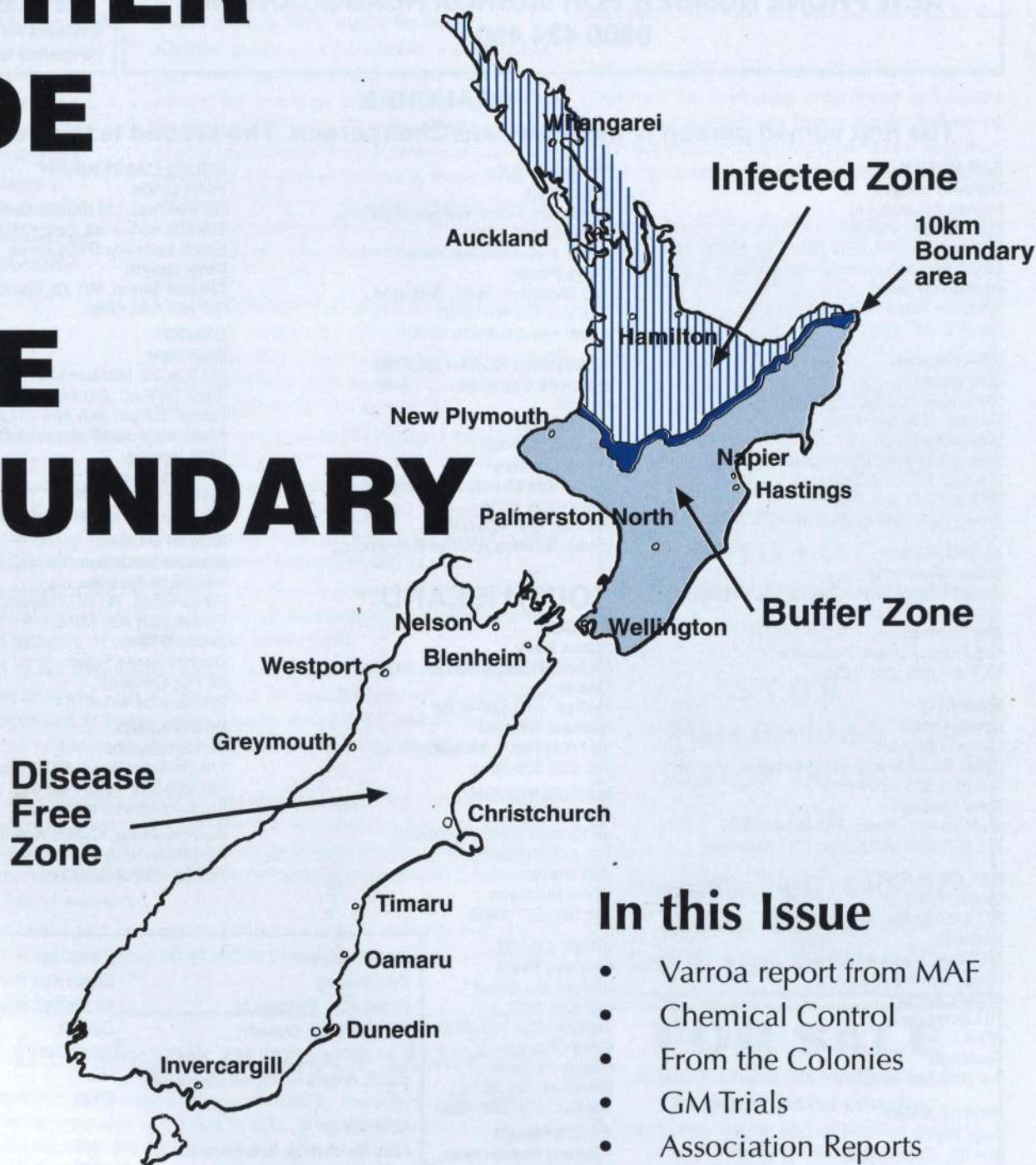




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Controls keep NBA busy

Richard Hatfield
President

Over the past few months a number of significant events have occurred affecting beekeepers. This has included EU testing regime for 2001 season, the set up of the varroa phase two and phase three committees, marketing committee review and direction, review of the executive secretary's contract with Federated Farmers and, of course, the issuing of the 2001 Levy notices.

Starting with the levy, the executive has put together a policy on the granting of deferrals. It has been decided that 20% of the levy income can be deferred for up to nine months. A graduated payment scale based on the total levy amount is used to calculate the number and size of each payment. Levies below \$1000 cannot be deferred. The executive also decided that deferrals would not be granted to beekeepers who either owe levy/penalties (or who have paid late in the past three years without good reason) or been non-compliant with the Pest Management Strategy. A copy of the policy is being sent to all branches and will be posted on the web site. This means deferrals will be applied fairly across the board.

National Beekeepers Association vice president, Don Bell, has been asked by the executive to review the function, role and authority of the marketing committee. There have been a number of issues raised over the past couple of years with marketing and we need to ensure those issues are addressed. Don was to report back to the next executive meeting (March 12 in Nelson) and his comments will be printed in next month's *Beekeeper*.

Varroa phase two and phase three committees have been established. Don Bell is leading the way on this with the involvement of a number of other beekeepers from around the country. Don will be reporting on this separately.

In last month's *Beekeeper* there was a short statement on EU testing. I would like to draw your attention to a number of background matters that would not be immediately apparent from the article and may explain why this all came about. Firstly, the cost had gone up four fold, due to an audit by the EU identifying that procedures and sampling rates were not being complied with. This would expose the National Beekeepers Association to approximately \$40,000 of risk.

The NBA has no reserves. The method of levy collection is based on what is actually exported but the testing basis is on the whole New Zealand crop. Therefore the levy calculation is an estimate of what is going to be exported.

Lastly, the NBA is not responsible for EU testing and has no mandate from the membership to be involved. This all came about because the Ministry of Agriculture and Fisheries negotiated exporting arrangements with the EU and did not involve the industry in the negotiations. The result was testing being introduced without any means of paying for it.

Lastly, you will see a number of enforcement activities occurring over the next few months. Beekeepers not complying with the Pest Management Strategy are being reminded of their obligations. In serious cases, the NBA will take action to prevent the spread of American foulbrood, (AFB), recover costs and criminal action under the Biosecurity Act, if warranted.

Complying beekeepers and beekeepers who make honest mistakes will not be affected by these activities and any effect will be positive in the eventual elimination of AFB.

Varroa freephone number changes.

The freephone number of the varroa HQ maintained by AgriQuality New Zealand has changed. The new number is 0800 424 490. A recorded message on the old number will direct callers to the new number.

AgriQuality is continuing to deliver a range of services on contract to MAF from the Ruakura HQ. These will include mailout and return of materials for South Island surveillance, the autumn treatment round for infected apiaries, movement control enquiries and the reporting of new varroa finds.

Floyd Marketing leaves NBA

It is with regret and some sadness that notification has been received that Bill and Sandee Floyd are no longer working for the National Beekeepers Association.

Their expertise and knowledge will not be lost to our industry. They are sure to be contracted by many beekeepers and help develop and market products, ensuring continued growth in our industry.

We have had a long association with Bill and enjoyed exceptional value from his company over the years. We wish him and Sandee well in the future.

The marketing committee will see how it can best continue the marketing programme and ensure continued liaison with Honey Research Unit so new opportunities can be explored as researching findings allow. **Jane Lorimer, Marketing Chair**

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MAF outlines varroa action for autumn

By Paul B. Bolger
Varroa programme co-ordinator
(MAF Biosecurity Authority)

Free treatment strips are available for beekeepers to treat varroa-infected hives in the second round of assisted treatment, funded under the two-year Varroa Management Programme. No further government-funded treatments are planned.

Application forms have been sent to all beekeepers in the upper North Island. Those who meet the criteria - anyone treated under the Phase I round, plus any other varroa-infected apiaries are eligible - have until April 30 to return the forms to AgriQuality, Ruakura.

Materials are supplied, but beekeepers must treat their own hives and, once completed, return used strips. Invoices will be sent for non-returned strips.

North Island surveillance

Locating new varroa infestations before economic losses occur requires a lower level of surveillance than required for the South Island, where any varroa detected may still be eradicated. The next major round of surveillance in the North Island is planned for spring. This autumn, surveillance is targeted at the Movement Control line and selected high-risk sites (mainly honey houses) throughout the North Island.

MAF understands the NBA is working on an alternative surveillance strategy. It will evaluate any proposal when it is received.

Reporting spread of varroa

A recent meeting by the Varroa Management Group discussed how beekeepers were best kept informed of recent varroa finds. Recognising conflicts between immediacy and the need for all beekeepers to have access to information, it was decided to put a map on the MAF web site (www.maf.govt.nz), with the North Island divided into grid squares. Squares will be shaded as varroa is detected in them. Maps will be mailed to NBA branches each month, so beekeepers without Internet access have a reference.

AgriQuality will collate reports of varroa spread and pass updates to MAF as required. Individual beekeeper names and apiary details will remain confidential.

- AgriQuality can be contacted at 0800 424-490, fax (07) 838-5794

Queen movement

The movement of queen bees within New Zealand is now governed by Movement Control policies, introduced last year.

South Island queens can be sent anywhere in New Zealand, but queens from the upper North Island must stay in that area. Queens produced in the lower North Island can be moved to hives in the upper North Island but must not be sent to the South Island.

Queens exports from any part of New Zealand are governed by the requirements of the importing country..

South Island surveillance

Surveillance here is to determine if the South Island is free of varroa and any incursion is detected in time for eradication to be a viable option.

AgriQuality New Zealand will co-ordinate the inspection of nearly 2000 apiaries this autumn. Sampling will be by miticide strip and sticky board, with all hives on each surveillance site tested.

Sites have been randomly selected from the apiary database, from both low-risk and high-risk areas. Where random selection does not give adequate coverage of areas around ports, extra apiaries will be

selected. Swarm trapping is also being tested around three South Island ports.

All Authorised Persons in the South Island have been required to carry out varroa sampling work on a paid basis. Owners of apiaries targeted for sampling have been asked to confirm their location and site details. Beekeepers who have received these letters are urged to complete and return them as soon as possible. Contact Dave Grueber (021) 515-633 or Dave McMillan (03) 489-0066 for more details.

Live bee export conditions

Information obtained by Sarah Peters and Jim Edwards of MAF Biosecurity Authority was accurate from March 6, 2001, but subject to change without notice, from importing countries.

Canada

Unrestricted access from zones considered to be free of varroa (for example, lower North Island and the South Island).

Bees from the upper North Island will be accepted, where they originate from apiaries not known to be infected with varroa, based on the results of the delimiting survey and subsequent sampling.

Transit permitted through Hawaii, Seoul, Los Angeles and possibly others.

European Union except the UK

(other countries may also impose different conditions)

No specific conditions have been imposed in response to varroa, but permit conditions require that "the bees come from hives that show no signs or suspicion of disease including infestations affecting bees". No American foulbrood (AFB) outbreaks within a 3km radius during the 30 days prior to export.

AFB testing required for any suspect sample that cannot be confirmed by visual diagnosis.

Japan

No outbreaks of varroa within 3km during the previous two years.

No outbreaks of AFB found within 3km during the previous eight months.

Apiaries supplying package bees must be lab-tested free of AFB within 30 days of export (does not apply to queen bees).

Korea

Korea remains the most restrictive market for live bees, despite repeated efforts over the years to improve access conditions. The following conditions have also been imposed on bees transiting through Korea.

No outbreaks of varroa within 50km during the previous two years.

No outbreaks of AFB for two years within 10km radius.

Testing required for all apiaries for varroa, AFB, chalkbrood, sacbrood, bee paralysis virus, nosema.

United Kingdom

No packages will be accepted.

Queen bees will be accepted from the South Island only. Attempts are being made to improve this access, but UK MAFF are occupied with other issues.

No outbreaks of AFB found within 3km during the previous 30 days.

Chemical Control Of Varroa Pesticides

Summary of a paper prepared by HortResearch for the Varroa Management Group

Chemicals commonly used by beekeepers to control varroa can be divided into those which are organic (found in nature) and those that are synthetic (not found in nature). But Mark Goodwin and Cliff Van Eaton, HortResearch, Ruakura Research Centre, warn it is important not to think of organic pesticides as “soft” or “safe” and synthetic pesticides as “hard” or “hazardous”.

Pesticides must be registered and approved by the New Zealand government to be legally be used to control varroa here. Only the synthetic products Apistan® and Bayvarol® are currently registered for use in this country, although other products are likely to be approved in the near future.

Synthetic chemicals

Synthetic chemicals usually provide the most effective and reliable varroa control. However, they cannot be used by beekeepers producing products under organic certification schemes, and will not be acceptable to beekeepers who want to avoid using chemicals in their hives.

The three most common synthetic chemicals used to control varroa are fluvalinate, flumethrin and coumaphos. Cymiazole, bromopropylate and amitraz are used less frequently.

Fluvalinate (Apistan®)

Apistan® is the most widely used varroa control product world-wide, is easy to use and extremely effective. Apistan® kills nearly 100% of mites if used correctly. It consists of a plastic polymer embedded with fluvalinate, a synthetic pyrethroid. Pyrethroids are a class of synthetic chemical similar in chemical structure to natural compounds found in the flowers of *Pyrethrum spp.*

Apistan® strips (one for every five frames) are hung between the frames of the brood chamber for six weeks. The bees rub against the strips as they move through the brood chamber.

The main problem with fluvalinate is that it is fat-soluble and not very volatile. It can therefore be absorbed into beeswax where it remains for a long time, and can also transfer into honey. Apistan® should not be used during the honey flow or while honey supers are on hives. Although Apistan® strips are relatively expensive, they are safe, easy to use and only require two hive visits per treatment.

Flumethrin (Bayvarol®)

Bayvarol® strips are also commonly used for varroa control. Bayvarol® contains flumethrin, another synthetic pyrethroid, embedded in a polymer strip.

Bayvarol® is used like Apistan® and is equally effective at killing varroa. Flumethrin in Bayvarol® is used in much lower concentration than the fluvalinate in Apistan®, so there are fewer residue problems.

Coumaphos (Check-mite+®)

Coumaphos comes in two formulations for mite control. Perizin is a solution of coumaphos that is trickled over bees. It is best used in the late autumn or winter, ideally in broodless conditions. Two treatments, one week apart, are recommended. Perizin is used primarily in Europe.

Check-Mite+ is a coumaphos product that is formulated into strips, so it can be used like Apistan® and Bayvarol®. The strips are also very effective against varroa, and easy to use. The label instructions are almost identical to Apistan®, and the product has been approved for use in the United States.

Coumaphos is an organophosphate. It acts as both a contact chemical (like fluvalinate and flumethrin) and as a systemic (that is, it works through the bee's body). Coumaphos is also fat-soluble and can migrate from the wax into stored honey. In Europe, coumaphos is the varroa control chemical most frequently found as a residue in honey.

Cymiazole (Apitol®)

Cymiazole is a systemic miticide rather than a contact chemical like fluvalinate or flumethrin. It is not fat-soluble. It transfers easily into honey and therefore should not be used during the honey flow.

Apitol® is a granular form of cymiazole mixed with sugar syrup, and is either fed or applied directly to the bees using a controlled dosage syringe. Two applications are made, seven days apart, for effective varroa control. Best results are obtained in the autumn when there is little or no brood in a hive.

Bromopropylate (Folbex®)

Bromopropylate is one of the oldest varroa control substances. It is no longer used extensively in Europe because of concerns about residues in honey. It is a fat-soluble chemical like fluvalinate and flumethrin. Residues were still found in a significant percentage of German honey samples eight years after its use was voluntarily discontinued in that country. The residues in honey come from contaminated beeswax, either in combs or foundation.

Folbex® contains bromopropylate in paper strips. The strips are lit and the resulting smoke distributes particles of the chemical around the hive. Four applications of one strip at four-day intervals are recommended. The product should not be used during the honey flow, while surplus honey is on the hives, or when the bees are in winter cluster.

Amitraz (Apivar®)

Amitraz is a contact miticide that is fat-soluble and volatile. It is however unstable in honey. It completely degrades in three to four weeks, so it is not found as a residue in honey. Beeswax has an accelerating effect on the degradation of amitraz.

Apivar® is a plastic strip similar to Apistan® with amitraz impregnated into it. The strips are used in the same way as Apistan®. Apivar® is highly effective in killing mites, and has the advantage of being able to be used during the honey flow.

Consider the following points before choosing synthetic chemicals for varroa control.

- Mites have developed resistance to a number of synthetic chemicals.
- Synthetic chemicals can cause residue in bee products.
- Directions on labels must be followed exactly.
- Once other products are registered, it will be important not to use the same product repeatedly, to help reduce the chances of creating resistant mites.

Organic chemicals

The desire to develop mite control substances as alternatives to synthetic chemicals stem from both a desire to use more “natural” compounds, and concerns about residues of synthetic chemicals appearing in bee products.

Two types of organic mite control substances (essential oils and organic acids) have been investigated, and promising ones from both groups are now in common use, particularly in Europe.

Essential oils

These are plant-derived extracts that are highly volatile (they evaporate quickly), and have strong, characteristic odours. A problem with essential oils compared to a chemical such as fluvalinate is the difference between the amount of the substance that will kill mites and the amount that will kill bees. Fluvalinate is 800-1000 times more toxic to varroa than to bees, whereas the best essential oils are only two to four times more toxic.

Thymol

Thymol kills a high percentages of mites (66-98%), and does not significantly harm bees. Application methods include powdered thymol suspended between frames in mesh bags, liquid thymol poured on a sponge on the top bars, and a continuous evaporator placed between the brood combs.

Thymol kills a greater percentage of mites when there is little or no brood. It does, however, leave taste residues in honey and wax, but these do not persist for long periods.

Apiguard® is a formulation of thymol in a gel designed to be easy to apply and provide a controlled release of vapours. Bees also pick up the gel on their body parts and move it around the hive. The dose rate is designed not to harm either bees or brood, although the killing of some young bee larvae has been noted in Canada.

Varroa mortality levels for Apiguard® range between 68% and 98%. There needs to be low levels of brood, but high enough temperatures for the product to work effectively.

Apilife VAR® is a combination of thymol (76%), eucalyptol, camphor and menthol. Twenty grams of the substance is put into vermiculite tablets (used in floral art). A tablet is placed on the top bars at the end of summer after the honey is taken off, and then replaced with a fresh one three to four weeks later. Under optimum conditions, mite kill can be 97%. However, temperature and lack of brood greatly affect the product's ability to kill mites.

Organic acids

Organic acids are also compounds found in nature, and some have uses as pesticides. Formic, lactic and oxalic acids are found naturally in trace quantities in honey. However, when applied as mite control substances they can all leave noticeable traces in honey, so Switzerland has developed maximum residue limits for these products. honeys with high aroma can tolerate higher levels of organic acids without becoming noticeably tainted, unlike low aroma honeys, like clover.

Formic acid

Formic acid has proved to be a useful tool for varroa control in a number of countries. It does, however, have two disadvantages. The first is that it has a high labour cost, since some methods of application require multiple visits to each hive (two to six visits). The other disadvantage is that it can be hazardous to use. Formic acid is highly corrosive, and skin and eye contact must be avoided. Its vapours are also potentially combustible.

Formic acid can kill 94% of mites if applied on one to two absorbent pads for four days and then repeated three times. However, the number of visits required made use of the substance uneconomic for commercial beekeepers, so various absorbent and slow-release devices were developed to hold more of the product and disperse it over a greater length of time.

Highest kill rates for formic acid are obtained when there is little or no brood in the colony, although this must be counter-balanced by the need to apply the material when outside temperatures are high enough to achieve good vaporisation. A gel product has also been

developed that distributes a given amount of formic acid (30g of 65%) over time.

Taste residues of formic acid can be found in honey and beeswax. These are not a problem provided treatment ends two to four weeks before the nectar flow, since the residues evaporate quickly.

Lactic acid

Lactic acid is a compound found naturally in milk, molasses, and various fruits and wines. It is used in a wide range of products, including adhesives, plastics and pharmaceuticals.

For varroa control, lactic acid should be sprayed on to each comb face. However, up to 60% of bee eggs are sometimes removed immediately after treatment. The other major drawback is the time required.

Normal mite kill efficiency for the product in broodless hives is considered to be about 80%, and 20-40% when applied to colonies with brood. As a result, lactic acid is normally used as a mite control in late autumn, in conjunction with other compounds like formic acid and biotechnical controls like drone trapping used during the main beekeeping season.

Of the three organic acids used for varroa control, lactic acid produces the least noticeable taste residues in honey.

Oxalic acid

Oxalic acid is a more recent addition to the arsenal of organic acids used for varroa control. Oxalic acid is a corrosive, poisonous acid, like formic acid, and is used in textile finishing and as a cleanser.

The application method involves mixing 2.1% or 3.2% oxalic acid into 1:1 sugar syrup, and then pouring a measured amount between the combs in autumn, directly on the bees (Fig. 3). The colony should be broodless, and the syrup lukewarm to avoid bee chilling. The oxalic acid works through contact, so temperature is not an important consideration.

The big advantage of this system is the decrease in labour costs, since the frames don't have to be taken out of the hive. As with formic acid, care must be taken when handling oxalic acid to avoid skin and eye contact. Oxalic acid can also produce noticeable taste residues in honey, although the product can be used in autumn without affecting next season's honey quality.

The following points must be considered when using organic chemicals for varroa control:

- **Mites may be able to develop resistance to organic control substances such as essential oils and organic acids, although this has so far not occurred.**
- **No organic chemical is currently as effective as the best synthetic chemicals.**
- **Any organic chemical needs to be used in conjunction with biotechnical methods or other organic or synthetic chemicals to keep mite levels below colony damage thresholds.**

Application systems for organic chemicals need to be improved to regulate the dose, allow for prolonged application without having to come back to the hive, and ensure proper dosage is maintained even when temperature conditions fluctuate.

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From the colonies



Far North

Very hot, very wet conditions have made this season particularly difficult. Bee numbers were up, but the 100% humidity, combined with hot temperatures (39degC one afternoon) had them hanging in front of their hives, unwilling to go inside or to work.

Beekeepers remain angry at the area's allocation to the infected zone – the nearest varroa site being 50km away. The varroa mite was originally located 120km away so if an eradication programme had been undertaken last year in the Rawene area, the Far North could have stayed outside the infected zone.

The Far North does not have varroa but is affected by 50km circles around known infected sites. This places hardship on queen exporters, trying to export to some countries.

- Malcolm Haines

Southland Branch Report

Temperatures were mostly warm in December until nearly Christmas. Weather was broken during January and February. Rainfall during December and January was above average, but February very dry. Ground conditions became dry during December but there was good moisture for January and most of February.

A good crop of kamahi was produced and clover takes were possibly 20 - 25kgs per hive.

Variable Spring weather made getting virgins mated an on-again off-again affair. In November, stores had to be watched. Warm, calm days in December meant a start to the honey flow, with the bees going more than 7km to the bush for kamahi, which produced well. Glimpses of summer were few during January and February, so, although the clover flowering was good, the bees were unable to take advantage of it. Some parts of inland Southland gave a good crop.

Many beekeepers attended the Southland field day, held at Lees Apiaries in Belfour on February 3. Nick McKenzie won the W.T. Herron Trophy for his innovation of a lunch box as a cell - carrier transporter. In early March, most hives seem to be in good condition for the winter. - Finlay Abernethy

Northland

The season started off well and at the beginning of November beekeepers were looking forward to a record crop. By early March, nearly everyone had experienced a dismal season. From the beginning of February, cloudy, humid, moist days kept bees indoors. The weather is coming right this month - but most of the flowers have gone.

Penny royal plants, depended on for winter honey stocks, have grown poorly this year so good honey will have to be left on the hives.

- Don Hoole

SNI Branch

A branch meeting held in Palmerston North last month gave members a chance to discuss mites, their control and the boundary line. It was felt the Ministry of Agriculture and Fisheries has not provided enough information since the boundary line was initially posted.

A basic timetable of events would be welcomed: When is the booklet on varroa being sent to all beekeepers? What sort of training/road show is planned? When are North and South Island surveillances taking place?

More hives were moved into the Waimarino district and around national park this year. Local beekeepers reported problems with several hives being dumped on land without owners' permission and apiaries arriving with many different or no registration numbers. The branch is now asking NBA, which is responsible for the American foulbrood pest management strategy, to take action against beekeepers not displaying registration numbers.

Several Disease Elimination Conformity Agreement (DECA) courses are to be held so beekeepers can pass the test within two years of their initial application.

- Frank Lindsay

South Canterbury

Dry conditions have caused a below-average production of honey this season. Hot temperatures and nor'west winds the week before Christmas ended the honey crops before it even got going.

The honey quality this summer has been dark, with not much light clover honey around. Beekeepers are now nearing the end of their extraction, drawing an average of 28kg per hive (compared to 40-45kg in a good year).

- Peter Smyth

Waikato

"The worst crop in 30 years" is how beekeepers here are describing the season. The hives started a bit slow last year, but were ready for pollination, usually occurring from late October to early December. Strong winds, however, kept pollination levels low and in December the honey crop hadn't started.

Little bush honey was produced, clover honey didn't eventuate and while there was some penny royal and dandelion clover around, heavy rain ended their season. Beekeepers are counting themselves lucky if they have from 4kg to 10kg of honey per hive.

• On April 28, a Field Day will be held at Bryan Clements' honey house, corner of Flat Rd and Meghie Rd, Kihikihi. Further details in next months' *Beekeeper*, but a new honey house can be seen, a panel discussion on the varroa mite will be held and a report given by NBA executive member Jane Lorimer. Contact: Tony Lorimer, (07) 856-9641

- Lewis Olsen

Bay of Plenty

A wet, long cold season has resulted in poor honey crops and people travelling further afield.

Traditionally, tawari trees flower on the coast at Christmas time and bring an abundance of nectar. For the past two years, however, it has barely flowered. Pohutukawa trees have fared a little better in some areas. Manuka flowered early this season. Combined with cool weather, honey production in the Coromandel was poor, although the East Cape area was close to average.

As a varroa-infected area, all beekeepers are expecting to find some mites in their hives next spring. Swapping customary floorboards for wire mesh is being suggested as a good way of monitoring the hives. By placing cardboard or a wooden board below the mesh, some mites in an infested hive will have fallen down in a day or two. That will be a valuable measuring tool when different bee stocks are trialled for varroa tolerance.

- Gerrit Hyink

Westland

A good summer and well-flowering rata trees have brought the best honey season in 30 years. After a cold January, the weather cleared in February and honey production was as high as 120kg per hive.

Kamaha, the main crop, did not flower as well this year and the manuka was poor, although some beekeepers have a few drums around.

No meeting is planned - "we're one of the smallest groups in the country" - but everyone is feeling anxious about the varroa mite.

- Garry Glasson

Marlborough

A recent \$160 registration fee for a single hive left president Gerald Steer feeling outraged this month. If an amateur beekeeper had, say 10 hives, how could he possibly make any money after paying a total \$1600 registration, he asked.

Profits were particularly hard in Marlborough this year, when hectares of former apple orchards are being cleared and replanted in grapes (with no pollination for honey bees), or hives have been incinerated in the bush fires which swept the region over Christmas-New Year. On Boxing Day, fire destroyed 17 of Gerald's bee hives, each holding three boxes of brooding nest and topped with three boxes of honey. Can beekeepers apply for compensation, he asks.

For hives still intact, the season has been too dry but bees are getting by on small supplies of clover and onion flowers. "And we haven't got the [varroa] mite."

- Gerald Steer

Hawkes Bay

A strange season, and wetter than the same time last year. Some areas have done well with manuka, others haven't. Some have done well in white clover, others haven't. Such variation is not uncommon, however.

Most beekeepers have finished harvesting their manuka honey and are now starting their white.

Meetings are always held on the second Monday of the month - in the Arataki College, Arataki Rd. Be ready for the AGM in April.

- Tom Taylor

From the Colonies gives an overview of beekeeping around New Zealand. Branches are urged to send in a report - or perhaps a comment that would be good to share about the industry - by April 1 for the next edition. Either post to: NZ Beekeeper, Crown Kerr Printing Ltd, PO Box 5002, Dunedin; send by fax: (03) 479-0753, or e-mail: ckp@xtra.co.nz

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NBA Voices Concern About GM Trials

On February 1, Barry Foster, Bill Floyd and Jane Lorimer, representing the National Beekeepers Association, made an oral submission to the Royal Commission on Genetic Modification.

Our industry is one that is not well understood by the general public. Many people think that we are all alternative lifestylers and we harvest our honey by turning a tap on at the side of the hive into our pail.

For instance we are always being asked if we add mutton fat to our honey to make it go white – the answer is no. We add nothing to honey (the health department will not allow us to), we only speed up a natural process when we cream or granulate honey.

Another question that is often asked is – How do we know what the honey type is that our bees collect? The answer is that we do not know definitely until we taste and extract the honey. We can only place our hives in the proximity of the crop we wish to collect, and hope that the bees do in fact forage on that particular plant.

In total, there are approximately 5000 beekeepers in New Zealand, with approximately 4000 of these owning less than 10 hives. There are in fact probably only between 180-200 beekeepers who solely derive their living from bees. The outfit that my husband and I run is 30th largest. We are, in fact, more dependant on the weather conditions and soil temperatures than the sheep, meat and dairying industries. For if the soil temperatures are not high enough and the weather settled during summer, then the flowers do not secrete nectar, and our bees then starve if we do not intervene.

When bees forage for their food – both nectar and pollen (for they are like humans who need both meat and vegetables for a balanced diet), they will work the easiest source available to them, and also sources which give them the best nutritional value.

For example, bees do not like to collect the pollen from the kiwifruit flower, as it is very poor in its nutritive value, so the bees tend to fly outside the orchard to collect pollen from other flowers such as clover, dandelion etc. To make bees work the kiwifruit, we have to manipulate the hive so it is short of pollen, and is a rapidly expanding hive in need of pollen to feed its young. We find that with carrying out this manipulation, the bees are more likely to work food sources closer to home.

In short, we are unable to control where our bees fly, and on what plants they forage. This means that any crop that is genetically modified may be visited by bees, unless the flowers are removed, or the site is screened to not allow any visitation by bees.

We believe as an industry, that it is unlikely that companies carrying out this GM technology are likely to go to this expense to ensure no bee visitation is likely. Also, with the trials likely to be spread over a wide area, it would be costly to audit, and punish any company that breaches these control measures.

It also must be borne in mind, that bees are not the only animals that carry out pollination. Before the introduction of *Apis mellifera* (honey bees) into New Zealand, pollination was carried out by birds, moths and butterflies, as well as our native, solitary bees. These solitary bees nest in the ground or in wood, where the eggs are layed in individual cells and develop over winter, and emerge the following season. So they are quite different to our honey bee, which is a social insect living in a colony of bees.

It is interesting to note that in Comvita's submission by Cliff Van Eaton, they looked at the trials that have been given the go ahead by ERMA. These included trials on potatoes (not very attractive to bees, but may be visited in times of dearth), white clover (highly attractive to bees – is one of our main honey crops within New Zealand) and maize (pollen readily collected by bees). In most of these trials, no screening was done to ensure no bee visitation. The borders of other plantings, (5m border of cereal in the case of the white clover trial) were also inadequate to deter bee visitation. As you will have noted in my submission, bees will fly up to 6.5kms to gather nectar and pollen.

Our industry is concerned that because we are unlikely to know where these GM trials are being carried out, our bees have become the vectors for spread of GM pollen, and will continue to do so in the future. To compound this problem, we have also got pollen possibly being spread by the wind, and also by beekeepers moving hives which have foraged on GM pollen. The beekeeper moves hives in order to get further honey crops, or moves them for availability of pollen in spring. When the hives are moved, many bees may be carrying pollen from the GM crop, which is then dispersed, when the bees next go foraging at the new site. This may create some out-crosses, if the bee visits related plant species. Thus, there are no such things as boundaries to a bee, only the distance it is able to fly.

Evolution has ensured that pollinators are an effective dispersal mechanism for pollen.

We would like to see New Zealand remain free of GM plants, particularly insect pollinated plants, and a moratorium be imposed on all open environment research and on all commercial applications for the development and/or introduction into New Zealand-branded products of GM organisms and products.

However, if this was not carried out, we would support Comvita's recommendation that a recognised honey bee scientist and (in our view), a beekeeper with wide knowledge on plants which bees forage on, is included in the assessment panel for any future GM crop field trials in New Zealand, that is, a position on ERMA. The criteria used to determine whether honey-bee screening/de-flowering of the crop is necessary is: is there a likelihood of the plant being visited by honey bees and food resources being obtained for removal back to the bee colony?

We believe it would in fact be more appropriate for a beekeeper to be on the panel of ERMA, as all bee scientists are employed by Crown Research institutes, which appear to be pro-GM, and may be swayed by their employers. We need representation from within our industry, to ensure no harm comes to the pollinators of this country.

We bring to your attention the fact that a precedence has already been set in that we have a representative on the pesticides board, who ensures that any pesticides which are being put forward for approval for use in New Zealand, are scrutinised by our representative to ensure sufficient labelling warnings about the use of the chemical which may be harmful to bees.

As an example of how helpful a representative may be, I will give an example of what has happened with the representative on the pesticides board.

It was noted by many beekeepers that were carrying out pollination in orchards several years ago, that bee mortality was occurring. This was bought to the attention of our pesticides board representative, with the outcome being that research was carried out to find out which chemical was doing the harm to our bees. The result was that it was in fact some of the Surfactants (a surfactant spreads the chemical over the applied surface more) which are added to the pesticides that were causing the mortality. The result of this is that we are getting more information to the orchardists to ensure they do not apply inappropriate chemicals and surfactants that may cause bee mortality.

Little research on pollinators

Our Industry would like to see greater resources put into research on the effect of transgenes on our country's pollinators.

We even note that Dr Louise Malone from HortResearch, who carries out considerable research on honeybees at the Mount Albert research

- centre, also expresses concern over this. In her submission to the Royal Commission – section B(j)(ii) Environmental matters,
7. “As more transgenic crop plants become commercialised, there is an increasing need for information on their impacts on honey bees and bumblebees.”
 8. “Direct effects on bees may arise upon ingestion of the proteins encoded by transgenes, if they are expressed in Pollen, nectar, or resin. Pollen is the most likely route, as nectar and resin do not have the protein content that pollen does.
 12. “Standard tests for determining the impacts of transgene products on bees are being developed. Methodologies have already been developed for assessing toxicity to adult honey bees and bumblebees and for measuring impacts on adult honey bee olfactory behaviour. However, more research is needed to develop test protocols for toxicity to bee larvae and for assessing sub-lethal effects at the individual and colony levels.”

Our industry would back this up wholeheartedly, and ask that no commercial releases of GM plants be allowed until such time that these GM plants are proven to be harmless to our pollinators.

We believe that before our industry changed its stance, there would have to be several years of repeatable results to show that GM is in fact harmless to our bees - and ourselves.

Dr Malone also states in 10 “Furthermore, through the ability to use green-leaf tissue-specific promoters [switches] on the transgenes, it should be possible to produce GM plants which do not, or only minimally, express foreign proteins in the pollen. Thus any direct impact on bees could be avoided.”

We note the words that she uses in this paragraph – “It should be possible”, and “minimally express foreign proteins in the pollen”. It would appear from the wording used, that this technology is not 100%.

If our industry cannot be assured that there is absolutely no expression of foreign proteins which may affect our larval and adult bees, then we do not want any association with GM plants whatsoever!!!

Pollination effects

If insufficient research is done to establish whether there are any adverse effects on our country’s pollinators, then pollination of our many and varied crops could be put at risk. The pollination carried out by our bees has been estimated at a value of more than \$3 billion to the New Zealand economy: a healthy and effective NZ beekeeping industry is vital to that pollination service.

Pollination is essential for both the pastoral and horticultural industries.

Unique native flora

We believe that the Crown has a responsibility to ensure the survival of our native flora and fauna. If our pollinators, both native and introduced are put at risk by GM organisms, then we put at risk our native flora. This in turn puts a sector of our exports at risk. Many beekeepers currently export our unique honeys produced from our native flora. Selling these monofloral varieties has been one way of de-commoditising our products, as most are sold as gift packs.

GM free

We would agree with the Organic Product Exporters Group, that “it is important for New Zealand, as a small player even in agricultural terms on world markets, to target high value markets, which through policy and or market preference, are concerned with the quality of food and how it is produced.”

The National Beekeepers Association believes that we should impose a moratorium on all open-environment research into, and any commercial applications for the use of GM organisms in New Zealand. Also, it should be made mandatory for all imported products that have GM content to be labelled as such. This will enable consumers to choose whether or not they buy GM, or GM-free products. We also believe that there should be a permanent GM commission set up to monitor changes during the period of the moratorium.

The commission would review the need for the moratorium against:

- 1 Ethical (humans, animals – including insects)
- 2 Marketing
- 3 Scientific criteria

Within the constraints of those ethical criteria, the commission will assess whether the New Zealand economy is benefiting more from the promotional opportunities created by the ‘GM-free’ stance than from not having that stance. The commission will then use the parameters created by the ethical and marketing considerations, and review the scientific literature and applications from scientific, business and community interests to determine what ongoing form the moratorium should take.

The National Beekeepers Association does not wish to see another repeat of the fiasco of the Starlink GM Corn produced which was approved for stockfeed only (due to the (Cry9C) protein which exhibits features characteristic of known allergens), but ended up in Taco Bell tortillas, forcing a recall of this product here in NZ. This corn was supposed to be kept completely separate from other corn, but it appears some farmers were not appraised of the necessity to isolate the Starlink corn.

We do not wish to see the application by forest research here in New Zealand to field test GM *Pinus Radiata* in Rotorua - granted. The trials will be for up to 22 years, and it is possible that at some stage during this trial, our bees will collect some of that GM pollen, and contaminate the honey produced, as some pollen is always found in honey that has been extracted. If this happens to an organic producer, and his products are found to be contaminated with GM, that organic producer would probably lose their certification.

We do not wish to be the vector in the spread of GM pollen, which then out-crosses to produce super weeds, that are unaffected by current herbicides.

Conclusion

We agree with the Organic Product Exporters group that “New Zealand’s preferred option would be to delay commercial release of GM food until the extent of the negative consumer attitude can be seen and the producer benefits become more apparent. This would enable New Zealand to position itself as being GM free and obtain current price premiums and preferential market access.”

The National Beekeepers Association, however, accepts that there may well be, in the future, GM concepts that are appropriate for New Zealand: in that they meet the most rigorous ethical criteria, and are an advantage to the New Zealand economy. But, until such time as this is proven to be the case, we would prefer that the open field trials, and commercial growing of GM crops is carried out in someone else’s back yard.

- **The full submission can be seen on the Royal Commission’s Website: www.gmcommission.govt.nz**

Association reports

Finance portfolio

Last year's financial accounts are currently being finalised and sent to the auditor. This year's budget is still being put together. It will be a different format from last year, to include the extra sub-committees and also information on levies due, deferred levies and outstanding levies.

Environment portfolio

This committee is one guaranteed to be always busy. Current members are Ron Law (to maintain a watching brief), Stephen Lee and Barry Foster. Other interested people are still sought. Peter Burt has agreed to help with the citrus issue in the Poverty Bay area.

Current work

- An oral submission (see pages 9 & 10) was presented to the Royal Commission on Genetic Modification on February 1. We have now been asked to submit an article for the journal, *Pacific World*, published by the Pacific Institute of Resource Management.

- Orthene has been sprayed on to citrus during the day, while the crops are in flower. We are investigating the current legislation regarding spraying and will look at how we can prevent bee mortalities in the future.
- Investigation into the use of Gaucho and other seed-coating pesticides is continuing, following information about a "mad bee disease" reported in France that beekeepers think was caused by Gaucho. I have recently read a scientific paper about trials conducted on Gaucho-treated crops. The results suggested bees were not affected by low doses of the pesticide, so the unusual bee behaviour may have been caused by varroa, paralysis-viruses or spiroplasm. We will continue the literature search and seek opinion from local bee scientists.
- Animal Products Act - John Lee from the Ministry of Agriculture and Fisheries will attend our executive meeting in April and explain who needs a Risk Management Programme and who will need a Food Safety Programme. Once everything is clarified, we will produce a template to help beekeepers draw up their programmes.
- A trust was making a submission on *Hieracium* by March 5, calling for insect-control of this weed. Our concern is the insects may damage non-target plants.

- Jane Lorimer, NBA executive member

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Honey flow ends for another year

By Frank Lindsay

The drought is still biting hard in and around Wellington. More and more scrubs on rocky slopes are now dying, farm ponds are baked dry, creeks have ceased flowing or are down to a trickle and local horse-owners can be seen carting in food and water to keep their charges alive.

I visited an apiary the other day and found only the water-carriers flying, collecting water from moist areas in the creek bed. Further north, the area that receives rain is marked. Land south side of the Otaki River is as dry as a bone and farmers are feeding out. A kilometre further north across the river on the plateau, the whole area is green, lush grass and clover is re-flowering;

Basically, the honey flow is over for another year. Days are getting shorter and the dew in the mornings is getting heavier. Any nectar brought in by the bees from now on is being packed in and around the brood nest for winter stores.

For commercial beekeepers, the long days continue. Honey supers are taken off early in the morning, extracted in the afternoon while it is still warm and the wets put back on hives to be cleaned out, ready for winter storage. On the next visit to the apiary, new queens or cells are put in to set the hive up for next year.

When no intense nectar sources are available, field bees turn to a different method of nectar collecting - robbing. Any exposed honey is fair game. Bees will try the defences of other hives and rob from any that are queen-less, have a small or weakened colony, a wide-open entrance or alternative entrances that are not fully guarded. The colony will try to defend itself and a stinging frenzy results, but after awhile the colony loses spirit and submits. A handful of bees are then left with no winter stores, or they abscond with the robbers, leaving the hive open to wax moth and mice perdition.

Wasps also rob hives. Requiring carbohydrates to produce new queens, wasps will visit anything with a high sugar content - grapes, ripe fruit and especially beehives. Flying at lower temperatures than bees, they will sneak in and pinch the honey and brood to feed their developing queens.

Wasps will probe each hive's defences and, when they find a weak one, attack. Once their smell is in the hive, the guard bees will not challenge them and the wasps will strip out a hive in a week, then move on to the next one.

Protect your hives, especially nucleus colonies you intend carrying through the winter, by not leaving them open too long. Close entrances down to a size the bees can properly guard, perhaps as little as a finger width.

Some beekeepers put a triangular bee escape over the entrance. Robber bees are attracted to the mesh over the entrance and can't get in, while resident bees quickly learn to use a small entrance at the side of the mesh. If you notice a lot of unusual bee activity at this time of the year, track down the source.

Poison bait to kill undetected wasp nests is expensive. Instead, consider paying the neighbourhood children a few dollars for each nest they find. Wasps, reaching peak populations at this

time of the year, are usually in banks and along waterways. Once located, two tablespoons of insecticide powder down the entrance should kill them all in an hour.

Cappings

Cappings can be processed and rendered into wax blocks. Separate the honey first - it can be pressed, spun out, melted out using a hot tap, put on a hive for the bees to remove, washed and the water used for making mead, or just put into a solar melter.

Once the cappings are free of honey, place them in a pot, in a couple of centimetres of water. That allows the residue to collect at the bottom. Beeswax melts at 64degC, so don't overheat it and process only once.

When melting the wax, pay attention to the heat being applied. Watch it closely, stir the wax occasionally and make sure it doesn't overflow the container (cleaning wax off the stove takes days and lots of Handy Andy, causing all sorts of problems in the kitchen).

Once fully melted, strain the hot wax through a hessian (jute sacking) filter, into a mould or bucket, which must be hard plastic or it will melt.

Cover the mould so the wax cools slowly. It then shrinks slightly, allowing the wax to be removed easily once a little water is applied to the sides. Wax cooled too fast cracks in the middle and sticks to the sides of the container.

Small dirt particles settle on the bottom of the wax. Clean off when cold by chiselling with a hand plane, or melt off with a gas torch, leaving a nice, clean block ready for sale. Do not mix cappings with comb wax and frame scrapings as these will darken it and reduce its value. Hobby beekeepers could pool their wax and exchange it for cartons of foundation.

Marking queens

I was asked how I mark queens. Experienced beekeepers can tell by looking at a queen and the brood pattern whether she is any good or not. New queens tend to be downy-covered, while older queens become shiny and their wings damaged by all the attention they get from attendant bees.

Most beekeepers replace all queens each or every second year, so marking them is not necessary. Marked queens, however, are easier to see and find and their ages are immediately identified. An unmarked queen in the hive then indicates the hive has superseded. Once you get into the habit of marking queens, you will notice that two queens in a hive is not that uncommon.

Queens are easier to find in the autumn as they tend to be in the centre of the brood nest. The following words are adapted from Steve Taber's book, *Breeding Super Queens*:

"Place a queen excluder between each box. Remember, eggs just laid won't hatch for a little over three days and are hard to see. After placing the excluders, do not look for the queen for five to seven days, especially when a hive is big, with lots of brood in different places.

When you do start looking for the queen, check for eggs and young larvae by removing the centre two or three frames in each section. Look on the excluder for the queen trying to get through.

Continue searching until you see eggs and young larvae, then go through all combs in that section carefully. If you still don't find the queen, even in the bottom box, put the hive back together but put the box with the queen on the top (it will probably be the bottom box) and put the box that was on the top, on the bottom board. Why? Mean bees are always in the bottom box, next to the entrance.

After another five to seven days, examine the combs for the queen. This time, you should easily find her and in about 5% of all colonies, there may be two or more. If there are eggs but no queen, it is likely they were laid by worker-bees.

After finding and removing the queen, record both the date and the colony. (I pin "date-removal" notices with blue-coloured tacks and "caged queen in this colony" notices with yellow tacks.) After removing a queen, her last egg won't hatch for about three days. If you come back and destroy all queen cells in six days, the bees will still be able to build queen cells.

To repeat: Find the queen quickly; expect more than one queen; keep good records of queen removal date and new queen introduction. Finally, come back in two weeks and check the performance of the new queen. One in 50 newly-introduced queens will need to be replaced.

Taber marks queens with light colours but I use shades recommended by the International Bee Research Association. They rotate at five-yearly intervals: 2001 - white, 2002 - yellow, 2003 - red, 2004 - green, 2005 - blue.

Paints to mark queen bees with include aeroplane dope, water-based correcting fluid or water-based paint (spirit-based products can suffocate the queen). Using a fine-point pen, paint brush, match or tooth pick, put a small blob in the queen's thorax. Too much will kill her.

When you locate the queen, pick her up by the wings and hold gently between thumb and forefinger. Mark, then release after 30 seconds, on to the section of frame she came from.

Young queens tend to fly when disturbed, so I pin mine gently to the surface of the comb, using my thumb and forefinger. After marking, I pop the drawer of a matchbox over her for about a minute, allowing the paint to dry and settling her in the dark. If she is placed on the comb surface before the paint dries, the bees will immediately clean it off her. Little devices to hold and pin queens to the comb while marking can also be purchased. Practise on a few drones, which are bigger and do not sting.

If a number of queens are being marked, wash your hands after each one so the pheromones from one queen are not transferred to another. If that happened, the bees may think their queen is a foreigner and attack her.

Honey competitions

For most hobbyists, everything has been done. The honey is off, extracted and distributed to neighbours and friends.

Bee club activities now turn to honey competitions. These are marvellous for teaching new beekeepers how to present honey.

Honey is a unique product but can absorb adverse taints. Smoke can be detected if too much is used while taking honey off, or lids from reused jars can let old flavours linger if not thoroughly washed. Tiny specks and flakes of wax can be detected under strong light and in the liquid honey section,

fine granulation spotted with polarized filters. Producing a fine grain of granulated honey that dissolves on the tongue takes time, patience and constant temperature to achieve.

The little mistakes made by new beekeepers are quickly rectified through trial and error and learning from others, resulting in a better product to the public. The aim is to produce a produce we can all be proud of.

Things to do this month

- Remove comb honey.
- Continue extracting honey.
- Re-queen hives.
- Winter down hives in the cooler areas after a final disease check (after robbing has finished)
- Keen an eye out for wasps.

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2 boxes of wax foundation $\frac{3}{4}$ depth	\$248.00 (Plus freight)

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- Lot 3:** 50 excluders, roofs and drip trays

All dipped, clean & disease free

For details phone

03-489-5052

021 294 2856 or Fax 03-489-5063

Tenders close 7 April 2001

Highest or any tender not necessarily accepted.

Postal Address c/- Beekeeper,
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APIMONDIA 2001

By Asger Sogard Jorgensen

Apimondia president

Durban, South Africa, will host the XXXVII (37th) International Apicultural Congress: APIMONDIA 2001, between October 28 and November 1.

The congress and accompanying exhibition is one of the main highlights of the international beekeeping calendar and is expected to attract to South Africa between 2000 and 3000 beekeepers, scientists, pollinators, packers, equipment vendors, apitherapists, entomologists, academics, farmers and growers (as well as representatives from the seed and fruit industries).

It is the first time in Apimondia's 104-year history that the congress will take place on the African continent.

The beginning of a new millennium brings the first ever APIMONDIA Congress to Africa. The 37th to be held in the Apimondia series will take place in Durban, South Africa from October 28 to November 1, 2001 and a general invitation is issued to beekeepers and scientists around the world to participate.

South Africa has excellent connections with South America, South East Asia, Australia and New Zealand and regular flights to Europe and North America - this will be a truly global congress!

South Africa has much to offer the beekeeping world. A chance to see African bees in their natural environment, the Cape-bee with its special features and imported bee-races. There is large-scale utilization of bees for pollination and increasing honey production showing the development from the original "honey hunting" to large-scale technology with related operations adapting to the rapid changes necessary in today's world.

The congress will be for everyone involved in beekeeping: the scientist, the professional beekeepers, the honey trader, the development worker and the hobby-beekeepers.

The scientific programme will be developed by the South African organising committee and the standing commissions of Apimondia to ensure a world congress is organised to reflect the special values of South African scientific development.

In the congress plenary sessions, selected keynote speakers will review scientific developments for the beekeepers as well as for fellow scientists. Genetically-modified crops as bee forage, varroa and the African bee races, effects of trade in bees on the spread of pests and diseases, appropriate-technology for professions and hobby-beekeepers, honey and its use in self-medication, solitary bees and honeybee pheromones, are just a few of the subjects to be covered. The programme also allows for smaller, specialist meetings at the seminars and workshops, to run concurrently with the plenary sessions.

All lectures presented in the seven plenary sessions will be translated into the four official Apimondia languages: English, German, French and Spanish.

ApiExpo 2001 will feature displays and exhibits from all over the world. Companies interested in doing business with Africa, South America, South East Asia, Australia and New Zealand will find the South African congress very attractive.

Twelve categories of contests (from technical beekeeping inventions to "bee" philatelic collections) will be included in the congress, a honey recipe competition, an evening of slides, films, videos and websites on beekeeping subjects. There will be a honey show and tasting, poster presentations and an educational exhibition with the theme: "Bees and beekeeping on the African continent".

Want to go? Contact:
Conference Planners:
PO Box 82
Irene
0062 South Africa,

Telephone +27 (0) 12 667-3680
Fax +20 (0) 12 667-3681
E-mail: confplan@iafrica.com
Website: www.apimondia2001.com

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- Kiwifruit Pollination
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- Queen Bees
- Pollen Production
- Propolis
- Wholesale & Retail Marketing

Applicants must have their H.T. Licence and with a minimum of 3 years commercial beekeeping experience. This is a full-time permanent position.

Please forward written applications only with CV to:

Beekeeper Applications,
PO Box 3132,
Tauranga

What is Apimondia?

Apimondia is an International Federation of Beekeepers' Associations, working to create links between everybody involved in the beekeeping world.

Apimondia wants to facilitate the exchange of information and the discussion of new ideas and to provide beekeepers, researchers and others involved in beekeeping with the latest information.

The organisation aims to promote apicultural, scientific, technical and economical development in all countries and the fraternal co-operation of beekeeping associations, scientists and individual beekeepers all over the world.

Apimondia also endeavours to put into practice initiatives which can contribute efficiently to improving beekeeping practice and help make beekeeping profitable.

Apimondia is 104 years old and its first congress was held in Brussels, 1897. With 54 national beekeeping associations as members, providing broad international contacts, Apimondia reaches five to six million beekeepers around the world.

• For further information contact:

Apimondia General Secretariat:

Riccardo Jannoni-Sebastianini, Telephone +39 06 685-2286

Corso Vittorio Emanuele II, 101 Fax +39 06 685-2286

I-00186 Roma RM, Italy E-mail: apimondia@mclink.it

2001 EXECUTIVE COMMITTEE ELECTIONS

In accordance with the Association's Rules, three members of the Executive Committee retire in rotation each year. This year (2001) they are Mr. Terry Gavin and Mr. Richard Hatfield for the North Island and Mr. Don Bell for the South Island.

National Beekeepers' Association of New Zealand Inc

Election of three members to the Executive Committee - one member to be domiciled in the South Island and two to be domiciled in the North Island.

NOMINATION FORM

We the undersigned members of the Association hereby nominate:

NAME IN FULL:-

ADDRESS:

With his/her consent as a candidate at the election of three members to the Executive Committee of the Association

NOMINATED BY: _____ SECONDED BY: _____

FULL NAME:- _____ FULL NAME: _____

ADDRESS _____ ADDRESS: _____

SIGNATURE _____ SIGNATURE _____

SIGNATURE OF
CANDIDATE: _____ DATE: _____

Nominations, which close at 9.00am Friday 20 April 2001, are to be addressed and forwarded to:

**The Returning Officer
National Beekeepers Assn., of NZ (Inc)
PO Box 715
WELLINGTON 6015**

NOTES FOR GUIDANCE OF CANDIDATES AND MEMBERS

1. Everyone receiving a nomination form can be nominated or can nominate and/or second a member's nomination.
2. Any member can nominate and second another member as a Candidate for election to the Executive Committee.
3. **Candidate's Biographical notes in support of their Candidature.** The Association will include with voting papers up to **200** words of Biographical Notes submitted by the Candidate **with his/her nomination.**
4. A copy of the roll of members will be supplied to the Secretary of each Branch.
5. **Scrutineers:** A Candidate may appoint a person to act as Scrutineer. The Returning Officer must be advised of the name and address of a suggested Scrutineer before the poll closes at 9am Tuesday, 12 June 2001

ADVERTISING RATE

Current for all issues in 2001.

FULL PAGE	(180 x 260mm)
Two Colour	\$480
Black & White	\$400
HALF PAGE	(180 x 125mm)
Two Colour	\$310
Black & White	\$250
QUARTER PAGE	(65 x 125mm)
Two Colour	\$185
Black & White	\$150
Eighth Page	(65 x 60mm)
Black & White	\$75
Sixteenth Page	(65 x 40mm)
Black & White	\$40

A 20% discount on the quoted rates for 11 consecutive placements.

Rates for inserts and 4-colour advertisement along with specified positions are subject to negotiation.

Straightforward typesetting and layout for advertisements will be included as part of the insertion rate. Additional costs will be incurred where logos and graphics are required to be scanned.

Please contact Allan Middlemiss for clarification and costings. — All payments to be made to Crown Kerr Printing Ltd. P.O. Box 5002, Dunedin

Copy for advertisements may be mailed, faxed, emailed or supplied on disk providing it is formatted for Macintosh. Please check with us before you forward the disk.

Articles published in the NZ Beekeeper Magazine are subject to scrutiny by the Associations publication committee but do not necessarily reflect the views of either the Association or the publisher.

BRANCH CONTACTS AND MEETINGS

NZ QUEEN PRODUCERS ASSN

Call: Mary-Anne (06) 855-8038

AUCKLAND BRANCH

Meets last Monday of the month at 7.30p.m. at Ceracell Beekeeping Supplies
24 Andromeda Crescent, East Tamaki
President: Brian Alexander
Phone/Fax: (09) 420-5028
Secretary
Jim Thompson
Phone/Fax: (09) 238-7464

AUCKLAND BEEKEEPERS CLUB INC.

President: Ian Anderson
Phone: (09) 480-8327
Email: ianderson@clear.net.nz

NORTH CANTERBURY BEEKEEPING CLUB

Meets the second Monday of April, June, August and October.
Contact: Mrs Hobson
Phone: (03) 312-7587

SOUTH CANTERBURY BRANCH

Peter Lyttle
Phone: (03) 693-9189

CANTERBURY BRANCH

Meets the last Tuesday of every month. February to October.
Field Day November.
Contact: Trevor Corbett
Phone: (03) 314-6836

CHRISTCHURCH HOBBYIST CLUB

Meets on the first Saturday 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: Maggie James, 21 Humboldt St, Christchurch 8002. Phone: (03) 337-2421

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.

Enquiries welcome to club secretary, Dorothy, Phone (03) 488-4390

FRANKLIN BEEKEEPERS CLUB

Meets second Sunday of each month at 10.00am for cuppa and discussion and at 10.30am open hives.

Secretary - Gwen Whitmore,
RD 1, Tuakau
Phone: (09) 233-4332
All welcome - Ring for venue

HAWKE'S BAY BRANCH

Meets on the second Monday of the month at 7.30pm,
Arataki Cottage, Havelock North.
Phone: Ron (06) 844-9493

MARLBOROUGH BRANCH

contact Jeff: (03) 577-5489

MANAWATU BEEKEEPERS CLUB

Meets every 4th Thursday in the month at Newbury Hall, SH 3, Palmerston North.
Contact: Andrew MacKinnon
Phone: (06) 323-4346

NELSON BRANCH

Phone: Michael
(03) 528-6010

NELSON BEEKEEPERS CLUB

Contact: Kevin
Phone: (03) 545-0122

OTAGO BRANCH

Phone: Mike (03) 448-7811

POVERTY BAY BRANCH

Contact: Barry (06) 867-4591

WANGANUI BEEKEEPERS CLUB

Meets on the second Wednesday of the month.
Contact Secretary: Neil Farrer
Phone: (06) 343-6248

NORTH OTAGO BRANCH

Bryan O'Neil
Phone: (03) 431-1831

SOUTHERN NORTH ISLAND BRANCH

Contact: Frank
Phone: (04) 478-3367

SOUTHLAND BRANCH

Contact: Don Stedman
Ph/Fax: (03) 246-9777

TARANAKI AMATEUR BEEKEEPING CLUB

Phone: (06) 753-3320

WAIKATO BRANCH

Contact Tony: (07) 856-9625

WAIARAPA HOBBYIST BEEKEEPERS CLUB

Meet 3rd Sunday each month (except January) at Kites Woolstore, Norfolk Road, Masterton at 1.30pm.
Convenor: Arnold Esler.
Phone: (06) 379-8648

WELLINGTON BEEKEEPERS ASSOCIATION

Meets every second Monday of the month (except January) in Johnsonville. All welcome.
Contact: John Burnett,
21 Kiwi Cres, Tawa,
Wellington 6006. Phone: (04) 232-7863
Email: johnburnett@xtra.co.nz