

1.0 Organisation and Personnel

MAF Quality Management became a State Owned Enterprise (SOE) on November 1 1998 and was renamed AgriQuality NZ Ltd. There has been a lot of restructuring within the new organisation accompanied by 'right sizing', but AgriQuality still has a staff of around 600 and a turnover of \$60 million. As an SOE, AgriQuality has all the trappings of a commercial entity including a Corporate Board, a Chief Executive Officer and General Managers for the four main businesses within the organisation.

The four main business units, headed by a General Manager, are Assurance Services, Farm Network, Emergency Response and Lab Network. The apiculture unit is in Assurance Services as a stand alone business along with Forestry, Food Quality, Horticulture and Plants, the Plant Protection Centre, Proficiency Services, a Seeds Business and Training. There are 17 businesses altogether within AgriQuality plus the usual service units like Finance, Marketing, Human Resources and Information Technology. The apiculture unit contracts to deliver services to the Emergency Response Business which also includes Surveillance.

There have been no changes in apiculture personnel during the year (for a change) except that Paul Bolger, currently based in Pukekohe, and James Driscoll from Palmerston North, will be swapping regions. This move is designed to meet the personal circumstances of the two officers concerned, but the opportunity is also being taken to re locate an officer in Tauranga. The apiculture business employs the services of 7 staff which equates to 4 full time equivalent positions.

2.0 Beekeeping Statistics

2.1 Beekeepers, Apiaries and Hives

There were 4918 registered beekeepers owning 302,988 hives on 21793 apiaries, as at 30 June 1999 (Table 4).

2.2 Honey Production

The total saleable crop was assessed at 9027 tonnes (29.9 kg/hive) which is an increase on last years crop of 8,081 tonnes (27.0 kg/hive). The six year average is 9,027 tonnes or 30.8 kg per hive (Table 5). Per hive honey production figures are taken over all registered hives not just the productive ones.

3.0 Exotic Disease and Pest Response (EDPR) Capability

Funding for a joint exercise involving beekeepers and AgriQuality NZ staff has been approved by MAF Regulatory Authority for the 99/2000 financial year. This is planned to be run from Pukekohe this spring, with the cooperation of the Auckland Branch, from 31 August to 3 September. This will follow the format of previous successful joint exercises which combined

teams of AgriQuality staff and beekeepers to inspect apiaries for AFB. This model will be used for a response to a European foulbrood outbreak

Activity in the 98/99 year has concentrated on re-establishing systems after the split off of AgriQuality NZ from MAF and a reorganisation of the way in which MAF manages exotic disease responses. An AgriQuality NZ exotic bee disease workshop, attended by Peter Berry and Frank Lindsay of the NBA Exotic Disease Investigation Committee and MAFReg staff, was held in Wellington in April this year. One of the outcomes of this workshop was the decision to call a meeting to discuss exotic bee disease issues at this conference

MAFReg are looking for an increase in primary industry involvement in all exotic disease response decision making and is seeking to clearly define responsibility for response activity, including funding, by developing Pest Management Strategies. The only exotic bee disease on their list is European foulbrood. Work on a PMS for EFB has already begun. The agreed process involves submitting the draft PMS to overseas experts to see if it is technically feasible and then doing a cost benefit analysis to determine if the benefit to the country as a whole would be greater than the cost of eradication. This work is being done through a Technical Focus Group set up by MAF.

The NBA needs to be actively involved in this decision making process if it wants a positive outcome. This should also include contingency planning for other exotic diseases such as Varroa, which MAFReg has decided not to include on the list of diseases under consideration for a PMS at this stage.

4.0 Surveillance

An exotic disease recognition brochure with coloured photographs was produced and sent to all beekeepers in the mail out containing an application to take up a Disease Elimination Conformity Agreement (DECA). The DECA also included a section on exotic disease recognition and reporting.

As part of the restructuring of the Ministry of Agriculture and Forestry, MAF took over responsibility for official diagnosis of suspect exotic diseases. There were some initial problems with turnaround time and reporting under this new regime but hopefully these have now been resolved.

Twelve cases of suspect European foulbrood were reported by beekeepers and investigated by AgriQuality staff, by inspection and/or having samples sent to the MAF laboratory at Wallaceville for culturing. Samples were also taken from a suspected pesticide poisoning episode and tested for exotic mites. A mite infestation can show symptoms similar to pesticide poisoning. Suspect mite samples are tested at the MAF lab at Lincoln. All of the suspect cases were negative

All samples of honey and bees collected from beekeepers for testing for AFB under the PMS are sent to the MAF labs to be examined for exotic bee diseases after they have been tested for AFB by Hort and Research at Ruakura. To date 91 samples of honey have been tested for EFB and 79 adult bee samples tested for internal and external mites. In addition, 301 samples of bees submitted by beekeepers, mainly as part of the live bee export business, have been tested for mites. All results were negative

It should be noted that although the surveillance programme is closely linked to the PMS for the efficiencies to be gained, all of the costs of the exotic disease surveillance programme, including the exotic disease brochure, the cost of the mail out containing the DECA and brochure, a contribution toward the operation of the apiary register and all of the laboratory testing for exotics, was funded from the MAF surveillance budget not the NBA PMS budget

5.0 AFB Pest Management Strategy

5.1 Apiary Register

The Register costs an estimated \$40,550 to operate for a year, although the true costs of hardware maintenance and upgrading and programming costs are not fully covered. The cost of \$40,550 was to be recovered as follows:

- \$21,250 from the NBA
- \$16,000 MAF Surveillance and EDPR
- \$3,300 from an additional fee on export apiary clearances

There have been a number of allegations of an inaccurate database and AgriQuality is working hard to correct these. It was expected, that a move to an apiary levy and a conformity management scheme involving all beekeepers, would cause more problems than in the past and this has proven to be the case. Conflicts have arisen where information, allegedly supplied to AgriQuality by beekeepers, is different to what is recorded in the database. We are working with the NBA and beekeepers to resolve these issues.

5.2 Annual Disease Returns (ADR's)

These were mailed to every beekeeper on April 20th this year. The completed ADR's were to be returned by 1st June but of the 5,200 mailed out, reminder notices had to be sent to 2,738 beekeepers. The small number of returns by the due date was disappointing given the number of reminders put in the New Zealand Beekeeper magazine, on the Beekeeper Homepage and given at NBA field days and meetings etc. The NBA has to decide on a policy, whether to send a notice to beekeepers who have failed to comply by 1st July, and what actions to take if beekeepers are in default of the notice conditions.

5.3 PMS Inspection and Audit Services

AgriQuality was able to warrant beekeepers up to 1st November, but on becoming an SOE, it lost this authority and no beekeepers were engaged by AgriQuality after this date to inspect hives. The Ministry of Agriculture & Forestry (MAF) is now responsible for issuing warrants to both AgriQuality staff as Authorised Persons and to beekeepers as Approved Persons. The accreditation and training requirements for beekeepers to become Approved Persons is still being developed by the NBA and MAF.

5.3.1 Field Inspections

AgriQuality was contracted to inspect up to 280 apiaries as well as organise or supervise Diseaseathons. The results of the inspection programme are in Table 3. AgriQuality inspected 289 apiaries and 1482 hives and found 48 hives of AFB in 26 apiaries. Beekeepers inspected a

further 927 hives in 90 apiaries and found 19 hives of AFB

5.3.2 Honey & Bee Sampling Programme

AgriQuality was required to arrange for the collection of 500 honey samples from commercial beekeepers (Table 1) and 500 bee samples from non-commercial beekeepers (Table 2). The number of samples per Apiary District was allocated on the number of beekeepers who had had AFB colonies the previous season. Beekeepers were selected within each district on the basis of previous AFB history or geographic location. 1069 jars were sent to 482 beekeepers.

Reminder notices were published in the New Zealand Beekeeper and the Beekeeper Homepage and further requests were made at field days and NBA meetings and by individual contact and a personal letter to defaulters. Despite all this, only 300 beekeepers (60%) sent in the requested samples. Some samples are still trickling in but as at 30th June 1999, 664 samples (62%) out of 1,069 had been received and tested at the Hort & Research laboratory at Ruakura. An additional 22 samples of suspect larvae or comb have also been sent in by AgriQuality or beekeepers as approved samples and there are 38 samples on hand waiting to be tested.

Of the 375 samples of honey that have been tested, 12 were positive but only 3 showed moderate numbers of AFB colonies on the culture plates (range 1-40). Of the 289 samples of bees tested, 23 were positive (range 1-1000), with 9 showing levels of AFB colonies that should indicate a visible infection in the field. Seven cases of visible AFB have so far been found or reported

A number of these cases were inspected in the late summer (February-March), but no signs of AFB were found. In other instances the hives were found to have visible AFB on subsequent inspections during late April and May. These apiaries will be marked for further inspection in the spring.

Table:1 Summary of Testing Honey Samples of AFB to 30th June 1999

No. beekeepers sent jars	No. jars sent	Beekeepers returning samples		Samples returned		* No. samples positive on culture	No. AFB hives in field
		No.	%	No.	%		
162	579	108	67	375	65	12	1

Table:2 Summary of Testing Bee Samples for AFB to 30th June 1999

No. beekeepers sent jars	No. jars sent	Beekeepers returning samples		Samples returned		** No. samples positive on culture	No. AFB hives in field
		No.	%	No.	%		
320	490	192	60	289	59	23	7

* The No. of AFB colonies on the "honey" plates ranged from 1-40

** The No. of AFB colonies on the "bee" plates ranged from 1-1000

In addition to the samples above, 22 suspect larvae or comb samples were submitted to the lab and 6 of these (27%) were positive with 2-1000+ AFB colonies.

5.4 Total AFB Reports

The total number of hives and apiaries with AFB continued to fall but it is difficult to say how significant this is. The figures are likely to be understated as more than 2000 ADR's are still outstanding. Also the ADR process has been moved from the spring to the autumn and many AFB colonies from the late summer of 1998 may not have been officially reported. These infections would normally have been recorded with the old Statements of Inspection sent to beekeepers in September each year.

Table 3: AFB Reported by Beekeepers or Found by Inspectors to June 30 1999

Apiary District	Apiaries AFB		Hives AFB	
	98/99	97/98	98/99	97/98
Whangarei	56	61	103	101
Hamilton	165	153	307	266
Tauranga	112	138	184	228
Palmerston North	57	62	93	109
Blenheim	59	86	88	177
Canterbury	46	52	66	93
Invermay	62	104	97	171
Total	557 (2.6%)	656 (2.8%)	938 (0.31%)	1145 (0.38%)

Table 4 New Zealand Beekeeper, Apiary and Hive Statistics by Apiary District as at 30 June 1999

<i>Location</i>	<i>Category 0-5 Hives</i>		
	<i>Beekeepers</i>	<i>Apiaries</i>	<i>Hives</i>
Blenheim	295	341	598
Canterbury	487	572	957
Hamilton	307	359	711
Otago/Southland	290	334	683
Palmerston North	866	949	1914
Tauranga	271	306	656
Whangarei	740	808	1518
New Zealand	3256	3669	7037

<i>Location</i>	<i>Category 6-10 Hives</i>		
	<i>Beekeepers</i>	<i>Apiaries</i>	<i>Hives</i>
Blenheim	54	91	419
Canterbury	89	176	697
Hamilton	73	123	592
Otago/Southland	67	97	502
Palmerston North	229	326	1773
Tauranga	70	106	543
Whangarei	121	183	933
New Zealand	703	1102	5459

<i>Location</i>	<i>Category 11-50 Hives</i>		
	<i>Beekeepers</i>	<i>Apiaries</i>	<i>Hives</i>
Blenheim	39	102	884
Canterbury	54	158	1318
Hamilton	43	107	916
Otago/Southland	52	139	1310
Palmerston North	113	308	2718
Tauranga	54	130	1451
Whangarei	70	143	1647
New Zealand	425	1087	10244

<i>Location</i>	<i>Category 51-250 Hives</i>		
	<i>Beekeepers</i>	<i>Apiaries</i>	<i>Hives</i>
Blenheim	28	186	3505
Canterbury	40	493	4942
Hamilton	21	215	3300
Otago/Southland	36	351	4308
Palmerston North	50	464	5865
Tauranga	44	292	4773
Whangarei	41	338	4712
New Zealand	260	2339	31405

<i>Location</i>	<i>Category 251-500 Hives</i>		
	<i>Beekeepers</i>	<i>Apiaries</i>	<i>Hives</i>
Blenheim	13	265	4847
Canterbury	18	387	6051
Hamilton	8	200	3329
Otago/Southland	16	410	5346
Palmerston North	9	248	4176
Tauranga	15	252	4710
Whangarei	7	96	2198
New Zealand	86	1858	30657

<i>Location</i>	<i>Category 501-1000 Hives</i>		
	<i>Beekeepers</i>	<i>Apiaries</i>	<i>Hives</i>
Blenheim	13	479	8371
Canterbury	25	1253	17968
Hamilton	13	510	10340
Otago/Southland	22	1052	15413
Palmerston North	7	337	5388
Tauranga	17	550	12475
Whangarei	9	272	6115
New Zealand	106	4453	76070

<i>Location</i>	<i>Category 1001+ Hives</i>		
	<i>Beekeepers</i>	<i>Apiaries</i>	<i>Hives</i>
Blenheim	5	282	6781
Canterbury	16	1797	28046
Hamilton	10	1197	27904
Otago/Southland	14	1185	21030
Palmerston North	8	1087	19689
Tauranga	17	1218	25284
Whangarei	8	519	13382
New Zealand	78	7285	142116

<i>Location</i>	<i>Category 0-9999</i>		<i>Total</i>
	<i>Beekeepers</i>	<i>Apiaries</i>	<i>Hives</i>
Blenheim	447	1746	25405
Canterbury	729	4836	59979
Hamilton	475	2711	47092
Otago/Southland	497	3568	48592
Palmerston North	1282	3719	41523
Tauranga	488	2854	49892
Whangarei	996	2359	30505
New Zealand	4914	21793	302988

Table 5

**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	<i>NORTH ISLAND</i>	Marlborough, Nelson, Westland	Canterbury*, North Otago	South & Central Otago, Southland	<i>SOUTH ISLAND</i>	NEW ZEALAND	Yield per Hive (kgs)**
1994	1295	1946	1524	1442	6207	493	2883	2236	5612	11819	40.8
1995	354	962	1426	1200	3942	499	1685	1921	4105	8047	27.5
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
6 yr ave	812	1400	1346	1295	4852	648	1869	1659	4175	9027	30.8

* Includes honeydew

** Total estimated production available for extraction divided by total number of registered hives

Table 3 Apiary & Hive Inspections to 30th June 1999

District	Inspections by AgriQuality				Inspections by National Beekeepers' Association				No. Unregistered Apiaries		No. Abandoned Apiaries/ Hives	No. Apiaries/ Hives inspected	No. Apiaries/ Hives with AFB destroyed
	*Apiaries	Hives	AFB Apiaries	AFB Hives	Apiaries	Hives	AFB Apiaries	AFB Hives	Registered	Destroyed	Found	On default of Notice	On default of Notice
Whangarei	8	80	5	6	0	0	0	0	0	0		0	0
Tauranga	40	259	2	4	56	600	7	7	3	0	2\25	0	0
Hamilton	25	137	11	28	0	0	0	0	0	0	1\1	0	0
Palmerston Nth	121	624	4	5	22	162	5	10	1	0		0	0
Blenheim	47	299	2	3	12	165	2	2	0	0		4\35	1\3
Timaru	48	83	2	2	0	0	0	0	1	0	0	0	0
Invermay	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	289	1482	26	48	90	927	14	19	5	0			

* Contract number of apiaries to be inspected 280