

AGRIQUALITY NZ LTD REPORT TO THE ANNUAL CONFERENCE OF THE NATIONAL BEEKEEPERS' ASSOCIATION OF NEW ZEALAND: AUCKLAND 17-18 JULY 2002

A PERSONNEL

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B HONEY CROP to 30 June 2002

	1997	1998	1999	2000	2001	2002	6-year average
Northland, Auckland, Hauraki Plains	766	1014	615	982	869	593	807
Waikato, King Country, Taupo	829	1404	1617	1434	672	708	1111
Bay of Plenty, Coromandel, Poverty Bay	933	1314	1800	1300	794	319	1077
Hawkes Bay, Taranaki, Manawatu, Wairarapa	1112	1230	1416	1323	1735	750	1261
Marlborough, Nelson, Westland	919	598	770	705	606	300	650
Canterbury, North Otago	2339	1238	1782	2310	2743	921	1889
South and Central Otago, Southland	1639	1283	1069	1555	1725	1091	1394
New Zealand	8537	8081	9069	9609	9144	4682	8187
Yield/Hive (kg)	29.7	27.0	29.9	30.0	29.4	15.0	26.3

C PMS SUMMARY

1 Beekeeper, Apiary And Hive Numbers

There were 3973 beekeepers, 20258 apiaries and 305152 hives at the end of June 2002. By comparison there were 4550 beekeepers, 20993 apiaries and 308,940 hives at the end of June 2001. The number of beekeepers requesting cancellation of their registration continued with a net loss of beekeepers of nearly 8% since March 2002 and a decrease of 13% over the past year. However, in this period there were 257 new registrations.

2 Annual Disease Return (ADR's) - Figures For 2001 Are In Brackets

ADR's were sent to 4275 (4841) beekeepers on 14 April 2002 and these were due back to AgriQuality on 1 June 2002. There were 1823 (2310) defaulters by the due date, and 1060 (1451)

defaulters after a reminder letter was sent on 14 June 2002, and a final reporting date of 1 July 2002. There has been little change in return performance of ADR's, or the former Statement of Inspections over the years. 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, from the 4275 ADR's mailed out, 43% were outstanding as at 1 June 2002, and 25% as at 1 July 2002.

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

As at the end of June 2002 there were 2767 beekeepers with DECA's and a Certificate of Inspection Exemption (70%). These beekeepers are able to inspect their own hives for AFB and make reports to AgriQuality on the authorised forms.

There were 1214 beekeepers with a COI and 743 defaulters still outstanding at the end of June 2002. COI's for the 2002-2003 year are due to be mailed out before 1 August 2002.

4 PMS Inspections

4.1 Number and percentage of AFB found

AgriQuality and the NBA found 122 apiaries (22%), and 295 hives (7%), infected with AFB in the period 1 July 2001 to 31 June 2002 belonging to 204 beekeepers. The total number of AFB found, or reported in this period, was 648 apiaries (3.2%) and 1457 hives (0.48). The corresponding figures for the year ending 30 June 2001 were 714 apiaries (3.7%) and 1369 hives (0.46%) from 242 beekeepers (4.7%).

4.2 Number and percentage of samples required to be taken by beekeepers.

AgriQuality had to arrange the collection of up to 1000 bee and honey samples on a random and targeted basis. Letters were sent to 443 beekeepers in October 2001, requiring them to submit 1089 samples of bees or honey to HortResearch lab at Ruakura to be tested for *Paenibacillus larvae*. As at 30 June 2002 the lab had received 794 (73%) usable samples from 326 (74%) beekeepers as well as AgriQuality or NBA inspectors. AgriQuality will continue to collect samples through to the end of its contract period, which is the 31 July 2002 and expects to meet the 1000 sample target.

The 794 samples received by the lab were made up of 97 larval or comb samples (suspects), 145 honey and 552 bee samples. Of the 97 suspect samples submitted by 38 beekeepers, with AgriQuality approval, 67 were positive and 30 negative for *P larvae*. A number of culture plates had only a few colonies of *P larvae* on them, which does not necessarily indicate a hive infection with AFB.

4.3 Number of unregistered apiaries found

Ten unregistered apiaries were found and 9 notices sent to Registrars to update the database.

4.4 Abandoned apiaries found or destroyed

Seven abandoned apiaries were found with 56 hives. Of these, 34 hives were destroyed after due notice had been served.

4.5 Number of apiaries & hives inspected by AgriQuality staff or contracted AP's

AgriQuality inspected 163 apiaries (116%) of the target 140 apiaries, and 1159 hives. Extra resources were put into the Auckland and Hamilton areas due to the problems identified there. Beekeepers contracted to AgriQuality assisted in the Palmerston North, Blenheim and Canterbury areas.

4.6 Number of apiaries and hives inspected by the NBA

The NBA has inspected 386 apiaries and 3041 hives. Waikato beekeepers inspected an additional 52 apiaries and 1000 hives in the Hauraki Plains but these are recorded under the Whangarei apiary district..

4.7 Number of apiaries with AFB destroyed on default of a notice

NBA and AgriQuality destroyed 20 apiaries and 50 hives, most belonging to one Auckland beekeeper.

4.8 Number of restricted place notices sent to beekeepers

Two notices were sent.

4.9 Number of clinical AFB notified and destroyed by beekeepers with COI's

Forty-three beekeepers with COI's, declared 72 AFB hives in 43 apiaries. Some of these reported AFB were in fact parasitic mite syndrome. How many false AFB hives were destroyed is not known.

4.10 Number of apiaries and hives held by beekeepers with a COI

There were 1214 beekeepers with a COI who owned 2172 apiaries and 16951 hives.

D EXOTIC BEE DISEASE SURVEILLANCE

A little over 12 months ago a team from MAF, HortResearch, NBA and AgriQuality New Zealand met to review the MAF standard for apicultural surveillance. As a result, a new surveillance programme was implemented at the beginning of this year, based on risk of introduction.

1 Field Inspection and Sampling

Each year 540 apiaries will be inspected and sampled for exotic diseases, with 400 of these samples coming from high-risk areas. 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 are inspected in the South Island and Lower North Island, by Authorised Person level 2 inspectors and beekeepers, as part of the varroa surveillance programme. In the upper North Island beekeepers are asked to inspect and sample their own hives and are sent a kit to assist with this.

This year AgriQuality New Zealand inspected 140 sites for American foulbrood disease (AFB) as part of the AFB Pest Management Strategy (PMS) These sites were also inspected and sampled for exotic diseases and pests. In general the surveillance contract requires that the hives on each site:

- are inspected for exotic bee disease symptoms with any symptoms being sampled.
- have a sample of about 400 adult bees taken to be tested for internal and external mites
- have a 24 hour sticky board and miticide sample taken for external mites.

Over and above this programme, a further 500 apiaries were tested from samples that are supplied by beekeepers who export live bees. These samples are currently tested for external and internal mites. In the future it is planned to test these samples for European foulbrood as well. This seasons sampling is well underway and scheduled to be completed by August 2002.

2 Reports

Each year, reports on surveillance activity are written for MAF and the New Zealand Beekeeper magazine. These reports are used to meet our international reporting requirements of New Zealand's bee health status and keeping New Zealand's beekeepers 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 are being written for beekeepers and published in the New Zealand Beekeeper magazine. These articles will cover issues relating to surveillance and exotic pests and diseases and their relevance to the New Zealand beekeeping industry. The first article on the Red Imported Fire Ant has been submitted for publication in the NZ Beekeeper magazine. This last year the exotic honey bee disease pamphlet was reviewed and reprinted and sent to all registered beekeepers with their Annual Disease Return. A copy was also sent to all new beekeepers when they registered.

Three more Authorised Person (AP) Level 2 workshops were held in the South Island, which saw 38 beekeepers being recommended to MAF as suitable to hold a warrant. This brings the number of approved AP's level 2 to 282. As part of the training for AP's, beekeepers were instructed in legal powers and responsibilities, inspection etiquette, and exotic bee pest and disease recognition and sampling methods.

5 Screening of Exotic Disease Inquires

Each year MAF and AgriQuality New Zealand receive a number of calls regarding suspect exotic diseases or strange symptoms that a beekeeper has found 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, 21 resulted in samples being taken and sent to a lab for further diagnosis. The suspects investigated included 15 for mites, 3 for European foulbrood (EFB), 1 for exotic bees and 2 for Africanized Honey Bees (AHB).

Four of the reported suspect exotics resulted in further field investigation and sampling by AgriQuality. These included a suspect tracheal mite in Auckland, a suspect exotic bee in Cable Bay Nelson, suspect exotic bee in Christchurch and a suspect varroa in Westport. These call outs ranged from 1 day to a week.

6 Technical Development

To ensure the technical robustness of the surveillance programme, reviews of the national and international literature on exotic bee diseases and pests were 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.

E HONEY BEE EXOTIC DISEASE AND PEST RESPONSE

1 Re-designing of bee response structures

Systems and procedures have been redesigned as a result of the Auckland varroa response, where the headquarters was based near the outbreak and all headquarters activities were operated from this point. Under the new model designed by the Ministry of Agriculture and Forestry (MAF), the headquarters structure is divided into two distinct parts, the Task Force and the Field Operations Response Team (FORT).

- *Task Force*

The task force is based in Upper Hutt at MAF's National Centre for Disease Investigation (NCDI). The NCDI has been designed for responding to exotic diseases and is set up with all the necessary equipment and resources. Based at the NCDI, during a response, are all the MAF staff who run the response, AgriQuality's non-field operations staff such as the Technical Advisors, Operations Manager, Disease Investigation Group, Movement Control, Tracing and Graphical Information Systems plus the beekeeping industry representatives.

- *Field Operations Response Team (FORT)*

The FORT is established near the outbreak centre and is concerned with carrying out the field activities. There may be more than one FORT if outbreaks are detected in different locations. AgriQuality field operation groups and field teams of beekeepers and AgriQuality staff are located at the FORT.

2 Procedure Review

The Honey Bee Exotic Disease and Pest Response Procedures were extensively reviewed and rewritten to align them with the new response model as well as procedures relating to inspection, eradication and depopulating hives.

3 Key Role Holder Training

A workshop was developed and delivered to key role holders for the new procedures and structures.

4 Field Team Leader Training

Training workshops were held in the North and South Islands for new and experienced AgriQuality Field Team Leaders (FTL's). Training focused on roles during a response, communication with the FORT, inspection and sampling techniques, identification of different pests and diseases, and recording and reporting requirements

5 Apiculture Adviser Training

A workshop was developed and delivered for Apicultural Advisors. This workshop focused on recent developments with exotic disease detection control and eradication.

6 Industry Awareness

Commercial and hobby beekeepers were introduced to the characteristics of exotic bee pests and diseases, the main entry pathways and consequences of an introduction as part of the 56 varroa workshops held around New Zealand.

New Zealand beekeeper, apiary and hive statistics by apiary district as at 2-Jul-2002

<i>Apiary Register Location</i>	<i>Category 0 - 5 Hives</i>		
	<i>Beekeepers</i>	<i>Apiaries</i>	<i>Hives</i>
Blenheim	221	247	484
Canterbury	398	468	873
Hamilton	214	238	474
Otago/Southland	206	220	497
Palmerston North	643	722	1567
Tauranga	212	240	466
Whangarei	676	735	1208
<i>New Zealand</i>	2570	2870	5569

<i>Apiary Register Location</i>	<i>Category 6 - 10 Hives</i>		
	<i>Beekeepers</i>	<i>Apiaries</i>	<i>Hives</i>
Blenheim	36	54	267
Canterbury	81	139	631
Hamilton	65	93	507
Otago/Southland	69	93	533
Palmerston North	210	315	1638
Tauranga	48	76	397
Whangarei	97	150	757
<i>New Zealand</i>	606	920	4730

<i>Apiary Register Location</i>	<i>Category 11 - 50 Hives</i>		
	<i>Beekeepers</i>	<i>Apiaries</i>	<i>Hives</i>
Blenheim	31	72	755
Canterbury	40	110	897
Hamilton	21	61	627
Otago/Southland	37	94	946
Palmerston North	88	212	2122
Tauranga	45	84	1042
Whangarei	50	105	1242
<i>New Zealand</i>	312	738	7631

<i>Apiary Register Location</i>	<i>Category 51 - 250 Hives</i>		
	<i>Beekeepers</i>	<i>Apiaries</i>	<i>Hives</i>
Blenheim	26	206	3527
Canterbury	31	352	3792
Hamilton	21	219	2967
Otago/Southland	26	249	3509
Palmerston North	48	419	5357
Tauranga	35	242	3790
Whangarei	32	218	3515
<i>New Zealand</i>	219	1905	26457

<i>Apiary Register Location</i>	<i>Category 251 - 500 Hives</i>		
	<i>Beekeepers</i>	<i>Apiaries</i>	<i>Hives</i>
Blenheim	14	259	5370
Canterbury	21	421	7439
Hamilton	6	184	2796
Otago/Southland	20	517	7880
Palmerston North	6	162	2475
Tauranga	8	165	2530
Whangarei	7	124	2346
<i>New Zealand</i>	82	1832	30836

<i>Apiary Register Location</i>	<i>Category 501 - 1000 Hives</i>		
	<i>Beekeepers</i>	<i>Apiaries</i>	<i>Hives</i>
Blenheim	11	362	7073
Canterbury	22	1064	15563
Hamilton	9	348	7694
Otago/Southland	20	979	14580
Palmerston North	10	455	7740
Tauranga	20	615	14071
Whangarei	13	377	9062
<i>New Zealand</i>	105	4200	75783

<i>Apiary Register Location</i>	<i>Category 1000+ Hives</i>		
	<i>Beekeepers</i>	<i>Apiaries</i>	<i>Hives</i>
Blenheim	6	400	8902
Canterbury	18	1709	31405
Hamilton	10	1420	31864
Otago/Southland	13	1081	20856
Palmerston North	10	1371	23824
Tauranga	17	1377	28209
Whangarei	5	435	9086
<i>New Zealand</i>	79	7793	154146

<i>Apiary Register Location</i>	<i>Category 0 - 1000 Hives</i>		<i>Total Hives</i>
	<i>Beekeepers</i>	<i>Apiaries</i>	
Blenheim	345	1600	26378
Canterbury	611	4263	60600
Hamilton	346	2563	46929
Otago/Southland	391	3233	48801
Palmerston North	1015	3656	44723
Tauranga	385	2799	50505
Whangarei	880	2144	27216
<i>New Zealand</i>	3973	20258	305152

Diseases Statistics

AFB

01-Jun-2001 - 15-Jun-2002

Apiary Register Location	Number of Beekeepers	No of diseased Apiaries	No of diseased Hives	Actual No of Hives	%
Blenheim	28	65	141	26,091	0.54
Canterbury	39	68	135	60,711	0.22
Hamilton	24	217	462	45,164	1.02
Otago/Southland	24	53	92	48,535	0.19
Palmerston North	49	88	194	43,898	0.44
Tauranga	30	199	464	47,834	0.97
Whangarei	35	87	276	26,056	1.06
TOTAL	229	777	1764	298,289	0.59