



Report 03.261
Date 19 May 2003
File Y/19/0/4

Committee Rural Services and Wairarapa
Author Wayne O'Donnell, Manager, Biosecurity

Varroa Bee Mite Management

1. Purpose

To inform the Committee of the situation concerning current strategies to manage Varroa bee mite, including possible implications for the Greater Wellington Regional Council.

2. Background

The presence of varroa was confirmed in South Auckland on 11 April 2000. On 17 July 2000, Cabinet agreed to a three-phase management programme for varroa involving:

- (a) a 10 week programme of immediate assisted treatment of high-risk hives;
- (b) a two-year Government-supported interim management programme;
- (c) the development of a long-term varroa pest management strategy proposal using the process set out in Part V of the Biosecurity Act 1993.

Phase II began in November 2000 and in late 2002 was extended out to 30 June 2003. The objectives of the Phase II programme were to ensure that the South Island remained free of varroa for as long as practicable, and that the economic impacts in the North Island were mitigated. It provided for the management of varroa while a sustainable long-term management strategy (Phase III) was developed.

3. Economic Assessment

The economic impact assessment suggested that, under beekeeper management only, varroa is likely to cost New Zealand agriculture at best around \$400 million and at worst around \$900 million, in present value terms, over the next 35 years.

The economic impacts are substantial but can be reduced by slowing the spread of varroa and excluding it from the South Island. The benefit of slowing

spread in the North Island by five years and excluding it from the South Island for the same period is estimated to be between \$81 - \$150 million.

4. Agricultural Impact

The varroa mite (*Varroa destructor*, formerly known as *Varroa jacobsoni*) is an external parasite of adult and developing stages of the honey bee (*Apis mellifera*). Infested colonies are weakened by a decline in the number of adult bees produced and emerging bees may be less active. Varroa may also act as a vector for a number of bee viruses.

Varroa may impact upon New Zealand agriculture in two ways:

- directly, on the beekeeping sector; and
- indirectly, on sectors that benefit from honey bee pollination.

Varroa may reduce not only the pollination efficiency of honey bees but also pollinator numbers through intermittent crashes of managed hives and the elimination of feral bees. The resulting reduction in pollination activity may affect the production of a number of crops.

Dependence on honey bees for pollination differs according to crop. Grasses and cereals are generally wind-pollinated. Floriculture has little requirement for honey bee pollination. Viticulture and some vegetables have a relatively minor reliance on honey bees. Glasshouse crops, such as tomatoes, are usually pollinated by commercially reared bumble bees. Most dependent on honey bees for pollination are many major horticultural crops, pasture clovers and some small seed and vegetable seed crops.

5. Long Term Management

A Varroa Planning Group (VPG) has been formed to develop a long-term management strategy for varroa. The VPG is led by MAF, and includes representatives of major stakeholder groups, including affected industries and local government. The original objective of the VPG was to develop a sustainable long-term management programme by the time the two year Phase II programme was due to end in November 2002. The interim management programme was extended to allow more time for Phase III development and implementation.

The VPG has identified a national pest management strategy (NPMS) under the Biosecurity Act as the most appropriate management option. A NPMS would provide for effective movement controls, surveillance and control of treatment products.

In December 2002, the VPG released a discussion document on the option of using an NPMS to manage varroa. The document raised two key management objectives-

- To maintain South Island freedom from varroa; and

- To slow the rate of spread within the North Island.

In December 2002, regions of the North Island believed to be free of varroa included Poverty Bay, Hawkes Bay and Wairarapa.

Specific strategy measures include ongoing movement controls on bees, bee products and bee keeping equipment within the North Island and between the two islands. There will also be an intensive surveillance programme in place in the South Island to ensure early detection and eradication of the pest should it ever cross the Cook Strait. Public awareness of the movement controls and the impact of Varroa is also a key component of the strategy.

The strategy is proposed to cover the next ten years with an estimated annual cost between \$670,000 and \$850,000. It is proposed funding will be from affected industries such as beekeepers, horticulturists, arable farmers and pastoral farmers, either through voluntary industry contribution or levies on rural land. The discussion document also raises the option of funding contributions from South Island regional councils.

6. Regional Council Involvement

Under a NPMS, North Island management would become the responsibility of the relevant management agency (possibly an industry collective). The discussion document does not propose involving regional councils, although that option is possible if surveillance work was to be tendered.

The proposed objective for the North Island would not be expensive to meet. The discussion document estimates \$30,000 a year, to be funded by voluntary contributions from beneficiaries.

Maintaining South Island freedom comes at a higher cost. Three funding scenarios were covered in the discussion document. All suggested contributions from regional councils, varying from 15-75% of the total annual cost. It was also suggested that councils could be used to collect any 'rural land levy' imposed by the NPMS. The writer is unclear as to the extent of consultation that occurred with South Island regional councils prior to the release of the discussion document. Feedback from South Island Biosecurity Managers, however, suggests that there is minimal support for regional council funding.

7. The Next Step

The VPG are currently reviewing written submissions and feedback from 15 public meetings held throughout NZ in January and February. If industry support is widespread, the VPG will proceed to develop a formal NPMS proposal for presentation to the Minister. If there is a lack of industry support or consensus, the VPG will further explore alternative options, including the option of industry only management.

8. Recommendation

That the report be received and its contents noted.

Report prepared by:

Report approved by:

Wayne O'Donnell
Manager, Biosecurity

Colin Wright
Divisional Manager, Wairarapa