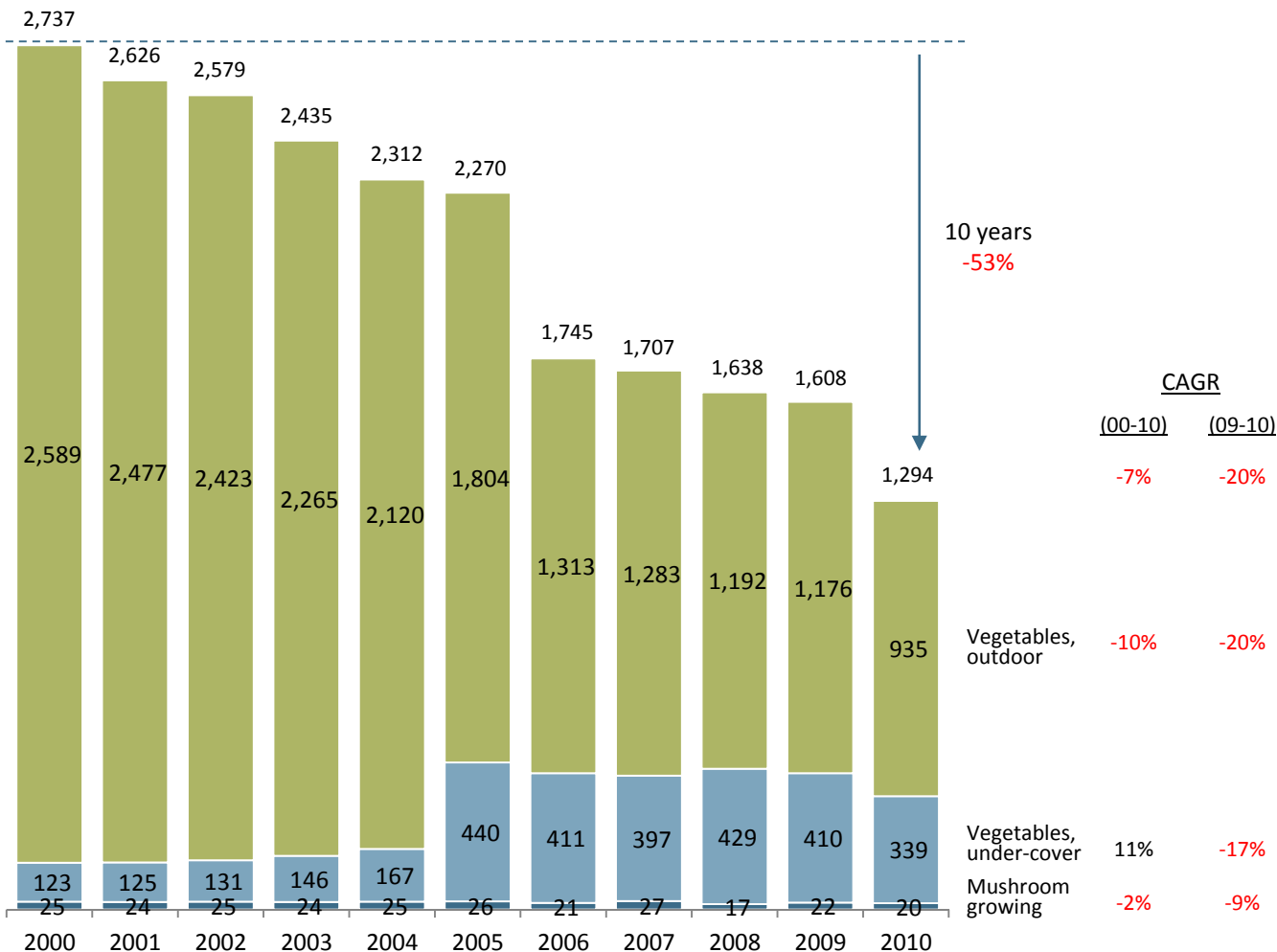
Notes/Definitions

- Not all numbers shown
- Data is latest available; next survey 2012
- Onions includes shallots
- Capsicum includes chillies
- Squash includes pumpkin
- Spinach includes silverbeet
- Mushrooms are not vegetables but included in analysis
- Other vegetables not shown as data only available historically

VEGETABLES – # OF ENTERPRISES

The number of enterprises involved in vegetable production has declined at a rapid pace (-7%/per annum) over the past decade; there has been a huge fall in the last year (-20%)

Number of enterprise units in vegetable growing in New Zealand
(enterprises; 2000-2010)



Comments

- We have some definitional and statistical reservations about data quality, particularly the 2005-2006 transition; likely a redefinition (e.g. under glass to under poly); data should be treated as directional
- That said, there appears to be a massive consolidation underway in the New Zealand vegetable sector
- Likely a mixture of increasing industry productivity through:
 - Consolidation (fewer/larger)
 - Automation (replacing labour with machines)
 - Increasing scale in automation (fewer/larger harvesters) leading to larger fields & properties

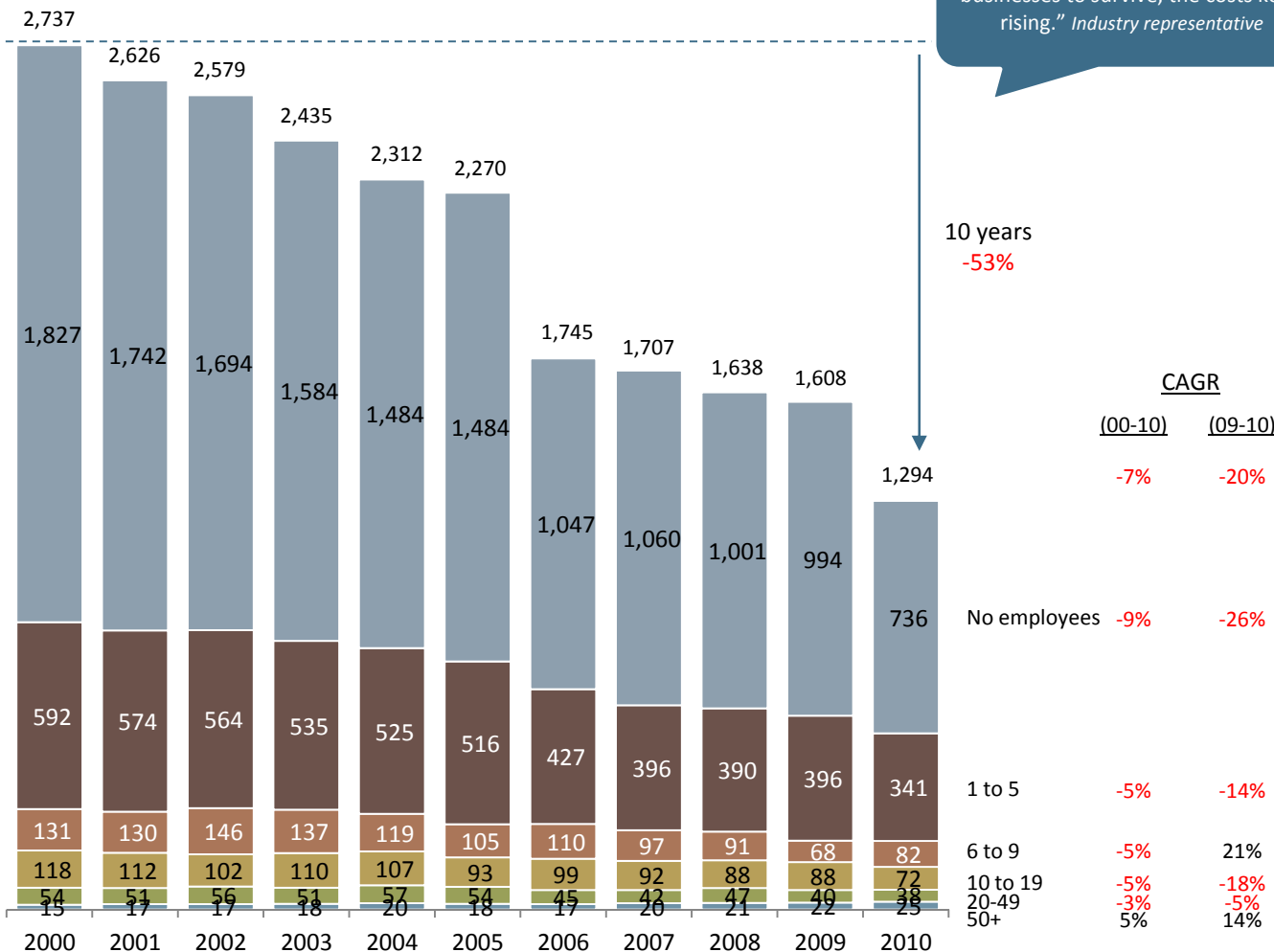
Notes/Definitions

- Mushrooms are not vegetables, but included in analysis
- Mushroom growing (A012-100)
- Vegetables, under-cover (A012-200)
- Vegetables, outdoor (A012-300)

VEGETABLES – # OF ENTERPRISES BY EMPLOYMENT SIZE

Looking at the same group split by employee size, we find that the decline is coming from smaller farming operations

Number of enterprise units in vegetable growing in New Zealand by number of employees¹
(enterprises; 2000-2010)



"It is harder and harder for small businesses to survive, the costs keep rising." Industry representative

10 years
-53%

	CAGR	
	(00-10)	(09-10)
No employees	-7%	-20%
1 to 5	-5%	-14%
6 to 9	-5%	21%
10 to 19	-5%	-18%
20-49	-3%	-5%
50+	5%	14%

Comments

- Decline across the board except in farms employing over fifty people
- Question: How many vegetable farms do we need?
- Question: Are we watching the demise of the family (vegetable) farm?

Notes/Definitions

We have some definitional and statistical reservations about data quality, particularly the 2005-2006 transition; data should be treated as directional

Mushrooms are not vegetables, but included in analysis

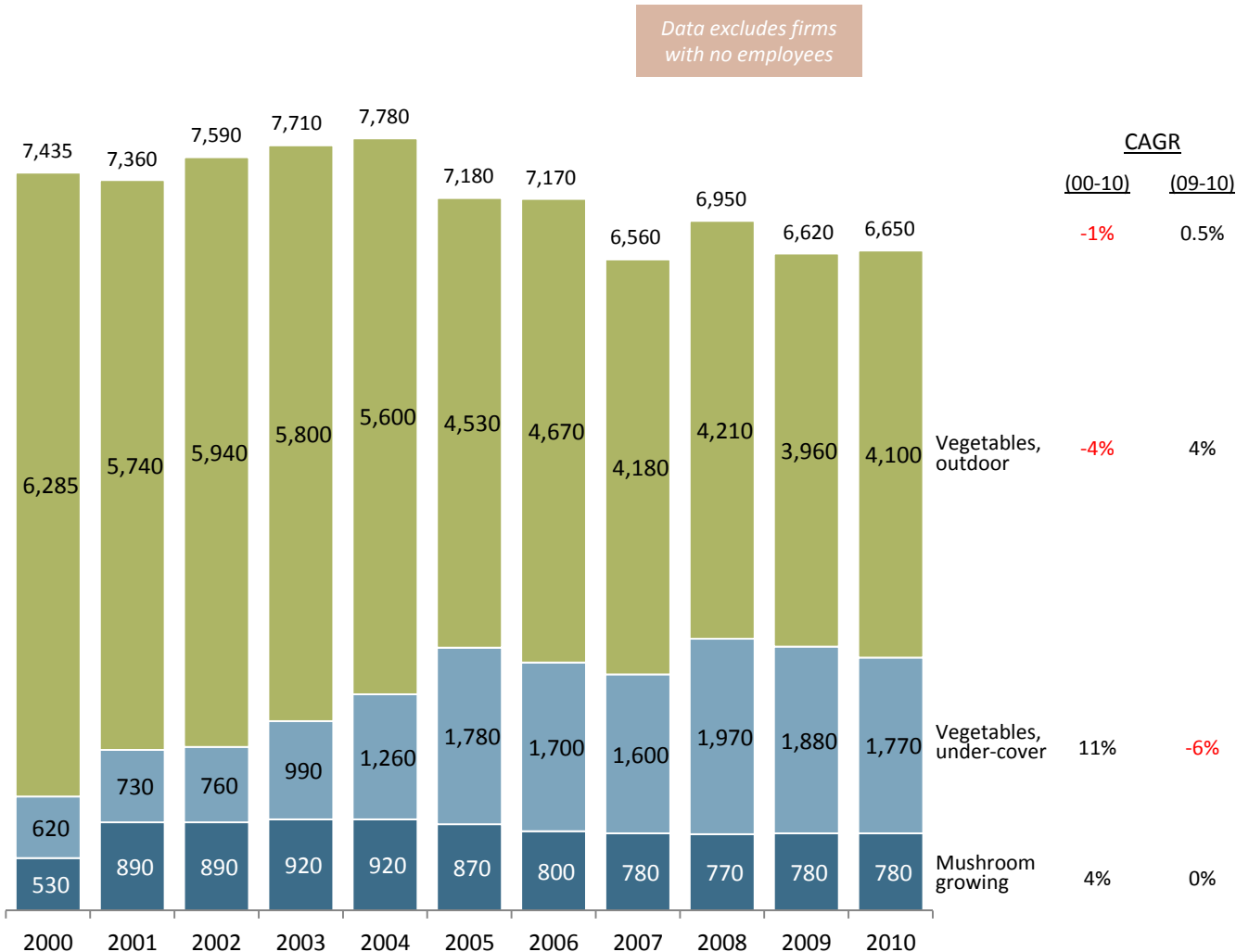
As sub-aggregate level data not available this aggregates:

- Mushroom growing (A012-100)
- Vegetables, under-cover (A012-200)
- Vegetables, outdoor (A012-300)

VEGETABLES – EMPLOYMENT

The number of people employed in vegetable growing is declining in outdoor but growing under-cover (ie. in greenhouses)

Number of persons employed in vegetable growing in New Zealand by type of operation
(people; 2000-2010)



Comments

- We have some definitional and statistical reservations about data quality; data should be treated as directional
- That said, there appears to be a massive consolidation underway in the New Zealand vegetable sector
- Likely a mixture of increasing industry productivity through:
 - Consolidation (fewer/larger)
 - Automation (replacing labour with machines)
 - Increasing scale in automation (fewer/larger harvesters) leading to larger fields & properties

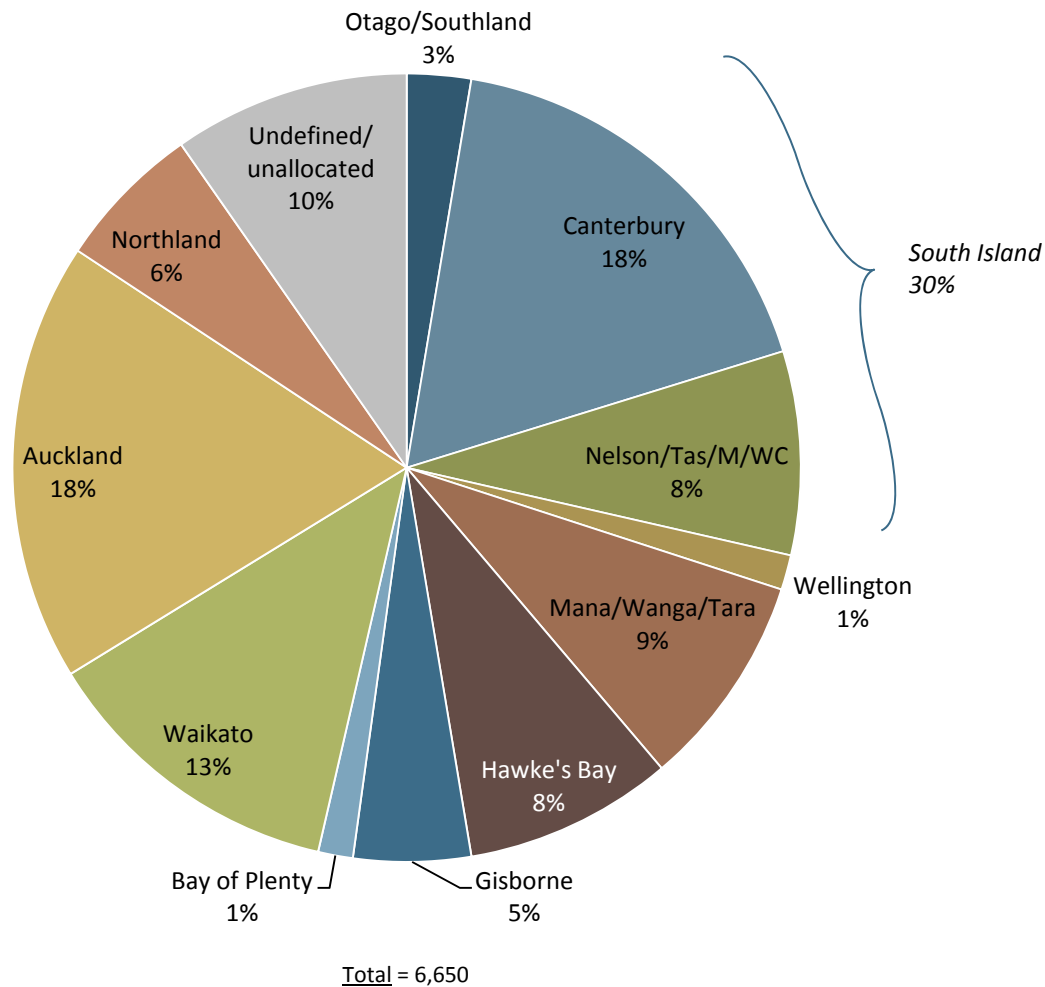
Notes/Definitions

- Mushrooms are not vegetables, but included in analysis
- Mushroom growing (A012-100)
- Vegetables, under-cover (A012-200)
- Vegetables, outdoor (A012-300)

VEGETABLES – EMPLOYMENT BY REGION

Industry employment is spread across the regions, however Auckland, Waikato and Canterbury stand out for absolute size

Number of persons employed in vegetable growing in New Zealand by region
(people; 2010)



Comments/Notes

- Somewhat proportional to regional population; significant proportion of production for consumption within region

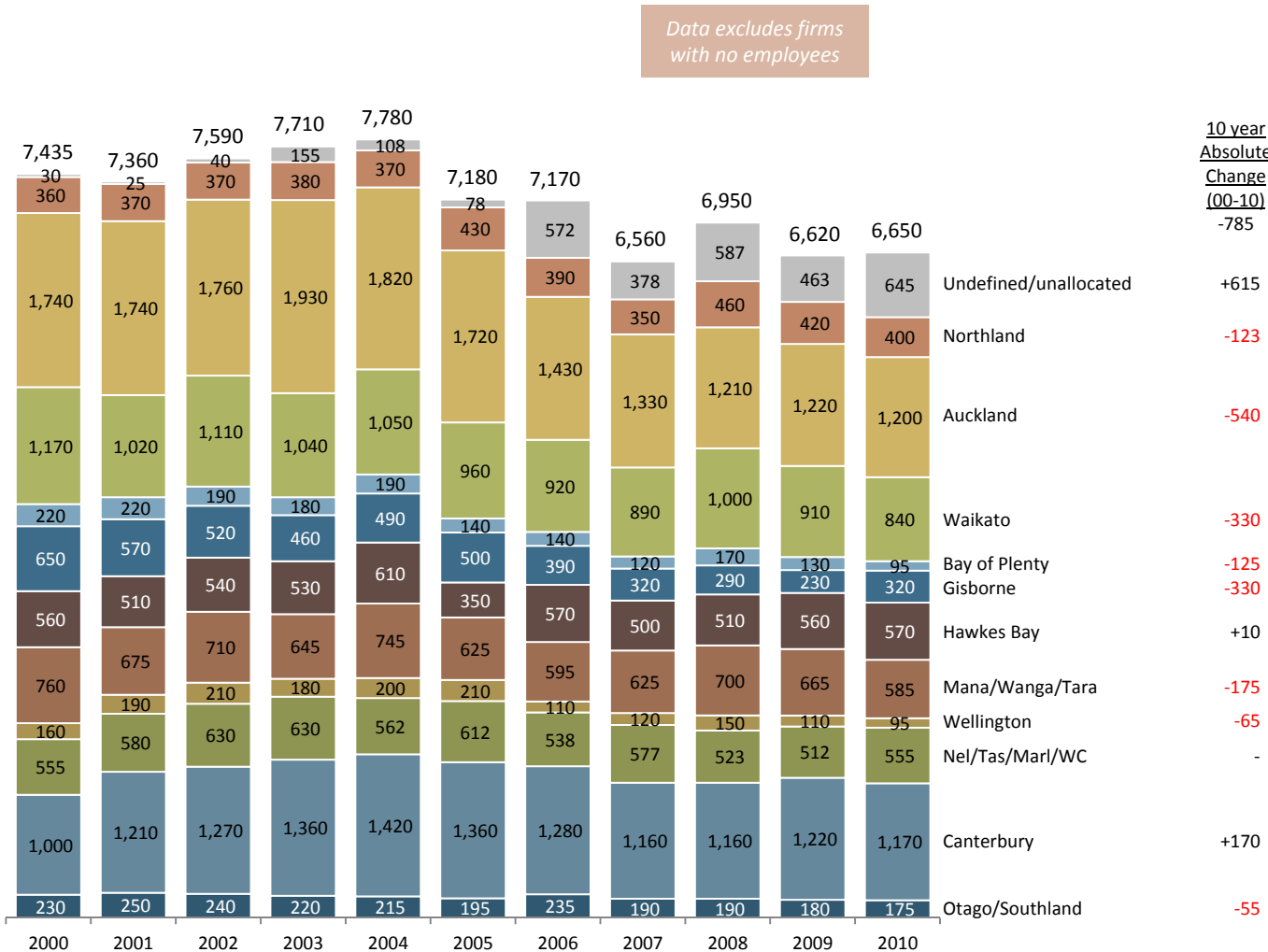
Notes/Definitions

- Statistics New Zealand calculates its statistics based on the predominant business activity of the enterprise
- A firm that is defined as “beverage manufacturing” at the enterprise level may have a subsidiary at the geographic level that is classified as “grape growing”
- Data here is “geographic” units not “enterprise” units (pages prior)
- “Unallocated” is the difference between geographic unit employees and enterprise unit employees; it represents firm subsidiaries not involved in “beverage manufacturing,” for example those classified as “grape growing” or “beverage wholesaling”
- Nelson/Tasman/Marlborough/West Coast
- Manawatu/Wanganui/Taranaki
- Excludes enterprises with no employees

VEGETABLES – EMPLOYMENT BY REGION

The number of people employed in vegetable growing is declining across most regions

Number of persons employed in vegetable growing in New Zealand by area
(people; 2000-2010)



Comments

- We have some definitional and statistical reservations about data quality; data should be treated as directional
- That said, there appears to be a massive consolidation underway in the New Zealand vegetable sector
- Likely a mixture of increasing industry productivity through:
 - Consolidation (fewer/larger)
 - Automation (replacing labour with machines)
 - Increasing scale in automation (fewer/larger harvesters) leading to larger fields & properties
- Urban sprawl and the growth of lifestyle blocks also definitely playing a role

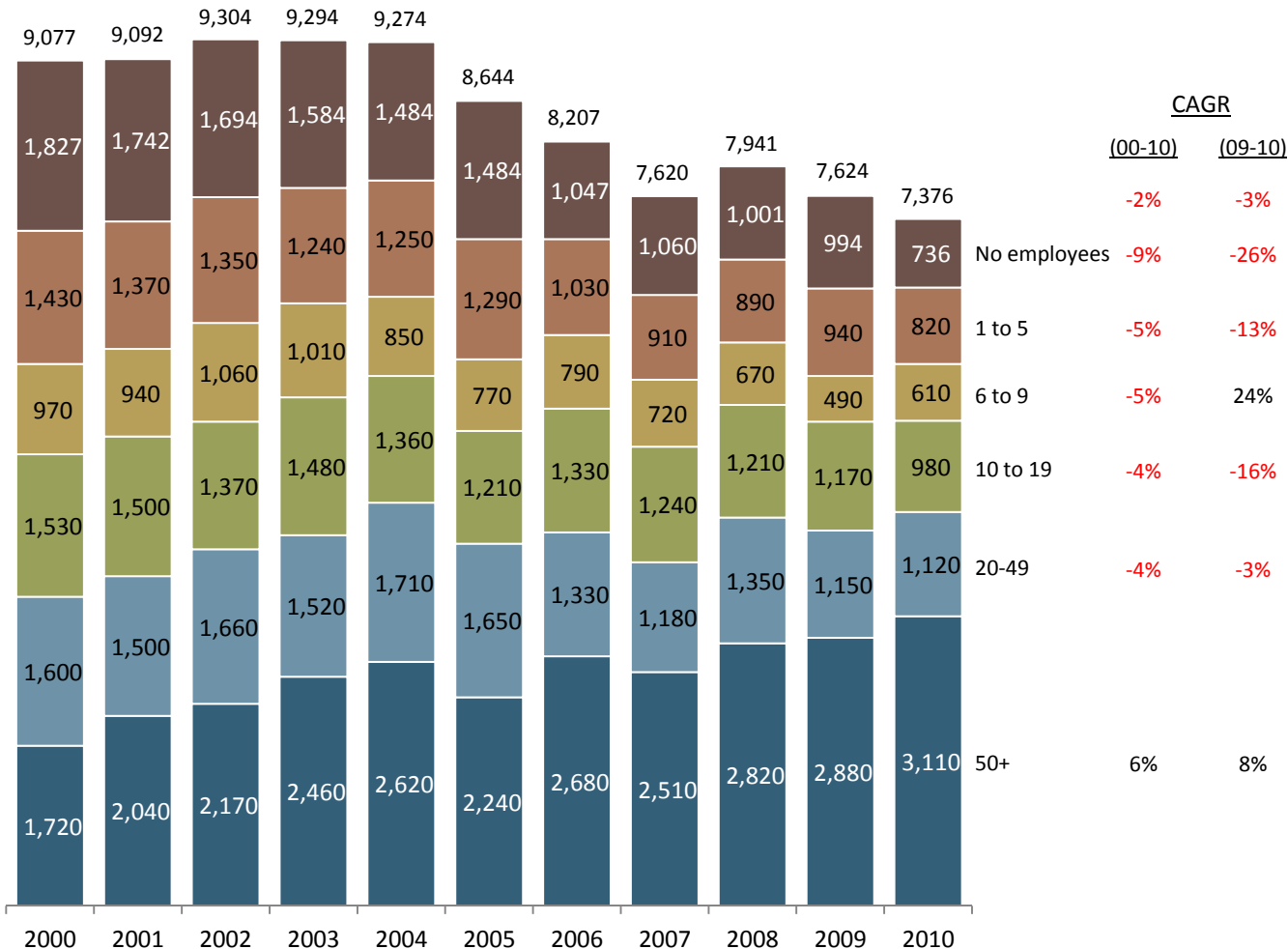
Notes/Definitions

- Data is persons employed (PAYE); does not include Director shareholders
- "Unallocated" see note prior page
- Nelson/Tasman/Marlborough/West Coast
- Manawatu/Wanganui/Taranaki

VEGETABLES – EMPLOYMENT BY ENTERPRISE SIZE

Looking at employment by firm employment size, it is clear that large operations are growing while small farms are shrinking

Number of persons employed in vegetable growing in New Zealand by number of employees¹
(people; 2000-2010)



Comments

- Employment total varies from page prior as this attempts to include owner-operators ("one-man-bands")
- We have assumed all firms with no employees have 1 owner/operator (director/shareholder); this is an assumption, but it balances multiple working family members with holding companies
- In 2000 firms with 50+ employees were 19% of the total enterprises, in 2010 this has increased to 42%

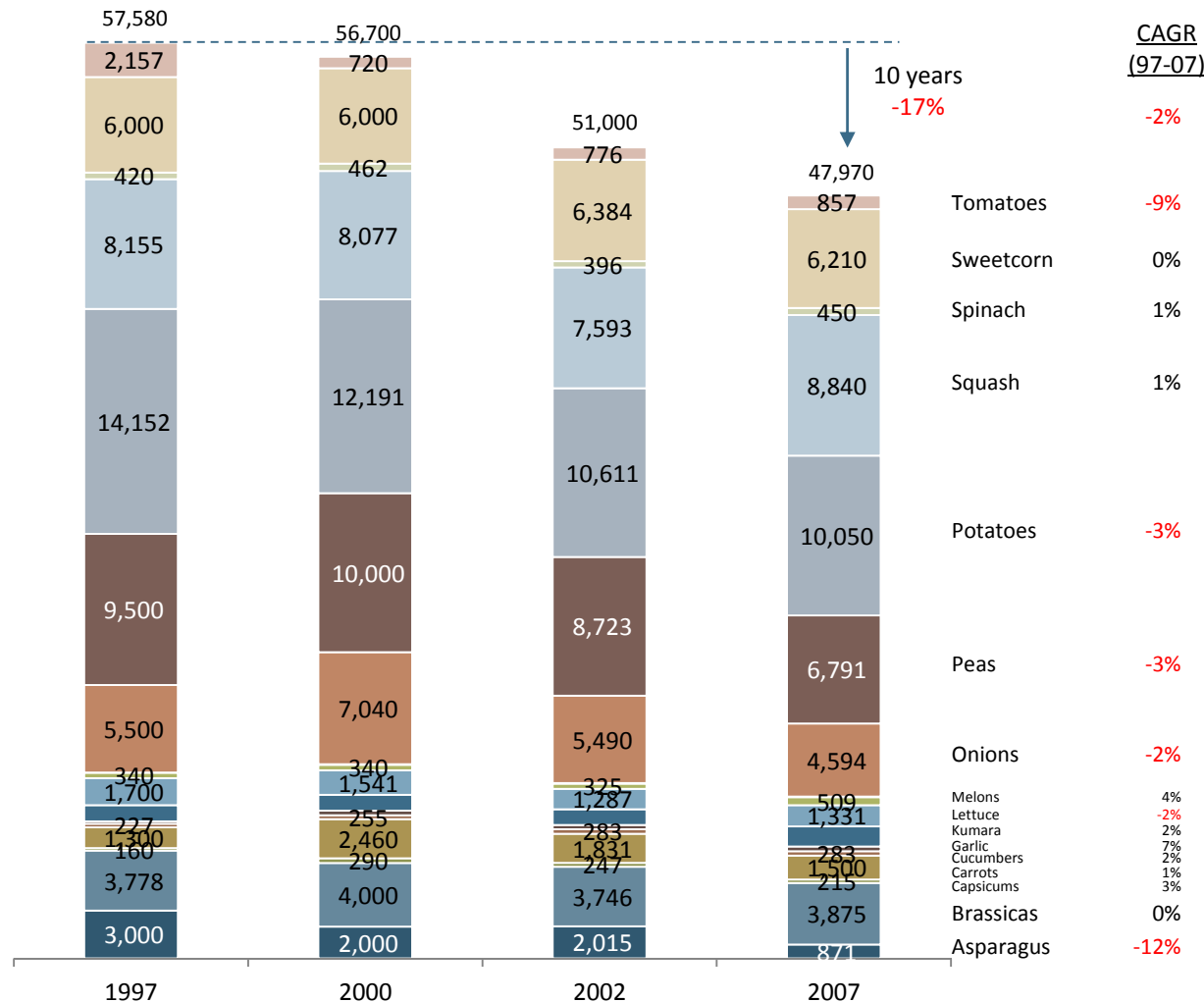
Notes/Definitions

- Mushrooms are not vegetables, but included in analysis
- Mushroom growing (A012-100)
- Vegetables, under-cover (A012-200)
- Vegetables, outdoor (A012-300)

VEGETABLES – PLANTED AREA

The amount of area planted in vegetables fell in New Zealand fell by **-17%** in the decade 1997-2007

Area planted in New Zealand in vegetables by specified crop
(hectares; 1997-2007)



Comments

- The state of New Zealand vegetable statistics – both absolutely and in comparison with peer group countries – varies from very bad to diabolical; this is due to past budget cuts
- The data presented here is cobbled together from a wide range of sources and represents our best attempt at a synthesis
- Data includes Coriolis estimates of missing values
- Data should be treated as indicative/directional

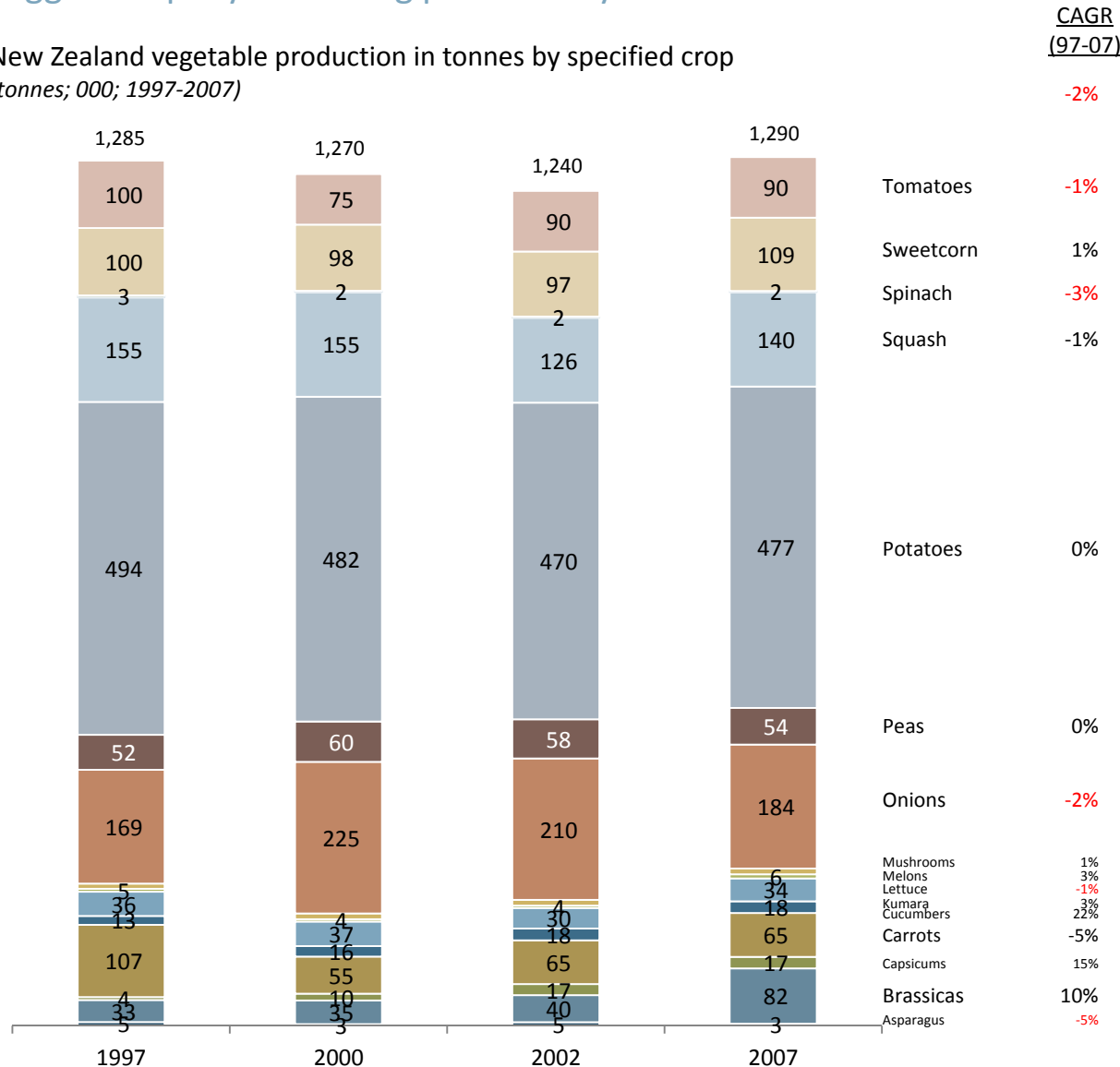
Notes/Definitions

- Not all numbers shown
- Data is latest available; next survey 2012
- Onions includes shallots
- Capsicum includes chillies
- Squash includes pumpkin
- Spinach includes silverbeet
- Other vegetables not shown as data only available historically

VEGETABLES – PRODUCTION

Despite the decline of other variables, vegetable production was actually flat over the decade 1997-2007; this suggests rapidly increasing productivity

New Zealand vegetable production in tonnes by specified crop
(tonnes; 000; 1997-2007)



Comments

- Vegetable yield growing through improved genetics, both imported and domestically developed (e.g. at Plant & Food)
- Yield improvements also coming from spread of best practice, mechanisation and more efficient/effective fertilizer application
- For example, over the past decade (97-07) we appear to be getting +4% more potatoes from -30% less land
- The state of New Zealand vegetable statistics – both absolutely and in comparison with peer group countries – varies from very bad to diabolical; this is due to past budget cuts
- The data presented here is cobbled together from a wide range of sources and represents our best attempt at a synthesis
- Data includes Coriolis estimates of missing values
- Data should be treated as indicative/directional








Notes/Definitions

- Not all numbers shown
- Data is latest available; next survey 2012
- Onions includes shallots
- Capsicum includes chillies
- Squash includes pumpkin
- Spinach includes silverbeet
- Other vegetables not shown as data only available historically

VEGETABLES – KEY FIRMS

The main firms in the New Zealand vegetable sector are primarily large wholesaler/distributors that “make the market” and handle distribution and logistics










Key firms in the New Zealand fresh sector
(2010 or as available)

	Turnover	% Export	Employees	Ownership	Year founded	Notes
Vegetables – wholesaler/distributor						
 	\$599m (2010) (\$847m under management)		2,000 (Ci)	New Zealand; listed (NZX: TUR) GPG UK 65%; Dossor (12%)	1897	www.turnersandgrowers.com Owns a range of subsidiaries Grows, processes, a range of fruit, primarily for NZ, also exports to Australia, Chile, etc.
	\$303m (2010) (\$574m under management)		350 (K)	New Zealand; co-operative (~400 growers)	1923	www.mgmarketing.co.nz Exporter/importer fresh produce 700 growers, 400 grower shareholders Acquired LaManna in Australia Imports Sunkist for NZ and Australia. Imports tropical fruit for NZ including Dole Office in California for procurement
	\$207.9m (Ci)		300 (K)	New Zealand; private (Turner family)	1995	www.freshdirect.co.nz Produce, flower distributors inside NZ \$190K from gov't to help develop portable vege processor
	\$150m (2006, ws)		300 (AU+NZ) (ws)	Australia; private equity/others (Wolseley Private Equity 50%)	1994	www.freshmax.co.nz 3 apple packhouses: Hawkes Bay, Nelson & Wairarapa; more domestic supply than export; YESS brand (apples, kiwifruit & avocados)
	\$30m (K)	35% (K)	25 (K)	New Zealand; private	1988	www.primor.co.nz Importer/exporter; avocado, kiwifruit, apples, blackcurrants Apata/Trevelyan's pack 30% of Avocado export business
	\$25.1m (Ci)		50 (ws)	New Zealand; private (Stokes, McPhee and Dalley families)	2000	www.produceco.co.nz Wholesaler, exporter (increased range to cheese, seafood)

VEGETABLES – KEY FIRMS

There are also a range of speciality firms

Key firms in the New Zealand produce sector
(2010 or as available)

	Turnover	% Export	Employees	Ownership	Year founded	Notes
Vegetables - specialists						
	\$200m (Ci)		170 (cws)	New Zealand; private (Wilcox Family)	1954	www.aswilcox.co.nz Potatoes, onions, carrots, persimmons 2,500 acres
	\$138.6m (Ci)	35% (ws)	240/ 250 seasonal (ws)	New Zealand; private (Murray McPhail)	1979	www.leaderbrand.co.nz Range of salads, produce and fruits; squash to Japan Cropping 3,000ha (ws; 2011)
	~\$200m (Ci)		N/A	New Zealand; private (Balle Family)		http://www.ballebros.co.nz/ Specialists in growing, packaging and marketing of New Zealand fresh produce
	\$45m (Ke)		300 (cws)	New Zealand; private (KPH Produce; others)	1989	www.nzhothouse.co.nz 20 hectares of glasshouse production Primarily tomatoes, also capsicum, cucumbers, lettuce
	\$28m (Ce)		150 (K)	New Zealand; private (Parent: Pimento Ltd)		www.nzfreshcuts.co.nz; www.snapfreshfoods.com Formed NZFC for dedicated growing and processing Includes Fraisbon Foods and Sun Sprout, Sproutman
	\$25m (Ce)		80 (K)	New Zealand; private (Thompson & Goodwin families)	1995	www.livingfoods.co.nz Production and marketing of salads and spinach (Pams Fresh Express)
	\$9.3m (2010)		20 (Ce)	USA; private (Golden State Foods USA)		Was Essentia Foods (May 2009)
Mushrooms						
	\$35-50m (Ce)	Small portion	500 (cws)	New Zealand; private (Burdon family; others)	1970	www.meadowmushrooms.co.nz 145 tonnes /week
	\$5m (2010)		15 FT; 100 PT	New Zealand; private (Speeden & Hawley families)	1967	www.stuff.co.nz/business/small-business/4050154/ No website; 21t/week

Group of smaller growers (Cresta, Greendale, Parkvale, Quality, Te Mata, Broadfields, others)

VEGETABLES – TRANSACTIONS

There has been limited consolidation activity in vegetables

Recent major produce industry transactions (2008-2010)

Date	Acquirer	Target	Price	Details
Jun 2010	MG Marketing	50% of Mainland Tomatoes	N/A	Acquired remaining 50% shareholding in tomato producer from Brian Gargiulo (MG Chairman)
2009	Golden State Foods Inc (USA)	Essentia Foods	N/A	US giant buys into the NZ freshcut salad business; Packaged salads to Foodservice
2007	Freshmax	Panda Ranch (Australia) OzTaste (Australia)	N/A	“Australia’s leading” stonefruit supply chain manager, offering domestic and international customers long, consistent lines of superior quality fruit. Australian fresh fruit marketer OzTaste from founding directors Andrew Prentice and Rocky Varapodio. OzTaste was formed in 2002 from the merger of three of Australia’s leading stone fruit, apple and pear grower and packer operations.
2007	Freshmax	Holman Fresh/John Holman & Co. (Australia) from Holman family	N/A	A major supplier to the Australian domestic market and supermarket chains, and an exporter to 40 countries
2006	Freshmax	Partners with Wolseley Private Equity	N/A	(WPE) to reposition Freshmax in the Australian market
2002	Turners & Growers	Status Produce	N/A	Expanding T&G tomato production
2002	Status Produce	PTO Growers	N/A	Two major tomato growers merge

Note: Freshmax established in 1995 forming a business based on ENZA subsidiaries Freshmax and Frucor Produce. Expanded into Australia in 2006 and has since changed names to Holman Fresh in Australia and Freshmax in NZ. Freshmax Pty Ltd Australia has 100% ownership of Freshmax NZ Ltd

VEGETABLES – THEMES

An analysis of firm level behaviour highlights a number of clear industry themes

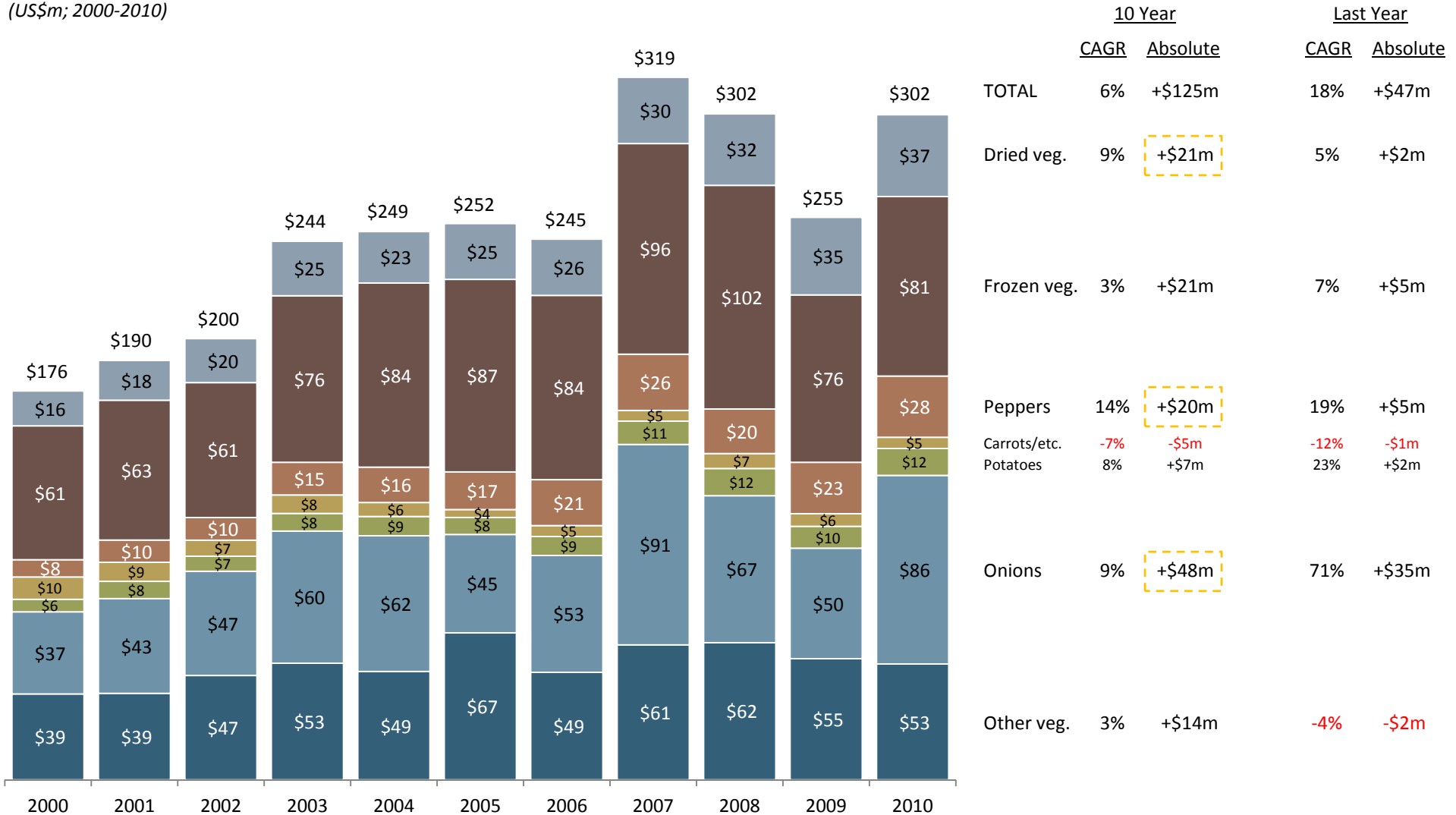
Identified firm level activity or investment themes – cost savings
(2010)

Theme	Details	Examples
Value-added processed	Additional processing to add value to product	<ul style="list-style-type: none"> - Meadow Mushrooms frozen crumbed mushrooms - Leader Brand pre-cut/washed gas flushed bagged salad
Diversifying Range	Entering new areas	<ul style="list-style-type: none"> - MG Marketing forms JV with United Flower Auctions (UFA) to consolidate the national flower market (merging MG's Wellington, Nelson, Dunedin & Invercargill with UFA's Auckland)
Consolidation	Companies making acquisitions to grow scale and achieve efficiencies	<ul style="list-style-type: none"> - T&G acquiring multiple companies - Smaller companies selling out; leasing land
Cost Cutting	Plant closure	<ul style="list-style-type: none"> - Meadow mushroom - Consolidating all activity to CHCH and closing its Morrinsville operation NZ Mushroom Ltd (March 2011)
Fresh Vegetable Challenges	Tough business conditions	<ul style="list-style-type: none"> - "No price increases, despite cost Increases" <i>CEO, large supplier</i> - Importing fresh produce vs. sourcing in NZ in the off season

VEGETABLES – EXPORTS BY TYPE

New Zealand vegetable exports have grown driven by onions, peppers and dried vegetables

New Zealand vegetable export by form
(US\$m; 2000-2010)



VEGETABLES – EXPORTS BY REGION

New Zealand vegetable exports have been growing, particularly to Australia and Europe

New Zealand vegetable export by region
(US\$m; 2000-2010)

“Australia will struggle to feed themselves good quality food in the future. We will be in a good position to supply them.” *Industry representative*

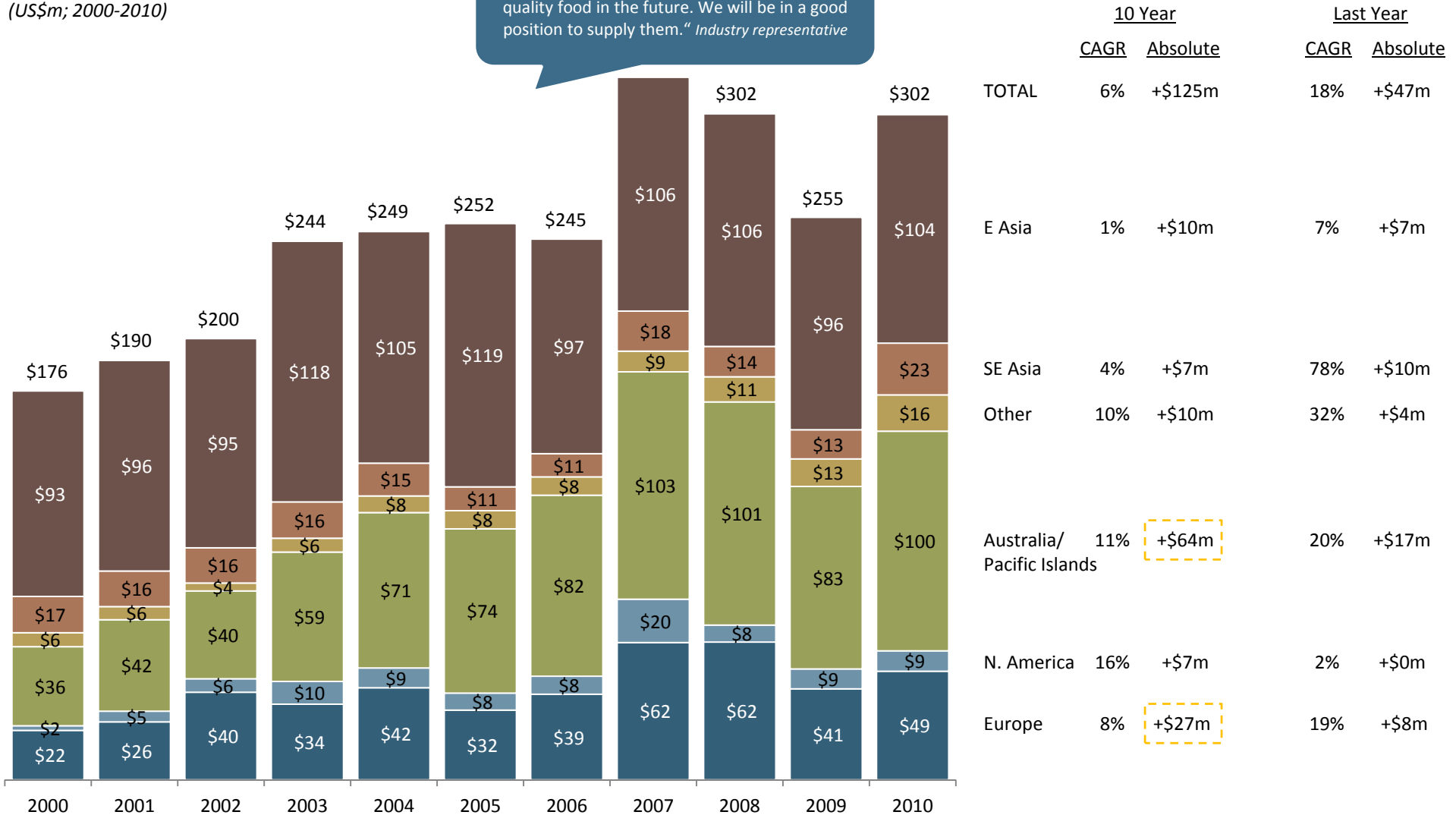




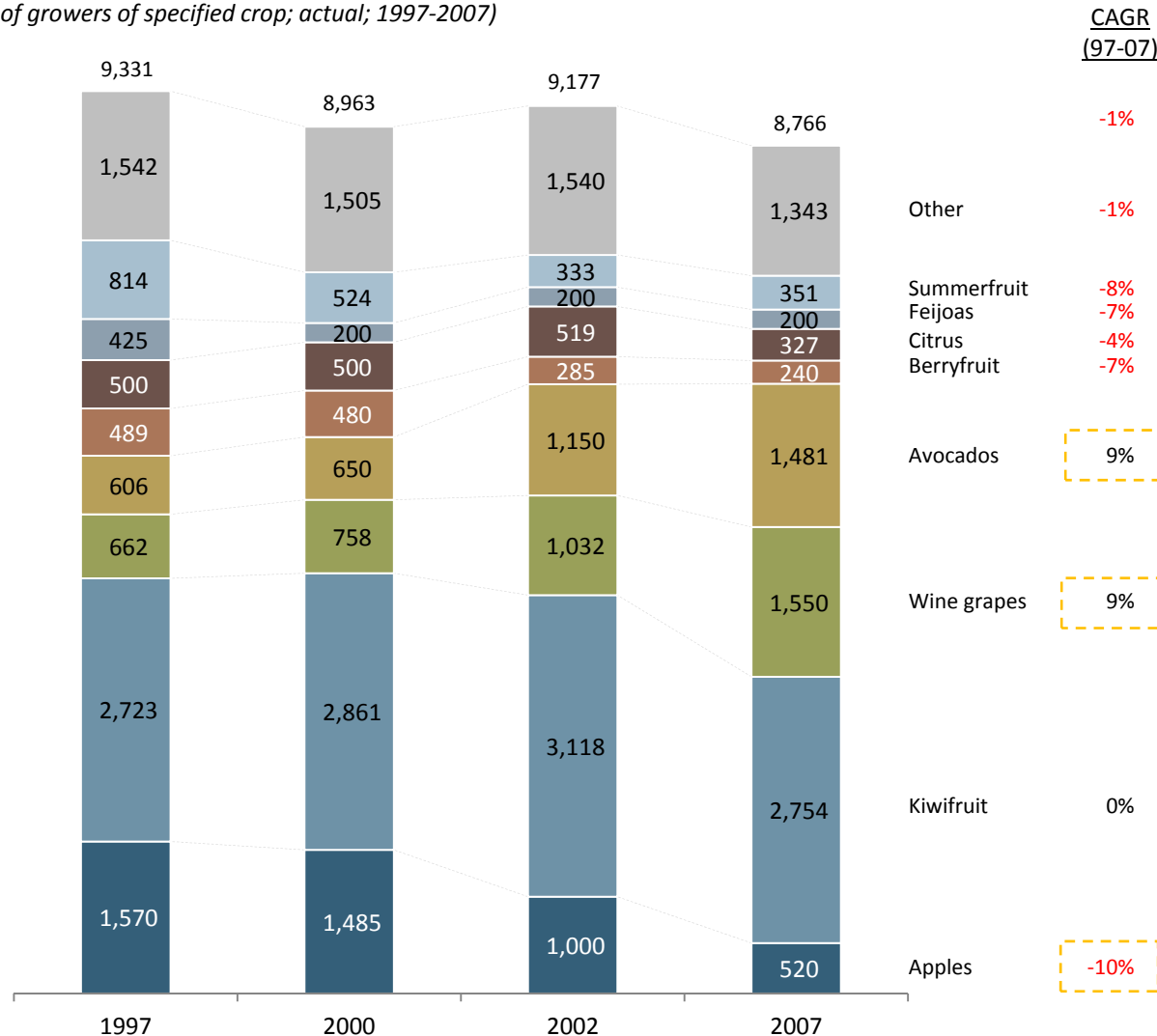
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FRUIT – # OF GROWERS

The number of fruit growers in New Zealand has been shrinking slightly; however within this grapes and avocados are growing while kiwifruit is flat and apples are down

Aggregate number of fruit growers in New Zealand by specified crop
(# of growers of specified crop; actual; 1997-2007)



Comments

- One grower can grow more than one fruit; the count here is the number of growers of each fruit (so will include some double counting of individual growers)
- The state of New Zealand fruit statistics – both absolutely and in comparison with peer group countries – varies from good to very poor; this is due to past budget cuts
- The data presented here is cobbled together from a wide range of sources and represents our best attempt at a synthesis
- Data includes Coriolis estimates of missing values
- Data should be treated as indicative/directional

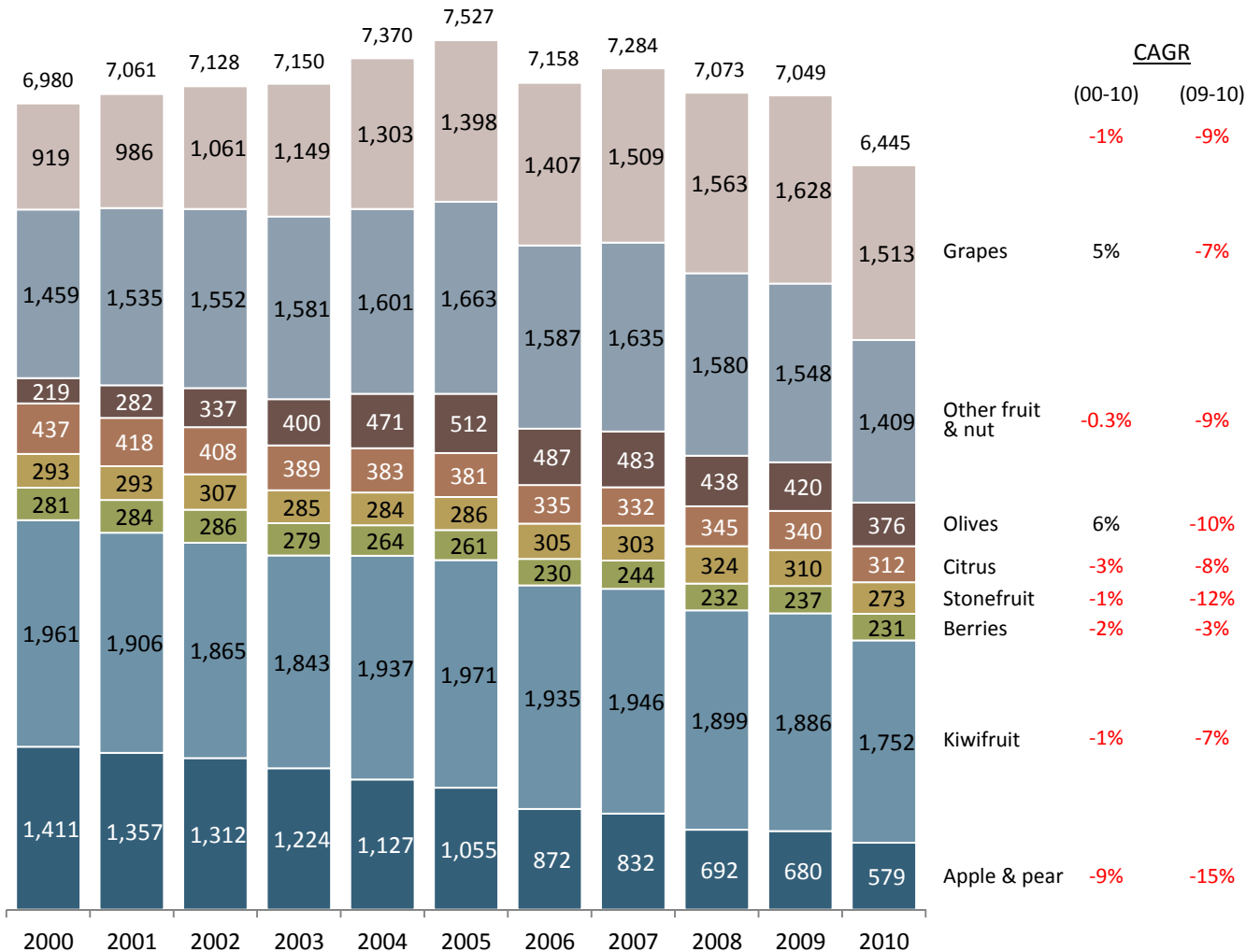
Notes/Definitions

- Data is latest available; next survey 2012
- Summerfruit includes apricots, cherries, nectarines, peaches and plums
- Berryfruit includes blackcurrants, blackberries, boysenberries, raspberries & blueberries
- Other includes persimmons, tamarillos, nuts, olives and other

FRUIT – # OF ENTERPRISES

The number of enterprises involved in fruit production has declined (-1%/per annum) over the past decade; there has been a strong fall in the last year (-9%)

Number of enterprise units in fruit growing in New Zealand by key species
(enterprises; 2000-2010)



Comments

- Consolidation not as clear in fruit (vs. vegetables)

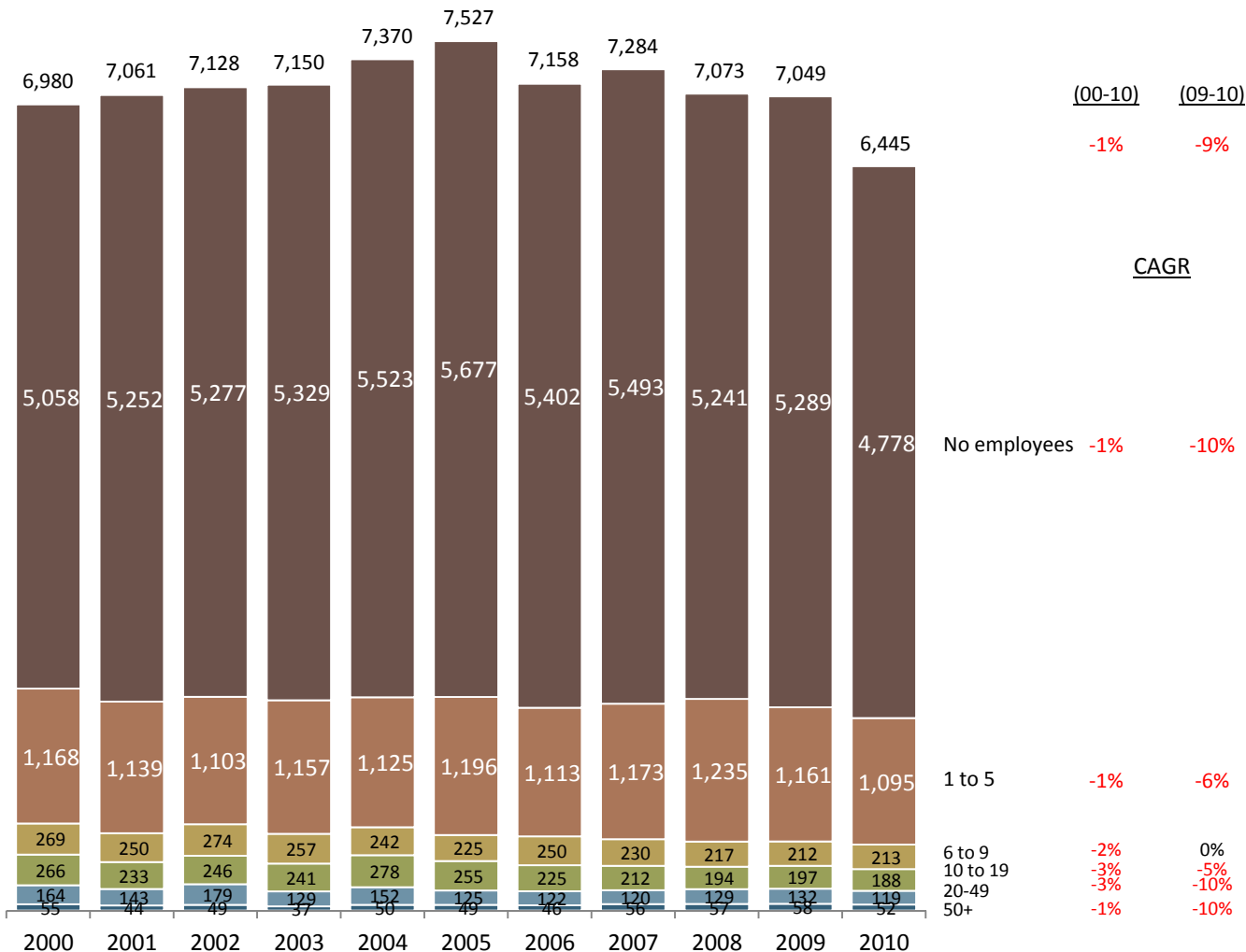
Notes/Definitions

- Apple & pear (A013-400)
- Kiwifruit (A013-200)
- Berries (A013-300)
- Stone fruit (A013-500)
- Citrus (A013-600)
- Olives (A013-700)
- Other fruit & nuts (A013-900)
- Grapes (A013-100)

FRUIT – # OF ENTERPRISES BY EMPLOYMENT SIZE

New Zealand fruit growing is still primarily small enterprises with no employees (i.e. director/shareholder, owner/operator)

Number of enterprise units in fruit growing in New Zealand by employment size¹
(enterprises; 2000-2010)



Comments

- Consolidation not as clear in fruit (vs. vegetables)
- This will also reflect seasonal nature of work and resultant extensive use of contractors (e.g. picking)
- Question: Is this all hobby farmers?
- Question: Is fruit growing more “sexy” than vegetables making it more attractive to hobby farmers?
- Question: Is this efficient? What are the implications for industry/sector structure?

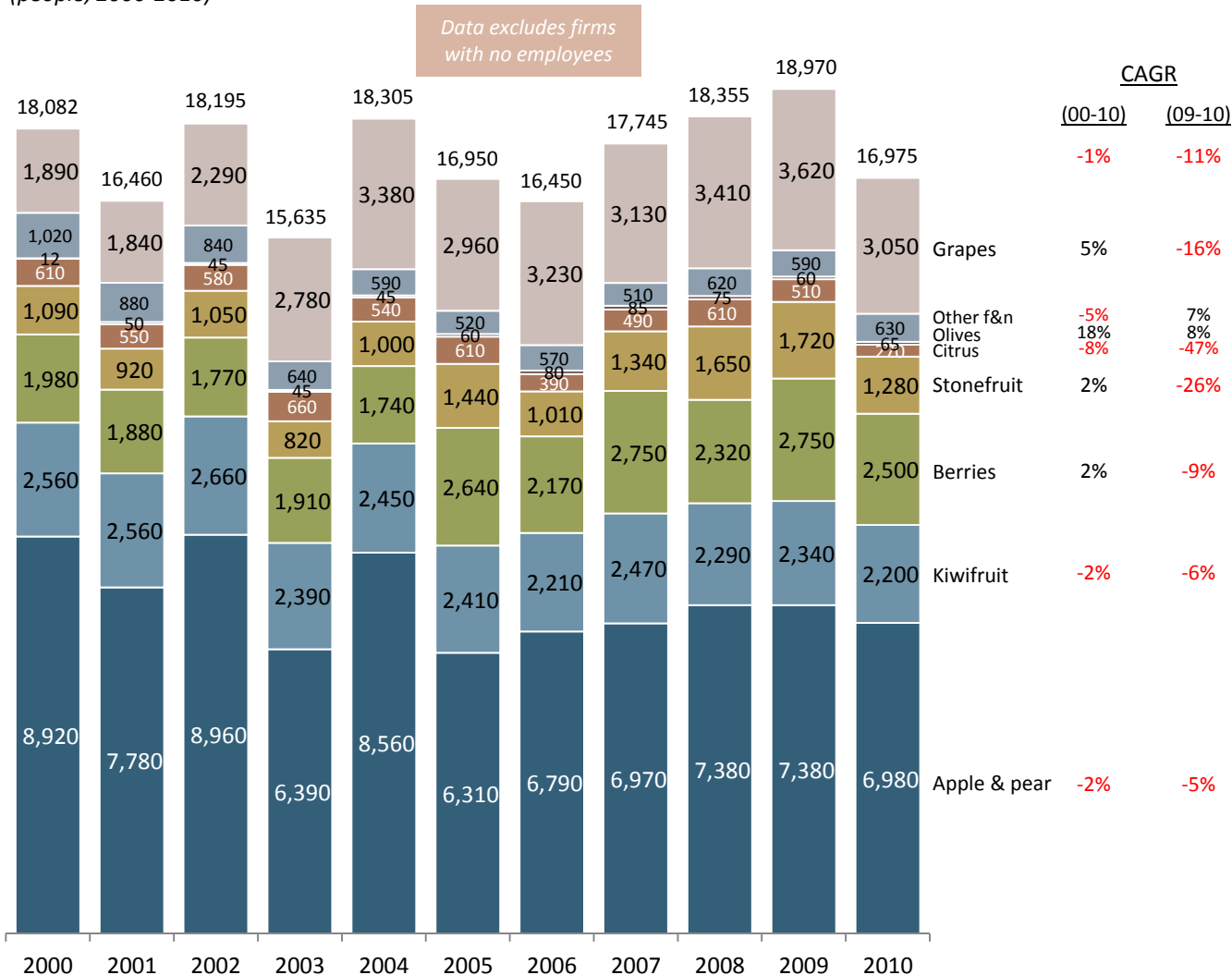
Notes/Definitions

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- Berries (A013-300)
- Stone fruit (A013-500)
- Citrus (A013-600)
- Olives (A013-700)
- Other fruit & nuts (A013-900)
- Grapes (A013-100)

FRUIT – EMPLOYMENT

The number of people employed in fruit growing is down only slightly over the last decade; however, employment is down **-11%** in the last year

Number of persons employed in fruit growing in New Zealand by key species¹
(people; 2000-2010)



Comments

- Likely a mixture of increasing industry productivity through:
 - Consolidation (fewer/larger)
 - Automation (replacing labour with machines)
 - Increasing scale in automation (fewer/larger harvesters) leading to larger fields & properties

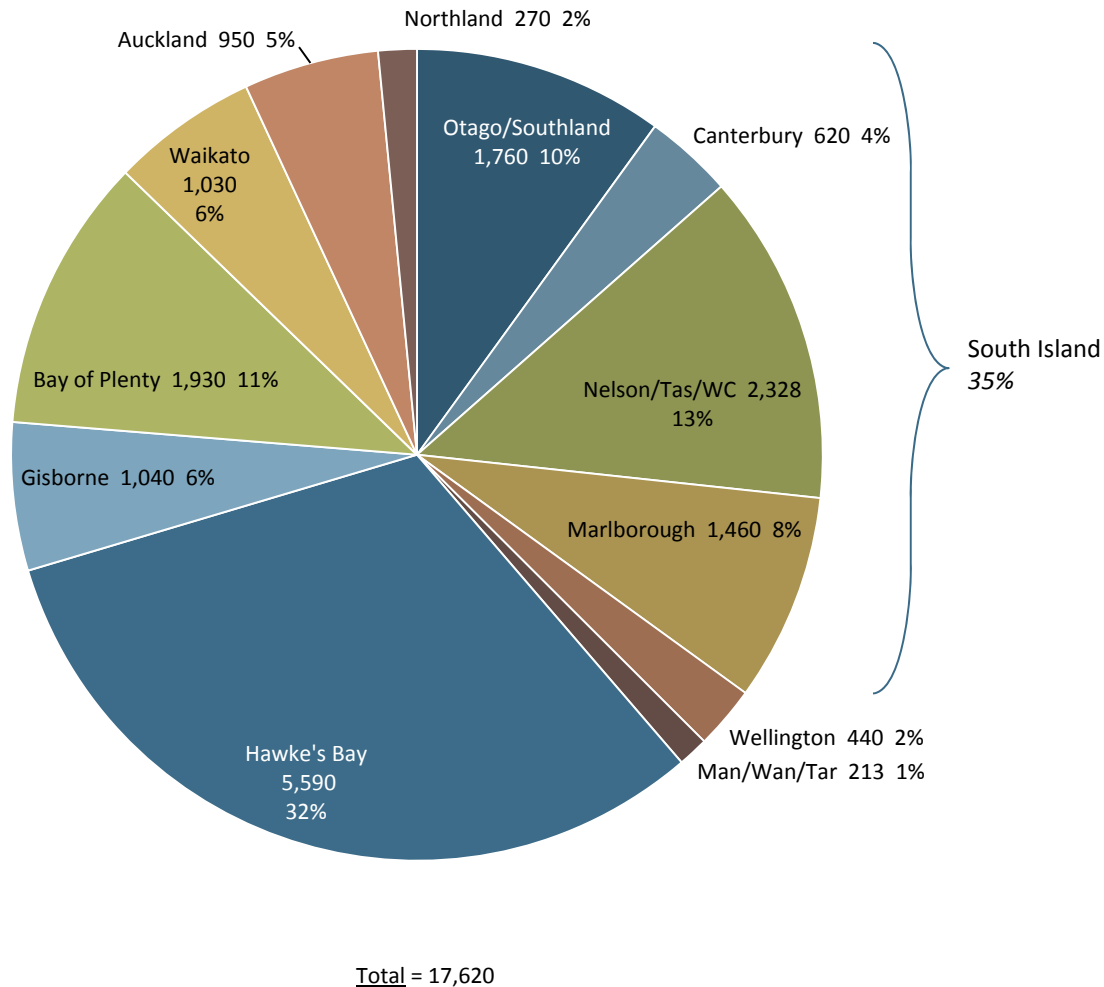
Notes/Definitions

- Apple & pear (A013-400)
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- Berries (A013-300)
- Stone fruit (A013-500)
- Citrus (A013-600)
- Olives (A013-700)
- Other fruit & nuts (A013-900)
- Grapes (A013-100)

FRUIT – EMPLOYMENT BY REGION

Employment in fruit growing is concentrated in the major growing regions

Number of persons employed in fruit growing in New Zealand by region
(people; 2010)



Comments/Notes

- Geographic data (this page) doesn't match earlier enterprise data (some other pages) due to understood reasons associated with different definitions and time periods

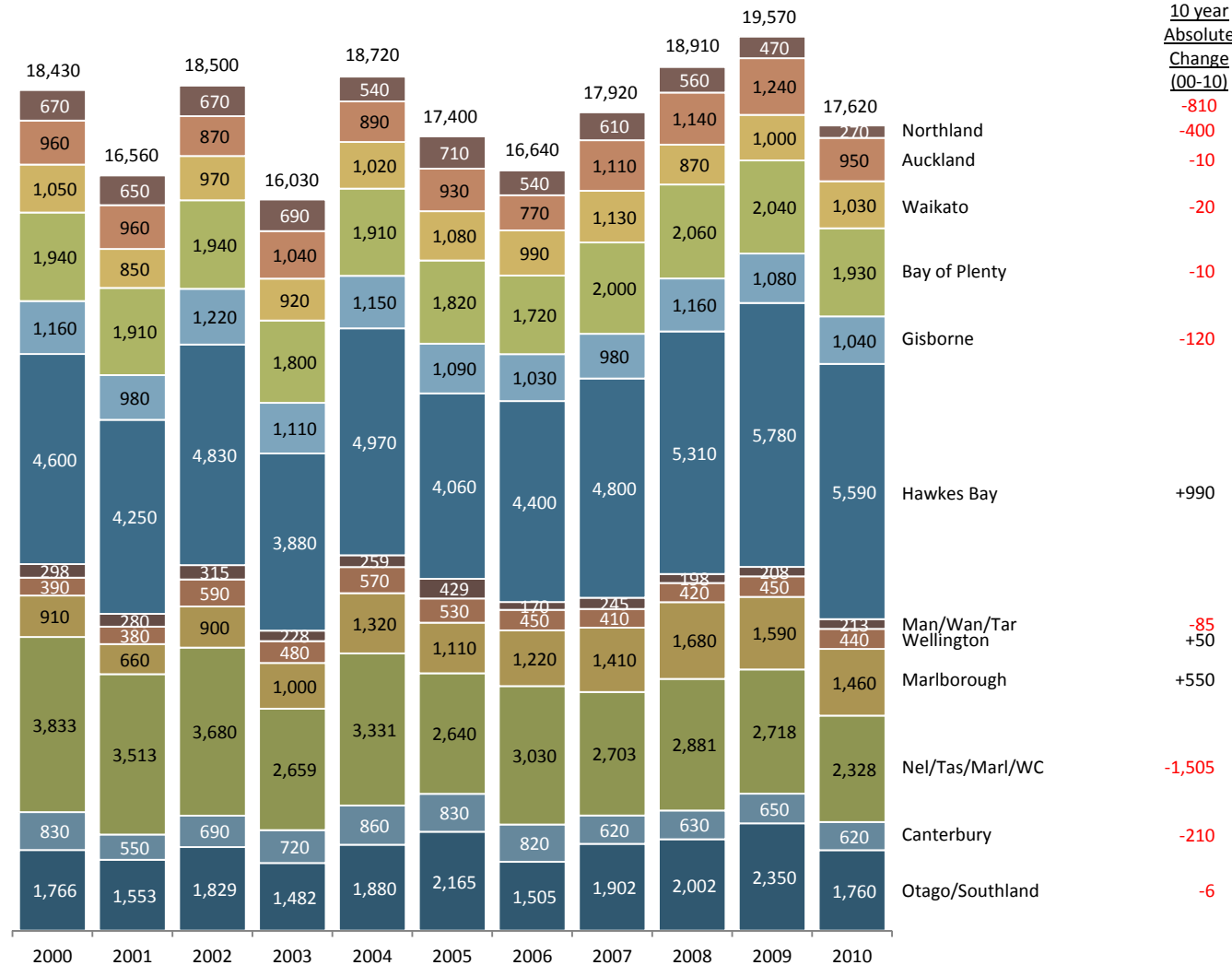
Notes/Definitions

- Uses A013 Fruit and Tree Nut Growing
- Statistics New Zealand calculates its statistics based on the predominant business activity of the enterprise
- A firm that is defined as "beverage manufacturing" at the enterprise level may have a subsidiary at the geographic level that is classified as "grape growing"
- Data here is "geographic" units not "enterprise" units (pages prior)
- Wellington region includes north to the Kapiti and Masterton districts
- Nelson/Tasman/Marlborough/West Coast
- Manawatu/Wanganui/Taranaki

FRUIT – EMPLOYMENT BY REGION

Hawkes Bay and Marlborough are the only regions creating significant employment in fruit growing; effectively all other regions are flat or in decline

Number of persons employed in the fruit industry in New Zealand
(people; 2000-2010)



Notes/Definitions

- Uses A013 Fruit and Tree Nut Growing
- Nelson/Tasman/Marlborough/West Coast
- Manawatu/Wanganui/Taranaki
- Wellington region includes north to the Kapiti and Masterton districts
- See note prior page

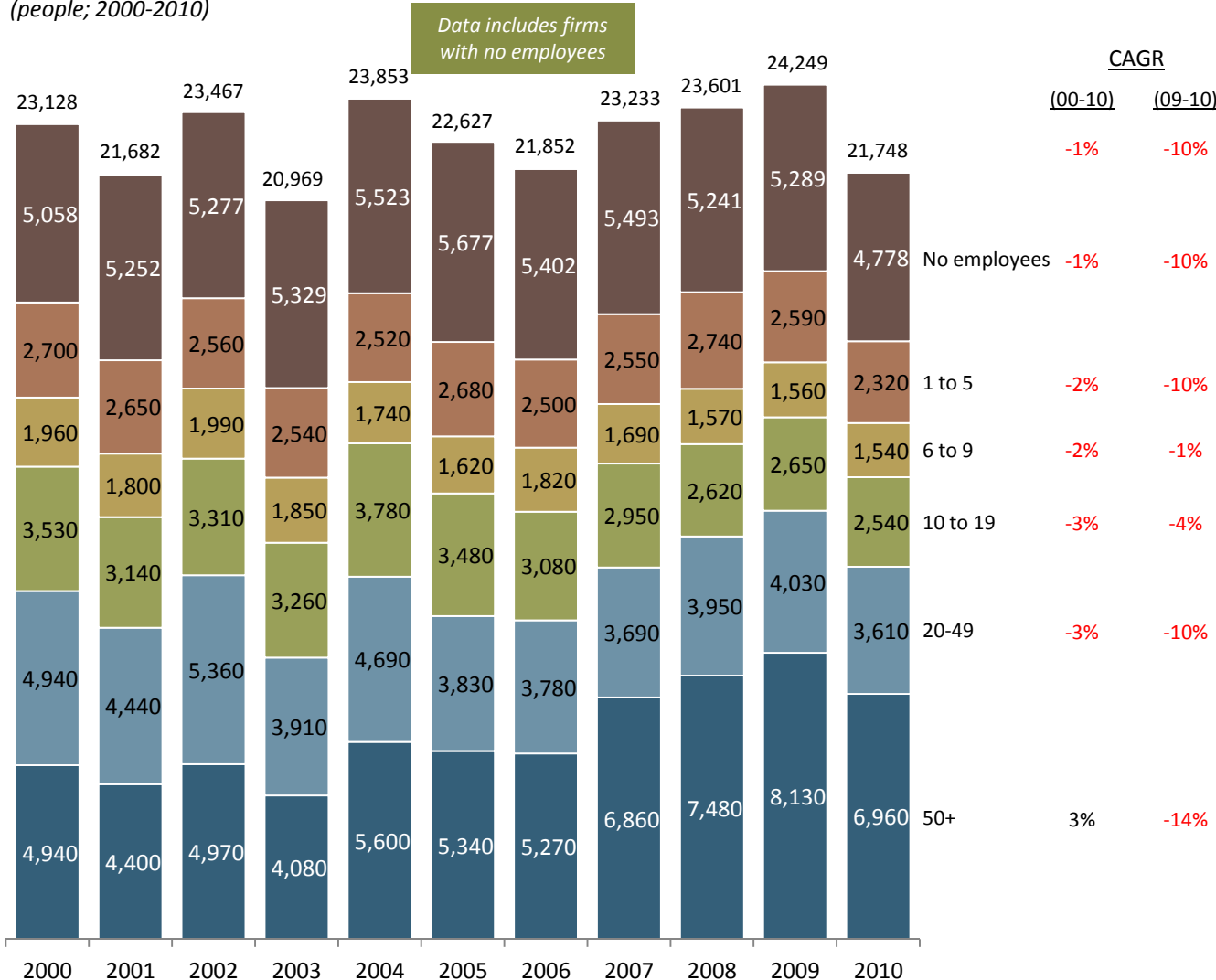
10 year
Absolute
Change
(00-10)

Northland -810
Auckland -400
Waikato -20
Bay of Plenty -10
Gisborne -120
Hawkes Bay +990
Man/Wan/Tar Wellington -85
Wellington +50
Marlborough +550
Nel/Tas/Marl/WC -1,505
Canterbury -210
Otago/Southland -6

FRUIT – EMPLOYMENT BY ENTERPRISE SIZE

Looking at employment by employee firm size highlights how only large farms (50+ employees) have been growing over the long term

Number of persons employed in fruit growing in New Zealand by employment size¹
(people; 2000-2010)



Comments

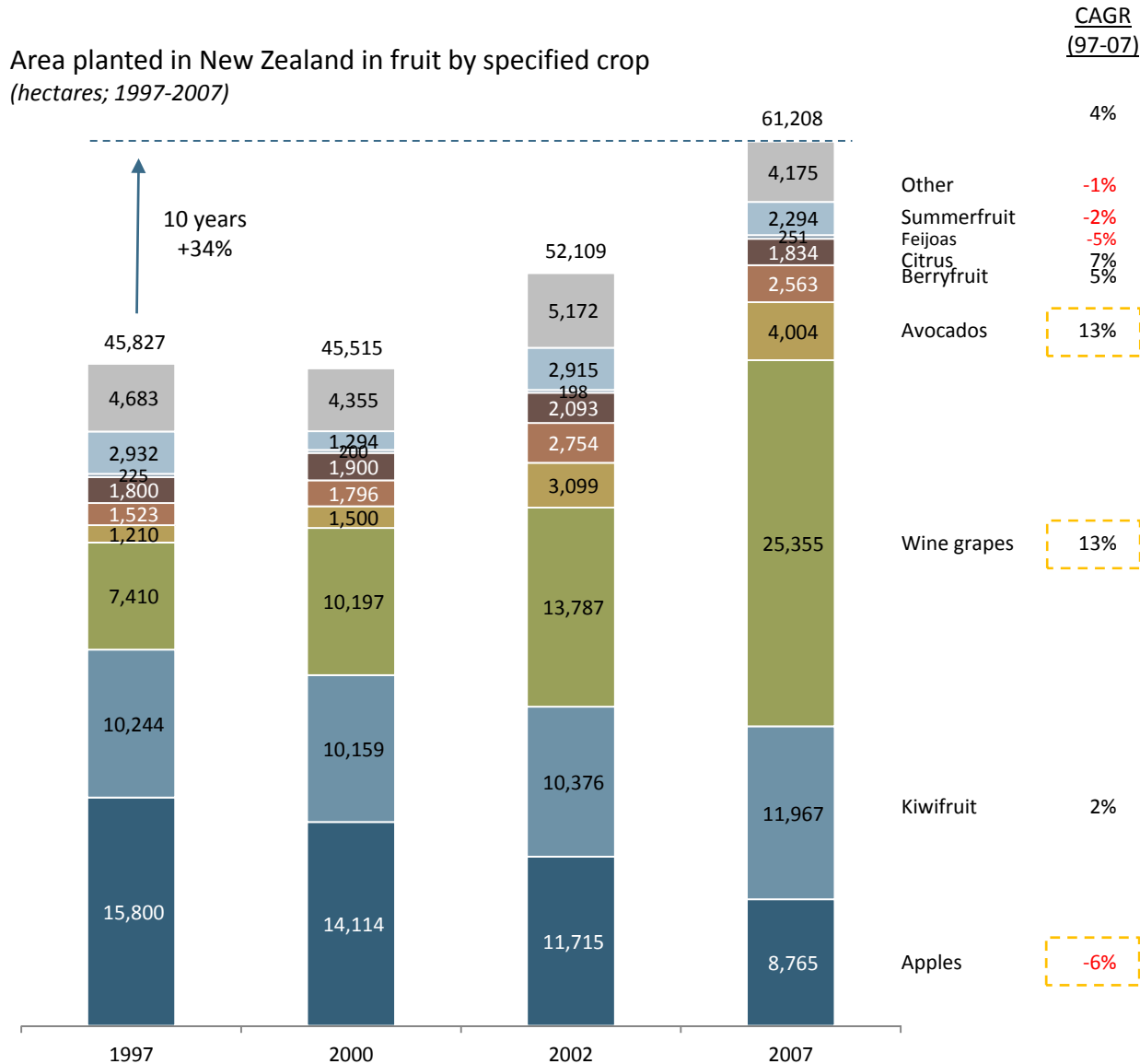
- We have assumed all firms with no employees have 1 owner/operator (director/shareholder); this is an assumption, but it balances multiple working family members with holding companies

Notes/Definitions

- Apple & pear (A013-400)
- Kiwifruit (A013-200)
- Berries (A013-300)
- Stone fruit (A013-500)
- Citrus (A013-600)
- Olives (A013-700)
- Other fruit & nuts (A013-900)
- Grapes (A013-100)

FRUIT – PLANTED AREA

The amount of area planted in fruit in New Zealand increased by +34% in the decade 1997-2007



Comments

- The state of New Zealand fruit statistics – both absolutely and in comparison with peer group countries – varies from good to very bad; this is due to past budget cuts

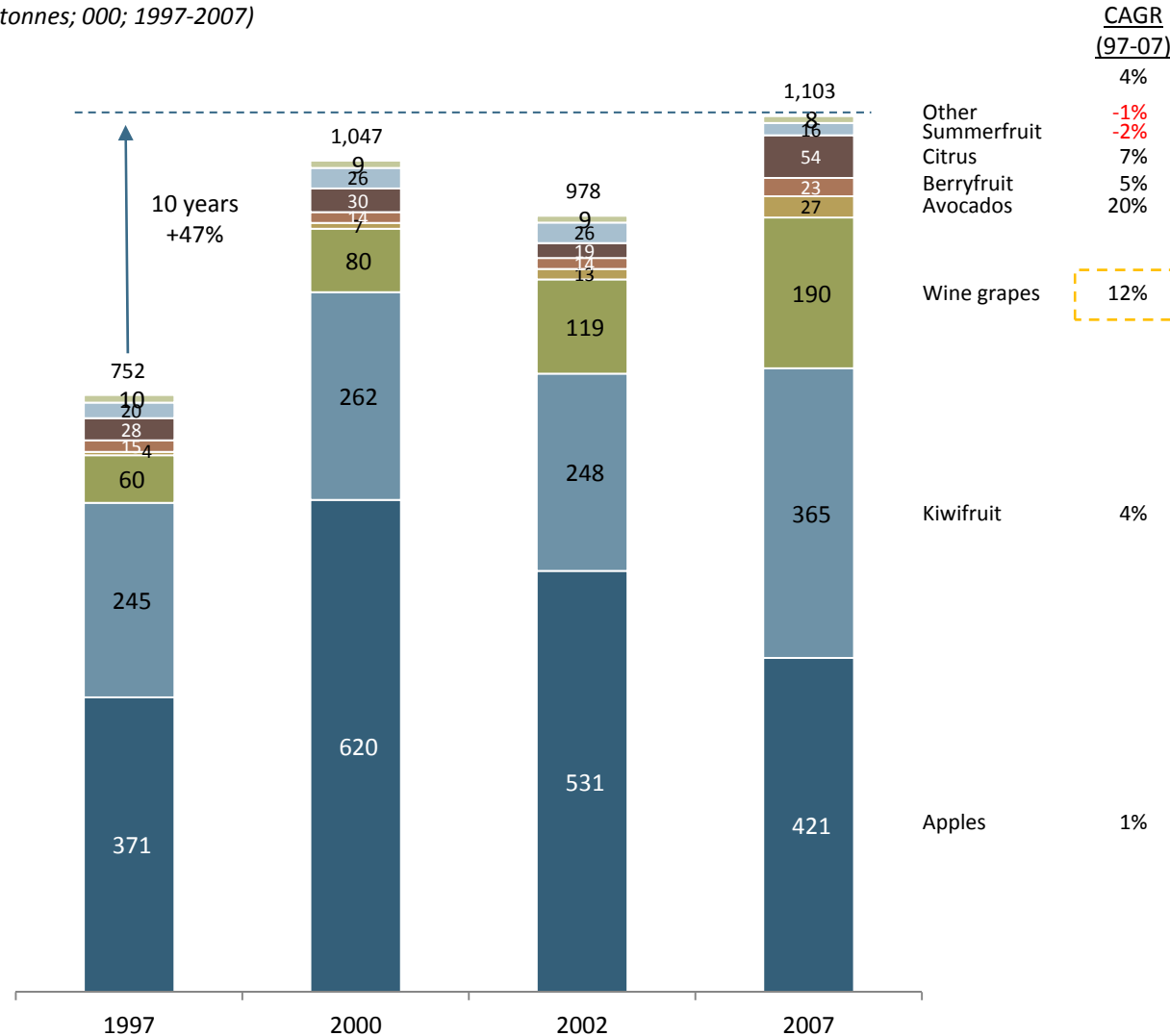
Notes/Definitions

- Data is latest available; next survey 2012
- The data presented here is cobbled together from a wide range of sources and represents our best attempt at a synthesis
- Data includes Coriolis estimates of missing values
- Data should be treated as indicative/directional
- Summerfruit includes apricots, cherries, nectarines, peaches and plums
- Berryfruit includes blackcurrants, black-, boysen-, rasp- & blue- berries
- Other includes persimmons, tamarillos, nuts, olives and other

FRUIT – PRODUCTION

Fruit production grew by almost +50% in the decade 1997-2007

New Zealand fruit production in tonnes by specified crop
(tonnes; 000; 1997-2007)



Comments

- Fruit yield growing through improved genetics, both imported and domestically developed (e.g. at Plant & Food)
- Yield improvements also coming from spread of best practice, new techniques and more efficient/effective fertilizer application

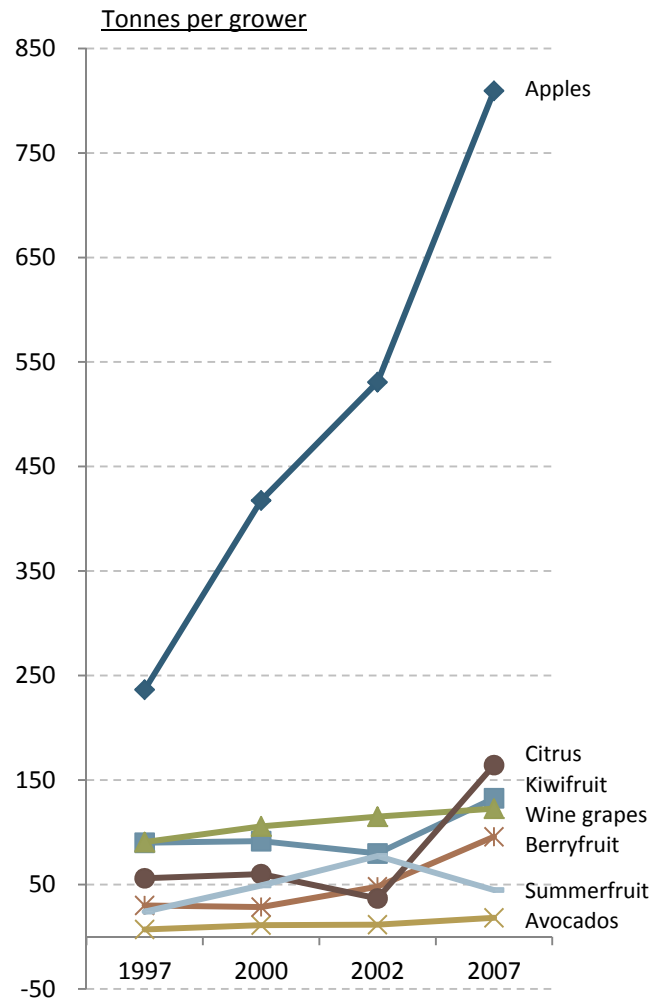
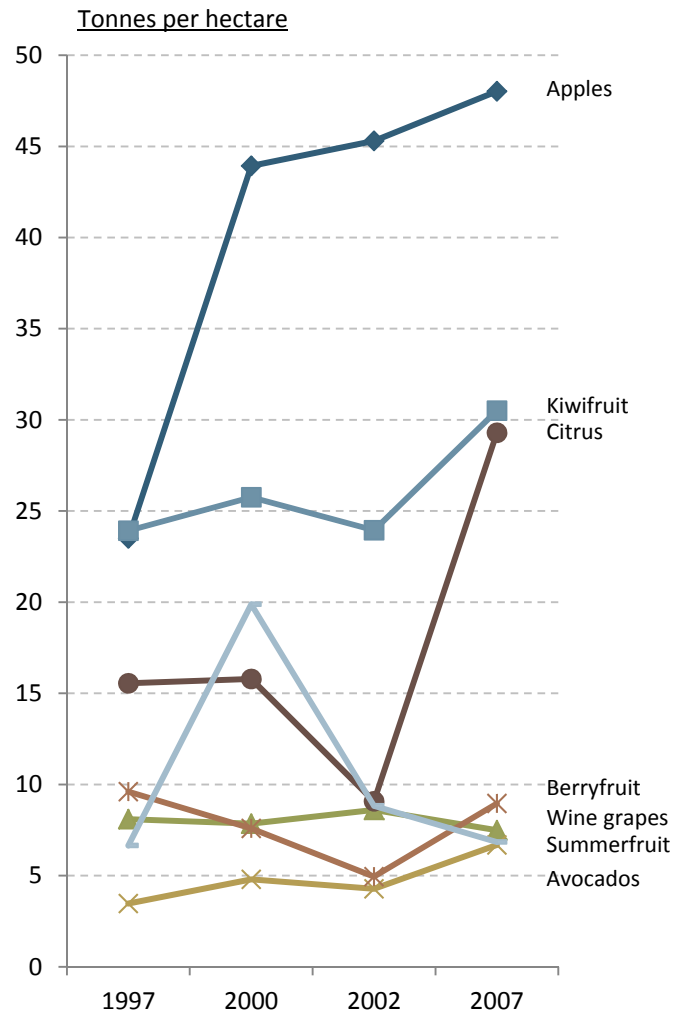
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- Berryfruit includes blackcurrants, blackberries, boysenberries, raspberries & blueberries
- Other includes persimmons, tamarillos, nuts, olives and other

FRUIT – EFFICIENCY STATISTICS

Deregulation of the apple sector clearly increased industry productivity; productivity improvements in other fruits not as pronounced

New Zealand fruit statistics by specified crop
(1997-2007)



Comments

- Fruit yield growing through improved genetics, both imported and domestically developed (e.g. at Plant & Food)
- Yield improvements also coming from spread of best practice, new techniques and more efficient/effective fertilizer application
- Experience of apple industry suggests monopsonies keep smaller hobby growers in the industry









Notes/Definitions

- Data is latest available; next survey 2012
- The data presented here is cobbled together from a wide range of sources and represents our best attempt at a synthesis
- Data includes Coriolis estimates of missing values
- Data should be treated as indicative/directional
- Summerfruit includes apricots, cherries, nectarines, peaches and plums
- Berryfruit includes blackcurrants, blackberries, boysenberries, raspberries & blueberries

FRUIT – KIWIFRUIT – KEY FIRMS

The New Zealand kiwifruit industry is organised as a government mandated marketing organisation (Zespri) that sells all export fruit (except Australia) and firms that pack and cold store export fruit...




Key firms in the New Zealand kiwifruit sector
(2010 or as available)

	Turnover	% Export	Employees	Ownership	Year Founded	Notes
Kiwifruit						
	\$1,542.0m (2010)		150 (K)	NZ; co-operative (kiwifruit growers)	1988	www.zespri.com Originally NZ Kiwifruit Marketing Board; corporatised Legal monopsony outside Australia
	\$599.2m (2010)		2,000 (Ci)	NZ; listed (NZX: TUR) GPG UK 65%; Dossor (12%)	1897	www.turnersandgrowers.com Owns a range of subsidiaries Grows, processes, exports fruit in NZ, AU, Chile, EU etc. EnzaGold, Red, Green grown in NZ& EU, China
	\$122.2m (2010)		158 (K)	NZ; public (NZX: SEK)	1987	www.seeka.co.nz 7 packhouses; 1,000 ha under production 20% of kiwifruit packing and coolstore capacity
	\$66.0m (2010)		101-250 (K)	NZ; co-operative (kiwifruit growers)	1980	www.eastpack.co.nz 3 sites in Bay of Plenty
	\$56.6m (2009)		60 (K)	NZ; public/co-operative (NZX:SAT)	1972	www.satara.co.nz 5 facilities
	\$43.5m (2010)		500 seasonal	NZ; public/co-operative (260+ shareholders)	1983	www.apata.co.nz Part of G3; kiwifruit 8.7 million trays in 2010 Avocado varies between 0.6 and 1.3 million trays 3 packhouses (2 Tauranga/1 Whangarei)
	\$20m (Ce)		70FT 800 seasonal (ws)	NZ; private (Trevelyan family)	1960s-1970s	www.trevelyan.co.nz 1 site; 3 packhouse facilities & 24 coolstores 8.5m trays of kiwifruit and 150,000 trays of avocado
	\$20.4m (2010)		70 FT 700 seasonal (ws)	NZ; public (~50% Jones/Greenlees)	1989	www.dms4kiwi.co.nz Part of G3; pack kiwifruit (green,/gold) and avocados 3 packhouses; 19 coolstores ; 5m trays in 2010

FRUIT – KIWIFRUIT – KEY FIRMS

...continued










Key firms in the New Zealand kiwifruit sector
(2010 or as available)

	Turnover	% Export	Employees	Ownership	Year founded	Notes
Kiwifruit						
	\$20m (Ce)		Peak: 1,000	New Zealand; private (Seeka 20%; others)	1987	4.6m trays kiwifruit www.opac.co.nz
	\$14.1m (2010)		70 (K)	New Zealand; public (grower-owned) (John Anderson 43%) (Birley family 29%)	2001	www.aerocool.co.nz Part of G6 1 packhouse; also avocados 4 million trays kiwifruit; Grower base of 120 kiwifruit orchards and 70 avocado orchards (many small avocado orchards)
	N/A		N/A	Australia/NZ; JV between Freshmax Holdings (Australia) and Aongatete Coolstores (NZ)	2001	www.freshmax.co.nz/products/kiwifruit.aspx Export company; market kiwifruit in Australia

FRUIT – APPLES – KEY FIRMS

The New Zealand apple packing sector is consolidating around a handful of large packers with scale...








Key firms in the New Zealand apple sector
(2010 or as available)

	Turnover	% Export	Employees	Ownership	Year founded	Notes
Apples						
 	\$599m (2010) (\$847m under management)		2,000 (Ci)	New Zealand; listed (NZX: TUR) GPG UK 65%; Dossor (12%)	1897	www.turnersandgrowers.com Owns a range of subsidiaries Grows, processes, exports a range of fruit primarily in NZ, also Australia, Chile, etc.
 	\$185.9m ¹ \$116m (Mr Apple) (2010)		400 (K) +1,300 (seasonal)	New Zealand; public South Canterbury Finance Ltd (80%; in receivership), others	1998	www.mrapple.co.nz; www.scorp.co.nz Exporting between 3-3.5m cartons/yr Vertically integrated = 20 orchards, 3 packhouses, 1 coolstore and logistics service Currently (May 2011) being sold as part of SCF receivership
	\$150m (2006, ws)		300 (AU+NZ) (ws)	Australia; private equity/others (Wolseley Private Equity 50%)	1994	www.freshmax.co.nz 3 apple packhouses: Hawkes Bay, Nelson & Wairarapa; more domestic supply than export; YESS brand (apples, kiwifruit & avocados)
	Apples \$35m (ws) \$100m (2006; K)		N/A	New Zealand; private (Newbigin, Wares, Black, Bark, Single Families)	1995	www.fernridge.co.nz "4 th largest apple exporter from NZ"
	N/A		120 at packhouse	New Zealand; private (Beaton and Mossman families)	2006	www.apolloapples.co.nz 400 ha of own fruit / ENZA partner with Jazz 100k bins/year; 1m cartons; 44 CA storerooms
	N/A		N/A	New Zealand; private (John Bostock)	1980	www.jbgroup.co.nz; www.dmpalmer.co.nz VI HawkesBay- squash onions, grains, ice cream, apples ProFruit (processors), Rush Munro's, DMP, Aozora (exports to Asia, JV Chile)
	N/A		N/A	New Zealand; private (Easton, Hoody, McCliskie, Thompson families)	2004	www.heartlandfruit.co.nz "Luvya" export brand and "Yummy" NZ brand 4 exclusive licensed varieties 4 grower owners in Nelson own Compass Fruit Packhouse

FRUIT – APPLES – KEY FIRMS

... continued



Key firms in the New Zealand apple sector
(2010 or as available)

	Turnover	% Export	Employees	Ownership	Year founded	Notes
Apples						
	N/A		50 (K)	New Zealand; private Currently in receivership	1988	www.edenzfruitcompany.co.nz (defunct) 2 packhouses; 1 coolstore complex 350ha or own orchards; apples, stonefruit and pears
	N/A		Peak 200 (ws)	New Zealand; private (Taylor family)	1995	www.taylorcorp.co.nz Owns 180ha; packs own fruit and has grower/suppliers 1 site (packhouse/coolstore)
	N/A			New Zealand; private (Altham & Whyte families)	2001	www.pickmee.co.nz Hamilton based grower/packer/shipper Formed in 1997 merger of Sunfruit & Fruitdale
	\$3.0m (Ci)		4 FT; 40-50 seasonal	New Zealand; private (Taylor; Mangan families)	1988	www.freshco.co.nz Formerly Frupak, now Freshco Hawke's Bay 2 packhouse/coolstore (1 HB; 1 Nelson)[Nelson is JV]
	\$26.3m (Ci)		101-250 (K)	New Zealand; private (Paynter family)	1974/ 2001	www.yummyfruit.co.nz Includes stone fruit Marketing company Significant orchard ownership in Hawkes Bay (via Johnny Appleseed)
	N/A		N/A	New Zealand; part co-operative (Caccioppoli family 32%; ~20 growers; others)	2002	www.grower.co.nz Cooperative formed in the wake of deregulation Also related Longview Packhouse/Hill Road Coolstores
	\$3.4m (Ci)		20 (K)	New Zealand; private 50% Bostock Group 50% Scales Holdings	2006	www.profruit.co.nz Processor and exporter Apple and kiwifruit juice concentrates

FRUIT – OTHER FRUIT – KEY FIRMS

Outside of apples and kiwifruit, there are only a handful of medium-large firms

Key firms in the New Zealand other fruit sector
(2010 or as available)

	Turnover	% Export	Employees	Ownership	Year founded	Notes
Citrus						
	\$45m (Ci)	Mostly domestic	300 (K)	NZ; private (Thorpe, Ready, Pepper families, others)	1989	www.firstfresh.co.nz NZ Fruits Limited (sister company) Grower/packer in Gisborne Partners with MG Marketing and Freshmax Collaborative marketing with Zespri “First Gold” exports to Thailand and HK
Berries						
	N/A		N/A	NZ; private (Auton family)	2000	http://www.oob.co.nz Production of fresh and frozen blueberries/strawberries, icecream/juice manufacture
Range of small firms (Berryfruit Exports (Coop), Perry’s Berries, Gibb/Sujon Berries)						

KIWIFRUIT – TRANSACTIONS

The kiwifruit industry is consolidating, both vertically and horizontally...

Recent major kiwifruit industry transactions (2006-2010)

Date	Acquirer	Target	Price	Details
2010	Port of Tauranga	Satara's Totara St Coolstore	\$8.6m	Port of Tauranga purchases former Satara coolstore and 2 hectare site (\$2.4m accounting loss)
Jul 2010	Seeka JV	Shanghai-Neuhof Trading Company	\$0.13m	JV with Chinese firm to pack pre-graded green kiwifruit in Shanghai for the Chinese market Contributed 50% of share of cost of equipment; partner is Zespri distributor in Shanghai
2010	Satara	Eastpac	Failed	Merger cancelled over impact of Psa disease on EastPac production
Dec 2009	Seeka	Huka Pak	\$24.6m	Acquired all shares of Huka Pak, packing 5.5m trays and 100k trays avocado
Jun 2009	Fresh MD Holdings Inc (Japan)	18.8% stake in Seeka from Christopher Morton	\$8.5m	Major logistics, ripening and fruit processing operations in Japan and is a significant handler of New Zealand kiwifruit
2009	Aerocool	Crop Gro	N/A	Te Puke based orchard management company; development of orchard management services
Apr 2008	Seeka JV	SAPAC	N/A	Sold its 50% share; \$400k claw-back from proceeds in FY10
2007	DMS Progrowers	25% share in Birchwood Packhouse	N/A	Allowed expansion of coolstore facilities
2006	Satara	Aongatete Coolstores Ltd	N/A	Merger created a new subsidiary, Bravo Avocado Company
2006	Satara	Kiwi Produce	N/A	20% shareholding
2006	Eastpack	Satara	Failed	Proposed merger (failed)
2006	Satara	25% of Kiwi Produce	N/A	
2006	Seeka	Clarks Packhouse & Coolstore	N/A	
2006	Aerocool	Birley Packhouse & Coolstore	\$2.4m	
2006	Seeka	Peninsula Pack & Coolstore	N/A	
2006	Seeka	Verikiwi	N/A	Seeka (50%) and Jace Investment (50%) acquire Verikiwi (900k trays packed) which is renamed South Auckland Pack and Cool

KIWIFRUIT – TRANSACTIONS

... continued

Recent major kiwifruit industry transactions (1995-2005)

Date	Acquirer	Target	Price	Details
2005	Trevelyan's	Birley	N/A	
2005	Seeka	Bridge Cool	N/A	4.5m tray capacity; for net \$10m; also 330k avocados
2004	Seeka	Eleos Ltd.	N/A	4m trays capacity; For \$10.5m (post special dividend)
2004	Seeka	20% share in OPAC	N/A	Packed 3.7m trays (05); "strategic shareholding" for \$3.7m
2002	Seeka	Waimapu Packhouse & Coolstores	N/A	
2001	Baypack (Satara)	Katikati Fruitpackers	N/A	Merger creates BK Mergeco, renamed Satara
2000	EastPack	Zest Company	N/A	Te Puke based Packing and Coolstorage operation
1999	Apata	Tauranga Fruit Packers Centrepac	N/A	Pyes Pa site
1997	Seeka	Kiwi Kool Pak Ltd. Kiwi Coast Growers Ltd. Pioneer Coolstores Ltd.	N/A	
1996	Rangitaiki Fruit Packers	Opotiki Co-op	N/A	Rangitaiki changed name to EastPack at time of acquisition
1995	Seeka	Kiwifruit Industries Ltd.	N/A	

KIWIFRUIT – ACTIVITY

There is constant investment in the kiwifruit industry

Recent major kiwifruit industry activity (1991-2009)

Date	Company	Activity	Cost	Details
Investment				
2009-	Turners and Growers	Kiwifruit orchards	N/A	Set up growing hubs in Italy and France, (100ha in 2012) China (third season) for IP protected ENZA Red
2010	Satara	Working with 2 Thai companies to plant kiwifruit in Thailand	N/A	Creates further kiwifruit supply for northern hemisphere season, expands operations in Asia
2008	Eastpack, Apata, Aerocool	Formed Southlink Supply Ltd	N/A	Southlink Supply was formed to supply Zespri more efficiently and unlock supply chain efficiencies
~2005	OPAC	Invested in kiwifruit production in Italy as 50:50 JV with Salvi (Italy)	N/A	Creates further kiwifruit supply for northern hemisphere season
1991	Apata	Formed exclusive partnership with Primor	N/A	Primor becomes the exclusive international marketer of Apata avocado

APPLES – TRANSACTIONS

Compared to the kiwifruit, the apple sector has been relatively quiet on the consolidation front

Recent major apple industry transactions (2001-2011)

Date	Acquirer	Target	Price	Details
2011	Direct Capital	Scales Corporation/Mr Apple	\$44m	Receivers of South Canterbury Finance have secured a conditional deal to sell the company's 79.7 per cent stake in horticulture business Scales Corporation for \$44 million.
May 2011	Freshmax NZ Ltd	Agrilasia Farms Ltd	\$0.25m	Currently owns 25% - purchased an additional 25% shares in ~95ha farms in Havelock North and Hastings to convert to pip and stonefruit orchard
Apr 2007	Turners & Growers	Delica	\$NZ 6.2m	Acquired 70% Delica (NZ) and 49% of Delica (AU); exporter of apples and citrus with turnover of \$11.1m and operations in New Zealand, Australia and South America
2007	Freshco	FruPak	N/A	Merger of Fruitpackers Cooperative Ltd. And Freshco (Fresh Fruit Co. of NZ) into Freshco Fruitpackers Ltd.
2006	Turners & Growers	Latitude 41 Limited	N/A	Previously a 50% stakeholder (JV), T&G completed purchase of this Nelson apple packhouse in 2006
Oct 2006	Mr Apple (Scale Corporation)	50% share in Profruit	N/A	Other 50% purchase is by JB NZ Holdings Ltd Allows expansion of juice production
2006	Apollo Fruit Ltd	United Fruit Packers HB Ltd (Unipac)	N/A	Two Hawkes Bay apple companies became Apollo Apples Ltd
2005	Turners & Growers JV	Inglis Family (Nelson)	N/A	JV formed to increase T&G apple production levels
2003	JM Bostock	D M Palmer	N/A	Major apple grower (among other businesses) purchases fruit & vegetable exporter to build scale in exporting
2002	Turners & Growers	ENZA	NZ\$ 101.9m	T&G spun off car auctions business, leaving fresh wholesale; then purchased ENZA from GPG for 44.2m shares (increasing GPG ownership)
Nov 2001	Scales Corporation	Grocorp Pacific, Hawkes Bay Apples and Red Apple Packhouse	N/A	Acquisition forming Mr. Apple, including 14 orchards (670ha) and three packhouses

OTHER FRUIT – TRANSACTIONS

Outside of apples and kiwifruit, there has been some consolidation activity; interestingly a number of deals by New Zealand firms into Australia looking to consolidate that market

Recent major produce industry transactions
(1997-2008)

Date	Acquirer	Target	Price	Details
2008	Turners & Growers	Kerifresh	\$7.8m	Kerifresh is a large citrus/kiwifruit grower/packer in Northland (90% of NL production)
2007	Turners & Growers	Kapiro Orchard (mandarins & kiwifruit)	N/A	Expands T&G production capabilities
Dec 2007	FreshMax	OzTaste (Australia) from founding directors	N/A	Bought Australian fresh fruit marketer OzTaste from founding directors Andrew Prentice and Rocky Varapodio for an undisclosed sum; OzTaste was formed in 2002 from the merger of three of Australia's leading stone fruit, apple and pear grower and packer operations
2007	FreshMax	Holman Fresh/John Holman & Co. (Australia) from Holman family	N/A	A major supplier to the Australian domestic market and supermarket chains, and an exporter to 40 countries
Jun 2007	FreshMax	Panda Ranch (Australia)	N/A	"Australia's leading" stonefruit supply chain manager, offering domestic and international customers long, consistent lines of superior quality fruit.
~2004	MG Marketing	LaManna (Australia)	N/A	Purchase designed to expand into Australia, performance has been variable so far
Oct 1997	David Smith/others	FreshMax/Frucor Holdings from Apple & Pear Marketing Board	N/A	

OTHER FRUIT/PRODUCE – ACTIVITY

Turners & Growers is expanding into new fruit/vege, production and export

Recent major produce industry activity
(2000-2011)

Date	Company	Activity	Investment	Details
Mar 2011	Turners & Growers	Distribution centre in Fiji	N/A	opening its own distribution centre in Fiji to improve the supply chain for suppliers and customers; Fiji market worth “about \$25 million a year”
2011	Turners & Growers	Developing blueberry operation	\$1.3m+ 34 FTE jobs	Developing 30ha of blueberries on orchard in Kerikeri (from lemons) Four new varieties developed in Plant & Foods breeding programme Launches ENZAbblue brand
2010	MG Marketing	JV with United Flower Growers Ltd		JV formed to improve access to auctions for flowers
2010	Turners & Growers	Worldwide Fruit trialing kiwifruit production in UK		Vines imported from Italy and Greece are being trialed in UK as an effort to address food miles; possibly commercially available in 2012
2010	Turners & Growers	Develop supply chain/coolstore in Fiji		Formed to export to Fiji
2010	Turners & Growers	Created JV in Belgium		Move into European frozen fruit business through JV to produce IQF fruit
2010	Meadow Mushrooms	Production plant expansion	\$45m	Canterbury-based plant is being significantly expanded
2009	Turners & Growers	Worldwide Fruit JV becomes 50:50 JV with Fruition, Northcourt no longer invested		Part of UK fruit shake up
2008	Meadows Mushrooms	Plant closing		Court-imposed closing due to odour from factory
2006	Turners & Growers	Started exporting kiwifruit from Chile to Europe		Exports under the ENZA brand
2004	Turners & Growers	Expanded tomato glasshouse in Tuakau		Increases T&G production capabilities
2003	Turners & Growers	Enzafruit Worldwide becomes JV between Northcourt and T&G		Further merging of UK domestic and import streams, renamed company Worldwide Fruit
2003	Geest Worldwide	Divestment of Enzafruit Worldwide		
2000	Northcourt Group (UK)	20% of Enzafruit Worldwide		Allowed merging of domestic and imported apple supply
2000	Turners & Growers	Subsidiary ENZA NZ UK Ltd merged with Geest Worldwide Fruit to form 50:50 JV		Created balanced portfolio of imported fruit, JV named Enzafruit Worldwide Ltd

PRODUCE – THEMES

An analysis of firm level behaviour highlights a number of clear industry themes...

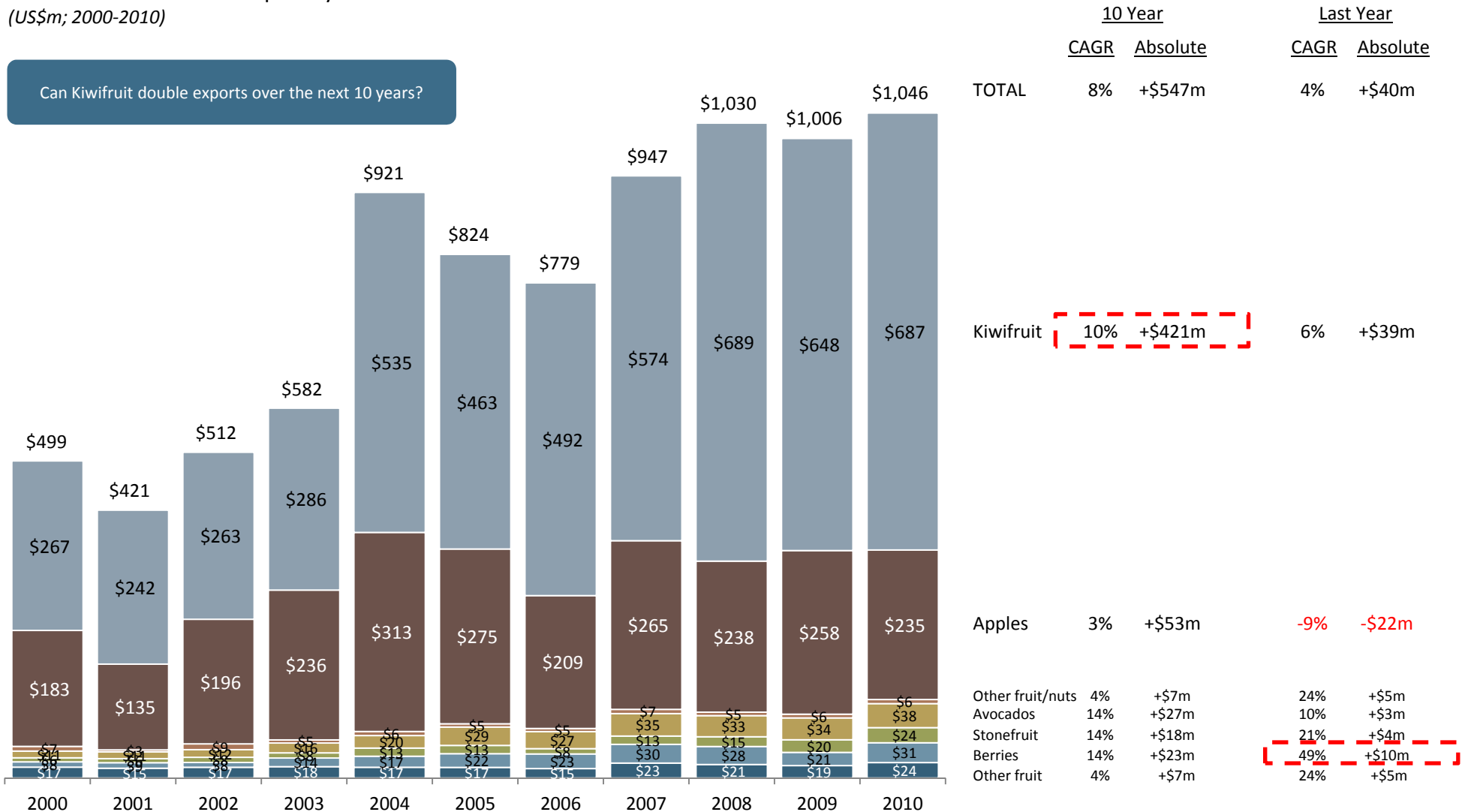
Identified firm level activity or investment themes
(2010)

Theme	Details	Examples
Diversifying Range	Entering new areas to export a wider range of fruit	<ul style="list-style-type: none"> - T&G going into blueberries, tomatoes, citrus - Satara (kiwifruit) is expanding into avocados
Counter Seasonal Supply	Growing fruit in northern hemisphere to become a consistent fruit supplier for the whole year	<ul style="list-style-type: none"> - Zespri producing kiwifruit in Italy and USA - Turners and Growers JV in Thailand, testing growing kiwifruit in UK; EnzaRed hubs in Italy, France & China - OPAC forms JV with Salvi (Italy)
Consolidation	Companies making acquisitions to grow scale and achieve efficiencies	<ul style="list-style-type: none"> - Seeka, Satara acquiring smaller post-harvest companies - T&G acquiring multiple companies
Vertical Integration	Investment throughout the supply chain	<ul style="list-style-type: none"> - Post harvest operators purchasing orchards - Scales Corporation – owns orchards, post harvest, processing and logistics companies
Strategic Alliances	Alliances to reduce number of exporters	<ul style="list-style-type: none"> - 2005 Alliance of HB Growers Trust, Mr Apple and KiwiCrunch - 2007 Frescho and Fruitpackers merge marketing and packing
Collaborative Marketing	Working together on marketing “Brand NZ”	<ul style="list-style-type: none"> - First Fresh and Zespri exporting “First Gold” into Thailand and HK; earlier ripening fruit. - Currently there are 10 exporters with over 20 different market sales programmes, supplying New Zealand-grown kiwifruit to international markets (excluding Australia) under collaborative marketing approvals with Zespri.
Growth in IP	Significant growth in IP protected species	<ul style="list-style-type: none"> - Apples (Jazz, Smitten etc.) - ENZA Red kiwifruit - Potatoes

PRODUCE – FRUIT – EXPORTS BY TYPE

Total New Zealand fruit export value has grown driven primarily by kiwifruit; however berries, stonefruit and avocados are experiencing a strong rate of growth

New Zealand fresh fruit export by form
(US\$m; 2000-2010)

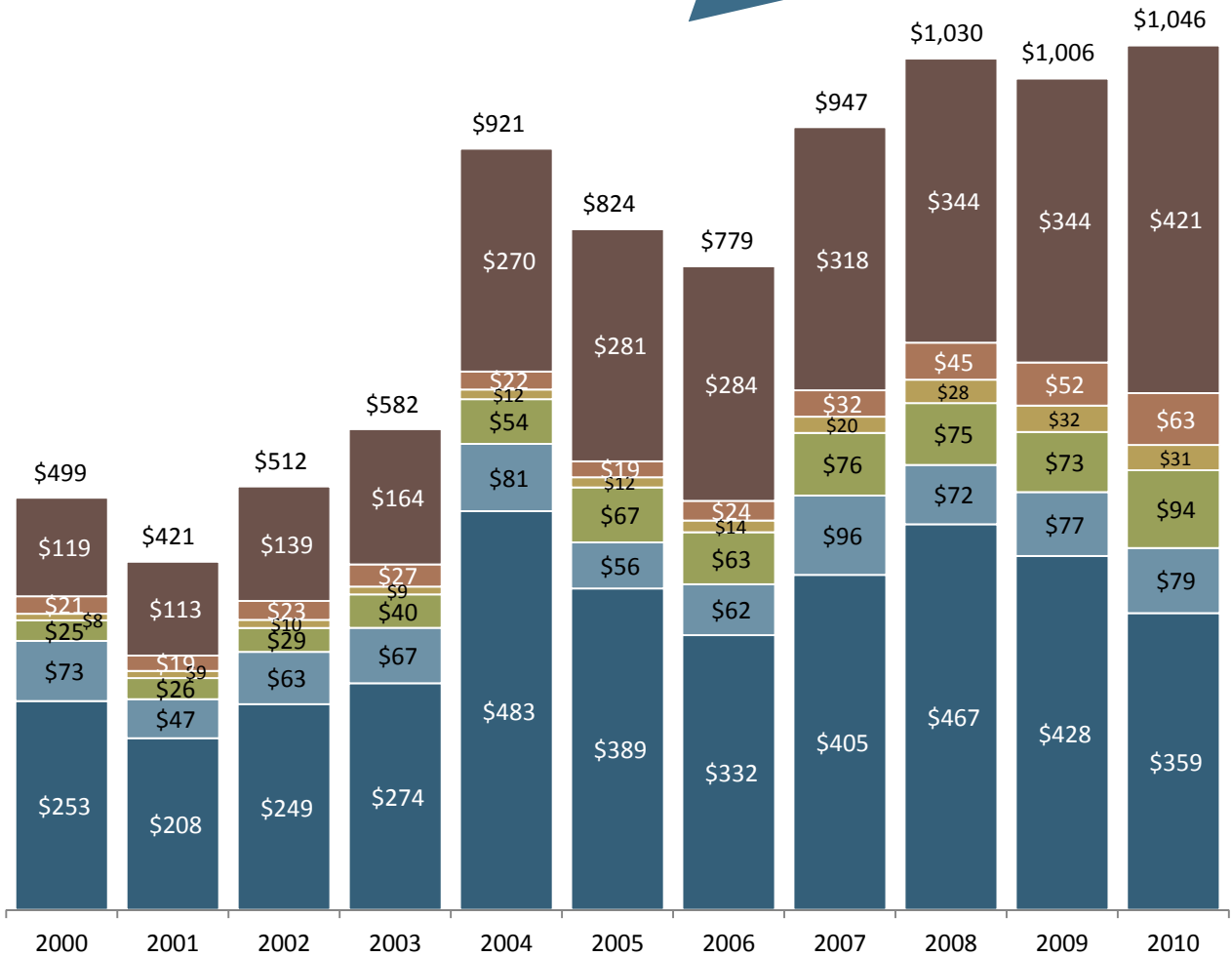


PRODUCE – FRUIT – EXPORTS BY REGION

New Zealand fruit exports appear to be reorienting from traditional markets to the Asia-Pacific region

New Zealand fresh fruit export by region
(US\$m; 2000-2010)

“Australia is one of the biggest opportunities especially for fresh, some restrictions are coming off, they keep up with supply themselves.” *Industry representative*



	10 Year		Last Year	
	CAGR	Absolute	CAGR	Absolute
TOTAL	8%	+\$547m	4%	+\$40m
E Asia	13%	+\$301m	22%	+\$77m
SE Asia	11%	+\$41m	20%	+\$11m
Other	14%	+\$23m	-4%	-\$1m
Australia/ Pacific Islands	14%	+\$69m	29%	+\$21m
N. America	1%	+\$6m	2%	+\$1m
Europe	4%	+\$107m	-16%	-\$69m

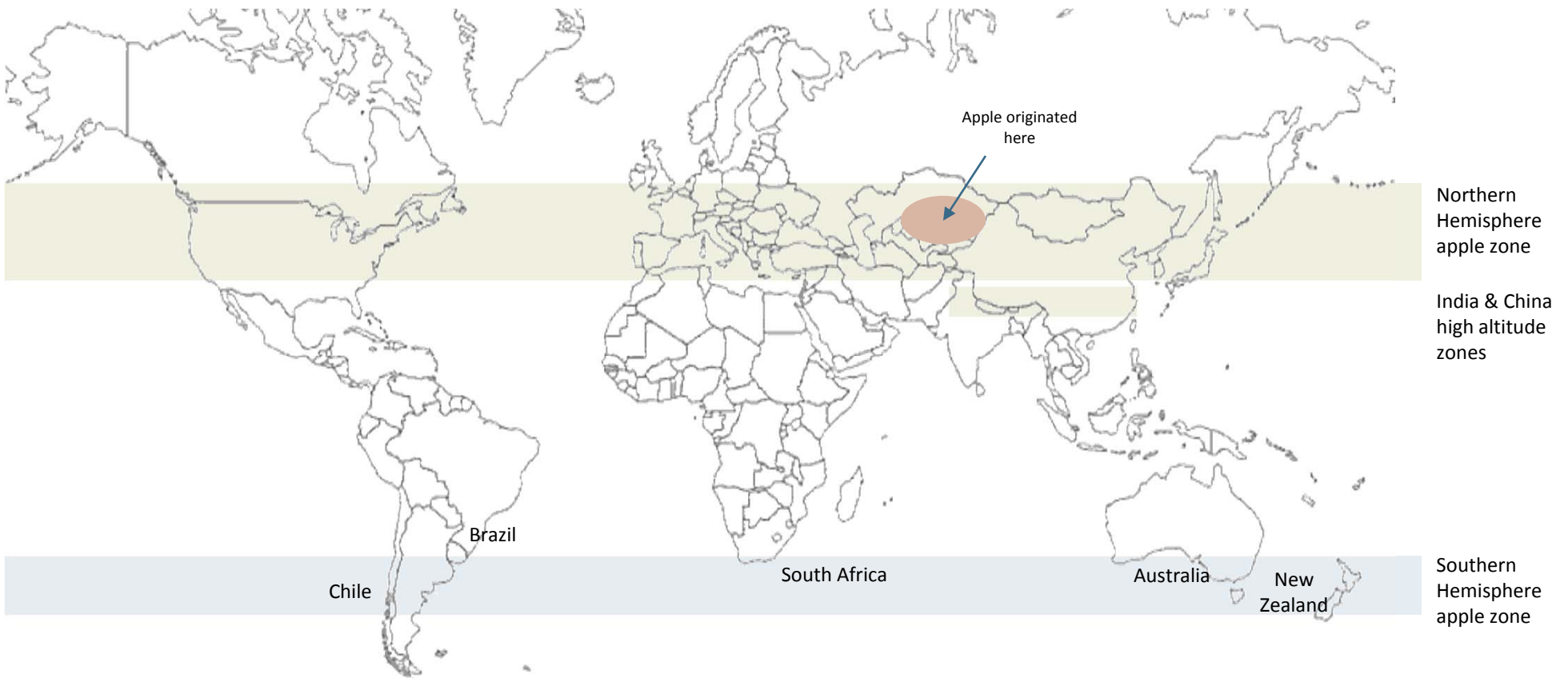


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APPLES – ZONES

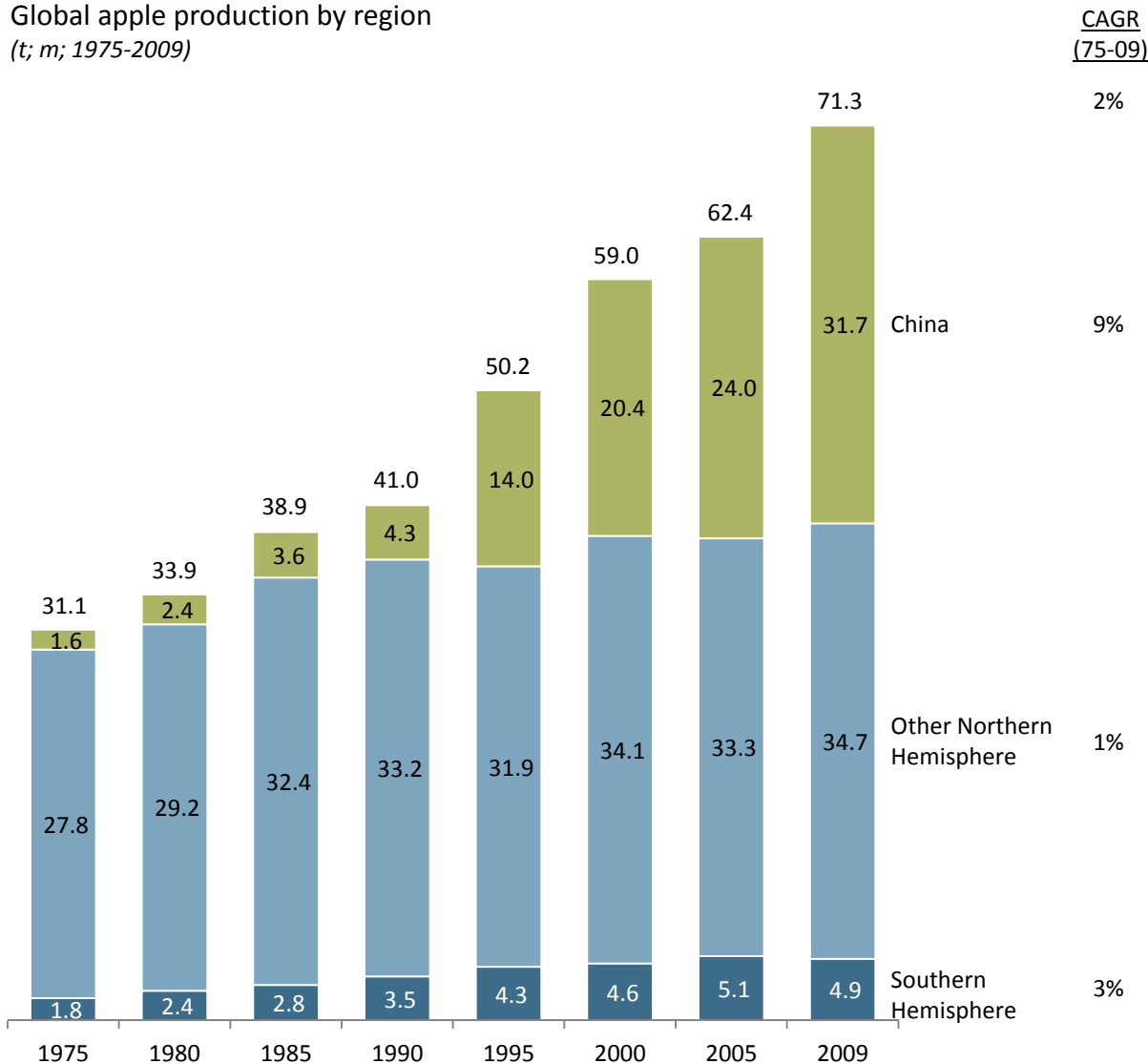
Apples can only be grown commercially in the two apple zones in opposite seasonal windows; the Southern Hemisphere supplies the Northern Hemisphere for six months of the year; both supply the tropics



APPLES – GLOBAL PRODUCTION

While Southern Hemisphere production growth is stable, in the Northern Hemisphere China has massively increased its apple production

Global apple production by region
(t; m; 1975-2009)



Comments

- Chinese apple yields currently low relative to key exporters due to poor orchard management techniques and poorer soils (e.g. planting in depleted clay ex-rice paddies)
- Chinese fresh apple quality currently poor; as a result fresh apples are only exported to low value/low price tertiary markets (e.g. Iran)
- Chinese area peaked in 90's and is declining at 5% per annum (95-08) [i.e. they are ripping out trees]; production growth coming from improved yields on remaining land
- China exports primarily apple juice at low prices; this has impacted global apple juice market
- Given the perishable nature of apples and cost of storage, the threat of Northern Hemisphere apples impacting the Southern Hemisphere window (via Smartfresh/1-MCP) is to date only hypothetical; however "the overhang of unsold local fruit has effected pricing of NZ exports to the EU and USA." *Industry representative*

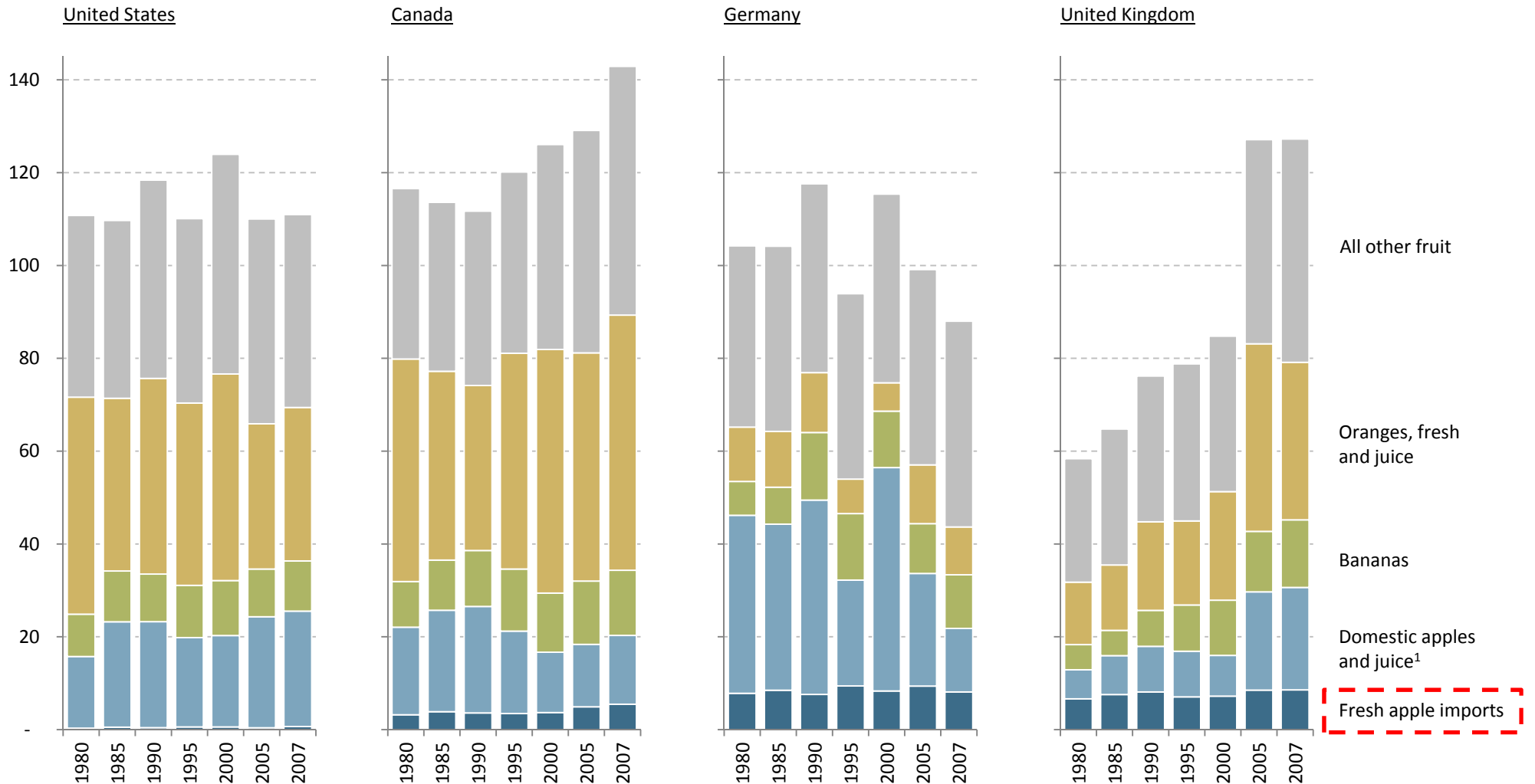
Notes/Definitions

- Southern Hemisphere uses non-tropical Southern Hemisphere (e.g. excludes Northern India)

FRUIT – KILOGRAMS PER CAPITA

At the same time fresh apple imports per capita are not growing in key historical developed markets due to competition from other forms (e.g. juice) and other fruit

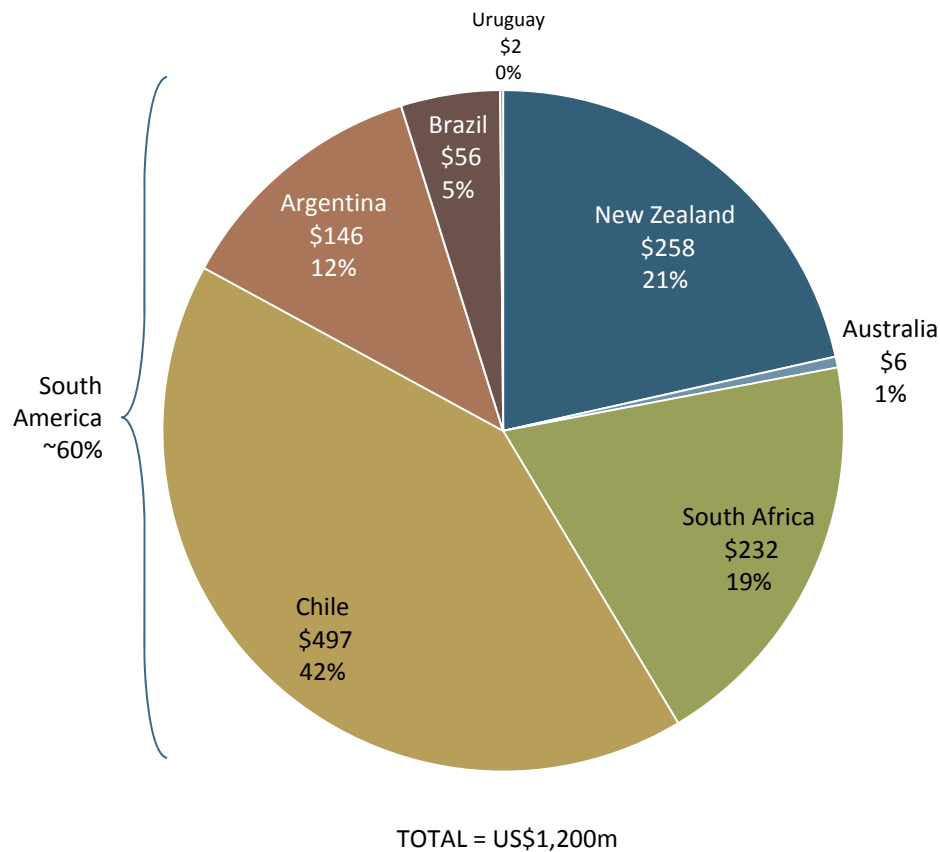
Fresh fruit consumption per capita by select key historical markets for New Zealand
(kg/person; 1980-2007)



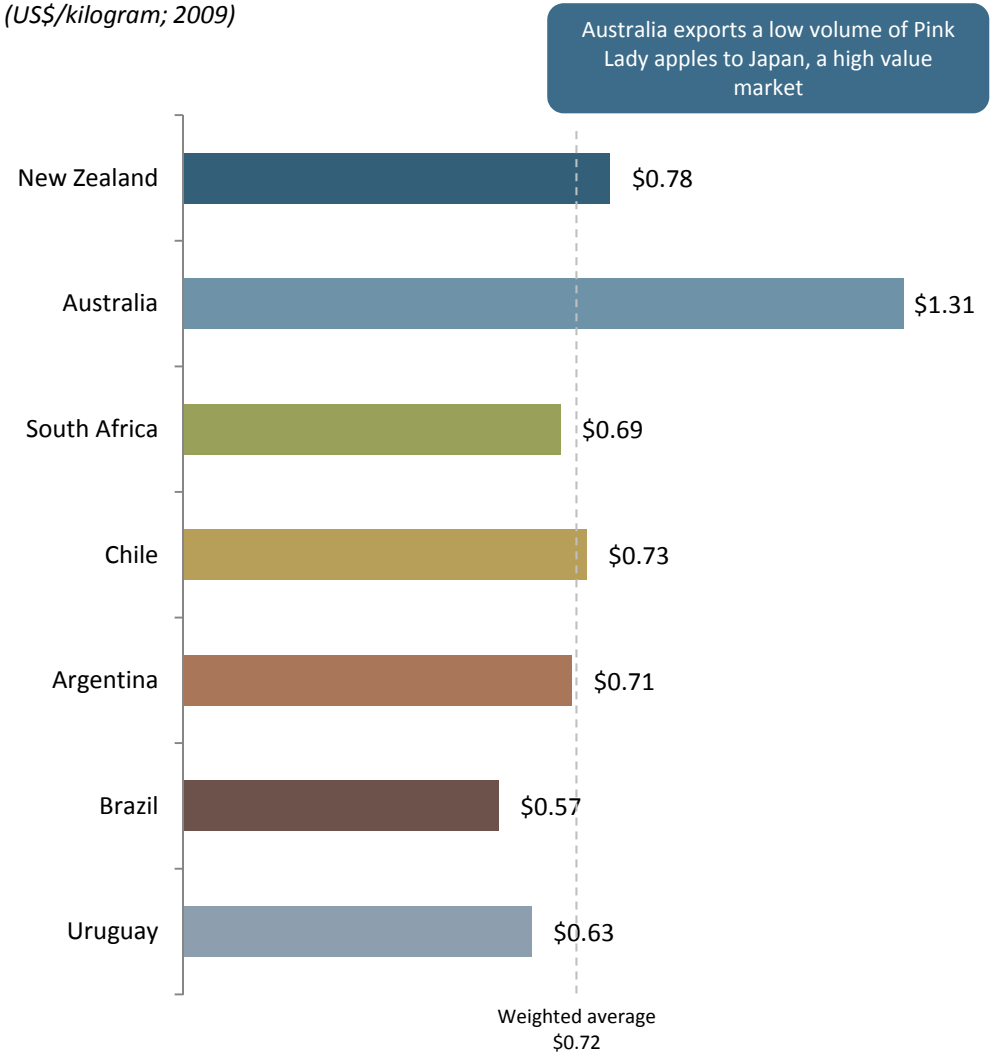
APPLES – S.H. EXPORT VALUE

New Zealand is one of three key players in S.H. apple exports; key NZ competitors are Chile and South Africa; overall New Zealand receives a slight premium due to quality and variety mix

Southern Hemisphere fresh apple export value by key country
(US\$m; % of \$; HS080810; 2009)



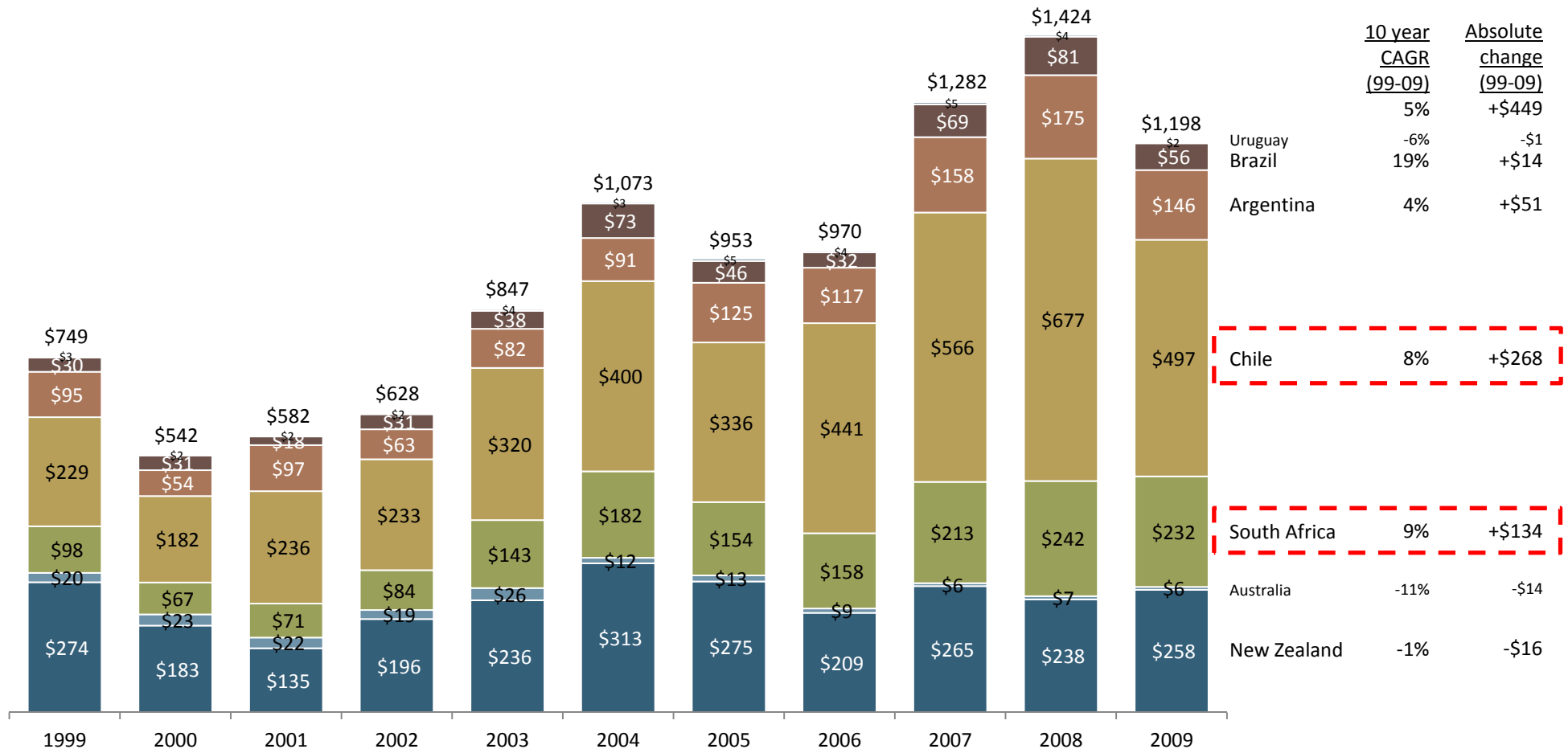
Average fresh apple FOB export value per kilogram
(US\$/kilogram; 2009)



APPLES – GROWTH OF S.H. EXPORT VALUE

Chile, South Africa and Brazil have shown strong export value growth over the past decade; New Zealand export value is flat to slightly down

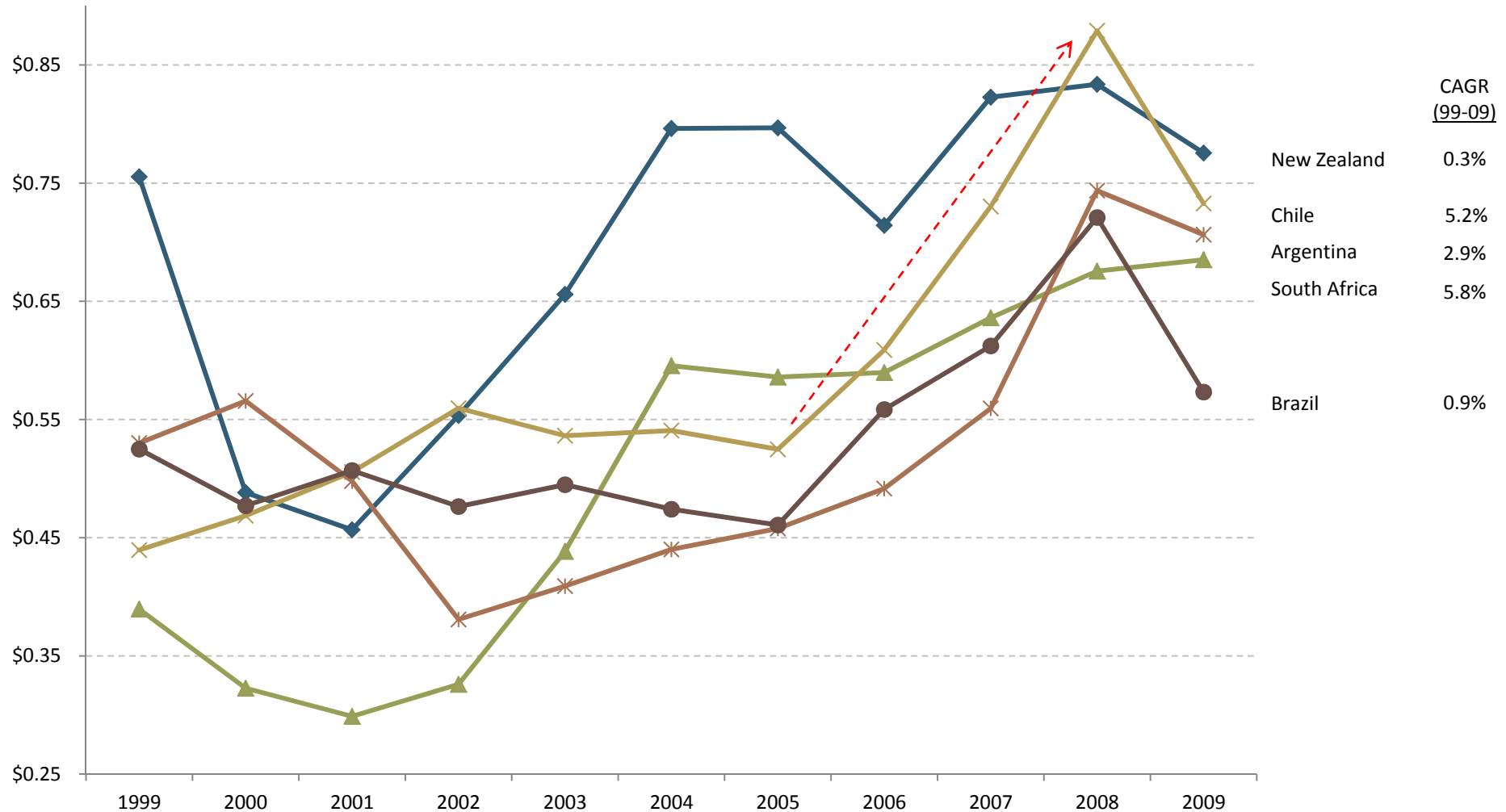
Southern Hemisphere fresh apple export value by key country
(US\$m; HS080810; 1999-2009)



APPLES – EXPORT PRICE PER KG

Chilean and New Zealand pricing per kilogram now broadly in line following a Chilean price/cost increase 05-08 (driven by currency, wages, relative efficiency)

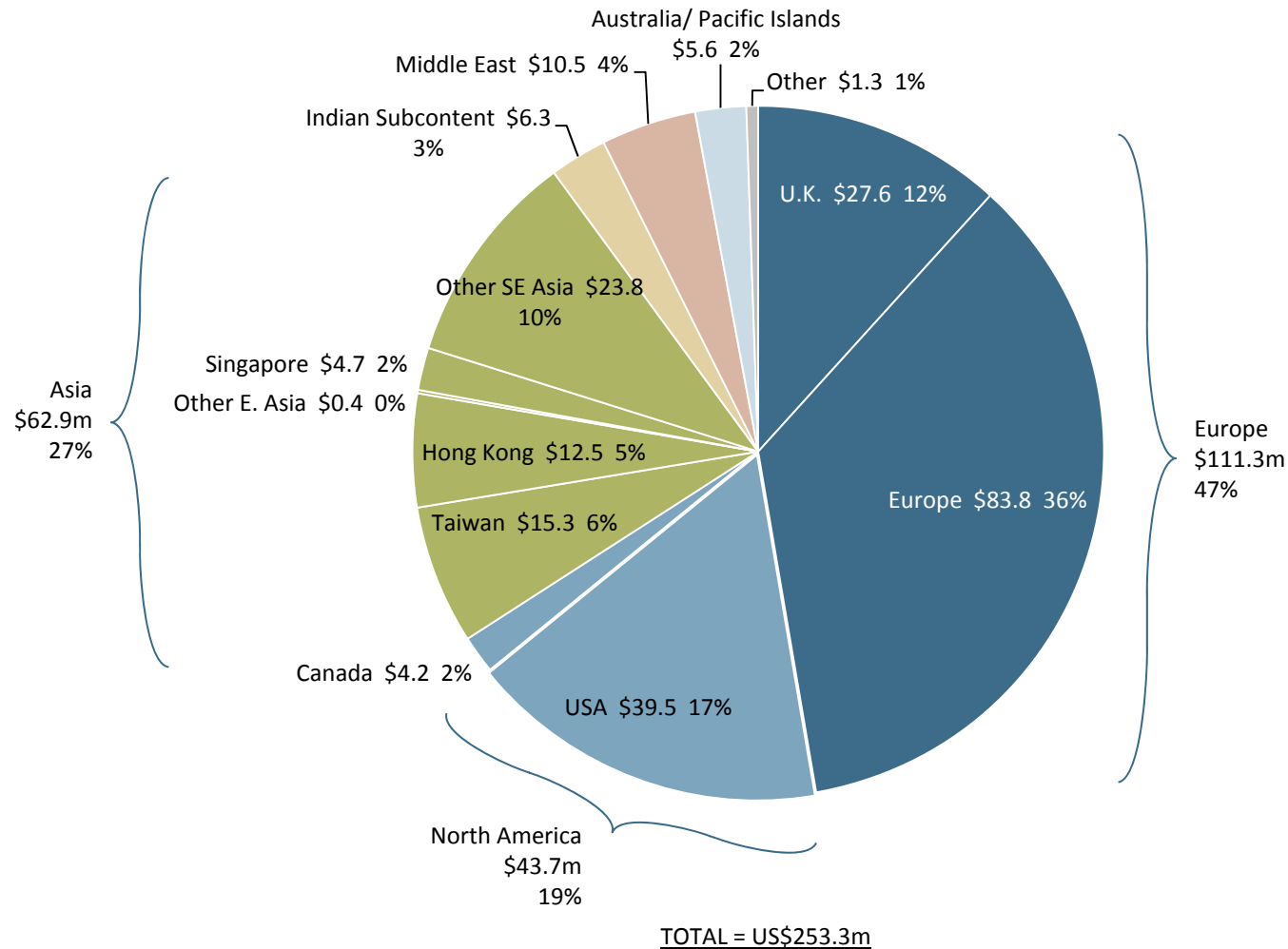
Average fresh apple FOB export value per kilogram
(US\$/kilogram; 1999-2009)



APPLES – NZ EXPORT VALUE

NZ apple export value still strongly weighted to traditional markets Europe (47%) and North America (19%); however Asia now more than a quarter (27%)

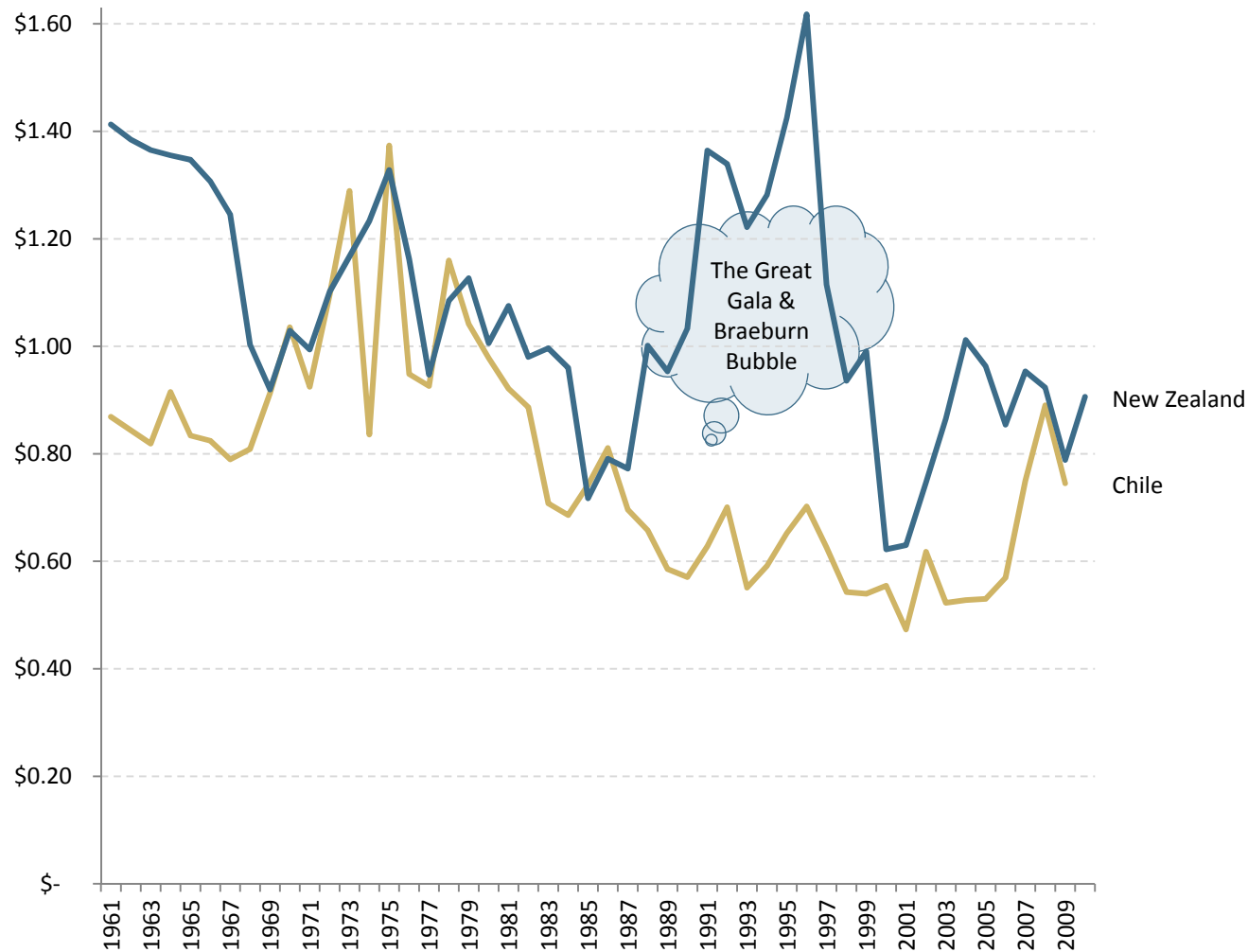
New Zealand apple export value by key country/region
(US\$m; 2010)



APPLES – LONG TERM EXPORT PRICE

In the 80-90's New Zealand inflated a bubble around the dramatic success of the gala and braeburn varieties; with the popping of this bubble the industry has returned to trend

Inflation adjusted average apple export price per kilogram: New Zealand vs. Chile
(US\$; inflation-adjusted; 1961-2010)



Comments

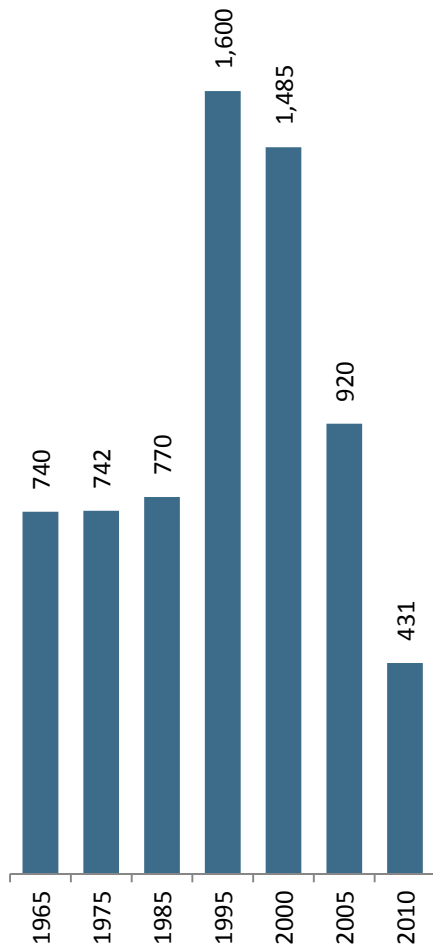
- Gala apple developed by J.H. Kidd in Greytown, Wairarapa in 1934
- Braeburn discovered by O. Moran in Upper Moutere, Nelson in 1952
- Genetics spread globally such that now ~13% of all apples grown in the world (outside China) are Gala and 3% are Braeburn

Notes/Definitions

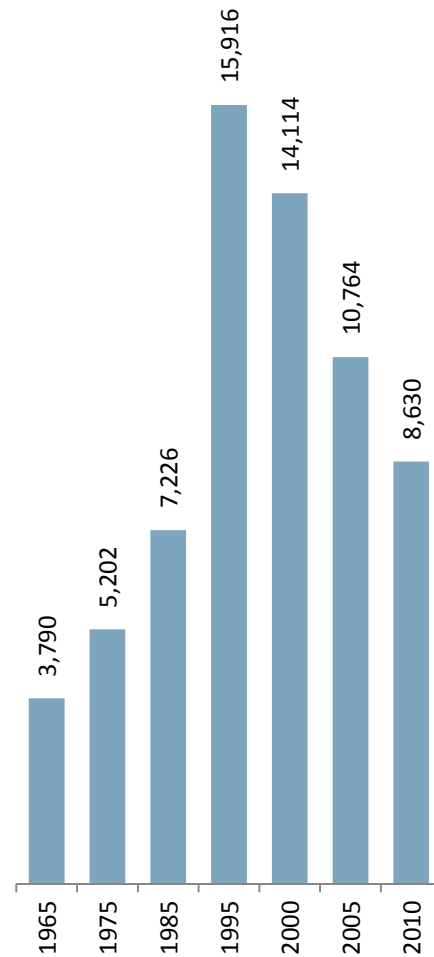
APPLES – LONG TERM METRICS

The impact of the bubble can clearly be seen in industry metrics

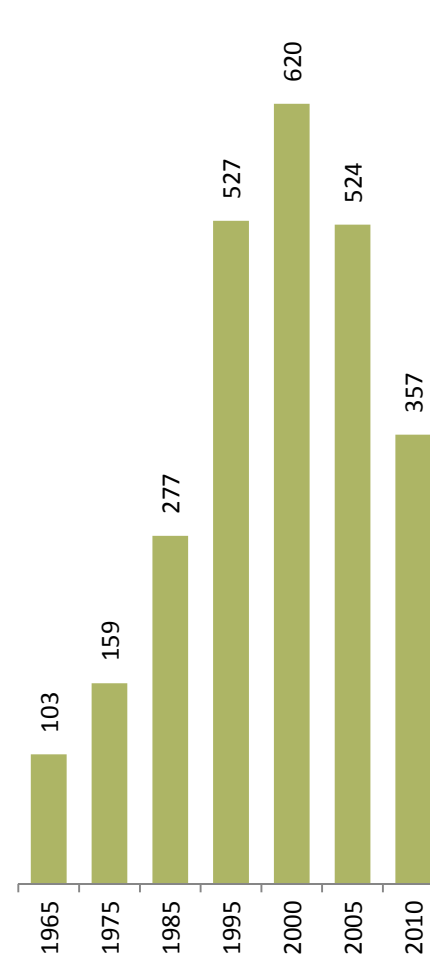
Number of growers
(#, 65-10)



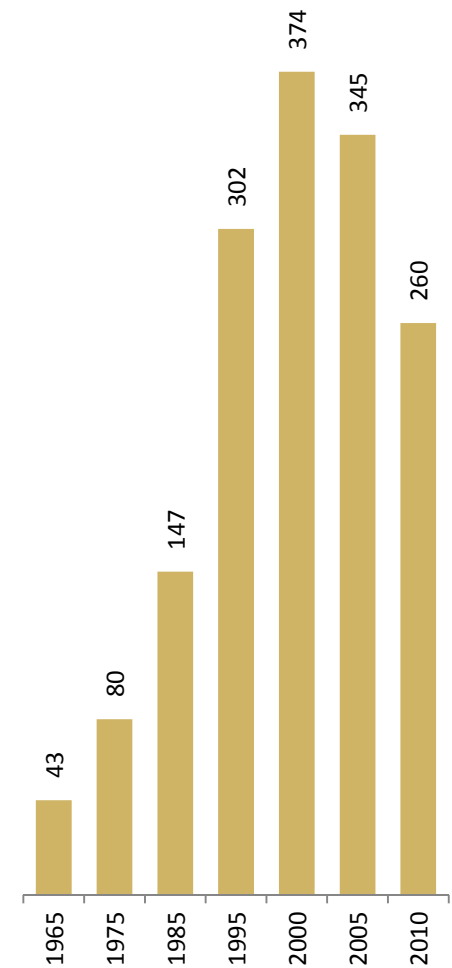
Area
(ha; 65-10)



Production
(t; 000; 65-10)



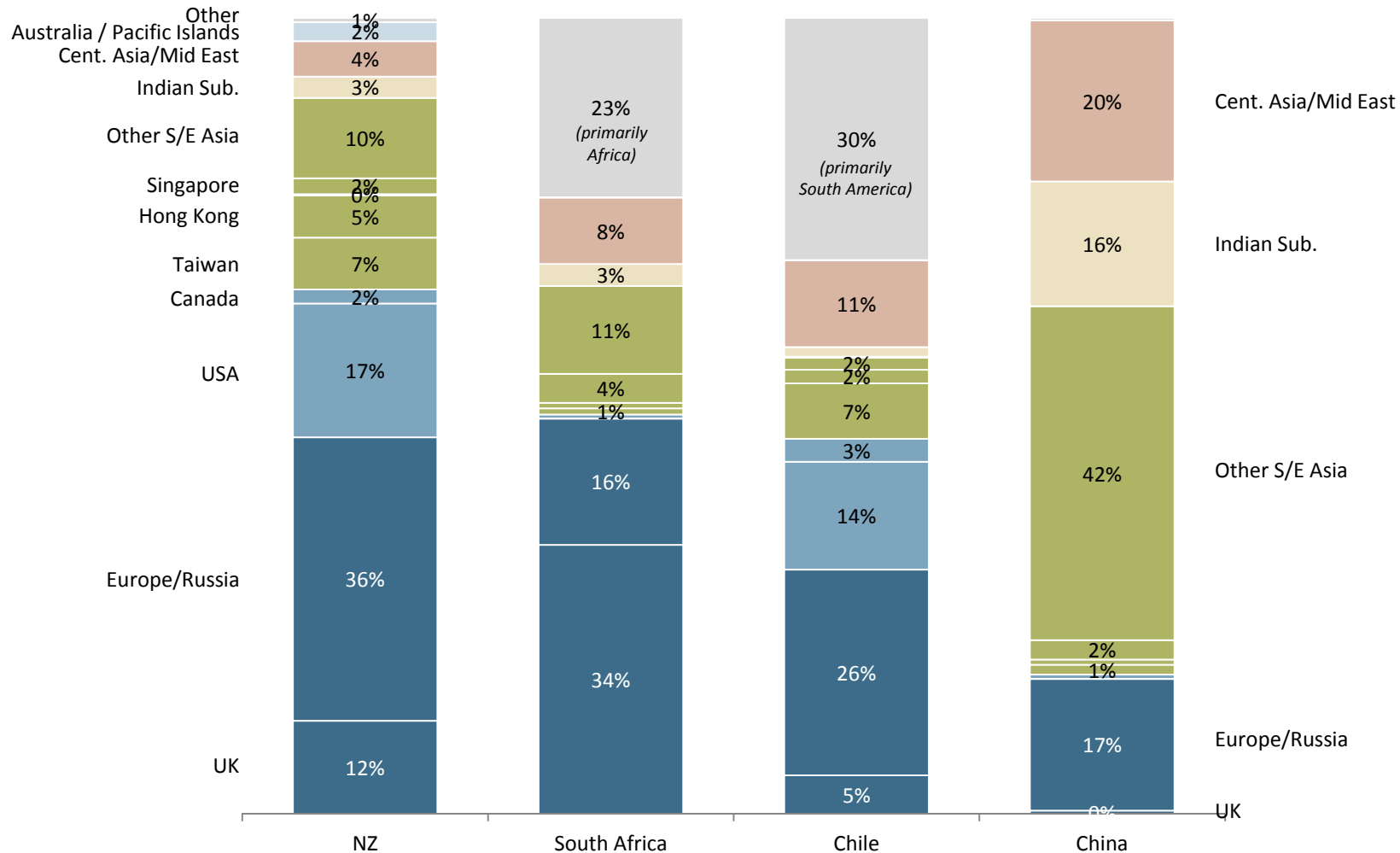
Export volume
(t; 000; 65-10)



APPLES – VALUE MIX – NZ VS. KEY COMPETITORS & CHINA

NZ value mix more weighted towards rich countries/regions than key competitors

Export value mix: New Zealand vs. key Southern Hemisphere competitors and China
 (% of value; 2009 or 2010 latest available)

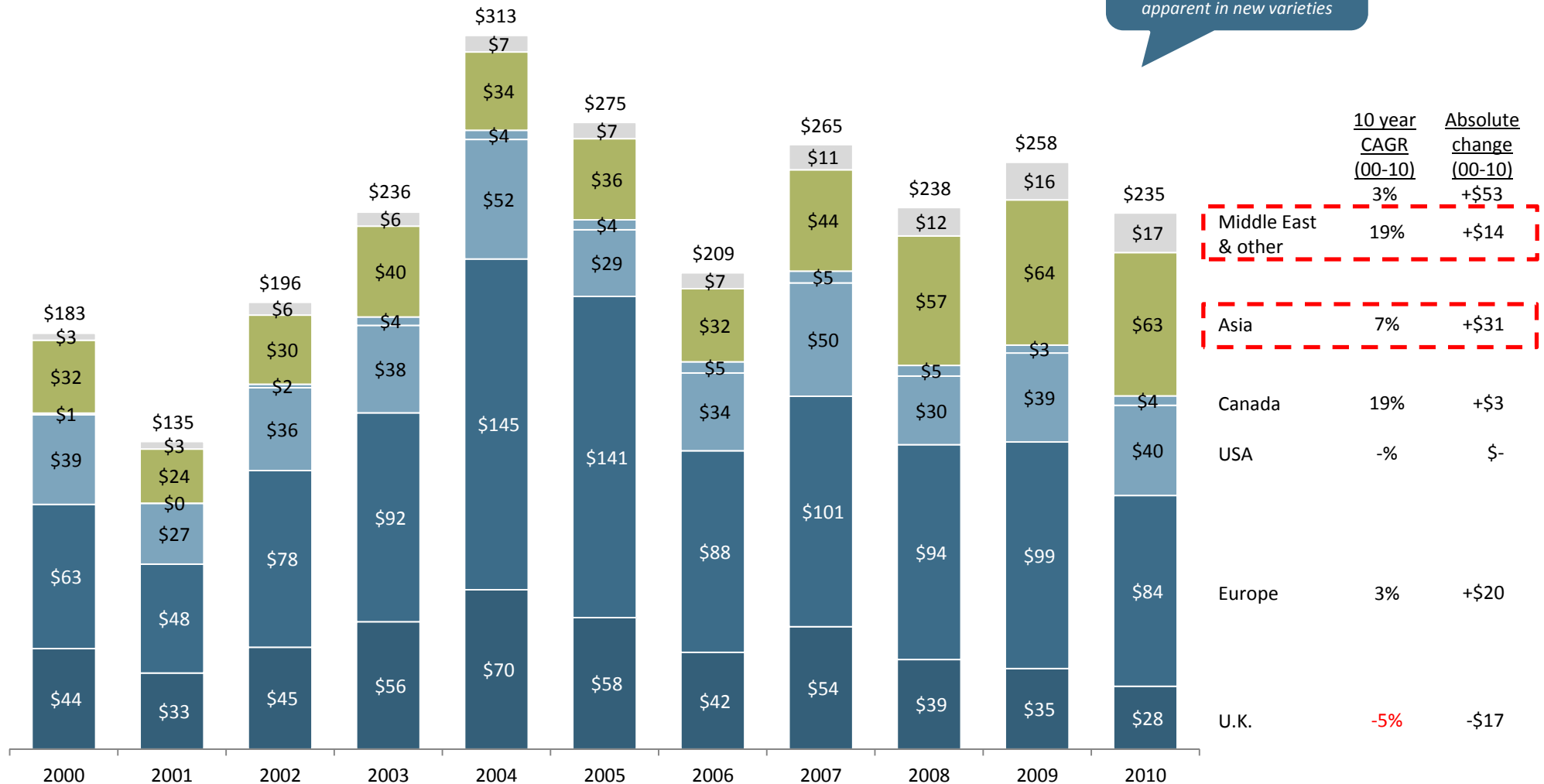


APPLES – NZ EXPORT VALUE

Asia and the Middle East are growing in value, making up for the decline of the U.K. and low/no growth in the U.S. and Europe

New Zealand apple export value by key country/region
(US\$m; FOB; 2000-2010)

New Zealand reorienting away from Europe and towards Asia; this is more apparent in new varieties



APPLES – TRADITIONAL VARIETIES

Major packer/exporters offer a full range of varieties for export from New Zealand









Varieties offered for sale by select key apple packers/exporters
(presence; 2011)

Variety	Year developed												TOTAL
Cox's Orange	1829	X	X		X		X	X	X	X			7
Granny Smith	1850	X	X	X	X	X	X	X	X		X	X	10
Red Delicious	1868	X	X			X		X	X		X		6
Golden Delicious	1890	X							X				2
Gala Royal Gala	1934	X	X	X	X	X	X	X	X	X	X	X	11
Fuji	1938	X	X		X	X	X	X	X	X	X	X	10
Braeburn	1952	X	X	X	X	X	X	X	X	X	X	X	11
Cripps Pink Pink Lady	1973	X	X		X		X	X	X	X		X	8
Pacific Beauty NZ Beauty	1974	X			X	X	X	X	X	X		X	8
NZ Queen	1974		X		X	X	X	X	X			X	7
Pacific Rose NZ Rose	1974	X	X		X	X	X	X	X		X	X	9
TOTAL		10	9	3	9	8	9	10	11	6	6	8	

APPLES – EMERGING VARIETIES

There are also a group of emerging branded club/controlled varieties being grown in New Zealand

Emerging club/controlled varieties being grown in New Zealand
(presence; 2011)

Variety	Patent	Released	Origin	Parents	Control	Website(s)
 Tentation <small>The Preference for Flavour</small>	Yes	1979	Delbard Nursery France	Golden Delicious x Grifer	Golden Sun (FreshCo) Tentation (Club Tentation)	www.pomme-tentation.com www.nztentation.com
 Jazz	Yes	1986	Hort Research	(AKA Scifresh) Royal Gala x Braeburn	Turners & Growers/ENZA	www.jazzapple.co.nz www.enza.co.nz
 KIKU	Yes	1990	Italian Luis Braun, discovered in Japan	Red sport of Fuji	Kiku Ltd. based in Italy	www.kiku-apple.com
 eve™	Yes	1990	Discovered by David Easton in Nelson, NZ	(AKA Mariri Red) Red sport of Braeburn	Heartland	www.eve.co.nz www.heartlandfruit.co.nz www.luviafruit.com
 Ambrosia	Yes	1993	Mennel family British Columbia Canada	Starking Delicious x Gold Delicious	Okanagan Plant Improvement Corporation (PICO)	www.ambrosiaapples.com
 SONYA	Yes	2000	Nevis Fruit Co.	(AKA Nevison) Gala x Red Delicious	FreshCo; Otago International LLC in Washington and marketed by Sage Fruit Company, Rainier Fruit Company, and L&M Companies	www.sonyaapple.com
 KANZI	Yes	2006	Better3Fruit Sint-Truiden Belgium	(AKA Nicoter) Gala x Braeburn (Jazz “clone”)	Greenstar Kanzi Europe; cooperatives VOG and VIP hold marketing rights in Italy	www.kanziapple.com
 envy.	Yes		Hort Research	(AKA Scilate) Royal Gala x Braeburn	Turners & Growers/ENZA	www.envyapple.com www.enza.co.nz

APPLES – EMERGING VARIETIES – JAZZ STRUGGLING


While it has excellent characteristics, Jazz is struggling due to lower yields

- “This is the second season in a row that Jazz growers have faced returns below or at the cost of production and this experience serves as a timely reminder to kiwifruit growers considering planting new varieties.” *Peter Ombler, President, New Zealand Kiwifruit Growers Inc., Oct 2010*
- “Jazz was developed by Plant and Food and is marketed by Enza, which in 2003 merged with Turners & Growers Ltd. Orchardists pay Plant and Food, which bred the apple, a royalty of three per cent of retail price of every box sold and \$1.28 as their share of the \$3.12 per carton Enza marketing budget. Enza's current market forecast return is \$20.40 a carton which some growers say is barely sustainable because Jazz yields per hectare are lower than for other apple varieties.” *Bay of Plenty Times, Oct 26, 2010*
- [ENZA pays an exclusivity fee for the global rights to Scifresh (Jazz) based on ENZA’s net sales; ENZA has arrangement directly with growers]
- “Jazz is a great eating apple - in fact it's my favourite, but yields are low and we're just not getting the returns for it we need, especially considering the huge investment made in it by growers... You need to consider more than the fruit itself. Most important is how will it be sold? Will it have the marketing structure and point of difference to command the premium that you need to return a healthy profit? Returns are currently around \$5 away from break-even for orchardists, and this is the second year in a row we've received less than the cost of production... Growers expect better from Jazz which has a PVR (Plant Variety Right) and a single seller.” *Paul Thomas, Thomas Brothers, Oct 2010*

APPLES – NEW IP CONTROLLED VARIETIES

Plant&Food (HortResearch) continue to develop new varieties – licensed through Prevar – which are being taken up by various organisations and coalitions

New apple varieties developed by HortResearch/Plant and Food and released by Prevar
(As of May 2011)

Variety	Patent	Released	Origin	Parents	Control	Others involved
Velvetine PremP33	Yes	Apr 2011	Plant & Food Prevar licensed	N/A	non-exclusive NZ marketing rights to T&G/ENZA	
PremP109	Yes	Sep 2010	Plant & Food Prevar licensed	N/A	Associated International Group of Nurseries (AIGN)	
 ROCKIT	Yes	Jun 2010	Plant & Food Prevar licensed	N/A	Havelock North Fruit Company	www.rockitapple.com
T193	Yes	Feb 2009	Plant & Food Prevar licensed	Royal Gala x Braeburn	The t193 ltd company	Fresh New Zealand Ltd Heartland Group Ltd Johnny Appleseed Holdings Ltd PickMee Fruit Company Ltd
 smitten	Yes	Jan 2009	Plant & Food Prevar licensed	N/A	The Seventeen Ltd	D M Palmer NZ Ltd ENZA Ltd FreshCo Ltd FreshMax NZ Ltd Fresh New Zealand Ltd Heartland Group Ltd Johnny Appleseed Holdings Ltd Mr Apple New Zealand Ltd PickMee Fruit Company Ltd
PremA153	Yes	May 2008	Hort Research Prevar licensed	Royal Gala x Braeburn	Licensed to Johnny Appleseed Holdings (Yummy) for NZ market	Heartland Fruit Limited (NZ) Fresh New Zealand
Maxie™ Prem1P cv		Dec 2005	Hort Research Prevar licensed	N/A	N/A	
Crispie™ Prem2P cv		Dec 2005	Hort Research Prevar licensed	N/A	N/A	
Sweetie™ Prem1A cv PremA280		Aug 2005	Hort Research Prevar licensed	Royal Gala x Braeburn	N/A	

APPLES – NEW VARIETIES – TARGETING ASIA

New varieties appear to be targeting Asian tastes

- “Envy is expected to be in high demand in Asia and North America, where people particularly appreciate the sweetness and crunch that it offers.” *Dawn Gray, General Manager, ENZA International, Sept 2007*
- “Given [new Prevar variety T193] has a mild sweet flavour profile, is refreshing and juicy and has an excellent crunchy texture we believe it will have very wide consumer appeal. This will be an outstanding apple in the Asian markets.” *Rex Graham, Chairman, The T193 Company, Feb 2009*
- “[PremA17] has an acid-sweet' flavour, a good shelf life and a multi-red colouring which would appeal to buyers... Its early picking in February would give it an advantage over later harvested apples and allow it to compete with South American growing nations such as Chile and Brazil... The early variety is expected to appeal to markets in Asia and North American.” *John McCliskie, Chairman, T17, Jan 2009*

APPLES – NEW BY KEY FIRMS

Adoption of emergent and new varieties is spread across the industry; Smitten appears to have assembled the broadest coalition

Availability of emergent or new IP controlled varieties by select key packers/exporters
(presence; May 2011)

Variety	Year developed /patented											
	1986	X	X									
envy 	1985	X										
 eve™	1990				X					X	X	
	1990								X			
	1993									X		
	2000				X							
	2006								X			
Mahana RED	2006								X			
smitten.	2009	X	X	X	X		X		X	X		
T193	2009			X						X	X	



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PRODUCE – INDUSTRY ORGANISATIONS

There are a number of key industry organisations in the produce industry

Key produce organisations in New Zealand
(2010)


HortNZ collects its own commodity levy (\$2.1m) to represent all commercial fruit and vegetable growers. It also collects on behalf of Vegetable groups ~\$3m.

	Represents	# Members	Annual Operating expenditure	Funding	Website/notes
	Growers advocacy	6,500	\$9.3m (O.E. FY11)	<ul style="list-style-type: none"> - Commodity Levy (FruitFed and VegFed) Order 2007 (\$2.1m) - 22 product groups pay levy 	Horticulture New Zealand www.hortnz.co.nz/
	Licensing Export promotions	59	0.4m (O.E. FY11)	<ul style="list-style-type: none"> - Mandatory exporters licencing fees (53 Companies) - Product Group under HEA fees (11 groups) 	Horticulture Exporters Authority (HEA) www.hea.co.nz
	Pipfruit industry	n/a	n/a	<ul style="list-style-type: none"> - Commodity Levy Order 2007 	Pipfruit Industry Council www.pipfruitnz.co.nz
	Kiwifruit growers	n/a	0.9m (O.E. FY11)	<ul style="list-style-type: none"> - Commodity Levy (Kiwifruit) Order 	New Zealand Kiwifruit Growers Inc (NZKGI) www.nzkgi.org.nz

PRODUCE – INDUSTRY SCIENTIFIC RESEARCH

Plant and Food Research is the key organisation involved in the industry research

Key scientific research organisations involved in produce industry research in New Zealand
(2010)

	Total Income	Total Staff	Focus & activities
 Plant & Food RESEARCH RANGAHAU AHUMARA KAI	\$117.5m (2010)	900+	<ul style="list-style-type: none">- Food innovation – foods with functionalities- Joint research with Prevar into new apple and pear varieties (\$21.6m over 7 yrs)- Prevar Licenses a new pear PremP109 to AIGN

