

#### 4.5 Toxic Honey

This year there has been one incident of toxic honey poisoning. The levels of tutin (40 mg/kg) and hyenanchin (260 mg/kg) detected were at the lower end of values previously found to be associated with poisoning symptoms. The poisoning occurred after eating extracted honey, not burr comb or comb honey, as in several previous cases.

However, the number of beekeepers who continue to operate outside the law is a cause for concern. In the Coromandel restricted area, 18% of beekeepers, and 41% of beekeepers in the Eastern Bay of Plenty restricted area, failed to apply for a permit.

#### 5.0 EXPORT CERTIFICATION

Improved price prospects for Canadian honey resulted in a strong demand for NZ package bees and queens for the Canadian market this past autumn. Approximately 18 tonnes of packages were shipped. All shipments through USA, which followed the protocol negotiated in 1995, transited the United States without problems.

Further efforts were made during the year under Sanitary Phytosanitary (SPS) provisions to obtain agreement from Korean authorities to reduce further the testing requirements of NZ bees. These efforts have not yet proved successful.

Strong demand for honey, particularly from Germany, which began at the end of 1995, has continued. It is disappointing that the high NZ dollar has not permitted a significant price increase to be achieved by producers in NZ. However these exports have removed what could have been a reasonable surplus from the local market which has resulted in some firming of prices this season.

#### 6.0 AMERICAN FOULBROOD AND NBA AFB CONTROL PROGRAMME

The 1995-96 AFB Control Programme contract with MAF Quality Management (MQM) contained most of the provisions of the 1994-95 contract, including the inspection of 3.9% (987) of registered apiaries by MQM personnel, the provision of inspection lists for NBA volunteer inspectors, counselling of beekeepers with AFB problems, and various other services relating to disease control and reporting. A significant new component of this season's contract was a trial of the adult bee test for *Bacillus larvae* spores.

Once again this year, the MQM inspection requirement was exceeded, with 1033 apiaries inspected. The average apiary size was also exceeded, with inspected apiaries averaging 8.4 hives (target minimum apiary size = 6 hives). A total of 35 MQM staff and contract beekeepers were used in these inspections (see Table 3).

The NBA executive canvassed branches prior to this year's contract to determine which branches wished to carry out NBA volunteer (diseaseathon) inspections. Four of the 16 branches elected not to be involved in this part of programme. Nevertheless, total apiaries inspected by NBA volunteers during the contract period actually increased by 10%. Part of the increase may be explained by the involvement of three branches in

Emergency Disease and Pest Response (EDPR) training exercises, which were held in Tauranga, Palmerston North and Timaru. Apiaries inspected for AFB during these exercises were included in the NBA volunteer inspection figures.

NBA branch inspections totalled 981 apiaries, or 63% of the 1545 required to achieve the target of 6.1% of registered apiaries. A total of 108 letters of appointment were issued to beekeepers wishing to assist in NBA inspections, with 82 letters of appointment actually being used. Letters of appointment were not issued to beekeepers taking part in the three EDPR exercises (Table 4).

The NBA AFB Disease Control Programme therefore resulted in the inspection of 8% of New Zealand's apiaries (MQM: 4.1% + NBA: 3.9%). The target inspection level set by the NBA executive for the programme was 10% of apiaries. A total of 16,044 hives were inspected (MQM: 8643 + NBA: 7401). This figure represents 5.5% of the beehives in New Zealand registered at the time the contract was let. Compared to 1994-95, 32% more hives were inspected by MQM and the NBA during the 1995-96 contract period.

MAF Quality Management personnel found 530 hives and 183 apiaries infected with AFB (6.1% of hives and 17.7% of apiaries inspected). As directed by the contract, all MQM inspections were targeted whenever possible to areas where there was the greatest likelihood of finding AFB (ie, trouble spots/outbreaks). NBA inspectors found a further 132 hives and 76 apiaries infected (1.8% of hives and 7.7% of apiaries inspected). Beekeepers reported an additional 1079 hives and 626 apiaries to be infected (Table 5).

The overall reported incidence of AFB in New Zealand beehives in 1995-96 was 0.6% of hives and 3.6% of apiaries, down from 0.8% of hives (25% reduction) and 4.2% of apiaries (14% reduction) in 1994-95 (Table 6).

The suggestion has been made that the reduction in AFB incidence in the last five years is due to beekeepers under-reporting AFB hives to enable them to meet disease area freedom export certification requirements. However, the reduction in AFB reported by beekeepers during that time (13.0%) is similar to the reduction in the amount of AFB found by MQM inspectors (13.7%). This tends to indicate that the decrease in reported AFB reflects a real decrease in the incidence of the disease.

Table 3

**PERFORMANCE OF MQM INSPECTORS\***  
**NBA AFB DISEASE CONTROL PROGRAMME**  
**YEAR ENDING 30 JUNE 1996**

Apiary Register Location	MQM Staff	Contract Inspectors	Apiaries Inspected		Hives Inspected	AFB Found (% Inspected)		
			Target**	Completed (%)		Hives (%)	Apiaries (%)	
Whangarei	5	3	116	118 (101.7%)	1191	83 (7.0%)	36 (30.5%)	
Hamilton	6	0	121	153 (126.4%)	1330	15 (1.1%)	10 (6.5%)	
Tauranga	3	1	144	144 (100.0%)	1472	175 (11.9%)	44 (30.6%)	
Palmerston Nth	3	3	154	154 (100.0%)	824	117 (14.2%)	26 (16.9%)	
Blenheim	3	0	81	81 (100.0%)	958	41 (4.3%)	24 (29.6%)	
Lincoln	3	0	207	217 (104.8%)	1774	58 (3.3%)	25 (11.5%)	
Invermay	5	0	164	166 (101.2%)	1094	41 (3.7%)	18 (10.8%)	
<b>TOTAL</b>	<b>28</b>	<b>7</b>	<b>987</b>	<b>1033 (104.7%)</b>	<b>8643</b>	<b>(8.4)***</b>	<b>530 (6.1%)</b>	<b>183 (17.7%)</b>
<b>1994-95</b>	<b>22</b>	<b>10</b>	<b>979</b>	<b>993 (101.4%)</b>	<b>7489</b>	<b>(7.5)***</b>	<b>506 (6.8%)</b>	<b>188 (18.9%)</b>

\* Includes beekeepers employed by MQM

\*\* Based on programme target of 3.9% of apiaries per Apiary District (June 30, 1994 statistics); 1994-95 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 1996**

NBA Branch	Warrants Issued	Warrants Used	Apiaries Inspected		Hives Inspected	AFB Found (% Inspected)	
			Target*	Completed (%)		Hives (%)	Apiaries (%)
Far North***	0	0	40	0 --	0	0 --	0 --
Northland	2	2	50	3 (6.0%)	22	2 (9.1%)	1 (33.3%)
Auckland***	1	1	91	2 (2.2%)	0	0 (0.0%)	0 (0.0%)
Waikato***	0	0	189	0 --	0	0 --	0 --
Bay of Plenty**	7	6	152	274 (180.3%)	2031	17 (0.8%)	12 (4.4%)
Poverty Bay	8	8	73	62 (84.9%)	369	17 (4.6%)	5 (8.1%)
Hawkes Bay	15	11	129	128 (99.2%)	666	8 (1.2%)	6 (4.7%)
S'thern North Island**	0	0	112	112 (100.0%)	725	38 (5.2%)	21 (18.8%)
Marlborough	6	6	44	25 (56.8%)	282	3 (1.1%)	1 (4.0%)
Nelson	18	11	55	63 (114.5%)	335	9 (2.7%)	6 (9.5%)
West Coast	3	2	28	10 (35.7%)	210	13 (6.2%)	6 (60.0%)
Canterbury	30	23	184	96 (52.2%)	942	8 (0.8%)	6 (6.3%)
Sth Canterbury**	9	4	140	154 (110.0%)	1538	10 (0.7%)	7 (4.5%)
North Otago***	0	0	56	0 --	0	0 --	0 --
Otago	0	0	133	0 --	0	0 --	0 --
Southland	9	8	69	52 (75.4%)	281	7 (2.5%)	5 (9.6%)
<b>TOTAL</b>	<b>108</b>	<b>82</b>	<b>1545</b>	<b>981 (63.5%)</b>	<b>7401</b>	<b>132 (1.8%)</b>	<b>76 (7.7%)</b>
<b>1994-95</b>	<b>150</b>	<b>98</b>	<b>1533</b>	<b>880 (57.4%)</b>	<b>4658</b>	<b>258 (5.5%)</b>	<b>82 (9.3%)</b>

\* Based on programme target of 6.1% of apiaries in Apiary Districts (June 30, 1994 statistics); 1994-95 programme based on 6.1%

\*\* Includes EDPR exercise where no letters of appointment were issued

\*\*\*Branches that elected not to be involved in '95-'96 NBA Voluntary Inspection Programme

Table 5

**APIARIES AND HIVES WITH AMERICAN FOULBROOD  
FOUND DURING NBA DISEASE CONTROL PROGRAMME OR REPORTED TO MQM BY BEEKEEPERS  
TO 30 JUNE 1996  
(1995 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	36 (12)	1 (8)	58 (75)	95 (95)	83 (19)	2 (12)	108 (150)	193 (181)
Hamilton	10 (16)	0 (0)	110 (135)	120 (151)	15 (25)	0 (0)	168 (234)	183 (259)
Tauranga	44 (54)	17 (20)	87 (101)	148 (175)	175 (222)	34 (80)	108 (199)	317 (501)
Palmerston Nth	26 (42)	27 (10)	69 (115)	122 (167)	117 (100)	46 (34)	125 (308)	288 (442)
Blenheim	24 (15)	13 (14)	60 (124)	97 (153)	41 (31)	25 (67)	148 (233)	214 (331)
Lincoln	25 (22)	13 (23)	132 (148)	170 (193)	58 (54)	18 (38)	231 (312)	307 (404)
Invermay	18 (27)	5 (7)	110 (84)	133 (118)	41 (55)	7 (27)	191 (170)	239 (252)
<b>Total</b>	<b>183 (188)</b>	<b>76 (82)</b>	<b>626 (782)</b>	<b>885 (1052)</b>	<b>530 (506)</b>	<b>132 (258)</b>	<b>1079 (1606)</b>	<b>1741 (2370)</b>

Inspectors employed by MQM (including beekeepers)

\*\* Beekeeper inspectors under MQM direction (diseaseathons)

Table 6

**INCIDENCE OF AMERICAN FOULBROOD IN APIARY DISTRICTS TO 30 JUNE 1996  
(1995 FIGURES IN BRACKETS)**

MQM Apiary Register	Diseased Apiaries/ % of Total District Apiaries		Diseased Hives/ % of Total District Hives		Apiaries Inspected NBA Programme*	
	Number	%	Number	%	Number	%
Whangarei	95 ( 95)	3.5% (3.3%)	193 (181)	0.7% (0.6%)	123 (154)	4.1% (5.1%)
Hamilton	120 (151)	4.1% (5.2%)	183 (259)	0.4% (0.6%)	153 (122)	4.9% (4.1%)
Tauranga	148 (175)	4.3% (5.0%)	317 (501)	0.7% (1.0%)	480 (363)	13.0% (10.1%)
Palmerston North	122 (167)	3.0% (4.2%)	288 (442)	0.8% (1.2%)	394 (267)	10.0% (6.7%)
Blenheim	97 (153)	4.8% (7.5%)	214 (331)	0.9% (1.5%)	179 (184)	8.6% (9.0%)
Lincoln	170 (193)	3.2% (3.7%)	307 (404)	0.5% (0.7%)	467 (578)	8.8% (11.2%)
Invermay	133 (118)	3.3% (2.9%)	239 (252)	0.5% (0.5%)	218 (205)	5.2% (4.7%)
<b>TOTAL</b>	<b>885 (1052)</b>	<b>3.6% (4.2%)</b>	<b>1741 (2370)</b>	<b>0.6% (0.8%)</b>	<b>2014 (1873)</b>	<b>8.0% (7.5%)</b>

\* 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, 1994.