

MAF Quality Management (MQM) Report to the Annual Conference of the National Beekeepers' Association of New Zealand, Christchurch 13-14 July 1995

1.0 Organisation and Personnel

Dr Stephen Ogden resigned during the year to take up a position with the Regulatory Authority. We have been able to secure the services of Dr Robert Rice as Apicultural Services Manager Lincoln. Robert and his father formerly owned and operated Rice's Aussie Bee Farm in Queensland where they were the largest producers of queen bees in the southern hemisphere.

2.0 Beekeeping Statistics

2.1 Beekeepers, Apiaries and Hives

There were 5409 registered beekeepers owning 293080 hives of bees as at 30 June 1995 (Table 1).

2.2 Honey Production

The total saleable crop was assessed at 8047 tonnes (27.5kg per hive) which is a significant decrease over the previous years record crop of 11819 tonnes (40.8kg per hive). The six year average is 8759 tonnes or 29.0kg per hive (Table 2).

3.0 Exotic Disease and Pest Response (EDPR) Capability

Training of MAF staff continued and further simulation exercises were held for Headquarters (HQ) personnel, as well as laboratory staff and Field Team Leaders. Systems and procedure manuals were accredited by the Regulatory Authority.

A major simulated exercise was held in Canterbury in September 1994 which involved an HQ, Field Team Leaders and Field Team Members. Beekeepers supported the exercise and acted as Field Team Members. Numerous visitors from the press, senior MAF management as well as politicians visited the HQ and were impressed by the commitment and professionalism shown by both MAF staff and beekeepers.

EDPR training and preparedness will be funded by government through the Regulatory Authority (RA) at least until 30 June 1996. However, under the Bio-security Act, there is a requirement for interested parties to prepare.

Table 1 BEEKEEPER, APIARY AND HIVE STATISTICS FOR NZ APIARY DISTRICTS AS AT 30 JUNE 1995

Apiary Register Location	Beekeepers			Apiaries			Hives		
	1995	1994	% Change	1995	1994	% Change	1995	1994	% Change
Whangarei	1213	1225	- 1.0%	2898	2972	- 2.5%	29101	29848	- 2.5%
Hamilton	551	584	- 5.7%	2905	3100	- 6.3%	43742	43749	+ 0.0%
Tauranga	537	598	- 10.2%	3531	3698	- 4.5%	50631	50282	+ 0.7%
Palmerston North	1352	1358	- 0.4%	4011	3957	+ 1.4%	37245	35839	+ 3.9%
Blenheim	469	474	- 1.1%	2037	2083	- 2.2%	22679	21190	+ 7.0%
Lincoln	735	771	- 4.7%	5270	5315	- 0.8%	58861	58155	+ 1.2%
Invermay	552	555	- 0.5%	4112	4208	- 2.3%	50821	50812	+ 0.0%
TOTAL	5409	5565	- 2.8%	24764	25331	- 2.2%	293080	289875	+ 1.1%

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)**
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
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
6 yr ave	868	1166	1279	1026	4339	490	2298	1632	4420	8759	29.0

* Includes honeydew

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

Table 3 PERFORMANCE OF MQM INSPECTORS* NBA AFB DISEASE CONTROL PROGRAMME YEAR ENDING 30 JUNE 1995

Apiary Register Location	MQM Staff	Contract Inspectors	Apiaries Inspected		Hives Inspected	AFB Found (% Inspected)	
			Target**	Completed (%)		Hives	Apiaries
Whangarei	3	4	118	126 (106.8%)	573	19 (3.3%)	12 (9.5%)
Hamilton	5	1	116	122 (105.2%)	788	25 (3.2%)	16 (13.1%)
Tauranga	3	1	140	147 (105.0%)	1632	222 (13.6%)	54 (36.7%)
Palmerston Nth	1	4	154	144 (93.5%)	906	100 (11.0%)	42 (29.2%)
Blenheim	3	0	79	81 (102.5%)	701	31 (4.4%)	15 (18.5%)
Lincoln	2	0	201	203 (101.0%)	1713	54 (3.2%)	22 (10.8%)
Invermay	5	0	171	170 (99.4%)	1176	55 (4.7%)	27 (15.9%)
TOTAL	22	10	979	993 (101.4%)	7489 (7.5)***	506 (6.8%)	188 (18.9%)
1993-94	37	4	973	1004 (103.2%)	8170 (8.1)***	532 (6.5%)	166 (16.5%)

* Includes beekeepers employed by MQM

** Based on programme target of 3.9% of apiaries per Apiary District (June 30, 1993 statistics); 1993-94 programme based on 3.9%.

*** Average hives per apiary > 6 hives/apiary required

Table 4 PERFORMANCE OF VOLUNTEER INSPECTORS NBA AFB DISEASE CONTROL PROGRAMME YEAR ENDING 30 JUNE 1995

NBA Branch	Warrants Issued	Warrants Used	Apiaries Inspected		Hives Inspected	AFB Found (% Inspected)	
			Target*	Completed (%)**		Hives	Apiaries
Far North	0	0	30	0	0	0	0
Northland	9	9	61	24 (39.3%)	155	8 (5.2%)	6 (25.0%)
Auckland	3	3	94	4 (4.3%)	36	4 (11.1%)	2 (50.0%)
Waikato	30	0	182	0	0	0	0
Bay of Plenty	25	19	146	146 (100.0%)	1016	74 (7.3%)	15 (10.3%)
Poverty Bay	6	6	73	70 (95.9%)	267	6 (2.2%)	5 (7.1%)
Hawkes Bay	14	14	61	36 (59.0%)	163	2 (1.2%)	2 (5.6%)
S'thern North Island	10	9	181	87 (48.1%)	230	32 (13.9%)	8 (9.2%)
Marlborough	9	7	44	44 (100.0%)	359	14 (3.9%)	6 (13.6%)
Nelson	15	6	55	38 (69.1%)	235	45 (19.1%)	3 (7.9%)
West Coast	4	3	25	21 (84.0%)	155	8 (5.2%)	5 (23.8%)
Canterbury	3	1	224	301 (100+%)***	1308	25 (1.9%)	13 (4.3%)
Sth Canterbury	11	10	90	74 (100+%)***	277	13 (4.7%)	10 (13.5%)
North Otago	0	0	56	0	0	0	0
Otago	6	6	138	16 (11.6%)	223	2 (0.9%)	1 (6.3%)
Southland	5	5	73	19 (26.0%)	234	25 (10.7%)	6 (31.6%)
TOTAL	150	98	1533	880 (57.4%)	4658	258 (5.5%)	82 (9.3%)
1993-94	194	128	1522	867 (57.0%)	5257	192 (3.7%)	107 (12.3%)

* Based on programme target of 6.1% of apiaries in Apiary Districts (June 30, 1993 statistics); 1993-94 programme based on 6.1%

** As reported to MQM by Branch Disease Control Coordinators

*** South Canterbury branch assisted Canterbury branch EDPR exercise; combined totals more than exceeded individual targets for both branches.

management plans for exotic and endemic pests and diseases of concern. Preparation and management of these plans or Pest Management Strategies (PMS's) will be the responsibility of beekeepers unless they can persuade government to be a partner. This message was delivered to the conference in Tauranga and the same message continues to come from the Regulatory Authority.

4.0 Surveillance

The Honey Bee Exotic Disease Surveillance Programme is comprised of four parts; the apiaries register, hive sampling, management of the restricted areas and border protection.

4.1 Register

The maintenance of this Register (in the form of a computer database) is a legal requirement for the Government under the current Apiaries and Biosecurity Acts. The database relies on accurate statements of inspection provided by the beekeeper each spring. However once again, this year, around 50% of beekeepers failed to provide such statements of inspection by the deadline of 7 December.

4.2 Hive Sampling

In the past 12 months, MAF staff have inspected 338 apiaries for the presence of exotic bee diseases and taken samples for laboratory analysis for internal and external parasitic mites. In addition, 76 samples were taken for European foulbrood diagnosis and one sample was taken for Africanised honey bee analysis. Apiaries were sampled in at risk areas including sea and airports, garbage dumps and areas with a lot of international travellers. A further 542 samples of bees were tested for live bee exports at Invermay a part of the export certification programme. The samples were analysed for the presence of exotic internal and external parasitic mites. MAF Quality Management wished to thank the beekeepers for providing samples. No specimens of exotic disease pests were found and New Zealand continued to claim country freedom from a number of bee diseases. This is of considerable economic advantage to exporters of honey and live bees.

4.3 Quarantine Service

The beekeeping industry continues to have a high profile in the work of

MAF's Quarantine Service with numerous consignments of honey and other bee products being intercepted at the border. Every opportunity was taken to bring the risk of importing honey and bees to the attention of the travelling public.

5.0 Export Certification

Considerable work, involving the industry, MAF Regulatory Authority (MAFRA) and MAF Quality Management (MQM) took place during the year to develop workable protocols and delivery systems to facilitate the export to develop workable protocols and delivery systems to facilitate the export of live bees to Korea, and to Canada via Honolulu. It was gratifying to MQM to see these systems working and exports proceeding to both these markets.

Further work will be necessary this year to maintain the impetus with the Korean Authorities for the development of a bilateral protocol which recognises New Zealand's disease free status. This will have to be driven by the beekeeping industry and MAFRA. Further work is also required to ensure that exporters of both bees and bee products retain access to the European markets with minimal compliance costs.

New agreements under the GATT and the setting up of the World Trade Organisation should enable exporters to market their products more easily as trade barriers come down. However this will not happen overnight, nor will it happen without effort on the part of the beekeeping industry, through the Export Committee of the Executive to maintain pressure on importing countries to justify their import requirements.

6.0 American Foulbrood and NBA AFB Control Programme

For the fourth successive beekeeping season, MAF Quality Management was contracted in 1994-95 to provide an AFB control programme for the NBA. The contract, which included a \$5000 increase in expenditure compared to

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Table 5
APIARIES AND HIVES WITH AMERICAN FOULBROOD
FOUND DURING NBA DISEASE CONTROL PROGRAMME OR REPORTED TO MQM BY BEEKEEPERS
TO 30 JUNE 1995
(1994 FIGURES IN BRACKETS)

MQM Apiary Register Location	Apiaries Found with AFB:				Hives Found with AFB:			
	By MQM Inspectors*	By Volunteer Inspectors**	Reported by Beekeepers	Totals	By MQM Inspectors	By Volunteer Inspectors	Reported by Beekeepers	Totals
Whangarei	12 (13)	8 (10)	75 (94)	95 (117)	19 (103)	12 (28)	150 (155)	181 (286)
Hamilton	16 (18)	0 (11)	135 (196)	151 (225)	25 (50)	0 (15)	234 (283)	259 (348)
Tauranga	54 (27)	20 (19)	101 (187)	175 (233)	222 (47)	80 (37)	199 (318)	501 (402)
Palmerston Nth	42 (27)	10 (8)	115 (62)	167 (97)	100 (85)	34 (10)	308 (86)	442 (161)
Blenheim	15 (19)	14 (18)	124 (140)	153 (177)	31 (51)	67 (32)	233 (460)	331 (543)
Lincoln	22 (30)	23 (33)	148 (197)	193 (260)	54 (93)	38 (57)	312 (355)	404 (605)
Invermay	27 (32)	7 (8)	84 (133)	118 (173)	55 (123)	27 (13)	170 (281)	252 (417)
Total	188 (166)	82 (107)	782 (1009)	1052 (1282)	506 (532)	258 (192)	1606 (1938)	2370 (2662)

- * Inspectors employed by MQM (including beekeepers)
- ** Beekeeper inspectors under MQM direction (diseaseathons)

Table 6
INCIDENCE OF AMERICAN FOULBROOD IN APIARY DISTRICTS TO 30 JUNE 1995
(1994 FIGURES IN BRACKETS)

MQM Apiary Register Location	Diseased Apiaries/ % of Total District Apiaries		Diseased Hives/ % of Total District Hives		Apiaries Inspected NBA Programme*/ % of Total District Hives	
	Number	%	Number	%	Number	%
Whangarei	95 (117)	3.3% (3.9%)	181 (286)	0.6% (0.9%)	154 (158)	5.1% (5.1%)
Hamilton	151 (225)	5.2% (7.2%)	259 (348)	0.6% (0.8%)	122 (231)	4.1% (7.3%)
Tauranga	175 (233)	5.0% (6.3%)	501 (402)	1.0% (0.8%)	363 (337)	10.1% (9.4%)
Palmerston North	167 (97)	4.2% (2.4%)	442 (161)	1.2% (0.4%)	267 (246)	6.7% (6.3%)
Blenheim	153 (177)	7.5% (8.9%)	331 (543)	1.5% (2.7%)	184 (235)	9.0% (11.7%)
Lincoln	193 (260)	3.7% (4.9%)	404 (505)	0.7% (0.9%)	578 (401)	11.2% (7.5%)
Invermay	118 (173)	2.9% (4.1%)	252 (417)	0.5% (0.8%)	205 (263)	4.7% (6.0%)
TOTAL	1052 (1282)	4.2% (5.1%)	2370 (2662)	0.8% (0.9%)	1873 (1871)	7.5% (7.5%)

- * Includes both MQM and beekeeper inspectors, whether employed by MQM or under MQM direction (diseaseathons); apiaries inspected as a percentage of apiaries registered on June 30, 1993.

NEW ZEALAND BEEKEEPER, APIARY AND HIVE STATISTICS BY APIARY DISTRICT AS AT 30 JUNE 1995

Apiary Register Location	0-5 Hives			6-50 Hives			51-250 Hives		
	Beekeepers	Apiaries	Hives	Beekeepers	Apiaries	Hives	Beekeepers	Apiaries	Hives
Whangarei	896	950	1808	260	609	3640	35	362	4178
Hamilton	352	410	850	144	295	2055	24	245	3485
Tauranga	297	330	696	142	314	2393	51	485	6175
Palmerston Nth	934	1046	2117	356	813	5153	37	462	4451
Blenheim	309	353	682	108	337	2123	22	249	2703
Lincoln	462	571	1036	179	528	2882	44	473	5105
Invermay	335	386	734	122	248	1726	41	482	5048
NEW ZEALAND	3585	4046	7923	1311	3144	19972	254	2758	31145

Apiary Register Location	251-500 Hives			501-1000 Hives			More than 1000 Hives		
	Beekeepers	Apiaries	Hives	Beekeepers	Apiaries	Hives	Beekeepers	Apiaries	Hives
Whangarei	10	178	3814	7	258	4194	5	541	11467
Hamilton	6	151	2854	15	664	13002	10	1140	21496
Tauranga	13	265	4785	21	707	13302	13	1430	23280
Palmerston Nth	10	266	3359	8	395	5500	7	1029	16665
Blenheim	19	482	7220	8	380	5665	3	236	4286
Lincoln	16	395	6296	19	1197	14509	15	2106	29033
Invermay	20	544	7391	20	962	13846	14	1490	22076
NEW ZEALAND	94	2281	35719	98	4563	70018	67	7972	128303

Apiary Register Location	0-50 Hives			More than 50 Hives			Totals		
	Beekeepers	Apiaries	Hives	Beekeepers	Apiaries	Hives	Beekeepers	Apiaries	Hives
Whangarei	1156	1559	5448	57	1339	23653	1213	2898	29101
Hamilton	496	705	2905	55	2200	40837	551	2905	43742
Tauranga	439	644	3089	98	2887	47542	537	3531	50631
Palmerston Nth	1290	1859	7270	62	2152	29975	1352	4011	37245
Blenheim	417	690	2805	52	1347	19874	469	2037	22679
Lincoln	641	1099	3918	94	4171	54943	735	5270	58861
Invermay	457	634	2460	95	3478	48361	552	4112	50821
NEW ZEALAND	4896	7190	27895	513	17574	265185	5409	24764	293080

the previous year, called for the inspection of 3.9% (979) of registered apiaries by MQM personnel, the provision of inspection lists for NBA inspectors and diseaseathons, and various other services relating to disease control and reporting. Unlike previous contracts, all inspections were to be targeted to known areas/beekeepers with disease problems. The \$5000 increase in the contract was earmarked by the NBA executive to provide additional counselling for beekeepers with AFB problems.

As in all previous contracts requiring MAF Quality Management to conduct inspections, the MQM target was exceeded, with 993 apiaries inspected. The average apiary size was also exceeded, with inspection apiaries averaging 7.5 hives (target apiary size = six hives). A total of 22 MQM staff and contract beekeepers were used in these inspections (Table 3).

NBA branch inspections totalled 880 apiaries, or 57% of the 1533 necessary to achieve the target set by the NBA executive of 6.1% of registered apiaries. Four of the 13 branches carrying out inspection programmes either met or exceeded their target of district apiaries inspected, while a further branch came within 4% of their target (Note: members of the South Canterbury

branch assisted the Canterbury branch in carrying out volunteer NBA inspections as part of this spring's EDPR exercise. The total of the two branches' inspections more than exceeded the individual targets for the branches). A total of 150 letters of appointment were issued to beekeepers who wished to assist in NBA inspections, with 98 letters of appointment being used (Table 4).

The NBA AFB Disease Control Programme therefore resulted in the inspection of 7.5% of New Zealand's apiaries (MQM: 4.0% + NBA: 3.5%), equal to the percentage inspected by the programme in 1993-94. The target inspection level set by the NBA executive for the programme was 10% of apiaries. A total of 12,147 hives were inspected (MQM: 7489 + NBA: 4658). This figure represents 4.1% of the beehives in New Zealand registered at the time the contract was let.

MAF Quality Management inspectors (and beekeepers contracted to MQM) found 506 hives and 188 apiaries infected with American Foulbrood (6.8% of hives/18.9% of apiaries inspected). NBA inspectors found a further 258 hives and 82 apiaries infected (5.5% of hives/9.3% of apiaries inspected). Beekeepers reported an additional 1606 hives and 782 apiaries to be

infected, down 332 (-17%) and 227 (-22%) respectively on 1993-94 (Table 5).

The overall reported incidence of American foulbrood in New Zealand beehives in 1994-95 was 0.8% of hives and 4.2% of apiaries, down from 0.9% (11% reduction) and 5.1% (18% reduction) respectively in 1993-94 (Table 6).

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He said trials on external infections were needed to provide hard clinical data following promising lab tests.

"What we do not know is how effective honey will be on a wound rather than in a petri dish in a laboratory," he said. Waikato Hospital plastic surgery consultant Michael Klaassen said the benefits of natural healing agents were being increasingly recognised.

He said the absorbency and antiseptic properties of sphagnum moss from the West Coast was also being looked at as a possible dressing.