



APICULTURE

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

KEY POINTS

- The New Zealand honey crop for 2011/12 was estimated at 10 385 tonnes, up 935 tonnes (10 percent) on the 2010/11 crop of 9450 tonnes. However, honey production in Northland, Bay of Plenty, Coromandel and Poverty Bay regions were down around 40 percent on the 2010/11 crop. By comparison, production in the South Island was up 80 percent over last year and Otago / Southland had a record crop, up 45 percent over the six year average for the region.
- The North Island averaged 19.5 kilograms of honey per hive in 2011/12, while the South Island averaged around 35 kilograms per hive.
- Prices paid to beekeepers for all honey types increased by 5 to 20 percent throughout the season, due to strong world demand and reduced honey production in parts of the North Island.
- Live bee exports in 2011/12 were down after three years of strong live bee export trade. Better hive survival over winter in Canada led to reduced demand for live bees from New Zealand.
- Sugar prices fell approximately 13 percent from a 29-year high of \$1500 per tonne in late 2010, with most beekeepers paying around \$1300 per tonne in 2011/12. Sugar is still a major expense and some North Island beekeepers will need to feed more sugar because of reduced honey crops.
- The number of registered beekeepers increased 16 percent from 3267 in 2010/11 to 3806 in 2011/12 – the third year of increase since the varroa mite arrived in 2000. Beekeepers with five or fewer hives recorded the greatest increase (20 percent) in numbers. Hives increased by 32 205 or 8 percent over last year.

Table 1: New Zealand honey crop (estimates), 2007 to 2012

Year ended 30 June	2007 (tonnes)	2008 (tonnes)	2009 (tonnes)	2010 (tonnes)	2011 (tonnes)	2012 (tonnes)	6-year average (tonnes)
Northland/Auckland/Hauraki Plains	1 252	1 186	1 756	1 285	2 000	1 200	1 447
Waikato/King Country/Taupo	1 270	1 436	1 864	1 584	1 400	1 535	1 515
Coromandel/Bay of Plenty/Rotorua/Poverty Bay	1 897	2 492	2 250	2 376	1 425	845	1 881
Hawke's Bay/Wairarapa/Manawatu/Taranaki	1 912	2 755	2 082	2 318	1 965	2 015	2 175
Marlborough/Nelson/West Coast	675	966	1 140	1 400	470	940	932
Canterbury/Kaikoura	1 620	1 980	1 718	2 200	1 045	1 650	1 702
Otago/Southland	1 040	1 560	1 755	1 390	1 145	2 200	1 515
New Zealand	9 666	12 375	12 565	12 553	9 450	10 385	11 166
Yield/hive (kg)	30.7	36.0	34.7	33.3	24.2	24.6	30.6

Source
AsureQuality Limited.

FINANCIAL PERFORMANCE OF APICULTURE IN 2011/12

Despite better honey prices, low honey crops in some areas of the North Island put a number of beekeeping operations under financial pressure. To mitigate the poor crop some North Island operators laid-off staff, sought secondary employment or sold hives.

In contrast, honey crops in the South Island in 2011/12 were up on average 80 percent compared with 2010/11. This provided South Island beekeepers with some financial respite after several poor seasons.

Beekeepers continue to reassess management and expenditure options with relatively high import costs for sugar, increases in fuel prices and usage, and rising costs for packaging containers and varroa mite treatments.

REVENUE

Revenue streams for beekeepers are diverse and variable. Beekeepers unable to access significant manuka sources or in areas where there are no significant horticulture or agriculture crops requiring pollination, are most likely to face income constraints.

2011/12 Honey production – a season of two islands

The New Zealand honey crop for 2011/12 was estimated at 10 385 tonnes, up 935 tonnes (10 percent) on the 2010/11 crop. The per hive production figure of 24.6 kilograms is the second lowest volume recorded since 2002 and is only marginally higher than last season.

Unfavourable weather conditions in some parts

of the North Island in 2011/12 reduced the North Island honey crop to around 5600 tonnes, down 18 percent on 2010/11. This yield is equivalent to 19.5 kilograms per hive. Weather conditions were generally more favourable over flowering in the South Island, achieving a honey crop of around 4800 tonnes, an equivalent of 35.2 kilograms per hive. This was a significant improvement on last year.

Regional honey production figures for the past six years are summarised in Table 1. Honey crops in Northland, Bay of Plenty, Poverty Bay and the Coromandel regions were down around 40 percent compared with 2010/11. These regions are home to large numbers of hives and produce much of New Zealand's manuka honey crop. Beekeepers in the Coromandel reported average production figures of between 2 to 16 kilograms per hive. The poor results were due to an unusually wet summer in these regions reducing nectar flows over the peak nectar period (November to February).

Late pasture nectar flows extended the honey production season and helped offset what started as a very poor production season for the Waikato and lower North Island areas. The Waikato honey crop was up 10 percent compared with 2010/11. The lower North Island honey crop increased 3 percent compared with 2010/11 but when compared to the 6 year production average, yields were down 7 percent.

The honey crop in the Nelson, Marlborough and West Coast area was estimated at 940 tonnes. This is up 470 tonnes (100 percent) on the 2010/11

Table 2: New Zealand beekeeper, apiary and hive statistics¹, as at June 2012

	Beekeepers	Apiaries	Hives
Northland/Auckland/Hauraki Plains	917	4 201	64 376
Waikato/King Country/Taupo	280	2 672	55 862
Coromandel/Bay of Plenty/Rotorua/Poverty Bay	369	3 814	79 213
Manawatu/Taranaki/Hawke's Bay/Wairarapa/Wellington	835	5 209	87 370
Marlborough/Nelson/West Coast	350	2 133	29 881
Canterbury/Kaikoura	610	3 865	55 362
Otago/Southland	445	3 359	50 664
New Zealand	3 806	25 253	422 728

Note

¹ Registered beekeepers, apiaries and hives under the National Pest Management Strategy for American Foulbrood.

Source

AsureQuality Limited.

crop but similar to the six-year production average for this region.

Hives in Canterbury survived the extreme winter conditions quite well but heavy swarming, for reasons unknown, was reported. Hives that swarm produce less honey and incur increased management costs to rebuild hives back into productive units. The Canterbury honey crop was 1650 tonnes, down 3 percent on the six year average due to an unfavourable cool wet summer.

The Otago and Southland regions proved most productive in 2011/12 despite variable nectar flows. A final crop of 2200 tonnes was recorded for this area which was up 45 percent on its six year production average and 92 percent up on last year's crop.

Honey production from different floral species

In the North Island, manuka and pohutukawa honey were in short supply over 2011/12, mainly due to unfavourable weather conditions during flowering.

Beekeepers in Nelson, Marlborough and the West Coast harvested early kamahi crops and some rata but manuka production was described as patchy.

Pasture species yielded well overall, but honeydew production in Canterbury was well down after wet weather conditions in the early autumn washed honey dew off beech trees, where it collects.

Yields of clover, thyme and blue borage in Otago and Southland ranged from an average of 30 kilograms per hive in coastal regions to 60 kilograms per hive in central areas. This is a

normal variability range and relates to the different weather conditions between the coast and inland parts of the country. Kamahi honey yields in Otago and Southland were average but as with other regions, southern rata and manuka did not yield well.

Hive numbers continue to rise

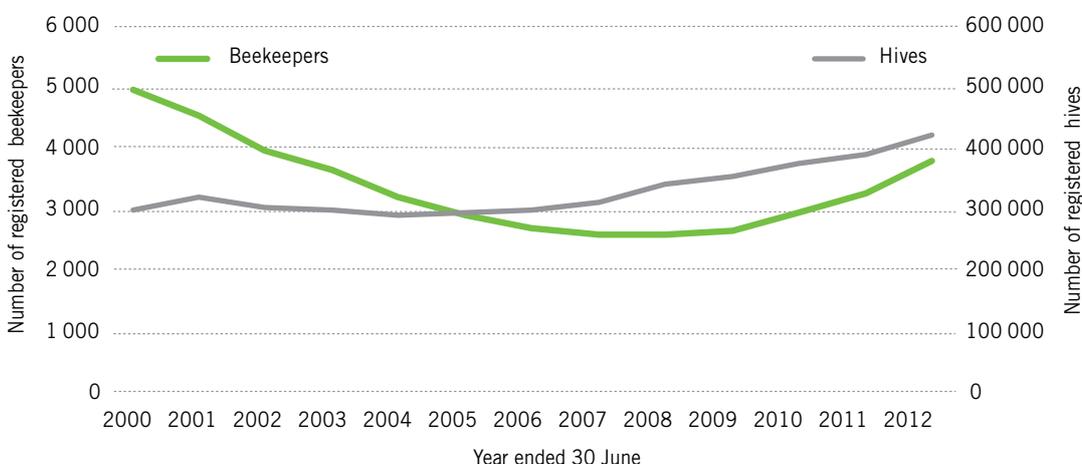
Hive numbers increased 8 percent from 2010/11 which was a continuation of the increase observed the previous two years (Figure 1). The number of registered beekeepers increased 16 percent from 3267 in 2010/11 to 3806 in 2011/12 with the greatest increase in those owning five or fewer hives.

The largest increase in beekeeper and hive numbers was again in the North Island. Beekeeper numbers were up 21 percent and hive numbers increased 12 percent compared with 2010/11. In the South Island, beekeeper numbers increased 11 percent and hive numbers increased 2 percent from 2010/11.

Rising world demand and reduced crop in New Zealand lift honey prices in 2011/12

Prices paid to beekeepers for most lines of honey rose again in 2011/12. This was due to world shortages of high quality honey and increasing consumption of honey in countries such as China and India. Global supply continues to lag behind demand with unfavourable weather conditions, colony collapse disorder and static or falling hive numbers affecting honey production in some of the major producing countries like the USA, India and Argentina.

Figure 1: New Zealand registered beekeeper and hive numbers¹, 2000 to 2012



Notes

¹ Registered beekeepers and hives under the National Pest Management Strategy for American Foulbrood. Varroa was discovered in hives in New Zealand in 2000.

Source

AsureQuality Limited.

Clover and light-amber grade honey prices rose on average 7 percent in 2011/12, while dark honey prices increased 11 to 20 percent. Prices rose above early-season quotations once it became apparent there was going to be a shortage of some varietal types of honey in New Zealand due to adverse weather conditions at flowering. Early offers for bulk non-active manuka honey were \$8 to \$10 per kilogram but later rose to \$12 to \$15 per kilogram. The bulk price for active¹ manuka honey ranged from \$12 to \$14 for UMF[®]5+ up to \$40 to \$50 per kilogram for UMF[®]20+.

Honey prices are expected to hold for the remainder of 2012 and into 2013 as world demand remains strong.

New Zealand clover honey produced in 2011/12 is proving difficult to sell in European markets at prices beekeepers want. New Zealand clover honey has traditionally supplemented supplies of clover honey from Canada. Canadian honey faces market access issues due to the presence of pollen from genetically modified canola. Rather than opening up demand for New Zealand clover honey, many stockists appear to have stopped carrying clover as a branded honey line. Prices for New Zealand white honey are likely to be lower in 2012/13 as a result.

More honey exported and values for honey are up

Exports of honey in the year to 30 June 2012 were up 937 tonnes (14 percent) compared with the same period in 2011. The increase in export volumes and prices reflects overseas demand and the emergence of new markets for New Zealand honey, such as China.

¹ The "activity" of manuka honey is usually based on the non-hydrogen peroxide activity and is expressed as points of activity using phenol as a reference point e.g. UMF[®]10+. Some honey suppliers record the level of methylglyoxal, a compound with bactericidal properties, for example, MGO[™] 250+. Other suppliers report on the total activity which includes peroxide activity.

OTHER REVENUE SOURCES

Pollination

There was a tenfold increase in the number of kiwifruit orchards infected by *Pseudomonas syringae* pv. *actinidiae* (Psa) in 2011, despite measures to slow its spread. The predominant gold kiwifruit cultivar, Hort16A, is particularly susceptible to the disease. This has led to significant areas of Hort16A canopy being partially or fully cut out in the Bay of Plenty region, particularly in Te Puke.

Vine removal, hive movement controls, vehicle sanitising, and the risk of contamination of honey from antibiotic sprays in orchards resulted in increased management costs for pollination. A number of beekeepers withdrew from providing a pollination service as a result of these costs but other new suppliers met the demand.

The issues with Psa meant prices for kiwifruit pollination increased in the Bay of Plenty but remained stable elsewhere. Prices over the whole country ranged from \$104 to \$200 per hive, depending on the level of service provided. The more expensive fees (per hive) in the Bay of Plenty (\$165 to \$200) include transport to the orchard and three to four, two litre sugar feeds. Lower fees (\$115 to \$120) do not.

Pollination fees per hive reported for other crops were: onions \$150, pipfruit and summerfruit \$60 to \$120, berryfruit \$60 to \$120, avocados \$80 to \$115, canola seed crops \$100 to \$120 and carrot seed crops \$150 to \$180. The large spread in fees reflects regional differences, the time the hives are required, the likelihood of pesticide damage, or reduction in bee strength if hives are under netting as in some berryfruit blocks.

Live bees

Live bee exports in 2011/12 were down compared with 2010/11 after three years of strong live bee export trade.

Table 3: Honey export volumes, prices and value, 2002 to 2012

Year ended 30 June	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Export volume (tonnes)	3 028	3 233	2 394	3 273	3 927	4 411	5 366	7 384	7 147	6 721	7 658
Export value (\$ million fob ¹)	20.6	25.5	23.1	33.5	38.4	47.8	62.6	81.0	97.6	101.6	120.8
Average export price (\$ per kg fob)	6.80	7.87	9.65	10.23	9.77	10.83	11.66	10.97	13.66	15.11	15.77

Note

¹ Free on board.

Source

Statistics New Zealand.

The majority of live bee shipments go to Canada and can provide a good income stream for North Island beekeepers able to deliver bees to collection centres in Central Hawke's Bay, Tauranga and Rotorua.

This income stream is not available to South Island beekeepers at present because export package bees leave through Auckland airport, and there is no facility for inter-island air transport of packages.

AsureQuality Limited report just under 25 000 one-kilogram packages² of live bees were exported to Canada in 2011/12, down 21 percent compared with 31 600 one-kilogram packages of bees

² A one-kilogram package of live bees contains 10 000 bees and one queen.

exported in 2010/11. The decrease was, in part, a result of above average winter survival rates of hives in Canada over 2011, leading to the cancellation of some late orders.

The number of queen bees exported dropped to around 7500 in 2011/12, down from 14 000 in the previous year. Canada is a major importer of queen bees from New Zealand but again, better winter survival there created less demand. Export certificates show 805 queen bees were exported to the United Kingdom (UK) in 2011/12. This is a significant decrease on the 4855 queens sent to the UK in 2010/11; the reasons are unclear.

Table 4: Returns for apiculture products, 2008 to 2012

Year ended 30 June	2007/08	2008/09	2009/10	2010/11	2011/12
Bulk honey (\$/kg¹)					
Light (clover type)	2.80-3.75	3.50-5.60	4.00-6.00	4.10-6.80	4.40-7.30
Light amber	2.80-3.00	3.70-4.00	3.90-4.50	4.00-5.80	4.30-6.00
Dark, including honeydew	2.80-3.70	4.50-5.00	4.00-5.00	4.50-5.00	5.00-6.00
Manuka, non-active	8.50-13.25	7.00-12.00	7.00-13.00	8.00-12.00	9.00-15.00
Manuka, active ²	12.10-45.00	12.50-56.25	11.00-37.50	12.50-80.50	14.75-50.00
Beeswax (\$/kg³)					
Light (residue-free and EU compliant)	6.50-7.00	7.00-8.10	6.80-8.50	8.90-9.00	8.00-9.10
Light	7.00-7.80	7.00-7.50
Dark	5.00-5.20	4.00-5.20	6.00-6.50	6.00-6.80	5.00-7.50
Pollen (\$/kg³)					
Not dried or cleaned	16-18	18-20	13-20	16-20	25-28
Dried and cleaned	20-30	25-31	30-36	32-38	35-40
Pollination (\$/hive⁴)					
Pipfruit, stonefruit and berryfruit	60-96	55-96	53-96	60-120	60-120
Kiwifruit					
– Hawke's Bay	110-170	140-160	145-170	104-160	104-160
– Auckland	110-150	115-150	120-150	120-150	120-150
– Bay of Plenty	110-160	110-160	120-175	110-178	115-200
– Nelson	100-120	125-145	125-145	120-150	120-150
Canola and small seeds (carrots)	120-150	120-180	100-150	120-150	100-180
Live Bees³					
Bulk bees (\$/one kilogram package)	22	22	25-26	26-27	27-28
Queen bees (\$ per queen)	...	25	25	25	28

Notes

All prices are GST exclusive.

1 Prices paid to beekeepers for bulk honey. The beekeepers supply the packaging (drums or intermediate bulk containers) and cover freight costs to exporter collection points/depots.

2 The "activity" of manuka honey is usually based on the non-hydrogen peroxide activity and is expressed as points of activity using phenol as a reference point e.g. UMF®10+. Some honey suppliers record the level of methylglyoxal, a compound with bactericidal properties, for example, MGO™ 250+. Other suppliers report on the total activity which includes peroxide activity.

3 Prices paid to beekeepers. The beekeepers cover the freight costs to exporter collection points/depots.

4 Prices paid to beekeepers. The prices at the lower end of the range are for hives delivered to depot sites. At the upper end, prices include delivery into the orchard and sugar for 3-4 one-litre feeds to stimulate the bees to collect pollen.

... Data not available.

Source

AsureQuality Limited.

Pollen, propolis and beeswax

Prices paid to suppliers of dried and cleaned pollen in 2011/12 rose 7 percent to an average of \$37 per kilogram. However, pollen production continues to fall. Only a few commercial producers now collect pollen as the best pollen production periods coincide with varroa treatments. Pollen traps cannot be activated when non-organic varroacides are being used. Those beekeepers that are persisting with pollen production have access to good pollen sources and are managing varroa with organic chemicals.

Propolis is a resin collected by bees from some tree species and marketed for its health benefits. Beekeepers gather the propolis off special mats placed in hives or by scraping boxes and frames. The recovery rate of pure propolis from raw propolis is approximately 20 to 25 percent for early season propolis, rising to 40 to 50 percent recovery later in the season. Beekeepers expect to receive \$45 to \$120 per kilogram for the raw unprocessed product. The lower end of this range is for propolis that contains a greater amount of wax and hence a lower recovery rate.

Export demand for beeswax free of varroacides and light coloured beeswax remained strong in 2011/12, but there was no significant lift in prices from 2010/11. A greater range of prices were received for dark wax in 2011/12. Most wax is used by beekeepers to coat plastic foundation frames or is manufactured into wax foundation sheets that beekeepers put into wooden frames.

OPERATING COSTS

Sugar prices eased during 2011/12 but remain high. The other main price increases in 2011/12 were for diesel, vehicle running, labour, freight costs and honey containers.

Sugar

Sugar prices fell approximately 13 percent from a 29 year high of \$1500 per tonne in late 2010,

with most beekeepers paying around \$1300 per tonne in 2011/12. World sugar supplies returned to a surplus situation as a result of improved weather conditions and sugar plantings increased, encouraged by previous year's high prices. Prices are expected to fall further in 2012/13.

Fuel

Diesel prices averaged approximately \$1.49 per litre from June 2011 to June 2012, but averaged \$1.56 per litre from early August to May when beekeepers were servicing their hives and incurred the greatest expenditure on fuel.

Helicopters were used again in 2011/12 by a few beekeepers to place hives in remote apiaries. The economics of this practice, estimated at \$160 per hive to fly in and out, is under scrutiny.

Honey drum prices

The price of new or remanufactured honey drums increased 7 percent on average as world steel prices firmed. Beekeepers paid \$75 per drum on average compared with \$70 per drum last year. Freight and pallet charges are quite expensive for beekeepers not able to collect their own drums from the manufacturer. Most commercial honey buyers only accept new drums for manuka honey but some packers recycle drums at least once for multi-floral honeys.

Labour

Average wage rates increased slightly on last year but the range stayed the same. Employers usually offer a range of incentives to retain capable staff such as meals, fuel cards, production bonuses, extra holidays, or the use of extracting plant and machinery. Those operations that experienced a poor honey harvest in 2011/12 have already reduced seasonal staff numbers and some have had to release permanent staff to negate reduced incomes.

Table 5: Estimated expenditure for beekeeping operations (\$ exclude GST), 2009/10 to 2011/12

Year ended 30 June		2009/10	2010/11	2011/12	
Labour	Worker	\$/hr	\$15-\$25	\$17-\$27	\$16-\$27
	Manager	\$/hr	\$27-\$35	\$30-\$40	\$25-\$50
	Average working week	hrs	45	45	45
	Average ratio of hives per fulltime equivalent with varroa present in the hives (pre-varroa)		350:1 (800:1)	350:1 (800:1)	350:1 (800:1)
Fuel	Variable		variable	variable	variable
Sugar	Variable depending on overseas prices and NZ exchange rate	\$ per tonne for bulk sugar	\$980-\$1300	\$1426-\$1500	\$1227-\$1307
Varroa treatment	Variable according to hive strength and product(s) used	\$ range per hive	\$12-\$24	\$23-\$25	\$24-\$25
	Varroa strips applied at recommended two treatments per year	1000 plus strips	\$12-\$24	\$23-\$25	\$24-\$25
Protein supplements	Hives may require 1-2 kilograms per year	\$ per 20 kilogram bag	\$155	\$162	\$162
Contract extraction costs	Manuka honey costs more to process as the frames must be pricked first to release the honey	\$ per frame for manuka honey	\$0.80-\$1.50	\$1.00-\$1.55	\$1.10-\$1.66
	Clover honey	\$ per frame for clover honey	\$1.00	\$1.00-\$1.20	\$1.00-\$1.35
Hives	Includes 2 brood boxes, floor, lid and 1 honey super, no bees, assembled and parafin waxed	New	\$185	\$225	\$273
	Reasonable condition, includes 2 brood boxes and 1-4 honey boxes with bees	Second-hand	\$180-\$385	\$200-\$385	\$250-\$400+
	4-5 Frame nucleus hive	New hives includes nuclei box	\$75-\$120	\$85-\$150	\$100-\$185
	Repairs and maintenance	\$ per hive (7% of hive purchase price)	\$11-\$27 per hive	\$14-\$27 per hive	\$17-\$28 per hive
	Wax to coat plastic frames	\$ per kilogram	\$6-\$8	\$7-\$8	\$8-\$9
	Hive Strappers (used as required)	\$ each	\$10-\$12	\$10-\$12	\$10-\$12
Bees	Queen bees	\$ per queen bee	\$25-\$35	\$25-\$35	\$25-\$35
	Select queens	\$ per queen bee	\$60-\$120	\$60-\$120	\$60-\$120
Protective clothing		Single piece suit	\$142-\$156	\$140	\$140
Honey drums	Holds approximately 300kg of honey	New or re-manufactured	\$55-\$65	\$62-\$72	\$57-\$77
Apiary rentals paid to landowner	Manuka	% of crop when sold	10%-25%	10%-25%	10%-25%
	Non-Manuka sites (honey 'rental' for non-manuka sites variable but often 500 grams honey per hive)	% gross crop or \$ per hive (whichever is greatest)	10% or \$40	10% or \$40	10% or \$30-\$40
	Non-manuka sites	% of the crop if the landowner owns the hives	50%-55%	50%-55%	50%-55%
	Non-manuka sites	\$ for rental if sole rights to a property	\$1000	\$1000	\$1000+
Compliance costs	Risk Management Programme (RMP) annual audit costs	\$ for processing RMP	up to \$1300	up to \$1300	up to \$1300
		\$ for a storage RMP	up to \$750	up to \$750	up to \$750
	MPI Food Safety Authority annual fees	\$ if require export eligibility	\$542	\$578	\$578
		\$ (if only processing for consumption within NZ)	~	\$258	\$258
		\$ per sample (first sample)	\$125-\$170	\$125	\$125
	Tutin tests	\$ per composite (up to 10 samples can be composited)	~	\$15	\$15
		\$ per beekeeper	\$20	\$20	\$20
American Foulbrood Strategy Levy	\$ per apiary	\$11	\$12	\$13	
National Beekeepers' Association Membership (voluntary)	Hobby beekeeper (1-10 hives)		\$118	\$118	\$126
	Commercial operations (251-3001+hives)		\$148-\$3937	\$480-\$4000	\$480-\$4139
	Corporate membership		\$246	\$250	\$261
	Beekeeping clubs		\$118	\$223	\$174-\$235
Beekeeping Industry Group membership	Voluntary - affiliated with Federated Farmers		\$107-\$438	\$100-\$500	\$100-\$500

Source
AsureQuality Limited.

INDUSTRY ISSUES AND DEVELOPMENTS

BUSINESS VIABILITY

Generally the industry is in good heart despite a relatively poor production season for honey in many parts of the North Island in 2011/12. Increased honey prices should see most beekeepers at least break even. Diversification of income streams is likely to continue where possible to help manage risk.

Manuka honey continues to attract premium prices and commercial beekeepers are looking to add manuka honey to their business or give up kiwifruit pollination to concentrate on manuka. A few bee product processing and exporting companies are buying land and planting manuka or entering into crop sharing arrangements with landowners. Others are buying beekeeping operations to secure and broaden their supply base, especially for manuka honey.

The number of registered beekeepers continued to increase in 2011/12; this was mainly in the group that own five or fewer hives (which experienced a 20 percent increase).

PESTS AND DISEASES

The apiculture industry remains very concerned about the risk of exotic bee pests and diseases being introduced into New Zealand either via breach of biosecurity at the border, or from Australia in the event that an import health standard is issued for Australian honey. The potential for honey from other countries to be re-packed in Australia and on-shipped as Australian honey is a particular concern. Apiculture's close relationship with the horticulture industry means biosecurity issues potentially

impacting New Zealand horticulture are also of concern and risk to New Zealand beekeepers.

Queensland fruit fly

The discovery of a single Queensland fruit fly in Auckland in May 2012 caused concern for both the pollination and horticulture industries. Because the fly was detected in an urban area, impacts on commercial beekeepers were limited. Beekeepers are very conscious of the potential impact of fruit fly on the horticultural sector, which would rapidly flow through to beekeepers supplying pollination services.

Psa

The bacteria *Pseudomonas syringae* pv. *actinidiae* (Psa), discovered in Bay of Plenty kiwifruit orchards in November 2010, spread during 2011/12 with nearly 1200 orchards affected. Beekeepers could not take hives from infected areas and reuse them in non-infected areas so lost the opportunity to achieve two pollination fees. Others lost pollination contracts because vines were cut out. Continuous disinfecting of vehicles and footwear added to costs incurred by beekeepers. Beekeepers that supply kiwifruit pollination hives are also worried they may not be paid for pollination services as credit availability for kiwifruit growers might be reduced.

A number of operators chose to pull out of pollination rather than risk potentially having their subsequent manuka honey crops contaminated with antibiotics and other sprays being used to restrict the spread of Psa. The Ministry for Primary Industries (MPI) assesses the risk of honey crop contamination as being extremely low.

Table 6: Distribution of beekeepers¹ by hive number

As at 30 June	2009	2010	2011	2012
<i>5 hives or less</i>	[1 529]	[1 745]	[2 044]	[2 463]
1 to 50	2 185	2 440	2 722	3 237
51 to 500 hives	293	319	336	351
501 to 1000	100	99	109	115
>1000	91	99	100	103
Total number of beekeepers	2 669	2 957	3 267	3 806

Notes

Beekeepers with 1–50 hives are considered hobbyists.

¹ Registered beekeepers and hives under the National Pest Management Strategy for American Foulbrood.

Source

AsureQuality Limited.

Varroa

Varroa was reported in Dunedin and Invercargill during the summer of 2012 and will very likely soon spread throughout Otago and Southland. Beekeepers in Otago and Southland, who have no access to pollination or manuka sources to provide additional income, will need to examine their costs and income opportunities.

Resistance to the synthetic pyrethroid active ingredients in Apistan® and Bayvarol® was observed in some hives in the Waikato for the first time in 2010/11 and is now alleged to be relatively widespread in Northland, Auckland and the Bay of Plenty. A small-scale survey for resistant mites is being undertaken by Plant and Food Research. Only one other synthetic miticide (amitraz, sold as Apivar®) is approved for use in New Zealand. Other 'organic' chemicals are available to treat varroa but require more frequent application and monitoring. Beekeepers will incur extra costs as resistance spreads, and face the risk of substantial hive losses.

Nosema ceranae

Reports of ill-thrift in colonies, premature loss of queen bees, and hive deaths in spring 2011 and

autumn 2012 were common but there has been no obvious explanation. The fungal parasite, *Nosema ceranae*, discovered in some hives in New Zealand in 2010 as a result of improved testing is thought by beekeepers to be a possible cause. There have been suggested links between *N. ceranae* and colony collapse disorder overseas, but there is limited evidence to support this. *N. ceranae* is common in some Australian states, but there have been no Australian reports of colony collapse disorder or increased losses due to Nosema.

ELECTRONIC CERTIFICATION (E-CERT)

If beekeepers wish to maintain EU eligibility for their bee products they must ensure their products are handled, processed and stored in premises operating under a Risk Management Programme (RMP) and are listed as eligible for the EU by MPI. In addition, all transfers of bee products between RMP premises after 1 June 2012 must now be recorded on E-Cert. This requirement has meant extra time and compliance costs for RMP operators to register and pay for the ongoing E-Cert charges, obtain suitable software and hardware, and become competent in raising E-Cert documents.

INFORMATION ABOUT THE COMMENTARY

Information in this commentary report is sourced from interviewing beekeepers, honey packers and exporters, reviewing export documents, the apiary database, published reports and data from Statistics New Zealand.

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