- There are currently 3649 beekeepers (3973 in 2002) owning 300729 (305152) hives on 20228 (20258) apiaries.
- The honey crop of 12,252 tonnes (6-year average 8,806 tonnes) was the best on record and a much-needed turn around from the record low crop of 4682 tonnes in 2002.
- Export markets were very buoyant and prices for most lines of honey increased.
- The National Beekeepers' Association of NZ (NBA) became a voluntary organization while an alternative body called the NZ Beekeeping Industry Group (NZBIG) was established as a sector group within Federated Farmers.
- The government funded interim varroa management program ended on 30 June 2003 and will hopefully be replaced by a Varroa Pest Management Strategy in the South Island.

POLLINATION

The season was late for both bee colony development and flowering. Most fruit crops experienced reasonably good pollination despite the indifferent weather in October and November. Colonies struggled to build up through October and a huge amount of sugar feeding was required in all regions.

Pollination fees increased slightly in the Bay of Plenty area from an average of around $115/hive to over $120 with a top price of $138 being reported for single queen hives. The increased fee helped offset cost increases for diesel, sugar and varroa treatments.

Heavy winter hive losses were experienced by some beekeepers who delayed treating for varroa, or couldn't get access to hives because of wet conditions, and this affected the number of colonies available for pollination. There was a strong demand to buy or rent hives from new suppliers to meet both an increase in demand from growers as well as to replace losses. An estimated 2000 hives were imported from the South Island for pollination services. Some kiwifruit growers increased their per hectare hive stocking rate and maturing areas of the ZESPRI^{TM} GOLD variety also saw an increased demand for pollinating hives.

LIVE BEE MOVEMENTS AND EXPORTS

Bee exporters had a good season in sales of package bees to Canada and Germany. Demand for package bees to stock hives in Canada was particularly strong reflecting the world shortage of honey. For the year ended December 2002, 10,780 queen bees and 18,028 x 1 kg packages of bees were exported. Good sales of packages and queens continued into 2003 and these figures will be reported in the year ending December 2003.

PMS SUMMARY

Annual Disease Return (ADR's) - Figures For 2002 Are In Brackets

ADR's were sent to 3840 (4275) beekeepers, which were due back to AgriQuality on 1 June 2003. There were 2444 (1823) defaulters by the due date, and 1152 (1060) defaulters after a reminder letter was sent on 30 June 2003, with a final reporting date of 7 July 2003. Typically, 50% of the returns are received by the due date, and another 25% after the first reminder. By the final cut off date of 1 July there are usually still 25% ADR's outstanding. This year's returns are a little poorer than usual. Of the 3840 ADR's mailed out, 64% were outstanding as at 1 June 2003, and 30% as at 7 July 2003.

Disease Conformity Agreements (DECA'S) & Certificate Of Inspections (COI'S)

As at the end of June 2003 there were 2645 beekeepers with DECA's and a Certificate of Inspection Exemption (72%). These beekeepers are able to inspect their own hives for AFB and make reports to AgriQuality on the authorised forms. No DECA's were revoked in the reporting period.

1004
926
78 returned

There were 1004 beekeepers with a COI and 926 defaulters still outstanding at the end of June 2003. COI's for the 2003-2004 year are due to be mailed out before 1 August 2003. A list of defaulters as at 15 December 2002, was supplied to the NBA. The requirement of beekeepers without a DECA to find a beekeeper with a DECA to inspect their hives is an ongoing problem. Many beekeepers sign and return their own COI's i.e. they are not getting their COI's signed by a beekeeper with a DECA. These are usually returned to the beekeepers concerned.

PMS Inspections
A summary of hive inspections, audits and sampling performance is in the attached report.

Number and percentage of AFB found
AgriQuality and the NBA found 62 apiaries (25%), and 204 hives (13%), infected with AFB in the period 1 July 2002 to 30 June 2003. The total number of AFB found, or reported in this period, was 475 apiaries (2.3%) and 1035 hives (0.34) belonging to 171 beekeepers (4.6%). The corresponding figures for the year ending 30 June 2002 were 648 apiaries (3.2%) and 1457 hives (0.48%) from 240 beekeepers (6.0%).

Several outbreaks of AFB have been found this year, which the NBA and AgriQuality have together to try and resolve. AgriQuality would like to thank all beekeepers that were involved in dealing with these outbreaks. Two of the major out breaks where in Canterbury and traced to two beekeepers. The resulting inspections carried out by the NBA and AgriQuality resulted in the destruction of about 50% of one commercial beekeepers hives and 20% of the other beekeeper.

Number of unregistered apiaries found
Eight unregistered apiaries were found and 6 notices sent to Registrars to update the database. In two cases the sites were registered after talking with the beekeepers concerned.

Abandoned apiaries found or destroyed
Six abandoned apiaries were found with 24 hives. Of these, 22 hives were destroyed after due notice had been served.

Number of apiaries & hives inspected by AgriQuality staff or contracted AP's
AgriQuality inspected 44 apiaries, and 217 hives. Apart from the inspections related to the disease out breaks in Canterbury, AgriQuality was not funded to complete any AFB audit inspections. In most cases AgriQuality inspected hives for AFB while going through outbreak areas on other business.

Number of apiaries and hives inspected by the NBA
The NBA has inspected 201 apiaries and 1363 hives. This was a small percentage of the numbers that had been allocated by AgriQuality to NBA branches for inspection.

Number of apiaries with AFB destroyed on default of a notice
NBA and AgriQuality did not destroy any apiaries or hives, in default of notice this season.

Number of restricted place notices sent to beekeepers
Two notices were sent to one beekeeper.

Number of clinical AFB notified and destroyed by beekeepers with COI's
Fifteen beekeepers' with COI's declared 33 AFB hives in 15 apiaries.

Number of apiaries and hives held by beekeepers with a COI
There were 1004 beekeepers with a COI who owned 1966 apiaries and 15799 hives

Number of apiaries and hives inspected on default of a notice
AgriQuality and the NBA did not inspect any apiaries or hives on default of a notice.

Lab tests
No funds were provided for lab testing but HortResearch Ltd at Ruakura tested 73 samples on a good will basis and in the expectation that further contact work would be forthcoming. Of the samples tested 5 were positive.

EXOTIC BEE DISEASE SURVEILLANCE

The new MAF standard for exotic disease surveillance has just completed its second year. The risk-based programme had a few changes from the previous year after feedback and input from beekeepers.

1 Field Inspection and Sampling

500 apiaries were selected and inspected and sampled for exotic diseases, with 400 of these coming from high-risk areas and 100 from beekeepers' home apiaries. High-risk areas are those locations considered to have the greatest potential for entry of exotic bee diseases eg ports, cities and tourist destinations. The high-risk sites were inspected in the South Island, by Authorised Person level 2 inspectors and beekeepers, as part of the varroa surveillance programme. In the North Island beekeepers were asked to inspect and sample their own hives and were sent a kit to assist with this.

In general the surveillance contract required that the hives on each site:

- Be inspected for exotic bee disease symptoms with any symptoms being sampled (namely European foulbrood, small hive beetle and other subspecies of bees).
- Have a sample of about 50 adult bees taken from each hive to be examined for internal mites
- Have a 24-hour sticky board and miticide sample taken for external mites.

Over and above this programme, a further 300 apiaries were sampled by beekeepers who export live bees. These samples were tested for external and internal mites.

All samples were negative for exotic be diseases and pests.

Table: The number of apiaries inspected and sampled as at the end of June 2003:

Inspection Category	**Target**	**Number Inspected**
High risk apiaries	400 apiaries	310 apiaries 1224 hives
Home apiaries	100	55 apiaries, 661 hives
Export samples	300	300

As in past years many beekeepers, who voluntarily inspect their own sites, find it difficult to meet the target number of inspections. A few inspection kits have come in since the end of June so the numbers above will increase slightly.

2 Reports

Each year, reports on surveillance activity are written for MAF and the New Zealand Beekeeper magazine. These are used to meet our international reporting requirements for New Zealand's bee health status and also to keep New Zealand's beekeeper's informed of surveillance activities.

3 Apiary Database

MAF contributes to the cost of the management and maintenance of the apiary database through the exotic disease surveillance contract.

4 Beekeeper Extension / Education

A series of articles were written for beekeepers and published in the New Zealand Beekeeper magazine. These articles covered issues relating to surveillance and exotic pests and diseases and their relevance to the New Zealand beekeeping industry.

An information leaflet on the Cape Bee was developed and sent to all registered beekeepers. This leaflet is a supplement to the exotic disease pamphlet, which was published two years ago and distributed to all beekeepers. New beekeepers are sent a copy of these pamphlets when they register.

An exotic disease web site is under development and will appear on the would wide web in the near future.

5 Screening of Exotic Disease Inquires

Each year MAF and AgriQuality Ltd receive a number of calls regarding suspect exotic diseases or strange symptoms that beekeepers find in their hives. AgriQuality works with MAF's National Centre for Disease Investigation (NCDI) to screen these calls and determine whether a sample needs to be taken. Often a phone diagnosis can be made which rules out an exotic bee disease or pest.

Of the calls received by AgriQuality or MAF, 31 resulted in samples being taken and sent to a lab for further diagnosis. The suspects investigated included 11 for mites, 12 for European foulbrood (EFB), 1 for Cape Bee, 2 for Africanized Honey Bees and 5 for Small Hive Beetle.

In addition, 6 swarms were caught in the South Island swarm trapping programme. No exotic diseases or pests were found.

6 Technical Development

To ensure the technical robustness of the surveillance programme, a review of national and international literature on exotic bee diseases and pests was undertaken. New surveillance techniques and potential new bee pests were also reviewed and risks of introduction to New Zealand assessed. Suggestions for programme improvements were reported to MAF.

HONEY BEE EXOTIC DISEASE AND PEST RESPONSE (EDPR)

1 Testing the new EDPR Model.

A large focus on this years programme was to train role holders in the new procedures. Since the varroa out break in Auckland in 2000 the EDPR procedures and structures have been significantly modified. This year two workshops were held, one desk exercise at the National Centre for Disease Investigation in Wellington, and a field exercise involving beekeepers in Blenheim. Both exercises went well with the Blenheim exercise being the smoothest and most successful field exercise we have ever run.

2 Technical Advisors Training

Byron Taylor and Tony Roper completed a 3-week study tour to the United States as part of their technical advisor training for exotic diseases. Byron and Tony presented a very informative debrief on their findings to MAF, the beekeeping industry and AgriQuality at a workshop held in Wellington.

AGRIQUALITY LTD REPORT TO NBA 30 JUNE 2003

	1 No & % AFB apiaries and hives found or reported and destroyed during the inspection programme by AQ and NBA	No AFB Apiaries AQ-NBA	No AFB Hives AQ-NBA	% AFB aps AQ_NBA	% AFB Hives AQ_NBA	Total aps inspected NBA-AQ	Total hives inspected NBA_AQ
WR		1	1	1.9%	0.7%	53	146
HN		1	2	7.7%	3.3%	13	60
TR		2	2	8.3%	1.3%	24	150
PN		3	3	5.5%	1.4%	55	208
BN		10	44	62.5%	15.7%	16	280
CH		45	152	61.6%	23.3%	73	651
INV		0	0	0.0%	0.0%	11	85
Total		**62**	**204**	**25.3%**	**12.9%**	**245**	**1580**

	2 Number of test samples taken by bkprs, or supplied by AQ, and results of tests. Positives include any plates with 1 or more colonies of *Paenibacillus larvae*	Total No samples	No positive	No tested by lab
WR		13	1	13
HN		12	0	12
TR		34	0	34
PN		5	2	5
BN		1	0	1
CH		0	0	0
INV		8	2	8
Total		**73**	**5**	**73**

		No aps	No Instructions	
	3 No of unregistered apiaries found			
	No instructions to register sent to Apiary Register contractor			
WR		2	2	
HN		0	0	
TR		1	1	
PN		2	0	Sites registed by talking to beekeeper
BN		0	0	
CH		3	3	
INV		0	0	
total		**8**	6	

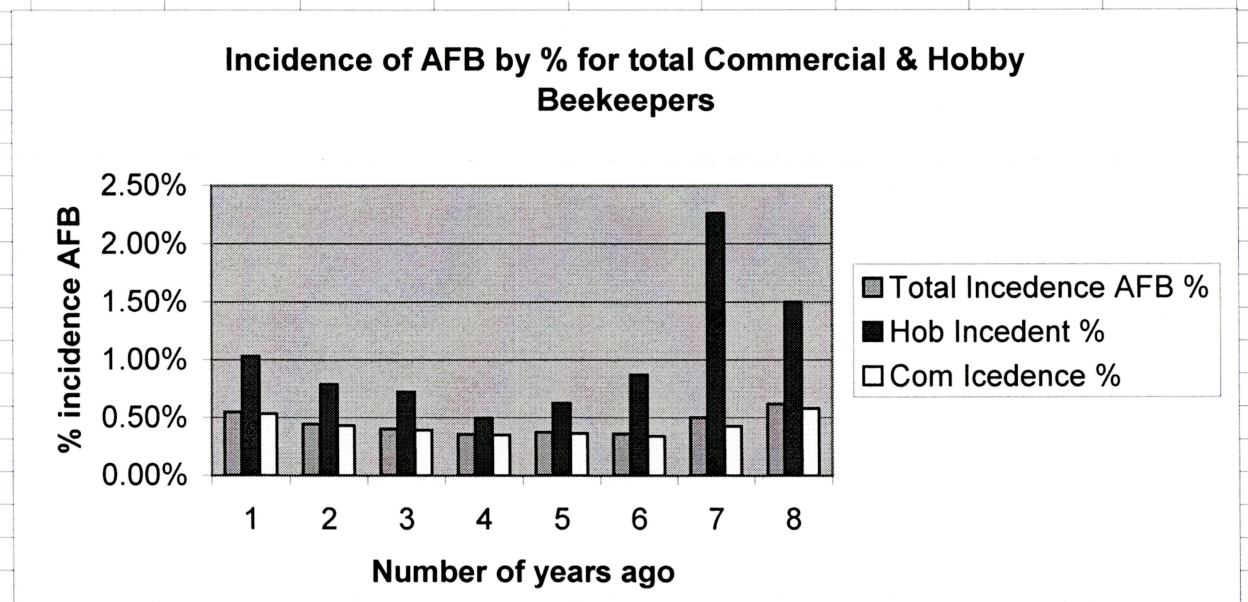
		No abandoned apiaries found	No aps destroyed	No hives	No hives destroyed		
4	**No of abandoned apiaries/beehives found**						
	No of abandoned apiaries/beehives destroyed						
WR		1	1	12	12		
HN		2	2	3	3		
TR		1	1	1	1		
PN		0	0	0	0		
BN		0	0	0	0		
CH		2	1	8	6		
INV		0	0	0	0		
Total		**6**	**5**	**24**	**22**		
		No Apiaries Inspected AgriQ	**No Hives Inspected AgriQ**				
5	**No of apiaries/beehives inspected by contractor (ie AQ or paid AP's)**						
WR	Target 0 apiaries	15	36				
HN	Target 0 apiaries	10	39				
TR	Target 0 apiaries	6	42				
PN	Target 0 apiaries	3	13				
BN	Target 0 apiaries	0	0				
CH	Target 0 apiaries	10	87				
INV	Target 0 apiaries	0	0				
Total	**Total 0**	**44**	**217**				
		No Apiaries Inspected NBA	**No Hives Inspected NBA**				
6	**No of apiaries inspected by NBA**						
WR		38	110				
HN		3	21				
TR		18	108				
PN		52	195				
BN		16	280				
CH		63	564				
INV		11	85				
Total		**201**	**1363**				

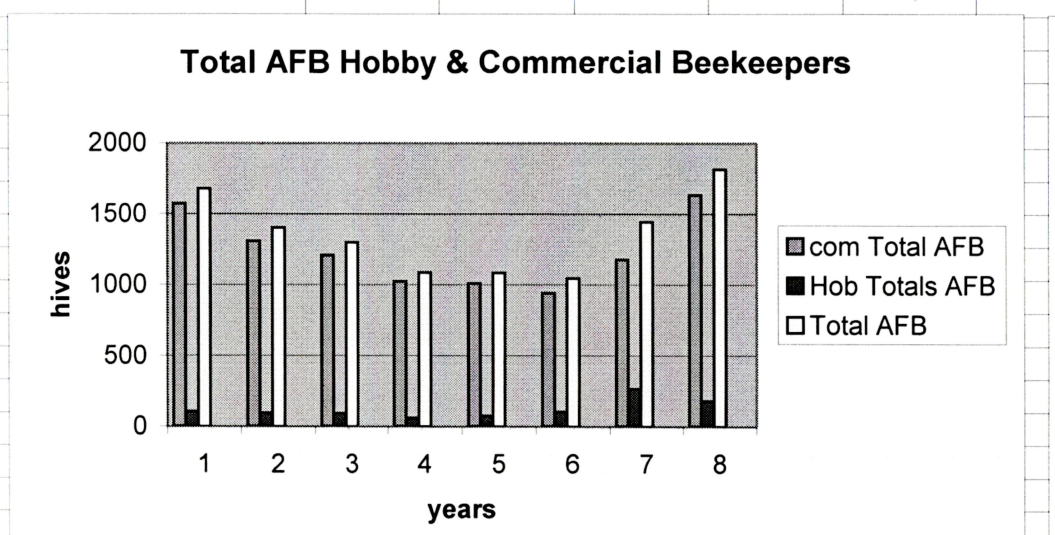
		No default aps destroyed	No hives destroyed				
7	**No apiaries/beehives infected with AFB destroyed on default of a notice issued**						
WR		0	0				
HN		0	0				
TR		0	0				
PN		0	0				
BN		0	0				
CH		0	0				
INV		0	0				
total		**0**	**0**				
		No bkprs	No notices sent				
8	**No Restricted Place notices sent to beekeepers**						
WR		0	0				
HN		0	0				
TR		0	0				
PN		0	0				
BN		0	0				
CH		1	2				
INV		0	0				
Total		**1**	**2**				
9	**No hives with clinical AFB found or reported and destroyed by beekeepers with COI's**	No Bkprs	No Apiaries	No hives			
WR		3	3	11			
HN		0	0	0			
TR		0	0	0			
PN		1	1	1			
BN		0	0	0			
CH		10	10	20			
INV		1	1	1			
Total		**15**	**15**	**33**			

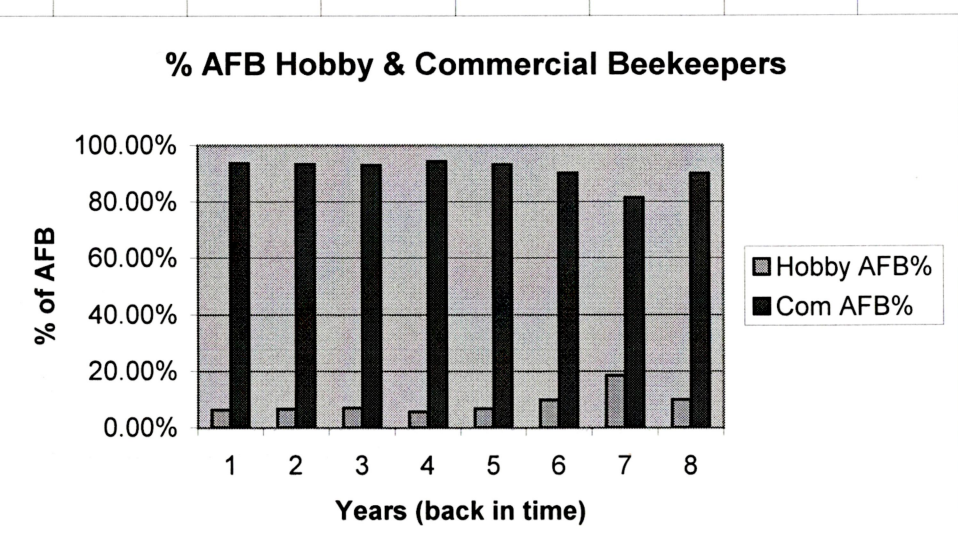
		No Bkprs	No Apiaries	No hives
10	**No bkprs, apiaries and hives held by bkprs with COI's**			
WR		231	331	2304
HN		95	188	1203
TR		99	315	4238
PN		260	403	2007
BN		80	111	674
CH		174	480	4066
INV		65	138	1307
Total		**1004**	**1966**	**15799**

		No apiaries	No hives
11	**No apiaries and hives inspected on default of a notice issued**		
WR			
HN		0	0
TR		0	0
PN		0	0
BN		0	0
CH		0	0
INV		0	0
Total		**0**	**0**

District	01_02 Hives	00_01 Hives	99_00 Hives	98_99 Hives	97_98 Hives	96_97 Hives	95_96 Hives	94_95 Hives
Com								
com Total AFB	1574	1307	1207	1023	1010	942	1175	1635
Com Total hives	294853	302142	307364	290519	275628.1	275628.1	275002.9	281018.7
Wha	347	168	116	116	65	73	73	89
Ham	315	262	228	238	125	116	83	196
Tau	451	440	375	249	337	264	259	360
Pal	151	117	99	78	79	146	153	233
Ble	144	119	173	107	159	83	176	163
Can	83	102	86	123	75	99	232	331
Ota	83	99	130	112	170	161	199	263
Hob								
Hob Total AFB	106	94	92	62	74	103	267	181
Hob Total Hives	10299	11949	12749	12469	11830	11830	11803	12061
Wha	12	34	11	7	17	12	11	9
Ham	8	14	4	6	10	6	6	10
Tau	8	9	18	14	10	13	41	5
Pal	29	10	37	23	11	29	110	68
Blem	2	2	6	5	9	11	13	31
Can	40	10	10	7	15	31	80	48
Ota	7	15	6	0	2	1	6	10
Total AFB	1680	1401	1299	1085	1084	1045	1442	1816
Total hives	305152	314091	320113	302988	287458	287458	286806	293080
Total Incidence AFB %	0.55%	0.45%	0.41%	0.36%	0.38%	0.36%	0.50%	0.62%
Hobby AFB%	6.31%	6.71%	7.08%	5.71%	6.83%	9.86%	18.52%	9.97%
Hobby Total Hive %	3.38%	3.80%	3.98%	4.12%	4.12%	4.12%	4.12%	4.12%
Hob Incidence %	1.03%	0.79%	0.72%	0.50%	0.63%	0.87%	2.26%	1.50%
Com AFB%	93.69%	93.29%	92.92%	94.29%	93.17%	90.14%	81.48%	90.03%
Com Total Hive %	96.62%	96.20%	96.02%	95.88%	95.88%	95.88%	95.88%	95.88%
Com Incidence %	0.53%	0.43%	0.39%	0.35%	0.37%	0.34%	0.43%	0.58%


Incidence of AFB by % for total Commercial & Hobby Beekeepers
% incidence AFB
2.50%
2.00%
1.50%
1.00%
0.50%
0.00%
1 2 3 4 5 6 7 8
Number of years ago
Total Incedence AFB %
Hob Incedent %
Com Icedence %


Total AFB Hobby & Commercial Beekeepers
hives
2000
1500
1000
500
0
1 2 3 4 5 6 7 8
years
com Total AFB
Hob Totals AFB
Total AFB


% AFB Hobby & Commercial Beekeepers
% of AFB
100.00%
80.00%
60.00%
40.00%
20.00%
0.00%
1 2 3 4 5 6 7 8
Years (back in time)
Hobby AFB%
Com AFB%

district_na	Bk AFB	Total BK	% BK	Apiary Afb	Toal Api	% Api	Hives AFB	Total Hive	% Hives
Blenheim	25	317	7.89%	49	1690	2.90%	136	26820	0.51%
Canterbury	32	578	5.54%	113	4311	2.62%	279	61299	0.46%
Hamilton	8	301	2.66%	63	2509	2.51%	156	46185	0.34%
Otago/Sou	25	385	6.49%	41	3207	1.28%	56	49003	0.11%
Palmerston	8	981	0.82%	14	3681	0.38%	18	43544	0.04%
Tauranga	12	339	3.54%	93	2783	3.34%	156	47435	0.33%
Whangarei	29	721	4.02%	49	2052	2.39%	125	26464	0.47%
Total	139	3622	3.84%	422	20233	2.09%	926	300750	0.31%