

**MAF QUALITY MANAGEMENT REPORT TO ANNUAL CONFERENCE
OF THE NATIONAL BEEKEEPERS' ASSOCIATION OF NEW ZEALAND
GORE 20-22 JULY 1993**

1.0 ORGANISATION AND PERSONNEL

David McMillan was appointed Apicultural Advisory Officer (Invermay) and took up his duties in October. David will have national responsibility for the exotic disease surveillance programme and will carry out district duties including apiary registration and export certification for the former Alexandra apiary district (North Otago, Central Otago and Southland). Matthew Sole will continue his apiary inspector role at Alexandra.

2.0 BEEKEEPING STATISTICS

2.1 Beekeepers, Apiaries and Hives

There were 5622 registered beekeepers owning 298982 hives of bees as at 30 June 1993. This represents an overall decrease of 1.9% of beekeepers and 1.7% of hives during the last 12 months (Table 1).

2.2 Honey Production and Exports

The total 1993 crop was assessed at 7086 tonnes (23.3kg per hive), down significantly from the previous year's production of 9560 tonnes (31.4kg per hive) (Table 2).

Exports of bee products to the year ending December 1992 were worth NZ\$8.6 million, and involved the shipment of 2400 tonnes of bulk, retail and comb honey, honeydew and beeswax (Table 3).

2.3 Queen and Package Bees

According to Customs Department figures, New Zealand producers exported queen bees and packages of bees (including queens) worth an estimated NZ\$1.7 million FOB in the 12 months to June 1993 (Table 3). MAF Quality Management issued export certificates for 38,523 queen bees and 29,082 packages of bees (including queens) in 1992-93.

3.0 AMERICAN FOULBROOD AND NBA AFB CONTROL PROGRAMME

MAF Quality Management was contracted by the NBA executive to provide an AFB control programme in 1992-93. The contract called for the inspection of 4.2% (1050) of registered apiaries by MAF personnel, the provision of inspection lists for NBA inspectors and diseaseathons, publicity and extension activities, the counselling of beekeepers on bee disease issues, and the preparation of reports and disease statistics.

The MAF inspection component of this contract was exceeded, with 1062 apiaries inspected. The target average hives per apiary (6/apiary) was also exceeded, with an average of 9.3 hives per apiary inspected. A total of 31 MAF Quality Management staff and 15 contract beekeepers were used in these inspections (Table 4).

NBA branch inspections totalled 901 apiaries, or 63% of the 1450 necessary to achieve the target set by the NBA executive of 5.8% of registered apiaries. There was a variability in NBA inspection commitment throughout the country. Nevertheless, 4 of the 13 NBA branches either met or exceeded their target of district apiaries inspected. A further one branch came within 10% of achieving this target. A total of 243 warrants were issued to beekeepers who wished to assist in NBA inspections, with 110 warrants actually being used (Table 5).

MAF Quality Management inspectors (and beekeepers contracted to MAF) found 771 hives infected with American foulbrood, up 665 on the amount found during the limited inspection programme in 1991-92. This increased amount of AFB found is similar to that predicted in the MAF report presented to the NBA annual conference in 1992. NBA inspectors found a further 217 hives infected with American foulbrood, a decrease of 13 from the previous year. The total number of hives infected with AFB reported by beekeepers was 1675, 1149 (41%) less than reported in 1991-92 (Table 6).

The NBA AFB Disease Control Programme therefore resulted in the inspection of 7.8% of New Zealand's apiaries (MAF: 4.2% + NBA: 3.6% = 7.8%). The target inspection level set by the NBA executive for the programme was 10% of apiaries. A total of 15,716 hives were inspected (MAF: 9888; NBA: 5828). This figure represents 5.3% of the registered bee hives in New Zealand. The overall reported disease incidence in New Zealand bee hives in 1992-93 was 0.9% of hives and 5.1% of apiaries, down 0.1% and 0.9% respectively on the previous year (Table 7).

4.0 EXOTIC DISEASE AND PEST RESPONSE (EDPR) CAPABILITY

The Honey Bee EDPR Programme, which continues to be fully funded by central government, increased in capability during the year. A total of 45 MAF personnel received training as Field Team Leaders (FTL) and a further 15 staff received training in Emergency Headquarters (EHQ) roles. Staff in addition to those from the Apiculture Unit will be used in the EHQ to ensure that adequate human resources are available in the case of an exotic bee disease outbreak. A procedures manual has now been approved by the EDPR contractor (MAF Regulatory Authority) and will form the basis for all subsequent EDPR training, exercises, and actual emergencies.

A response one (initial not-negative sample) alert took place in the Waihi area in November 1992. All registered apiaries within a 3km radius of the suspect site were inspected by MAF personnel and all other hives belonging to the beekeeper were quarantined on their sites. A subsequent culture of the

original sample revealed the bacteria in question to be a "coagulase negative *Staphylococcus*", a secondary invader bacteria not known to cause mortality in honey bee larvae. Officials from MAF Quality Management have personally expressed their appreciation to the beekeeper who first brought the suspect larvae to a MAF officer's attention. The beekeeper sent the sample to MAF in response to an article requesting such samples which appeared in *Buzzwords*, the NBA newsletter.

5.0 SURVEILLANCE

The Honey Bee Exotic Disease Surveillance Programme, which also continues to be fully funded by central government, is composed of three parts: 1) the apiary register, 2) hive sampling, and 3) border protection (as part of the larger Border Protection Service).

5.1 Apiary Register

The maintenance of this register (in the form of a computer database) is a legal requirement of government under the current Apiaries Act. The database relies on accurate statements of inspection provided by beekeepers each spring. However, once again this year just under 40% of beekeepers failed to provide such statements by the deadline of December 7. Programmes in addition to exotic disease surveillance (including the NBA AFB programme, EDPR, and export certification) depend on all beekeepers making this important statutory obligation.

A three year programme was also initiated this spring to improve the reliability of apiary location data by coding all registered apiaries to 260 series grid map references. The programme was undertaken as a result of recommendations by NBA members who took part in the Nelson Emergency Response in November 1991. Beekeepers have been very cooperative in this programme, with upwards of 50% of apiaries now coded in many districts. A spin-off from the programme is likely to be a reduction in the time required to clear apiaries for some types of export certification.

5.2 Hive Sampling

In the past twelve months MAF staff inspected 391 apiaries for the presence of exotic bee diseases and took samples for laboratory analysis for internal and external parasitic mites. Sixty-one samples were taken for EFB diagnosis and 2 samples were taken for Africanised honey bee analysis. Apiaries were sampled in "at risk" areas including seaports, garbage dumps, and areas frequented by overseas travellers. No specimens of exotic diseases/pests were found.

A further 609 samples of bees were provided by live bee exporters as part of the export certification programme. The samples were analyzed for the presence of exotic internal and external parasitic mites. This is an excellent

response from this segment of the beekeeping industry and MAF Quality Management wishes to thank all those who provided samples.

5.3 Border Protection

The beekeeping industry continues to have a high profile in the work of MAF's Border Protection Service, with numerous consignments of honey and other bee products being intercepted at the borders and the disease risks to honey bees being brought to the attention of the travelling public. A further 22 Border Protection Officers were given training in assessing risks to the beekeeping industry in 1992-93.

The National Flora and Fauna Investigation Unit (NFFIU) has now been formed as part of the Border Protection Service and will in future handle all investigations concerning the illegal importation of animals, plants and associated products into New Zealand. The unit is composed primarily of ex-Criminal Investigation Bureau officers from the NZ Police.

NFFIU was involved in a suspected case of queen bee smuggling in late 1992. Air passenger and mail surveillance was carried out and a number of bee hives were sampled during the investigation. Based on the evidence, representatives of NFFIU now believe that an illegal importation **did not** in fact take place.

6. EXPORT CERTIFICATION

The split between policy and delivery for export certification of live bees and bee products was formalised this year in a written contract between MAF Regulatory Authority (the owner of the government seal and all NZ government export certificates) and MAF Quality Management (the contracted deliverer of export certification services).

In this contract The Regulatory Authority (RA) requires the same performance criteria for the export certification of live bees and bee products that it does for all other New Zealand plant and animal exports. The criteria include the use by MAF Quality Management of an export certification quality system and the adherence to strictly auditable procedures in carrying out that certification.

What this means, in essence, is that MAF Quality Management, as the contractor, must ensure that the statements made on any export certificate which it issues are verified with supporting documentary evidence. Local knowledge and presumptions by certifying officers are no longer enough. MAF Quality Management is now subject to independent audits to check that such documentary evidence exists for all certificates.

The negotiation of protocols with governments of importing countries is one of the major roles performed by the RA. Importing country requirements which either the beekeeping industry or the NZ government believe are too stringent or unworkable can sometimes be altered as a result of these negotiations.

However, it must be realised that in all cases the initial establishment of these import requirements (and therefore the basis for the export certification) comes from the importing country, not the New Zealand government.

Mr. Jim Edwards, National Advisor (Animal Exports) with the RA, who has considerable experience in this regard, carried out a number of such protocol negotiations for the industry in the past year. He has relied, from time to time, on technical advice provided on contract by Murray Reid from MAF Quality Management.

Importing country requirements are always changing, and a number of issues have recently emerged relating to several of our major markets for live bees and bee products. Some members of the beekeeping industry have also expressed concern about the design of the current export certification procedures.

National Beekeepers' Association representatives are now being asked by MAF officials to review these issues and come up with concrete suggestions which can be sent forward to the RA for their consideration. Provided these suggestions meet a) the negotiated requirements of the importing countries involved, and b) the performance criteria for NZ export certification systems set by the RA, there is every chance of creating a certification system which both provides credible access to export markets and is acceptable to the beekeeping industry.

Table 1

**BEEKEEPER, APIARY AND HIVE STATISTICS FOR NZ APIARY DISTRICTS
AS AT 30 JUNE 1993**

Apiary Register Location	Beekeepers			Apiaries			Hives		
	1993	1992	% Change	1993	1992	% Change	1993	1992	% Change
Whangarei	1264	1316	- 4.0	3033	3072	- 1.3	30967	32301	- 4.1
Hamilton	596	627	- 4.9	2985	3044	- 1.9	43185	45452	- 5.0
Tauranga	606	602	+0.7	3593	3573	+0.6	53043	51938	+2.1
Palmerston North	1319	1332	- 1.0	3961	3927	+0.9	38446	37554	+2.4
Blenheim	484	510	- 5.1	2036	2048	- 0.6	22448	23941	- 6.2
Lincoln	765	758	+0.9	5143	4949	+3.9	58116	59090	- 1.6
Invermay*	588	585	+0.5	4373	4344	+0.7	52777	53789	- 1.9
TOTAL	5622	5730	- 1.9%	25124	24957	+0.7%	298982	304065	- 1.7%

*Previously Alexandra

Table 2

**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)**
1988	480	1298	976	834	3588	807	1503	1850	4160	7748	23.1
1989	379	730	401	530	2040	621	1290	1801	3712	5752	17.4
1990	660	1154	1296	894	4004	471	2774	1503	4748	8752	27.5
1991	668	1057	1470	811	4006	265	1965	1054	3284	7290	23.3
1992	1200	1068	998	1231	4497	650	2870	1543	5063	9560	31.4
1993	1033	811	958	577	3379	560	1611	1536	3707	7086	23.3
6 yr ave	737	1020	1017	813	3586	562	2002	1548	4112	7698	24.3

* Includes honeydew

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

Table 3

EXPORT FIGURES FOR HONEY, BEESWAX AND LIVE BEES*
(Honey, Beeswax - year to December 1992; Live Bees - year to June 1993)

Product	Amount	NZ\$ (FOB)**	Countries	Ave. Price
Bulk Honey	1564.3 tonnes	\$3,855,832	16	\$2.46 kg
Retail Honey	235.7 tonnes	\$1,074,080	27	\$4.56 kg
Comb Honey	241.6 tonnes	\$1,815,208	13	\$7.51 kg
Other (including Honeydew)	174.5 tonnes	\$764,483	17	\$4.38 kg
Total - Honey	2216.1 tonnes	\$7,509,603		\$3.39 kg
Beeswax	183.3 tonnes	\$1,088,445	10	\$5.94 kg
Total - Beeswax/Honey	2399.4 tonnes	\$8,598,048		
Total - Live Bees		\$1,696,099	8	
TOTAL EXPORTS		\$10,294,147		

* Source: NZ Customs

**FOB (free on board) - importer pays freight and/or insurance

Table 4

**PERFORMANCE OF MAF INSPECTORS*
NBA AFB DISEASE CONTROL PROGRAMME
YEAR ENDING 30 JUNE 1993**

Apiary Register Location	MAF Staff	Contract Inspectors	Apiaries Inspected		Hives Inspected	AFB Found (% Inspected)	
			Target**	Completed (%)		Hives (%)	Apiaries (%)
Whangarei	3	3	128	132 (103.1)	1078	46 (4.3)	26 (19.7)
Hamilton	4	5	130	134 (103.1)	1198	64 (5.3)	36 (26.9)
Tauranga	4	1	149	149 (100.0)	2404	184 (7.7)	48 (32.2)
Palmerston Nth	3	6	165	154 (93.3)	1160	254 (21.9)	36 (23.4)
Blenheim	4	0	83	86 (103.6)	1104	63 (5.7)	26 (30.2)
Lincoln	6	0	207	222 (107.2)	1536	56 (3.6)	31 (14.0)
Invermay***	7	0	188	185 (98.4)	1408	104 (7.4)	51 (27.6)
TOTAL	31	15	1050	1062 (101.1%)	9888 (9.3)+	771 (7.8%)	254 (23.9%)

* Includes beekeepers employed by MAF

** Based on programme target of 4.2% of apiaries per Apiary District

***Previously Alexandra

+ Average hives per apiary (>6 hives/apiary required)

Table 5

**PERFORMANCE OF VOLUNTEER INSPECTORS
NBA AFB DISEASE CONTROL PROGRAMME
YEAR ENDING 30 JUNE 1993**

NBA Branch	Warrants Issued	Warrants Used	Apiaries Inspected		Hives Inspected	AFB Found (% Inspected)	
			Target*	Completed (%)**		Hives (%)	Apiaries (%)
Northland	30	3	88	18 (20.5)	53	2 (3.8)	2 (11.1)
Auckland	25	3	89	43 (48.3)	533	2 (0.4)	1 (2.3)
Waikato	23	0	180	0 (00.0)	0	-- --	-- --
Bay of Plenty	32	13	125	128 (102.4)	1222	63 (5.2)	17 (13.3)
Poverty Bay	13	11	80	80 (100.0)	732	66 (9.0)	19 (23.8)
Hawkes Bay	16	8	76	59 (77.6)	219	7 (3.2)	3 (5.1)
S'thern North Island	16	12	151	119 (78.8)	318	6 (1.9)	5 (4.2)
Marlborough	9	6	40	48 (120.0)	290	4 (1.4)	2 (4.2)
Nelson	15	5	49	31 (63.3)	111	1 (0.9)	1 (3.2)
West Coast	6	3	25	14 (56.0)	75	0 (0.0)	0 (0.0)
Canterbury	18	16	196	145 (74.0)	1081	44 (4.1)	15 (10.3)
Sth Canterbury	7	6	91	45 (49.5)	210	7 (3.3)	6 (13.3)
North Otago	4	4	54	49 (90.7)	350	4 (1.1)	2 (4.1)
Otago	15	6	136	49 (36.0)	208	6 (2.9)	5 (10.2)
Southland	14	14	70	73 (104.3)	426	5 (1.2)	3 (4.1)
TOTAL	243	110	1450	901 (62.1%)	5828	217 (3.7%)	81 (9.0%)

* Based on programme target of 5.8% of apiaries in Apiary Districts

**As reported to MAF by Branch Disease Control Coordinators

Table 6

**APIARIES AND HIVES WITH AMERICAN FOULBROOD
FOUND DURING NBA DISEASE CONTROL PROGRAMME OR REPORTED TO MAF BY BEEKEEPERS
TO 30 JUNE 1993
(1992 FIGURES IN BRACKETS)**

MAF Apiary Register Location	Apiaries Found with AFB:				Hives Found with AFB:			
	By MAF Inspectors*	By Volunteer Inspectors**	Reported by Beekeepers	Totals	By MAF Inspectors	By Volunteer Inspectors	Reported by Beekeepers	Totals
Whangarei	26 (5)	3 (17)	115 (127)	144 (149)	46 (20)	4 (38)	250 (249)	300 (307)
Hamilton	36 (12)	0 (0)	177 (305)	213 (317)	64 (46)	0 (0)	280 (735)	344 (781)
Tauranga	48 (8)	36 (40)	191 (331)	275 (379)	184 (37)	129 (104)	405 (695)	718 (836)
Palmerston Nth	36 (4)	8 (1)	76 (121)	120 (126)	254 (3)	13 (6)	75 (258)	342 (267)
Blenheim	26 (0)	3 (3)	116 (166)	145 (169)	63 (0)	5 (4)	205 (374)	273 (378)
Lincoln	31 (0)	21 (15)	134 (167)	186 (182)	56 (0)	51 (77)	223 (255)	330 (332)
Invermay***	51 (0)	10 (1)	132 (165)	193 (166)	104 (0)	15 (1)	237 (258)	356 (259)
Total	254 (29)	81 (77)	941 (1382)	1276 (1488)	771 (106)	217 (230)	1675 (2824)	2663 (3160)

* Inspectors employed by MAF (including beekeepers)

** Beekeeper inspectors under MAF direction (diseaseathons)

***Previously Alexandra

**Table 7 INCIDENCE OF AMERICAN FOULBROOD IN APIARY DISTRICTS TO 30 JUNE 1993
(1992 FIGURES IN BRACKETS)**

MAF Apiary Register Location	Diseased Apiaries % of Total District Apiaries		Diseased Hives % of Total District Hives		Apiaries Inspected NBA Programme*	
	Number	%	Number	%	Number	%
Whangarei	144 (149)	4.7 (4.9)	300 (307)	1.0 (1.0)	193 (186)	6.4 (6.1)
Hamilton	213 (317)	7.1 (10.4)	344 (781)	0.8 (1.7)	134 (17)	4.5 (0.6)
Tauranga	275 (379)	7.7 (10.6)	718 (836)	1.4 (1.6)	357 (250)	9.9 (7.0)
Palmerston North	120 (126)	3.0 (3.2)	342 (267)	0.9 (0.7)	332 (75)	8.4 (1.9)
Blenheim**	145 (169)	7.1 (8.3)	273 (378)	1.2 (1.6)	179 (115)	8.8 (5.6)
Lincoln	186 (182)	3.6 (3.7)	330 (332)	0.6 (0.6)	412 (57)	8.0 (1.2)
Invermay***	193 (166)	4.4 (3.8)	356 (259)	0.7 (0.5)	356 (36)	8.1 (0.8)
TOTAL	1276 (1488)	5.1% (6.0%)	2663 (3160)	0.9% (1.0%)	1963 (736)	7.8% (2.9%)

* Includes both MAF and beekeeper inspectors, whether employed by MAF or under MAF direction (diseaseathons).

** Blenheim 1992 figures do not include emergency response inspections, November 1991

***Previously Alexandra

NEW ZEALAND BEEKEEPER, APIARY AND HIVE STATISTICS BY APIARY DISTRICT AS AT 30 JUNE 1993

Apiary Register Location	1-5 Hives		
	Beekeepers	Apiaries	Hives
Whangarei	926	1053	1976
Hamilton	366	426	862
Tauranga	354	412	825
Palmerston Nth	884	997	2069
Blenheim	317	355	661
Lincoln	494	608	1059
Invermay*	371	404	795
NEW ZEALAND	3712	4255	8247

6-50 Hives		
Beekeepers	Apiaries	Hives
278	637	3748
172	368	2576
157	358	2684
370	878	5336
117	320	2057
180	514	2776
120	289	2050
1394	3364	21227

51-250 Hives		
Beekeepers	Apiaries	Hives
30	327	3948
24	214	3070
52	467	6319
41	526	4776
25	373	3861
45	575	6435
45	586	5440
262	3068	33849

Apiary Register Location	251-500 Hives		
	Beekeepers	Apiaries	Hives
Whangarei	13	197	3633
Hamilton	11	229	3781
Tauranga	19	452	8607
Palmerston Nth	12	334	4326
Blenheim	15	426	6072
Lincoln	14	261	3826
Invermay*	15	379	4998
NEW ZEALAND	99	2278	35243

501-1000 Hives		
Beekeepers	Apiaries	Hives
9	360	7252
12	528	10488
10	412	6932
6	322	4872
7	310	4898
19	1182	14105
22	1123	15861
85	4237	64408

More than 1000 Hives		
Beekeepers	Apiaries	Hives
8	459	10410
11	1220	22408
14	1492	27676
6	904	17067
3	252	4899
13	2003	29915
15	1592	23633
70	7922	136008

Apiary Register Location	1-50 Hives		
	Beekeepers	Apiaries	Hives
Whangarei	1204	1690	5724
Hamilton	538	794	3438
Tauranga	511	770	3509
Palmerston Nth	1254	1875	7405
Blenheim	434	675	2718
Lincoln	674	1122	3835
Invermay*	491	693	2845
NEW ZEALAND	5106	7619	29474

More than 50 Hives		
Beekeepers	Apiaries	Hives
60	1343	25243
58	2191	39747
95	2823	49534
65	2086	31041
50	1361	19730
91	4021	54281
97	3680	49932
516	17505	269508

Totals		
Beekeepers	Apiaries	Hives
1264	3033	30967
596	2985	43185
606	3593	53043
1319	3961	38446
484	2036	22448
765	5143	58116
588	4373	52777
5622	25124	298982

* Previously Alexandra