

**MAF QUALITY MANAGEMENT REPORT TO ANNUAL CONFERENCE
OF THE NATIONAL BEEKEEPERS' ASSOCIATION OF NEW ZEALAND
HASTINGS 22-23 JULY 1992**

1.0 ORGANISATION

MAF Technology was amalgamated with the Department of Scientific and Industrial Research and formed into a number of Crown Research Institutes (CRI's). MAF itself now consists of MAF Policy, MAF Quality Management, MAF Regulatory Authority, MAF Corporate Office and MAF Fisheries.

2.0 BEEKEEPING STATISTICS

2.1 Beekeepers, Apiaries and Hives

There were 5717 beekeepers owning 304,065 hives of bees at 30 June 1992 (Fig I).

2.2 Honey Production and Exports

The total crop was assessed at 9560 tonnes (31.4kg per hive) compared with last years crop of 7290 tonnes (23.3kg per hive) (Fig II).

Exports of bee products to the year ending December 1991 were worth NZ\$6.7 million and involved 1,800 tonnes of bulk, retail and comb honey, honeydew and beeswax. (Fig III).

2.3 Queen and Package Bees

New Zealand producers exported 25,112 queen bees worth NZ\$301,000 (free on board; fob) and 19016 1kg equivalent packages. It was not possible to put on fob value on packages because of the reluctance of some exporters to supply the relevant information. However, based on last seasons figures these packages were worth approximately NZ\$600,000 fob.

3.0 AMERICAN FOULBROOD DISEASE (AFB) AND APIARY INSPECTIONS

A contract was entered into with the NBA Executive to assist branch disease co-ordinators to carry out hive inspections. Some branches such as Bay of Plenty, Gisborne and Hawkes Bay carried out extensive 'diseaseathons', while others organised inspectors to work on an ad hoc basis. (Fig VI).

Altogether 161 temporary inspector warrants were issued by MAF but only 83 beekeepers exercised those warrants. However, beekeepers did inspect over 4000 hives and found 227 hives of AFB disease. (Fig V).

MAF officers carried out limited inspections under the NBA contract plus some inspection on an individual cost recovery basis.

MAF inspected 118 apiaries compared with 1286 last season and 753 hives compared with 7607 last year. (Fig VII). One hundred and nine hives of AFB were found in 29 apiaries. MAF officers and temporary inspectors usually find an average of just under 1000 AFB hives per year. This season, with the greatly reduced field inspections, only 336 AFB hives were

found. The number reported by beekeepers was nearly the same as last year so it is possible nearly 600 AFB hives are still in the field waiting to be found by beekeepers.

MAF attempted to negotiate a memorandum (MOU) of understanding with the Executive for disease control services for the 92/93 season. This MOU was to be effected by March 1992 but to date has not been received by MAF. However, expressions of intent to engage MAF have been made and on this basis MAF continued to budget resources pending a contract that was to be signed in August 1992. Because of these continual delays some apicultural officers have contracted other business and may not be available to personally inspect hives next season. However, they will be able to manage any disease control contracts with the industry and audit the performance of any temporary inspectors engaged to do the work.

The industry is to be encouraged to examine the whole aspect of disease control from the specifications, service delivery to auditing performance of the delivery organisation(s). The Executive Study paper is a good beginning. However, a more radical approach may be called for involving research work from Dr Mark Goodwin's lab at Ruakura. MAF has been evaluating the AFB disease monitoring being done in Denmark, the USA and in New South Wales for some years. Now that Dr Goodwin has answered many of our questions we are in a position to consider alternative methods of monitoring AFB rather than costly hive inspections. Monitoring could be done on voluntary or compulsory submissions of honey samples from hives, honey drums, or bee samples from hives. There are still a lot of questions to be thought through and costings done with these systems. MAF will be critically evaluating these systems in the next few months and making a recommendation to Executive.

4.0 EUROPEAN FOULBROOD (EFB) RESPONSE

This has been well documented in the New Zealand Beekeeper (No 213 and 214 1992) and Buzzwords (No 37, 38, 39, 40 and 42). An internal MAF audit following the response has highlighted a number of MAF systems that can be improved, and beekeepers and the Bee Disease Advisory Committee have also made helpful comments. These suggestions have been incorporated into new draft response procedures.

However, more fundamental questions of compensation and whether the industry wants MAF to respond to any suspect or confirmed case of EFB still has to be resolved. Remit Number 26 is a welcome attempt to address some of these issues. When the Biosecurity Bill becomes law then joint industry and MAF development of response plans will be required.

5.0 SURVEILLANCE

Government, through MAF Policy, continued to support inspection systems to prevent exotic pests and diseases entering New Zealand, the development of response procedures and training of staff to respond to any suspect outbreak, and a surveillance operation that looks for exotics that may have slipped through the net.

The apiculture surveillance system has three parts:

a. Apiary Register

Maintenance of the apiary registers in a computer database is a legal requirement under the current Apiaries Act.

The database is a very large one with over 35,000 names and addresses. The database is only as accurate as the information supplied by beekeepers and as usual we only had approximately 50% of the statement of inspection forms returned by the due date. A number of beekeepers had their apiaries inspected after failing to make their returns and were sent an account for the work involved. The importance of an up-to-date register was highlighted by the Nelson response and beekeepers will be encouraged to supply grid references for their apiaries.

b. Hive Sampling

Apiculture officers inspected 430 apiaries for the presence of exotics and took samples from 430 hives for testing for tracheal mites, *Varroa* and *Tropilaelaps*. Forty four samples were taken for suspect EFB and eight for Africanized honey bees.

MAF sampled apiaries mainly in residential areas and locations deemed to be high risk eg airports, seaports, garbage dumps, hospitals, military bases and suburbs with populations who are likely to be frequent overseas travellers.

No exotic specimens were found.

c. Live Bee Exporters

Live bee exporters were asked to take another 500 samples for testing for exotic mites but again proved unwilling to co-operate and only submitted 22 samples.

EXPORT CONFORMITY CERTIFICATION

Two draft export conformity certification schemes, one for bees and one for bee products, were prepared and distributed for industry comment. These schemes were modelled on schemes in place for animals and plants and reflect MAF Policy specifications.

MAF Policy set specifications and procedures for export certification and negotiate export protocols with overseas governments. They also contract organisations to be the certifying authority. In the case of animal and plant exports MAF Quality Management is the certifying authority but no contract has been let for apiculture nor standards and procedures defined. Further work on conformity schemes has been suspended until a contract is signed with MAF Policy.

ACKNOWLEDGEMENTS

The co-operation and support of my colleagues in the apiculture unit, and in MAF Quality Management is much appreciated.

I would also like to acknowledge the support of the NBA executive and Dr Mark Goodwin and his team at Ruakura.

**FIGURE I BEEKEEPERS APIARY AND HIVE STATISTICS
FOR NZ APIARY DISTRICTS
AS AT JUNE 1992**

Register Location	BEEKEEPERS		APIARIES		HIVES	
	1992	1991	1992	1991	1992	1991
Whangarei	1,316	1,307	3,072	3,046	32,301	32,475
Hamilton	627	649	3,044	3,105	45,452	45,661
Tauranga	602	619	3,573	3,541	51,938	53,717
Palmerston North	1,332	1,340	3,927	3,917	37,554	40,528
Blenheim	497	505	2,048	1,972	23,941	23,284
Lincoln	758	768	4,949	4,937	59,090	58,239
Alexandra	585	586	4,344	4,482	53,789	58,338
TOTAL	5,717	5,774	24,957	25,000	304,065	312,242

Figure II 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 N. Otago	South & Central Otago, Southland	SOUTH ISLAND	New Zealand	**Yield per Hive (kgs)
1987	1122	1506	1450	1012	5090	966	1070	2965	5001	10,091	29.7
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
6 year average	751	1135	1098	885	3871	630	1912	1786	4328	8199	25.4

* Includes honeydew

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

**FIGURE III* EXPORT FIGURES FOR HONEY, HONEYDEW AND BEESWAX
FOR THE YEAR TO DECEMBER 1991**

PRODUCT	TONNES	NZ\$ (FOB)	NO. OF COUNTRIES	NZ\$/KG
Bulk Honey	1,030.9	2,858,268	15	2.77
Retail Honey	296.6	1,239,163	23	4.18
Comb Honey	114.3	934,908	10	8.18
Honeydew	254.5	993,106	13	3.90
TOTAL	1,696.3	6,025,445		
Beeswax	116.4	667,645	11	5.74
TOTAL HONEY AND WAX EXPORTS	1,812.7	6,693,090		

* Source: NZ Customs

**FIGURE IV AMERICAN FOULBROOD DISEASE LEVELS
IN APIARY DISTRICTS TO 30 JUNE 1992
(1991 FIGURES IN BRACKETS)**

Register Location	DISEASED APIARIES				DISEASED HIVES				* %APIARIES INSPECTED BY MAF INSPECTORS	
	No.		%		No.		%		No.	
	1992	1991	1992	1991	1992	1991	1992	1991	1992	1991
Whangarei	149	192	4.8	5.0	307	667	0.9	2.1	6.1	18.1
Hamilton	317	232	10.4	12.5	781	559	1.7	1.2	0.6	14.1
Tauranga	379	351	10.6	9.9	836	1,115	1.6	2.0	7.0	9.1
Palmerston North	126	119	3.2	3.3	267	272	0.7	0.7	1.9	9.2
**Blenheim	169	218	8.3	11.6	378	453	1.6	2.0	5.4	6.7
Lincoln	182	148	3.7	3.6	332	255	0.6	0.4	1.2	5.5
Alexandra	166	182	3.8	3.3	259	412	0.5	0.7	0.8	6.2
TOTAL	1,488	1,442	6.0	7.0	3,160	3,733	1.0	1.2	2.9	9.8

* Includes both MAF and backeeper inspectors whether under MAF direction or NBA direction

** Does not include emergency response inspections, November 1991

**FIGURE V NUMBER OF APIARIES AND HIVES WITH
AMERICAN FOULBROOD DISEASE FOUND BY MAF OR
REPORTED BY BEEKEEPERS TO 30 JUNE 1992
(1991 FIGURES IN BRACKETS)**

	NO. OF APIARIES	NO. OF HIVES	% OF APIARIES INSPECTED	% OF HIVES INSPECTED
* Inspected by MAF	118 (1,286)	753 (7,606)	0.5	0.3
** Inspected by beekeeper inspectors	614 (1,058)	4,256 (5,859)	2.5	1.4
TOTAL Inspected	732 (2,345)	5,009 (13,465)	2.9 (9.4)	1.6 (4.3)
AFB found by MAF or beekeeper inspectors	106 (242)	336 (950)		
AFB reported by beekeepers	1,382 (1,200)	2,824 (2,783)		
TOTAL AFB	1,488 (1,442)	3,160 (3,733)		

* Includes beekeepers working under MAF directions

** Includes beekeepers working under NBA disease co-ordinator/NBA branch

**FIGURE VI PERFORMANCE OF BEEKEEPER INSPECTORS
WORKING UNDER THE DIRECTION OF THE NBA
FOR THE YEAR TO 30 JUNE 1992**

Register * Location	No. of Warrants Issued	No. of Inspectors	No. of Apiaries Inspected	No. of Apiaries AFB	No. of Hives Inspected	No. of Hives AFB
Whangarei	32	15	130	17	461	38
Hamilton	28	2	4	-	40	-
Tauranga	33	27	238	40	2,461	104
Palmerston North	25	20	50	1	273	3
Blenheim	15	10	99	3	364	4
Lincoln	20	3	57	15	445	77
Alexandra	8	6	36	1	212	1
TOTAL	161	83	614	77	4,256	227

* Most Apiary Registration Districts have more than one NBA Branch

**FIGURE VII PERFORMANCE OF MAF INSPECTORS AND
BEEKEEPERS WORKING UNDER THE DIRECTION OF THE MAF
FOR THE YEAR TO 30 JUNE 1992
(1991 figures in brackets)**

Register Location	No. of Warrants Issued	* No. of Inspectors	No. of Apiaries Inspected	No. of Apiaries AFB	No. of Hives Inspected	No. of Hives AFB
Whangarei	3	4	56	5	258	20
Hamilton	2	2	13	12	207	46
Tauranga	2	3	12	8	75	37
Palmerston North	5	4	26	4	92	6
Blenheim	-	1	11	-	121	-
Lincoln	-	1	-	-	-	-
Alexandra	3	3	-	-	-	-
TOTAL	15	18	118 (1,286)	29	753 (7,606)	109

* Includes Apicultural Advisors

NEW ZEALAND BEEKEEPER, APIARY & HIVE STATISTICS BY APIARY DISTRICTS AS AT JUNE 30 1992

Register	1-5 Hives		
	Beekeepers	Apiaries	Hives
Whangarei	974	1099	2120
Hamilton	382	453	923
Tauranga	330	383	790
Palmerston North	878	976	2066
Blenheim	321	365	667
Lincoln	479	580	1043
Alexandra	354	391	732
NEW ZEALAND	3718	4247	8341

Beekeepers	6-50 Hives	
	Apiaries	Hives
281	619	3923
187	408	2992
174	382	2934
384	836	5316
124	339	2122
185	502	3031
137	315	2321
1472	3401	22639

Beekeepers	51-250 Hives	
	Apiaries	Hives
33	273	3959
24	215	3239
49	435	5876
40	402	3846
28	385	4487
43	505	5604
39	492	4586
256	2707	31597

Register	251-500 Hives		
	Beekeepers	Apiaries	Hives
Whangarei	13	215	4530
Hamilton	10	210	3862
Tauranga	23	501	8741
Palmerston North	16	422	4906
Blenheim	11	309	4596
Lincoln	22	419	7120
Alexandra	16	427	5432
NEW ZEALAND	111	2503	39187

Beekeepers	501-1000 Hives	
	Apiaries	Hives
11	513	8122
12	538	11233
12	415	9054
6	274	3875
8	350	5299
14	850	10950
22	1040	14788
85	3980	63321

Beekeepers	More than 1000 Hives	
	Apiaries	Hives
4	353	9647
12	1220	23203
14	1457	24543
8	1017	17545
5	300	6770
15	2093	31342
17	1679	25930
75	8119	138980

Register	1-50 Hives		
	Beekeepers	Apiaries	Hives
Whangarei	1255	1718	6043
Hamilton	569	861	3915
Tauranga	504	765	3724
Palmerston North	1262	1812	7382
Blenheim	445	704	2789
Lincoln	664	1082	4074
Alexandra	491	706	3053
NEW ZEALAND	5190	7648	30980

Beekeepers	More than 50 Hives	
	Apiaries	Hives
61	1354	26258
58	2183	41537
98	2808	48214
70	2115	30172
52	1344	21152
94	3867	55016
94	3638	50736
527	17309	273085

Beekeepers	Totals	
	Apiaries	Hives
1316	3072	32301
627	3044	45452
602	3573	51938
1332	3927	37554
497	2048	23941
758	4949	59090
585	4344	53789
5717	24957	304065