



PIPFruit

Key results from the Ministry for Primary Industries 2012 pipfruit monitoring programme

KEY POINTS

- Favourable climatic conditions led to increased pipfruit yields in the Hawke's Bay and Nelson regions in 2011. However, competition from other exporting countries, stagnant demand in European markets and a high New Zealand dollar impacted on export returns of most varieties. The Hawke's Bay model achieved a small profit in 2011, while the Nelson model experienced a third consecutive year of significant losses.
- Export production and fruit size in 2012 are variable; however, fruit colour and quality are reported as excellent. Export yields of Royal Gala, Fuji and the Pacific series of apple are expected to be lower than last year, while higher export yields are anticipated for Jazz™, Envy™, Pink Lady™ and some pear varieties.
- A cool spring delayed the start to the season, impacting on the early season sales window for New Zealand apples into Asia. Markets in Europe appear well balanced, helped by a significant reduction in exports from the main southern hemisphere suppliers. A small lift in export returns is predicted for all varieties in 2012.
- The Hawke's Bay and Nelson orchard models anticipate a profit before tax in 2012 of \$76 000 and \$13 300, respectively. Should this financial outcome be realised for the Nelson model, it would be the first profit it has achieved since 2008.
- Growers in both regions are responding to the low profitability outcomes by judicious expenditure, revising their business models and assessing options to improve business viability in the short to medium term. Further rationalisation of the industry is likely.
- Vertically integrated businesses are tending to fare better than grower suppliers, with margins in the provision of post-harvest services and/or marketing offsetting any orchard losses.
- The pipfruit sector is optimistic about the potential for market expansion in Asia in the medium term, with outcomes from research and development programmes helping to better manage the phytosanitary and residues requirements of various markets.

Table 1: Key parameters, financial results and budgets for the pipfruit orchard models

Year ended 31 December	2008	2009	2010	2011	2012 budget
Hawke's Bay model					
Planted area (ha)	22	22	22	22	22
Total TCE ¹	56 070	68 135	62 260	65 885	67 360
Export TCE	35 485	49 990	38 200	45 865	46 540
Weighted average return (\$/export TCE) ²	24.55	21.60	22.00	21.50	22.05
Net cash income (\$)	948 100	1 130 050	941 300	1 048 600	1 088 200
Orchard working expenses (\$)	771 700	952 850	848 000	916 400	914 200
Orchard profit before tax (\$)	80 900	78 700	-5 000	33 200	76 000
Orchard surplus for reinvestment (\$) ³	31 600	31 700	-25 000	7 200	41 500
Nelson model⁴					
Planted area (ha)	27	27	27	27	27
Total TCE	75 500	80 500	73 160	79 150	81 100
Export TCE	55 500	58 850	54 730	60 610	60 455
Weighted average return (\$/export TCE)	24.82	18.60	21.10	20.00	21.65
Net cash income (\$)	1 439 300	1 178 100	1 201 900	1 256 200	1 360 700
Orchard working expenses (\$)	1 125 200	1 289 835	1 143 100	1 215 300	1 227 900
Orchard profit before tax (\$)	177 000	-261 635	-126 200	-79 600	13 300
Orchard surplus for reinvestment (\$)	104 600	-263 735	-101 200	-94 600	-4 700

Notes

The pipfruit orchard models are based on an owner-operator business structure and representative of grower suppliers.

Figures may not add to totals due to rounding.

1 Tray carton equivalent is a measure of apple and pear weight. A TCE is defined as 18.6 kg packed weight which equates to 18.0 kg sale weight.

2 Returns per export TCE are expressed at free alongside ship (FAS return). This is the value of the product at the ship's side net of commission, additional packaging costs and controlled atmosphere or SmartFresh™ costs.

3 Orchard surplus for reinvestment is the cash available from the orchard business, after meeting living costs, which is available for investment on the orchard or for principal repayments. It is calculated as orchard profit after tax plus depreciation less drawings/living expenses.

4 Corrections were made retrospectively to some expenditure items in the 2009 Nelson model. Due to this revision, data for the 2009 year will not match the *Horticulture and Arable Monitoring Report 2010*.

FINANCIAL PERFORMANCE OF THE HAWKE'S BAY PIPFRUIT ORCHARD MODEL IN 2011

Favourable climatic conditions in the 2010/11 season resulted in high gross and export yields for Hawke's Bay apple crops. However, increased competition in the main markets in Asia from both northern and southern hemisphere suppliers, stagnant demand in Europe and an appreciating New Zealand dollar reduced export returns for several varieties. The model achieved an orchard profit before tax of \$33 200, up from a loss of \$5000 in the previous year.

The Hawke's Bay pipfruit orchard model remained at 22 hectares, with 15 hectares owned and 7 hectares leased. Some changes were made to the variety mix: Braeburn dropped from 20 to 16 percent, and Envy™ was included in the model for the first time at 3 percent of the orchard model planted area. Pacific Queen™ has risen slightly to 7 percent of the orchard model planted area.

REVENUE UP DUE TO HIGH YIELDS

Net cash income for the model was up 11 percent in 2011, at \$1.05 million, driven by a 20 percent increase in export production compared with the hail-affected crop of 2010. The increase in yield was the result of:

- generally favourable growing conditions with a warm, wet season;
- an "on" crop for those varieties that exhibit a biennial bearing pattern¹, such as Braeburn and the Pacific series; and
- new plantings of Jazz™ coming into production.

The average export recovery rate (that is, the proportion of gross yield exported) across all varieties in 2011 was 70 percent, considerably higher than the 61 percent achieved in 2010.

Based on information on likely market demand for the Braeburn variety in 2011, and considering poor export returns in recent years, several growers in Hawke's Bay took up the 16 cents per kilogram price offered by juice processors. This, combined with seasonal factors, explains the low export recovery rate of 47 percent for the Braeburn variety.

Export returns impacted by competition and unfavourable exchange rates

The average weighted return per export carton of \$21.50 FAS (free alongside ship) in 2011 was 50 cents (2 percent) less than that achieved in 2010.

Prices for Fuji and Royal Gala were impacted by increasing competition in the main markets in Asia from both northern and southern hemisphere suppliers. In contrast, demand in Asian markets for the Pacific series of apple remained strong with demand exceeding supply. Prices increased to compensate for the higher exchange rate with export returns for these varieties closely matching those received in 2010.

Efforts by New Zealand growers and exporters in 2011 to better co-ordinate market supply with demand for Braeburn helped to lift export returns for this variety to around \$18 per export carton, about \$1 higher than the previous season.

Table 2: Hawke's Bay pipfruit orchard model FAS¹ export returns

Year ended 31 December	2008 (\$/TCE ²)	2009 (\$/TCE)	2010 (\$/TCE)	2011 (\$/TCE)	2012 Budget (\$/TCE)
Variety					
Braeburn	25.25	16.00	17.15	18.05	19.50
Envy™	–	–	–	25.50	28.00
Fuji	26.90	25.60	26.20	22.40	22.00
Granny Smith	21.40	20.80	22.45	21.25	22.00
Jazz™	30.30	21.65	21.85	19.70	22.00
Pacific Beauty™	24.35	33.00	27.30	25.70	25.25
Pacific Queen™	27.00	35.80	30.75	31.80	32.85
Pacific Rose™	24.10	29.70	28.45	28.50	31.25
Pink Lady™	29.50	24.00	22.45	21.55	22.50
Royal Gala	22.25	20.80	22.00	20.55	20.25
Weighted average	24.55	21.60	22.00	21.50	22.05

Notes

¹ Free alongside ship.

² Tray carton equivalent.

¹ Biennial bearing is a physiological phenomenon common in some fruit trees, which means an irregular crop load from year to year. In the "on" year, too much fruit is set and, without management, results in small fruit size. Flower initiation in the "on" year is lower, which means the following year will be an "off" year (too little fruit).

LARGE CROP GENERATES EFFICIENCIES

Orchard working expenses for the model increased 8 percent overall in 2011 to \$916 400. This increase was largely driven by a higher crop volume.

Harvesting costs per gross carton dropped from \$2.14 in 2010 to \$2.07 in 2011 due to efficiencies in picking a large crop, and better packouts and separate juice picks. Thinning costs incurred in 2011 were also lower on average, compared with the previous hail year, and ranged between \$1469 and \$4277 per hectare amongst the monitored growers. Some growers had high thinning expenses as chemical thinners gave mixed results, while others were constrained by seasonal finance issues. The increase in other wages by 10 percent to \$48 400 was due to additional labour requirements needed for training young trees and/or grafting over to new varieties.

Post-harvest expenses decreased in 2011 to \$10.04 from \$10.51 per export carton in the previous year, mainly due to better export recovery rates. Packaging expenses increased due to price increases for packaging materials.

Expenditure on repairs and maintenance increased 23 percent to \$19 500 for the model as some growers faced large repairs and maintenance bills in 2011 after deferring expenditure in the previous hail year. Expenditure on contract machine work was also higher at \$2650; several growers across the Heretaunga Plains had tile drains on their orchards cleaned out in response to recent wet seasons.

With the efficiencies afforded by the large crop in 2011, total orchard working expenses dropped back to \$19.98 per export carton, compared with \$22.20 in 2010. The total orchard operating expenses, which include interest expenses, lease, depreciation and wages of management, dropped from \$26.12 in 2010 to \$23.24 per export carton FAS in 2011.

NET RESULT GIVES ANOTHER YEAR OF LOW PROFITABILITY

Higher yields and export recovery rates in 2011 compensated for the lower prices and resulted in an improved cash operating surplus for most growers. The model returned a cash operating surplus of \$132 200, up from \$93 300 in 2010. Lower interest rates in 2011 helped to keep interest expenses at similar levels to the previous year, despite the increase in total liabilities. Lease expenses increased in the model from \$3000 to \$3500 per hectare leased reflecting a rise in rates as leases were renewed.

The model made a modest profit before tax of \$33 200 in 2011, up from a loss of \$5000 in the previous year, and a small but positive cash surplus for reinvestment of \$7200. Off-orchard cash income from wages or from other crops, such as summerfruit, is being relied on to fund the bulk of expenditure on capital items.

Expenditure on capital held steady at \$22 000, matching depreciation levels. Some expenditure was on necessities, such as the installation of water meters. This was required to comply with the National Environmental Standard (NES) on water take measurements that came into effect in November 2010 for all water takes over 5 litres per second.

Increasing debt has reduced the equity level of the orchard model to 62 percent, down from an average of 70 percent in recent years. The value of land and buildings remained stable in 2011.

Some growers in Hawke's Bay are continuing to replace a small proportion of existing varieties with more marketable varieties, such as Pacific Queen™, mainly via grafting in order to constrain expenditure. The model allowed for a small proportion of tree replacement via grafting in winter 2011. Expenses for this replacement are included under other wages, repairs and maintenance and general expenses rather than recorded as development expenditure in the model budget, as in previous years. The Income Tax Act 2007 (DO 6) provides for immediate deduction of expenses for replacement plantings for listed horticultural crops to a maximum of 15 percent of the orchard planting over any three-year period, and with a maximum of 7.5 percent of the planting in any income year².

² Source: *Staples Tax Guide 2012*.

BUDGET FINANCIAL PERFORMANCE OF THE HAWKE'S BAY PIPFRUIT ORCHARD MODEL IN 2012

In 2012, the model is anticipating a net trading profit before tax of \$76 000, double that of the previous year. This improvement is driven by small increases in export yields and prices.

EXPECTATIONS OF SMALL IMPROVEMENTS IN YIELDS AND PRICES

Net cash income for the model is budgeted to reach \$1.09 million in 2012, up 4 percent on the previous year due to an anticipated lift in export prices and small increases in gross and export yields.

Small changes are planned in the variety mix, with a reduction in the planted area of Braeburn and an increase in the planted area of Pacific Queen™. The variety Envy™, which was included in the model in 2011, is expected to have produced a small marketable crop in 2012.

Climatic conditions variable

Initial predictions were for a neutral weather pattern but another La Nina developed early in the 2011/12 growing season. This meant prevailing north-east winds brought significant rain events, unsettled weather patterns and humid and cool conditions to the Hawke's Bay region.

June and July 2011 had mild temperatures, which delayed the accumulation of winter chill units by approximately two weeks. The mild, early winter was followed by a cold August and September, with only 7 and 14 growing degree days (GDD) respectively, compared with historic averages of 20 and 47 GDD for these months. Consequently, bud break was delayed by around 14 days. Dormancy breakers applied at their usual timing failed to work well, leading to drawn out, rather than compressed blossom periods and this adversely affected chemical thinner response and ultimately, fruit size. Some growers increased their expenditure on hand thinning to compensate.

A hail storm in mid-October 2011 affected summerfruit crops in the region, but pipfruit orchards escaped with only minor damage, which was thinned out later.

Below-average temperatures and the lack of sunny weather throughout summer resulted in small fruit size for most varieties, in particular Royal Gala, and delayed the start of harvest by around two weeks. Royal Gala

is expected to reach an average count size³ of only 135 this year, around three count sizes smaller than usual.

On the positive side, the cooler summer meant fruit colour was excellent for most varieties and sunburn was almost absent, leading to firm, high-quality fruit at harvest. This is expected to improve export recovery rates in 2012 for varieties prone to sunburn such as Braeburn, Envy™, Jazz™ and Pink Lady™.

In the colder parts of the district, the incidence of russet on susceptible varieties such as the Pacific series was high and is expected to lower export recovery rates.

Colour development and fruit size are below optimal for some blocks of standard Fuji, reducing the export recovery rate for this variety. Greater volumes than usual were sent for processing.

An improvement in the "grow for process" price to 17 cents per kilogram meant several growers in the Hawke's Bay took up this option for Braeburn again in 2012. This kept the expected export recovery rate for this variety close to 50 percent.

The wet growing season minimised the need for irrigation but increased disease problems, with black spot causing significant crop loss on some orchards. Frequent rain events in March caused harvest disruption for early and mid-season varieties.

The average export recovery rate across all varieties is estimated at 69 percent for 2012.

MARKET RETURNS AT THE MERCY OF THE EXCHANGE RATE

In May–June 2012, growers and exporters had mixed expectations about the market outturn given the delayed start to the season, the high value of the New Zealand dollar against the main trading currencies and a less than optimum fruit size profile for some varieties. A weighted average return per export carton of \$22.05 FAS is budgeted for the model, up slightly on last season.

The delay in the start of harvest flowed through to the start of the selling season into Asia. This meant a shorter window than usual for New Zealand Royal Gala and Fuji before the arrival of competing southern hemisphere supplies.

³ The count size refers to the number of apples in a carton. Larger numbers therefore imply smaller fruit.

Demand in Asian markets for the Pacific series of apple is strong with demand exceeding supply. Increased prices are expected to compensate for the high exchange rate with export returns for these varieties expected to closely match those of the past two years.

Markets in Europe appear well balanced helped by a significant reduction in exports of Royal Gala, Cripps Pink/Pink Lady™ and Braeburn from the main southern hemisphere suppliers. Import prices are higher than last year for most varieties, which should help to compensate for the very high value of the New Zealand dollar against the Euro and UK pound in 2012.

Good demand in Europe plus diversification into other markets in 2012 has lifted the price expectation for Jazz™ to \$22 per export carton FAS, a welcome outlook for growers of this variety.

EXPENDITURE EXPECTED TO HOLD STEADY

Orchard working expenses in 2012 are expected to remain at similar levels to 2011, given there are no significant changes in production.

Labour expenses are budgeted to remain stable overall. It is anticipated increases in pruning and thinning expenditure will be compensated for by a drop in other orchard wages as growers plan to reduce the amount of grafting and other development work over winter 2012.

Post-harvest costs are expected to hold at around \$10 per export carton. A fire in mid-January 2012 at Hawk Packaging, a local plant that produces much of the industry's packaging, was a concern, but supply issues were resolved in time for the start of harvest.

On-orchard operating costs are budgeted to drop 6 percent to \$5225 per hectare as growers tighten up on expenses, such as repairs and maintenance, after large repair bills in 2011.

Water-related charges are budgeted for the first time at \$500 for the model in 2012. This includes items such as an audit of installed water meters and expenses incurred in monitoring and reporting water use.

Many pipfruit growers in the region are expecting to face water consent renewal expenses in 2013 or thereafter. This is due to the Tukituki River and Heretaunga Zone catchments being earmarked for plan and policy changes in the regional council's Long Term Plan 2012–22.

Overall overhead expenses in 2012 are expected to remain similar to 2011, allowing for increases in line with inflation.

NET RESULT

The model's cash operating surplus is budgeted to increase 32 percent to \$174 000 in 2012. A fall in interest rates is lowering interest payments for the model. Opening debt levels were budgeted to increase slightly on 1 January 2012, with the need to lift seasonal finance provisions via overdraft. Lease expenses are expected to remain stable at \$3500 per hectare leased following a rise in lease rates in 2011.

The model is anticipating a net trading profit before tax of \$76 000, more than double that of the previous year. Growers are hoping that market returns will at least meet their cautious expectations.

Few growers are budgeting for any orchard development work. Capital expenditure is also expected to drop back, with growers intending to reduce overdrafts and pay off some principal on term debt, should the budgeted market outcome be realised.

There are few orchard blocks on the market in the Hawke's Bay region in 2012, and no recent sales. In the absence of market data, the land and buildings value of the orchard model remained stable, at \$1.65 million, on 1 January 2012.



Table 3: Hawke's Bay weather data

Month	Rainfall (mm)			Growing degree days ¹ (GDD)		
	2010/11	2011/12	Long-term average	2010/11	2011/12	Long-term average
June	120	55	76	23	28	20
July	88	84	145	7	16	14
August	76	47	39	38	7	20
September	59	32	31	89	14	47
October	79	69	46	76	97	102
November	14	33	26	138	137	146
December	54	91	44	260	178	216
January	194	97	33	262	228	250
February	8	45	25	267	194	227
March	105	129	49	194	164	197
April	159	87	82	98	124	118
May	66	63	49	94	40	54
Total	1022	832	645	1547	1227	1411

Note

1 GDD – growing degree days. GDD are a temperature index, calculated by taking the average of the daily high and low temperatures each day compared with a baseline (usually 10 degrees centigrade). They help to predict the date that a flower will bloom or a crop reach maturity.

Sources

MetService (Hastings) for rainfall data.

NIWA (Whakatu) for Growing Degree Days data.

Figure 1: Hawke's Bay pipfruit orchard model profitability trends

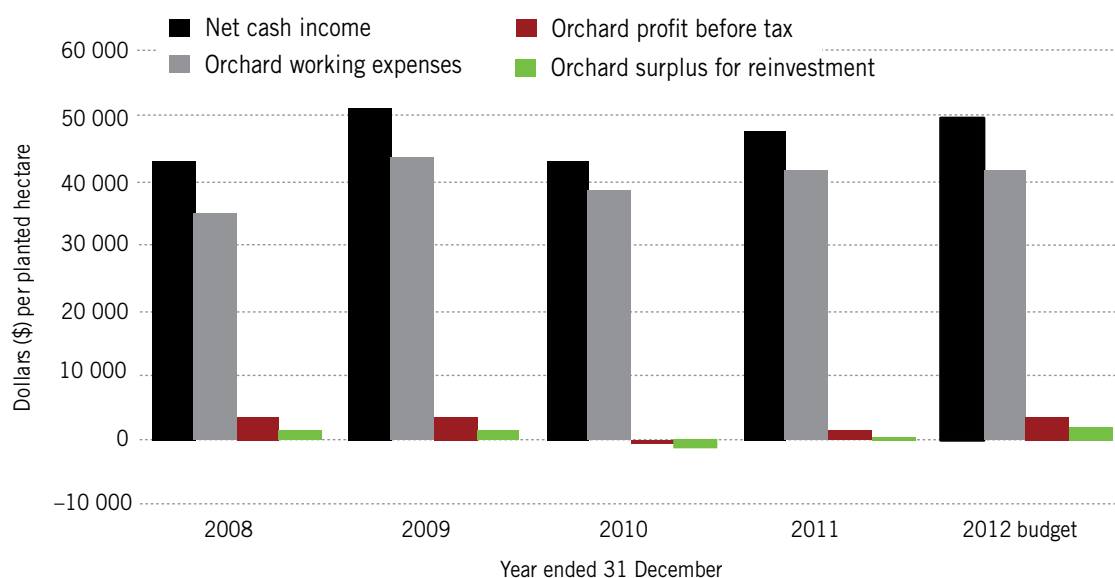


Table 4: Hawke's Bay pipfruit orchard model production and income details for 2011

Year ended 31 December	Area (ha)	Gross yield (TCE ¹)	Export recovery (%)	Total export cartons	Export return (\$/TCE)	Non-export return (\$/TCE)	Revenue (\$)
Variety							
Braeburn	3.5	15 770	47	7 410	18.05	2.45	154 250
Envy™	0.7	250	64	160	25.50	1.40	4 200
Fuji	3.5	9 625	78	7 510	22.40	0.80	169 900
Granny Smith	0.7	2 415	59	1 425	21.25	2.15	32 400
Jazz™	2.2	4 435	82	3 635	19.70	0.70	72 200
Pacific Beauty™	0.7	1 655	72	1 190	25.70	5.25	33 000
Pacific Queen™	1.5	2 480	81	2 010	31.80	2.90	65 200
Pacific Rose™	1.3	3 925	60	2 355	28.50	5.55	75 900
Pink Lady™	1.3	3 915	68	2 660	21.55	0.35	57 800
Royal Gala	6.6	21 415	82	17 510	20.55	1.65	366 250
Total/average	22.0	65 885	70	45 865	21.50	2.22	1 031 100

Notes

Figures may not add to totals due to rounding.

1 Tray carton equivalent.

Table 5: Hawke's Bay pipfruit orchard model budget production and income details for 2012

Year ended 31 December	Area (ha)	Gross yield (TCE ¹)	Export recovery (%)	Total export cartons	Export return (\$/TCE)	Non-export return (\$/TCE)	Revenue (\$)
Variety							
Braeburn	3.3	15 015	52	7 810	19.50	2.50	170 250
Envy™	0.7	1 070	80	855	28.00	0.70	24 100
Fuji	3.5	9 855	65	6 405	22.00	0.85	143 900
Granny Smith	0.7	2 500	50	1 250	22.00	3.80	32 200
Jazz™	2.2	6 785	87	5 905	22.00	0.70	130 500
Pacific Beauty™	0.7	1 475	69	1 020	25.25	1.65	26 450
Pacific Queen™	1.8	2 545	73	1 855	32.85	5.95	65 100
Pacific Rose™	1.3	3 815	56	2 135	31.25	4.85	74 900
Pink Lady™	1.3	4 500	77	3 465	22.50	1.30	79 300
Royal Gala	6.6	19 800	80	15 840	20.25	1.20	325 500
Total/average	22.0	67 360	69	46 540	22.05	2.19	1 072 200

Notes

Figures may not add to totals due to rounding.

1 Tray carton equivalent.

Table 6: Hawke's Bay pipfruit orchard model budget

	2010	2011				2012 budget			
	Whole orchard (\$)	Whole orchard (\$)	Per planted ha (\$)	Per TCE ¹ gross (\$)	Per TCE export (\$)	Whole orchard (\$)	Per planted ha (\$)	Per TCE ¹ gross (\$)	Per TCE export (\$)
Revenue									
Pipfruit income	892 800	1 031 100	46 868	15.65	22.48	1 072 200	48 736	15.92	23.04
Other orchard income	48 500	17 500	795	0.27	0.38	16 000	727	0.24	0.34
Net cash income	941 300	1 048 600	47 664	15.92	22.86	1 088 200	49 464	16.16	23.38
Orchard working expenses	848 000	916 400	41 655	13.91	19.98	914 200	41 555	13.57	19.64
Cash operating surplus	93 300	132 200	6 009	2.01	2.88	174 000	7 909	2.58	3.74
Interest	50 000	49 000	2 227	0.74	1.07	47 500	2 159	0.71	1.02
Rent and/or leases	21 000	24 500	1 114	0.37	0.53	24 500	1 114	0.36	0.53
Depreciation	30 000	27 500	1 250	0.42	0.60	26 500	1 205	0.39	0.57
Net non-fruit cash income	2 700	2 000	91	0.03	0.04	500	23	0.01	0.01
Orchard profit before tax	-5 000	33 200	1 509	0.50	0.72	76 000	3 455	1.13	1.63
Tax		3 500	159	0.05	0.08	11 000	500	0.16	0.24
Orchard profit after tax	-5 000	29 700	1 350	0.45	0.65	65 000	2 955	0.96	1.40
Allocation of funds									
Add back depreciation	30 000	27 500	1 250	0.42	0.60	26 500	1 205	0.39	0.57
Drawings/living expenses	50 000	50 000	2 273	0.76	1.09	50 000	2 273	0.74	1.07
Orchard surplus for reinvestment²	-25 000	7 200	327	0.11	0.16	41 500	1 886	0.62	0.89
Reinvestment									
Net capital purchases	22 000	22 000	1 000	0.33	0.48	12 000	545	0.18	0.26
Development	8 300	0	0	0.00	0.00	0	0	0.00	0.00
Principal repayments	0	0	0	0.00	0.00	15 000	682	0.22	0.32
Orchard cash surplus/deficit	-55 300	-14 800	-673	-0.22	-0.32	14 500	659	0.22	0.31
Other cash sources									
Off-orchard cash income	30 500	29 400	1 336	0.45	0.64	22 500	1 023	0.33	0.48
New borrowings	35 000	0	0	0.00	0.00	0	0	0.00	0.00
Introduced funds	0	0	0	0.00	0.00	0	0	0.00	0.00
Net cash position	10 200	14 600	664	0.22	0.32	37 000	1 682	0.55	0.80
Assets and Liabilities³									
Land and building (opening)	1 650 000	1 650 000	110 000	25.04	35.97	1 650 000	110 000	24.50	35.45
Plant and machinery (opening)	120 000	120 000	8 000	1.82	2.62	120 000	8 000	1.78	2.58
Orchard related investments (opening)	0	0	0	0.00	0.00	0	0	0.00	0.00
Total orchard assets (opening)	1 770 000	1 770 000	118 000	26.86	38.59	1 770 000	118 000	26.28	38.03
Total liabilities (opening)	645 000	675 000	45 000	10.24	14.72	680 000	45 333	10.10	14.61
Total equity	1 125 000	1 095 000	73 000	16.62	23.87	1 090 000	72 667	16.18	23.42

Notes

Figures may not add to totals due to rounding.

1 Tray carton equivalent.

2 Orchard surplus for reinvestment is the cash available from the orchard business, after meeting living costs, which is available for investment on the orchard or for principal repayments. It is calculated as orchard profit after tax plus depreciation less drawings/living expenses.

3 Land and building asset value includes the value of owned land, trees and supports, other improvements, orchard buildings and dwellings on the property. Asset and liability values per planted hectare are based on owned planted area of 15 hectares; not owned and leased planted area of 22 hectares.

Table 7: Hawke's Bay pipfruit orchard model expenditure

	2010	2011				2012 budget			
	Whole orchard (\$)	Whole orchard (\$)	Per planted ha (\$)	Per TCE ¹ gross (\$)	Per TCE export (\$)	Whole orchard (\$)	Per planted ha (\$)	Per TCE ¹ gross (\$)	Per TCE export (\$)
Orchard working expenses									
Hand harvesting	133 240	136 400	6 200	2.07	2.97	139 400	6 336	2.07	3.00
Pruning	40 500	40 500	1 841	0.61	0.88	41 800	1 900	0.62	0.90
Thinning	56 000	52 000	2 364	0.79	1.13	54 200	2 464	0.80	1.16
Other wages	44 200	48 400	2 200	0.73	1.06	40 000	1 818	0.59	0.86
ACC - employees	3 960	4 000	182	0.06	0.09	4 200	191	0.06	0.09
Total labour expenses	277 900	281 300	12 786	4.27	6.13	279 600	12 709	4.15	6.01
Packing	175 325	185 750	8 443	2.82	4.05	188 500	8 568	2.80	4.05
Packaging	144 000	177 950	8 089	2.70	3.88	180 500	8 205	2.68	3.88
Cool storage	68 375	82 500	3 750	1.25	1.80	83 700	3 805	1.24	1.80
Freight	13 700	14 500	659	0.22	0.32	14 800	673	0.22	0.32
Total post harvest expenses	401 400	460 700	20 941	6.99	10.04	467 500	21 250	6.94	10.05
Weed and pest control	62 800	61 000	2 773	0.93	1.33	59 400	2 700	0.88	1.28
Pollination	1 200	1 450	66	0.02	0.03	1 450	66	0.02	0.03
Fertiliser and lime	2 100	1 500	68	0.02	0.03	2 000	91	0.03	0.04
Electricity	3 200	3 300	150	0.05	0.07	3 300	150	0.05	0.07
Vehicle	12 600	10 700	486	0.16	0.23	10 000	455	0.15	0.21
Fuel	12 300	14 300	650	0.22	0.31	14 300	650	0.21	0.31
Repairs and maintenance	15 800	19 500	886	0.30	0.43	15 000	682	0.22	0.32
General	7 900	8 500	386	0.13	0.19	7 300	332	0.11	0.16
Contract machine work	1 600	2 650	120	0.04	0.06	2 200	100	0.03	0.05
Total other working expenses	119 500	122 900	5 586	1.87	2.68	114 950	5 225	1.71	2.47
Rates	5 300	5 400	245	0.08	0.12	5 500	250	0.08	0.12
Water and related charges	0	0	0	0.00	0.00	500	23	0.01	0.01
General insurance	4 700	4 800	218	0.07	0.10	5 000	227	0.07	0.11
Crop insurance	14 400	14 400	655	0.22	0.31	14 400	655	0.21	0.31
ACC - owners	2 750	2 200	100	0.03	0.05	2 200	100	0.03	0.05
Communication	2 800	2 600	118	0.04	0.06	2 600	118	0.04	0.06
Accounting	3 800	3 800	173	0.06	0.08	3 800	173	0.06	0.08
Legal and consultancy	3 250	3 400	155	0.05	0.07	3 400	155	0.05	0.07
Levies and subscriptions	9 500	12 400	564	0.19	0.27	12 500	568	0.19	0.27
Other administration	2 700	2 500	114	0.04	0.05	2 250	102	0.03	0.05
Total overhead expenses	49 200	51 500	2 341	0.78	1.12	52 150	2 370	0.77	1.12
Total orchard working expenses	848 000	916 400	41 655	13.91	19.98	914 200	41 555	13.57	19.64
Calculated ratios									
Economic orchard surplus (EOS) ²	14 600	56 000	2 545	0.85	1.22	98 800	4 491	1.47	2.12
Orchard working expenses/NCI ³	90%	87%				84%			
EOS/total orchard assets	0.8%	3.2%				5.6%			
EOS less interest and lease/equity	-5.0%	-1.6%				2.5%			
Interest+rent+lease/NCI	7.5%	7.0%				6.6%			
EOS/NCI	1.6%	5.3%				9.1%			
Wages of management	48 700	48 700	2 214	0.74	1.06	48 700	2 214	0.72	1.05

Notes

Figures may not add to totals due to rounding.

1 Tray carton equivalent.

2 EOS is calculated as follows: net cash income less orchard working expenses less depreciation less wages of management (WOM). WOM is calculated as follows: \$31 000 allowance for labour input plus 1 percent of opening total orchard assets to a maximum of \$75 000.

3 Net cash income.

FINANCIAL PERFORMANCE OF THE NELSON PIPFRUIT ORCHARD MODEL IN 2011

The Nelson pipfruit model experienced a loss before tax of \$79 600 in 2011, despite increases in both gross and export yields and efforts to constrain expenditure. Low market returns for the main apple and pear varieties constrained most growers' revenue. This negative financial result is the third consecutive year of financial losses for the Nelson pipfruit model.

The planted area for the Nelson pipfruit model remained stable at 27 hectares in 2011, with 22 hectares owned and 5 hectares leased. Some changes were made to the variety mix: Braeburn dropped from 24 to 22 percent and Royal Gala dropped from 21 to 20 percent of the orchard model planted area. Growers in the Nelson region have relinquished lease blocks and pulled out trees from lower producing orchard blocks of these varieties. Some growers have grafted over or pulled out trees of Tentation™ and Jazz™, frustrated by the inadequate market returns for these varieties in recent years.

MODERATE RISE IN REVENUE

Net cash income for the model in 2011 reached \$1.26 million, up 5 percent, compared with 2010. Increases in gross and export yields, of 8 and 11 percent respectively, helped to compensate somewhat for the drop in average export prices.

Yields up given favourable climate and younger trees maturing

Climatic conditions were generally favourable during the 2010/11 production and harvest season. Dry conditions in October and November 2010 meant a lower incidence of black spot disease.

Braeburn production per hectare increased 11 percent, to 4140 cartons gross per hectare, helping to counteract the drop in planted area of this variety in the model. Royal Gala yields remained similar to 2010 levels.

Gross yields per hectare of Jazz™ and Pink Lady™ increased 21 and 43 percent, respectively, due to young trees increasing yields as they mature.

Production of Cox Orange was down by around 10 percent, impacted by the warmer weather in 2010/11 and an off year in the biennial bearing pattern of this variety.

Good export recovery rates achieved for apples

The average export recovery rate (that is, the proportion of gross yield exported) across all varieties was 77 percent in 2011, up from 75 percent in 2010.

The recovery rate for Braeburn, at 75 percent, was influenced by a greater proportion of this variety being sent for juicing. Like their counterparts in Hawke's Bay, some growers in Nelson took up the 16 cents per kilogram price offered by juice processors in 2011.

Favourable climatic conditions delivered good colour development for Royal Gala, Fuji, Pink Lady™ and Jazz™, helping to lift export recovery rates to long-term averages for these varieties.

The warmer, drier season was not conducive for russet development in pear varieties that require it, such as Beurre Bosc and Taylors Gold. Export recovery rates for these varieties were low in 2011, with some lines down to 30 percent. Wind rub and blemishes reduced the export recovery rate for Doyenne du Comice.

Expected premiums for new varieties still not being achieved

The average weighted return per export carton for the Nelson model in 2011 was \$20.00 FAS, down 5 percent, or \$1.10 per carton, compared with 2010. Export returns for all varieties except Braeburn were lower, compared with the previous year; returns for Braeburn were higher.

The outcome from the mid- to late-season European markets was disappointing for many growers, in particular because these markets are the main outlet for Braeburn, Jazz™ and Pink Lady™. In 2011 these varieties accounted for around 55 percent of export production in the Nelson model. Stagnant demand in Europe, an increase in export volumes of southern hemisphere Cripps Pink/Pink Lady™, and an appreciating New Zealand dollar against the Euro and UK pound, all contributed to limiting export returns for these varieties.

Braeburn delivered higher revenue per hectare than Jazz™ in 2011 for several growers. This increased their frustration at having invested in costly new intensive plantings of Jazz™ to replace the Braeburn variety. Another year of marginal returns for Jazz™ in 2011 led some growers to commit Jazz™ blocks to process in 2012.

EFFORTS CONTINUED TO IDENTIFY AND TRIM DISCRETIONARY EXPENDITURE

Orchard working expenses increased 6 percent overall on 2010, to \$1.22 million, mainly due to the increase in production. The larger crop generated efficiencies, reducing orchard working expenses on a per export carton basis from \$20.89 FAS in 2010 to \$20.05 in 2011.

Harvesting expenses increased from \$1.99 to \$2.07 per gross carton, mainly due to a rise in the minimum wage. Thinning expenses decreased 10 percent to \$1926 per hectare, helped by effective chemical thinning but also reflecting tighter constraints on growers' cash flow. Expenditure on other wages was down nearly 20 percent as growers reduced the number of permanent staff and employed workers on a contract basis instead.

Post-harvest costs increased to \$9.76 per export carton, up from \$9.24 per export carton in 2010. This was due to packhouse operators passing on to growers increases in wage costs and packaging materials.

Expenditure on weed and pest control was down 10 percent to \$2526 per hectare as growers switched from using costly shoot growth retardant sprays to mechanical root pruning to slow vegetative shoot growth.

Spending on repairs and maintenance increased 13 percent to \$926 per hectare. This expenditure takes into account some expenses for the grafting over of trees to more marketable varieties.

Contract machinery work fell almost 80 percent

to \$44 per hectare. This reflects a significant drop off in contract work supporting orchard redevelopment. Most orchards are now in maintenance mode.

Crop insurance was up almost 20 percent to \$374 per hectare, with two-thirds of the monitored growers taking out crop insurance in 2011. Having crop insurance is a recommended risk management strategy as few businesses could survive the economic impact of significant crop loss, usually from hail, and, more importantly, their bankers won't allow them to continue without it.

Legal and consulting expenditure was up 13 percent to \$222 per hectare as growers sought advice from consultants on business survival strategies. Other administrative expenses, at \$374 per hectare, reverted to usual levels following expenditure constraints in 2010.

NET RESULT INSUFFICIENT TO SUSTAIN ORCHARD

The model returned a cash operating surplus of \$40 900 in 2011, down from \$58 800 in the previous year. A lift in production and savings in some operating expenses were not sufficient to negate the fall in average export prices of \$1.10 per export carton.

The injection of capital from outside the business in the previous year reduced overall liabilities and, together with lower interest rates, helped to reduce interest expenses from \$100 000 in 2010 to \$78 000 in 2011. The reduction in lease expenses was achieved by negotiating new orchard leases at more competitive rates. Depreciation has returned to usual values. The outcome is an orchard loss of \$79 600 in 2011. Albeit a negative financial outcome, the result is an improvement on the past two years for the model.

Living expenses returned to more usual levels following stringent cut-backs in the previous year.

External cash sources continued to be relied on to cover the orchard deficit of \$94 600. The main cash source in 2011 was off-orchard income of \$55 000. This was from one of several sources including off-orchard salaried work, income from other crops, such as kiwifruit and hops, and contracting out sector-related services. The remaining deficit was managed via an increase in term debt reported under new borrowing.

Expenditure on capital items and significant orchard redevelopment is on hold by most Nelson growers until profitability improves. The model also takes this position.

Table 8: Nelson pipfruit orchard model FAS¹ export returns

Year ended 31 December	2008 (\$/TCE ²)	2009 (\$/TCE)	2010 (\$/TCE)	2011 (\$/TCE)	2012 Budget (\$/TCE)
Variety					
Braeburn	24.00	16.20	18.70	19.00	20.00
Cox Orange	21.60	23.00	22.85	21.05	24.00
Fuji ³	–	–	22.30	20.05	21.00
Jazz TM	30.30	21.50	21.25	19.30	22.00
Pink Lady ^{TM3}	–	–	22.15	21.45	22.45
Royal Gala	22.60	19.50	21.30	19.30	20.00
Other apples	27.30	17.60	24.40	24.00	25.70
Pears	29.60	23.40	30.80	26.80	30.20
Weighted average	24.82	18.60	21.10	20.00	21.65

Notes

1 Free alongside ship.

2 Tray carton equivalent.

3 Included with Other apples in previous years.

As in Hawke's Bay, some growers in the Nelson region are continuing with replacement of a small proportion of existing varieties into more marketable varieties, mainly via grafting in order to constrain expenditure. The model allowed for a small proportion of tree replacement via grafting in winter 2011. Expenses for this replacement are included under other wages, repairs and maintenance and general expenses rather than recorded as development expenditure in the model

budget, as in previous years. The Income Tax Act 2007 (DO 6) provides for immediate deduction of expenses for replacement plantings for listed horticultural crops to a maximum of 15 percent of the orchard planting over any three-year period, and with a maximum of 7.5 percent of the planting in any income year.

Feedback from monitored growers and industry representatives indicates that land values have remained stable, at \$111 000 per planted hectare.

BUDGET FINANCIAL PERFORMANCE OF THE NELSON PIPFRUIT ORCHARD MODEL IN 2012

The Nelson pipfruit model is budgeted to achieve a small orchard profit before tax of \$13 300 in 2012, driven by an anticipated improvement in export prices for all apple and pear varieties. Should this financial outcome be realised, it would be the first profit the model has achieved since 2008.

In May–June 2012, growers and exporters in the Nelson region were cautious about budgeted market returns, especially for varieties sold later in the season. Fluctuations in the value of the New Zealand dollar against the main trading currencies over the selling season make it difficult to predict final market outturn.

Given the poor financial outcomes of recent years, the majority of growers monitored have stalled orchard redevelopment plans. The focus continues to be on trying to get the best return possible from the trees already planted.

REVENUE EXPECTED TO IMPROVE

Net cash income for the model is budgeted to reach \$1.36 million in 2012, up 8 percent on the previous year, due to the anticipated increase in export prices. Both gross and export production are expected to remain at similar levels to 2011.

Yields variable across varieties

The 2011/12 growing season was cooler than usual leading to a delay in the start of harvest by seven to ten days, and impacting on fruit size of some varieties. Smaller fruit size and black spot disease pressure are expected to reduce recovery rates for several varieties.

Attempts to save on thinning expenditure early in the season led to more fruit on the trees at harvest. This, in combination with a rapid advance in maturity once harvest got under way, meant a lot of fruit needed to be picked in a shorter timeframe

than usual, impacting on likely export recovery rates. Yields for early season varieties like Royal Gala and Cox Orange are expected to be lower in 2012, mostly because of smaller fruit size.

Production per hectare for the mid- and later-season apple varieties, such as Jazz™ and Pink Lady™, continues to increase as trees mature. The higher crop load is likely to affect Jazz™ fruit size, with expectations of an average 118 count size instead of the preferred market 110 count size.

Export recovery rates for pears are expected to average 56 percent in 2012, up from 52 percent last year, and despite problems of low russet on varieties such as Taylors Gold and Beurre Bosc.

The average export recovery rate across all varieties is estimated at 75 percent in 2012, down from 77 percent last year.

Market returns at the mercy of the exchange rate

In May–June 2012, growers and exporters had mixed expectations about the market outturn given the delayed start to the season, the high value of the New Zealand dollar against the main trading currencies and a less than optimum fruit size profile for some varieties. A weighted average export return per carton of \$21.65 FAS is budgeted for the model, an increase of \$1.65 per carton on 2011.

Nelson growers will be pleased that markets in Europe seem well balanced, given their reliance on them for most of the apple varieties grown in the region.

Should the budgeted \$22.00 per export carton FAS be realised for Jazz™, this would provide much needed confidence to the many growers of this variety in Nelson.

GROWERS WORK HARD TO CONSTRAIN EXPENDITURE

Total orchard working expenses for the model in 2012 are expected to remain similar to the previous year.

The model is budgeting for a small increase in overall labour expenses, taking into account incremental increases in the minimum wage and planned fruit thinning of the 2013 crop.

Weed and pest control expenses are projected to increase 15 percent to \$2893 per hectare due to the need for further fungicide sprays to manage increased disease pressure, mainly black spot.

Fertiliser and lime expenditure is budgeted to drop 10 percent to \$352 per hectare as growers defer lime applications and move to maintenance fertiliser applications for older trees.

The cooler summer of 2012 is expected to reduce electricity expenditure 23 percent to \$263 per hectare with less irrigation needed.

Deferral of repairs and maintenance is an ongoing trend as growers seek to spend on necessary items only until profitability improves.

NET RESULT

Most monitored orchards, depending on their variety mix, are expecting an improvement in their cash operating surplus in 2012, mainly because of an anticipated lift in prices for all varieties. A cash operating surplus of \$132 800 is budgeted for the model in 2012, up from \$40 900 last year. This surplus should be adequate to cover interest, lease and depreciation expenses,

resulting in a small orchard profit before tax of \$13 300, a significant improvement for the model following three consecutive years of losses.

The model shows a small increase in interest expenses because of the need to take on new debt to part fund the orchard losses of 2011.

No capital purchases or significant development expenditure are planned. Off-orchard income will be relied upon to help meet living expenses.

As illustrated by the model, many growers in the Nelson region are in a holding pattern. Growers continue to use funds from other sources to supplement their orcharding operations, which highlights that the stand-alone export grower supplier is struggling to survive.

Nelson growers are hopeful that increased yields from maturing new plantings, and moves to secure more profitable methods for fruit sales, will help sustain their businesses. Some growers are looking at various options to improve business viability, in the short-term at least. These include:

- cropping for juice only, hence reducing permanent labour costs;
- using cheaper alternatives to control tree vigour, such as root pruning; and
- changing packhouses and exporters.

Banks continue to encourage their growers to rationalise expenditure in areas that will not compromise fruit quality, and to sell off assets not critical to the business. Financiers report that some of the more financially challenged orchard businesses may face foreclosure.



Table 9: Nelson weather data

Month	Rainfall (mm)			Growing degree days ¹ (GDD)		
	2010/11	2011/12	Long-term average	2010/11	2011/12	Long-term average
June	217	251	132	24	21	6
July	51	103	143	6	1	3
August	170	22	151	39	6	7
September	162	62	113	51	4	29
October	14	200	127	71	86	76
November	18	82	102	170	122	124
December	242	292	96	251	193	194
January	35	41	80	236	223	237
February	10	103	78	244	215	214
March	56	82	99	174	161	177
April	107	67	118	82	95	85
May	292	49	115	104	16	30
Total	1 374	1 354	1 353	1 453	1 142	1 180

Note

1 GDD – growing degree days. GDD are a temperature index, calculated by taking the average of the daily high and low temperatures each day compared with a baseline (usually 10 degrees centigrade). They help to predict the date that a flower will bloom or a crop reach maturity.

Source

NIWA (Riwaka).

Figure 2: Nelson pipfruit orchard model profitability trends

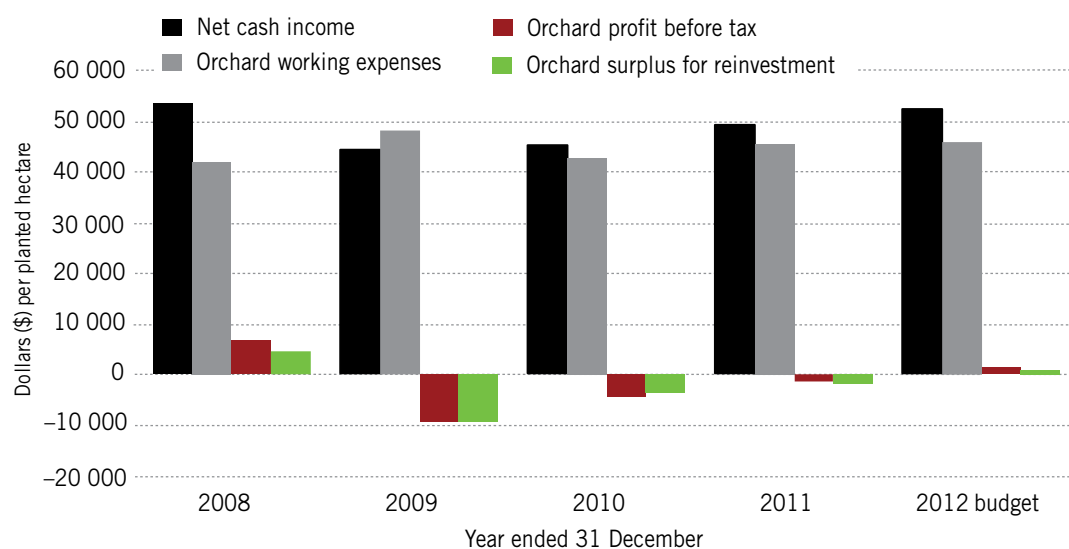


Table 10: Nelson pipfruit orchard model production and income details for 2011

Year ended 31 December	Area (ha)	Gross yield (TCE ¹)	Export recovery (%)	Total export cartons	Export return (\$/TCE)	Non-export return (\$/TCE)	Revenue (\$)
Variety							
Braeburn	5.9	24 600	75	18 450	19.00	2.55	366 200
Cox Orange	1.6	3 200	72	2 295	21.05	2.70	50 800
Fuji	1.4	3 400	66	2 255	20.05	0.90	46 200
Jazz™	5.4	15 700	82	12 855	19.30	0.30	248 900
Pink Lady™	1.4	3 800	75	2 850	21.45	1.00	62 100
Royal Gala	5.4	18 250	84	15 330	19.30	2.55	303 300
Other apples	3.2	6 300	72	4 530	24.00	2.90	113 800
Pears	2.7	3 900	52	2 045	26.80	5.35	64 900
Total/weighted average	27.0	79 150	77	60 610	20.00	2.35	1 256 200

Notes

Figures may not add to totals due to rounding.

1 Tray carton equivalent.

Table 11: Nelson pipfruit orchard model budget production and income details for 2012

Year ended 31 December	Area (ha)	Gross yield (TCE ¹)	Export recovery (%)	Total export cartons	Export return (\$/TCE)	Non-export return (\$/TCE)	Revenue (\$)
Variety							
Braeburn	5.9	25 500	76	19 360	20.00	2.50	402 500
Cox Orange	1.6	3 000	72	2 145	24.00	3.05	54 000
Fuji	1.4	3 800	68	2 565	21.00	0.80	54 800
Jazz™	4.9	15 100	81	12 215	22.00	0.85	271 200
Pink Lady™	1.4	5 000	75	3 785	22.45	0.85	86 000
Royal Gala	5.4	16 500	79	13 030	20.00	3.20	271 700
Other apples	3.8	7 400	63	4 665	25.70	2.60	127 000
Pears	2.7	4 800	56	2 690	30.20	5.80	93 500
Total/weighted average	27.0	81 100	75	60 455	21.65	2.55	1 360 700

Notes

Figures may not add to totals due to rounding.

1 Tray carton equivalent.

Table 12: Nelson pipfruit orchard model budget

	2010	2011				2012 budget			
	Whole orchard (\$)	Whole orchard (\$)	Per planted ha (\$)	Per TCE ¹ gross (\$)	Per TCE export (\$)	Whole orchard (\$)	Per planted ha (\$)	Per TCE ¹ gross (\$)	Per TCE export (\$)
Revenue									
Pipfruit income	1 201 900	1 256 200	46 526	15.87	20.73	1 360 700	50 396	16.79	22.51
Other orchard income	0	0	0	0.00	0.00	0	0	0.00	0.00
Net cash income	1 201 900	1 256 200	46 526	15.87	20.73	1 360 700	50 396	16.79	22.51
Orchard working expenses	1 143 100	1 215 300	45 011	15.35	20.05	1 227 900	45 478	15.15	20.31
Cash operating surplus	58 800	40 900	1 515	0.52	0.67	132 800	4 919	1.64	2.20
Interest	100 000	78 000	2 889	0.99	1.29	80 000	2 963	0.99	1.32
Rent and/or leases	30 000	17 500	648	0.22	0.29	17 500	648	0.22	0.29
Depreciation	55 000	25 000	926	0.32	0.41	22 000	815	0.27	0.36
Net non-fruit cash income	0	0	0	0.00	0.00	0	0	0.00	0.00
Orchard profit before tax	-126 200	-79 600	-2 948	-1.01	-1.31	13 300	493	0.16	0.22
Tax	0	0	0	0.00	0.00	0	0	0.00	0.00
Orchard profit after tax	-126 200	-79 600	-2 948	-1.01	-1.31	13 300	493	0.16	0.22
Allocation of funds									
Add back depreciation	55 000	25 000	926	0.32	0.41	22 000	815	0.27	0.36
Drawings/living expenses	30 000	40 000	1 481	0.51	0.66	40 000	1 481	0.49	0.66
Orchard surplus for reinvestment²	-101 200	-94 600	-3 504	-1.20	-1.56	-4 700	-174	-0.06	-0.08
Reinvestment									
Net capital purchases	5 000	0	0	0.00	0.00	0	0	0.00	0.00
Development	20 000	0	0	0.00	0.00	0	0	0.00	0.00
Principal repayments	0	0	0	0.00	0.00	0	0	0.00	0.00
Orchard cash surplus/deficit	-126 200	-94 600	-3 504	-1.20	-1.56	-4 700	-174	-0.06	-0.08
Other cash sources									
Off-orchard cash income	39 400	55 000	2 037	0.69	0.91	48 000	1 778	0.59	0.79
New borrowings	0	40 000	1 481	0.51	0.66	0	0	0.00	0.00
Introduced funds	250 000	0	0	0.00	0.00	0	0	0.00	0.00
Net cash position	163 200	400	15	0.01	0.01	43 300	1 604	0.53	0.72
Assets and Liabilities³									
Land and building (opening)	2 442 000	2 442 000	111 000	30.85	40.29	2 442 000	111 000	30.13	40.40
Plant and machinery (opening)	175 000	125 000	5 682	1.58	2.06	110 000	5 000	1.36	1.82
Orchard related investments (opening)	0	0	0	0.00	0.00	0	0	0.00	0.00
Total orchard assets (opening)	2 617 000	2 567 000	116 682	32.43	42.36	2 552 000	116 000	31.49	42.22
Total liabilities (opening)	1 200 000	1 097 000	49 864	13.86	18.10	1 137 000	51 682	14.03	18.81
Total equity	1 417 000	1 470 000	66 818	18.57	24.26	1 415 000	64 318	17.46	23.41

Notes

Figures may not add to totals due to rounding.

1 Tray carton equivalent.

2 Orchard surplus for reinvestment is the cash available from the orchard business, after meeting living costs, which is available for investment on the orchard or for principal repayments. It is calculated as orchard profit after tax plus depreciation less drawings/living expenses.

3 Land and building asset value includes the value of owned land, trees and supports, other improvements, orchard buildings and dwellings on the property. Asset and liability values per planted hectare are based on owned planted area of 22 hectares; not owned and leased planted area of 27 hectares.

Table 13: Nelson pipfruit orchard model expenditure

	2010	2011				2012 budget			
	Whole orchard (\$)	Whole orchard (\$)	Per planted ha (\$)	Per TCE ¹ gross (\$)	Per TCE export (\$)	Whole orchard (\$)	Per planted ha (\$)	Per TCE ¹ gross (\$)	Per TCE export (\$)
Orchard working expenses									
Hand harvesting	150 000	163 800	6 067	2.07	2.70	170 000	6 296	2.10	2.81
Pruning	59 300	59 300	2 196	0.75	0.98	56 600	2 096	0.70	0.94
Thinning	57 500	52 000	1 926	0.66	0.86	56 100	2 078	0.69	0.93
Other wages	110 000	88 700	3 285	1.12	1.46	91 000	3 370	1.12	1.51
ACC - employees	8 100	7 700	285	0.10	0.13	6 700	248	0.08	0.11
Total labour expenses	384 900	371 500	13 759	4.69	6.13	380 400	14 089	4.69	6.29
Packing	191 500	230 200	8 526	2.91	3.80	229 600	8 504	2.83	3.80
Packaging	209 300	242 300	8 974	3.06	4.00	241 600	8 948	2.98	4.00
Cool storage	97 000	109 400	4 052	1.38	1.81	109 100	4 041	1.35	1.80
Freight	8 100	9 500	352	0.12	0.16	9 400	348	0.12	0.16
Total post harvest expenses	505 900	591 400	21 904	7.47	9.76	589 700	21 841	7.28	9.75
Weed and pest control	75 400	68 200	2 526	0.86	1.13	78 100	2 893	0.96	1.29
Pollination	4 500	4 500	167	0.06	0.07	4 500	167	0.06	0.07
Fertiliser and lime	10 500	10 500	389	0.13	0.17	9 500	352	0.12	0.16
Electricity	9 300	9 200	341	0.12	0.15	7 100	263	0.09	0.12
Vehicle	17 900	17 400	644	0.22	0.29	16 100	596	0.20	0.27
Fuel	21 000	20 000	741	0.25	0.33	20 600	763	0.25	0.34
Repairs and maintenance	22 100	25 000	926	0.32	0.41	23 500	870	0.29	0.39
General	15 200	16 100	596	0.20	0.27	17 000	630	0.21	0.28
Contract machine work	5 700	1 200	44	0.02	0.02	900	33	0.01	0.01
Total other working expenses	181 600	172 100	6 374	2.17	2.84	177 300	6 567	2.19	2.93
Rates	13 000	13 300	493	0.17	0.22	13 500	500	0.17	0.22
Water and related charges	800	800	30	0.01	0.01	800	30	0.01	0.01
General insurance	10 000	10 500	389	0.13	0.17	10 500	389	0.13	0.17
Crop insurance	8 500	10 100	374	0.13	0.17	10 100	374	0.12	0.17
ACC - owners	1 800	2 200	81	0.03	0.04	2 200	81	0.03	0.04
Communication	5 400	5 400	200	0.07	0.09	5 400	200	0.07	0.09
Accounting	5 400	5 500	204	0.07	0.09	5 600	207	0.07	0.09
Legal and consultancy	5 300	6 000	222	0.08	0.10	6 000	222	0.07	0.10
Levies and subscriptions	13 000	16 400	607	0.21	0.27	16 300	604	0.20	0.27
Other administration	7 500	10 100	374	0.13	0.17	10 100	374	0.12	0.17
Total overhead expenses	70 700	80 300	2 974	1.01	1.32	80 500	2 981	0.99	1.33
Total orchard working expenses	1 143 100	1 215 300	45 011	15.35	20.05	1 227 900	45 478	15.15	20.31

Calculated ratios

Economic orchard surplus (EOS) ²	-53 370	-40 770	-1 510	-0.52	-0.67	54 280	2 010	0.67	0.90
Orchard working expenses/NCI ³	95%	97%				90%			
EOS/total orchard assets	-2.0%	-1.6%				2.1%			
EOS less interest and lease/equity	-12.9%	-9.3%				-3.1%			
Interest+rent+lease/NCI	10.8%	7.6%				7.2%			
EOS/NCI	-4.4%	-3.2%				4.0%			
Wages of management	57 170	56 670	2 099	0.72	0.94	56 520	2 093	0.70	0.93

Notes

Figures may not add to totals due to rounding.

1 Tray carton equivalent.

2 EOS is calculated as follows: net cash income less orchard working expenses less depreciation less wages of management (WOM). WOM is calculated as follows: \$31 000 allowance for labour input plus 1 percent of opening total orchard assets to a maximum of \$75 000.

3 Net cash income.

INDUSTRY ISSUES AND DEVELOPMENTS

GROWER MORALE MIXED

Grower morale in the pipfruit industry varies. Some growers are struggling to cover costs and are in survival mode just trying to make it through another season; some are in the process of exiting the industry; others are doing well and are expanding their businesses.

In Hawke's Bay, while market returns have not been exceptional in recent years, good yields in 2011 and likely again in 2012 have at least provided a small surplus for reinvestment for many growers since the hail year in 2010. Those who invested in orchard redevelopment several years ago, and in the more profitable varieties, are generally positive looking ahead as these new orchard blocks come into full production.

In Nelson, growers with a diverse variety mix, or who are vertically integrated and receiving profits from other pipfruit enterprises, are more positive about their futures. Generally, independent grower suppliers are disillusioned and despondent.

Many have undertaken significant orchard redevelopment since 2006, but this has not yet resulted in the expected improvement in orchard profitability.

Cash flow shortfalls are being funded by overdrafts and more debt, and the erosion of equity is becoming a concern for many. In the Nelson region, the financial strain of several consecutive years of orchard losses is reaching crisis point for some. A few orchards in the Nelson region were sold in 2011/12; mainly larger businesses buying out neighbouring orchards. Packhouse facilities have also felt the strain, with one pear packing facility closing.

BUSINESS VIABILITY PLANS – SHORT- AND LONG-TERM

Growers in both regions are trying to strengthen their business viability by limiting expenditure to necessary items, pulling out unprofitable pipfruit blocks and, where finances are available, redeveloping into varieties suited to Asian markets. Sector leaders and advisers are encouraging growers to focus more on matters that are within their control, in particular, maximising marketable yields.

Few owner-operator growers are willing and able to invest further in large-scale orchard redevelopment, and are instead making small

adjustments to their variety mix, mostly by grafting over existing trees. The plethora of new apple varieties available, plus the splintering into club varieties, is viewed by growers with increasing risk. Some believe that only a few new varieties can ultimately succeed in the market place with growers taking a hit on those that fail.

In the Nelson region, many growers are focused on survival in the short-term. Revised business models for growers include selling fruit in the bin to packhouses for fixed prices, developing local market opportunities, juicing non-profitable varieties or orchard blocks and not picking all the fruit for export.

Actions being taken to minimise expenditure, particularly in the Nelson region, include relinquishing permanent staff and taking on more contract workers, terminating or seeking to renegotiate orchard leases, and using cheaper alternatives to managing tree vigour, such as root pruning.

Growers acknowledge that tighter constraints on cash flow mean they are forced to pay less attention to how jobs are being done, and, in some instances, this is impacting on the quality of the trees and overall state of the orchard.

The drop in interest rates has provided relief for many growers, particularly those with climbing debt levels. Rural lending rates are now at some of the lowest levels for several years.

Co-ordination of marketing efforts and a disciplined approach to selling the crop are important issues for growers. While these have improved over recent years, growers still feel that “rogue exporters and importers” have the potential to jeopardise markets for growers. The potential for the industry to have a strategic plan for developing and expanding into new markets has been flagged.

The devastation that Psa¹ has caused to kiwifruit orchards in the Bay of Plenty region, plus the detection of a Queensland fruit fly in Auckland in May 2012, has made the sector seek further assurances from the Minister for Primary Industries and MPI about the robustness of New Zealand's border protection programme. A robust biosecurity system is deemed by growers

1 Psa refers to *Pseudomonas syringae* pv. *actinidiae*, a bacterial canker disease specific to kiwifruit. This pathogen was confirmed to be present in New Zealand in November 2010.

as essential to the long-term viability of their businesses.

Despite the low and fluctuating profitability trends demonstrated by both the Nelson and Hawke's Bay pipfruit orchard models, many in the pipfruit industry see a positive outlook for the sector. Factors that should engender future industry development and profitability include:

- growth potential of markets in Asia and Australia;
- improved market access to Japan in 2012 through the development of a successful compliance programme managed by MPI through independent verification agencies;
- secure supply of seasonal labour, with migrant workers under the Recognised Seasonal Employer scheme complementing New Zealanders;
- on-going strong demand for the Pacific series of apple from markets in Asia. The Pacific series is almost uniquely grown in New Zealand;
- on-going rationalisation, vertical integration and restructuring of pipfruit businesses creating scale, improved links to markets, career opportunities and improving resilience. BayWa becoming a majority shareholder in Turners and Growers in 2012 is causing general optimism within the industry, with growers of Jazz™ hoping it will lead to more profitable returns for this variety;
- potential novel apple and pear cultivars from the New Zealand apple and pear breeding programme within five years;
- new outcomes from research and development programmes that should help better manage market access requirements, for example, the approval of a parasitic wasp by the Environmental Protection Authority in July 2012 as a biological control agent for codling moth;
- on-going demand for apples and pears for processing; some juice companies are investigating fixed-term contracts for pears to secure future supply; and
- initiatives such as the industry-sponsored "Young Grower of the Year" competition, and others, raising the profile of the sector and attracting new entrants to the industry.

ENVIRONMENTAL AND NATURAL RESOURCE MANAGEMENT

Environmental and natural resource management continue along the same lines as in previous years. However, given the low profitability levels and hence the general lack of funds for reinvestment in recent years, there has been little new investment or other developments in this area beyond core regulatory and market requirements.

Water

The most significant environmental issue concerning Hawke's Bay pipfruit growers is water allocation and the renewal of consents. Many growers are expecting to face water consent renewal expenses in 2013 or thereafter. This is a result of the Tukituki River and Heretaunga Zone catchments being earmarked for plan and policy changes in the regional council's Long Term Plan 2012–22. Growers are mindful of recent experiences in the Twyford catchment where some growers ended up with inadequate allocated volumes of water. The cost of consent renewal is also a concern to growers, with indications of \$2000 as the base fee.

EXCHANGE RATE

Growers say that the current high New Zealand dollar against the Euro, UK pound and US dollar, and its volatility within the selling season, is a significant issue for industry profitability at present. A high New Zealand dollar over several years is deemed unsustainable for growers and the industry. A good demand–supply balance in 2012 is helping to raise import prices for New Zealand apples in the main markets, with expectations that the higher prices will help buffer the high exchange rate. However, a good demand–supply balance in the main export markets cannot be expected for pipfruit every year. Customers have options for product substitution if prices are too high, and retailers are unlikely to reduce their margins for long.

INFORMATION ABOUT THE MODELS

The two pipfruit models represent the main pipfruit growing areas of New Zealand. Hawke's Bay is the largest pipfruit-producing district, exporting over half the national crop, with Nelson the second-largest pipfruit-growing region. The orchards are a mixture of old and new, mainly apple varieties, typically run by owner operators. Although there is an increasing trend towards corporate ownership and vertical integration of pipfruit businesses, this has not been captured in the models, which are based on an owner-operator business structure.

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

The value of land and buildings in each model is attributed to the owned title area, including a dwelling.

The pipfruit model budgets are prepared using a 31 December balance date to allow year-to-year financial comparisons.

HAWKE'S BAY PIPFRUIT MODEL

The Hawke's Bay model includes leased land that accounts for nearly one-third (7 hectares) of the orchard size (22 hectares). The owned title area is 18 hectares, with 15 hectares planted in pipfruit.

Royal Gala is the predominant apple variety in the model, accounting for 30 percent of the planted area. The model is based on data from 18 orchards located in the Heretaunga Plains.

The planting density distribution of the orchard model is:

- 50 percent planted area is at standard density (<1000 trees per hectare);
- 30 percent planted area is at semi-intensive density (>1000 and <1800 trees per hectare);
- 20 percent planted area is intensive (>1800 trees per hectare).

NELSON PIPFRUIT MODEL

The Nelson model is 27 hectares planted, with 22 hectares owned and 5 hectares leased. The model is based on data sourced from 18 orchards. Braeburn is the predominant apple variety in the model, accounting for 22 percent of the planted area in 2011. The proportion of planted area in Jazz™ has increased from 9 to 20 percent over the past four years.

The planting density distribution of the orchard model is:

- 40 percent planted area is at standard density (<1000 trees per hectare);
- 10 percent planted area is at semi-intensive density (>1000 and <1800 trees per hectare);
- 50 percent planted area is intensive (>1800 trees per hectare).

For further information on these models contact:

Annette.Carey@mpi.govt.nz

Ministry for Primary Industries
PO Box 2526, Wellington 6140, New Zealand
Tel +64 4 894 0100 or Freephone 0800 00 83 33
Email: brand@mpi.govt.nz
Web: www.mpi.govt.nz

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