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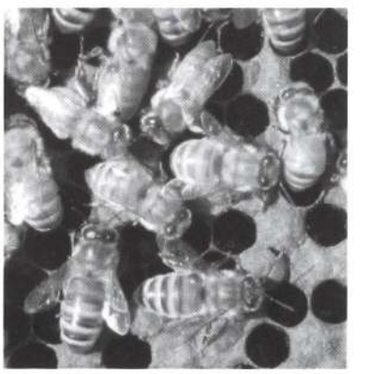
A rough winter for all, but a better road ahead

Photos by Frank Lindsay



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President's Report

AFB PMS

Since conference, the Executive has been busy looking at the AFB PMS in detail so that we have a good understanding of what is required by law and what are the additional components of the strategy.

It is good to see that some branches are undertaking more competency course training days to allow beekeepers in the area to sit the test. The test has now been revised in accordance with the recommendations made by the review team to make the questions easier to understand. Thanks to Simon and Sarah Peacey and Mike Stuckey for their input.

The Executive has now made recommendations to the Operations Committee and the Manager to implement a surveillance and audit programme that will cover all the branches. They will be required to work out the detail of the programme and put it into the operational plan.

Sustainable Farming Fund – Varroa Research

On 16 August, Graham Cammell (as project manager), Mark Goodwin and I met with the Sustainable Farming Fund people to look at what was required for the contract. The SFF staff have also asked that we look at cutting back on the project by the equivalent of $75,000 for the whole of the project. This is simply due to the fact that the Fund has too many worthwhile requests to meet in full.

We have indicated that this will be difficult to do. However, if you are willing to contribute some funds and have not committed to do so already, contact Graham. *Editor's Note: The Minister of Agriculture has approved the varroa National Pest Management Strategy.*

Proposed Varroa PMS

It has been indicated to us that the Board of Inquiry has made its decision and that it has gone to the Minister for his consideration. A report on the board's recommendations is also submitted from MAF. We expect to hear the outcome some time in mid-September.

Approval for own use for Food Grade Mineral oil

At the time of writing (22 August), we have not heard back on the progress of this application. It appears that all registrations are taking considerable time to progress. One wonders if the group that carries out this registration process is under-resourced.

Use of unregistered chemicals

It concerns me greatly to hear via the grapevine that some beekeepers are using and mixing products that are not approved for use. Those of you that are rumoured to be using these products put the whole of our industry at risk. If you use a product and residues are found in our harvested bee products, you risk halting our ability to export product.

And as you all know, our country relies on exports. Please do not put this at risk. If you have heard of a treatment that looks promising from overseas experience, and would like to see if it will be effective in New Zealand, please bring it to the attention of the Executive, so that we can look at its merits, and possibly get some research conducted here. If it looks promising and won't leave residues, we can then possibly get it approved for "own use". This is a way to have generic or non-commercial products approved.

Joint Stakeholder meeting

The Environmental Risk Management Agency (ERMA) has just sent us an invitation to attend a meeting on 23 September to discuss issues of interest about the regulation of hazardous substances. As beekeepers have ongoing concerns about the use of chemicals (especially sprays), we need to make sure the NBA is well represented. *Editor's Note: Roger Bray will be attending this meeting for the NBA.*

- Jane Lorimer

DECA Competency Test resources

The DECA test and tutors' resources have been upgraded; in particular, new photos are now in use in the test. All the revised test questions are strictly based on the yellow manual.

The photos are the same as those used in the brochure 'Diagnosis of Common Honey Bee Brood Diseases and Parasitic Mite Syndrome' which every registered beekeeper should have. I recommend this brochure as an excellent resource for all beekeepers to keep on hand. I know several experienced beekeepers who have had their brochure laminated so it can be carried in the truck and be available at all times.

Tutors can obtain a new set of transparencies on request from the Executive Secretary, Pauline Bassett, or borrow a complete resource kit from the NBA Technical Library.

A CD with an electronic copy of the tutor resource is available so contact me if you are interested.

- Don Stedman

Deadline for Publications

October Edition:	22 September 2004
November Edition:	20 October 2004
December Edition:	22 November 2004

All articles/letters/photos to be with the Editor via fax, e-mail or post:

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New Rules for Imports of Canadian Queens: Recommendation for Proposed Import Conditions

Darlene McCue, Green Isle Consulting Inc, Victoria, British Columbia

The Canadian Honey Council (CHC) ad hoc Committee on the Importation of Honeybee Queens met in Kelowna, BC, on October 21–22, 2003 to develop industry recommendations to the Canadian Food Inspection Agency (CFIA) regarding proposed permit conditions for importing honeybee queens from the continental USA and other importing countries. The committee recommended the following protocols.

The honey bee, *Apis mellifera,* queens imported under CFIA permit will be eligible for entry into Canada provided that queens are accompanied by a health certificate issued by an official from the Department of Agriculture from the exporting state of the USA within 45 days prior to the importation conforming to sections 1.0 through 2.2 below.

1.0 The queens originate from an apiary that does not have any visible clinical evidence of American Foulbrood (AFB), European Foulbrood (EFB), Varroa mites or small hive beetles.

Five percent of the colonies or a minimum of 25 bee colonies (which ever is greater) should be randomly selected and examined from each of the queen production and mating apiaries from which queens will be exported. Inspection for AFB, EFB, Varroa mites and small hive beetles should occur within 45 days prior to exporting queens. Queens would be allowed for shipments if no clinical evidence of AFB, EFB, varroa, and small hive beetles was found in the samples from the queen production and mating apiaries. Bee colonies will be examined as follows:

Visual examination of brood for symptoms of AFB or EFB is required. Bee colonies used in queen production and mating apiaries should be free from visible clinical evidence of AFB or EFB. If AFB or EFB is found, queens would not be allowed for shipment from this apiary. At least three brood frames per hive should be inspected.

Colonies should be assessed by alcohol washing of bee samples (200-300 bees/colony). The sample of bees should be placed in a basket, immersed in a solution of alcohol and the basket should be shaken for a period of at least two minutes. If varroa is not detected or is under 1% queen shipments will be allowed.

If varroa is found at levels above 1%, bee colonies in the queen rearing apiaries should be treated with a product that is registered in Canada. Treated colonies must be retested prior to collecting the queens and attendants to confirm that the level of varroa is below 1%.

Visual examination for small hive beetle is required. Colonies' lids, bottom boards and frames should be inspected for the small hive beetle. Colonies from which queens are collected should show no clinical evidence of the small hive beetle.

2.0 The queens originate from an apiary free of genes of the sub-Saharan type of the Africanized honey bee, *Apis mellifera scutellata.*

2.1 Africanized honey bees have not, in the past one year, been detected within 100 miles of the apiaries of queens' origin.

Based on current maps and surveillance programs for Africanized bees, a certificate from an authority of the State Department of Agriculture must be included in the export documentation.

2.2 Mitochondrial Polymerase Chain Reaction-DNA (PCR-DNA) testing results do not show signs of *A. m. scutellata* in the progeny of the breeder queens.

Mitochondrial (PCR-DNA) testing is done on random samples of workers representing the progeny of the selected breeder queens used by the queen producers. The PCR-DNA testing should be conducted within 180 days prior to exporting queens in the spring. Workers collected, one each from each of the breeder queens, may be pooled and run as a single sample if appropriate for the technique. If the test indicates the presence of *A. m. scutellata,* whether from a single bee or from all pooled workers, that queen producer would not be given certification to export queens. The PCR-DNA testing should be carried out by an accredited or State Laboratory.

- From *HiveLights* May 2004 Vol 17 #2

Editor's Note: According to the August 2004 issue of *HiveLights* (Vol 17 #3), the new regulation for importation of queens from mainland USA came into effect on 19 May 2004. The regulation change applies to queens only: the prohibition on packaged honeybees from the continental USA has been extended until December 2006.

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"Pollination, Sir? Of gorse!"

Dave Black

Beekeeping in the Bay of Plenty is a significant industry. Around 20 percent of New Zealand's honey is produced by beekeepers based here, and more importantly, pollination contracts in the region are valued at around $8-9 million to the industry annually, and worth considerably more to the region's growers. To meet these contracts beekeepers have to manage their honeybee colonies so as to produce a hive to a recognised standard, with bees, brood, and food stores present in appropriate quantities. There must be sufficient time for the colonies to grow from their small, over-wintered size, and sufficient forage available to sustain that growth. An essential component for any animal's growth is protein, and for honeybees this is delivered as pollen gathered from flowering plants. Given good pollen sources a colony will take around two months to grow big enough to be an effective 'pollination unit'.

Honeybees are not indigenous to New Zealand, and native plants have not evolved to satisfy their pollination requirement by using honeybees as a vector. Moreover, crops in the Bay of Plenty requiring pollination on a commercial scale flower fairly early in respect to the honeybee's natural growth cycle. Depending on the local weather, avocado begins flowering in September and green kiwifruit (Hayward) in November. Gold kiwifruit flowering sits somewhere in the middle, usually around the second week of October, and seems to get earlier every year. Throughout the early spring months of August and September beekeepers must ensure their colonies are within range of an abundant source of pollen if they are to be ready to visit these crops and achieve the grower's optimum fruit sets.

No native New Zealand plants are adapted to be a workable source of pollen this early in the year. Fortuitously, rangiora (*Brachyglottis repanda*), or five finger (puahou, *Neopanax sp*), may provide the bees with an opportunity in certain areas for a limited time, but are generally too late and too short-lived to be of use. There are a number of introduced species, willow, gorse, alder, and buttercups for example, which depending on locality, are important resources. By far the most important, in flower for several months and widespread in many areas, is gorse.

European gorse (*Ulex europaeus*) is a plant species classified as a pest in Environment Bay of Plenty's Regional Pest Management Strategy (Biosecurity Act) and subject to various control measures. Landowners are to destroy the plant growing within 10 metres of a property boundary, although only if directed to do so normally because of a complaint. It cannot be sold or propagated, and there are currently eight insects that have been released as 'biological controls', ones that consume gorse seeds for example. The control strategy seems widely misunderstood and vast tracts of gorse are subjected to aerial spraying; gorse, it seems, is widely disliked.

Besides its pivotal role for the region's beekeepers, gorse has many excellent qualities which seem to render its labelling as a 'pest', and imminent destruction, a little unfair. It is a fine nursery plant, ironically promoting the regeneration of native bush plant species that can shelter within, as well as providing a niche for small birds and animals. As a leguminous plant it is an effective 'nitrogen fixer' improving the soil's fertility, especially that of the marginal, exhausted land which is its natural habitat. It is a good plant to choose to prevent erosion, or encroachment by grazing stock onto steep sidings. A more recently recognised product of the hives, bee pollen itself is becoming an important commodity in its own right. With its long flowering period (and gorse flowers twice a year in New Zealand), it forms an important proportion of the pollen harvested for therapeutic purposes.

Honey production aside, the requirement for 'pollination units' in the Bay of Plenty is projected to rise. Each year, kiwifruit production is still set for a modest increase in acreage, and avocado plantings are expected to cover 10,000 hectares by 2015. It seems generally agreed that some 40,000 additional hives will be needed in the area to service growers' pollination requirements.[1] Indeed, in the case of avocado trees, the cool weather and long flowering phase may require an even greater hive density than current estimates predict, and what is more, hives at a more advanced stage of growth than is currently desired. There is already acute competition for early pollen forage in the Bay; if this is to increase in line with current forecasts there is some doubt that there will be enough forage available, and a strategy which is determined to eliminate one of the area's most important forage plants should not be maintained. Worryingly, it may already be too late to halt the

eradication of the gorse plants we have, and without them, it will be difficult and costly to produce hives in the strength and numbers the horticultural industry needs. The next time the region's pest control strategy is to be considered, a new tolerance for a valuable species ought to be promoted. In the meantime, where they can, landowners need to make a positive effort to use odd blocks of ground to plant 'bee-friendly' trees and shrubs, preferably those of value early in the year!

The particular case of gorse serves to illustrate a far more general and important lesson, reminiscent of the ship being spoilt for a 'ha'penny worth o' tar'. The largest enterprise can be scuttled by the smallest detail, in this case the profitability of a multi-million dollar industry could be jeopardised by destroying a weed. It is vital, at an institutional level, that we develop the best possible understanding of the social ecology we use when making land management policies, and consult widely. Individual landowners need to take what measures they can to create a great diversity of land management practices, on the one hand maximising their return from the land, but on the other, maximising our collective return from the lands.

- © Dave Black
National Beekeepers Association,
Bay of Plenty branch
July 2004

[1] Dr Jonathan Dixon, *The New Zealand Beekeeper*, February 2004, pp. 14–17.

From the colonies

Bay of Plenty Branch

The Branch had its July meeting on the topic of gorse. We invited Jim Pringle, a representative of the Regional Council (Environment BOP), to start a dialogue on the status and importance of gorse. Jim then published an article in our local paper about the importance of gorse to bees and the vital link between bees and the flourishing kiwifruit and avocado industry in the Bay of Plenty.

In the article, Jim says he learned a lot about the place of gorse in the life of bees at a recent beekeepers' meeting in Tauranga, and that this new view of gorse means a need to adjust Environment BOP's plant pest strategy. Jim wonders if in future the kiwifruit and avocado industries might of necessity find themselves using areas unsuitable for cropping to grow gorse and other winter-flowering plants for the survival and health of their production crops.

One of our members, Dave Black, has written an article on the topic. *(Editor's Note: Dave Black's article* Pollination, Sir? Of gorse! *is on page 6).*

- Gerrit Hyink

Hawke's Bay Branch

It has dried out a little bit but this would have to be one of the longest coldest periods of weather I have ever experienced. Some of the bees I have been working lately have sealed brood but no eggs or larvae and not a skerrick of pollen; some of the sealed brood are chilled and dead as well. There is not much you can do about this except put up with it: at least today the sun was shining and they were starting to gather pollen.

- John Berry

Poverty Bay Branch

Bees are canaries for the environment. They sample almost everything that is exposed to some pesticide or other. Perhaps we as beekeepers ought to utilise this to report unexplained bee deaths and the locations of the apiaries in order to identify problem area industries and substances. Two Gisborne beekeepers are working on a plan to develop a template for monitoring pesticides and their misuse. They will be meeting with the SFF in September to make an application for funding.

The Gaucho debate has highlighted another problem: which government agency handles what? ACVM does labels registrations. ERMANZ monitors risks. OSH handles workplaces. Gaucho's registration allows its use as a seed coating on grass seed. Some watched the No8 Wired show on television and noted that the monitor farm in the Manawatu was using Gaucho on clover seed. A check with the Government alphabet soup showed that this is an off-label use. ACVM and ERMANZ are now debating bee toxicity.

The NBA needs to decide how it is formally notified of new registrations and get involved in consultations on identified risks to bees. We used to have representation on the old Pesticides Board. The new HSNO regime is too much for one person. The Environment Committee of the NBA is perhaps the best vehicle for this.

- Ian S Stewart

Southern North Island Branch

Many commercial and hobbyist beekeepers are getting rude surprises at hive losses during the last month — mainly due to varroa levels. Many treated hives in March/April and thought that was enough; the prudent ones monitored levels and often treated again in late June/July. The weather has been very changeable with the odd warm day and as a consequence bees have been out and varroa has come in, or expanded in numbers as brood has expanded.

The branch will be planning Diseaseathons in a couple of areas. Please remember to thoroughly check all the frames in the bottom box etc., and report if any AFB is found. The branch is keen to target areas where there appears to be a rise in AFB levels.

Our spring Field day will be held at the Tweeddales in Taihape on 25 September. This will be a great chance for many smaller beekeepers to see a large-scale operation. An interesting day is being planned to cater for commercial and non-commercial beekeepers. Got a good idea? Come and tell us about it — please contact either Neil Farrer or Frank Lindsay.

- RN (Neil) Farrer

Nelson Branch

"As the days begin to lengthen, the cold begins to strengthen," which has truly been the case here in Nelson this 'spring'. After a rather rainy July, the weather has 'settled' and we have missed all the August storms around us. Are we *really* only 90 kms from Wellington – as the bee flies? It has been very hard to open hives or to start raising queen cells when the cold from the heavy frost lingers on into the late morning. Most beekeepers seem to be mainly making nervous rounds, feeding light hives, or busily hammering up late bee gear, waiting for warmer weather so that some intensive hive work can be done. The heather, gorse and tree lucerne pollen are coming in. The hives are on their 'starting blocks'.

At the 10 August meeting of the Nelson NBA, a unanimous vote instructed the president and secretary of the branch to again write to the Hon Jim Sutton to convey their opposition to the National PMS – Varroa Bee Mite. We have already opposed this strategy in a 2 July 2003 submission, but now have additional reasons for continuing serious opposition to the proposed strategy.

Below is a précis of this letter to Hon Jim Sutton dated 20 August 2004:

1) We have no confidence in the surveillance plan actually picking up an early varroa incursion, nor would it appear, does MAF Biosecurity, in the recent "incident" near Tutaki (Murchison) where all the live bees from 40 hives

Continued on page 10

Continued from page 8

were destroyed and taken away to be examined in order to be certain of varroa-free status. The branch also feels serious lack of confidence in the contractors after members observed the MAF Biosecurity and AgriQuality NZ Ltd operation near Murchison.

2) We are now even more aware of the devastating and serious disruption to businesses and families following the destruction-of-bee incident mentioned above.
3) Of the 20 commercial beekeepers in Nelson, all but three are 65-100% reliant on pollination for their gross income. The proposed NPMS's inevitable restriction on hive movements would not allow the beekeepers to fulfill their commitments to the fruitgrowers.
4) We feel that there should be a referendum for all South Island *commercial* beekeepers in light of the widespread opposition to the NPMS to gauge the current level of support/opposition to the strategy, as we assume that commercial beekeepers will be the ones paying the levy and affected by the restrictions of hive movements.

The Nelson branch concerns were discussed with the Marlborough beekeepers at a meeting on 25 August.

- Merle Moffitt.

Canterbury Branch

August has been the worst month of the winter. We are receiving regular cold southerly winds accompanied by snow. All of which is delaying the start to the beekeeping season as we can only snatch a few hours a week to work the bees.

With the varroa response over in Oxford, beekeepers including myself are extra busy dealing with the aftermath of movement controls. It is a real battle trying to get hives up to speed as a lot of hives that would have been shifted out of cold winter gullies have dwindled significantly. I would like to know how many beekeepers that have been affected by these movement controls would still be in favour of a varroa PMS? Now that a few beekeepers have experienced the full effects of movement controls on their business (and at a dormant time of year), I am sure that the number will have decreased. A democratic approach would be to vote.

Beekeepers affected must keep good records if they intend to make a claim, as MAF will only compensate on verifiable losses. This is where it will get interesting, no doubt. Watch this space.

- Brian Lancaster

Southland Branch

A very late winter has set back hive development recently, with the province being blanketed with snow twice in 10 days. While we have not had the floods affecting the North Island, pastures are generally saturated and access has become a problem. The mild winter had meant that in general there was a lot of feed available both as grazing and fodder crops such as swedes, and it was amazing how quickly that situation changed. Beekeepers seemed to have avoided problems by migrating north. "It was nice and warm in England/Italy/ Europe/ Australia" is a common response.

Environment Southland is launching another campaign against gorse and broom, so-called noxious weeds. Most of Southland is very well groomed to the uninitiated gaze, but beekeepers tend to regard it as a green desert. The loss of native and weed species that provide nectar and pollen, particularly in the spring, makes life difficult for bees and beekeepers. We certainly don't want any more gorse destroyed.

The recent find of a damaged varroa mite on a sticky board from the Gore district is not causing much concern so long as movement controls are not imposed. A realistic view of the inevitability of infestation in the long term is not deterring a few new beekeepers from building their investment.

A DECA competency course and test will be held in Invercargill on Sunday, 17 October. Interested participants should contact me.

- Don Stedman

Effect of the beeFORCE™ unit on honey bees and varroa

H.M. McBrydie and R.M. Goodwin, Hort Research Ruakura, January 2002

Executive Summary

The purpose of this investigation was to determine the effect of BeeFORCE™ units on both adult bee populations in hives and adult honey bee survival, and also the effect of powdered sugar esters on adult honey bee and varroa survival. Twenty hives were selected, and a single BeeFORCE™ unit was attached to each of ten hives. The effect of using BeeFORCE™ units after two days had no significant difference on adult honey bee survival. There was no significant effect on colony populations. Forty and 88% powdered sugar ester significantly increased varroa mortality. Forty percent sugar ester did, however, reduce honey bee survival.

Introduction

The aims of this project were to determine the effect of:

1) BeeFORCE™ unit on adult honey bee populations in hives,
2) BeeFORCE™ unit on adult honey bee survival,
3) Powdered sugar esters on adult honey bee and varroa survival.

Methods and Results (the results were analysed using ANOVA)

Effect of BeeFORCE™ unit on honey bee population

Twenty hives were selected on a secure site at the Ruakura Research Centre. A single BeeFORCE™ unit was attached to each of ten randomly selected hives. The BeeFORCE™ units were set up under the supervision of G. Willacy (Amberley Management Services Ltd) to the protocols in Appendix A.

Honey bee populations were determined by weighing all bees from both the treated and the untreated hives before and after the BeeFORCE™ units (containing kiwifruit pollen) had been in place for 12 days. A sample of approximately 150 bees was also taken from both the treated and the untreated hives before and after the BeeFORCE™ units were attached. These were weighed and counted, and used to convert the total bee weights from each hive to the total number of bees per hive.

There was a slight decline in the average population of bees per hive in both the treated and untreated hives during the course of the trial (Figure 1). However, there was no significant (P=0.96) difference between the treated and untreated populations.

Effect of BeeFORCE™ on honey bee survival

After the units had been in place for two days, bees leaving the hives were captured in a plastic bag. Twenty of these bees, from each of the twenty hives, were lightly anoxiated with CO_2 and placed into a cage. The cages (Plate 1) (40 mm x 100 mm x 100 mm) were constructed of wood with two sides covered in 2 mm mesh, with a gravity feeder which allowed bees access to a 2M sucrose solution. The cages were kept at ambient temperature (daily range 12°C – 26°C). Honey bee survival was recorded hourly for the first four hours and again at 24 and 48 hours.

There was no significant difference (P=0.93) between mortality rate of adult bees captured leaving the hives with (25% mortality SE=1.56) or without (28% mortality SE=1.54) the BeeFORCE™ unit attached to the hives (Figure 2).

BeeFORCE units in Te Puke Orchard

Effect of powdered sugar esters on honey bee and varroa survival

To ascertain the effect of powdered sugar esters, fifty cages were prepared as above. Fifty bees from a varroa infested hive were placed in each cage. Twenty cages each received one single dose of 40% sugar ester powder using the BeeFORCE™ unit. A further 20 cages received a single dose of 88% concentration of the powder. Ten cages received no treatment. Each cage was put into a two-litre ice cream container lined with Fluon AD1, to prevent the escape of the varroa. Honey bee survival and the number of dead mites was recorded hourly for the first 4 hours and again after 24 and 48 hours. At 48 hours the bees from each cage were placed into a jar and alcohol was poured over them to kill the bees. The jars were then agitated vigorously for five minutes to remove any remaining mites. The alcohol and bees were then poured through filters to collect the mites.

The bee mortality data from the first trial has not been presented. As there was unacceptably high mortality of bees in the control cages the trial was repeated using bees without varroa and 20 control cages instead of 10.

The sugar esters significantly ($P<0.01$) increased mite mortality. The highest varroa deaths occurred from the highest percentage of sugar ester (Table 1). This is a significant rate effect ($P<0.05$).

There was a significant ($P=0.016$) increase in bee mortality after 48 hours (Figure 4) when the trial was repeated with bees without mites. There was a significant ($P<0.01$) increase in bee mortality in the 40% treated cages after 48 hours compared to the 24 hours.

Discussion

The slight decline in colony populations was probably due to a seasonal effect with a higher than normal December rainfall during the trial period. The use of the BeeFORCE™ units with kiwifruit pollen did not affect adult bee populations in the hives.

The sugar esters significantly increased varroa mortality. The 40% powdered sugar ester approximately doubled the percentage of mite deaths, which increased even further at the highest rate. This may be explained either by the powder interfering with the pads on the legs of the mites, through attempts to groom the powder off their bodies, or most probably through toxicity of the material as most of the mites fallen off the bees were dead.

Forty percent ester significantly decreased honey bee survival, indicating that either the sugar ester itself or the carrier is toxic to bees. Why there was no significant increase in bee mortality with 88% concentration is unknown.

Editor's Note: This article has been reprinted with permission, although it has been abridged; i.e., it does not include the appendix, plate, figures and tables referred to in the article. For a copy of the full report, please contact Dr Mark Goodwin, HortResearch, Ruakura Research Centre, email Mgoodwin@hortresearch.co.nz, or visit the beeFORCE™ Australasia Ltd website at www.beeforce.co.nz.

Photos sourced from beeFORCE™ Australasia Ltd.

About the Apiary

Mid-August and we've had two weeks of relatively good beekeeping weather, although access has been a problem. Most of the minor farm tracks in this area are pugged and you need chains to get through to the hives.

The bees have been flying well, bringing in loads of pollen and I have even spotted two full frames of wet honey in one hive. Bees are marvellous creatures. Some bees (usually the dark bees with quite a bit of *mellifera mellifera*) managed to ferret out a honey source while those yellow bees in the hive alongside are starving. I'm not too sure where this nectar came from but I can't rule out that it was robbed from some poor unfortunate hive that has succumbed to varroa.

All the early spring sources are now flowering: five finger (*Pseudopanax arboreus*), tree lucerne (*Cytisus proliferus*), Karo (*Pittosporum crassifolium*), Spanish heath (*Erica lusitanica*), bush wattle (*Albizia lophantha*), gorse, broom and numerous other early blossoms. The warm weather seems to have stimulated the succulents *Jovibarba hirta* (I think) into flowering earlier. Most have massive flower heads that are about to pop; yet this plant generally flowers at the beginning of October. Perhaps an indication that spring could be a week or two early.

I have been out cleaning the plastic core board trays in the mesh bottom boards and checking natural mite fall a few days later as I pass by. Most have one or two mites dropping per day but I found several hives in each apiary with 10 mites dropping per day. Without immediate treatment these would be dead within a month or two.

Some of these hives were very small (four frame nuc size) and you can actually see the damaged bees emerging from the cells. Late reinvasion, perhaps.

Another interesting thing about using mesh bottom boards is that you can see what's going on in the hive. Chalkbrood mummies are more obvious (mark hives for replacement queens). You can see the lines of dross indicating an expanding brood nest and I have been surprised how many mice are getting into my hives. That tiny chewed-away corner in the bottom super allows them easy access. I've been blocking these up with sticks and putting out baits to reduce their numbers.

I have also found several hives that were dead or on the verge of dying through starvation. Perhaps I should have been out a week or two earlier seeing that it has been a relatively warm winter. Most of those dead hives had massive amounts of brood. Such a pity. To overcome shortages and the on-again, off-again trickle of early nectar, I've been adding two scoops (using a 2 kg honey container) of raw sugar to the top feeder in each hive. To encourage the bees to convert this into usable nectar, add a dribble of water around the edge of the raw sugar nearest to the feeder entrance hole. This dissolves the raw sugar and the bees quickly get the idea and carry water back to the hive and continue to dissolve the sugar.

This is a good method of feeding for strong hives, as it tends to retard their growth close to swarming time. However, it is not recommended for small or nuc colonies. These need to be stimulated using sugar syrup.

Spring inspection

I usually start doing full hive inspections in September. Pick a warm day when the bees are flying well. If you only have a few hives, this job can be left until the end of the month.

Maintaining control over the bees by light puffs of smoke and requeening hives are the two most important fundamentals of beekeeping. A lot of new beekeepers allow the smoker to go out and this can cause problems, especially in an urban area. It's a skill easily acquired. Choosing the right material is important. I use pine needles as they are cheap and easily accessible. I collect them when they are falling, bag them and leave them to fully dry out in the garage for a few months. Having dry pine needles is most important: if used straight off the ground they are liable to go out.

Lighting your smoker

Make sure there isn't any ash below the grate to impede the airflow from the bellows. Pack about 2 cm of pine needles into the bottom of the smoker. Take another handful of pine needles and hold them over the open smoker. Light them and, still, holding the pine needles, gently push them into the smoker while gently pumping the bellows. When you see a considerable amount of burning needles, drop the handful into the smoker and continue pumping. Then take another handful of needles and force these down on top of the first lot, so that the smoker is now full. Allow the smoker to burn for another minute before closing its lid. A small trickle of smoke should emanate from the smoker and after a couple of puffs, there should be enough smoke to control the bees.

Lightly puff smoke into the hive entrance and then repeat in a few minutes. This gives the bees time to react to the smoke and you will find that your bees are far easier to control. Now you are ready to proceed with the hive inspection.

Stripping the hive

Strip the hive down to the baseboard. Check the stand underneath the base. Is it secure and will it take the heavy weight for another year? Any rot or unevenness — replace it. The ideal is a stand that holds the hive off the ground allowing an airflow underneath and has a gentle slope towards the entrance of about 15 mm.

Clean the bottom board. Brother Adam (UK) used to put a clean, freshly painted bottom board on his hives each year. You can do the next best thing by taking a spare base to replace the existing one. Then clean up the dirty one so that it is ready for your next hive by scraping the debris off using your hive tool and then scrubbing it clean with Janola and water. Rinse off with clean water and the board is ready for the next hive.

Cleaning the bottom board is important. In the wild, debris in a feral hive drops to the bottom of the cavity, well away from the bees. Unfortunately, modern hives allow the debris to collect close to the brood nest, requiring the bees to take debris out of the hives to keep themselves healthy. Just an observation — those hives with a nice clean baseboard coming out of winter generally have some hygienic behaviour genes. Keep an eye on these hives as possible sources for resistance breeding.

Check the supers and replace any that are starting to rot. Full depth supers that are rotting in the corners can be patched up or can be cut down and used as 3/4 honey supers. Place the bottom super back on the baseboard and go through all the frames, starting from the outside frame. If you have nine frames in the brood super, the outside frame comes out easily. If you use 10 frames, prise out the second frame in from the end first and then remove the outside frame for inspection. Generally the outside frames are a lot wetter during the winter. They may have started to rot and will break apart if prised out first.

With the sun behind you, check all the cells for AFB scale. Sometimes you will find one or two capped cells that are well away from the brood nest. Flick the capping off these with your hive tool so that you can identify why the bee didn't emerge. The odd one around the outside of the frame could have been chilled earlier. Those in the middle could be either chalkbrood or sacbrood. Always keep in mind that you are looking for American foulbrood.

As you go through the frames, remove any that are dark (that is, you can't see light through them when held up to the sun) and any that are heavy or have excessive drone brood. You only need to have drone brood in one frame. Replace these with last year's drawn frames. If the dark frames have brood in them, mark them and during the season gradually work them to the outside of the super.

While checking the frames, scrape off any propolis on the sidebars so they can be jammed close together to maintain the 33 mm space between the frames — centre to centre. If you leave the propolis on, the frame spacing gradually gets wider and will eventually require double the number of bees between the frames to maintain brood temperature. It also makes it easier to remove and replace the frames if you maintain ten frames in the super. Collect the propolis as it's worth money.

When you reach the brood, handle the frames carefully without jarring or dropping them. Check the brood pattern. As the population of the hive increases, the brood nest expands outwards in rings. Look at the edge of the brood where you see uncapped larvae. Are they all the same size (or age)? If they are of different sizes (ages) and there is plenty of pollen surrounding the brood nest, then this is an indication the queen could need replacing. Consider replacing a second-year queen as a normal part of your beekeeping. Old queens usually fail once the pressure of brood rearing increases. Although they were laying well earlier in a nice pattern, they start missing cells (the larva were not viable) once the brood nest starts expanding. If this happens the hive will not build to its full strength after requeening (to be covered in next month's column).

If you have time, check the drone brood to identify the varroa mite levels. Select an area of drone brood at the purple eye stage, and, using an uncapping fork, slide it under the cappings and gently lift out the brood. Varroa will be seen on the backs of the drones' abdomens.

Sample about 100 cells to identify the varroa mite numbers: if one in 50 pupae sampled has mites on it, the infestation is light. If one in 20, the infestation is medium. One in 10 is considered heavy. If one in six pupae is infested, then the colony may be at risk of collapse. In such cases treatment with an approved varroacide may be appropriate (*Bee Craft*, August 2004).

At this time of the year any more than a 2% infestation means you should consider treating your hive before the end of the season. Also, a hive with a lot of drone brood in development is an indication that the hive might be making preparations to swarm in October. Mark these hives and keep an eye on them, and split them if they start making queen cells.

Replace the brood frames in the same order as they are removed so the equilibrium of the brood nests is maintained. Check the amount of stores in the hive and add either sugar syrup or raw sugar to the feeder, so that at least three full frames of honey stores are maintained in the hive. Before closing the hive, make sure there is a bit of top ventilation, as converting sugar syrup into honey requires the bees to get rid of excess moisture.

All the time while inspecting the hive, waft a bit of smoke over the tops of frames to keep the bees under control. You can tell when this is required as they will start sticking their heads up between the frames or could become agitated and start flying at you. All this shouldn't take more than 5–10 minutes. Any longer and the brood nest will start to become chilled.

Things to do this month:
Check for AFB; cull old frames from the brood nest; feed if necessary; control weeds around the hive/s. Check stored supers for wax moth; prepare replacement frames for waxing as soon as the flow starts.

- Frank Lindsay

Explanation of front cover photos

"Five finger and macadamias are flowering and the macadamia fruit (nuts) are just starting to fall. The rats are having a good time cleaning them up — they chew small holes to get at the kernel. I found damaged queens and varroa mites in the same small hive. This queen has no wings and has a damaged abdomen. How did she lose her wings? Did the bees blame her for the high number of varroa mites in the hive and attack her? Some beekeepers are having to walk feed to their hives because the paddocks are pugged. Hives are being moved into pollination. Interesting that there are less blossoms on the trees this year, perhaps due to biannual fruiting?"

- Frank Lindsay

How Beekeepers Spread American Foulbrood Disease

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Without the intervention of beekeepers, American foulbrood disease (AFB) probably spreads quite slowly. However, modern beekeeping practices have increased the number of opportunities for AFB to spread. This article describes the way beekeepers contribute to the spread of AFB.

Swapping brood
The most significant way beekeepers spread AFB is moving frames of brood between colonies. Although you need to feed about five million spores to a colony to infect it with AFB, a single diseased larva may contain 2,500 million spores. If you wanted to infect a colony the most certain way of doing so would be to place a frame of brood from a diseased colony into it. There are many examples where beekeepers have created significant disease problems by swapping brood. Many of these have occurred while preparing hives for kiwifruit pollination.

Feeding pollen
This is another high risk activity. The design of most pollen traps ensures that many of the AFB scales that bees remove from a hive end up in the pollen trap with the pollen. For this reason feeding pollen can be another very good way of spreading AFB.

Feeding honey
Feeding extracted honey contaminated with AFB spores is also highly risky. There are many horror stories where beekeepers have had to burn large numbers of hives after feeding extracted honey.

Extracted honey supers
Even though extracted honey supers usually contain less infected material than brood or pollen, they are a major source of cross infection. This is because of the frequency with which they are swapped between hives. In most commercial outfits they are taken off one hive and placed on another hive at least once each year. Some large reductions in disease levels have been achieved by making sure extracted honey supers are returned to the hives they were removed from. The best indicator that extracted supers are spreading AFB is through a scattered occurrence of the disease with no pattern to it.

Other hive parts
Swapping other hive parts can also spread AFB. This can be a problem when a dead hive is broken up for parts. The floorboard is usually the biggest problem because bees often drop infected material on it.

Robbing
Bees robbing honey from an infected colony is another major way AFB spreads (Figure 1). In most cases beekeepers have contributed to the problem, either by allowing an infection to get to the stage that the colony is weakened enough to be robbed, allowing a diseased colony to die of other causes, or by not protecting it from stock so that it gets knocked over and robbed. Unfortunately, robbing also occasionally happens when an AFB hive is killed and stored in an inappropriate manner.

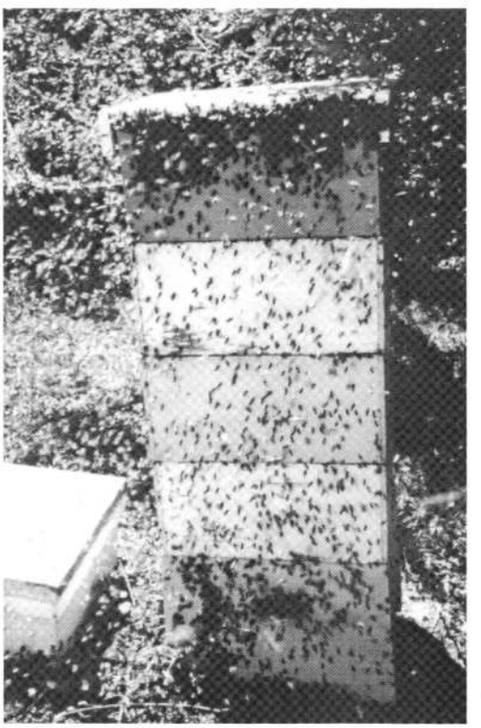

Figure 1 – A colony being robbed

Drift
Bees drifting between hives is a lesser source of cross infection but still significant. The likelihood of drift increasing spread increases with the degree of infection and the amount of drift that occurs. Anything that can be done to reduce drift is usually worthwhile doing.

The remaining pathways by which AFB spreads are less important.

Beekeeping equipment

Bee suits, gloves, and hive tools have at times been implicated in the spread of AFB. Bee suits probably never spread AFB, although gloves and hive tools may do very occasionally. It is therefore good practice to have a clean pair of gloves that can be worn after an AFB colony has been found, so the infected gloves can be taken home and cleaned thoroughly. Hive tools can be cleaned on site using a flame.

Other mechanisms for spread

There have been a large number of other mechanisms suggested to be important for the spread of AFB, including truck decks, steering wheels, hive straps, queens, queen cells, foundation, flowers and the soil outside a hive. Although some of these may occasionally pose a small risk, they are so insignificant compared to the other ways the disease spreads that they can usually be safely ignored.

Trade Mark fact sheet available

According to the Ministry of Economic Development and the Intellectual Property Office of New Zealand (IPONZ), a trade mark "is a unique identifier, often used as a brand or logo. It is a means of identification — a sign or combination of signs which enables businesses to make their goods and services easily distinguishable from similar goods and services supplied by other traders. Trade marks can include words, company names, logos, shapes, colours, smells, sounds — or any combination of these."

The Ministry and IPONZ have put out a fact sheet entitled 'What is a Trade Mark?', covering topics such as what qualifies (or what doesn't qualify) for trade mark protection, the rights conferred by a trade mark, how to apply for registration of a trade mark and how to protect and enforce trade marks. If you are interested in applying to register or use a trade mark, it is important to check first that your proposed trade mark isn't already registered or being used by another person; otherwise you could be infringing someone else's trade mark rights. You can search for trade marks by viewing the database of trade marks provided by IPONZ at its website www.iponz.govt.nz; visiting the IPONZ Information Centre at 17 Toop Street, Seaview, Petone, Wellington, or requesting that IPONZ conduct a search on your behalf (a fee is charged for this service).

For more information about trade marks, call free on 0508 447 669, or visit www.med.govt.nz or www.iponz.govt.nz.

- Abridged from the fact sheet 'What is a Trade Mark?', Ministry of Economic Development and Intellectual Property Office of New Zealand

Swarm Control revisited

(Abridged from an entry in irishbeekeeping@yahoogroups.co.uk.
NB: dates refer to the Northern Hemisphere)

Three methods suit different times to ensure a good harvest. Timing assumes the main flow is late June onwards. For earlier or later flows adjust accordingly. This article relates to local conditions where the summer flow starts third or fourth week in June.

(1) The classic artificial swarm: queen, one frame of brood (emerging), foundation and flying bees (no queen cells) in a brood chamber (fresh) on the original site; move the rest away to the side or above. The colony often behaves rather like a swarm and will draw foundation well, sometimes furiously. The "split", containing queen cells, lots of brood and young bees can be used to make up several new queens in nuclei or one queen to replace the old. The method is useful before mid-May because the daughter will have mated and started her own brood, ready to replace the old queen by the time of the summer flow. Harvest could be greater, especially if run as a two-queen system until the main summer flow starts, when the old queen is removed, perhaps to a nucleus. The disadvantage of using this method later than mid-May is the potential loss of honey crop. The "split" will have a laying queen by the time all the brood has hatched, three weeks after the split, weather permitting. It will also have most of the complement of flying bees it will get from the split. However, the new queen will get into lay very quickly and demand the attention of the young bees. Meanwhile, the artificial swarm will have lost most of the original flying bees, replaced by your one frame of brood, and most bees will be needed for another three weeks or so to look after the new queen's brood and get her going again after her own bees hatch. Imagine doing this split at the end of June, when you will expect the bees to be building your honey stocks up. So, some time after mid-May, we need a method which will keep the colony largely intact and able to get honey at the peak of our bees' summer (not the school holiday summer!)

(2) New queen nucleus. From mid-May to early June, leave the flying bees on the site with a frame of brood, attached bees and queen cells. The flying bees will support the new queen. Move the old queen and her brood away. They should tear down the remaining cells (no flying bees to swarm with the queen) and continue as normal for three or more weeks when there will be a full complement of flying bees again and the swarming impulse may have passed. The lost flying bees will be replaced in about three weeks and there will be continuity in brood rearing. This means a continuous replacement of flying bees through the summer flow.

(3) Old queen nucleus. One frustrating thing about our bees is that they are prone to swarming just before or even during the summer flow. Now, this is not a good characteristic for honey gathering, but we can get around it easily. Take the queen away to a nucleus with a frame (or two) of emerging bees, food frames, and a couple of shakes of bees plus foundation. Reduce queen cells in the main stock to one open cell and a week later save that cell and cull the other emergency cells (which may appear as swarm cells, since the bees can move eggs from a worker cell to a queen cell). The near full-sized colony will gather nectar better than normal since there is no brood to feed and the brood is rapidly diminishing, reducing the need for warmth. This method is useful in June or July when the complete split of the artificial swarm takes away bees that would otherwise help in processing the harvest and providing flying bees at the peak of the nectar flow. It is useful also if there is a sealed queen cell and an imminent swarm.

Nucleus boxes for National hives can be three, five or six-frame jobs. I like to make them with upper bee space and simple flat 9mm ply roofs with a feeder hole in (the piece cut out is glued to a cross piece and reinserted into the hole!). Using 9mm ply and Hoffman frames, 2x6-frame nucs can sit side by side (entrances on opposite ends) and receive a National roof or even, with pieces of queen excluder, a super of honey if needed. An empty super can also take two rapid feeders. The two boxes can even sit on a National varroa mesh floor, so long as you put in "battens" to fill the gaps under the nucs so the queens cannot pass to each other. I like three-frame nucs as they are versatile and small. They can be used as mating nuclei with a frame of emerging brood and a queen cell with a shake of bees, a frame of brood and one of foundation. Feeding of sugar syrup can be done easily with a small rapid feeder or a jar feeder. Unfortunately, three nucs together do not make the National "footprint" and four nucs are too wide. With care, even three-frame nucs can be used to over-winter young queens, ready to take off next spring, replace old, failing queens or even be given to a split from a swarming stock, to maintain strength.

Anyone with carpentry skills and tools can make these up.

- James Kilty

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From the Archives: Apiary Sections' work reviewed (1970)

Following is a summary of Field Investigation and Experimental work undertaken by the Apiary Section of the Department of Agriculture during the past 12 months as reported by the Superintendent, Beekeeping, to Conference, 1970.

Industrial Sugar
Trials with industrial sugar as a replacement for honey as winter stores or for feeding in the spring were carried out at Auckland and Oamaru.

Queens for Canada
Visits were made to the Auckland airport to examine queens and the conditions under which they were transported. A number of changes were recommended.

Bee Strains
Individual characteristics of various strains such as brood patterns, swarming propensities, working habits, temper and ability to bring in nectar under changeable weather conditions have been recorded.

Overseas Shipment of Hives
Pacific Island peoples continue to purchase hives of bees from the Auckland district. Special knowledge of packing hives, loading and stowage aboard ship is necessary for the successful shipment of these hives. The most recent shipment was 50 hives for the Government of Tonga.

Bee Mortality on Rangitoto and Motutapu Islands
Bee mortality on these Islands at crucial periods of the year has been traced to a combination of circumstances i.e. Karaka nectar poisoning, the narcotic effects of Kowhai nectar, lack of pollen, inadequacy of Pohutukawa honey as winter stores, and lack of brood and young bees.
Measures recommended are:

- Requeening with a fresh strain of bees
- Adding combs of honey, pollen and brood from the mainland
- Sugar syrup feeding to stimulate breeding and activity
- Provision of pollen supplement
- One supply of ample clean water
- The elimination of wasps.

Cappings Melter
Trials were undertaken at Auckland with a melter cabinet fitted with a basket to determine from which direction heat can be most effectively applied to the cappings. The heating unit used was a Tangray forced air electric heater.

Planting for Honey Production
Soya beans and Argentine rape are under observation for this purpose and sunflowers for pollination and honey production.

Surveys
Surveys have been carried out at Great Barrier and Kawau Islands to assess the beekeeping potential of the islands.

Evaluation of Different Colony Management Methods
A comprehensive evaluation and comparison was made of three colony management systems. These were (a) the basic single queen system using over wintering colonies; (b) single queen system using spring nucleus colonies and (c) the two queen system. 90 colonies were used in three apiaries of 30 colonies each in three districts – Hawkes Bay, Manawatu and Taranaki.

Pollen Supplements
An extensive test of pollen supplement feeding was undertaken last season in conjunction with the above management experiments.

Pollen Trapping and Pollen Supplements
The Ontario Agricultural College (O.A.C.) pollen trap was tested under Manawatu and Hawkes Bay conditions.

The Economics of Trapping and Selling Pollen
This included the testing of various types of pollen traps, methods of cleaning pollen, removal of moisture and the storing of pollen.

Pollen Combs
Trials are under way with supers of combs held in a cooler, under polythene, coated with paraffin wax and glazed. The purpose of the trials is to preserve the pollen against mites and deterioration.

Pollination
Orchardists and apiarists were brought together for the purpose of setting up a pollination service, mainly for pollinating apples and plums. As a result of last year's experience a bulletin on the subject has been prepared and a standard service charge agreed upon. Some orchardists reported record crops after using bees for the first time. It is expected that 150 hives will be rented this coming season in the Henderson and Oratia areas alone.

Sunflower Pollination
During the past two years, observations have been conducted into the pollination of sunflowers.

The Sugar Concentration of Nectar
In order to obtain some idea of the amount of sugar in various nectars some 30 flower species were examined. The reasons for this were to determine:

1. Competition from other sources during fruit blossom pollination
2. The siting of bees
3. The best time to move bees to a crop.

Permanent Apiaries versus Temporary Apiaries
It is proposed to undertake an economic evaluation of shifting colonies of bees for spring build-up and honey flow purposes. This will be conducted in Hawkes Bay–Manawatu regions.

Wasp Attractants
Some materials found to be successful in attracting species of Vespula in Canada and U.S.A. when tested in N.Z. have proved entirely unsuccessful under N.Z. conditions. This year a number of other chemicals, as well as horsemeat extract and pet food mixes, have been tested without any success being achieved.

- The New Zealand Beekeeper, November, 1970

NBA Library Update

Greetings from your wandering librarian. It's good to know that the library functioned well during my absence. Thanks to those who on-forwarded their magazine postings to the next borrower during June and July. The magazine packs are somewhat out of sequence at present but that will be sorted out soon. It's of interest to note that the next magazine posting to be compiled will be number 50!

Those of you who visited the library display at conference will have been greeted by the smiling faces of Linda and Roger (co-opted) Bray, who looked after a selection of books from the library. Their willingness to 'hold the fort' is much appreciated.

One unfortunate happening: *Breeding queens* by Gilles Fert, a fairly new book, went missing. If it has ended up in your possession, would you please send it back to the library.

The DECA folders now have updated sets of transparencies and can be sent out to anyone running a DECA course.

In spite of the current weather patterns, spring must be on its way — let's hope that the warmer days are with us soon.

- Chris Taiaroa,
Honorary Librarian

Effects of Pollen Availability on the Quality and Quantity of Workers Produced in Spring

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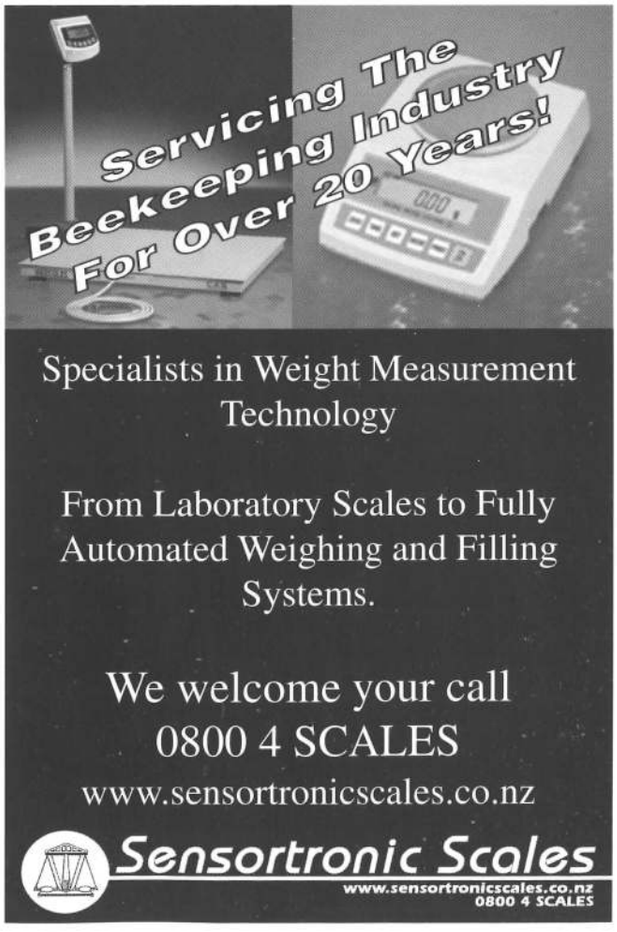
Colony growth in spring is dependent on the ability of an overwintering colony to initiate mid-winter brood rearing with pollen and protein stores (Seeley and Visscher, *Ecol. Entomol.* 10:81-88). Colonies can become protein-stressed if these protein reserves are depleted before adequate foraging conditions exist. We examined the effects of pollen availability on the quality and quantity of brood reared by colonies in the spring. Pollen stores were manipulated by trapping pollen in the fall (low pollen), feeding pollen patties in late winter (high pollen) or left unmanipulated (control).

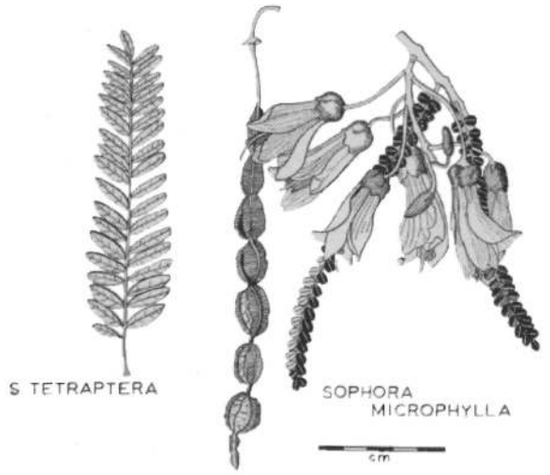
Sealed brood measurements were made on colonies from mid-March to late April. Three times in April, newly emerged workers were collected from colonies, if available. Some workers were tagged and introduced into a common observation hive to determine differences in behaviour and longevity between treatments, while others were measured for size, symmetry and protein content.

Pollen-fed colonies reared significantly more brood than control or low pollen colonies. Worker size, protein content and symmetry were not affected by pollen availability at any sampling date, except for forewings, which increased in size over time for control and low pollen colonies but remained constant for high pollen colonies. Longevity was significantly greater for workers reared in high pollen colonies compared to low pollen and control colonies. A two-week difference in longevity between high and low pollen treatments was found even though workers spent their adult life in the same observation hive. This increase in workforce translated to significant increases in honey production in the source colonies by mid-summer, where high pollen colonies produced two times more honey than low pollen colonies. The results indicate that protein-stressed colonies compromise both quantity and quality of brood. No differences in behaviour were found between bees from each treatment to 10 days of age, but our data suggest that bees reared under high pollen conditions may spend more time performing in-hive duties at the age when control bees became foragers (20 days).

- From the Proceedings of the 62nd Canadian Honey Council-Conseil Canadien du Miel (CHC-CCM) Annual Meeting, *HiveLights,* Volume 16, No. 5, Supplement 2003



Trees and Shrubs of New Zealand



Sophora tetraptera; *Sophora microphylla*:
Small leaved species
Maori name: Kowhai

The Kowhai is found throughout New Zealand. It is thought to have been brought to New Zealand by tohunga Ngatoro-i-rangi of the Te Arawa canoe.

The Kowhai is deciduous, with the large yellow flowers appearing before the leaves in Spring. If the tree flowers from the lower branches upwards a warm season should follow. If the tree flowers from the crown downwards a cold wet season will follow.

Birds compete with the bees for a light amber honey with a mild but distinctive flavour.

The nectar has an intoxicating effect on the bees and the Tui, with bees often seen under the trees that are unable to fly.

The pollen is deep orange in colour and is often seen covering the bodies of bees, but is seldom observed packed in the pollen baskets of the bees.

The Kowhai is related to trees of the same Genus found overseas, which are used for a variety of ailments. It is also related to the mescal bean of Mexico which has hallucinogenic properties.

The inner bark of the Kowhai was used by the Maori for 'itch', as a poultice for sprains, for scabies, as a wound dressing, dandruff, and ringworm. The bark was only taken from the sunny side of the tree.

The Kowhai was taken internally as a purgative, as a cure for gonorrhoea, internal pains, colds and sore throats.

- Tony Lorimer

Minister Considering Varroa Inquiry Report

The three-person board of inquiry appointed by the Minister of Agriculture, the Hon Jim Sutton, is now reviewing the information received during the hearings and submissions on the proposed varroa National Pest Management Strategy (NPMS). Under the Biosecurity Act 1993, the board is required to prepare a written report and recommendations for the Minister on the proposal and matters raised during the inquiry process. The inquiry will be completed upon the delivery of the board's report to the Minister. The board anticipated it would have completed this task by 30 July 2004.

The Act also requires that the Ministry of Agriculture and Forestry (MAF) prepare a response to the board's report for the Minister's consideration. The Minister will then make a decision whether or not the strategy should go ahead. If he decides to proceed, the aim is for the strategy to be operational in time for surveillance in the autumn of 2005.

For a copy of the strategy and a summary of submissions, go to the MAF website www.maf.govt.nz/varroa, or contact Elizabeth Paterson, Policy Analyst, MAF Policy, phone 04 474 4232, email elizabeth.paterson@maf.govt.nz

- Abridged from *Biosecurity* Magazine, Issue 53, 1 August 2004.

Club Contacts & Beekeeping Associates

NORTH CANTERBURY BEEKEEPERS CLUB Meets the second Monday of April, June, August and October Contact: Mrs Hobson Phone: 03 312 7587	**AUCKLAND BEEKEEPERS CLUB INC** Meets 1st Saturday monthly at Unitec, Pt Chevalier, Auckland. Contact: Carol Downer, Secretary Phone: 09 376 6376 Email: fairy-angel-peewee@xtra.co.nz	**WANGANUI BEEKEEPERS CLUB** Meets on the second Wednesday of the month. Contact: Neil Farrer Phone 06 343 6248
NZ QUEEN PRODUCERS ASSN Contact: Mary-Anne Phone: 06 855 8038	**SOUTH CANTERBURY BRANCH** Contact: Peter Lyttle Phone: 03 693 9189	**NELSON BEEKEEPERS CLUB** Contact: Kevin Phone: 03 545 0122
WHANGAREI BEE CLUB Meetings: 1st Saturday each month (except January) Time: 10 am, wet or fine (we are keen) Contact: Dave Trinder Phone: 09 433 8566 John Parsons Phone: 09 438 8766 Kevin Wallace Phone: 09 423 8642 (Wellsford)		
TARANAKI AMATEUR BEEKEEPING CLUB Contact: Stephen Black 685 Uruti Road RD 48, Urenui Phone: 06 752 6860	**HAWKES BAY BRANCH** Meets on the second Monday of the month at 7.30pm, Arataki cottage, Havelock North Contact: Ron Phone: 06 844-9493	**CANTERBURY BRANCH** Meets the last Tuesday of every month, February to October Contact: Roger Bray Phone: 03 693 9189
MANAWATU BEEKEEPERS CLUB Meets every 4th Thursday in the month at Newbury Hall, SH3, Palmerston North Contact: Frances Beech 35 Whelans Road, RD 1 Levin Phone: 06 367 2617	**WAIRARAPA HOBBYIST BEEKEEPERS CLUB** Meet 3rd Sunday of month (except January) at Norfolk Road, Masterton at 1.30 pm. Contact: Arnold Esler Phone: 06 379 8648	**FRANKLIN BEEKEEPERS CLUB** Meets second Sunday of each month at 10.00am for a cuppa and discussion. 10.30am open hives. Contact: Peter Biland Phone: 09 294 8365
DUNEDIN BEEKEEPERS CLUB Meets on the first Saturday in the month September–April, (except January) at 1.30pm. The venue is at our club hive in Roslyn, Dunedin. Contact Club Secretary: Margaret Phone: 03 415-7256 Email: flour-mill@xtra.co.nz	**CHRISTCHURCH HOBBYIST CLUB** Meets on the first Saturday of each month, August to May, except in January for which it is the second Saturday. The site is at 681 Cashmere Road, commencing at 1.30pm Contact: Jeff Robinson 64 Cobra Street Christchurch 3. Phone: 03 322 5392	**WELLINGTON BEEKEEPERS ASSN** Meets every second Monday of the month (except January) in Johnsonville. All welcome. Contact: Richard Wickens 59 Puriri Street Lower Hutt Phone: 04 566 9347 Email: wickensfamily@paradise.net.nz

Is your group or Branch missing from here?
Please contact the National Beekeepers' Association - inside front cover.