

AGRIQUALITY NZ LTD REPORT TO THE ANNUAL CONFERENCE OF THE NATIONAL BEEKEEPERS' ASSOCIATION OF NEW ZEALAND: QUEENSTOWN 25-26 JULY 2001

1 PERSONNEL

During the year the apiary section was staffed by 3 full time equivalents. David McMillan at Invermay and Dave Grueber at Blenheim increased their hours to full time in the business group, James Driscoll left to manage one of AgriQuality's main laboratories in Wellington, and Paul Bolger is still on secondment to MAF. AgriQuality Management has agreed to advertise for 2 more full time apiculture officer positions on a contract basis until secondments and income streams become clearer. One of the positions may be contingent on securing an offshore contract currently under negotiation.

2 BEEKEEPER, APIARY AND HIVES STATISTICS

There are 4550 beekeepers, 20993 apiaries and 308940 hives at the end of 30 June 2001. By comparison there were 4956 beekeepers, 22443 apiaries and 320113 hives at the end of June 2000. Beekeeper numbers have decreased by 406 (8.2%) over the 12 months with all apiary registration districts showing a decrease in numbers. Auckland is the worse affected area with respect to varroa and recorded a net loss of 91 beekeepers. This trend is expected to continue as beekeepers feel the effects of winter and spring losses from varroa, free government treatment for varroa is withdrawn, and the 354 beekeepers from the Whangarei Apiary Registration District (which includes Auckland) return outstanding ADR's. Apiary numbers have decreased by 1450 (6.5 %) while hive numbers decreased by 11173 (3.5%).

3 ANNUAL DISEASE RETURNS (ADR'S)

Mailing of 4841 ADR's was completed on 19 April 2001. The ADR's were due back to AgriQuality on 1 June 2001 but by the due date there were still 2310 defaulters. Reminder letters were sent to these beekeepers on 14 June and these beekeepers had 14 days to return their declarations. By the due return date of 1 July there were 1451 defaulters and this list was forwarded to the NBA. As at 30 June 2001 there are still 1304 defaulters (27%) with outstanding ADR's.

4 DISEASE ELIMINATION CONFORMITY AGREEMENTS (DECA'S) & CERTIFICATE OF INSPECTION (COI)

As at 30 June 2001 there were 2988 beekeepers with a DECA and a Certificate of Inspection Exemption. These beekeepers are able to inspect their own hives for disease and make reports to AgriQuality (on behalf of the Management Agency) on the authorised forms. Beekeepers without an inspection exemption must get a beekeeper with a DECA to inspect and report on the disease status of their colonies. There were 545 beekeepers who had returned their Certificate of Inspection (COI). Lists of COI defaulters, as at December 15 2000, were supplied to the NBA as required. DECA's were withdrawn from 2 beekeepers during the year on instructions from the NBA.

5 PMS INSPECTION

5.1 Number & percentage AFB apiaries and hives found

AgriQuality and the NBA found 29 apiaries (9.2%) and 113 hives (4.9%) infected with

American foulbrood (AFB) in the period 1 July 2000 to 30 June 2001. The total number of AFB found or reported by beekeepers and AgriQuality for this period was 714 apiaries (3.7%) and 1369 hives (0.46%) from 242 beekeepers (4.7%). Note; these figures also include those found by the NBA and AgriQuality inspectors reported above.

By comparison 660 apiaries (2.9%) and 1293 hives (0.4 %) were found or reported to be infected with AFB for the year ending 30 June 2000. While the percentage of infected apiaries and hives has increased this year this is partially due to a decrease in the actual number of apiaries and hives as the number of infected apiaries and hives is not that different from last year.

5.2 Number and percentage of samples taken by beekeepers for lab testing

AgriQuality wrote to 152 beekeepers requiring them to submit 1064 samples, made up of 630 honey samples and 434 bee samples. Beekeepers were chosen on the basis of past disease histories in their hives and hive holdings. AgriQuality also took some samples and other samples were submitted by beekeepers as suspect AFB.

A reminder letter was sent out on 11 May as the return of samples to that date had been poor with only 330 samples having been received by the lab. The usual problems were experienced despite clear instructions being supplied. Common problems included no lab submission forms with the samples, improper packaging leading to breakage or leakage, honey and wax not separated and insufficient bees in the jar.

To date Horticulture and Research advise that 1018 samples have been received by the lab. Of this number 61 were larvae or comb from suspect hives, 633 were honey samples and 324 were bees. Of the bee and honey samples received, 41 tested positive for *Paenibacillus larvae*, but most had only a few colony forming units per culture plate. This should not translate into an AFB infection in the field but beekeepers are being advised to take extra care inspecting their hives in the spring in any case. Horticulture and Research will report more fully on their results and include information on suspects sent in by beekeepers as well as samples not tested to date.

Note: this is an interim report only as the PMS contract with AgriQuality runs until 1 August to collect the samples and the NBA's contract with Horticulture and Research for testing the samples runs until October. More samples will come in after 30 June and will be reported on within the contract periods.

All these samples, collected under the PMS, plus bee samples from exporters, plus any suspects are forwarded to MAF labs at Lincoln or Wallaceville to be tested for other exotic bee diseases. No exotics were found.

Table 1 Surveillance Monitoring Summary for year ending 31 December 2000

Samples tested for:	Routine Samples	Suspect Samples	Total Samples	MAF Specification
Internal Parasites-tracheal mite	789	9	798	600
External Parasites	1592	16	1608	600
European foulbrood	386	269	655	600

5.3 Number of unregistered apiaries found

Seventeen unregistered apiaries were found with 16 being duly registered and one shifted.

5.4 Abandoned apiaries found and or destroyed

Twenty one apiaries and 203 hives were declared as abandoned. Ninety six hives were subsequently destroyed while the owners were found for the remaining hives. The cooperation of

beekeeper AP's in locating, inspecting and destroying these hives is to be commended.

5.5 Number of apiaries and hives inspected by AgriQuality staff or contract AP's

AgriQuality inspected 129 apiaries and 782 hives out of the target 100 apiaries required thus exceeding the specification by 29 apiaries. Palmerston North is over represented because of a regional disease situation and destruction of a number of abandoned apiaries.

5.6 Number of apiaries and hives inspected by the NBA

The NBA inspectors (AP'S) inspected 186 apiaries and 1511 hives according to figures supplied to AgriQuality. The NBA may have more complete figures.

5.7 Number of restricted place notices sent to beekeepers

Twelve notices were sent to 12 beekeepers. All but one beekeeper complied with the notices.

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

Forty eight beekeepers, who have a COI, reported finding and destroying 73 hives of AFB in 38 apiaries.

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

There were 1582 beekeepers with COI's as at 30 June 2001. They had 3057 apiaries and 25720 hives.

5.10 Number of apiaries and hives inspected during varroa surveillance

There were 4 exotic bee disease surveillance programmes during this reporting period. Only the first 2 programmes involved inspecting the brood nest for AFB during surveillance for varroa and other exotic bee diseases. The first programme involved re sampling all apiaries within 6 kilometres of the Auckland epicenter or primary cluster, plus the Infected Places or Blips outside the Auckland Hauraki Plains areas. This was carried out in October 2000. Many of the original hives could not be re sampled because they had already been treated with Apistan. However, 10 apiaries (68 hives) in the Auckland area and 1 apiary (33 hives) in the Hokianga were inspected and sampled.

The second area to be surveyed was the Christchurch area in September 2000. AgriQuality and the NBA surveyed 178 apiaries and 1162 hives which included an inspection for AFB. The third varroa programme involved sampling 1800 apiaries and around 30000 hives in the South Island from April to the end of August 2001. Beekeepers were not asked to carry out inspections for AFB during this programme. The other varroa surveillance programme involved surveying hives along, and south of, the movement control line. Again inspectors were not required to look for AFB.

5.11 Number of apiaries and hives found with AFB during varroa surveillance

No AFB was found in Auckland but 12 apiaries containing 17 hives were found during the Christchurch exercise. All AFB hives were destroyed and AgriQuality or AP's followed up all cases to confirm destruction. Some hobby beekeepers with infected hives have subsequently cancelled their registration. One AFB was found during the South Island varroa surveillance but no cases have been reported from the North Island surveillance.

Note- these varroa inspection figures have NOT been recorded in the inspection results for AgriQuality or the NBA.

6 INSPECTION INFORMATION SUPPLIED TO DISEASE COORDINATORS

Full information was supplied to NBA Disease Coordinators where requested to enable them to inspect apiaries and hives. The importance of restricting access to this information was stressed as many beekeepers are sensitive about the location of their apiaries and the bee disease history of their hives. In all cases the inspection lists were produced after discussion with NBA Bee Disease Coordinators. This included work instructions, inspection forms and spread sheets of beekeepers with AFB over the past 5 seasons.

7 APIARY DATABASE

Information was entered into the database as supplied by beekeepers. Every care is taken to transcribe data accurately and code apiaries to the correct Inspection Districts. Registrars are aware of the frustrations and costs for field teams working off inaccurate data. New programmes were written at the request of MAF allowing for better tracking of varroa finds and allocating inspection lists to varroa surveillance teams

Gone No Addresses are followed up using local knowledge, the White Pages on the Internet or Electoral Rolls, to locate the beekeeper or the property owner where the apiary was located or anyone else who may be able to give a lead as to the whereabouts of the beekeeper and his or her hives. Beekeepers are requested and encouraged to supply full apiary information especially apiary grid references, and be very clear in their instructions regarding cancelling their registration or an apiary(s) location.

8 AUTHORISED PERSON TRAINING

244 beekeepers (126 South Island, 118 North Island) received training so they could be warranted as Level Two Authorised Persons (AP's) under the Biosecurity Act. A Level Two Authorised Person has the powers to enter land, to inspect, sample and destroy bees or beekeeping equipment, under the direction of a Level One Authorised Person. These beekeepers have been trained in inspection and sampling techniques for differential diagnosis of endemic and exotic bee diseases.

9 HONEY PRODUCTION

Honey crops were variable but an above average crop of 9144 tonnes was produced for the whole country (6 year average 8842 tonnes). Some areas like the Waikato produced just 672 tonnes, which is the lowest crop in 20 years (6 year average 1266 tonnes). The Bay of Plenty produced 794 tonnes, which was also well down on the 6 year average of 1203 tonnes.

Table 2 New Zealand Honey Crop for 2000 - 2001

YEAR	Northland, Auckland, Hauraki Plains	Waikato, King Country, Taupo	Bay of Plenty, Coromandel, Poverty Bay	Hawkes Bay, Taranaki, Manawatu, Wairarapa	Marlborough, Nelson, Westland	Canterbury North Otago	South & Central Otago, Southland	NZ	Yield per Hive (kgs)
1996	829	1639	1077	1367	607	1287	1804	8610	30.0
1997	766	829	933	1112	919	2339	1639	8537	29.7
1998	1014	1404	1314	1230	598	1238	1283	8081	27.0
1999	615	1617	1800	1416	770	1782	1069	9069	29.9
2000	982	1434	1300	1323	705	2310	1555	9609	30.0
2001	869	672	794	1735	606	2743	1725	9144	29.5
yr av	846	1266	1203	1364	701	1950	1513	8842	29.4

New Zealand beekeeper, apiary and hive statistics by apiary district as at 21-Jul-2001

<i>Apiary Register Location</i>	<i>Category 0 - 5 Hives</i>		
	<i>Beekeepers</i>	<i>Apiaries</i>	<i>Hives</i>
Blenheim	241	270	531
Canterbury	455	534	964
Hamilton	265	302	605
Otago/Southland	222	243	538
Palmerston North	744	826	1802
Tauranga	255	285	588
Whangarei	812	875	1599
<i>New Zealand</i>	2994	3335	6627

<i>Apiary Register Location</i>	<i>Category 6 - 10 Hives</i>		
	<i>Beekeepers</i>	<i>Apiaries</i>	<i>Hives</i>
Blenheim	44	71	333
Canterbury	81	143	632
Hamilton	78	114	647
Otago/Southland	76	112	580
Palmerston North	212	309	1668
Tauranga	59	81	452
Whangarei	132	190	1010
<i>New Zealand</i>	682	1020	5322

<i>Apiary Register Location</i>	<i>Category 11 - 50 Hives</i>		
	<i>Beekeepers</i>	<i>Apiaries</i>	<i>Hives</i>
Blenheim	35	80	806
Canterbury	45	133	1070
Hamilton	29	79	799
Otago/Southland	38	100	983
Palmerston North	87	221	2091
Tauranga	57	119	1330
Whangarei	60	127	1381
<i>New Zealand</i>	351	859	8460

<i>Apiary Register Location</i>	<i>Category 51 - 250 Hives</i>		
	<i>Beekeepers</i>	<i>Apiaries</i>	<i>Hives</i>
Blenheim	24	209	3497
Canterbury	35	381	4374
Hamilton	18	195	2840
Otago/Southland	29	302	3991
Palmerston North	49	411	5133
Tauranga	35	223	3789
Whangarei	36	289	4182
<i>New Zealand</i>	226	2010	27806

<i>Apiary Register Location</i>	<i>Category 251 - 500 Hives</i>		
	<i>Beekeepers</i>	<i>Apiaries</i>	<i>Hives</i>
Blenheim	14	288	5400
Canterbury	21	379	6856
Hamilton	10	230	3598
Otago/Southland	20	522	8268
Palmerston North	12	295	4706
Tauranga	10	193	3089
Whangarei	9	188	3074
<i>New Zealand</i>	96	2095	34991

<i>Apiary Register Location</i>	<i>Category 501 - 1000 Hives</i>		
	<i>Beekeepers</i>	<i>Apiaries</i>	<i>Hives</i>
Blenheim	12	387	7507
Canterbury	24	1176	17325
Hamilton	15	564	11823
Otago/Southland	21	1012	14998
Palmerston North	10	380	6835
Tauranga	18	573	13093
Whangarei	12	368	8338
<i>New Zealand</i>	112	4460	79919

<i>Apiary Register Location</i>	<i>Category 1000+ Hives</i>		
	<i>Beekeepers</i>	<i>Apiaries</i>	<i>Hives</i>
Blenheim	6	386	8288
Canterbury	17	1673	29678
Hamilton	7	1285	28230
Otago/Southland	14	1192	21662
Palmerston North	9	1135	20958
Tauranga	18	1378	30169
Whangarei	8	503	12481
<i>New Zealand</i>	79	7552	151466

<i>Apiary Register Location</i>			<i>Total</i>
	<i>Beekeepers</i>	<i>Apiaries</i>	<i>Hives</i>
Blenheim	376	1691	26362
Canterbury	678	4419	60899
Hamilton	421	2742	48042
Otago/Southland	420	3483	51020
Palmerston North	1123	3577	43193
Tauranga	452	2852	52510
Whangarei	1069	2540	32065
<i>New Zealand</i>	4539	21304	314091

**NEW ZEALAND HONEY PRODUCTION, IN TONNES
AS AT 30 JUNE ANNUALLY**

YEAR	Northland, Auckland, Hauraki Plains	Waikato, King Country, Taupo	Bay of Plenty, Coromandel, Poverty Bay	Hawkes Bay, Taranaki, Manawatu, Wairarapa	NORTH ISLAND	Marlborough, Nelson, Westland	Canterbury*, North Otago	South & Central Otago, Southland	SOUTH ISLAND	NEW ZEALAND	Yield per Hive (kgs)**
1996	829	1639	1077	1367	4912	607	1287	1804	3698	8610	30.0
1997	766	829	933	1112	3640	919	2339	1639	4897	8537	29.7
1998	1014	1404	1314	1230	4962	598	1238	1283	3119	8081	27.0
1999	615	1617	1800	1416	5448	770	1782	1069	3621	9069	29.9
2000	982	1434	1300	1323	5039	705	2310	1555	4570	9609	30.0
2001	869	672	794	1735	4070	606	2743	1725	5074	9144	29.4
6 yr ave	846	1266	1203	1364	4679	701	1950	1513	4163	8842	29.4
* Includes honeydew											
** Total estimated production available for extraction divided by total number of registered hives											

APIARIES AND HIVES WITH AFB TO JUNE 30

Apiary District	Apiaries AFB			Hives AFB		
	00/01	99/00	98/99	00/01	99/00	98/99
Whangarei	74	79	56	181	152	103
Hamilton	186	156	165	368	269	307
Tauranga	190	169	112	344	358	184
Palmerston North	77	60	57	135	128	93
Blenheim	59	79	59	121	179	88
Canterbury	64	39	46	106	72	66
Invermay	64	78	62	114	135	97
Total	714 (3.7%)	660 (2.9%)	557 (2.6%)	1369 (0.46%)	1293 (0.40)	938 (0.31%)