

HORTICULTURE MONITORING REPORT

JULY 2006

»» A SHORT-TERM FINANCIAL AND PHYSICAL FORECAST
REFLECTING GROWER AND INDUSTRY PERCEPTIONS
OF HORTICULTURAL FIGURES, TRENDS AND ISSUES

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INTRODUCTION

Each year the Ministry of Agriculture and Forestry's policy unit (MAF Policy) monitors the production and financial status of farms and orchards. The unit also monitors trends, issues and sector concerns. It uses this information to create models of specific farm and orchard types: for example, South Island merino farms, Waikato/Bay of Plenty dairy farms, or Bay of Plenty kiwifruit orchards.

Such models are the basis of MAF Policy's *Monitoring Report* series of short-term financial and physical forecasts for agriculture sectors and regions within New Zealand. The reports reflect growers' expectations and intentions, as well as the views of those servicing the sector. These forecasts are not MAF price or production predictions: MAF receives the information for the models from contracted sources. MAF's price and production forecasts are published in the *Situation and Outlook for New Zealand Agriculture and Forestry* (available on www.maf.govt.nz).

This report contains a kiwifruit model, two viticulture models, and information on process and fresh vegetables, floriculture, summerfruit, subtropicals, export berryfruit, and apiculture.

»» HOW THE MODELS WERE CREATED

The model orchards depicted in this report are representative of their orchard type within each region. Each model is created from information drawn from up to 20 orchardists and a wide cross section of agribusiness representatives.

The aim of each model is to typify an average orchard for the region. Budget figures are averaged from the contributing orchards and adjusted to represent real orchards. Income figures include off-orchard income, new borrowing, and other cash income. Expenditure figures include costs of management, orchard production, debt leasing, drawings, and other land development and capital purchases.

Monitoring is continually being improved to meet the needs of the users of the reports. From time to time the models are revisited, and changes may be made. Bear this in mind when making comparisons between years.

»» CALCULATIONS USED IN THE MODELS

The economic orchard surplus (EOS) depicted in the model budgets is calculated as follows:

- gross orchard revenue
- less working expenses (excluding interest, rent and lease costs)
- less depreciation
- less wages of management (WOM).

Wages of management are calculated as follows:

- \$31,000 allowance for labour input
- plus 1% of total capital as managerial reward.

An upper limit for WOM of \$75,000 has been set.

OVERVIEW

OF THE HORTICULTURE SECTOR

2

This issue of the *Horticulture Monitoring Report* paints a considerably more optimistic picture than the 2005 issue. Both production and prices have increased in many of the crops reviewed.

The weather in the 2005/06 season was largely benign. Growers report high yields per hectare for many crops. The winegrape and avocado harvests were at record highs, and berryfruit growers achieved higher average yields than in any of the past four years. However, spring floods seriously affected returns for Gisborne vegetable growers, and production of Hawkes Bay stonefruit was adversely affected by wet spring conditions. Rain over the cherry harvest also caused some crop losses.

Growers of export crops harvested in autumn 2006 reaped the benefit of lower exchange rates for the New Zealand currency. Improved yields and export returns have resulted in higher gross margins for most of the crops reviewed in this report. However, growers of many vegetable crops continue to face low margins.

Kiwifruit grower prices were hit hard by the high exchange rate in the 2005 selling season, despite stable prices for New Zealand kiwifruit in international markets. High yields per hectare partially compensated for the lower prices, but the model orchard still made a small net trading loss in the 2005/06 March year. The 2006 crop is equally large, and growers expect better prices and margins, due to the moderating value of the New Zealand exchange rate. The current focus of the industry on improving the flavour of kiwifruit by changing on-orchard management has proved very challenging, but good progress is being made. The industry is strongly market oriented, and achieves high quality standards and market premiums over competitor nations' kiwifruit.

The wine industry is also focused on delivering a high quality product that is targeted at the premium and super-premium market. The Marlborough model vineyard's profits show an increasing trend from 2005 to 2007, reflecting increasing production and higher prices per tonne. The net trading profit in the Hawkes Bay model vineyard has fallen in 2006, with almost static prices and production compared with 2005, but growers expect improved yields and prices in 2007.

All the sectors covered in this report note the impact of rising costs. Increasing fuel prices have had particularly serious effects on margins for crops produced in heated greenhouses, and crops requiring frequent cultivation such as vegetables. Airfreight costs have also increased, with particular effects on the heavier flower crops such as paeonies.

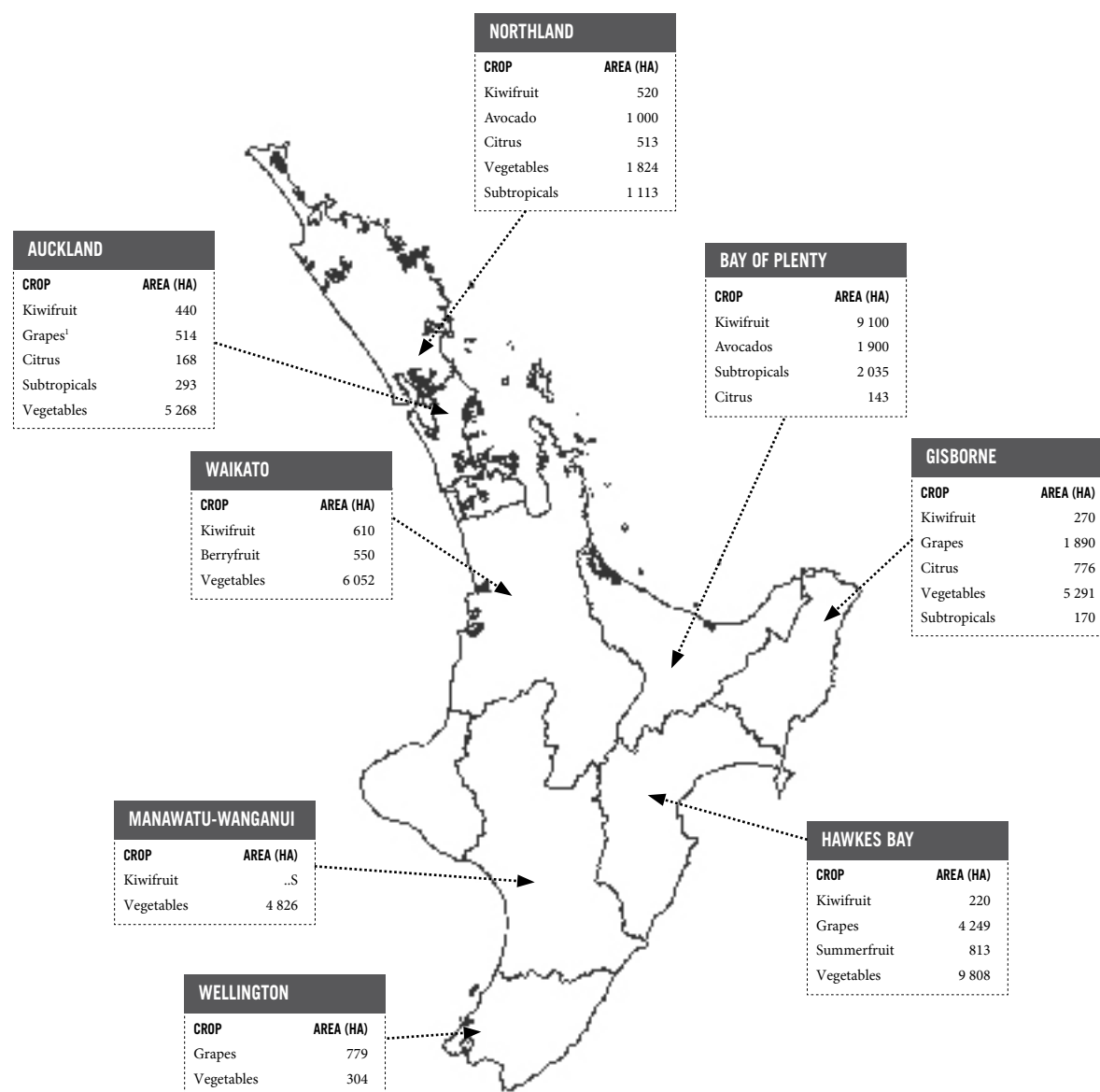
Labour shortages are of concern to most growers. Horticulture is a labour intensive enterprise, and growers and post-harvest operators in most regions have difficulty finding sufficient staff to pick, pack and prune many crops. The horticulture sector and government agencies have worked together to address this issue, resulting in some useful initiatives. However, sourcing sufficient labour will continue to be a challenge in areas like Marlborough, where the local pool of labour is small and the demand for seasonal workers is increasing rapidly.

Technological development is an important facet of New Zealand's competitive advantage for horticultural crops on world markets. New varieties with improved yields or market appeal are being adopted by the summerfruit, berryfruit and floriculture sectors, although importing new varieties continues to be difficult for the berryfruit sector.

A recurrent theme across many of the sector reports is grower concern about their lack of market power. Growers feel at a competitive disadvantage when negotiating with large-scale buyers. As a result, the grower representative body, Horticulture New Zealand, has become a member of the New Zealand Fair Trading Coalition. The Coalition is publicising proposals for policy changes which it considers are required to provide a fair and competitive business trading environment for small to medium enterprises.

As this report went to press, it was announced that the varroa bee mite had been found in the South Island. Biosecurity New Zealand has launched an immediate response, and management options are being considered. The find is of concern to both beekeepers and growers of crops requiring pollination.

»» FIGURE 2.1: NORTH ISLAND HORTICULTURE STATISTICS, 2005



Source

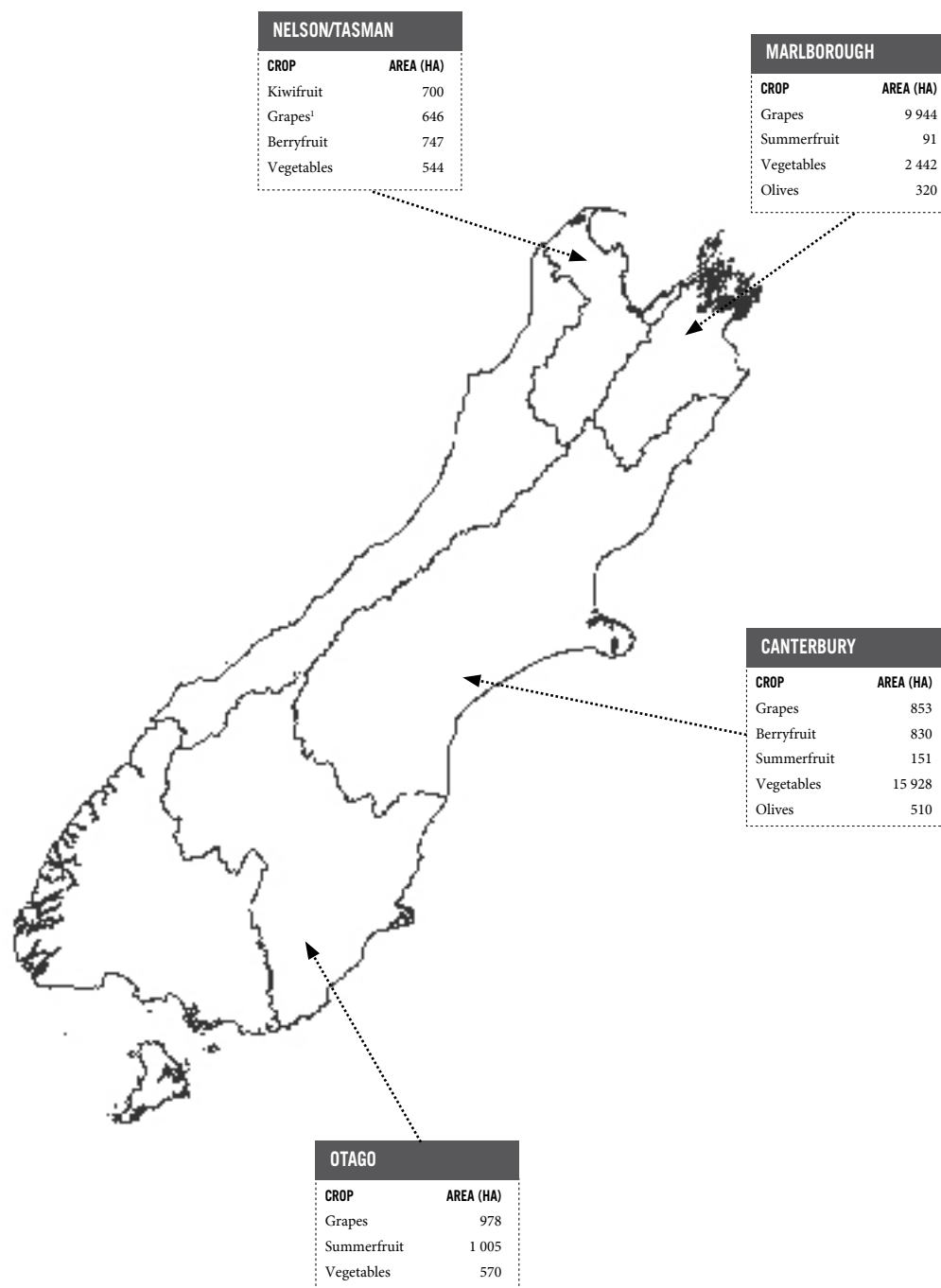
Agricultural Production Survey, June 2005, Statistics NZ.

¹ Grape statistics have been sourced from the New Zealand Winegrowers Vineyard Surveys.

Symbol

..S Suppressed

»» FIGURE 2.2: SOUTH ISLAND HORTICULTURE STATISTICS, 2005



Source

Agricultural Production Survey, June 2005, Statistics NZ.

¹ Grape statistics have been sourced from the New Zealand Winegrowers Vineyard Surveys.

KIWIFRUIT

»» THE KIWIFRUIT ORCHARD

This report covers kiwifruit orchards in the major growing regions of New Zealand. The Bay of Plenty produces around 80 percent of the New Zealand kiwifruit crop, and the model budget represents an established owner-operator orchard in this region.

Financial data relates to the year ending 31 March. A specific comment is made on the growing season in each district.

Kiwifruit income spans two financial years, with the residual payment for each crop occurring in the next financial year. For example, final payments on the crop harvested in May 2005 occur in the 2006/07 forecast year.

»» TABLE 3.1: EFFECTIVE AREA OF THE KIWIFRUIT MODEL

	2002/03 (HA)	2003/04 (HA)	2004/05 (HA)	2005/06 (HA)	2006/07 ^f (HA)
Variety Hayward (ZESPRI™ GREEN)	4.5	4.5	4.5	4.5	4.5
Variety Hort16A (ZESPRI™ GOLD)	0.5	0.5	0.5	0.5	0.5
Total effective area	5.0	5.0	5.0	5.0	5.0

Symbol
f Forecast

»» TABLE 3.2: KEY PARAMETERS OF THE KIWIFRUIT MODEL

	2002/03	2003/04	2004/05	2005/06	2006/07 ^f
ZESPRI™ GREEN					
Production (export trays/ha)	6 080	6 400	7 385	7 750	8 000
Total production (export trays)	27 360	28 800	33 233	34 875	36 000
Total revenue (OGR ¹ \$/tray)	5.65	6.35	4.32	3.46	3.76
Revenue before 31 March (\$/tray)	5.25	6.00	3.85	3.07	3.40
Revenue after 31 March (\$/tray)	0.40	0.35	0.47	0.39	0.36
ZESPRI™ GOLD					
Production (export trays/ha)	7 200	7 500	9 800	9 300	10 100
Total production (export trays)	3 600	3 750	4 900	4 650	5 050
Total revenue (OGR \$/tray)	6.59	7.25	5.50	5.46	5.80
Revenue before 31 March (\$/tray)	6.06	6.86	4.93	4.92	5.40
Revenue after 31 March (\$/tray)	0.53	0.39	0.57	0.54	0.40
Gross orchard revenue (\$)	186 926	223 525	171 028	152 810	169 530
Cash orchard surplus (\$)	70 367	95 955	29 688	11 870	27 990
Net trading profit (\$)	62 367	88 205	17 568	– 230	18 540

Note
¹ Orchard gate return.

Symbol
f Forecast

»» KEY POINTS

- › Kiwifruit growers are in good heart, despite lower revenue in 2005/06.
- › Gross revenue was down 11 percent, and the cash orchard surplus down 60 percent for the model orchard in 2005/06, compared with the 2004/05 year.
- › The lower revenue was mainly due to the higher value of the New Zealand currency when compared to the yen and the euro.
- › In 2006/07, growers expect similar yields but higher revenue due to the weaker New Zealand currency.
- › Growers are responding to market demand and higher payment incentives by aiming to produce fruit with higher dry matter, which is an indicator of good-tasting fruit.
- › Labour continues to be a constraint, but pilot work-permit schemes have been very helpful with providing backpackers for harvest labour.

»» CLIMATIC FACTORS AFFECTING PRODUCTION

› NORTHLAND

Northland kiwifruit growers had a good growing season to produce their 2006 kiwifruit crop. The mild winter led to lower flower numbers but conditions improved and included a warm spring, regular rain, and little damaging wind. Vine growth and fruit size were good. Fruit size of the green variety is particularly large.

The incidence of core disorder, an internal defect, appears to be higher this year in the gold variety. This has resulted in extensive pre-harvest sampling, and more fruit facing market restrictions.

Wet weather delayed picking during May 2006 and harvest will extend into June, which is later than usual for the district. Despite pressure to get the mature fruit picked, continuing weather delays have caused frustration. The wet weather causes casual workers to move on because they cannot earn enough working only a few days each week.

Yields will be higher than in 2005. For the green variety the large fruit size and modest reject level has offset the lower flower numbers in spring. For the gold variety, maturing orchards are contributing to higher yields this season but yields are also good on mature orchards.

› AUCKLAND

The Auckland district has also had a very good growing season. The number of flowers on the green vines in spring was lower than usual but good growth has occurred since. Yields will be similar to 2005 as the very large fruit size has compensated for the lower numbers. Dry matter levels are good in the green crop.

For the gold variety, fruit size is smaller than usual. Gold variety yields are higher than in 2005, when yields were reduced by hail.

This season, less Auckland fruit was harvested early compared with last season. Wet weather during harvest has been a problem with a whole week too wet to harvest during May, and rain reducing the number of days suitable for picking fruit throughout the season. Picking will extend until mid-June.

› BAY OF PLENTY

The Bay of Plenty has also had a very good growing season, with yields expected to be slightly above the good yields achieved last year. Vine and fruit growth were encouraged by a warm spring, early summer temperatures, and regular rainfall. Dry matter levels at harvest are good. This is due to orchard and harvest management changes. Lower flower numbers at the start of the season have been offset by low fruit losses during the growing season. Green fruit size is larger than the preferred market size profile, whereas the size of the gold fruit is smaller than usual due to growers' management changes to increase fruit dry matter. Gold reject rates at harvest are lower than last year.

Fruit matured early, so harvest and shipping began well. However, frequent wet weather during May delayed harvest. In early June, the quantity of fruit picked and packed was ahead of the late maturing 2005 season, but it has been difficult getting enough fruit ready for the scheduled shipping programme.

Harvest was still progressing at the time this report was compiled. The model orchard 2006 yield forecast is 3 percent higher for green and 8 percent higher for ZESPRI™ GOLD, compared with the 2005 harvest. The average Bay of Plenty yield tends to be higher than other regions. During harvest, ZESPRI has increased its forecast of total 2006 kiwifruit volumes to just above 2005 volumes, based on harvest results.

› GISBORNE

The 2005/06 growing season has been a challenging one for growers. Frosts in August damaged fruit buds in gold crops and two heavy rainfall events in October and November caused some vine deaths due to waterlogging of their roots. Associated high winds also increased the incidence of fruit blemish.

Despite this, it is expected that fruit production from the area in 2006 will be similar to 2005 at approximately 1.8 million trays. Maturing plantings of gold kiwifruit will help maintain total district production.

Fruit picking in the district commenced on 20 March 2006 due to some growers taking advantage of early start premiums. Other growers preferred to leave harvesting until May, to take advantage of increased fruit dry matter and size.

› HAWKES BAY

The kiwifruit growing season in Hawkes Bay was favourable and growers are pleased with the resulting crops. Good weather during pollination and the low incidence of damaging winds during the growing season has resulted in large fruit size and low reject rates. As usual, fruit matured early in the district. The last crops were still being packed when this report was compiled, but based on harvest to date, yields are higher than in 2005.

› LOWER NORTH ISLAND

Kiwifruit growers in the lower North Island had a good growing season. There were few spring winds, frost protection was sufficient to combat the usual spring frosts, and there were no hail events. Yields will be above average, reject rates are low and fruit size is good. Vines that survived the flooding in February 2004 are continuing to recover. Growers who trunk-girdled their vines report good dry matter levels at harvest. Vine leaf condition is still good towards the end of May and replacement cane growth for the next season is good.

Wet weather during harvest delayed picking, and around one-third of the fruit was still to be picked in the last week of May.

› NELSON

Nelson kiwifruit growers had an average growing season in 2005/06. Two severe spring frosts in September were the major climatic events of the season. Despite using frost protection, some growers lost up to 80 percent of their crop. Initial estimates were for a 30 percent crop loss for the region. However, the 2006 Nelson crop is likely to be only 20 percent below the 2005 result thanks to favourable December temperatures, regular summer rainfall, increased management inputs, and larger average fruit size. The district Class 1 crop is expected to be about 2.8 million trays.

Growers not affected by the frost have higher yields than last year due to the good growing conditions. Yields will average about 5600 trays per hectare.

›› FINANCIAL POSITION OF THE ORCHARD

› REVIEW OF 2005/06

REVENUE

The model orchard's revenue dropped 12 percent in 2005/06 due to lower revenue received for kiwifruit. The average industry orchard gate return (OGR) received for the 2005 crop of green kiwifruit was \$3.46 per tray, 86 cents (20 percent) less than for the 2004 crop. For ZESPRI™ GOLD the revenue per tray dropped four cents (1 percent) to \$5.46 per tray and for organic green kiwifruit the drop was 71 cents per tray (12 percent) to \$5.34 per tray. The main reason behind the lower revenue was the higher value of the New Zealand currency, particularly relative to the yen and euro. The late start to the 2005 crop marketing season, higher green crop volume, some gold quality issues, and higher shipping and fuel costs also contributed to the lower revenue.

The effect of the exchange rate was worse for gold and green organic fruit due to the higher proportion of fruit sold in Japanese yen, and in East Asian markets using United States (US) currency. However, some of the exchange rate effect was offset by gains on pricing and market mix for these fruit types, and their revenue dropped less than for green kiwifruit.

To account for the influence of yield as well as per-tray returns on orchard revenue, ZESPRI calculates an OGR per hectare, using national production and orchard area, which is shown in Table 3.3.

»» TABLE 3.3: ZESPRI-ESTIMATED OGR¹/HECTARE BY FRUIT TYPE

	ZESPRI™ GREEN (\$/HA)	ZESPRI™ GREEN ORGANIC (\$/HA)	ZESPRI™ GOLD (\$/HA)
2005 crop	25 573	29 963	42 495
2004 crop	31 872	33 462	49 358
2003 crop	37 637	37 988	45 503
2002 crop	32 455	32 293	42 857
2001 crop	29 748	25 842	27 415

Source

Kiwifliers: 248, May 2006; 236, May 2005; 224, May 2004; May 2003.

Note

¹ Orchard gate return.

Final payments on the 2004 crop provided 12 percent of the model orchard's revenue. Income from other fruit crops and sundry income, such as from hiring out the orchard tractor during harvest, contributed 3 percent of revenue.

EXPENDITURE

The model orchard's cash spending in 2005/06 was 1 percent lower than in 2004/05. As a response to the lower revenue, growers aimed to contain costs without jeopardising orchard productivity. Savings were made on wages, spraying and chemicals, vehicle costs, and repairs and maintenance. Where spending increased, it was mainly due to price rises for overhead spending categories like rates and insurance. Picking labour costs increased, mainly due to the higher yield. Pollination spending increased, caused by price rises for pollination hives, and increased use of artificial pollination to supplement honeybee pollination.

NET RESULT

The model's cash orchard surplus (after deducting interest) was 60 percent down on the 2004/05 surplus, due to the lower revenue. Consequently, the model made a small net trading loss. Growers have continued to undertake some capital and development spending with nearly \$12,000 combined spending on these items in the model budget. Most spending was on continuing planned upgrades of orchard structures, replacing an aged tractor or other spending aimed at enhancing productivity or reducing future maintenance requirements. Spending on capital and development items varies considerably between growers.

The model orchard is repaying a term loan. Growers' debt positions vary markedly, with low debt levels common among owner-operator growers, and 30 to 50 percent having no term debt. Good equity levels mean many growers are able to suspend principal repayments and increase their borrowing on flexible "credit line" mortgages without the typical trauma of arranging more finance at a time when revenue is low.

Off-orchard income for the model was \$35,700, which was \$8,200 (30 percent) more than in 2004/05. A good proportion of this was from investment income within the kiwifruit industry, particularly dividends on shares

in ZESPRI and post-harvest companies. A ZESPRI dividend of 50 cents per share paid in February 2006 helped boost grower shareholders' cash flow. Growers with shareholdings in Kiwifruit International Limited (KIL) also received a capital payment. KIL underwrote ZESPRI's marketing of overseas-grown kiwifruit. However, ZESPRI has terminated the arrangement and paid compensation, and KIL is being wound up.

➤ FORECASTS FOR 2006/07

REVENUE

Growers expect higher revenue for their 2006 crop due to currency changes. They expect a modest increase of 30 cents per tray (9 percent) for the green variety and 34 cents per tray (6 percent) for ZESPRI™ GOLD. As a result, the model orchard total revenue is forecast to be 11 percent higher. Industry commentators think the revenue per tray will increase by perhaps 50 to 60 cents per tray above 2005 crop levels. The revenue from final payments for the previous crop is less than in 2005/06, and less revenue is expected from other fruit crops, due to poor avocado fruit set in the Bay of Plenty area.

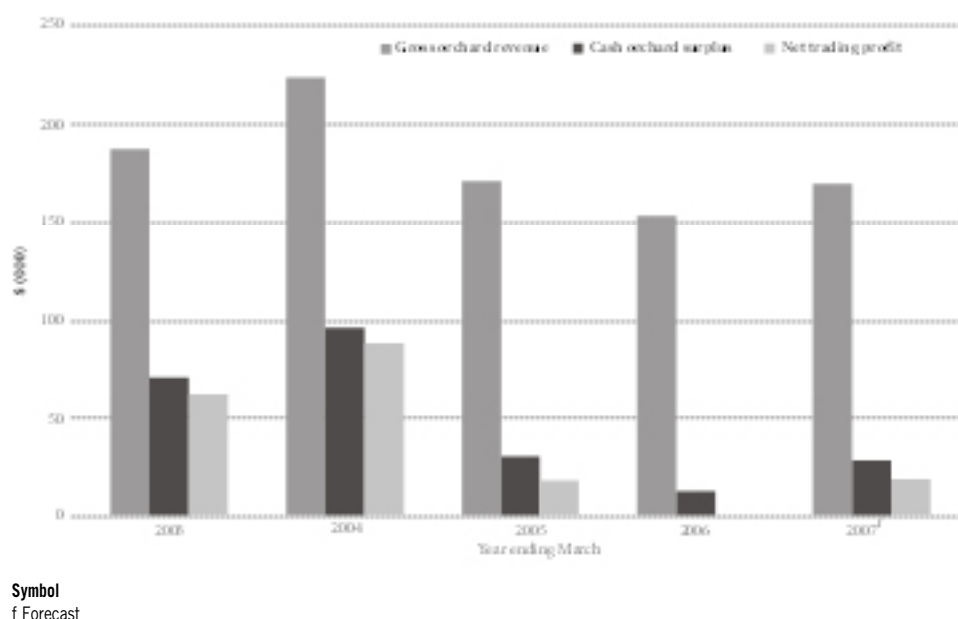
EXPENDITURE

The model cash orchard expenditure is forecast to reduce by less than 1 percent. Spending on wages is expected to increase but to be offset by lower spending on repairs and maintenance. Maintenance is not necessarily being deferred, as orchard structures and equipment are in a good state after a strong programme in recent years. Picking wages have increased because kiwifruit harvest occurs over several public holidays, and new legislation has increased the cost of public holiday labour. Post-harvest operators usually pool the cost across the season's work, rather than charging it to the specific growers whose fruit is picked or packed that day. Growers expect some price inflation due to high fuel costs but aim again in 2006/07 to contain spending without compromising productivity.

NET RESULT

The budgeted cash orchard surplus for 2006/07 is 136 percent higher than in 2005/06 due to the higher revenue and lower spending. Drawings are budgeted to reduce by 2 percent. Development and capital spending is planned at around half the spending of 2005/06. Activities planned are those that will enhance productivity and continue existing projects. Off-orchard income is expected to be 6 percent lower than in 2005/06. Growers expect their investment income to continue at similar levels to 2005/06 but without the one-off capital repayment from KIL. The proportion of growers' off-orchard income coming from investments rather than wages has increased. This is due to investments made during the recent good years of industry profitability, and from dividends paid on ZESPRI shares.

»» FIGURE 3.1: KIWIFRUIT PROFITABILITY TRENDS



»» ISSUES AND TRENDS

Kiwifruit growers are in fairly good heart, despite the lower returns for their recent kiwifruit crops. They are happy with ZESPRI's market performance and see the main reason for lower revenue as the exchange rate. Good yields, high fruit dry matter and a more favourable exchange rate encouraged growers during the 2006 harvest.

Growers recognise their strong position is a result of successive years of good revenue. The good times have enabled them to improve their orchards and make off-orchard investments. Property values are still strong and many growers have high equity, providing a platform for dealing with lower returns and future uncertainties. Kiwifruit growers also believe their position compares favourably to others, including growers of apples and avocados.

Income variation between different growers has increased again. ZESPRI publishes detailed average returns for each fruit type but growers' payments can vary considerably from the averages. Causes of variation are yield, fruit size, post-harvest supplier performance, and incentives relating to the time of harvest, predicted eating quality, low pest presence and compliance with EurepGAP procedures. The average incentive portion of returns in 2005 was 14 percent for green, 31 percent for gold and 14 percent for green organic. Of the incentives, the most substantial one was gold fruit dry matter at an average of \$1.92 per tray or 35 percent of OGR.

ZESPRI dividends have been favourable. Growers were given ZESPRI shares when the company was established and were invited to buy more in 2001. ZESPRI shares may be sold to other growers or may be retained if the orchard is sold or leased. Shares sold for \$5 each in May 2006. Share sales are not frequent. All shareholders receive dividends but voting is linked to the proportion of kiwifruit grown. Tension exists between returns paid to growers for supplying their kiwifruit and shareholder returns from ZESPRI profits. The alignment between shareholders and growers improved after a targeted share offer during 2005. ZESPRI's profit was sufficient to pay a loyalty bonus of 10 cents per tray on their 2005 fruit to growers who had signed a rolling three-year supply agreement.

The loyalty bonus is seen as one way of recognising that ZESPRI only makes a profit by having growers' kiwifruit to sell. The three-year rolling supply contract adds a further commercial tie between growers, suppliers and ZESPRI, in addition to the underpinning legislation. For the 2006 crop the loyalty scheme is being enhanced. Those growers signing the rolling three-year supply contract, who use a supplier that exclusively supplies their kiwifruit to ZESPRI, will receive a loyalty bonus under a profit-share formula. Using the 2005 crop as an example, the profit-share formula would return a loyalty payment of 17 cents per tray rather than the 10 cents per tray paid. Nearly all growers sign the three-year rolling contract.

A higher proportion of growers' kiwifruit payments in 2006/07 will be related to dry matter levels. Growers support the emphasis on growing and segregating better tasting fruit to supply premium markets. However, they are confused about how to produce higher dry matter fruit and frustrated at the influence of seasonal growing conditions, which have a greater influence than most of their growing techniques. Growers have reported that blocks with high dry matter last year had low dry matter this year and vice versa, with little change in management practice. However, understanding of the most effective techniques is improving. A ZESPRI policy to double the average dry matter proportion of payments for green kiwifruit to 40 percent of revenue has been deferred until the 2007 crop. This was due to grower concern about how to achieve high dry matter and the potential impact of very low revenue for low dry matter fruit, given that green kiwifruit receives the lowest revenue per tray. The deferral will allow growers another season to evaluate techniques and research trial results.

The average dry matter incentive for gold kiwifruit will increase from 55 percent of payments in 2005 to 60 percent for the 2006 crop. For green organic kiwifruit the average incentive will also increase, from 20 percent in 2005 to 50 percent in 2006. A minimum level of dry matter has been set by the fruit grade standard. Orchards are divided into maturity areas for harvest management and dry matter sampling. For the few areas below the minimum acceptable dry matter level, the grower has options of re-segmenting the maturity area or separating out low dry matter fruit after harvest. Some packhouses have non-destructive segregation technology built into their packing equipment. Trunk-girdling has been shown to improve dry matter and more growers are now doing this. Growers are concerned about the long-term effect of girdling although trials have shown no problems after several successive years of girdling.

Labour continues to be a difficult issue for the New Zealand kiwifruit industry. Peak labour demand is during harvest from late April to early June. Low unemployment and the resulting urban demand for semi-skilled workers has reduced the available labour pool for horticulture. The kiwifruit grower representation organisation, New Zealand Kiwifruit Growers Incorporated (NZKGI), has worked closely with government agencies to prepare for the harvest season. This has helped greatly. Labour co-ordinators, under the direction of NZKGI, have been appointed to help provide information about jobs, accommodation, childcare, and work permits in the Bay of Plenty. This was first done in 2005 with one part-time seasonal-work co-ordinator. In 2006 two additional co-ordinators were appointed to extend the geographical coverage. Co-ordinators have been operating in other horticultural districts for longer. Backpackers have become an important labour source. A pilot work-permit scheme for backpackers has made more workers available from this source in 2006. National co-ordination by fruitgrower groups has helped attract mobile workers to a harvest trail from district to district. Websites are being used as one means to provide information, particularly to backpackers. The requirement for labour in orchards is strong through until the end of winter pruning in late August. Packhouses need labour to continue re-working fruit after coolstorage until around October.

Packhouses have increased their efforts to retain and reward staff and to build staff loyalty. Rewards for reliability, spot prizes, and an end of season bonus related to attendance are all methods being used to motivate and reward staff. Wage rates are fairly consistent across facilities. Providing transport for harvest workers from neighbouring areas like Rotorua has been done for a number of years. Many packhouses have had staff vacancies throughout the harvest season. Urban workers are being attracted to night and weekend shifts by setting shift hours compatible with other employment.

Where staff is short, the work is usually done later or not as well, rather than not at all. Fruit is still picked and vines are still pruned. Some growers with larger orchards have changed to hiring permanent staff rather than using contract labour to increase the quality of the orchard work. Others have deliberately streamlined work methods to simplify the job for relatively inexperienced labour. Growers recognise that the quality and timeliness of the work done on their orchards is a key component to sustaining high yields. Recent immigrants are often found to be good workers. Aspects of casual kiwifruit orchard work are not always attractive. It is outdoor work, carried out in all weather conditions and, depending on the task, workers are sometimes laid off during wet weather. Workers also require transport to the orchard in most cases, staff facilities may be minimal, and wage rates are not high.

A withholding tax has been introduced for contract picking, packing, pruning or thinning work done on orchards and vineyards from 1 April 2006, unless a contractor has a certificate of exemption. The tax is in response to some contractors not paying Pay As You Earn (PAYE) tax and some resulting prosecutions. For growers, one of the attractions of using contractors is the reduction in paperwork. Therefore they do not like the withholding tax because it reinstates paperwork. The 1 April introduction was early in the harvest season for kiwifruit and caused considerable interaction between horticulture industry representatives and the Inland Revenue Department to clarify how the rules could be practically applied. Revision of the legislation is

intended. Fruitgrower groups do not support the withholding tax and are participating in the revision process.

More kiwifruit orchard workers are receiving formal training in horticulture, either integrated into or alongside their work. The field-work based orchard workers' certificate, which was designed by the industry, had 30 workers enrolled in its first year of operation in 2005. The certificate is now being extended into the Eastern Bay of Plenty. In addition, 60 students are involved in the multi-year orchard cadet programme and several dozen more are studying part-time in Tauranga for a University Diploma in Horticulture.

For gold kiwifruit the OGR for the 2005 crop was \$2 per tray higher than for green kiwifruit at \$5.46 per tray. One reason for the higher OGR is the higher proportion of the gold crop sold to premium markets. The gold variety is a patented variety, bred in New Zealand by HortResearch and now owned by ZESPRI. As well as the legal protection of variety ownership, the brand name ZESPRI™ GOLD is trademarked. Having the gold variety also provides marketing leverage to ZESPRI for green and organic kiwifruit. The variety is still relatively new and has a shorter storage life than green kiwifruit. ZESPRI has licensed gold orchards overseas to extend the period the fruit is available to markets. Most of these overseas orchards are joint ventures between New Zealand supplier groups and the overseas landowners.

The gold variety has proved it can yield very highly on favourable sites with good management. It appears to be more readily pollinated than green kiwifruit, and the management tools available have enabled repeated high yields of good-sized fruit. Growing costs are usually higher on an area basis. Over time, growing and handling methods specific to the gold variety are being developed and some variety-specific problems encountered.

ZESPRI™ GOLD fruit with green-coloured flesh instead of the characteristic yellow-gold was a problem in markets during 2005. The fruit flesh is naturally green during growth and the gold colour develops as the fruit matures. Maturity is determined using a mix of indicators like sweetness and firmness along with the gold flesh colour. Early-harvested fruit is stored after harvest at higher temperatures while the gold colour develops. Fruit is now sampled upon exiting storage to ensure the flesh colour is sufficiently gold before it is shipped. Green-fleshed ZESPRI™ GOLD has not been a problem so far in 2006.

A disorder of the core within gold kiwifruit has occurred again in 2006. Fruit lines identified as having a high level of the disorder are diverted from premium markets, and the disorder has not been a problem in markets so far in 2006. Affected fruit have small areas of bitter-tasting flesh around the core. Research is continuing to establish what causes the disorder. Cool temperature periods during spring are one possible cause.

The gold-fleshed variety is thin-skinned and particularly delicate at harvest. Development of scuffs and cuts on the skin are a significant cause for repacking fruit. Some of this damage has shown up within a few weeks of the initial packing. The early-harvested fruit seems to be particularly prone to skin damage.

Growers are licensed to grow a specific area of the gold variety and there is a moratorium on new licences within New Zealand. Growers may sell their gold licence and stop growing the variety. Selling the licence provides capital to support conversion of the orchard back to the public-domain green variety. There have been some sales, usually where the gold variety has not performed on an orchard site due to high reject levels from wind exposure. Prices paid for a gold licence are several tens of thousands of dollars per hectare. Those buying licences tend to be existing growers of ZESPRI™ GOLD with a record of good yields.

For organic green kiwifruit the OGR for the 2005 crop was \$1.88 per tray higher than for conventional green fruit, at \$5.34 per tray. As for gold kiwifruit, a major reason for the higher OGR is the higher proportion of organic fruit sold in premium markets. For organic growers, the advantage of the higher return per tray is diminished by the lower yield, smaller fruit size and greater yield fluctuations typical of an organic kiwifruit orchard. Low fumigation rates at the Japanese border are helping the category after a couple of years when high fumigation rates disrupted supply to this market. Volumes remain steady at around 3 percent of total production, which makes organic kiwifruit one of the largest volume and value categories of organic exports in New Zealand. Organic gold kiwifruit is being produced in small quantities, totalling around 280 000 trays in 2006. Growers of organic ZESPRI™ GOLD receive a market-based premium of \$2.00 per tray for their fruit.

Production of organic kiwifruit has stabilised, with urban fringe orchards being removed for urban subdivision offsetting the few new conversions to organic growing. Consultation is in progress to work out how to deliver an effective advisory service to support organic production of all crops.

The Environmental Risk Management Authority (ERMA), the New Zealand regulatory agency dealing with hazardous substances, is reviewing the chemical hydrogen cyanamide. Growers are very keen for the usage of this chemical to continue under existing rules. Hydrogen cyanamide has been widely used on kiwifruit since 1990. It enhances bud break and is a key management tool for growers in most districts, except on organic orchards. The grower representation organisation NZKGI has engaged with the reassessment process, and made a submission on the growers' behalf. ZESPRI and over 900 growers have also made submissions.

Fruit quality problems are a significant cost to the industry. Additional fruit quality checks were introduced in 2006 just prior to ship loading. The aim is to reduce fruit quality problems in overseas markets and contain problems and costs in the despatching coolstore. When problems are detected in the marketplace, repacking costs are higher. It is also more difficult to establish whether the fruit met quality standards at the time of ship loading, and therefore who should bear the handling costs. By late May 2006, around 10 percent of consignments checked had failed fruit quality standards. Failures of gold fruit have been around twice the level of green fruit. Repeated failures result in the despatching coolstore being placed on temporary hold, requiring corrective action before they can resume loading out fruit.

Weather during the early portion of the 2006 harvest was good and early shipments were as scheduled. However, the considerable number of rain days in May prevented picking. More people are now set up to extend the workday by picking into the night under lights. Some ships had to send a different mix of fruit types than planned because of the weather constraints on picking.

Growers are aiming for higher orchard performance. The 2005 harvest was one of the highest average yields for New Zealand kiwifruit and yields will be similar in 2006. The high yields have been achieved through favourable weather, attention to detail in vine management, using management tools like cane and trunk girdling, and upgrading orchard structures, frost protection, shelter, and irrigation. The successive high yields are aiding grower confidence. Although some growers are nervous about the industry's ability to handle and market increased production, year to year fluctuations in production make marketing difficult, so consistent high yields are not considered a problem by marketers.

Incentive payments for various fruit characteristics have made the payment system even more complicated than previous years. Combined with the vagaries of managing a biological system, this makes it hard to develop the optimal strategy for any particular orchard. Incentives apply to post-harvest suppliers as well as growers, in order to provide commercial drivers for improved fruit-handling policies. There is a trade-off in payment structures between simplicity, the accurate reflection of market signals, and fairness between growers and suppliers. A number of projects have come from a review of the supply chain over the past couple of seasons, and could simplify the payment structures in the future.

Most growers get their payment information from their post-harvest supplier and it can be difficult to compare suppliers. NZKGI plans to provide growers with a scorecard indicating supplier performance on specific criteria. ZESPRI will be providing information directly to growers this season of payments made to suppliers for growers' fruit. This will improve the transparency of individual payment information.

Industry committees are integral to managing changing seasonal supply conditions and developing policies. Most committees have representatives from ZESPRI, suppliers and growers. The Industry Supply Group meets frequently during harvest to deal with issues that arise (such as quality problems). Growers of green, organic and gold fruit each have a product group forum that considers issues specific to their fruit type.

Orchard values have softened and sales have slowed. Few growers are under pressure to sell so there are fewer sales rather than low prices. Prices are closely related to the orchard earning potential in terms of production and fruit quality history. Bay of Plenty green kiwifruit orchards are typically selling for \$250,000 per canopy hectare. More is paid for orchards with a better revenue history.

Consolidation of post-harvest companies is continuing. One large company has bought out packhouses in Auckland and Coromandel. Two other large companies are discussing merger options.

An increasing body of research on the health benefits of kiwifruit is being compiled by internationally respected health and nutrition researchers. Kiwifruit has a high nutrient content and is low in calories. Other work in progress indicates eating kiwifruit may help to prevent cardiovascular illnesses and maintain digestive health.

»» TABLE 3.4: KIWIFRUIT ORCHARD BUDGET

CLASS I	WHOLE ORCHARD (\$)	2005/06 PER HA (\$)	PER CLASS I TRAY (\$)	WHOLE ORCHARD (\$)	2006/07 ¹ PER HA (\$)	PER TRAY (\$)
REVENUE						
Green – OGR ¹ progress	107 065	23 795	3.07	122 400	27 200	3.40
– previous crop final	15 620	3 470	0.45	13 600	3 025	0.38
Gold – OGR progress	22 880	45 755	4.92	27 270	54 540	5.40
– previous crop final	2 795	5 585	0.60	2 510	5 020	0.50
Other fruit crops	2 300	460	0.06	1 600	320	0.04
Sundry orchard income	2 150	430	0.05	2 150	430	0.06
Gross orchard revenue	152 810	30 560	3.87	169 530	33 910	4.13
Cash orchard expenditure	123 840	24 770	3.13	123 590	24 715	3.01
Interest 17 100	3 420	0.43	17 950	3 590	0.44	
Rent and/or leases	0	0	0	0	0	0
Cash orchard surplus	11 870	2 375	0.30	27 990	5 600	0.68
Stock on hand adjustment	0	0	0	0	0	0
Depreciation	12 100	2 420	0.31	9 450	1 890	0.23
Net trading profit	–230	–45	–0.01	18 540	3 710	0.45
Taxation 900	180	0.02	2 600	520	0.06	
Net trading profit after tax	–1 130	–225	–0.03	15 940	3 190	0.39
ALLOCATION OF FUNDS						
Add back depreciation	12 100	2 420	0.31	9 450	1 890	0.23
Add back stock value adjustment	0	0	0.00	0	0	0
Drawings 51 400	10 280	1.30	50 300	10 060	1.23	
Principal repayments	4 900	980	0.12	5 300	1 060	0.13
Development	3 300	660	0.08	4 350	870	0.11
Capital purchases	8 650	1 730	0.22	2 000	400	0.05
Disposable surplus/deficit	–57 280	–11 455	–1.45	–36 560	–7 310	–0.89
OTHER CASH SOURCES						
New borrowing	0	0	0	0	0	0
Off-orchard income	35 700	7 140	0.90	33 600	6 720	0.82
Other orchard income	0	0	0	0	0	0
Net cash change	–21 580	–4 315	–0.55	–2 960	–590	–0.07
ASSETS AND LIABILITIES						
Land and building (opening)	1 600 000	320 000	40.48	1 575 000	315 000	38.37
Plant and machinery (opening)	68 700	13 740	1.74	56 600	11 320	1.38
Stock valuation (opening)						
Total orchard capital	1 668 700	333 740	42.22	1 631 600	326 320	39.75
Total debt opening	181 700	36 360	4.6	186 500	37 300	4.54
Equity	1 486 900	297 380	37.62	1 445 100	289 020	35.20

Note¹ Orchard gate return.**Symbol**

f Forecast

»» TABLE 3.5: KIWIFRUIT ORCHARD EXPENDITURE

	WHOLE ORCHARD (\$)	2005/06 PER HA (\$)	PER CLASS I TRAY (\$)	WHOLE ORCHARD (\$)	2006/07 ^f PER HA (\$)	PER CLASS I TRAY (\$)
ORCHARD WORKING EXPENSES						
Wages	53 000	10 600	1.34	55 000	11 000	1.34
Picking wages	12 650	2 530	0.32	13 960	2 790	0.34
ACC	2 300	460	0.06	1 400	280	0.03
Electricity	1 100	220	0.03	1 180	235	0.03
Spray and chemicals	6 650	1 330	0.17	6 600	1 320	0.16
Pollination	7 350	1 470	0.19	7 350	1 470	0.18
Fertiliser	6 000	1 200	0.15	6 000	1 200	0.15
Vehicle costs	7 100	1 420	0.18	6 900	1 380	0.17
Repairs and maintenance	11 800	2 360	0.30	9 100	1 820	0.22
Rates	3 300	660	0.08	3 500	700	0.09
Communication costs (phone/mail)	2 660	530	0.07	2 700	540	0.07
Insurance	1 950	390	0.05	2 000	400	0.05
Accountancy	3 600	720	0.09	3 600	720	0.09
Legal and consultancy	1 400	280	0.04	1 100	220	0.03
Other administration	1 050	210	0.03	1 100	220	0.03
Other expenditure	1 930	385	0.05	2 100	420	0.05
Cash orchard expenditure	123 840	24 770	3.13	123 590	24 715	3.01
CALCULATED RATIOS						
Economic orchard surplus (EOS) ¹	-30 817	-6 163	-0.78	-10 826	-2 165	-0.26
Cash orchard expenditure/GOR ²	81%			73%		
EOS/total orchard capital	-1.8%			-0.7%		
EOS less interest & lease/equity	-3.2%			-2.0%		
Interest+rent+lease/GOR	11%			11%		
EOS/GOR	-20%			-6%		

Notes

¹ EOS (or Earnings before interest and tax) is calculated as follows: gross orchard revenue less orchard working expenses less depreciation less wages of management (WOM). Wages of management are calculated as follows: \$31,000 allowance for labour input plus 1% of total capital as managerial reward. An upper limit for WOM of \$ 75,000 has been set.

² Gross orchard revenue.

Symbol

^f Forecast

4

VITICULTURE

»» THE VINEYARDS

This is the third year the Ministry of Agriculture and Forestry (MAF) has monitored grape growers as part of its annual monitoring process. Dynamic industry growth, and the increasing influence this sector has on New Zealand's horticultural export earnings, have increased demand for the sort of information provided in this report.

This report presents two model vineyards representing the predominant grape growing regions of Marlborough and Hawkes Bay. These two regions currently account for over 75 percent of the grape harvest in New Zealand. The models are owner-operated businesses where the primary source of income is derived from grape growing. Smaller lifestyle properties and larger corporate businesses are excluded from the survey. Climate and production commentary reflect all grape-growing regions.

Several changes have been made to vineyard model parameters this year to better reflect typical operations. Model areas have been revised downwards, and budget results are expressed per producing hectare rather than per planted hectare. A calculation per vine column is included to aid reader understanding. The 2005 results in Table 4.1 have been revised to reflect the change in model area, and cannot be matched to those in last year's report.

Viticulture income commonly spans two financial years. However, for ease of comparison, deferred income is included in the same financial year as grapes are harvested. A summary is presented in Table 4.1.

»» TABLE 4.1: KEY PARAMETERS OF THE MARLBOROUGH AND HAWKES BAY VITICULTURE MODELS¹

	2005	MARLBOROUGH 2006	2007 ^f	2005	HAWKES BAY 2006	2007 ^f
Producing area (ha)	23.0	23.0	25.0	9.7	9.7	10.0
Total production (tonnes)	178	235	262	78	80	93
Average return (\$/tonne)	2 183	2 252	2 202	1 596	1 569	1 626
Cash vineyard revenue (\$)	402 646	536 728	582 873	130 513	126 139	152 069
Cash vineyard surplus (\$)	134 052	254 266	269 311	34 605	17 459	41 419
Net trading profit (\$)	113 237	224 841	236 698	26 418	5 969	31 849

Note

¹ The year referred to in this and subsequent tables represents the year grapes are harvested.

Symbol

^f Forecast

»» KEY POINTS

- › Large multinational companies continue to drive new plantings in Marlborough, providing confidence in the long-term prospects for the industry.
- › Industry export performance continues to impress, and maintaining a niche position as a provider of premium to super-premium quality wine is critical to the ongoing profitability of the industry.

- › Industry and government are active in efforts to find solutions to shortages in seasonal labour and the lack of worker accommodation.
- › The average price per tonne for the model vineyards increased in Marlborough but decreased in Hawkes Bay for 2006.
- › The 2006 harvest is estimated at 185 000 tonnes, the largest-ever vintage for the industry.

›› CLIMATIC FACTORS AFFECTING PRODUCTION

The 2005/06 season began early after a mild winter, with bud burst up to a week earlier than usual in some regions. Fine weather in spring and the absence of damaging frosts resulted in excellent flowering and fruit set conditions. However, a short period of cool weather lightened bunch weights and fruit set in some varieties.

Dry, hot weather conditions in January prevailed and consequently 2005/06 was a low disease pressure season for winegrowers. Despite a number of cyclones forecast in the Gisborne area, winegrowers in this region came through the season with negligible damage.

Vintage was earlier than usual in 2006 with near perfect weather conditions allowing fruit to be harvested at optimum times. Periods of rain in March and April interrupted harvest in some areas, but overall the climate this season has produced a particularly good quality vintage.

›› PRODUCTION FIGURES AND FORECASTS

The 2006 vintage reached an estimated total of 185 000 tonnes, up 30 percent on 2005. This is the largest-ever vintage for the industry, up 11 percent on the previous record of 166 000 tonnes achieved in 2004.

The record vintage in 2006 can be attributed to increases in the producing area and a return to more “average” yield levels following favourable growing conditions this season.

Table 4.2 shows the national grape intake by variety over the last five years. The low national vintage in 2003 resulted from damaging spring frosts. Cool weather in December 2004 affected flowering in most regions, resulting in a vintage of just 142 000 tonnes in 2005.

»» TABLE 4.2: NEW ZEALAND VINTAGES

	2001 (TONNES)	2002 (TONNES)	2003 (TONNES)	2004 (TONNES)	2005 (TONNES)
GRAPE VARIETY					
Sauvignon Blanc	20 826	36 742	28 266	67 773	63 297
Chardonnay	17 067	33 883	15 543	35 597	29 741
Pinot Noir	8 015	10 402	9 402	20 145	14 578
Merlot	2 573	6 502	4 957	9 330	9 194
Riesling	4 377	5 038	3 376	5 647	4 792
Cabernet Sauvignon	2 782	4 375	3 201	4 045	3 018
Semillon	1 887	3 053	2 192	3 511	2 388
Muller Thurgau	4 231	4 806	1 685	3 888	2 144
Muscat varieties	1 694	2 623	1 242	1 828	2 098
Pinot Gris	747	1 214	836	1 888	1 655
Gewurztraminer	460	990	529	1 325	1 164
Cabernet Franc	332	827	602	858	782
Malbec	273	731	458	1 106	763
Syrah	244	397	330	691	758
Pinotage	487	863	588	917	708
Reichensteiner	723	1 184	644	1 140	675
Chenin Blanc	1 041	1 322	391	1 325	629
Viognier	-	-	-	-	155
Other white vinifera	801	1 253	330	668	360
Other red vinifera	375	430	221	400	459
All hybrids	51	51	38	17	47
Total	68 986	116 686	74 822	162 100	139 406
Industry total¹	71 000	118 700	76 400	166 000	142 000
REGION					
Marlborough	36 962	54 496	40 537	92 581	81 034
Hawkes Bay	10 887	25 661	10 832	30 429	28 098
Gisborne	12 936	26 587	14 350	25 346	22 493
Nelson	2 313	1 785	3 149	4 563	2 454
Wellington	1 457	2 022	1 311	2 820	1 649
Otago	1 543	1 519	1 825	1 439	1 441
Auckland	614	1 526	715	1 497	948
Canterbury	1 779	1 972	1 422	2 825	895
Waikato and Bay of Plenty	411	932	497	457	210
Northland	84	186	182	144	183
Other	0	0	0	0	0
Total	68 986	116 686	74 820	162 100	139 406
Industry total¹	71 000	118 700	76 400	166 000	142 000

Source

New Zealand Winegrowers Vineyard Surveys.

Note¹ Industry total represents the tonnes crushed by the total wine industry. The difference between "Total" and "Industry total" is data from wine companies who did not respond to the NZ Winegrowers Annual Vintage Survey.

The national producing area continues to climb as shown in Table 4.3. The record 2006 vintage came from an estimated 22 100 hectares, with the national producing area forecast to increase to approximately 23 600 hectares by 2008.

»» TABLE 4.3: NEW ZEALAND PRODUCING VINEYARD AREA

	2004 (HA)	2005 ¹ (HA)	2006 ^{1f} (HA)	2007 ^{1f} (HA)	2008 ¹ (HA)
GRAPE VARIETY					
Sauvignon Blanc	5 897	7 043	7 569	8 016	8 663
Pinot Noir	3 239	3 757	3 894	4 049	4 096
Chardonnay	3 617	3 804	3 813	3 829	3 856
Merlot	1 487	1 492	1 525	1 527	1 521
Other and unknown	552	1 463	1 639	2 136	1 442
Pinot Gris	381	489	715	964	1 014
Riesling	666	811	828	853	866
Cabernet Sauvignon	687	614	567	558	560
Gewurtztraminer	210	257	278	292	298
Syrah	183	211	238	255	264
Semillon	306	240	234	238	231
Cabernet Franc	213	180	179	183	182
Malbec	168	163	168	173	177
Muscat varieties	136	139	136	137	131
Muller Thurgau	155	137	116	104	99
Pinotage	82	85	94	93	87
Chenin Blanc	72	58	59	59	59
Reichensteiner	61	59	56	49	40
Total	17 809	21 002	22 107	23 515	23 586
REGION					
Marlborough	8 539	9 944	10 419	11 226	11 153
Hawkes Bay	3 873	4 249	4 572	4 695	4 731
Gisborne	1 810	1 890	1 847	1 952	1 929
Otago	844	978	1 151	1 299	1 354
Other and unknown	378	1 001	1 054	1 120	1 123
Canterbury/Waipara	641	853	897	970	980
Wairarapa	737	779	785	794	804
Nelson	548	646	706	754	767
Auckland	591	514	525	560	597
Waikato/BOP	151	148	151	145	148
Total	18 112	21 002	22 107	23 515	23 586

Source

New Zealand Winegrowers Vineyard Surveys.

Note

¹ Totals have been adjusted given the survey represents 97.5 percent of total plantings.

Symbol

f Forecast

Marlborough remains New Zealand's predominant winegrowing region with just under 10 000 hectares or 47 percent of the national producing area in 2005. The other major regions are Hawkes Bay and Gisborne with 20 percent and 9 percent of the national producing area respectively. Together these three main regions make up over 75 percent of the national producing area in grapes.

The producing area is forecast to grow strongly out to 2008 in Otago and Nelson, while the contribution from Gisborne is forecast to decline.

Sauvignon Blanc is the most widely planted variety in New Zealand, accounting for 34 percent of the national producing area in 2005. Chardonnay is a distant second with Pinot Noir close behind. The forecast growth in Pinot Noir plantings means this variety is forecast to overtake Chardonnay as New Zealand's second largest producing variety by 2008.

By 2008, Sauvignon Blanc is forecast to increase its share, moving to 37 percent of total producing hectares. Steady growth is predicted in some locations like Hawkes Bay for Pinot Gris, Pinot Noir and Syrah. The producing area for Merlot and Chardonnay is also expected to increase over this period, but their percentage contribution to the total will decline.

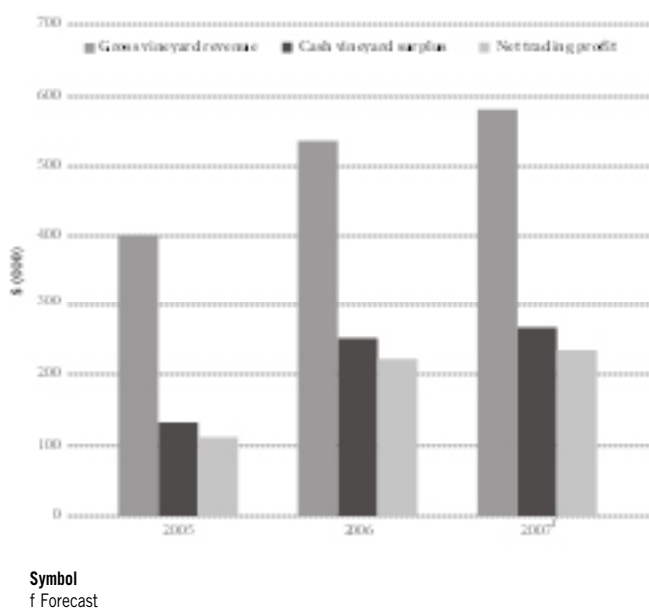
The producing area for Muller Thurgau, Reichensteiner, Semillon and Muscat varieties is predicted to decline by 2008.

»» FINANCIAL POSITION OF THE MARLBOROUGH VINEYARD

The model vineyard for Marlborough has a planted area of 27 hectares and a producing area of 23 hectares in 2006. This producing area will increase to 25 hectares in 2007 due mainly to young plantings of Sauvignon Blanc coming on stream.

The producing vineyard area has been revised to better reflect a typical contract growing operation in the region. Caution should therefore be exercised when comparing this report with previous years. A significant number of the surveyed growers have a producing area of less than 10 hectares, thus reducing the need to employ permanent labour.

»» FIGURE 4.1: MARLBOROUGH VITICULTURE PROFITABILITY TRENDS



The geographical location of surveyed growers is almost exclusively within the Wairau Valley, with only one grower located within the Awatere Valley. Sauvignon Blanc is the dominant grape variety in the model vineyard followed by Pinot Noir, Riesling and Chardonnay.

► REVIEW OF 2005/06

REVENUE

Gross revenue from grapes for the model vineyard in 2006 was about \$537,000 based on total production of 235.3 tonnes from 23 producing hectares. The average yield increased by 32 percent from 2005, to 10.2 tonnes per hectare, mostly due to more favourable weather over flowering.

The average price per tonne increased in 2006 by 3 percent to \$2,252. This was largely driven by an improvement in the average price for Sauvignon Blanc to \$2,355 per tonne.

Sauvignon Blanc now represents 80 percent of the vineyard's production. Continued success of this variety in overseas markets strongly underpins overall vineyard profitability in Marlborough. Growers are aware that this also creates a long-term dependency on the success or failure of just one grape variety. All other varieties are predominantly white, except for some Pinot Noir for still and sparkling wine.

EXPENDITURE

Total cash vineyard expenditure in 2006 was about, \$176,000, or \$7,650 per hectare.

Growers are keeping a watchful eye on costs. Wages stand at \$3,300 per hectare. As the price of contract labour increases, owner-operators are choosing to do more work themselves. Crop-thinning costs fell compared with 2004/05 levels as maturing vines were better placed to handle increased crop loads. Hand harvesting decreased in 2006, with most blocks now being machine-harvested.

Operating costs are up, largely due to increases in both vehicle and contract machinery costs. This is a flow on from rising fuel prices during the year and an increase in the mechanisation of tasks.

NET RESULT

A healthy cash surplus for the vineyard of about \$254,000, or \$11,055 per hectare, was achieved for 2006. This outcome reflects an improvement in both the price per tonne being paid by wineries and efforts by growers to keep vineyard operating costs in check.

Interest costs are up as additional funds are borrowed to support further planting of the vineyard, mainly with the Sauvignon Blanc variety.

➤ FORECASTS FOR 2006/07

REVENUE

Gross vineyard revenue in 2007 is forecast to be about \$583,000, an increase of 9 percent on 2006. This is the result of a predicted increase in yield to 10.5 tonnes per hectare as younger plants come into full production and the addition of two hectares to the producing vineyard area.

The price for Sauvignon Blanc is expected to fall slightly, bringing down the average price per tonne for the model to around \$2,200. Growers view this price decrease as a conservative estimate.

EXPENDITURE

Cash vineyard expenditure is forecast to increase by 2 percent to about \$7,840 per hectare. The extra work required on young vines as they come into production has also prompted a forecasted increase in wages. Spray and chemical costs are forecast to increase for the same reason. Contract machinery costs, machine harvesting, and vehicle costs are also expected to increase as growers anticipate continued rising fuel prices.

NET RESULT

The cash surplus for the vineyard in 2007 is forecast to be about \$269,300 or \$10,772 per hectare. Debt levels will stabilise. Vineyard development is expected to be funded by vineyard profits in 2007, and no new borrowing is planned.

»» TABLE 4.4: MARLBOROUGH VITICULTURE BUDGET

	2006 \$				2007/ \$			
	WHOLE VINEYARD	PER PRODUCING HA	PER TONNE GROSS	PER VINE	WHOLE VINEYARD	PER PRODUCING HA	PER TONNE GROSS	PER VINE
REVENUE								
Income from grapes (current)	530 023	23 044	2 252	12.07	577 433	23 097	2 202	12.09
Other vineyard income	6 705	292	28	0.15	5 440	218	21	0.11
Gross vineyard revenue	536 728	23 336	2 281	12.22	582 873	23 315	2 223	12.21
Cash vineyard expenditure	175 952	7 650	748	4.01	195 918	7 837	747	4.10
Interest	87 071	3 786	370	1.98	99 287	3 971	379	2.08
Rent and/or lease	19 439	845	83	0.44	18 357	734	70	0.38
Cash vineyard surplus	254 266	11 055	1 081	5.79	269 311	10 772	1 027	5.64
Depreciation	29 425	1 279	125	0.67	32 613	1 305	124	0.68
Net trading profit	224 841	9 776	956	5.12	236 698	9 468	903	4.96
Taxation	32 056	1 394	136	0.73	26 742	1 070	102	0.56
Net trading profit after tax	192 785	8 382	819	4.39	209 956	8 398	801	4.40
ALLOCATION OF FUNDS								
Add back depreciation	29 425	1 279	125	0.67	32 613	1 305	124	0.68
Drawings	57 219	2 488	243	1.30	50 426	2 017	192	1.06
Principal repayments	57 205	2 487	243	1.30	23 349	934	89	0.49
Development	70 000	3 043	297	1.59	35 000	1 400	133	0.73
Capital purchases	61 094	2 656	260	1.39	31 811	1 272	121	0.67
Disposable surplus/deficit	-23 308	-1 013	-99	-0.53	101 983	4 079	389	2.14
OTHER CASH SOURCES								
New borrowing	70 000	3 043	297	1.59	0	0	0	0.00
Off-vineyard income	6 079	264	26	0.14	5 111	204	19	0.11
Other cash income	5 826	253	25	0.13	7 583	303	29	0.16
Net cash change	58 597	2 548	249	1.33	114 677	4 587	437	2.40
ASSETS AND LIABILITIES								
Land and building (opening)	4 633 613	201 461	19 692	105.48	4 991 443	199 658	19 034	104.53
Plant and machinery (opening)	111 443	4 845	474	2.54	118 585	4 743	452	2.48
Total vineyard capital	4 745 056	206 307	20 165	108.01	5 110 028	204 401	19 486	107.02
Total debt opening	880 879	38 299	3 743	20.05	950 879	38 035	3 626	19.91
Equity	3 864 177	168 008	16 422	87.96	4 159 149	166 366	15 860	87.10

Symbol

f Forecast

»» TABLE 4.5: MARLBOROUGH VITICULTURE EXPENDITURE

		2006 \$				2007 ^f \$			
	WHOLE VINEYARD	PER PRODUCING HA ³	PER TONNE GROSS	PER VINE		WHOLE VINEYARD	PER PRODUCING HA	PER TONNE GROSS	PER VINE
VINEYARD WORKING EXPENSES									
WAGES									
Pruning and tying down	45 480	1 977	193	1.04		56 952	2 278	217	1.19
Wire lifting & bud rubbing	8 779	382	37	0.20		10 481	419	40	0.22
Bunch thinning and leaf plucking	3 587	156	15	0.08		3 979	159	15	0.08
Hand harvesting ⁴	651	28	3	0.01		97	4	0	0.00
Other	15 049	654	64	0.34		20 537	821	78	0.43
ACC	2 357	102	10	0.05		2 526	101	10	0.05
	75 903	3 300	323	1.73		94 572	3 783	361	1.98
OPERATING COSTS									
Spray and chemicals	20 949	911	89	0.48		23 950	958	91	0.50
Contract spraying	3 685	160	16	0.08		972	39	4	0.02
Contract machinery work	2 467	107	10	0.06		2 918	117	11	0.06
Machine harvesting	14 222	618	60	0.32		16 377	655	62	0.34
Frost protection	845	37	4	0.02		660	26	3	0.01
Fertiliser	6 143	267	26	0.14		6 449	258	25	0.14
Electricity	3 039	132	13	0.07		3 256	130	12	0.07
Sundry expenses	4 597	200	20	0.10		4 305	172	16	0.09
Vehicles	10 660	463	45	0.24		12 434	497	47	0.26
Repairs and maintenance	13 582	591	58	0.31		7 285	291	28	0.15
	80 189	3 486	341	1.83		78 606	3 144	300	1.65
ADMINISTRATION AND PROPERTY EXPENSES									
Communication	1 928	84	8	0.04		2 049	82	8	0.04
Levies and subscriptions	3 665	159	16	0.08		4 166	167	16	0.09
Rates	5 941	258	25	0.14		8 406	336	32	0.18
Accountancy, consultancy, legal	236	10	1	0.01		236	9	1	0.00
General insurance	3 309	144	14	0.08		2 976	119	11	0.06
Crop insurance	2 341	102	10	0.05		2 401	96	9	0.05
Other	2 440	106	10	0.06		2 506	100	10	0.05
	19 860	863	84	0.45		22 740	910	87	0.48
Cash vineyard expenditure	175 952	7 650	748	4.01		195 918	7 837	747	4.10
CALCULATED RATIOS									
Economic vineyard surplus (EVS) ¹	267 049	11 611	1135	6.08		286 641	11 466	1093	6.00
Cash vineyard expenditure/GVR ²	32%					33%			
EVS/total vineyard capital	5.6%					5.6%			
EVS less interest & lease/equity	4.2%					4.1%			
Interest+rent+lease/GVR	19.5%					19.9%			
EVS/GVR	48.8%					48.6%			

Notes

¹ EVS (or Earnings before interest and tax) is calculated as follows: gross vineyard revenue less vineyard working expenses less depreciation less wages of management (WOM). WOM is calculated as follows: \$31,000 allowance for labour input plus 1% of opening total vineyard capital to a maximum of \$75,000.

² Gross vineyard revenue.

³ Expenditure per hectare for a vineyard with producing vines ranging from young to fully mature. Expenditure of up to \$9,000 per producing hectare could be expected for fully mature blocks.

⁴ Hand harvesting is a cost that tends to be paid for by the winery.

Symbol

^f Forecast

»» TABLE 4.6: MARLBOROUGH VITICULTURE PRODUCTION AND INCOME DETAILS, 2006

	AREA (HA)	PRODUCTION PER HECTARE (TONNE/HA)	TOTAL PRODUCTION (TONNES)	GROSS YIELD (%)	BRIX LEVEL (BRIX)	RETURN (\$/TONNE)	REVENUE (\$)
VARIETY							
Sauvignon Blanc	17.9	10.5	188.0	80	22.4	2 355	442 622
Pinot Noir – still table	1.4	6.4	9.0	4	23.9	1 965	17 606
Riesling	1.2	12.5	15.0	6	21.7	1 930	28 950
Chardonnay							
– Mendoza & clone	0.9	8.5	7.7	3	23.6	1 976	15 116
Chardonnay							
– All other clones	0.9	8.5	7.7	3	22.8	1 961	15 002
Pinot Noir – sparkling	0.5	13.2	6.6	3	20.6	1 100	7 260
Other white	0.2	7.5	1.5	1	23.2	2 311	3 467
Total	23.0	10.2	235.3	100		2 252	530 023

»» TABLE 4.7: MARLBOROUGH VITICULTURE FORECAST PRODUCTION AND INCOME DETAILS, 2007

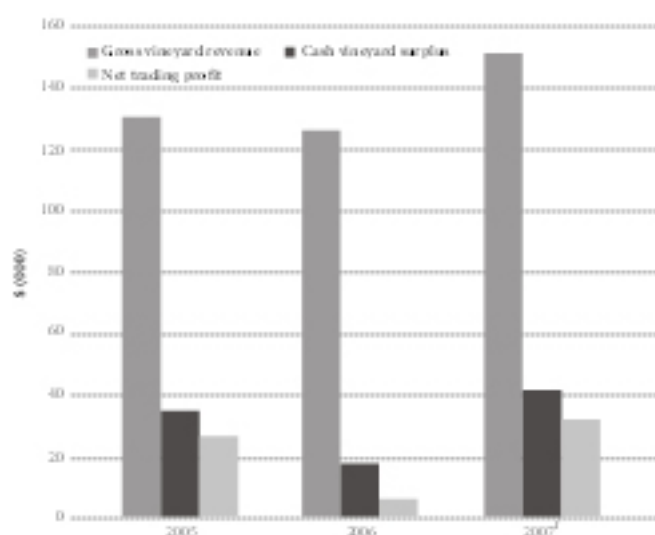
	AREA (HA)	PRODUCTION PER HECTARE (TONNE/HA)	TOTAL PRODUCTION (TONNES)	GROSS YIELD (%)	BRIX LEVEL (BRIX)	RETURN (\$/TONNE)	REVENUE (\$)
VARIETY							
Sauvignon Blanc	19.8	10.6	209.9	80	22.0	2 280	478 526
Pinot Noir – still table	1.4	6.6	9.2	4	24.0	2 270	20 975
Riesling	1.2	12.1	14.5	6	21.5	1 835	26 644
Chardonnay							
– Mendoza & Clone	0.9	10.0	9.0	3	23.0	1 932	17 388
Chardonnay							
– All other clones	0.9	10.9	9.8	4	22.0	2 008	19 698
Pinot Noir – sparkling	0.5	14.3	7.2	3	20.6	1 100	7 865
Other White	0.3	8.8	2.6	1	22.0	2 400	6 336
Total	25.0	10.5	262.2	100		2 202	577 433

»» FINANCIAL POSITION OF THE HAWKES BAY VINEYARD

The model Hawkes Bay vineyard has a planted area of 10 hectares, with a producing area of 9.7 hectares. The size of the model vineyard has decreased from 17 hectares in 2005 to more accurately reflect the average vineyard owner in the region. The 10-hectare block can be run solely by the owner, without having to employ permanent labour. Caution should therefore be exercised when comparing this report with previous years.

The geographic spread of the 18 growers surveyed ranges from coastal vineyards to the Gimblett Gravels. Only the Esk Valley–Bayview area is not represented in the model vineyard. Merlot is the dominant grape variety, followed by Chardonnay and Sauvignon Blanc. The vineyard includes young plantings of Syrah and a block of Pinot Gris that are not expected to come into production until 2007.

»» FIGURE 4.2: HAWKES BAY VITICULTURE PROFITABILITY TRENDS



Symbol
f Forecast

> REVIEW OF 2005/06

REVENUE

Gross revenue from grapes for the vineyard in 2006 was about \$126,000 based on total production of 79.6 tonnes over 9.7 producing hectares. Average yield was 8.0 tonnes per hectare which is similar to that achieved in 2005.

The average price per tonne for the model vineyard has dropped by 2 percent in 2006 to \$1,569. A fall in price for Merlot and the “other reds” category, predominantly Cabernet Franc and Malbec, reflects a downward trend in Bordeaux red prices.

On the upside, the price for Sauvignon Blanc increased, reflecting a demand for Hawkes Bay Sauvignon Blanc as either a blend with, or as an alternative style to, Marlborough Sauvignon Blanc.

The variety mix of the model vineyard now includes Syrah and Pinot Gris, reflecting the increase in planting of these varieties in Hawkes Bay. The Pinot Gris is not expected to come into production until 2007.

EXPENDITURE

Total cash vineyard expenditure in 2006 was \$84,000 or \$8,400 per hectare. Operating costs are up 21 percent on last year to about \$3,900 per hectare. This is largely due to the increased cost of spray and chemicals, despite low disease pressure during the season. Fertiliser costs doubled as many growers increased this input

for their vines in an effort to produce better quality fruit.

The surge in fuel prices through 2005 and 2006 is the main factor behind an increase in vehicle costs per hectare. This factor also underlies increases in other fuel-related costs like contract machinery work and frost protection.

NET RESULT

The vineyard achieved a cash surplus for 2006, but was down on the surplus achieved in the previous year. This outcome reflects a fall in the average price per tonne and a decrease in other sources of vineyard income.

Net trading profit after tax is back to \$446 per hectare. A factor is the rise in interest payments as additional debt is taken on to fund some new development and to cover a small cash deficit from 2005. Drawings are up, reflecting an increase in owner-operator contribution to vineyard operations.

› FORECASTS FOR 2006/07

REVENUE

Gross vineyard revenue in 2007 is forecast to be \$152,000, up 21 percent on 2006. This optimistic prediction arises from an expected increase in yield to 9.3 tonnes per hectare, younger plants maturing, and an improvement in average price per tonne.

The increase in average price per tonne is driven by a 9 percent jump in the price for “other whites”. This category consists of a mix of white varieties. It is forecast to improve as the proportion of higher paying varieties in this category, such as Viognier and Gewürztraminer, increase relative to bulk white varieties such as Chenin Blanc. Sauvignon Blanc is also forecast to increase in price by 2 percent. Pinot Gris is expected to have its first crop of 3.6 tonnes per hectare in 2007. The forecast price for this variety is just over \$2,000 per tonne.

Merlot, Chardonnay (Mendoza and Clone 15) and “other reds” are forecast to decrease in price as downward pressure from wineries increases.

EXPENDITURE

Cash vineyard expenditure is forecast to increase by 4 percent in 2007 to \$8,700 per hectare. Growers expect wage-related costs to increase as both permanent and contract labour rates rise. Spray and chemical costs are expected to increase owing to higher disease pressure and increased prices due to the recent fall in the New Zealand exchange rate. Vehicle costs are expected to be up because of increasing fuel prices.

Frost protection costs are also forecast to rise because of increasing fuel and electricity prices and the expected extra running time of frost protection systems next season.

NET RESULT

The cash surplus for the vineyard in 2007 is forecast to be just over \$4,100 per hectare. This would be a significant improvement on 2006 due mainly to a higher yield profile and an overall lift in the average price paid per tonne.

No new borrowing is forecast in 2007 as development activity levels out. Vineyard prices are expected to ease slightly in 2007 as properties take longer to sell in the market.

»» TABLE 4.8: HAWKES BAY VITICULTURE BUDGET

	2006 \$				2007 ^f \$			
	WHOLE VINEYARD	PER PRODUCING HA	PER TONNE GROSS	PER VINE	WHOLE VINEYARD	PER PRODUCING HA	PER TONNE GROSS	PER VINE
REVENUE								
Income from grapes (current)	124 899	12 490	1 569	5.43	150 639	15 064	1 626	6.55
Other vineyard income	1 240	124	16	0.05	1 430	143	15	0.06
Gross vineyard revenue	126 139	12 614	1 585	5.48	152 069	15 207	1 642	6.61
Cash vineyard expenditure	84 040	8 404	1 056	3.65	87 120	8 712	941	3.79
Interest	24 640	2 464	310	1.07	23 530	2 353	254	1.02
Rent and/or lease	0	0	0	0.0	0	0	0	0.0
Cash vineyard surplus	17 459	1 746	219	0.76	41 419	4 142	447	1.80
Depreciation	11 490	1 149	144	0.50	9 570	957	103	0.42
Net trading profit	5 969	597	75	0.26	31 849	3 185	344	1.38
Taxation	1 510	151	19	0.07	3860	386	42	0.17
Net trading profit after tax	4 459	446	56	0.19	27 989	2 799	302	1.22
ALLOCATION OF FUNDS								
Add back depreciation	11 490	1 149	144	0.50	9 570	957	103	0.42
Drawings	35 340	3 534	444	1.54	38 060	3 806	411	1.65
Principal repayments	2 060	206	26	0.09	3 210	321	35	0.14
Development	5 710	571	72	0.25	5 290	529	57	0.23
Capital purchases	11 760	1 176	148	0.51	6 140	614	66	0.27
Disposable surplus/deficit	-38 921	-3 892	-489	-1.69	-15 141	-1 514	-163	-0.66
OTHER CASH SOURCES								
New borrowing	6 840	684	86	0.30	0	0	0	0.0
Off-vineyard income	16 460	1 646	207	0.72	15 580	1 558	168	0.68
Other cash income	19 350	1 935	243	0.84	19 820	1 982	214	0.86
Net cash change	3 729	373	47	0.16	20 259	2 026	219	0.88
ASSETS AND LIABILITIES								
Land and building (opening)	1 307 910	130 791	16 433	56.87	1 268 750	126 875	13 697	55.16
Plant and machinery (opening)	56 970	5 697	716	2.48	55 390	5 539	598	2.41
Total vineyard capital	1 364 880	136 488	17 149	59.34	1 324 140	132 414	14 295	57.57
Total debt opening	238 090	23 809	2 991	10.35	238 190	23 819	2 571	10.36
Equity	1 126 790	112 679	14 157	48.99	1 085 950	108 595	11 724	47.22

Symbol
f Forecast

»» TABLE 4.9: HAWKES BAY VITICULTURE EXPENDITURE

	2006 \$				2007 ^f \$			
	WHOLE VINEYARD	PER PRODUCING HA	PER TONNE GROSS	PER VINE	WHOLE VINEYARD	PER PRODUCING HA	PER TONNE GROSS	PER VINE
VINEYARD WORKING EXPENSES								
WAGES								
Pruning and tying down	12 000	1 200	151	0.52	12 660	1 266	137	0.55
Wire lifting & bud rubbing	4 470	447	56	0.19	4 300	430	46	0.19
Bunch thinning and leaf plucking	3 620	362	45	0.16	4 030	403	44	0.18
Hand harvesting	1 360	136	17	0.06	2 110	211	23	0.09
Other	10 810	1 081	136	0.47	11 750	1 175	127	0.51
ACC	940	94	12	0.04	1 020	102	11	0.04
	33 200	3 320	417	1.44	35 870	3 587	387	1.56
OPERATING COSTS								
Spray and chemicals	10 370	1 037	130	0.45	11 430	1 143	123	0.50
Contract spraying	-	0	0	0.00	-	0	0	0.00
Contract machinery work	1 500	150	19	0.07	1 480	148	16	0.06
Machine harvesting	8 000	800	101	0.35	8 000	800	86	0.35
Frost protection	670	67	8	0.03	770	77	8	0.03
Fertiliser	1 330	133	17	0.06	1 550	155	17	0.07
Electricity	1 470	147	18	0.06	1 570	157	17	0.07
Sundry expenses	2 800	280	35	0.12	2 800	280	30	0.12
Vehicles	6 350	635	80	0.28	6 620	662	71	0.29
Repairs and maintenance	6 290	629	79	0.27	5 050	505	55	0.22
	38 780	3 878	487	1.69	39 270	3 927	424	1.71
ADMINISTRATION AND PROPERTY EXPENSES								
Communication	1 360	136	17	0.06	1 360	136	15	0.06
Levies and subscriptions	1 060	106	13	0.05	1 350	135	15	0.06
Rates	2 670	267	34	0.12	2 670	267	29	0.12
Accountancy, consultancy, legal	3 720	372	47	0.16	3 480	348	38	0.15
General insurance	1 930	193	24	0.08	1 960	196	21	0.09
Other	1 320	132	17	0.06	1 160	116	13	0.05
	12 060	1 206	152	0.52	11 980	1 198	129	0.52
Cash vineyard expenditure	84 040	8 404	1 056	3.65	87 120	8 712	941	3.79
CALCULATED RATIOS								
Economic vineyard surplus (EVS) ¹	-14 040	-1 404	-176	-0.61	11 138	1 114	120	0.48
Cash vineyard expenditure/GVR ²	67%				57%			
EVS/total vineyard capital	-1.0%				0.8%			
EVS less interest & lease/equity	-3.4%				-1.1%			
Interest+rent+lease/GVR	19.5%				15.5%			
EVS/GVR	-11.1%				7.3%			

Notes¹ EVS (see Table 4.5 for formula).² Gross vineyard revenue.**Symbol**^f Forecast

»» TABLE 4.10: HAWKES BAY VITICULTURE PRODUCTION AND INCOME DETAILS, 2006

	AREA (HA)	PRODUCTION PER HECTARE (TONNE/HA)	TOTAL PRODUCTION (TONNES)	GROSS YIELD (%)	BRIX LEVEL (BRIX)	RETURN (\$/TONNE)	REVENUE (\$)
VARIETY							
Merlot	2.50	8.0	20.0	25	23.3	1 694	33 880
Chardonnay							
– Mendoza & clone 15	1.80	6.7	12.1	15	22.1	1 683	20 297
Sauvignon Blanc	1.30	10.5	13.7	17	19.8	1 672	22 823
Other white	1.00	11.4	11.4	14	n/a	1 064	12 130
Other red	1.00	6.7	6.7	8	n/a	1 757	11 772
Cabernet Sauvignon	0.70	5.9	4.1	5	22.7	1 967	8 124
Syrah	0.50	5.0	2.5	3	22.2	2 132	5 330
Chardonnay							
– all other clones	0.50	7.1	3.6	4	n/a	1 544	5 481
Pinot Noir – sparkling	0.40	14.0	5.6	7	19.6	904	5 062
Pinot Gris							
(non-producing)	0.30						
Total	10.00	8.0	79.6	100		1 569	124 899

»» TABLE 4.11: HAWKES BAY VITICULTURE FORECAST PRODUCTION AND INCOME DETAILS, 2007

	AREA (HA)	PRODUCTION PER HECTARE (TONNE/HA)	TOTAL PRODUCTION (TONNES)	GROSS YIELD (%)	BRIX LEVEL (BRIX)	RETURN (\$/TONNE)	REVENUE (\$)
VARIETY							
Merlot	2.40	9.3	22.3	24	23.4	1 686	37 632
Chardonnay							
– Mendoza & clone 15	1.80	9.1	16.4	18	22.8	1 624	26 601
Sauvignon Blanc	1.50	12.1	18.2	20	21.0	1 701	30 873
Cabernet Sauvignon	0.70	7.0	4.9	5	23.0	1 983	9 717
Chardonnay							
– all other clones	0.70	8.9	6.2	7	n/a	1 585	9 875
Other white	0.70	10.6	7.4	8	n/a	1 160	8 607
Other red	0.70	8.3	5.8	6	n/a	1 746	10 144
Syrah	0.60	6.7	4.0	4	23.7	2 101	8 446
Pinot Gris	0.50	3.6	1.8	2	22.6	2 058	3 704
Pinot Noir – sparkling	0.40	14.0	5.6	6	18.7	900	5 040
Total	10.00	9.3	92.6	100		1 626	150 639

»» ISSUES AND TRENDS

The United Kingdom, United States and Australia are still our major export markets, accounting for over 85 percent of total New Zealand wine exports by volume. Canada, Ireland and the Netherlands are showing promise as export markets for New Zealand wines.

Export volumes for the New Zealand wine industry continue to climb. Exports in the 10 months to April 2006 were 48.5 million litres, up 11 percent on the same period last year. The fall in the New Zealand exchange rate has helped lift wine export values in March 2006 to their highest level in two years, with a moving annual total of \$8.51 (\$8.72 excluding bulk wine) per litre (FOB). The industry recognises the need to develop new markets while still servicing existing markets. The increase in the volume of wine going to Canada, Ireland and the Netherlands looks promising.

Marlborough growers have confidence in the short-term future of the industry on the back of continued strong performance by New Zealand's flagship variety, Sauvignon Blanc. Hawkes Bay growers are feeling more challenged as they face downward pressure on Bordeaux red prices and increases in the cost of production.

Growers realise the need for rigorous action to safeguard the international reputation New Zealand now has for providing premium and super-premium wines. They recognise that sustainable profits for growers and other key players in the supply chain depend on consistently providing only the best wines to overseas markets.

Growers see advantages in improving the branding of both Marlborough Sauvignon Blanc and New Zealand wines generally by, for example, developing a trademark representing New Zealand with a "Number 1" image. They also see benefit in creating a marketing panel to increase the level of co-operation across industry sectors. Marketing is a very expensive exercise so it is important that the wine industry can gain maximum leverage from the positive awareness that already exists about New Zealand overseas.

Smaller-scale growers producing top quality wines are investigating opportunities to group together for marketing purposes. This should also place them in a better negotiating position with supermarkets overseas. A challenge initially will be growers' willingness to relinquish ownership of personal marketing initiatives in the interest of gains achieved through working co-operatively. Models of smaller growers grouping together to export their product exist in other horticulture industries such as apples. Smaller growers also add colour to the industry and colour is just as important as volume in the wine industry.

Wineries are demanding a higher standard of viticulture. This is reflected in more pressure on growers to produce a consistent quality within seasonal constraints, with high crop loads discouraged. The common focus of growers and wineries to ensure top quality grapes achieve the best return should ensure a collaborative approach. Currently, pricing for grapes is based on a "district average". Growers consider that

pricing mechanisms needs to be refined to reflect the quality of the grapes supplied. Using Brix levels (a measure of sugar levels) is seen by some as too blunt an instrument to measure quality.

The area planted in grapes nationally is currently about 22 000 hectares and should increase to 23 600 hectares by 2008. However, putting this development into perspective, New Zealand's planted area is less than 3 percent of the planted area of either France or Italy. In production terms, New Zealand accounts for only 0.3 percent of world production.

Nurseries have shortages of stock for planting out in 2006 in contrast to their stock surplus last year. Currently there is a waiting list of buyers wanting to plant. There is an unprecedented demand for the Sauvignon Blanc variety – representing about 80 percent of enquiries. New planting is occurring, particularly in and close to the Marlborough region's Awatere Valley, with large international companies tending to finance it. However, some growers believe there is some speculative investment occurring. This is where vine planting is proceeding without any firm contracts for wine sales.

Some growers believe the increasing volume of wine to sell may result in lower market prices, which translate into lower prices for grapes. There is no doubt that volume increases are putting pressure on prices in wine markets. The challenge for the industry is developing strategies to market the increased volume of wine coming on stream without seriously eroding the premium position achieved to date.

Seasonal peaks of harvesting and pruning can require up to 3500 additional workers nationally. Unemployment has fallen to record lows, and the dependence of the industry on itinerant New Zealand-based workers and overseas visitors has also increased. Growers are finding it increasingly difficult to source good quality labour. Some large properties are investing in accommodation to attract seasonal workers.

The industry is collaborating with the government to manage both the seasonal labour shortage and the consequent demand for additional accommodation. The Marlborough Viticulture Working Group is in the process of scoping a project that will ensure effective and sustainable seasonal labour co-ordination in Marlborough. It is expected that this project will consider other seasonal co-ordination models already operating in New Zealand. Currently there is a website called PickNZ which offers job seekers access to seasonal and full-time opportunities in the horticulture industry. This was initially trialed in Hawkes Bay.

A study looking at the accommodation challenges in Marlborough is being managed by the research group Motu and funded by the Centre for Housing Research Aotearoa New Zealand (CHRANZ). Some potential solutions for the industry will be included in this report, with findings expected to be announced in August 2006.

In Hawkes Bay the industry is better able to manage seasonal labour due to its greater horticultural diversity compared with Marlborough.

Changes made to the withholding tax legislation for contract labour have put further pressure on the labour situation. The changes require growers to register as employers. Consequently some growers may employ staff directly.

Overseas labour has tended to fill labour shortfalls in recent years. Experienced pruners are currently able to earn up to \$25 per hour. A more common practice today is for smaller growers to collaborate when sourcing and managing their labour. However, poor employment practices by some contractors are discouraging some people from working in the industry. Such practices also have the potential to bring the industry into disrepute.

On a positive note, some growers do not have real concerns in this area. They are well located geographically to sources of labour. Smaller operators are able to do much or all of the work themselves. Some growers comment that expanding would require them to employ labour that is costly and time-consuming to organise. Other grape growers are taking full advantage of technology to lower their dependency on labour.

Some polarisation is taking place in the wine industry with extremes occurring in size, costs and brands. Six wineries now source more than 2800 tonnes, compared with about 245 wineries sourcing less than 50 tonnes. The trend of large companies investing in new plantings is expected to continue, particularly in Marlborough and Hawkes Bay, as wineries secure supply.

Marlborough is seeing an increase in vineyard acquisitions by global companies. On the one hand, this is helping to instil confidence as it is seen as confirmation of their faith in the long-term profitability of the industry. On the other hand, some growers see the trend towards fewer and larger players as a threat. Smaller operations without a niche market will struggle to compete. These global companies are vertically integrated businesses able to utilise their scale to achieve efficiencies within the vineyard and throughout the supply chain. Their well developed networks in overseas countries are opening up new markets not otherwise accessible. They are the main drivers behind recent increases in area and production.

Smaller growers are still looking at on-going development into grapes. Some of the reasons expressed for this development include converting from less profitable pastoral enterprises, undertaking a regular strategy of development in line with winery demand, leasing land to leverage off existing infrastructure, and managing water issues more effectively. Other growers are implementing replanting programmes, which include replacing a small percentage of producing area with a new variety, and the replacement of virused vines. Some are pulling out a variety like Pinot Noir because of its relatively high production costs.

Marlborough is witnessing an expansion of vineyards into less suitable areas. These sites tend to be more frost prone and located a greater distance from the hub of industry infrastructure services.

Fuel price increases have both directly and indirectly increased vineyard costs, through vehicle use, contract

machinery prices and frost protection. The recent fall in the New Zealand exchange rate is expected to increase vineyard expenses further. Some pruning contractors are quoting 20 percent increases in pruning prices.

Confidence is high amongst many Marlborough growers. Some have recently completed development and are receiving income for the first time this year. Prices appear to be remaining strong and with younger vines, yields are still scaling upwards. Other growers are at or near full production, and are seeing the fruits of their investment.

Growers are finding that legislation concerning the environment, labour and taxes are becoming increasingly burdensome. Extra requirements are being introduced for Occupational Safety and Health (OSH). An assessment of compliance costs incurred by growers was part of this year's survey of growers.

Water availability, especially to support frost protection systems and the irrigation of new large-scale plantings, is an important issue. Irrigation schemes such as the Blind River and Southern Valley have recently been constructed in Marlborough to meet a surge in irrigation demand. However, drought conditions experienced this season coupled with new plantings mean this issue is still high on the agenda.

Frosts are a yearly industry risk, especially as wine production moves into more marginal areas. This risk can be managed to a certain extent by frost protection systems. Water-based frost protection systems require large volumes and need to be adequately factored into new vineyard developments.

Variable environmental conditions act as a significant governor to vintages achieved in New Zealand. Poor flowering years are a major concern to some growers. It can lead to major fluctuations in production and therefore vineyard profitability. Vineyard decline is also proving a limiting factor for some vineyards, leading to reduced yield potential. Wineries are becoming less tolerant of fruit from virus-infected vineyards.

International competitors are aware of the success New Zealand is achieving in marketing Sauvignon Blanc. Growers in Australia are known to be top-grafting vines over to Sauvignon Blanc.

Growers are aware of the adage of "not having all your eggs in one basket". There is long-term risk associated with having an investment locked into only one grape variety. Some growers are looking at diversification options. In some cases this involves replanting in what are perceived to be less desirable varieties.

Biosecurity is in the public eye at the moment. Growers are conscious of the potential for outbreaks of pest and diseases. Clover root weevil, didymo, sea squirt and varroa are recent incursions to the South Island that are affecting other land and sea-based industries. The lesson for the wine industry is vigilance in identifying and supporting efforts to exclude those pest and diseases with potential for damaging their industry.

Despite the large vintage this season, and reports of a wine glut in Australia, growers are confident that New Zealand wine is well positioned for the future. They consider that New Zealand wines have distinct advantages that rightly command premiums from overseas consumers, and that winegrowing will continue as a profitable business in the long term if the industry remains rigorous in its efforts to export only the best to overseas customers.

PROCESS AND FRESH

VEGETABLES

This commentary covers the production, profitability, trends and issues for process and fresh vegetable growers over the entire country, and covers produce grown for both local and export markets. The report is an amalgamation of the previous south Auckland/Waikato commercial vegetable, lower North Island process and fresh vegetable and Canterbury process and fresh vegetable reports.

The commentary covers the growing season from July 2005 to June 2006.

»» KEY POINTS

- › The growing season was dry and warm in most parts of the country, causing few issues for growers who were able to irrigate crops.
- › In Gisborne, two flood events led to the loss of 1300 hectares of vegetable crops.
- › Input costs such as labour and imported items such as fuel, freight and fertilisers have escalated.
- › Horticulture New Zealand, the growers' national representative body, has become active in the New Zealand Fair Trading Coalition to support growers who feel at a competitive disadvantage when selling their produce.
- › The decision not to introduce the proposed carbon tax has been welcomed by growers.
- › The closure of the McCain Foods Fielding plant has left many specialised growers in the area with few crop options, but will increase the growing area in South Canterbury.

»» CLIMATIC FACTORS AFFECTING PRODUCTION

In Pukekohe, an extremely dry summer followed a dry winter. Rainfall in the 12 months to March was 970 millimetres, 25 percent less than average. Apart from May and October, monthly rainfall was always less than average. November was particularly dry with just 36 millimetres (36 percent of the average) falling when crops were sizing (the most critical time for crop yield). While December rainfall was average, most of this did not arrive until near the end of the month. Irrigation was essential for Pukekohe growers this summer, with half the average rainfall between January and March and just six millimetres in February.

For Gisborne growers, the 2005/06 growing season will be remembered as the most difficult season since Cyclone Bola struck in 1988. Two major rainfall events, one at Labour Weekend and another five weeks later, washed away crops close to rivers and caused ponding damage. Some growers replanted crops after the first flood only to have them damaged again by the second event. It is estimated that almost 1300 hectares were affected by this flood damage.

In general, Hawkes Bay growers had an excellent growing season. Although temperatures in October and November were cooler than normal, summer temperatures were at or above average. The cooler temperatures meant crops were slower to establish, but a warm summer with little rain and adequate irrigation resulted in crops generally maturing and yielding well.

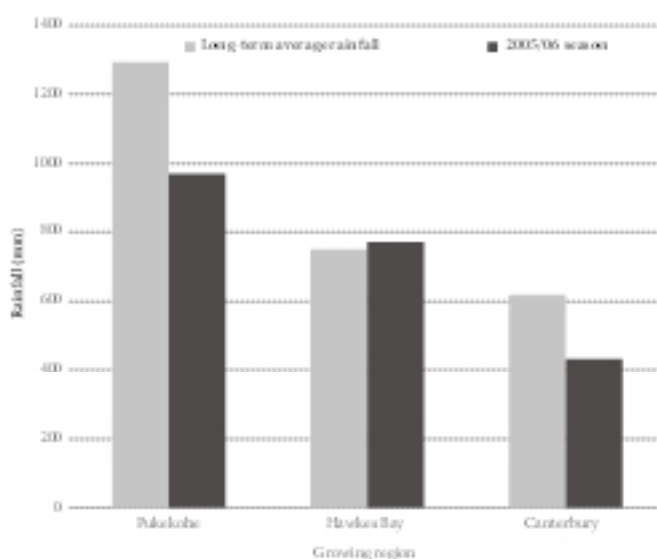
In Canterbury, monthly rainfall in 2005/06 was well below the long-term average for all months except March. Total rainfall for the year was only 432 millimetres or 70 percent of the long-term average. The winter was particularly dry with only 47 millimetres falling between June and August compared with the long-term average of 185 millimetres.

Air temperatures in Canterbury were warmer than normal from July to September by 1.6 to 1.7 degrees Celsius. They then dropped below the long-term average for the month of October, but became warmer again in December and January (by 1.7 and 1.2 degrees Celsius respectively). March was a cool month at 2.1 degrees Celsius below average. The warm dry conditions during the 2005 winter allowed soils to be cultivated with a minimum of passes, and reduced costs for growers sowing early vegetable crops. Fewer northwest winds and days with extreme temperatures during the summer meant Canterbury growers had sufficient water for irrigation. Most of the crops considered in this report are grown in the lower plains, and apart from some shallow wells, aquifers still produced sufficient water to meet demand. Growers preferentially irrigate their vegetable crops when water supply is restricted.

Growing conditions were reasonable for covered crops (tomatoes, capsicums, cucumbers), with high winter light and good spring conditions. Higher summer night temperatures and overcast skies in December made for difficult growing conditions and caused flushes (periods of high growth and rapid maturing), resulting in oversupply at times. The lack of consistent warm conditions also reduced the demand for summer salads.

Figures 5.1 and 5.2 provide comparisons of this year's weather records for rainfall and temperature with long term averages.

»» FIGURE 5.1: RAINFALL FOR THE PROCESS AND FRESH VEGETABLES GROWING SEASON



Source
NIWA

»» PRODUCTION FIGURES

> POTATOES

There were an estimated 11 300 hectares of potatoes planted throughout New Zealand in the year ending December 2005, down 4 percent from the previous season. This area was planted by 279 growers, six less than in the 2004/05 growing season.

In Pukekohe, early potato yields were considered poor to average. The dry August contributed to these light yields. Main crop potatoes had reasonable yields as

long as growers were able to irrigate. However, without irrigation the number of potatoes and the tuber size were both small. In Canterbury, low climatic stress on the crops during the growing season and little disease pressure caused early crops of process potatoes to yield well. Later season crops are also expected to yield well. Potato seed producers also had a better growing season than last year.

Average yields for potato growers were similar to last season with typical North Island yields of 45 tonnes per hectare and

65 tonnes per hectare in Canterbury. The yield is typically higher in Canterbury as growers are focusing on process rather than fresh potatoes.

The volume of fresh and processed potatoes exported from New Zealand in the year ended March 2006 (including seed potatoes) was 90 862 tonnes. The value of these exports totalled \$70.5 million.

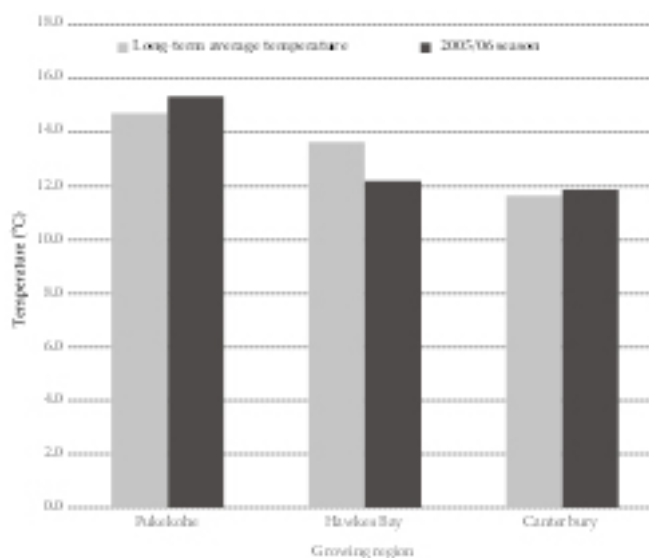
> ONIONS

The area planted in onions was estimated at 4300 hectares for the year ended December 2005. This was 14 percent down from the previous year, due to poor returns over recent seasons. The majority of this area reduction occurred in Pukekohe where 430 fewer hectares were planted. The reduction was less than originally anticipated, partly because of ideal planting conditions in August.

The weather conditions for onion production and harvesting have been the best experienced in many years. Onion yields were average, although some growers reported lighter yields. The resulting high quality of export onions was desperately needed to salvage the reputation of New Zealand product in Europe and the United Kingdom following several years of poor quality. The growing conditions experienced by Hawkes Bay growers resulted in good bulb size and shape. Fewer days of hot drying winds in Canterbury resulted in less leaf damage and higher quality onions.

High thrip numbers on onion crops did not result in post-harvest problems, because of better skin condition.

»» FIGURE 5.2: MEAN MONTHLY TEMPERATURES FOR THE PROCESS AND FRESH VEGETABLES GROWING SEASON



Source
NIWA

Growers continue to struggle with the control of onion thrip, as the agrichemicals available to them do not fully control the pest. There was more pink root (caused by the fungus *Phoma terrestris*) than normal due to the dry periods that caused plant stress, allowing the fungus to enter and affect yields.

Yields of onions in the North Island dropped an average of 12 percent to around 35 tonne per hectare. However, the percentage of exportable yield was higher at around 90 percent compared with the previous year's average of around 80 percent. The net result of this was similar yields of exportable product.

The volume of onions exported from New Zealand to the year ended March 2006 was 156 000 tonnes, with a total free on board (FOB) value of \$69.6 million. This is similar to last year, but substantially less than some earlier years, when the value of onion exports exceeded \$100 million at times.

› SQUASH

The total planted area of squash in New Zealand in the 2005/06 season was estimated to be 6300 hectares, 22 percent less than the previous season.

In the Pukekohe region, those who could irrigate over summer achieved good yields. However, it was another disappointing year for Gisborne squash growers. An estimated 690 hectares of squash (of the 2200 hectares planted over the season in Gisborne) were affected by flooding, and some fields were flooded again after being resown. Crops that survived were affected by strong winds, which opened the leaf canopy up and allowed diseases such as powdery mildew and angular leaf spot to establish. Growers had to apply more fungicides than usual. Average yields were around eight tonnes per hectare, compared with the normal 13 tonnes per hectare.

In the Hawkes Bay, squash growers had a good season. Yields averaged 13 tonne per hectare (two to three tonnes per hectare up on last year) with some crops over 20 tonnes per hectare. Powdery mildew levels were down due to the cooler weather, although packers reported more rot this year due to denser canopies and fruit that had grown more rapidly.

Some in the industry are concerned that there could be an upsurge in plantings next season after the good 2005/06 production season in the main growing area, Hawkes Bay.

For the year ended March 2006, a total of 89 016 tonnes of squash were exported from New Zealand with a FOB value of \$59 million. This is an 8 percent reduction on the value achieved in the previous season from only a 2 percent reduction in volume.

› GREENS

The production of all green vegetable crops in Pukekohe relied on the ability to irrigate over the summer.

The seasonal conditions meant that lettuce quality has been very good with no significant disease issues. A breakthrough in controlling the destructive lettuce aphid has been achieved with the granting of a new label claim for the systemic insecticide Confidor®. Lettuce aphid was first detected in 2002 and has spread throughout New Zealand to become the biggest plant health issue facing lettuce growers.

A new disease threat to the New Zealand lettuce industry has been the detection in Western Australia of lettuce leaf blight caused by the fungus *Pythium tracheiphilum* Matta. As it has only appeared on two properties in Australia, there is hope that it can be eradicated. While it has not been found in New Zealand, it has the potential to cause up to 50 percent losses, particularly on poor-draining soils in cool wet weather. The climate in New Zealand is potentially ideal for this disease, especially in Auckland.

Future trends will include the continued growth of bagged iceberg lettuce and mesclun mix with its attractive colours and textures. This is reducing the dominance of loose iceberg, although this still sells well in traditional greengrocer outlets.

Growers observe that significantly more cauliflower was planted this year following the good prices last year. Quality was poor through most of the country in May due to warm conditions and high sunshine hours. This causes rapid growth, which in turn causes hollow stem and opens up the curd, which should be tight and even.

While overall it was a good production year for crops such as broccoli and cauliflower, there were periods when weather conditions caused significant oversupply. These were followed by periods when the market could not be supplied.

The quality of produce has improved throughout the industry. This has been driven by a combination of fewer, more professional growers and the recently introduced more stringent quality requirements for growers supplying Progressive Enterprises. Growers are also tending to become more specialised and growing larger areas of fewer crops.

› ASPARAGUS

Asparagus plantings have declined 50 percent over the past five years, to the current estimated area of 810 hectares. The two main factors driving the drop are the poor returns growers are receiving relative to the capital cost of planting a new production bed, and the value of land surrounding large urban areas for either lifestyle or residential subdivisions. Some of the area removed from production included high-value clonal material planted two to three years ago in the Waikato, which did not perform as expected.

The seasonal conditions for asparagus growers were generally good. In Canterbury, asparagus harvesting started two to three weeks earlier than usual due to the warm dry spring, but carried on to normal finish dates due to the temperate conditions. Yields were about average.

Growers had an average season in the Hawkes Bay and Manawatu, where asparagus is produced mainly for the process market. The cooler spring caused spear development to be slow. The crop from the first cuts was also light, with improved yields from later cuts. The dry winter meant that *Phytophthora*, a fungal infection of the below-ground parts of the plant, was less problematic than in previous seasons.

Growers in the Waikato experienced a relatively good growing season. The average yield for growers in the Waikato is estimated to have been 20 percent higher this year at approximately six tonne per hectare.

Inability to get labour at key times, resulting in wastage of crop, was the most significant impact on asparagus production. Cutting the spears within a day of it being ready to harvest is critical to ensure high quality product. One grower commented that he lost approximately 20 percent of an estimated eight tonne per hectare crop because of a lack of staff to harvest the spears. Producers on older, poorer yielding blocks were forced to close up early as the pay rates demanded by staff made it uneconomic to harvest their asparagus.

The removal of poor performing asparagus blocks has lifted the national average yield to 3.6 tonnes per hectare.

The value of asparagus exports for the year ended March 2006 was \$5.3 million from a volume of 803 tonnes, which reflects the improved export prices. Despite the 12 percent drop in export volumes, value only decreased by 2 percent compared with the previous year.

› CARROTS

Carrot growers reported a variable season, with some growers crediting their good yields and high quality to their ability to access high quality land that had not previously grown carrots.

For the year ended March 2006, a total of 7459 tonnes of carrots were exported mainly to Japan and other Asian countries, with an FOB value of \$5.1 million. This was 48 percent down on the volume exported in the previous season. The decrease was caused by the larger volumes of cheaper product being sourced from China, the strong exchange rate (although this has now fallen back in value), and several large operators pulling out of the industry, including one who moved to Western Australia to take advantage of cheaper shipping rates.

› PROCESS CROPS

The area of process peas contracted by McCain Foods in the lower North Island was down by 50 percent. The heavy rainfall in October reduced yields from the usual 6.5 tonnes per hectare to around five tonnes per hectare. Most crops are now established under a minimum tillage regime. This saves on production costs in a

crop with comparatively low returns. In Canterbury, the season was ideal for process peas. There was less disease, better conditions at sowing, and temperate conditions. However, drier conditions in February reduced quality and yield in late crops.

Sweetcorn growers in Gisborne had a reasonable year, apart from the early season floods that caused the loss of 490 hectares of sweetcorn. Some growers were able to extend their planting season to late December to maintain their intended planted area. Average yields were excellent at approximately 21 tonnes per hectare. After the rain, infestations of rust and northern leaf blight occurred but these were generally in isolated areas. In Hawkes Bay, both processors (McCain Foods and Heinz Wattie's), cut back on their contracted area. Crop scheduling problems also caused an estimated 400 hectares of sweetcorn to be bypassed (i.e. not harvested). Yields were excellent, but growers consider that bypass payments this year did not fully compensate them. For Canterbury growers, sweetcorn production was good in early sown crops, but late sown crops were disappointing due to cooler conditions.

Canterbury processors have commented that it was a good year for all process crops, including peas, bush or snap beans, and sweetcorn. Potatoes and carrots, which will be harvested in the early winter, are also likely to have good yields.

Tomato growers in Gisborne had a disappointing season compared to last year. Some early crops were flooded and not replanted. These flood-affected crops only produced 50 tonnes per hectare, half that achieved in the previous year. Later-planted crops were potentially higher yielding, but processing problems in the Gisborne factory dropped daily intakes down, leading to a backlog of crops waiting to be harvested. In late March, rain increased the disease pressure on these crops leading to lower tonnages per hectare. In Hawkes Bay process tomato growers had a very good season with the climate providing ideal conditions for growth through the season and at harvest time. Average yields at 100 tonnes per hectare were well up on last season's average of 78 tonnes per hectare.

› COVERED CROPS

Auckland greenhouse producers experienced good early spring conditions until October, with better winter light levels than in 2005, and mild temperatures. Summer light levels were high until the beginning of February and temperatures have been approximately 1.5 degrees Celsius warmer than long-term average temperatures. Higher summer night temperatures made for more difficult growing conditions.

Growers of covered crops in the South Island had an average year. A lack of consistent hot days and the variable summer weather increased the number of crop flushes, resulting in periodic oversupply and a reduction in demand for salads.

Tomato growers continue to quit the industry. The growers currently quitting the industry are the medium-sized operators, growing between 3000 to 10 000 square metres. Many of these operators expanded to capture

economies of scale, but now face high debt servicing and escalating operating costs. By contrast, many of the old unheated glasshouses are able to remain in business. This is because the growers' main income is off the property and they have no labour costs or debts. Unfortunately, the lower quality fruit that generally comes out of these operations is setting the benchmark price, lowering returns across the whole industry.

Fresh tomato exports for the 12 months ending March 2006 totalled 4922 tonnes, with an FOB value of \$11.3 million. This is over 75 percent higher than the proceeding 12 months. In October and November 2005, export volumes were 82 percent higher than the previous year. Part of this increase was attributed to hurricanes in Florida that forced Japanese buyers to source tomatoes from elsewhere.

The value of capsicum exports for the year ending March 2006 was \$27.3 million FOB from a volume of 5575 tonnes.

»» FINANCIAL POSITION

The recent drop in the exchange rate has come too late in the season to benefit most exporters. Growers are hopeful that the exchange rate will remain at its current position or lower to enable them to receive better export returns for the crops they will be harvesting later this year.

» REVENUE

POTATOES

Prices for potatoes have been consistently poor this year, although slightly improved on the previous season. The poor results were put down to an oversupply of both seed and fresh potatoes. The overseas market is weak, with slow sales. As a result of these continuing poor returns it is expected that a number of both seed and fresh potato growers will quit the industry. Growers received an average of \$330 per tonne for their fresh potatoes this season and an average of \$170 for process product.

ONIONS

Onion prices have been better than last year, but are considered only adequate by growers. Some contracts for onions destined for Europe have a minimum price guarantee of \$300 per tonne FOB as long as they meet 85 percent pack-out requirements when they arrive. These contracted onions are expected to fetch \$350 per tonne FOB. Prices into the United Kingdom are slightly higher at \$350 to \$375 per tonne. The Japanese market delivered poor prices which were compounded by the high value of the New Zealand dollar against the Japanese yen. Onion growers are hopeful of improving returns as the value of the New Zealand dollar falls.

SQUASH

Squash returns, as usual, varied widely through the season. Little early squash was available for export because of the spring floods. This early season product fetched good prices at around 60 cents per kilogram. Later in the season, as more squash became available, prices fell to around 30 cents per kilogram. With poor yields,

later crops would have barely covered the cost of production. Overall, squash prices were similar to the previous season at approximately 40 cents per kilogram.

GREENS

Green growers continue to comment about the distorted supply and demand mechanisms operating in the market for their produce. It is reported that prices paid to growers are held at or below \$1.49 per head in order to minimise consumer resistance once retailer margins are added. Growers feel that greens continue to be used as a customer drawcard, or a loss leader in the major supermarkets.

The summer lettuce price at \$8.50 per crate was 6 percent ahead of last year's price.

Cauliflower prices this year were 30 per cent lower than last year at \$7 per crate. Broccoli growers received similar prices to last year (\$16 per crate).

ASPARAGUS

Waikato asparagus growers (who mainly supply the fresh export and domestic markets) achieved prices of approximately \$2.30 per kilogram for their crop. Returns of \$2 per kilogram were on a par with last season for process growers in the lower North Island and South Island.

PROCESS CROPS

Process crop prices have remained static for the main crops of peas, beans, and potatoes. A poor freezer pea harvest season in the United States allowed New Zealand exporters to capitalise on what would otherwise have been a difficult marketing season.

On average, process pea producers were paid \$330 per tonne. Prices for processed sweetcorn for Gisborne growers were on a par with last season at around \$150 per tonne. New growers in Ruatoria were paid only \$116 per tonne to take into account the transport costs to the Gisborne processing plant, 2.5 hours south. Tomato prices were on a par with previous seasons, at \$100 per tonne.

COVERED CROPS

Tomato prices to the end of April were 10 to 20 percent less than last year, translating into an average price of around \$2 per kilogram. Prices were high for growers with produce to sell in May.

› EXPENDITURE

Growers have commented that they are carrying significantly increased costs from energy, seeds, fertiliser, transport, labour, compliance, and land (to either rent or buy). They note there has been no corresponding increase in product prices.

For greenhouse growers, energy costs have risen by as much as 50 percent in the past 12 months, rising from

\$8 to \$10 last year, to \$15 per square metre this year. The reprieve that growers felt they had received with the decision not to introduce the proposed carbon tax has been short-lived, as the overall increase in fuel costs is two to four times what the carbon tax would have cost.

The cost of labour has been a significant issue for many growers. Asparagus growers, for example, faced a 15 percent increase in their harvesting costs. For many growers, the cost of harvesting a block was higher than the potential income from the product, and the decision was made to finish harvesting earlier than planned.

The increase in the minimum wage had a significant impact on growers. Along with increasing the hourly rate of those on the minimum wage, it also flowed through to all staff wages, as the differential between those with experience and those starting out decreased. There is no additional revenue to cover the higher labour cost.

› NET RESULT

The gross margins for the various vegetable crops in Table 5.1 provide an indication of an average farm gate return per hectare for the season. The gross margin considers the revenue for a particular crop less all the direct costs associated with growing that crop. The figure does not consider overheads such as administration, debt servicing, taxation, or drawings. The actual result for an individual grower may be quite different from the gross margins presented, due to individual circumstances. In particular, the net result will vary significantly between squash growers, given the excellent yields achieved in Hawkes Bay, and the very poor production from Gisborne due to the floods and subsequent disease issues. Also, the mix of crops grown by a particular grower may moderate the net effect of these gross margins.

Table 5.1 provides a summary of the average prices, yields and gross margins generated during the 2005/06 season for the major vegetable crops grown in New Zealand.

››› ISSUES AND TRENDS

Growers feel that the Commerce Commission decision to allow just two major supermarket chains has been extremely detrimental to them, and has not resulted in lower prices for fresh fruit and vegetables being passed on to consumers. Almost universally, growers are experiencing lower domestic wholesale prices while retail prices continue to climb. Growers are cautiously welcoming the introduction of a new supermarket competitor, The Warehouse, as it may mean more competition for vegetable supplies. Horticulture New Zealand is actively involved in the recently formed New Zealand Fair Trading Coalition. The New Zealand Fair Trading Coalition has been set up to lobby for law reform in many areas where smaller businesses are perceived to be at a competitive disadvantage compared with large commercial entities.

In December 2005, the Government announced that the carbon tax would not be introduced in its proposed form. This news was warmly received by vegetable growers, particularly those involved in the greenhouse industry. However, growers are still anxious to see the detail of the proposed narrow-based carbon tax. They fear they are not yet “off the hook”, and may still face some sort of charge as a result of their relatively high

»» TABLE 5.1: VEGETABLE GROSS MARGINS, 2005/06

	PRICE (\$)	YIELD PER HECTARE	GROSS MARGIN (\$/HA)
SOUTH AUCKLAND/WAIKATO			
Asparagus (tonne)	230	6	2 310
Onions (tonne)	350	35	1 630
Potatoes – table (tonne)	330	45	1 230
Greens			
– Cauliflower (crate)	7	1 735	–480
– Broccoli (crate)	16	1 000	4 710
– Lettuce (crate)	8.5	3 800	6 445
HAWKES BAY/GISBORNE			
Squash (tonne)	400	13	945
Sweetcorn – process (tonne)	150	19	1 285
CANTERBURY			
Peas – process (tonne)	330	6.5	1 230
Potatoes – process (tonne)	170	65	2 740
Onions (tonne)	300	40	2 460

Source
Fruition Horticulture, AgriLINK NZ, and Canterbury Agriculture.

energy inputs. As it happens, the increase in fuel costs has been two to four times what the implementation of the carbon tax would have cost, and new energy efficiency measures are required to stay in business.

Growers believe there is a lack of consistency in the financial assistance to growers affected by adverse climatic events. Comparisons are being made between the level of assistance given to growers affected by the February 2004 floods in the lower

North Island, and the Gisborne growers twice affected by floods during 2005. Gisborne growers were hopeful they would be offered compensation to replant their crops, as the lower North Island growers were in 2004. However, the damage caused by this year's Gisborne floods was not as extensive as in the 2004 flood event, and government help was limited to enhanced Taskforce Green assistance focused on cleaning up the affected areas, and income support via the Rural Assistance scheme.

Biosecurity issues continue to worry growers. Gisborne sweetcorn growers were disturbed and surprised to read in a magazine article in May that a new maize and sweetcorn disease “boil smut”, caused by the pathogen *Ustilago maydis*, had been discovered in Gisborne in January. Biosecurity measures have been taken, and the site is being treated to eradicate the organism from the site. The outbreak of the smut calls into question the effectiveness of seed treatments on imported seed as obviously the smut originated from the United States. Gisborne growers are also concerned by the spread of the weed species broomcorn millet which is difficult to control. It is thought to have entered the country as an impurity in budgie seed. Another weed pest, Noogoora bur, has been found in Bay of Plenty maize crops. This pest is described by Australian and American producers as their worst weed to control and is believed to have entered New Zealand in imported seed.

A Northland helicopter pilot has been found guilty of illegally discharging herbicide spray into a Northland stream and causing substantial losses to two growers in the area. The contaminated water was used to irrigate

crops, which subsequently died. The Northland Regional Council undertook investigations and concluded that the crops were poisoned by herbicide in the irrigation water. The legal process was extremely long and drawn out, and is ongoing, with appeals currently under way.

The processing potato industry in the Manawatu and Hawkes Bay has been hit by the planned shut down in December 2006 of the McCain Foods processing plant in Fielding. The plant has become uneconomic due to a combination of high labour and raw product costs, and poor seasons including the Manawatu floods in 2004. McCain Foods will concentrate its production around its Timaru plant where it has contracts with fewer but larger growers who are able to achieve economies of scale and higher yields. The closure has left many growers in a precarious position, particularly those with significant specialist capital invested. Beyond the immediate growers, the closure also affects many supply companies. It will also further suppress fresh potato prices through a combination of increased supply from growers switching to producing fresh potatoes, and reduced demand from McCain Foods for additional potatoes from the fresh market. The closure of the Feilding facility will increase the area of crops grown and competition for land in mid and South Canterbury.

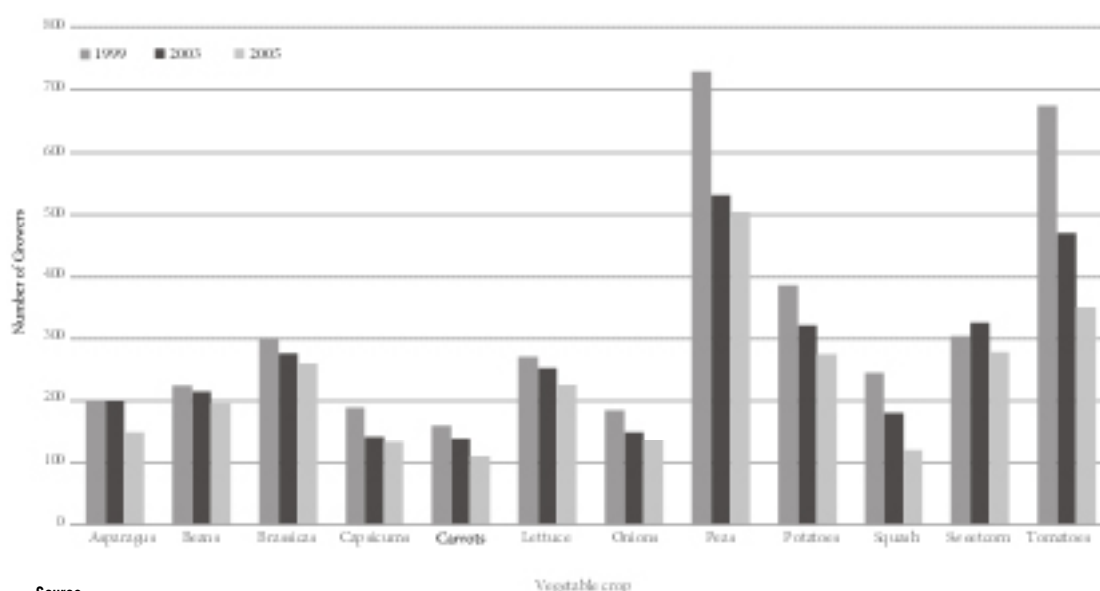
The restriction on the importation of new potato lines due to quarantine rules has been largely resolved. Quarantine facilities have been accredited in Scotland and Level 3 facilities are now also available in Gisborne.

Higher labour costs (estimated at 15 to 20 percent) continue to be a big issue for growers. Changes in holiday allowances, sick leave and bereavement leave give employees the potential of another 13 unworked but paid days per year. Accommodation and travel add to labour costs. Growers are finding it very difficult to employ suitable labour prepared to work in the rural environment. In a competitive environment where high quality produce is essential, a number of workers that present themselves for work do not have sufficient skills. There is a trend towards increasing contract harvesting for picking and packing, as well as for additional mechanisation to reduce labour costs. Under tight margins there is little opportunity to pay additional labour costs. Grower representatives have been working with the Government to ease the pressure on labour supply. Initiatives such as the changes to work permits (the Working Holiday Scheme, the Seasonal Work Permit, and variation of conditions on work permits) and the seasonal labour co-ordinator proposed for the Pukekohe region have been welcomed by growers.

Horticulture New Zealand continues to advocate on behalf of vegetable growers on resource management issues. Of particular concern are strategies proposed to limit the impact of vegetable growing on the environment. Growers believe these strategies are unworkable and unlikely to achieve their intended aim. Submissions have also been made on behalf of growers on policy issues such as the recently published *Water Programme of Action*.

The number of vegetable growers in the country continues to decline. Figure 5.3 provides a graph of the change in grower numbers over the years.

»» FIGURE 5.3: NUMBER OF VEGETABLE GROWERS, 1999, 2003, AND 2005



Source

NZ Horticultural Facts and Figures 2005, HortResearch, Fresh Facts 2006, HortResearch.

Despite fewer growers, the value of vegetable exports from New Zealand remains the same, with exports for the year ended March 2006 totalling \$474.9 million. This is 1 percent higher than the previous year.

The recent drop in the exchange rate came too late in the season to benefit most growers and exporters. The lower exchange rate is having an effect on the costs of inputs (fuel, packaging, and freight), but will increase the cost of competing imported vegetables, and increase export prices at FOB. Growers focused mainly on the local market consider they are worse off under the lower exchange rate situation. The current higher fuel costs are likely to add costs throughout the vegetable supply chain over the next season.

The American owner of Cedenco, SK Foods, has made further investments in the processing and marketing sector. Last year it bought out the Gisborne-based vegetable processor and marketer Sunrise Coast Ltd, and the Hawkes Bay-based asparagus processor and marketer Circle Pacific Ltd. The deals have given growers in both regions renewed confidence that outside interests see value in New Zealand's vegetable growing and processing sector.

The removal of approximately 650 hectares of apple area in the Hawkes Bay region proved a boon for vegetable growers in the area. Growers believe that their excellent results this year can mainly be attributed to the access to high quality land that had previously been used for growing pipfruit.

6

FLORICULTURE

This commentary covers the flower industry in New Zealand, with emphasis on the main export flower and bulb crops. All export statistics are provisional for the year ending March 2006.

»» KEY POINTS

- › The value of flower bulb exports increased significantly to \$27.5 million (FOB) in 2005/06.
- › The high New Zealand exchange rate over the past year reduced export returns for flower crops.
- › Increasing volumes of New Zealand grown flowers are being sold to North America.
- › Floriculture industry groups are becoming more active and co-operative.
- › A “promotional charge” is being collected from buyers and growers on the domestic market, to be used for advertising.
- › New Zealand plant breeders continue to produce exciting new varieties.
- › Growers are facing increasing costs, especially for fuel and freight.

»» PHYSICAL FACTORS AFFECTING PRODUCTION

The following sections of the report cover the most significant export crops in order of free on board (FOB) value. Flower producers use a wide range of growing systems ranging from open field and simple shade structures to plastic houses and sophisticated climate-controlled glasshouses. In addition, flower production is spread throughout New Zealand from Northland to Southland. Where climate events have affected production, it is mentioned in the relevant crop commentary.

› CYMBIDIUM ORCHIDS

Cymbidium exports increased to 3.83 million stems in 2005/06, which was up slightly from the 3.75 million stems in 2004/05. Exporters note that colours such as brown, red and orange remain hot favourites in the United States (US). Also popular are greens with dark lips. Mixes are still preferred in Japan. At certain times in the season there is an oversupply of pink.

The New Zealand Export Orchid Growers Association (EOG) remains active, holding field days and workshops, and its members are estimated to grow approximately 75 percent of production. EOG and the New Zealand Flower Exporters Association (NZFEA) once again advertised New Zealand cymbidiums in the US trade magazine *Florists' Review*.

The main cymbidium growing areas are Northland, Auckland, Waikato and Bay of Plenty. Several large properties have changed hands, with younger people entering the industry.

Production volumes for cymbidiums in 2006 are expected to continue their steady increase.

› CALLA – CUT FLOWERS

Total calla (*Zantedeschia*) flower exports increased to 5.13 million stems in 2005/06 from 4.79 million stems in 2004/05. There was an early start to the season in the north and west of the North Island, while the South

Island and east of the North Island started later than usual. Stem lengths were shorter than usual, possibly as a result of the warm weather in early spring, and the flowering season was condensed. High winds in October damaged some growing structures, causing losses for the affected growers.

The New Zealand Calla Council has re-established its newsletter, developed a website, started regional grower discussion groups, improved networking with other floriculture groups, and invested in postgraduate research to improve the vase life of calla.

Production volumes are expected to expand as larger growers continue to increase in size.

› HYDRANGEAS

Hydrangea volumes continued to increase and 1.22 million stems were exported in 2005/06. This was an increase of nearly 20 percent over the previous season. The anticipated oversupply of hydrangea production from New Zealand has yet to appear and demand continues to grow as the volumes increase.

A late snowfall in Canterbury in mid-September and the severe frosts that followed burnt off the first flower buds, reducing volumes from these growers. Local market demand has improved with florists now willing to use the flowers.

Supply is expected to continue to increase as new plantings mature and production per plant increases.

› PAEONIES

The provisional official export statistics indicate that the number of paeonies exported dropped by 6 percent from the 2004/05 season, to a total of 618 000 stems in 2005/06. However, local market sales were strong.

The season started two to three weeks early in the north but the late snowfall in Canterbury (resulting in bent unsaleable stems) reduced the volume of early Corals. The season progressed well after the snow and finished in Southland about two weeks earlier than normal. Central Otago had to contend with a lot of rain through the harvest. Hail damage did not prove to be a factor in 2005. The annual promotion run by the New Zealand Paeony Society with assistance from New Zealand Trade and Enterprise (NZTE) took place in New York.

› BULBS

In this report, the term “bulbs” has been used to encompass bulbs, corms, tubers, tuberous roots, crowns and rhizomes. The main exports are lilies, tulips and callas. Paeony, sandersonia, gladioli, iris and freesia are also exported. Bulb production in New Zealand is continuing to expand, mainly driven by large Dutch companies aiming to supply international customers year-round. New Zealand-produced bulbs are used to fill the gap in northern hemisphere production for early and late supply.

Lilium bulb exports increased significantly to 3293 tonnes in 2005/06 from 2603 tonnes in 2004/05. Large

areas of land are now being leased for lily bulb production in Canterbury. It is not viable for the companies to buy the land because of the ten-year crop rotation cycle. Harvesting of lily bulbs takes place from July to August each year and is a large-scale operation.

Tulip bulb export volumes increased to 1477 tonnes in 2005/06. This was a large increase over the previous season of 950 tonnes. Tulip production is based in Southland and also uses predominantly leased land. Leasing works in well with the dairy industry, as the lease runs from March to March and the land is returned to the farmer fertilised and re-seeded in grass. A percentage of new planting material is imported by container each year from the Netherlands.

The volume of calla tubers exported dropped to 60 tonnes in 2005/06. This is a drop from the 90 tonnes exported in 2004/05 but similar to the 63 tonnes in 2003/04. New Zealand produces calla tubers mainly for cut flower production. Internationally, pot plant production is growing very quickly. However, New Zealand does not produce sufficient quantities of large bulbs to satisfy this market. New Zealand does have some competitive advantage access to new varieties produced by local breeding programmes, but more cost-effective production systems need to be developed.

As predicted, sandersonia tuber exports fell last season, with 22.4 tonnes exported in 2005/06 compared with 27.2 tonnes in 2004/05. The number of sandersonia growers continues to fall, as small family operations are replaced by larger producers. Demand for tubers at the start of 2006 was good, but supply has been limited.

› OTHER CROPS

Other export crops include members of the protea family (*Proteaceae*), nerines, viburnum, sandersonia and foliage crops.

The main crops in the protea family include protea, leucadendron and leucospermum, with production predominantly based in the Bay of Plenty and Northland.

Proteaceae exports totalled 1.09 million stems in 2005/06. The New Zealand Protea and Foliage Growers' Association (NZPFGA) have a MAF Sustainable Farming Fund grant to investigate the fungal disease phytophthora. Phytophthora has led to significant crop losses and remains a limiting factor in the expansion of these species in New Zealand.

Nerine export volumes continue to increase and have passed the one million stem mark for the last three years. The New Zealand Nerine Growers' Group has completed a two-year project (funded by the MAF Sustainable Farming Fund), which aimed to improve the quality of nerine flowers exported to Japan. A specific breeding programme for nerines has been started with the New Zealand Nerine Growers' Group, Crop and Food Research, and Technology New Zealand.

Viburnum volumes also continue to grow with 410 000 stems exported in 2005/06, up from 157 000 stems exported in 2002/03. The late snowfall in Canterbury resulted in no significant damage.

Sandersonia flower exports continue their decline, with only 1.09 million stems exported in 2005/06. This is a significant fall considering 2.12 million stems were exported in 2002/03.

A large number of crops are included in the foliage category. The major species exported are *Pittosporum* and *Phormium* (flax).

»» FINANCIAL POSITION

» REVENUE

New Zealand currency exchange rates remained high for most of 2005, and this continued to erode export returns on cut flowers and bulbs.

There is a consistent theme in the financial aspects of all the key export and domestic market flower, foliage and bulb crops. They can be summarised as follows:

- › Overall prices are not increasing per stem on the export market.
- › Prices may be maintained if there is diversification into new markets and the loyalty of established customers requiring high quality, low volume supplies is sustained.
- › Producing new varieties with new colours or forms is the key strategy used by New Zealand growers to maintain economic viability.
- › Production costs continue to rise.
- › Smaller growers are under pressure to discontinue their business if they are unable to replace their stock with new, better performing varieties.
- › All growers are at risk from lower prices in the future as overseas competitors slowly improve their quality to match that of New Zealand growers.
- › New entrants to the industry start with new improved varieties, giving them an advantage over established growers.

CYMBIDIUM ORCHIDS

The average price for a cymbidium stem was \$5.06 (FOB) for the year to March 2006, which was within a few cents of 2005 returns. Domestic Japanese production was delayed and this helped late-season flowers obtain good returns on the Japanese market. It is estimated that 65 percent of cymbidiums were sold at a fixed price in 2005, rather than at auction.

The main market for cymbidiums remains Japan. Japan received 58 percent of exports (by FOB value) in 2005/06. However, this is a major drop from the 83 percent share of five years ago. The North American market has shown significant growth, with the US and Canada increasing by approximately 350 percent in the last five years. The US now accounts for nearly 25 percent of exports (by FOB value) and Canada accounts for

4 percent. Exports to Italy continue to fall and now account for only 4 percent of export sales value.

The gross margin for the 2005/06 season resulted in a slight increase on average (8 percent) on the previous year from \$30.27 to \$32.77 per square metre. This was mainly due to an increase in the number of growers being offered fixed prices on their flowers. Even though exchange rates were not favourable, the consolidation and co-ordination of some major growers with exporters appears to have improved the marketing of the product. Having new varieties to offer is also a major advantage, enabling growers to maintain prices. A typical cymbidium orchid grower has 7000 square metres of greenhouse, with 5000 square metres considered to be the minimum economic area for cymbidium production.

Production costs continue to increase and grower returns will continue to be dependent on the exchange rate. In many cases Japanese auction prices have remained comparable to previous seasons, but a high exchange rate quickly diminishes the grower's return.

CALLA – CUT FLOWERS

Calla flowers remain a popular product and the average price has stayed consistent at \$1.17 per stem (FOB) in 2005/06. Prices are becoming more consistent throughout the season and December 2005 provided very good returns, despite the exchange rate. Premium prices continue to be paid for longer stems and there was a good demand for gold, orange and red.

Improvements in returns to calla cut flower growers are not necessarily due to changes in crop management or climate improvements. They are, however, strongly related to the introduction of new varieties. These new varieties produce more flowers per tuber, and ensure that overseas customers stay interested in New Zealand product, while not necessarily paying significantly more. This is a critical strategy for many New Zealand-grown flower species to remain competitive in the international market.

Increasing production of callas in the northern hemisphere continues, notably in China, Kenya and Vietnam. In the southern hemisphere, Chile and South Africa are now serious competitors, with a similar production season to New Zealand's, and improving quality.

Japan remains the largest market for calla flower exports, taking 55 percent of sales (by FOB value) in 2005/06. The US continues to grow as a market and accounted for 28 percent of sales last season, followed by the Netherlands with 5.6 percent. As with cymbidiums, market diversification is increasing. Five years ago Japan accounted for 72 percent of sales (by FOB value) of New Zealand's calla exports, the US 15 percent, and the Netherlands 3.1 percent.

The gross margin for calla flowers (greenhouse) in 2005/06 increased to \$35.20 per square metre from \$22.55 per square metre. Replacement of tuber stock with new varieties is starting to yield benefits to established growers, while new growers entering this business start immediately with new varieties. This is critical for

callas as the grower price is unlikely to increase, but the fixed production costs per tuber are rising. Growers can only improve their revenue by increasing the number of flowers from each bulb. However, prices for greenhouse (early and late) callas improved in 2005/06 due to the poor quality of callas produced by some southern hemisphere competitors.

The gross margin for field-grown calla flowers also increased in 2005/06 to \$3.53 per square metre from \$2.85 per square metre in the previous year. Field growers are slowly replacing their tuber stock with better varieties.

Prices in 2006/07 are expected to continue in the range of the previous years.

HYDRANGEAS

As expected, total sales of hydrangeas increased but the average price per stem fell slightly to \$2.25 (FOB) for the year to March 2006. Demand continues to outstrip supply and this has helped to keep prices up.

The US is the predominant market with 65 percent of export sales (by FOB value) in 2005/06. Japan held second spot with 17.4 percent and South Korea accounted for 5.5 percent. There have been significant increases in exports of this crop over the past few years. Statistics New Zealand only started recording hydrangeas as a separate crop in the 2002/03 year when total sales were \$407,000 (FOB). Export sales have grown exponentially and in three years have reached \$2.76 million (FOB) for 2005/06.

As the US remains the major market for hydrangeas, a lower exchange rate against the US dollar will help improve grower returns.

PAEONIES

The average price for an export paeony stem increased to \$2.01 (FOB) for the year to March 2006. The high dollar and increasing regulatory costs (such as for agrichemical handling) are making it difficult for small growers. Membership of the New Zealand Paeony Society has fallen by 20 percent over the last two years. However, it remains a strong grower group and holds regular meetings and promotions. New Zealand growers continue to get good prices with their high quality, good variety mix and new variety introductions.

The gross margin for paeonies in Table 6.1 relates to growers who have predominately new varieties that are in demand. The returns to growers with old varieties are uneconomic.

The 2005/06 gross margin increased from \$10.33 per square metre in 2004/05 to \$13.31 per square metre. This financial gain was viewed by the sector as a positive outcome of stabilisation in the industry, with fewer “novice” growers and old varieties. Strong demand from various exporters meant higher average prices for preferred varieties, which is important for growers who have invested in expensive plant material.

For the 2007 season, prices are expected to remain in the range of the last two seasons, with growers hopeful of an improvement if the exchange rate does not rise.

BULBS

Bulb sales continue to increase and exports are now worth \$27.5 million (FOB) for the year ended March 2006. Liliium bulb sales had the largest increase on the previous season, with sales now at \$13.5 million (FOB) for 2005/06. This significant increase is due to two large Dutch-owned and managed operations in the South Island. Tulip bulb sales also increased to \$8.1 million (FOB). Calla and sandersonia tuber sales were down to \$3.6 million and \$1.5 million (FOB) respectively.

Calla tuber production involves planting small tubers to produce larger flowering-grade material. The gross margin has remained stable in 2005/06. Product prices for calla tubers (and for bulbs in general) are more stable than for cut flowers and foliage. Changes in returns are mainly due to increases in production costs.

ROSES

Only small volumes (\$49,000 FOB) of roses are exported from New Zealand. The huge volumes grown in countries such as Kenya, Colombia and Ecuador make the crop uneconomic to export from New Zealand (except to some Pacific Island countries). However, roses remain one of the main crops on the domestic market so a gross margin for roses is included.

Domestic prices for 2005/06 were average, with prices slightly lower than at a similar time in May last year. Imported roses from India are having some impact on local market prices.

The 2005/06 gross margin for roses declined from \$37.19 per square metre in 2004/05 to \$32.30 per square metre. Rose growers use intensive production growing systems (including heating, carbon dioxide enrichment, plant protection materials and fertilisers), and increasing production costs are eroding grower returns. The trend towards fewer but larger growing operations is likely to continue in the future.

› EXPENDITURE

Increasing fuel costs hit growers on a number of fronts. Freight costs continue to rise with the increasing cost of fuel being passed on to growers by airlines and trucking companies. This especially affects heavier products such as paeonies, when they have additional weight in the boxes from ice packs. Not only are the boxes heavy, they also have to be transported long distances to exporters in Auckland, as the majority of paeony growers are in the South Island. For those growers who heat their growing areas, costs continue to increase. For example, in five years the cost of waste oil has doubled. Rises in electricity prices also increase costs such as running coolrooms, which are vital to ensure the post-harvest quality of many flowers.

Spending is reported from associated services in this sector to be down slightly, as growers minimise expenditure and purchase only essential items.

► NET RESULT

The gross margins for several of the largest flower crops are listed in Table 6.1. These figures assume the grower to have average to above-average management skills in Auckland growing conditions (or Southland for paeonies). The revenue, prices, yields and expenditure levels are average for the market and climatic conditions of the season. The figures include the labour costs for high input activities such as flower harvesting and packing.

The gross margins are per square metre of total planted area, but crops are not necessarily directly comparable with each other. Some gross margins are based on crops that produce year-round (e.g. roses), while other crops are produced over a six to eight month period (e.g. calla tubers). There are also considerable differences in the capital investment for the different crops (e.g. outdoor versus glasshouse growing).

When predicting returns, the average prices mentioned elsewhere in the report must be treated with care. The average price each grower receives is affected by the mix of production quality, quantity, timing, flower colour or variety, and market destination.

►► TABLE 6.1: FLORICULTURE GROSS MARGINS

	GROWING METHOD	2003/04 (\$/M ²)	2004/05 (\$/M ²)	2005/06 (\$/M ²)
Cymbidium	Greenhouse	29.00	30.27	32.77
Calla – cut flowers	Greenhouse	24.90	22.55	35.20
Calla – cut flowers	Field	2.98	2.85	3.53
Calla – T1 tubers	Greenhouse	15.00	12.60	12.58
Paeony rose	Field	10.78	10.33	13.31
Rose	Greenhouse	35.10	37.19	32.30

Source
Green Harvest Developments Ltd.

►► ISSUES AND TRENDS

Flower exports for the year ended March 2006 are estimated to be \$38.5 million (total FOB export value of flower and foliage sales). This is similar to the previous three years. Cymbidium orchid exports are climbing back towards the level of the early 2000s and are clearly the most important flower export with \$19.4 million in sales (FOB). Callas continue to hold second position with export sales of \$6 million. Cut flower hydrangeas have moved into third place with export sales of \$2.8 million in 2005/06. Paeony and protea family exports complete the top five with approximately \$1.2 million each.

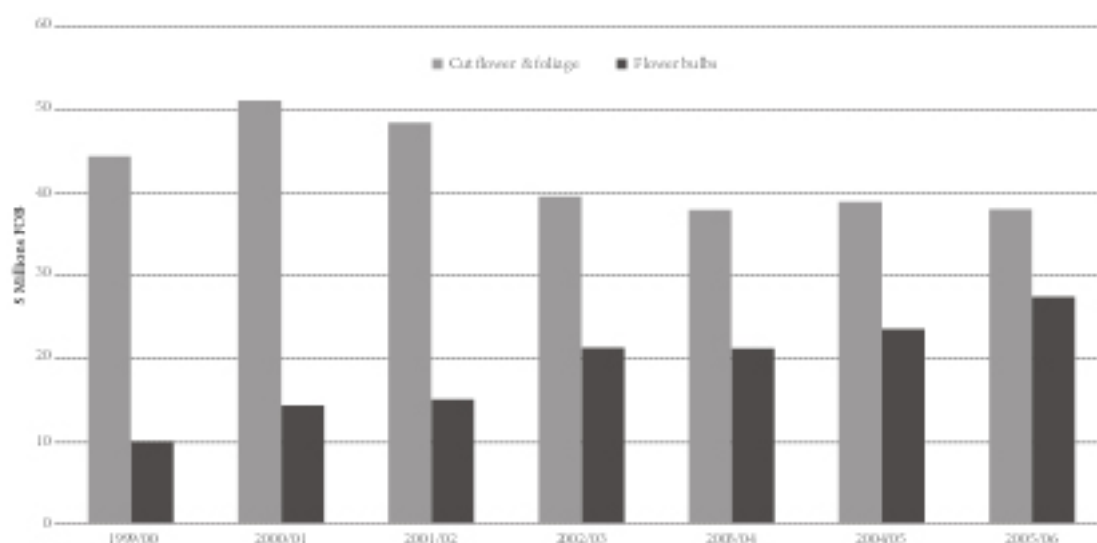
The top five markets for New Zealand flowers by FOB value for 2005/06 are: Japan (51.5 percent), US (28.5 percent), Canada (3.8 percent), Hong Kong (3 percent), and the Netherlands (2.6 percent).

The NZFEA published an updated version of its catalogue in 2005. This catalogue is printed in both Japanese and English and includes information about the key flower and foliage types New Zealand exports.

Export of bulbs has seen significant growth over the last five years and total sales have increased from \$14.3 million (FOB) in 2000/01 to \$27.4 million (FOB) in 2005/06. The main export markets by FOB value are: Japan (32.5 percent), the Netherlands (25.3 percent), and the US (15.8 percent). The Netherlands and the US are the two markets where sales have increased significantly, rising from \$1.7 million and \$1.5 million respectively in 2000/01 to \$7.0 million and \$4.4 million in 2005/06.

Figure 6.1 illustrates the changing value of New Zealand flower, foliage and bulb exports.

»» FIGURE 6.1: NEW ZEALAND FLOWER, FOLIAGE AND BULB EXPORTS



Exports of roses, chrysanthemums, carnations, lilies, and alstroemeria continue to fall, although they remain important on the domestic market. Total export sales of these five combined varieties is now worth less than \$750,000 (FOB).

The local market has had a steady year. The variety of flowers being sold has remained relatively constant, but with changes in the colour mix. The market is favouring the softer/deeper tones of pink and burgundy, rather than bold or hard colours. The main crops being imported are Indian roses and tropical flowers and foliage. Good volumes of flowers were available at the markets at both Valentine's Day and Mothers' Day, although the warm weather in April meant some crops flowered too early. The quality of flowers being sold in the markets is reported to have improved significantly over the last few years. A number of small, niche crops are disappearing from the markets as some of the smaller growers leave the industry.

Utilising an idea from the Northern Flower Growers Association (NFGA), FloraMax (an auction house) has instigated a promotional charge of 1 percent of turnover for buyers and suppliers. After initial queries from both buyers and suppliers, it has been accepted that in order to grow the industry there needs to be promotion. FloraMax has flower auctions in Auckland, Wellington and Christchurch. It is hoped the initial promotion will occur in spring, 2006.

There is a trend for large-scale producers to keep growing. Growers continue to leave the industry but the rate has slowed. For new growers who have taken over existing properties there is a steep learning curve. If even a single factor is inadvertently forgotten or applied incorrectly at a crucial stage of the crop's growth, a whole year's income can be seriously reduced. Due to the nature of the crop, this effect can even carry over to future years – for example, if pruning is carried out incorrectly.

Several large Dutch companies now produce bulbs in New Zealand. The large size of these operations has meant a considerable investment in setting up packhouse facilities and obtaining specialised machinery, most of which is imported. A shortage of labour, both casual and highly skilled, is a cause of concern for these large bulb operations in the short term.

More growers are now using packhouse services. This can even include picking crops for small part-time growers. Most of these growers are working full-time off-site, and only have enough time to manage the crop, not carry out harvesting as well.

New Zealand breeders continue to develop novel flower varieties. A New Zealand-bred calla (*Zantedeschia* “Hot Chocolate”) won best flower from a bulb or tuber at the 2005 International Hortifair in the Netherlands. This is a premier prize at an international competition, and it is the second time in three years that the breeder has won the award. Rose breeders also continue their work and their varieties continue to be sold internationally. International rose breeding operations are massive, with many nurseries covering hundreds of hectares. Kenya alone has around 2000 hectares of roses. New Zealand rose breeders are able to compete on the world stage, which shows the quality of the varieties they produce. Crop and Food Research continues its breeding programmes with *Gentiana*, *Cyrtanthus* and *Limonium*. This includes the development of a new red gentian that has been bred in partnership with Rhindo International Ltd, a joint venture between Crop and Food Research, Southland Flowers, and the Japanese gentian supplier, Ashiro-cho. NZTE and Enterprise and Technology New Zealand have also contributed to continuing research and marketing of locally-bred bromeliads. The variety “Red Dragon” has proved extremely popular on the export market.

The restrictions on new plant material coming into New Zealand continue to be a concern for many growers, who rely on new plant material from overseas for their operations. In addition there was considerable publicity during the year about proposals to place more plant species on the National Pest Plant Accord. The National Pest Plant Accord is a cooperative agreement between regional councils and government departments with biosecurity responsibilities. The Technical Advisory Group published a list of recommendations for high,

medium and low priority species to add to the Accord, and submissions on this closed in February 2006. For example, two species, *Agapanthus praecox* and *Zantedeschia* “Green Goddess”, were included as high priority species. Their inclusion in the Accord would affect growers who currently sell the flowers and/or plants commercially.

In the past year there has been a significant increase in the number of postgraduate students studying cut flower production at Massey University. These students are working on topics involving *Limonium*, *Gentiana*, *Clivia* and *Zantedeschia*. Massey University has also been involved with collaborative projects with the New Zealand Calla Council and the New Zealand Nerine Growers’ Group.

The Government announced in December 2005 that it would not be proceeding with the proposed carbon tax in the first commitment period under the Kyoto Protocol. The proposed tax had been a source of concern for greenhouse growers (predominately cymbidium orchid and rose growers) in 2004/05 and the NFGA, in association with glasshouse vegetable growers, had opposed the tax.

The vote over a compulsory commodity levy in 2001 deeply divided the flower industry and the national body Florafed was later disbanded. The past year has seen grower groups becoming more active and showing increasing co-operation. Horticulture New Zealand was launched in late 2005, and flower groups are now discussing the possibility of joining later in 2006.

7

SUMMERFRUIT

This commentary discusses the New Zealand summerfruit industry in the two main production regions, Hawkes Bay and Central Otago. Hawkes Bay growers mainly supply fresh summerfruit to the domestic market and processing fruit to Heinz Wattie's Ltd (Heinz). Central Otago is more export-oriented and grows a wider variety of summerfruit, with a larger proportion of cherries and apricots.

»» KEY POINTS

- › A favourable growing season in Central Otago resulted in an early harvest of high quality fruit, with firm prices leading to improved gross margins for all summerfruit types in the district.
- › Hawkes Bay suffered adverse spring conditions, resulting in lower yields and reduced gross margins.
- › Process peaches in the Hawkes Bay failed to meet processor volume requirements with a 1700 tonne shortfall in volume.
- › Production costs continue to increase faster than returns, with labour costs and fuel prices the main areas of concern.
- › The summerfruit industry continues to contract, with production down 14 percent and exports down 5 percent compared with 2004/05. Planted area is also falling as lower profit margins force growers to quit the industry.

»» CLIMATIC FACTORS AFFECTING PRODUCTION

› HAWKES BAY

The 2005/06 summerfruit season commenced with very wet conditions over the spring period. Rainfall in October was seven times greater than average, and September and November were also wetter than normal.

Weather conditions for the earlier part of the blossom period were generally good for pollination, but later-flowering varieties were caught by wet weather, which caused a reduction in fruit set. Cherry, apricot and plum varieties all experienced significant reductions in production as a result of the rain during flowering.

An air frost¹ on 21 September 2005 caused losses in orchards with inadequate frost protection. September hailstorms also damaged cherries and nectarines, and later hailstorms affected plums.

The abnormally wet weather over the post-blossom period caused significant bacterial spot infection in susceptible cultivars. This led to serious leaf drop in many Fortune plum blocks, and Rose Diamond nectarines. This foliage loss affected the ability of some blocks to size their crop, resulting in additional heavy-hand thinning which reduced yields. Anecdotal evidence suggests there may be a relationship between the application of ammonium thiosulphate blossom thinning sprays and subsequent leaf drop in Fortune plums.

Although the spring was abnormally wet, brown rot over harvest was not a serious problem for Hawkes Bay summerfruit growers this year. This is because most blossoming occurred before the wet weather in late September.

¹ An air (or screen) frost occurs when the temperature at 1.3 metres above ground falls below 0°C.

Rainfall was very close to average for the months of December and January, with February above average, but still reasonably dry. March rainfall was almost twice as much as normal, but most of this fell later in the month when the bulk of the late summerfruit crop had been harvested.

On the whole, weather conditions over the summerfruit harvest period were good. This resulted in few disease or rain-induced problems, except splitting problems in some cherry crops not protected by rain covers.

Temperatures, as measured by growing degree days (GDD), were high for September at 1.73 times the average value. October and November were just below average, and December, January and February were all above average. The warm growing season advanced harvest maturity for summerfruit by seven to ten days.

April was warm and wet with no frosts, which may delay the commencement of dormancy in some varieties.

The key features of the weather in 2005/06 in Hawkes Bay are summarised in Table 7.1.

»» TABLE 7.1: HAWKES BAY WEATHER DATA

	TEMPERATURE		RAIN		GROWING DEGREES DAYS	
	2005/06 (MEAN °C)	AVERAGE (MEAN °C)	2005/06 (MM)	AVERAGE (MM)	2005/06	AVERAGE
September	11.2	11.3	40	32	85	49
October	13.0	13.6	176	24	108	110
November	14.4	14.8	70	61	142	147
December	18.4	17.2	23	25	261	225
January	18.6	18.0	54	56	268	254
February	18.4	18.5	33	24	237	222
March	15.8	17.2	71	39	185	200
April	14.6	14.5	137	86	144	119

Source
HortPlus Lawn Road Logger Site.

» CENTRAL OTAGO

Central Otago spring weather conditions were particularly favourable for summerfruit production this year. Spring came two weeks earlier than normal and although several frosts reduced the overall crop, most growers retained a near-full crop load. The early spring was followed by fine, warm summer weather, which favoured good fruit sizing, high sugars and good fruit finish.

These favourable growing conditions advanced harvest maturity to give one of the earliest harvest seasons in recent years.

An eight-day period of rain over the New Year period coincided with the cherry harvest, causing heavy crop losses in the Roxburgh district where rainfall was the heaviest. Some growers lost up to half their mid-season cherry crop to splitting and disease. In the Alexandra and Cromwell districts rainfall was lighter, causing some splitting, but minimal cherry crop losses.

The wet summer weather caused some disease issues in cherries, including bacterial blast outbreaks in several varieties, particularly the late variety Sweetheart.

However, wet weather quickly cleared up, providing ideal growing conditions for ripening the later apricot, nectarine and peach crops.

The warmer than average summer temperatures shortened the harvest season to give an abrupt early finish, leaving a shortfall of fruit relative to demand at the end of the season.

»» PRODUCTION

Total New Zealand summerfruit production fell 14 percent from 15 717 tonnes in the 2004/05 season to 13 456 tonnes in the 2005/06 season. Cherry production rose slightly by 1.6 percent, while production of other summerfruit types all fell. Apricots and peaches were both down by 13 percent, nectarines by 26 percent and plums down by just 2 percent.

The 2005/06 season has seen an expansion in the producing area of both plums and cherries, but lower yields than the 2004/05 season. The drop in apricot production is largely due to lower fruit set while the fall in peach and nectarine production appears to be a combination of slightly lower fruit set and orchard removals.

Summerfruit area trends are summarised in Table 7.2.

» HAWKES BAY

Apricot yields were well down in Hawkes Bay with the main variety, Royal Rosa, reported to be down around 20 percent and the erratic cropping variety Sundrop down as much as 80 percent on the previous year.

Yields of early varieties of cherries were down as much as 50 percent in some orchards, with later varieties faring better with around 20 percent reductions.

Plum crops had varying yields with some growers reporting reductions of around 30 percent, whereas other growers reported average cropping levels. Some Fortune crops were down by as much as 90 percent due to wet weather during the blossom period.

Fresh market peach and nectarine yields are reported to be average this year, except where affected by hail.

Fruit quality was generally good with little brown rot. However, increased levels of carpophilus beetle caused serious problems for some Golden Queen growers. Leaf rollers and oriental fruit moth (OFM) were also more active with the second generation of OFM, which enters the fruit, occurring slightly earlier than normal this year.

Heinz process volumes continue to fall, with peaches down to 3384 tonnes, 27 percent down on the 2004/05 season. The peach volume is estimated to be 1700 tonnes below requirement, indicating a need for orchard renewal as younger trees in modern orchards are performing much better than older orchards.

The total process plum volume was slightly up this year at 280 tonnes compared with just less than 250 tonnes last season. Process nectarines fell from 41 tonnes last year to 36 tonnes this year.

All volumes were down on early season predictions with the main causes identified as spring frost, wet conditions over blossoming in some crops, heavier than normal infestations of carpophilus beetle, and brown rot infections.

› CENTRAL OTAGO

The summerfruit crop volume in 2005/06 was slightly below early expectations due to fruit losses from frost. However, these losses were mitigated by favourable climatic conditions experienced until late December.

The cherry crop was on production target until rain occurred during harvest. In the Roxburgh area many properties lost up to half their mid-season crop to rain splitting and disease. In the drier Alexandra and Cromwell areas, the losses were minimal.

Apricots, peaches, and nectarines yielded close to a full crop with excellent fruit size.

Apart from cherries, overall fruit quality was very good due to the high heat units and settled weather this summer. Fruit had high sugars and good flavour profiles, which generated strong demand from consumers. The local market in particular took large volumes of fruit, with returns to growers staying acceptable right to the end of the season. A new initiative, the Dunedin Farmers' Market, sold around 15 tonnes of summerfruit every Saturday morning.

»» TABLE 7.2: ESTIMATED AREA PLANTED IN SUMMERFRUIT IN 2005

	HAWKES BAY ¹ (HA)	OTAGO ¹ (HA)	NATIONAL ² (HA)
Peaches	340	90	548
Nectarines	160	170	433
Apricots	180	340	487
Cherries	25	360	524
Plums	150	105	333

Source

Statistics NZ and AgFirst.

Notes

¹ Estimates only, except for the peach figures which are provisional results from the Agricultural Production Survey carried out in June 2005.

² Provisional results from the Agricultural Production Survey carried out in June 2005.

» EXPORT PRODUCTION

Export volumes continue to decline with only 1784 tonnes exported this season, down 5 percent on last year's volume (Table 7.3).

Apricots remain the main export fruit with almost 53 percent of the export volume, followed closely by cherries at 44 percent. Nectarines, plums and peaches make up the remaining 3 percent of volume.

Australia remains the main summerfruit export market, taking 34 percent of exports, followed by Taiwan with 27 percent, and the United States (US) with 14 percent.

Australia took 58 percent of the apricots exported, followed by the US (21 percent) and the United Kingdom (17 percent). Taiwan dominated as a destination for cherry exports with 62 percent of the volume, followed by South Korea (12 percent), Thailand (9 percent) and Australia (7 percent).

Taiwan is the major market for nectarine exports, and the US and Pacific Islands are the main importers of New Zealand plums.

»» TABLE 7.3: SUMMERFRUIT EXPORT VOLUMES

	2000/01 (TONNES)	2001/02 (TONNES)	2002/03 (TONNES)	2003/04 (TONNES)	2004/05 (TONNES)	2005/06 (TONNES)
Cherries	612	503	712	1 115	831	780
Apricots	1 362	1 784	1 196	1 090	973	941
Nectarines	249	177	45	436	66	41
Peaches	66	9	5	5	4	6
Plums	34	56	9	11	10	16
Total	2 323	2 529	1 967	2 657	884	1 784

Source

Summerfruit NZ Inc.

» LOCAL PRODUCTION

Local market volumes over the past two seasons are summarised in Table 7.4. Comparisons with Table 7.3 illustrate that the New Zealand summerfruit industry is primarily focused on the domestic market, with 87 percent of the 2005/06 production sold locally. Cherries and apricots are the only significant export crops with 48 percent and 29 percent exported respectively. The local market received 16 percent less summerfruit in 2006/06 compared with 2004/05, resulting in higher local market prices.

»» TABLE 7.4: SUMMERFRUIT LOCAL MARKET VOLUME

	2004/05 (TONNES)	2005/06 (TONNES)	PERCENT CHANGE
Cherries	766	842	+9.9
Apricots	2 704	2 254	-16.7
Nectarines	5 001	3 716	-25.7
Peaches	3 531	3 069	-13.1
Plums	1 820	1 792	-1.5
Total	13 822	11 673	-15.5

Source
Summerfruit NZ Inc.

»» FINANCIAL POSITION

» REVENUE

EXPORT RETURNS

Growers of export cherries achieved FOB prices in the \$10.50 to \$12.00 per kilogram range, significantly up on last year when prices were affected by the exchange rate. Average export apricot prices are also estimated to have lifted from last year's lows, to above \$4 per kilo grower return compared with \$3 to \$4 last year.

There is strong competition from both Chile and Australia on the export market. Substantial investment has been made in summerfruit production in both Tasmania and Victoria, and as this production comes on stream it will adversely impact on the volumes New Zealand can export profitably to Australia.

LOCAL MARKET RETURNS

Hawkes Bay summerfruit growers report similar local market returns to last season for peaches and nectarines. Due to the local apricot shortage, apricot prices were substantially up on last season, by as much as 50 cents per kilogram in some instances.

Average Hawkes Bay plum prices were reported to be up around 20 cents per kilogram on last year. Plum prices, however, varied with weak prices received over the middle part of the season for the Fortune variety, due to competition from Central Otago apricots in the supermarkets. Later in the season new, high quality plum varieties achieved grower returns as high as \$5 per kilogram.

Demand was high for Hawkes Bay cherries with much of the crop being sold directly to the public through the orchard gate for good prices. The resulting lower grading and marketing costs provided higher net returns than the wholesale market.

Central Otago summerfruit sold well on the local market due to its superb quality this season, which gave high packouts and good prices. In addition to the favourable growing season, the industry has lifted grade standards to eliminate poor quality fruit from the marketplace.

Estimated average grower prices for Central Otago local market summerfruit were \$6.50 per kilogram for cherries, \$2.50 per kilogram for apricots, and \$2.70 per kilogram for peaches and nectarines.

»» TABLE 7.5: AVERAGE NEW ZEALAND WHOLESALE RETURNS FOR SUMMERFRUIT

	2002/03 (\$/KG)	2003/04 (\$/KG)	2004/05 (\$/KG)	2005/06 (\$/KG)
Nectarines	3.55	2.00	2.40	2.55
Peaches	3.55	2.00	2.40	2.50
Apricots	3.35	2.00	2.25	2.50
Cherries	7.50	7.30	8.00	8.00
Plums	4.00	2.50	3.00	3.00

Source
AgFirst and W King.

PROCESSING RETURNS

Process fruit prices remain unchanged with first grade peaches sized above 65 mm diameter receiving \$590 per tonne, and second grade (size 58–65 mm) receiving \$365 per tonne.

Dessert grade plums, usually Black Doris, paid \$1,000 per tonne, while jam grade received \$800 per tonne.

This year's lower process peach yields resulted in lower orchard revenue relative to last season for the average supplier.

» EXPENDITURE

Average orchard expenses increased in 2005/06 with higher labour, agrichemical, fuel and transport costs. These costs are expected to continue to increase in the medium term. Packaging costs this season were similar to last season.

Labour costs per hour have risen between 25 percent and 30 percent in the last three years, largely due to the impact of the Holidays Act. Improved fruit quality giving higher packouts and the adoption of chemical thinning strategies to reduce hand thinning costs have helped cushion the effect of the higher hourly wage

costs in the 2005/06 season. However, in a season of lower fruit quality it may be more difficult for growers to make labour efficiency gains in this manner.

Orchard fuel costs have nearly doubled over the last three years. Spray chemical costs, particularly copper sprays (which are widely used in summerfruit for bacterial disease control), are expected to rise 25 percent in the coming season. Packaging is forecast to rise 15 percent next season.

Freight costs are rising steadily as fuel prices increase. Typical freight costs per kilogram out of Hawkes Bay range from 6.9 to 9.0 cents for major North Island market centres and 28 to 35 cents for South Island destinations. Due to the imbalance of freight traffic between the North and South Islands, the cost of shipping Otago fruit to the North Island is slightly less than the costs stated here.

› NET RESULT

Higher fruit prices helped cushion the effect of increasing orchard expenses in 2005/06. The net effect increased gross margins for Otago growers depending on the impact of the rain event over the New Year period. Export cherries, followed by export apricots showed the greatest increase in gross margin. However, export apricots still lag behind local market nectarines in terms of profitability.

Hawkes Bay summerfruit growers experienced both lower production in apricots and plums and increasing production costs for peaches and nectarines. Market prices did not compensate for this situation, resulting in a lower average net result for Hawkes Bay growers relative to last season.

Lower yields reduced process peach returns for the average process peach grower.

››› ISSUES AND TRENDS

Production and marketing costs continue to increase but are not being matched by increasing market returns. Growers are concerned about the buying power of the supermarkets and the impact this has on their returns. Lower profit margins are causing some growers to exit the industry.

Increasing freight costs due to higher oil prices is making shipment to more distant markets marginal, unless returns in these markets rise to compensate for the increasing costs.

The summerfruit industry has experienced issues with fruit quality over recent years, with green, immature, poor-tasting fruit arriving in the market. This was largely due to fruit being picked well ahead of good eating maturity. The industry is making conscious efforts to address this issue and fruit quality has vastly improved in the 2005/06 season. This move appears to be paying off with improved prices.

»» TABLE 7.6: SUMMERFRUIT GROSS MARGINS

	MARKET	2005/06		GROSS MARGIN		VARIANCE (%)
		MARKETABLE PRODUCTION (KG/HA)	GROSS RETURN (\$/HA)	2005/06 (\$/HA)	2004/05 (\$/HA)	
OTAGO						
Apricots	Export/local	13 200	48 840	14 640	10 480	+40
	Local	13 200	33 000	4 200	4 160	+1
Cherries	Local	13 200	89 760	32 277	29 980	+8
	Export/local	13 200	151 800	72 010	38 600	+87
Nectarines	Local	23 900	64 530	34 765	26 525	+31
Plums	Local	13 000	39 000	13 288	12 040	+10
Peaches	Local	15 300	41 310	9 611	7 366	+30
HAWKES BAY:						
Apricots	Local	12 600	33 000	6 780	7 884	-14
Nectarines	Local	20 000	48 000	6 108	9 108	-33
Plums	Local	12 750	38 250	13 860	17 670	-22
Peaches	Local	18 000	41 400	11 530	14 756	-22
	Process	20 000	11 400	2 550	4 300	-41

Source
AgFirst and W King.

Industry and government efforts to streamline seasonal work permits are successfully overcoming labour shortage issues, particularly for Otago growers where most of the seasonal labour force is from overseas. Development of employment websites on the internet are also helping. The industry is still having difficulty in attracting high-calibre skilled staff.

Compliance costs continue to rise, as well as audit and certification requirements.

The summerfruit industry is continuing to contract in size. Agricultural production statistics show the area planted in peaches fell 32 percent between 2002 and 2005. It is estimated that the area planted in most summerfruit crops is falling. This trend is consistent with the lower profit margins experienced by some in the industry, resulting in growers leaving the industry.

Planting trends in Hawkes Bay illustrate that the majority of interest is in supplying the fresh market. New high-quality plum varieties and licensed peach and nectarine varieties are currently being explored. Old blocks are being replaced with new varieties with the intention of lifting yields and obtaining premium prices. The process industry is also actively seeking new plantings of yellow-fleshed process peaches and nectarines. There is a need to replace aging, disease-ridden blocks of process peaches with new, high-performing blocks.

Carpophilus beetle is once again a major problem for Hawkes Bay summerfruit growers. Further research to find satisfactory control measures for this pest is required.

There is a growing trend within the fresh fruit sector for fruit to be marketed through controlled variety marketing clubs. As their name suggests, these clubs market a particular variety. Growers who wish to supply them pay to belong to the club and receive the benefits of the club's marketing efforts through premium prices. These clubs are proving rewarding for the growers who belong to them, but are causing significant competition for fruit from other growers. Thus, growers who do not belong to them view the growing trend of such clubs with some concern.

8

SUBTROPICALS

This report provides commentary on the subtropical crops of avocados, citrus, persimmons, feijoas, tamarillos and passionfruit. These crops are grown in the warmer parts of New Zealand, particularly Gisborne, the coastal Bay of Plenty, greater Auckland and Northland.

Most of these crops are harvested in autumn and winter, and the commentary discusses the 2006 harvest. The only exception is avocados. Avocados ripen over the spring and summer, and the commentary discusses the 2005/06 harvest.

»» KEY POINTS

- › The growing season has been generally good for subtropical crops in 2005/06 and persimmon, tamarillo and citrus growers report an early start to their harvest as a result.
- › The avocado crop harvested in 2005/06 was a record and export volumes were nearly 80 percent higher than the previous peak, but revenue per tray fell.
- › A poor avocado fruit set in the Bay of Plenty will reduce production in 2006/07 but Northland has had a good fruit set.
- › The weaker New Zealand dollar is improving revenue for passionfruit, feijoas and tamarillos being exported to the United States (US) in 2006.
- › Persimmons sold in Asian markets may be traded in US currency so growers are optimistic of higher revenue in 2006.

»» CLIMATIC FACTORS AFFECTING PRODUCTION

The 2005/06 growing season has been good for subtropical crops. Spring was warm, rainfall fairly well distributed during summer, and there have been few perils such as widespread frost or windstorms in the districts growing subtropical fruits.

Avocado maturity was later than usual in the 2005/06 season. The trees were still carrying a significant proportion of their crop at flowering time. Fruit set was variable and many orchards in the Bay of Plenty had most of the newly-set fruit drop off the tree. The crop to grow on for the 2006/07 harvest will be around 30 percent of the 2005/06 volume across the Bay of Plenty but there is variation between orchards. Typical fruit set in Northland was much better, at around 80 percent of the 2005/06 fruit set.

A warm summer has led to Satsuma mandarin harvest beginning a week early. Gisborne had a late frost in November, which damaged flowering citrus shoots in cooler parts of the district.

Warm conditions also helped persimmons mature a week early. Wet weather since March in the main Gisborne and Auckland growing districts has reduced persimmon fruit quality so export packout is lower than usual.

The 2006 tamarillo harvest also began earlier than 2005 due to the warm summer. Fruit size is generally larger

too. There were some challenges dealing with tamarillo pests, as the summer conditions were also favourable to pests.

Passionfruit growers had a good growing season, but wet weather was a nuisance towards the end of the main harvest period in May 2006.

»» PRODUCTION FIGURES AND FORECASTS

The New Zealand avocado crop harvested in 2005/06 was the largest ever, as forecast. Exports were around 2.5 million trays, more than double the previous season's volume and nearly 80 percent more than in the previous largest season of 2000/01. The increase was a combination of maturing trees and a very good fruit set, following several years of poor fruit set. The domestic market crop volume was 55 percent higher than in 2004/05 and manufacturers of avocado oil had a 400 percent increase in fruit supplied to them.

Citrus crops are generally light in 2006. As a result, the fruit size of Satsuma mandarins is large, which is not ideal as the major export market in Japan prefers medium-sized fruit.

Persimmon growers are still harvesting their 2006 crop at the time of compiling this report. They expect a total export crop of 375 000 trays. This is nearly 20 percent below the 2005 export volume due to the lower packout.

Feijoa growers had a normal growing season. Yields are a little lower than in 2005 but vary considerably between growers.

Tamarillo yields also vary considerably between growers due to local conditions, tree age and orchard management. Overall production is expected to be similar to 2005.

Passionfruit yields vary considerably between growers as well. Growers with covers above their vines report higher proportions of saleable fruit due to less wind blemish and sunburn.

Table 8.1 shows features of the subtropical fruit crops discussed in this report.

»» TABLE 8.1: FEATURES OF THE NEW ZEALAND SUBTROPICAL FRUIT SECTOR

	TOTAL AREA AS AT 30 JUNE 2005 (HA)	MAIN GROWING REGIONS	KEY HARVEST PERIOD	LIFESPAN (YEARS)
Avocados	4 400 ¹	Bay of Plenty (BOP), Northland	Sep–Mar	>15
CITRUS				
Mandarins	676	Northland, Gisborne, Auckland	Apr–Jul	>15
Oranges	541	Northland, Gisborne	Jun–Oct	>15
Lemons	334	Northland, Gisborne	All year	>15
Tangelos	103	Gisborne, BOP	Oct–Nov	>15
Grapefruit	48	BOP, Gisborne, Auckland	Jul–Oct	>15
Total citrus	1 702			
Persimmon	195	Auckland, Gisborne	Apr–Jun	>15
Feijoa	181	BOP, Auckland, Waikato	Mar–May	>15
Tamarillo	206	Northland, BOP, Auckland	Jun–Aug	4–6
Passionfruit	66	BOP, Taranaki, Northland	Feb–May	4–6

Source

Statistics New Zealand, Fruition Horticulture, Avocado Industry Council.

Notes

¹ Avocado industry estimate at March 2006.

»» FINANCIAL POSITION

» REVENUE

Avocado revenue per tray was lower in 2005/06 due to the impact of the significantly higher fruit volume. Pre-season planning had identified that Australia was still the best market option, but the higher fruit volumes and periods of oversupply depressed prices. The amount of late-season Australian fruit was higher than expected, which also had an impact on the start of the New Zealand selling season. Revenue varied between exporters with those more exposed to the wholesale market more affected by the lower revenues. In the domestic market, prices were low and revenue considered uneconomical for the smaller fruit sizes.

»» TABLE 8.2: ESTIMATED VALUE OF SUBTROPICAL CROPS

	DOMESTIC (YEAR ENDED JUNE 2004) (\$ MILLION)	EXPORT (FOB) (YEAR ENDED MARCH 2006) (\$ MILLION)
Avocado	13.9	53.8
Citrus	16.4	5.0
Persimmon	0.6	7.2
Feijoa	1.7	0.1
Tamarillo	1.4	0.9
Passionfruit	0.6	0.7

Source

HortResearch (sector estimates), MAF, Statistics New Zealand.

Prospects for export Satsuma mandarins exported to Japan in 2006 have been encouraging with early market prices of \$2.90 per kilogram reported. Local market revenues for oranges were depressed by 30 percent in 2005 due to significantly higher quantities of imported Australian oranges. Growers expect a slightly higher price in 2006. Prices for other domestic citrus have been steady since 2004 and similar returns are expected in 2006.

»» TABLE 8.3: CITRUS DOMESTIC MARKET PRICES (ORCHARD GATE)

	PRICE 2004/05 (\$/KG)	EXPECTED PRICE 2005/06 (\$/KG)
Mandarins	1.00	1.00
Oranges	0.30	0.35
Lemons	0.50	0.50
Tangelos	0.38	0.40
Grapefruit	0.40	0.40

Source
Agriculture New Zealand Ltd.

Persimmon growers received around \$13.50 per tray for their export fruit in 2005. They expect at least the same revenue in 2006 and are hopeful of higher revenue due to the weaker New Zealand currency. Export persimmons are sold to Asian markets and many are traded in US currency. Most export feijoas, tamarillos, and passionfruit are sold in the US and the exchange rate has improved returns for New Zealand growers so far in 2006.

› EXPENDITURE

All growers have noted higher fuel costs. The freight component of input prices and the cost of transporting produce to market have both increased, and so have the growers' own fuel costs.

Avocado growers in the Bay of Plenty will significantly reduce orchard inputs in 2006 due to the poor fruit set. Pest control is one area that will be reduced, with some growers having little fruit to protect from pests and disease.

Navel orange growers have strongly supported the introduction of a new levy for research and development. The levy is set at one cent per kilogram and collection will begin from harvest in late July 2006.

Feijoa growers with larger orchards are increasingly using a commercial packhouse to pack their fruit for the domestic market. The packhouse buffs fruit and grades it into different size groups, which appeals to supermarket buyers.

The Passionfruit Growers Association has organised bulk purchase of printed packaging for their growers, to help contain costs and improve product presentation. More passionfruit growers are covering their vines to help improve packouts and reduce labour requirements. Fruit is picked up after it falls from the vines. Covering reduces sunburn on the fallen fruit and enables it to be collected less frequently.

› NET RESULT

The financial returns vary greatly between growers of the same crop depending on their production level, whether they are targeting export or domestic markets and how much labour they employ. Many growers of these crops have a small area and growing the crop is a part-time activity, often in conjunction with work off the property. Others are full-time, larger scale, and aiming for higher orchard performance. Table 8.4 provides

indicative yields and gross margins for subtropical crops. The gross margin is the revenue less the direct growing costs for one hectare of a mature crop for one year. Annual costs not factored into the gross margin are overheads like rates, insurance and administrative costs not directly related to production, debt servicing, and drawings. The gross margin does not show the profitability between crops over their life span as it excludes establishment costs, the time lag until first production, and the differing lifespan expected for each crop.

»» TABLE 8.4: YIELDS AND GROSS MARGINS FOR SUBTROPICAL CROPS, 2006¹

	YIELD (TONNES/HA)	GROSS MARGIN (\$/HA)
Avocados	7.9	4 600
Mandarins	25.0	14 200
Oranges	40.0	3 150
Persimmons	12.0	8 700
Tamarillos	7.0	12 500
Feijoas	16.0	16 150
Passionfruit	5.5	15 500

Source

Agriculture New Zealand Ltd, Fruition Horticulture Ltd.

Note

¹ March year end except for avocado, which is for the 2005/06 June year.

»» ISSUES AND TRENDS

The 2005/06 season has been significant for the avocado industry. The industry handled the substantial crop of 2.5 million export trays and a 55 percent volume increase on the domestic market. Over 90 percent of exports were to Australia, with around seven percent to Japan and a small quantity to the US. The volume exported to Japan was nearly four times the previous season's volume. The exchange rate and supply of Mexican and Chilean product have reduced the financial attractiveness of the US market to New Zealand growers.

While this avocado season demonstrated the industry capacity to pick and pack a big crop, fruit scheduling was an issue at times. In the highest volume week in November, 165 000 trays were packed, taking volumes above the market flow plans for the period. In some periods, wet weather or holidays contributed to volumes being below flow plans.

The Bay of Plenty produced 62 percent of New Zealand's avocado crop in 2005/06. Factors implicated in the poor Bay of Plenty fruit set in spring 2005 (fruit to be picked in 2006/07) include periods of cool temperatures during flowering in late November, little rain in the four weeks before flowering, and trees having insufficient reserves to support the new crop after bearing the bumper 2005/06 crop. Avocados have a tendency to bear biennially, yielding poorly one season and well the next. New Zealand avocados are still carrying much of one

maturing crop when flowering to set the next one, which increases the load and stress on the tree. Avocado fruit may be left on the trees for some time when mature, providing some flexibility in time of harvest. Later harvest increases the amount of time that the tree carries both the mature and the newly set crops. In years when exports to the US market have been significant, harvest has been earlier to supply that market window. The Australian market window is later, so harvest of New Zealand fruit is left later to manage market fruit volumes. This may be aggravating the biennial-bearing tendency.

A big Australian avocado crop is expected in 2006 so the New Zealand harvest will be deferred until Australian supply dwindles. Prices are expected to be good for export and domestic fruit due to the lower volume. The fluctuation in volume between seasons is a problem for market and industry development.

The persimmon industry estimates the area of persimmons grown has reduced by around 25 percent in the past two years, mainly due to smaller orchards being subdivided and the persimmons removed. Feijoa plantings are estimated to be slowly increasing, with new plantings outweighing removals, although many new plantings are of small-sized areas. A survey in Gisborne indicated local citrus area is six percent higher than official figures.

Argentine ants have been found in urban areas of Gisborne. This aggressive ant is a serious pest in South Africa and growers are concerned it may spread to commercial citrus orchards. The local council in Gisborne is providing residents with information on identification and control of the ant pest. The ant has been found previously in other urban areas such as near the Port of Tauranga, and control measures have been taken. Such insect incursions are of increasing concern as most industries are aiming to reduce broad spectrum pesticide applications, preferring to use soft chemicals and biological controls where practical.

The presence of insect pests has been an issue for feijoa growers at the US border again in 2006. Pests may be concealed under the calyx of the fruit. There have also been some passionfruit consignments to the US rejected due to pests being found, which is unusual as there are no places for insects to hide on the fruit. These crops have limited pest control options when exporting to the US as the fruit must have low pesticide residues, but the pest control standards are also exacting. The immature pests found may not be species requiring quarantine action in the US, but are not formally identified. The small scale of these New Zealand industries limits their capacity to develop crop-specific market access protocols.

The citrus industry is making progress with their application to access the US market. Proposed access conditions have been published by the US Department of Agriculture. Based on progress so far, access may be allowed from late 2007.

Feijoa fruit is in demand for processing. Prices are less than half those for fresh fruit but harvesting is cheaper. This is because fruit for processing can be allowed to fall and be collected from the ground, whereas fruit sold

for eating fresh needs to be touch-picked. Organic feijoas for processing receive 20 percent higher revenue than conventional processing lines.

The avocado industry would like to be resurveyed to demonstrate freedom from the sunblotch viroid. Their testing indicates the viroid is not present in New Zealand and that previous test results may have been incorrect. Being listed as free from sunblotch would help with access to some export markets.

The first new avocado varieties are being released from an importation programme, which is a joint venture between the avocado industry and a nursery company with post-entry quarantine facilities. More varieties will be released, including those of interest as rootstock, pollinator and fruiting varieties. The industry will own the New Zealand plant variety right for the varieties imported, but has no plans to limit volumes available.

Avocado nurseries report lower orders for plants after demand exceeding supply in recent years. This is probably due to growers awaiting the release of the new varieties. It may also be a response to the lower returns for the 2005/06 crop and the wider knowledge of the variable production typical of avocados, exemplified by the poor fruit set for 2006/07.

Research projects are underway, including several supported by the Sustainable Farming Fund. Persimmon taste is the focus of one project. Spraying techniques are being reviewed by the persimmon and avocado industries. A combined project on post-harvest rots of feijoas, tamarillos and persimmons is nearing completion. The passionfruit industry is seeking funding to research alternatives to copper products for disease control.

The tamarillo industry is continuing its programme of promoting tamarillos to food writers, providing resources such as recipes, photos, and nutritional analysis of the fruit. They are also planning to promote tamarillos in the US. In association with New Zealand Trade and Enterprise, they will promote tamarillos at the Aspen food festival and do some in-store promotions. This follows on from market research in the US, reported in the 2004 *Horticulture Monitoring Report*.

Most of the subtropical industries have a website aimed at growers and consumers. Some include a member-only section and some have interactive material such as an electronic spray diary for avocado growers. The passionfruit industry reports that the recipe section of their website is the most popular.

9

EXPORT BERRYFRUIT

This report provides commentary on the major berryfruit crops produced in New Zealand, focusing mainly on the key export crops. The commentary discusses the 2005/06 season.

»» KEY POINTS

- › The weather over the 2005/06 season had a favourable impact on berryfruit production.
- › The decline in the New Zealand exchange rate over recent months has benefited export berryfruit growers, with all sectors showing an improvement in revenue.
- › Despite cost increases, particularly for labour, berryfruit growers have experienced a lift in their net financial results for this season.
- › Berryfruit industries such as blackcurrants and boysenberries are well organised, and continue to invest in long-term strategic priorities, including research and development.
- › Berryfruit growers continue to have difficulty importing new plant material for variety evaluation and breeding programmes.

»» CLIMATIC FACTORS AFFECTING PRODUCTION

Blackcurrant growers experienced a good growing season, with sufficient winter chilling in 2005 to obtain even bud burst and growth. Pollination was very good, but wind and hail in January 2006 caused some crop losses.

At the end of the 2005/06 growing season, blackcurrant bud quality appeared favourable, with good cane and bud numbers for production in the next growing season.

Temperature and soil conditions were very favourable for strawberry plant establishment in 2005. Similarly, favourable conditions at harvest allowed growers to pick strawberries at or near optimal maturity.

Warm spring and early summer conditions advanced the season for both boysenberry and raspberry growers in the main production area of Nelson.

Blueberry growers also experienced favourable conditions. The latter part of the summer was dry, resulting in good fruit quality but reduced berry size. Autumn rain encouraged the development of rust disease on blueberry plants again.

»» PRODUCTION FIGURES AND FORECASTS

The national crop for blackcurrants was 10 000 tonnes, down on a forecast crop of 11 000 tonnes. Botrytis fungus disease during the bloom period and hail in early January caused crop losses in the order of 500 to 1000 tonnes. In addition, uncertain market prospects led to 500 tonnes of fruit not being harvested. This fruit tended to be either late-harvested varieties or varieties with less desirable characteristics, which did not meet specific market requirements. However, there were low weather-related losses, and newer blocks yielded better than expected.

The harvest in 2007 could reach 12 000 tonnes. It is likely that the crop will vary in volume between 10 000 and 12 000 tonnes, depending on seasonal factors. Typical blackcurrant yields were around 7.2 tonnes per hectare in 2005/06.

Blueberry yields were up this season for both individual growers and the whole industry. There were few adverse climatic events, and production increased from plantings of new, better performing varieties. As a result, total blueberry industry volumes increased more than 50 percent on the previous season.

Rust infestation levels on blueberry plants in autumn 2006 were comparable to 2003 levels, when the disease was first discovered in New Zealand. The level of disease expression is now just as severe on a range of varieties as it was on the variety initially considered most susceptible. The effect on the 2007 crop will only be quantified as the season progresses.

The boysenberry industry has enjoyed growth in total production in 2005/06. Factors contributing to this outcome include a good growing season, grower attention to best management practice, and new plantings coming on stream. Warm spring conditions advanced the season by up to two weeks and placed added pressure on growers to harvest at optimal condition.

Strawberry yields improved this season owing to the absence of major adverse climate events, and an increasing proportion of area planted with the variety Camarosa. Camarosa achieves higher productivity per hectare compared to the former dominant variety, Pajaro.

Raspberry yields have also improved slightly as a result of better seasonal conditions.

»» TABLE 9.1: LONG-TERM AVERAGE AND SEASONAL BERRYFRUIT YIELDS

	LONG-TERM AVERAGE (TONNES/HA)	2003/04 (TONNES/HA)	2004/05 (TONNES/HA)	2005/06 (TONNES/HA)
Blueberries	6.0	5.4	6.0	7.0
Strawberries	24.0	22.8	22.1	28.0
Raspberries	6.0	5.4	6.0	6.3
Boysenberries	15.0	12.75	14.4	17.0
Blackcurrants	5.3	6.8	5.2	7.2

Source

NZ Berryfruit Growers' Federation Inc, Strawberry Growers New Zealand, Blackcurrants New Zealand Ltd and NZ Boysenberry Council.

»» FINANCIAL POSITION

» REVENUE

Low-priced Polish blackcurrants still place significant price pressure on undifferentiated blackcurrant products supplied for processing. Over the entire New Zealand industry, the average price is expected to be about \$1.00 per kg. There have been some contracts available above this level, but these higher-priced contracts will be offset by lower payouts from pooled industry product.

Consumer demand for fresh blueberries is increasing as the health benefits of this fruit become more widely known. Increased demand from the United States (US) has caused a shortfall in supply to the blueberry process sector. The higher demand has led to improved prices and gross margins for both fresh and frozen blueberry suppliers.

Strawberry grower revenues have improved owing to higher yields and returns, with export prices typically around \$14.50 per tray.

Returns to boysenberry growers have recovered this season. Growers attribute this to higher overall yields and the downward movement of the New Zealand exchange rate, which has provided better export returns.

» EXPENDITURE

Blackcurrant growers have moved to utilise existing grape harvesting technology, with minor modifications, for the harvesting of blackcurrants. The capital cost of harvesters is in the order of \$180,000 to \$300,000. Large-scale blackcurrant growers see this as a long-term investment. The speed of mechanical harvesting means growers are able to harvest the crop when fruit maturity conditions are optimal. They are also able to reduce their dependence on the labour market and thus avoid associated employment compliance costs, and can lease or contract out the machinery for grape harvesting later in the season.

Berryfruit growers are finding production costs are creeping up, due mainly to increasing fuel prices. The Holidays Act 2003 has also added to costs, as labour often has to be employed on public holidays over the Christmas period. Over the last three years, base pay rates have moved from around \$9 to \$12 per hour plus an additional 8 percent for four weeks' equivalent annual leave.

Airfreight costs continue to escalate as the New Zealand exchange rate falls. These costs are not offset by higher market returns for crops such as strawberries in the US, where year-round prices are relatively stable.

The cost of annual replanting for strawberry growers is declining because the variety Camarosa is more widely spaced than its predecessor Pajaro. Despite the wider spacing, it is able to achieve similar or higher yields per hectare. This cost saving may not continue in the long-term, as Camarosa may be replaced by new closer-spaced varieties with improved growth and performance characteristics.

Fuel costs have increased significantly and growers can expect other inputs like fertiliser and agrichemicals to rise as supply companies factor in fuel cost increases.

› NET RESULT

Gross margins for export berryfruit crops are shown in Table 9.2. The gross margin does not allow for overhead costs such as taxation, debt servicing or administration. Levies charged per unit of production or sales are included in the gross margin.

Gross margins for all varieties have increased over last year. For most berryfruit crops, 2006 has provided the highest gross margin in the last five years.

››› TABLE 9.2: GROSS MARGINS FOR BERRYFRUIT

	PRODUCT TYPE	2003/04 (HA)	2004/05 (HA)	2005/06 (HA)	CHANGE B/T 2004/05 & 2005/06 (%)
Strawberries	Fresh	23 723	17 509	25 810	+47
Blueberries	Fresh	20 781	23 938	28 860	+20
Blueberries	Frozen	6 805	2 962	8 630	+190
Boysenberries	Frozen	6 461	7 977	11 680	+46
Raspberries	Frozen	7 356	7 626	9 490	+24
Blackcurrants	Frozen	3 865	2 198	2 710	+23

Source
Linda Hawes.

››› ISSUES AND TRENDS

Some significant new market success stories are evident in Japan where they are recognising the quality characteristics of New Zealand blackcurrant products on offer. This has built on the findings of the partially industry-funded “Healthful Berries” project, which has identified specific berry qualities in different blackcurrant varieties.

For example, the variety Ben Ard has very high anthocyanin levels and medicinal product values. It is also likely to be used in fortified foods. This variety is the result of a New Zealand blackcurrant breeding programme, which is continuing, although no new material has been imported in recent years.

New initiatives are being undertaken by some growers to develop other blackcurrant products. If these initiatives are successful, it will result in production becoming focused on selected varieties such as Ben Ard. A discount can be expected for less preferred varieties and/or a premium for the more preferred varieties.

The blackcurrant industry organisation, Blackcurrants New Zealand, continues to invest funds in research

including the Healthful Berries project, pest and disease management (particularly botrytis), and nutrition management.

The Horticulture Export Authority has granted two further export licenses in the last two years. The Horticultural Export Authority has actively supported the industry in refining their export marketing strategy. This should ensure good control of exporters of blackcurrant products through the industry-wide export development programme.

Most of the initial processing of blackcurrants to produce juice concentrate is carried out in Nelson. A company has purchased the plant of Timaru Concentrators Ltd, trialling processing of a modest volume of fruit. The outcome of this trial will determine whether the processing plant justifies further capital development. This could lead to a greater proportion of the Canterbury-grown blackcurrant crop being processed in the region.

The blackcurrant industry is not making significant profits for a number of growers. However, the more successful growers tend to have economies of scale, are moving towards mechanical harvesting, and are actively replanting with preferred varieties. They are also quick to adopt the latest research findings, and this is leading to better yields and fruit quality on younger plantings.

Blueberries New Zealand Incorporated, the blueberry industry organisation, has enjoyed a significant improvement in its revenue from levies, which are based on product sales value.

Blueberries New Zealand is currently reviewing its contract plant breeding programme with Hort+Research. Hort+Research has withdrawn from commercial propagation of blueberries in New Zealand, but a large company engaged in growing blueberries has obtained a propagation licence. This brings the number of licensed New Zealand blueberry propagators to four.

The blueberry industry has also experienced a significant increase in total yield in 2006, up 55 percent on the previous year. This was due to good climatic conditions in the major growing regions, and an increase in production in Hawkes Bay as new plantings came into production.

The Commodity Levy Order for blueberries is due to be voted on later this year. The stability of industry-funded activities such as research and development will be strongly influenced by whether the levy order is supported, especially by large players.

Blueberry export market diversification away from Japan continues, with market expansion in Australia, South-East Asia and the domestic fresh market. The recent New Zealand/Thailand Free Trade Agreement assisted in establishing a supply relationship with that country.

Market diversification has been driven by price competition with other southern hemisphere blueberry suppliers, notably Chile. Chilean suppliers use modified-atmosphere containers to sea-freight blueberries, allowing them to land the fruit in North American markets at very low cost. New Zealand has a freight cost advantage over Chile when supplying Australian and Asian destinations. In the future, blueberry exports using conventional and modified-atmosphere containers will become a feature of the New Zealand blueberry industry.

Strawberry growers continue to lose ground in the US market, due to supply competition from Mexico, Argentina, Chile and other suppliers. There has been some expansion of New Zealand exports to Asia, with prices holding at similar levels to previous years. Exporters are targeting value-added products such as stem berry packs for premium food service customers in US markets. Process strawberry production in New Zealand has dropped 75 percent over the last three seasons, following the importation of cheap substitute products from Chile and China.

The strawberry industry charges a fee on all plant sales managed under its propagation programme, to fund research and development. As the more widely spaced Camarosa variety has become increasingly dominant in the industry, the total number of plants sold annually and therefore the total income available for investment in research and development has decreased. In 2005, 11.5 million plants were sold compared with 13.7 million plants in 2004. Sales for 2006 will not be known until July.

New strawberry varieties were last imported into New Zealand in 2002. Since that time, industry variety evaluation and development programmes are on hold pending completion of the review of the Import Health Standards for all types of berryfruit. The strawberry industry is seeking the reaccreditation of the University of California as a supplier of plant material, as this would allow the importation of new varieties into New Zealand without the need to use Level 3 quarantine facilities. The strawberry industry now considers it is three years behind competitors like Australia, which possesses new and better strawberry variety selections.

The strawberry industry obtained an extension of its critical use exemption for methyl bromide under the Montreal Protocol. This allows continued use of the product as a soil fumigant during 2006 for both strawberry runner and strawberry fruit production, and for a final year in 2007 for strawberry runner growers. Strawberry growers lack confidence in the alternative soil fumigants trialled, and have significant concerns about the long-term sustainability of the industry.

One strawberry exporter is spreading its supply risk by investing in production in North Auckland, and continuing to source fruit from other growers in the Waikato and Auckland Region. Some northern region plantings are to be trialled under protective cover for the coming season using the Spanish Hoops cover system. The industry group is also investing in research on the use of “virtually impenetrable films”, which have the potential to enhance fumigation efficacy and reduce required fumigant dose rates for effective treatment.

The boysenberry industry continues to invest in the Healthful Berries programme after a hiatus in support when the outputs of the programme from Hort+Research and the industry requirements were reviewed. The industry has combined with other berry groups to seek funds through the MAF Sustainable Farming Fund. The project is designed to investigate a new approach for control of flower blight and latent berry infections. If successful, benefits will include reduced costs of fungicide application, increased targeting and lowered crop chemical residue profiles.

A successful outcome from this programme would assist the boysenberry industry meet market requirements. Some international markets have very restrictive crop residue tolerances. Successful biocontrol of the boysenberry disease botrytis would reduce the requirement for agrichemical application and therefore the detectable residue profile on the fruit.

The boysenberry industry is also working on predictive modelling of infection risk for the fungus disease dryberry. This will allow growers to better select fungicides, and time applications for optimum disease control. The industry is focused on achieving zero detectable chemical residues on boysenberry fruit.

The boysenberry industry is reflecting a lift in grower confidence as they achieve better productivity. They have refocused investment in the highest priority areas of research and development.

Small plantings of boysenberries in California and Chile should help this berry maintain a taste presence internationally. The increase in industry production last season and the expected doubling of supply over the next five years provides a much needed assurance to international manufacturers.

The raspberry industry is declining, and there is no industry organisation or representative group. The industry is now focused on the domestic market, as it is not internationally price competitive in either fresh or frozen product.

»» TABLE 9.3: BERRYFRUIT INDUSTRY STATISTICS

	2004 (HA)	AREA 2005 (HA)	2006 (HA)	2004	GROWER NUMBERS 2005	2006
Blackcurrants ¹	1 450	1 450	1 450	50	48	52
Blueberries ²	N/A	N/A	420	81	81	95
Boysenberries ³	210	206	209	55	52	55
Raspberries ⁴	225	220	200	60	60	60
Strawberries ⁵	220	175	170	120	98	100

Notes¹ Blackcurrants New Zealand Ltd estimates.² Blueberries New Zealand Inc.³ NZ Boysenberry Council estimates.⁴ Raspberry grower estimates.⁵ Estimate based on plant sales figures, New Zealand Berryfruit Propagators Ltd.

APICULTURE

10

This section comments on a range of beekeeping activities and products throughout New Zealand.

»» KEY POINTS

- › Beekeeper numbers continued to decline in 2005/06, but hive numbers increased slightly, reversing the trend of the past several years.
- › The New Zealand honey crop increased by 734 tonnes, up from 9689 tonnes in the 2004/05 season to 10 423 tonnes in 2005/06.
- › World honey prices fell to five-year lows in 2004/05 but recovered a little in 2005/06. This was partly due to the falling New Zealand dollar and anti-dumping tariffs imposed by the United States (US) on Chinese and Argentinean honey.
- › Sales of live bees to Canada fell again. This is due to the low honey prices Canadian beekeepers are receiving, and large honey stocks still on hand.
- › Access to the US for live bees was finally achieved after 30 years of negotiations, but few bees were sent because of high compliance costs.
- › The beekeeping industry waged a vigorous technical and political battle during 2005/06 after the release of a risk analysis of imported honey and bee products, completed by Biosecurity New Zealand.
- › Beekeepers are concerned about the huge cost increases for fuel, sugar, varroa treatment and containers: all caused by rising commodity prices and the falling value of the New Zealand exchange rate.

»» CLIMATIC FACTORS AFFECTING PRODUCTION

Some beekeepers say the beekeeping season starts in winter as this period determines how many hives survive into the spring and in what condition. The past winter was one of the warmest and driest on record. Above-average temperatures were recorded throughout much of the South Island and the north and west of the North Island, and near-average temperatures elsewhere. Sunshine hours were well above average for most of the country as well. These conditions were excellent for the over-wintering of beehives and early spring build-up.

During spring, above-average temperatures and sun hours were experienced in the west, with above-average rainfall in the east and parts of the Waikato, Wanganui and Manawatu. This was good news for many beekeepers as strong hives were split to make up for winter losses and to increase hive numbers. However, swarming was a problem in many areas with the very populous hives. Hives that swarm seldom produce a surplus honey crop. Access to apiaries was easier, especially pollination sites. Good crops of honey were obtained from early nectar sources such as rewarewa and manuka in some locations. Snow fell to low levels in Canterbury in late September followed by heavy frosts that damaged a lot of pasture nectar sources.

Unfortunately the weather deteriorated in December and January, and the bumper honey crop beekeepers were expecting after an excellent spring did not eventuate. Summer rainfall was very high in parts of the Bay of Plenty, Hauraki Plains, Coromandel, and Rotorua-Taupo regions, with floods in many places. Wanganui, the Waikato, South Taranaki, Nelson, North Otago and Southland also had above-average rainfall. Meanwhile,

parts of Central Otago, South Canterbury, the Kaikoura coast, Wairarapa, Hawkes Bay, North Taranaki and parts of Auckland experienced below-average rainfall with some high temperatures.

»» HONEY PRODUCTION FIGURES

The nectar flow stalled after Christmas, following the good flow in late spring and early summer from many bush sources. The honey that was produced in early 2006 came in over a two-month period, as a rather long, protracted flow. Despite this, average to above-average crops were reported from the North Island and below-average crops in the South Island with the exception of Canterbury.

Some exceptionally good yields were recorded in Northland, the Coromandel, Bay of Plenty, Hawkes Bay, Taranaki and Canterbury. Yields in these areas ranged from 36 to 95 kilograms per hive with district averages of 36 to 42 kilograms per hive. The national average was 34.7 kilograms per hive. The New Zealand honey crop was calculated at 10 423 tonnes, up 734 tonnes from the 2004/05 season of 9689 tonnes (see Table 2). The six-year average is 9180 tonnes with a range from 4682 tonnes (2002) to 12 252 tonnes (2003). Regional honey production data for the past six years are summarised in Table 10.1.

»» TABLE 10.1: NEW ZEALAND HONEY CROP

	2001 (TONNES)	2002 (TONNES)	2003 (TONNES)	2004 (TONNES)	2005 (TONNES)	2006 (TONNES)	6-YEAR AVERAGE (TONNES)
Northland, Auckland,							
Hauraki Plains	869	593	1 066	1 047	1 221	1 337	1 022
Waikato, King Country,							
Taupo	672	708	2 210	1 164	1 095	1 124	1 162
Bay of Plenty,							
Coromandel,							
Poverty Bay	794	319	2 064	2 052	1 498	1 937	1 444
Hawkes Bay, Taranaki,							
Manawatu, Wairarapa	1 735	750	1 607	1 330	1 440	1935	1466
Marlborough, Nelson,							
Westland	606	300	1 350	550	800	690	716
Canterbury	2 743	921	2 400	1 500	1 500	2100	1861
Otago, Southland	1 725	1 091	1 555	1 245	2 135	1300	1509
New Zealand	9 144	4 682	12 252	8 888	9 689	10 423	9180
Yield/hive (kg)	29.4	15.0	40.8	30.2	33.1	34.7	31.5

Source
AgriQuality New Zealand.

»» POLLINATION

Excellent winter and early spring weather meant many hives maintained brood throughout the winter and started heavy brood rearing earlier than usual. This resulted in strong colonies early in the season, but also meant more hives starved where beekeepers were not closely monitoring the feed situation. Many strong hives were split and requeened to make up winter losses and to help prevent swarming. Despite these precautions, beekeepers reported the spring of 2005 as a bad one for swarming. Many hives were also too strong for Haywood kiwifruit pollination and required extra management to reduce colony populations and create enough room for colony expansion during the time the hives were in the orchards.

Pollination fees for kiwifruit in the Bay of Plenty area increased again to \$140 per hive from an average of \$135 last season, with a top price of \$185 being reported. These prices included delivery into the orchard and sugar for three one-litre feeds to stimulate the bees to collect pollen. Feeding the bees was extra and often done by the orchardists. Pollination brokers paid beekeepers \$102 to \$104 per hive, delivered into depot apiaries in the Bay of Plenty, with the brokers placing the hives into orchards and feeding them sugar syrup. This was up about \$1 per hive on last season, but beekeepers requested hives be fed three to six litres at a time rather than the one-litre feeds provided in previous years. The extra syrup was deemed necessary to keep the bees alive as well as stimulate pollen collection. While many hives benefited from the extra sugar syrup, other hives gathered rewarewa nectar and were very heavy to shift out of the orchards.

Increases in demand for pollination hives for avocados and the gold kiwifruit variety (which flowers at the same time as avocados), could see a shortfall in hives for next season, which begins in October 2006.

The price for pollination hives is expected to increase again next year by an average of \$5 per hive to offset increased costs for labour, fuel and sugar. Some beekeepers are talking about increasing prices to \$200 per hive. However, if honey prices don't recover and honey stocks remain unsold, then more beekeepers may commit to pollination, which could increase competition and help keep pollination prices stable.

The Sustainable Farming Fund, administered by MAF Policy, funded a project to look at the strategic issues facing beekeepers and the horticulture and arable sectors, which rely on honey bees for pollination. Demand for pollination hives is projected to outstrip supply in five to ten years. There are a number of reasons for this and a group of people from key sectors met in May 2006 to discuss the issues and potential remedies.

»» LIVE BEE MOVEMENTS AND EXPORTS

The demand from Canada for package bees reached a peak in 2003/04, with the orders for the last two years being well down. For the exporting season, which is generally February to May, 8988 packages of bees weighing 1 kilogram each, and 10 173 individual queen bees were exported. In comparison, 15 711 packages were exported in 2005, 27 729 in 2004 and 25 121 in 2003.

»» FINANCIAL POSITION

> REVENUE

HONEY

Bulk honey prices paid to New Zealand beekeepers are determined to a large extent by the ability to export any honey that is surplus to local market requirements. Approximately 3000 to 3500 tonnes must be exported each year to maintain local market stability.

New Zealand producers continued to be affected by decreasing world bulk honey prices. The US introduced anti-dumping tariffs of 3 to 5 percent on Chinese and Argentinean honey, but this prompted some unscrupulous practices, which only distorted the market further. Importers of Chinese honey in particular were required to guarantee to pay the tariffs by way of a promissory bond. After incurring liabilities of US\$8.5 million and US\$18 million respectively, two Chinese importers declared bankruptcy and “disappeared” only to emerge after a time as different companies. The United States authorities are currently legislating to plug this loophole by requiring the tariffs to be paid in advance. In order to import honey and meet the anti-dumping duties, honey was purchased and sold very cheaply. In addition there was a large increase in world supplies as a result of previous high prices, and this depressed prices paid to producers even more.

Commodity prices for bulk honey lifted late in the year, mainly as a result of currency fluctuations. One exporter expects to pay \$350,000 as a bonus to his suppliers as a result of favourable currency movements.

New Zealand beekeepers are very concerned about the likely importation of “cheap” Australian honey. Along with reducing prices, this could potentially introduce an exotic bee disease called European foulbrood and/or a drug-resistant strain of the endemic bee disease American foulbrood. Controlling European foulbrood disease, if it became endemic in New Zealand, would significantly add to beekeeper costs, which are already under pressure.

Unlike last season, there was a very good crop of rewarewa honey this year. However, bulk (free in store) prices reduced from last year's \$4.50 to \$4.75 per kilogram to \$3.50 to \$3.90 per kilogram². White clover-type honeys were in reasonable supply with some carryover stocks from last year. However, markets in Europe were limited because of competition, especially from China, India and Argentina. Early sales of clover were made at \$4.10 per kilogram with the producer supplying the drums and often loading the container at their own premises. Later offerings softened to between \$3.50 and \$3.40 per kilogram, with some exporters offering as low as \$2.85 per kilogram (drums and freight supplied). Some spot prices of \$4.50 per kilogram were realised earlier in the year.

Thyme honey realised around \$5.30 to \$6.40 per kilogram, kamahi \$3.25 per kilogram, blue borage \$4.25 per kilogram, and rata around \$4.20 per kilogram. Honeydew increased from last season's low of \$2.60 per

2 All bee product prices are quoted “free in store” unless otherwise stated. “Free in store” price means the price at the honey packer door, or other first point of delivery through the supply chain.

kilogram to between \$2.90 and \$3.30 per kilogram. Most of this movement was due to the weakening New Zealand dollar.

The one bright light on the international honey market is the increase in sales of certified organic honeys. Most of the organic producers are in the South Island. North Island producers have found it too difficult to maintain their organic registration using only organic products for varroa control. Prices paid for organic honeys were generally \$1.20 to \$1.50 per kilogram over non-organic honeys. The demand for organic honey, especially in Germany, is growing and importers are selling the honey labeled as product of New Zealand. This is a positive trend, improving the sustainability of the market for New Zealand honey, and reducing competitive pressure from other exporting countries.

The bulk price for “non-active” manuka honey remained static at \$5.00 to \$7.25 per kilogram, although one exporter in the South Island was paying \$8.30 per kilogram provided manuka pollen content was at least 70 percent of total pollen, with a high total pollen count. Manuka with the “unique manuka factor” (UMF) ranged in price from \$0.90c per point of activity to \$1.25 per point. Bioassays are done to determine the non-hydrogen peroxide activity or UMF, which is expressed as points of activity. Points of activity payments usually begin when the honey scores over ten points. Thus, honeys with an activity of 15 would be worth \$13.50 per kilogram at \$0.90c per point and up to \$18.75 per kilogram at \$1.25 per point.

Buyer and consumer resistance caused comb honey sales to remain moderate in the main markets of Germany and the United Kingdom. Prices paid ranged from \$55 to \$58 per dozen pieces. Returns were better in Japan, with sales at \$70 per dozen being reported. However the Japanese market predominantly wants white honeys only, whereas Germany takes a greater range of colour and flavour types, which can result in a better average return to the producer.

QUEEN BEES

Queen bees were in great demand and most sold for \$20 to \$24 each on the local market, with a high of \$27. This is up slightly on last year. South Island beekeepers are becoming concerned that their stock is regressing in temperament because no breeding queens have been allowed into the South Island from the North Island since varroa arrived in March 2000. One queen breeder has imported semen from the North Island and started a bee stock improvement programme.

Breeding stock from the new strain of Carniolan bees from Austria and Germany was released onto the New Zealand market in 2004. The bee breeder who imported the semen is developing the breed in New Zealand using artificial insemination. Select tested breeder queens sold for \$500 to \$1,000 per queen bee. The Carniolan strain is preferred by many Canadian beekeepers as it has superior over-wintering abilities to the Italian strain. Some North Island beekeepers are reporting that the Carniolan-Italian cross can be very aggressive and concerns were expressed that this bee should not be used in intensive pollination areas like the Bay of Plenty.

BULK BEES

Bulk bees are exported as “package bees”, which are cardboard and wire mesh units that contain between one and one and a half kilograms of bees, a queen bee and a food source. Payment remained the same as last year with exporters paying \$20 per kilogram delivered for bulk bees and \$20 per queen bee. However, the demand from Canada was much reduced from last season owing to depressed world honey prices and unsold honey stocks from the previous season. Exports to Canada comprised of 8988 packages plus 9573 queen bees, compared with 15 711 packages and 2554 queen bees in 2005. Canadian importers took more queen bees this year especially the Carniolan strain.

Although the US market for queen bees and package bees was finally opened to New Zealand stock in 2005, compliance and pre-export inspection requirements made this market very difficult to exploit and only a few queen bees were sent. Australian exporters, however, sent many thousands of packages to the US for almond pollination. New Zealand exporters are looking closely at this market given the downturn in Canada for package bees, and are negotiating with Biosecurity New Zealand regarding export requirements.

PROPOLIS

Propolis is a gum or resin that is exuded by trees and shrubs and collected by bees. It is antibiotic and is made into many therapeutic products after extraction and refining. The price paid for raw propolis remained static at \$150 to \$175 per kilogram for pure product, with little interest from buyers. Beekeepers received approximately \$60-\$80 per kilogram of raw product as collected from the hives or scraped off bee frames and boxes. Propolis collected by the beekeeper is usually mixed with beeswax, which reduces its value. Buyers adopted a more stringent testing protocol this year, which saw average purity ratings reduced. Some producers who regularly achieved 44 to 57 percent purity tests in previous years reported lower ratings of 40 to 47 percent for the current season, with no apparent change in beekeeper practices. Large stocks on hand, imports, and slow export markets reduced demand. Producers are hoping the weakening New Zealand exchange rate will increase sales and buyer interest.

BEESWAX

Most of the wax produced in New Zealand is used to produce sheets of beeswax foundation, which goes into new frames or is used to coat plastic frames. Quantities of beeswax are also made into candles and cosmetics. Prices paid to beekeepers for light cappings wax increased from \$5.00 to \$5.40 per kilogram (including freight) last year to \$6.00 to \$6.60 per kilogram this year, with spot prices of \$7.20 per kilogram. Prices for darker wax from old brood combs increased slightly to between \$4.50 and \$5.00 per kilogram. Demand for organic beeswax increased dramatically with prices of \$8.50 to \$11.50 per kilogram being offered.

HONEY POWDER

The honey powder market had been building up with exports averaging 20 tonnes per month to Asian countries. However, sales decreased dramatically in 2005/06 due to low international honey prices and competition from other manufacturers overseas. Honey powder is used in the manufacturing industry

wherever a honey flavour or content is required. This market may recover with the reduction in the New Zealand exchange rate, and cheaper bulk prices being paid to New Zealand beekeepers.

The returns for apicultural products and services is summarised in Table 10.2.

»» TABLE 10.2: RETURNS TO APICULTURE PRODUCTS

PRODUCT	2004/05 PRICE	2005/06 EXPECTED PRICE
BULK HONEY¹ – COLOUR GRADE (\$/KG FOB)²		
Light (clover type)	3.50–5.00	2.85–4.50
Light amber	3.50–4.75	3.50–4.00
Dark	3.20–4.75	3.00–4.00
Manuka ³	6.00–6.90	5.00–7.25
BEESWAX (\$/KG FOB)		
Light	5.40	6.00–6.60
Dark	4.50	4.50–5.00
POLLEN (\$/KG FOB):		
Not dried or cleaned	13.00	14.00–16.00
Cleaned and dried	20.00–37.00	20.00–37.00
POLLINATION (\$/HIVE)		
Pipfruit, stonefruit and berryfruit	55.00–60.00	60.00–72.50
Kiwifruit – Hawkes Bay	80.00–110.00	110.00–115.00
– Taranaki	80.00–90.00	80.00–95.00
– Auckland	85.00–185.00	90.00–185.00
– Bay of Plenty ⁴	101.00–165.00	102.00–170.00

Source
Agriculture New Zealand Ltd.

Notes

¹ Beekeepers supply drums or containers.

² FOB “free-on-board” – purchaser pays freight and probably insurance.

³ Non-active manuka honey.

⁴ Prices at the lower end of the range are for hives delivered to depot sites.

» EXPENDITURE

Beekeepers faced one of their worst years for increased costs in 2005/06. Rising commodity prices and a falling New Zealand exchange rate compounded the problem. Truck running is a major cost for beekeepers and diesel has risen around 60 percent since May 2005. Other cost increases include sugar (25 percent), varroa treatment (15 percent), packaging, and wages.

The new requirement for secondary processors of bee products (including beekeepers who extract honey) to have an approved risk management plan (RMP) in order to be eligible for an export certificate will also affect costs. Annual compliance costs for RMPs are expected to be between \$1,000 and \$2,000, compared with \$250 to \$400 for certificates of registration issued by local health authorities. Many honey facilities will

need significant expenditure to bring them up to the standards required by the RMPs.

The National Beekeepers' Association (NBA) continued to administer the compulsory apiary levy to fund its American foulbrood pest management strategy (PMS) under the Biosecurity Act. The fee remained unchanged at a base fee of \$20 plus \$8 per apiary. In the South Island another levy of \$2 per hive, with a minimum charge of \$10 (plus GST), was implemented for the first time in April 2005 to fund the South Island varroa PMS. This levy was reduced to \$1.38 per hive for the 2006/07 year, with a minimum fee of \$6.90 plus GST for those with five or fewer hives.

› NET RESULT

The net results for 2005/06 are summarised in Table 10.3. Beekeeping involves many different operations such as bulk honey, retail packed honey, pollination services, other bee products such as propolis, pollen and live bees, and various combinations of these. There is also a great variation in prices paid for bulk honeys ranging from \$2.50 per kilogram for industrial-grade honeys to over \$30 per kilogram for active manuka honey.

Beekeepers with access to manuka honey and/or kiwifruit pollination are doing very well. However, those who produce only bulk honey may be struggling as packers and exporters are only buying from long-term clients. Increases in costs are of great concern and beekeepers will have to critically evaluate their way of “doing business” to see if any savings can be made or better income opportunities exploited. The threats of cheaper imported honey and the possible increased risk of introducing an exotic bee disease are key issues for the industry.

››› TABLE 10.3: INCOME AND EXPENDITURE FOR VARIOUS BEEKEEPING OPERATIONS, 2005/06

	EXTENSIVE: 1000 HIVES (\$)	SPECIALIST HONEY: 700 HIVES (SOUTH ISLAND) (\$)	POLLINATION AND MANUKA HONEY: 700 HIVES (\$)	HIGHLY INTENSIVE HONEY, BEE PRODUCTS, AND POLLINATION: 700 HIVES (\$)
Honey	141 600	115 600	157 500	95 750
Bee products	11 500	4 300	5 500	5 500
Pollination	0	0	88 300	62 000
Total revenue	153 100	119 900	251 300	163 350
Variable costs	112 750	82 500	156 400	93 050
Fixed costs	10 900	11 750	13 300	10 400
Total costs	123 650	94 250	169 700	103 450
Total EBIT¹	29 480	25 650	81 600	59 900
EBIT/hive	29	37	117	86

Source

AgriBusiness Group.

Note

¹ Earnings before interest and tax.

››› ISSUES AND TRENDS

As at May 2006, 2707 beekeepers owned 300 569 hives on 18 996 apiaries (Table 10.4). Beekeeper numbers continued to decline during 2005/06, falling by 240, compared with 261 last year and 582 in 2004. However, hive numbers increased by 7641 and reversed the downward trend of the past several years.

The huge increases in fuel costs for vehicle running has all commercial beekeepers evaluating the location of their apiaries and the costs of servicing them. Many are considering the costs of servicing and moving hives for pollination, especially kiwifruit which flowers when bush sources are yielding nectar. Others are

considering their income mix and may change from honey production to pollination and perhaps live bee production for package bees to the US. Beekeepers wishing to increase income by placing more hives in pollination find they need to mechanise or invest in more labour and/or vehicles to do this: all with consequences to their costs.

Sugar feeding and varroa miticide strips have also increased in price but beekeepers cannot easily save on these costs.

Under new Food Safety Authority requirements, all secondary processors (i.e. those who extract, process, pack or store bee products for export) will have to have an approved risk management plan (RMP) by 1 July 2006, to be eligible for an official assurance (export certificate). So far 150 processors have signed up to have their risk management plans verified. Some beekeepers are selling hives in anticipation of not being able to meet these new conditions, or because they are concerned about potential lower honey prices if imports are permitted and/or the threat of new bee diseases. Other beekeepers are hoping to use the services of contract processors, but these are in short supply and may not choose to take on more clients.

The issue of potential imports of honey from Australia has the industry very concerned and 150 beekeepers marched on Parliament in April 2006 to highlight the issue. Honey from all states except Western Australia, could introduce the exotic bee disease European foulbrood. This disease kills young larvae and greatly reduces colony strength. This disease is usually controlled overseas by feeding antibiotics. However, New Zealand beekeepers do not wish to feed antibiotics and are not sure if they will even be able to under current regulations. Apart from the effect of the disease on honey and pollination hives, beekeepers are concerned that honey prices will be driven down even further, and their business viability will be threatened. Many are saying they cannot survive with bulk honey at its current price level of \$3 per kilogram, and are concerned that imports will force prices down even further to between \$2 and \$2.50 per kilogram. Beekeepers are also concerned that when the free trade agreement is signed with China, huge volumes of very cheap honey may be allowed into New Zealand.

There is a shortage of skilled labour willing and able to work in the beekeeping sector and some staff are “poached” from other employers each year. Beekeeping in the South Island (but not the North Island) is on Immigration New Zealand’s immediate skill shortage list, which eases immigration procedures for potential employees. Employers have had to progressively increase wages and/or conditions to attract and keep employees. Wage rates of \$17 to \$24 per hour are common and some key personnel earn over \$50,000 per annum plus benefits.

Varroa is well established throughout the North Island. Varroa will kill any colonies not managed by beekeepers. Many North Island beekeepers lost a lot of hives during the 2006 autumn, due mainly to varroa. Figures of 10 to 20 percent losses are very common. The problem stemmed mainly from the protracted honey season, which prevented beekeepers from harvesting their honey as early as they wanted to. Beekeepers using

contract extracting facilities were held up even more. This delayed the autumn treatment of hives by four to eight weeks and varroa and associated viruses took their toll during this time.

The cost of monitoring and treating varroa, using registered miticide strips (Apistan, Apivar and Bayvarol), are significant and can cost \$12 to \$24 per hive each year, or more depending on the severity of infestation. This does not include the cost of placing the strips in the hives, removing them after six to eight weeks' treatment and monitoring their effectiveness. New products containing organic oils have come on to the market but they are more variable in their effectiveness than the synthetic products, and hives require more monitoring.

Many beekeepers are reporting resurgence in wasp numbers and attribute the loss of many hives to wasps. These large wasp numbers have not been seen for many years and beekeepers are hoping that this is not a portent of things to come.

»» TABLE 10.4: CHANGES IN NEW ZEALAND BEEKEEPER AND HIVE STATISTICS SINCE VARROA ARRIVED IN 2000

	MAY 2000	NUMBER OF BEEKEEPERS MAY 2006	% CHANGE	MAY 2000	NUMBER OF HIVES MAY 2006	% CHANGE
Blenheim	414	257	-38	28 443	27 937	-2
Canterbury	727	511	-30	60 356	56 211	-7
Hamilton	486	185	-62	49 863	39 278	-21
Otago/Southland	451	343	-24	50 823	48 134	-5
Palmerston North	1 214	659	-46	43 534	46 581	+7
Tauranga	496	258	-48	51 008	53 797	+5
Whangarei	1 168	494	-58	36 086	31 631	-12
New Zealand	4 956	2 707	-45	320 113	300 569	-6

Source
AgriQuality Limited.

»» STOP PRESS

As this report went to press, it was announced that the varroa bee mite had been found in the South Island. The South Island had been considered free of the pest. Although beekeepers can treat hives to reduce the impact of varroa, the find is of concern to both beekeepers and growers of crops requiring pollination. Biosecurity New Zealand has launched an immediate response, and management options are being considered.

APPENDIX A

HORTICULTURE MONITORING TEAM

SECTOR CONTROLLER

Irene Parminter, MAF Policy, Hamilton

MODEL CONTROLLERS

Model	Model Controller	Telephone
Kiwifruit	Irene Parminter	(07) 856 1824
Viticulture	Nick Dalgety	(03) 543 9184

COMMENTARY

Process and fresh vegetables	Murray Doak	(03) 358 1860
Floriculture	Irene Parminter	(07) 856 1824
Summerfruit	Irene Parminter	(07) 856 1824
Subtropicals	Irene Parminter	(07) 856 1824
Export berryfruit	Nick Dalgety	(03) 543 9184
Apiculture	Irene Parminter	(07) 856 1824

Note: Initial editing of the Hawkes Bay viticulture and summerfruit chapters was completed by Rachel Agnew.

