Volume 12 No. 7
August 2004

The New Zealand BeeKeeper

Permit Post
Wellington, N.Z.
Permit No. 154506

Thank You 2004 NBA Conference Sponsors we couldn't do it without you!

Ceracell Beekeeping Supplies Ltd

Peter Boutelje
HONEY PROCESSING EQUIPMENT

Comvita

Vita (Europe) Limited

Ecroyd Beekeeping Supplies Ltd

TELFORD RURAL POLYTECHNIC

IN THIS ISSUE:

ISSN 0110-63325
The Official Journal of The National Beekeepers Association of New Zealand Inc.

Published by Crown Kerr Printing
P.O. Box 5002
Dunedin, New Zealand

NATIONAL BEEKEEPERS' ASSOCIATION OF NZ (Inc.) EXECUTIVE

President: Jane Lorimer
Hillcrest Apiaries,
"Kahurangi-o-Papa"
RD 3, Hamilton 2021
Ph: 07 856-9625
Fax: 07 856-9241
Mobile (1st) : 027 496 9889
Mobile (2nd): 027 294 6559
Email: hunnybee@wave.co.nz

Vice President: Don Stedman
Catlins Apiaries,
Pine Bush,
RD1
Wyndham
Ph/Fax: 03 246 9777
Email: dstedman@xtra.co.nz

Executive Secretary: Pauline Bassett
National Beekeepers
Box 234, Te Kuiti
Ph/Fax: 07 878 7193
Email: waihon@actrix.co.nz

Executive: Bob Blair
157 Carlisle Rd,
Browns Bay
Auckland 1310
Ph/Fax: 09 479 4354

Executive: Philip Cropp
Nelson Apiaries, Motupiko,
RD 2, Nelson
Ph: 03 522 4130
(Wk) 03 522 4413
Fax: 03 522 4513
Mobile: 027 482 9143
Email: nectar@ts.co.nz

Executive: Bruce Stanley
196 Fosters Rd,
RD 1, Whakatane 3080
Ph/Fax: 07 312 9028
Email: honeybee@clear.net.nz

Executive: Roger Bray
Braesby Farm, RD1
Ashburton
Ph/Fax: 03 308 4964
E-mail: birdsnbees@xtra.co.nz

Hon. Librarian: Chris Taiaroa
43 Princes Street,
Waikari Nth Canterbury 8276
Ph/Fax: 03 314 4569
Email: chris.tony.taiaroa@clear.net.nz

www.nba.org.nz	**PHONE NUMBER FOR AGRIQUALITY 0508 00 11 22**	**Magazine subscriptions: — 11 Issues — NZ $55.00 GST inc Overseas Airmail US $55.00**

BRANCHES: The first named person is the President/Chairperson. The second is the Secretary.

NORTHLAND
Simon Peacey
76 Malone Rd, RD 9
Whangarei 0121
Ph/Fax: 09 434 6344
Mobile: 025 270 8922
Email: peacey@paradise.net.nz
Terry Gavin
PDC, Titoki 0250
Ph: 09 433 1891
Fax 09 433 1895
Mobile: 021 257 6457
Email: terry.gavin@xtra.co.nz

AUCKLAND
Ian Browning
1824 Great South Rd
RD 3, Drury
Ph: 09 236 0764
Bob Russell
101 Kern Rd
RD 3, Drury
Home Ph/Fax: 09 294 8656
Work Mobile: 027 284 8951
Email: bob.russell@paradise.net.nz

WAIKATO
Russell Berry
Arataki Honey,
2488 SH5 Waiotapu
RD 3, Rotorua 3221
Ph: 07 366 6111
Fax: 07 366 6999
Email: russell@arataki-honey-rotorua.co.nz
Cameron Martin
Haumea Road
RD 1
Galatea
Ph: 07 366 4804
Fax: 07 366 4804
Email: busy-bee@xtra.co.nz

BAY OF PLENTY
Ross Carroll
78 Laurel Drive
RD 6, Tauranga
Phone 07 552 4585
Email: rcarroll@clear.net.nz
Gerrit Hyink
271 Lindemann Road
RD 1 Katikati
Ph: 07 549 1223
Fax: 07 549 3290
Email: hyink@xtra.co.nz

HAWKE'S BAY
John Berry
46 Arataki Rd,
Havelock North
Ph. 06 877-6205
Fax: 06 877-4200
Email: jrberry@ihug.co.nz
Ron Morison
31 Puketapu Road, Taradale, 4001,
Hawkes Bay
Ph/Fax: 06 844 9493
Email: rmorison@clear.net.nz

POVERTY BAY
Peter Burt
725 Back Ormond Road
RD 1
Gisborne 3801
Ph: 06 868 4771
Email: pwburt@xtra.co.nz
Barry Foster
695 Aberdeen Road, Gisborne 3801
Ph: 06 867 4591
Fax: 06 867 4508
Email: bjfoster@xtra.co.nz

SOUTHERN NORTH ISLAND
RN (Neil) Farrer
7 Nixon Street
Wanganui
Ph: 06 343 6248
Fax: 06 343 3275
E-mail: farrer@infogen.net.nz
Frank Lindsay
26 Cunliffe Street,
Johnsonville, Wellington 6004.
Ph/Fax: 04 478 3367
Email: lindsays.apiaries@xtra.co.nz

SOUTH ISLAND
MARLBOROUGH
Will Trollope
RD 3, Blenheim 7321
Ph: 03 570 5633
Tony Mulligan
Grazengrove
Hammericks Rd
RD 2, Blenheim 7321
Ph: 03 578 2317

NELSON
Glenn Kelly
PO Box 421, Motueka
Ph/Fax 03 528 8147
Email: glennkelly@xtra.co.nz
Michael Wraight
15 Titoki Place, Motueka 7161
Ph/Fax: 03 528 6010
Email: wraight@xtra.co.nz

CANTERBURY
Roger Bray
Braesby Farm
RD1, Ashburton
Ph/Fax: 03 308 4964
E-mail: birdsnbees@xtra.co.nz
Paul West (Pav)
Box 57, Ahaura
Mobile: 025 748 466
Email: pav@badassbees.com

OTAGO
Brian Pilley
45 Elwyn Crescent
Green Island
Dunedin
Ph: 03 488 0151
Fax: 03 488 0152
Email: beeline@free.net.nz
Peter Sales
"Te Ora", RD1, Port Chalmers,
Dunedin 9030
Ph: 03 472 7220
Email: foxglove@paradise.net.nz

SOUTHLAND
Doug Lomax
81 Quintin Drive
Te Anau
Ph: 03 249 9099
Fax: 03 249 9068
Don Stedman, Catlins Apiaries
Pine Bush RD1, Wyndham 9758
Ph/Fax: 03 246 9777
Email: dstedman@xtra.co.nz

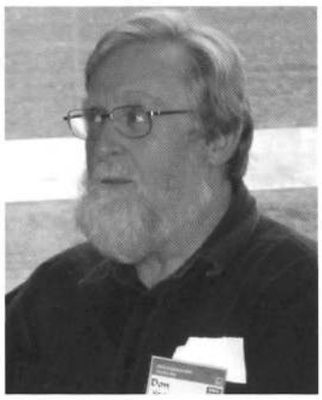
NZ Beekeeper Printed & Published by:
Crown Kerr Printing Ltd
48 Stafford Street, P.O. Box 5002, Dunedin.

Advertising:
Allan Middlemiss:
Telephone: 03 477 8109 Fax: 03 479 0753
Email: ckp@xtra.co.nz

NBA membership & Magazine Subscriptions:
Pauline Bassett
National Beekeepers Assn
Box 234, Te Kuiti
Ph/Fax: 07 878 7193
Email: waihon@actrix.co.nz

Editorial/Publication
Nancy Fithian
8A Awa Road
Miramar, Wellington 6003
Ph: 04 380 8801 Fax: 04 380 7197
E-mail: fithian.jones@xtra.co.nz

Vice President's Report



Thank you to the organisers of another very successful NBA Conference in Napier. There were great discussions and fellowship and good guidelines for your Executive to follow up.

After the conference I took time to travel around the North Island, getting a better idea of how our industry works up there. Although born and bred in the North, most of my beekeeping has been in the deep South so I found it interesting seeing the country from a beekeeper's perspective. I was impressed by the operations I saw, and the honey I brought away.

Over recent years there have been many complaints about the content of the American Foulbrood DECA test. This test has now been rewritten with revised photographs included and is ready for use. The tutor's materials available from the library will shortly contain the revised plates. The test content is strictly on the information in the yellow AFB manual.

At our seminar in Napier, Roger Poland (MAF) outlined some of the issues relating to the surveillance for exotic bee diseases and pests. He touched on some of the issues that we, as beekeepers, need to consider.

I have just received a copy of the 'Proposed Honey Bee Surveillance Technical Plan'. This is a detailed document setting out what is needed to detect significant exotic diseases in time to make eradication a technically and financially feasible option and provide assurance of disease freedom for trade certification purposes.

A preliminary read confirms that the lists of undesirable organisms in the big wide world contain lots of things we don't want in New Zealand. The ability to detect and eradicate incursions involves a significant cost – up to three million dollars per annum. In recent years this surveillance has been able to piggyback on the varroa surveillance programme, cutting the direct cost significantly.

The vibes I picked up in Napier were that a beekeeper contribution (in cash) might be required in future.

There are a number of issues that occur to me as starting points for consideration:

- The role of border control as a biosecurity barrier.
- Testing/sampling being carried out (or not) by beekeepers on their own hives who don't appreciate their significance and importance in the total picture.
- The small pool of capable (trained and available) AP2s in much of the country.
- The relationship between exports and freedom from disease certification.
- Public good versus Bee Industry good.

As a long-serving Branch Disease Control Officer, I well know the significant amount of work put in by some beekeepers on AFB work over many years, much of it voluntary. I will be thinking how we can best fairly contribute to a more effective exotic surveillance programme without imperilling our own beekeeping work.

We don't want another pest to become firmly established before detection.

- Don Stedman

Deadline for Publications

September Edition:	24 August 2004
October Edition:	22 September 2004
November Edition:	20 October 2004

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

Nancy Fithian
8A Awa Road, Miramar, Wellington 6003
Phone 04 380 8801 Fax 04 380 7197
fithian.jones@xtra.co.nz

Secretarial Snippets

The memories of the NBA Conference 2004 are fading in spite of the extensive minutes and notes that have required transcribing into readable form. During the week of conference the Executive held three meetings, one of these on the Friday after conference. There has been another meeting since then followed by a three-week break and a chance for Jane Lorimer to take a well-earned holiday.

I have just completed the typing of the draft version of the AGM minutes. These will be a good reminder of the remits that now require some positive action.

Membership numbers have fallen below 400 due to the non-renewal of subscriptions. However, there has been a slight increase in magazine subscriptions. It is worth noting the conference voted to increase the magazine subscription rate to NZ$66 in 2005, with the overseas subscription remaining at US$55.

There were two life memberships conferred at conference. It was so easy to heap accolades on the deserving recipients (Graeme Cammell and Frank Lindsay), but not nearly so easy to come up with the paperwork required. I could not find certificate forms anywhere, however our computer genius Sam was able to replicate a top-notch certificate. Now I have been asked for an original branch member life certificate form. Perhaps there is someone out there who can help with this?

Graeme Cammell

Frank Lindsay

Conference certainly meant doing lots of errands, note-taking and enquiries, with very little time to listen to speakers. However, the personal contact with members made it all worthwhile and this year my husband John and I hosted a number of post-conference visitors. This included a memorably noisy evening of bee talk with Dr Pedro Rodriguez and thirteen others crammed in our living room. Now back to normal; however my thoughts are now with the Bay of Plenty beekeepers contending with the ravages of floods and earthquakes.

- Pauline Bassett

Report on ERMA Pesticide Symposium, June 2004

On 24 and 25 June 2004 the Environmental Risk Management Authority (ERMA) ran a two-day symposium for the purpose of building partnerships for pesticide risk reduction.

I represented our Association as the Executive considered it important to hold up the flag for the environmental concerns of our bees and for the wider beekeeping community.

ERMA has the role of assessing any applications for Hazardous Substances and New Organisms for release in New Zealand. Part of any assessment is the consideration of risk in our environment from the release of pesticides and other exotic organisms (including Genetically Modified Organisms). In the past there have been practices with substances such as DDT and arsenic which have left residues which damage our environment and will remain a toxic legacy for generations to come.

The Government through ERMA recognises the importance of safety with pesticides and there is an evolving process that should promote greater public (and handler) safety as well as environmental safety. This will be done by codes of practice and suitable education and certification to ensure that the applicators of pesticides have knowledge of the chemicals they use and apply these chemicals to prevent damage to non-target organisms.

Some of the new controls on pesticides have not been well received by some farmers and horticulturalists who consider they will be unnecessarily restricted by regulations. There are groups like kiwifruit and pipfruit growers who are moving towards an Integrated Pest Management (IPM) programme, to reduce the use of chemicals and apply any treatments at optimum times for pests and diseases rather than a programme based on a calendar. This IPM has the benefit of a reduction in grower costs and ensures a cleaner greener product for market without unnecessary chemical residues. The benefit for bees is a reduction of potentially harmful sprays.

There is some work for the NBA to progress with regard to some chemicals which are in common use but may be toxic to bees. In 1999 Mark Goodwin and his team conducted trials for the NBA on the effect of surfactants (sticking agents) on bees. One trial suggests that 10 per cent of the recommended rate of a product when applied to bees caused significant mortality. These types of products were not deemed to be pesticides and escaped the old Pesticides Act for any 'toxic to bee' labelling. The Executive is keen to progress the labelling and conditional use of such surfactants.

Another chemical that has been linked to bee mortality overseas is Imidacloprid, a systemic insecticide. Beekeepers overseas have been concerned at an apparent reduction in bee populations and are considering a build up of the chemicals in the beehive wax could be causing mortality in bees.

Now is probably an appropriate time for our environment committee to look at such issues and take the necessary steps to reduce the risk to bees by such chemicals and substances.

- Roger Bray

Conference Sponsors 2004

Napier conference was made possible by the financial contributions of the following prime sponsors

Company		Contact Name
Ceracell Beekeeping Supplies Ltd Supplier of Quality Beekeeping Equipment: - hive ware and beekeeping tools - pumps and extractors - queen rearing equipment - processing and bottling equipment Buy and sell beeswax; export beeswax; import and export beekeeping equipment		**Trevor Cullen** 24 Andromeda Crescent PO Box 58114 East Tamaki Auckland Phone 09 274 7236 Fax 09 274 0368 Email beesupplies@xtra.co.nz Website www.bees.co.nz
Vita (Europe) Limited Dedicated to bee health, Vita is a small company with a big footprint in the bee-keeping world, producing the world's no. 1 miticide 'Apistan' and now the natural alternative 'Apiguard'. Suppliers of AFB test kits. Vita has an ongoing innovative research programme into cures and treatments of all major bee pests and diseases.		**NZ Distributor: Ceracell Beekeeping Supplies Ltd.** Vita (Europe) Ltd 21/23 Wote St Basingstoke, Hampshire RG21 7NE, United Kingdom Jeremy Owen and Dr Max Watkins Phone +44 (0) 1256 473 175 Fax +44 (0) 1256 473 179 Website www.vita-europe.com
Comvita NZ Buyers and sellers of bee products. Range includes: - honey and Manuka honey - Propolis and royal jelly - bee venom and bee pollen products - winter wellness products including lozenges and cough elixir - Woundcare 18+, first Manuka honey product in the new Comvita Medical range, to be joined shortly by the new medical honey alginate wound dressings.		**Ken Clements** Tauranga - Rotorua highway, approx 10 km south of Te Puke Private Bag 1 Te Puke Phone 0800 477 676 Email info@comvita.com Website www.comvita.com
Ecroyd Beekeeping Supplies Ltd - distributors, exporters & importers of beekeeping equipment - distributors of Bee Healthy & Beeway Honey & Bee Products		**Stuart Ecroyd** 6A Sheffield Cres, Burnside, Christchurch PO Box 5056 Papanui Christchurch Phone 03 358 7498 Fax 03 358 8789 Email ecroyd@beehealthy.co.nz Website www.ecroyd.com
Peter Boutelje Honey processing equipment: - honey loosening - extracting - centrifuges - straining & filtering - pumping - heat exchangers - complete packing lines - plant automation		**Peter Boutelje** PO Box 60598 Titirangi Auckland Phone 09 817 3195 Mobile 027 406 1603 Fax 09 817 3105 Email peterb@ak.planet.gen.nz Website www.bouteljeproducts.co.nz
Telford Rural Polytechnic Course offerings: - Certificate in Apiculture Knowledge - Certificate in Queen Bee Rearing - Queen Bee Rearing Knowledge - Certificate in Apiculture		**David Woodward** Telford Rural Polytechnic Freepost 73901 PO Box 6 Balclutha South Otago Phone 0800 835 367 (0800 TELFORD) Fax 03 418 3584 Website www.telford.ac.nz

Assisting the prime sponsors were a variety of other businesses associated with the New Zealand beekeeping industry

Company	Products	Address
Airborne Honey Ltd	Airborne Honey	PO Box 28, Leeston
Amcor Pet & Closures	Plastic bottles and jars	Private Bag 302081, North Harbour, Auckland
Bay Treatment Ltd	Timber treatment	PO Box 10 000 Rotorua
Beeline Supplies	Southern Cross Plastic frames, beekeeping equipment	45 Elwyn Crescent, Green Island, Dunedin.
Beetech NZ Ltd	High efficiency honey extractors, spin float centrifuge, heat exchangers, complete modular/portable extracting plants, consultancy/advice for setting up new plants	4e Settlers Cres, Ferrymead, Christchurch
Beetek (NZ) Ltd	Plastic bee frames F/D, 3/4, other plastic hardware	PO Box 72468 Papakura, Auckland
Chemical Laif	Api Life var (organic varroa treatment)	PO Box 7102, Rotorua
Kerry NZ Ltd	Simply Sugar	PO Box 5990, Wellesley St, Auckland
Mahurangi Hiveware	Wooden honeycomb frames	370 Pukapuka Rd, Warkworth
New Zealand Sugar Co Ltd	Sugar refiner, sugar supplies	PO Box 30, Auckland
New Zealand Beeswax Ltd	Beeswax comb foundation, total frames, Apivar, paraffin wax, Alliance Woodware, pollen traps, beekeeping equipment, beeswax buyers	Private Bag, Geraldine
Tec Pak Industries	Safe a Pak, Pots & Jars	PO Box 1685, Dunedin
Tunnicliffes Timber Co. Ltd	Supers and woodware	PO Box 54, Edgecombe
VL Smith & Sons Ltd	Alliance Woodware	222 Beach Rd, Kaikoura
Xenacom Ltd	Xen-APIARY – a hive management and tracking system that saves hives, time and money	PO Box 4363, Hamilton
National Bank	All your banking requirements	Branches throughout NZ
Arataki Honey HB Ltd	Buyers and sellers of honey and honey bee products	PO Box 8016, Havelock North

From the colonies

Hawkes Bay

While we have not had the flooding that other places have suffered it has been very wet and cold, fortunately at this time of year I leave the hives strictly alone, still there is plenty of work getting frames and boxes ready for the new season.

I hope you all had a good time at conference this year, from my point of view it seemed to run very smoothly and everyone that I have talked to seemed to enjoy themselves, still I'm glad as it's 'Canterbury's turn next year'. If you have been unlucky enough to have had hives flooded, I know from past experience that it is possible to shake out and reuse combs that have had clean water in them but if the combs are full of silt the bees never seem able to clean them out properly and that it is best to replace them. If hives have had water around them but not been flooded completely away, it is important to check them as quickly as possible, as silt often blocks the entrances and the hives will smother if left too long.

- John Berry

Auckland

The following are just a couple of snippets from postings made by Dr Pedro Rodriguez on the web following his visit to New Zealand:

"Back in Virginia from a very successful visit to NZ. A country rich in beekeeping, livestock and humanity. I enjoyed the trip and learned a great deal from my visit.

Met hundreds of them (beekeepers) and visited their apiaries and commercial honey operations. New Zealand beekeepers are generous, kind, hardworking professionals guided by modern technology and expert scientists. New Zealand has a tactic slogan: CAN DO. NO PROBLEM AT ALL."

A special thanks to all those who billeted and escorted Dr Rodriguez during his 20-day, 2500k circuit of the North Island.

- Bob Russell

Southern North Island

Once again we have heard of flooding and trauma and we think of the problems that beekeepers and farmers are facing around Whakatane and the Bay of Plenty area. Many of SNI members are still in recovery mode, getting gear ready to make Nucs in the spring and making sure that they have ordered cells and mated queens as part of the replacement program. Any supers recovered need a lot of work to clean up (re-dip in paraffin etc.) and generally the old frames have been burnt — so very little was recovered.

We experienced flooded hives, loss of honey, and hives just swept away — probably similar to problems in the Bay area now apart from honey loss. Members should examine their insurance program and quantify what losses are acceptable to their business. Our members found that often the cover that they thought they had was not what the insurance company were prepared to pay out on after the event. Cheaper premiums can result in reduced cover when you need it most. One insurance company (Lumleys) had exclusions in their rural pack that they say ruled out any payment for flood damage claims, including beehive losses, even though beehives all risk extensions had been documented in the policy. All beekeepers should revise their policy covers with their broker/ insurance company, as our members have found lots of grey areas to argue about; some are still waiting for payouts for claims made in March or earlier.

Varroa-related problems in the autumn have caused increased hive losses. Some hives were unable to be treated after the storm as there was no access, and treatment was therefore late, resulting in dead hives in June/July, possibly of queen failure or lack of wintering over bees. Members are reporting losses in most apiaries.

The weather has been kind to us, ample pollen sources are providing food and those hives that have survived generally are in good health. Winter feeding provides an opportunity to check on varroa levels.

Many members are waiting to hear that Thymol has been approved, and after Pedro Rodriquez's talks we certainly want the FGMO approval that NBA has supported and forwarded to the appropriate Government officials.

At our last meeting Ian Berry outlined the proposed new structure of NBA and the meeting supported and approved the changes proposed.

- Neil Farrer

West Coast

The Murchison incursion: 40 hives have been killed and sent to Christchurch for washing. MAF is inspecting hives within the 10km radius and expects to have this finished next week. No more mites have been found. Nelson beekeepers are looking forward to having the movement controls lifted and life back to normal for the beekeepers involved (our mite has been called Murt).

- Philip Cropp

Apivar® update

Recently Dr Beniot Siefert from Veto-pharma, the French company that manufactures Apivar®, visited NZ to check on the efficacy under NZ conditions, and to conduct some seminars on Apivar.

When meeting NZ beekeepers, there were quite a lot of rumours and claims concerning Apivar's efficacy. When asked for details on the monitoring of the Apivar treatment, it was discovered that in most cases, manufacturer's recommendations were not properly followed, and in most cases the rumours were absolutely unfounded.

Some of the claims were based on observations made after only three or four weeks of Apivar treatment, and it was reported that there were big mite drops after a change of strips. One apiary that was visited while under Apivar treatment contained hives that had been under-treated and had bad positioning of the strips (at the time of the visit). The "negative results" which were reported during the Waikato field day were based on the weakest hive where only one strip was found (instead of two). Furthermore, there was no information on mite levels before treatment was commenced and the treatment was commenced approximately four weeks late.

One of the important aims of Dr Siefert's visit was to present all that is known about Apivar (related to French and European uses), to help NZ beekeepers to understand and use the new weapon, Apivar, in the best way to develop its best efficacy. Whatever the product, and its own properties or capabilities, the results depend largely on how it is used.

The point is nobody knows exactly what happens inside an individual hive while under normal treatment. Some mites (adult fecundated females) are present on the back of the bees, but the majority are hidden in the capped cells of the brood (where they are multiplying) and cannot be attacked directly by miticides.

With long lasting slow releasing products like Apivar, the miticide can remain present at a sufficient level inside the hive (only while the strips are present) to be able to be in contact with the Varroa mite during the phoretic part of its life cycle. This is possible due to close contacts between bees, which exchange Amitraz from one to another. Amitraz is regularly released from the inside to the surface of the Apivar strips for more than 10 weeks. Bees walk on the strips or rub their backs on it, and load the Amitraz by contact with the Apivar strip. The Amitraz molecules are then transferred from loaded bees to others by contact, and finally to emerging bees with young mated Varroa on their backs. All these contacts are not under human control and we can only imagine the probabilities of contacts and transfers. At the same time, we know that as soon as Amitraz arrives at the surface of the Apivar strips, its hydrolysis process can start, which leads to inactive compounds.

This is why Dr Siefert presented the point of the high sensitivity and degradation of Amitraz by moisture, as this could be an explanation of some under-efficacy; however, this has not been scientifically demonstrated and is only conjecture. The positive point is that this degradation is largely responsible for the excellent residues levels found after Apivar treatment (this was tested and confirmed under NZ conditions), which is essential for both consumer protection and to dramatically slow the development of mite resistance.

Inside the hive, all is under equilibrium, and sometimes little is needed to have quite big impacts; for example, the re-positioning of the strips during treatment to increase the contacts of the bees and the Amitraz loading. This can shorten the distance between the strips and the bees emerging from the brood with their Varroa mites, so that there are more chances for these mites to be killed quickly.

For the same reason, Dr Siefert presented French results after longer periods of inserting the strips than the official six weeks duration. In field conditions, we know that the environment of a treated hive is not perfectly controlled (feral hive, other hives not treated at the same time, etc) and the jeopardising behaviour of strong colonies against weak ones leads to reinvasion, which are really difficult to manage.

For this reason, application is being made to increase the treatment period of Apivar to eight to 10 weeks depending on local conditions. The reasoning is that in spring when there is minimal reinvasion, a shorter treatment may be sufficient; however, in autumn in areas of high reinvasion, a longer treatment is necessary in order to protect the hive over the reinvasion period.

The extremely high levels of reinvasion experienced in many parts of the North Island last autumn were responsible for what many beekeepers mistook for poor efficacy. A trial was conducted by two Northland beekeepers who used Apivar and were concerned by rumours about Apivar efficacy. An apiary was treated half with Apivar and half with another widely used strip treatment. Although not conducted under strictly scientific conditions, the results showed no discernible difference between the efficacy of the two products.

All beekeepers approached since their Apivar treatments have been completed have reported good results and are very satisfied with Apivar 's performance.

Apivar should be viewed as another and different weapon to use in the fight to control Varroa. No one treatment should be viewed as better or worse than another, as they all have different attributes and all have a role to play. No one treatment will work forever on its own. We are fortunate, and probably unique in New Zealand to have six registered treatments available, with the prospect of two more in the not too distant future. We must learn from the mistakes made in so many other countries, as it is now critical to start alternating treatments if we are to preserve our arsenal.

Peter Lyttle
N Z Beeswax
New Zealand Distributor of Apivar ®

About the Apiary

On the whole it's been a very mild winter along the Wellington coastal fringe. We've had plenty of rain and a few cold spells but also some very nice still days as well. On days when the temperature is around 10 degrees centigrade, you can see the odd bee flying back to the hives loaded with pollen. This is a marvellous sight as it indicates that brood production is underway in the hive. In fact in most of my hives, the bees have maintained brood rearing in three frames right through the winter. They have also been chewing through their honey stores and are now getting fairly light.

On a nice day, spend a little time checking your hive/s. Check their weight by hefting the hive forward by placing your hand in the top super handhold and lifting. A heavy hive is difficult to lift off its base. Light hives should be fed sugar syrup to maintain brood rearing. It's important that they isn't a break in the brood rearing if you want strong hives for the honey flow – don't let them run out of stores.

Beekeepers in urban areas should feed hives in the evening so that the bees are not stimulated into flying. At this time of the year flying bees are likely to put yellow spots all over the neighbour's clean washing. Something you really want to discourage if you want to keep bees in the bottom of your garden.

Continue with your inspection by removing the roof and checking under the hive mat for condensation. The hive should be relatively dry with just a little condensation around the top edges of the super. Any more than this and you should consider adding a twig under the corner of the mat to give increased ventilation. Look down into the top super and you should see frames of capped honey and the bees clustered below this.

At this time of the year we also discover our mistakes. The hive at the bottom of the garden that we thought was a heavy hive is now showing signs of starvation – the entrance is blocked by dead bees. When you think back, you did notice the bees have been flying during cold weather and there were cappings and young-looking bees at the entrance. Generally this is a sign that something is wrong. Open the hive: you're in for quite a shock.

There's no sealed honey and in the warmer areas, the bees will be scattered all over the frames instead of being in a tight cluster. Inland where it's colder, the bees won't have moved out of the cluster and will be in a tight clump. Lift out a couple of frames and you'll discover that most of the weight in the super is pollen not honey as you may have thought. That lovely hive you put to bed in the autumn has starved itself almost to death. Well that's not strictly true, YOU allowed it to nearly starve to death by taking off too much honey or you can take the hard approach and say that it must not have had good over-wintering genes.

Examine the bees. If they are lifeless, old and breaking down, the hive has been dead for some time. If the brood frames are dark, I'd recommend they be used as fire starters as they are likely to be loaded with nosema spores. If they are new frames, store them and hose out the bees when the weather gets warmer. The frames can then be added to another hive and the bees will clean them up.

If, however, they slowly vibrate their wings, they are still alive! You can try and save those bees that are still alive. There are several ways you can do this:

Lightly spray warm sugar syrup (50/50 sugar/water) over the bees (don't forget the ones on the bottom board). The warmth and syrup will revive the bees and they will start to warm the hive and feed other bees until you have some sort of semblance of a hive again. The only problem is that the bees are likely to be stimulated into searching for the nectar supply and will fly outside the hive, get chilled and die. Therefore it's important to cover the entrance with shade cloth or mesh to prevent them from flying.

Another method is to assist the bees to heat the hive using the same method you use to melt honey. Place a 60 watt light bulb in an empty super, cover the top with aluminum foil and (after spraying the bees with sugar syrup) place all the supers on top. Lightly spray the bees on the bottom boards and tip them on top of the others. Within a few hours the bees should have started to recover. Again it's important to prevent the bees from flying. The warmth will stimulate them into flying to void themselves of faeces. If this happens they'll quickly chill and all your work will have been wasted.

Allow the hive to cool to ambient temperature before placing the hive back on the baseboard. At the same time remove the dead bees and fill a feeder with warm syrup, dribbling a little across the top of the frames to the feeder so the bees have a trail to follow.

If you can't provide external heat, you could consider putting the whole hive on top of another separated by a split board.

Feed both hives, and you will find the heat from the hive below will restore the bees in the hive above.

You could also be callous and write the hive off. Lightly spray all the bees as before, remove the roof and hive mat from an adjacent hive and put the supers directly on top. The bees from below will come up and rejuvenate those bees that are still alive and throw the dead ones out the entrance. But you'll lose the queen as she will be killed by the other bees. This hive will be strengthened and might be able to be split in the spring to re-establish the lost hive.

Yet another method I have used in the past was to wrap the hive with shade cloth and put the whole thing in a heating cabinet. It doesn't take too long for most of the bees to recover. Turn off the heater and leave the hive for 24 hours, still covered, in the dark so that the hive is allowed to cool and then place it back on its stand again in the evening. Add three frames of honey to near the centre of the brood nest and in a few days check the hive again to see that it's OK. If you don't have any honey, put a feeder above or close by so the bees don't have to travel far to reach it.

Open the hive again on the next sunny day and check the results. You might be lucky to end up with a hive that has three to four frames of bees. Clean any dead bees off the bottom board and check to see if there is a queen or eggs in the centre of the cluster. If you see eggs, you've been lucky and it's possible to get the hive back into working condition again by adding half a frame of emerging brood from another hive every month. But please check the donor hive's brood carefully for AFB before swapping frames between hives. You will have to continue feeding this hive on a weekly basis until it gets back up to strength.

Nobody likes to see bees die unnecessarily. It does happen but in most cases it's preventable with good management.

Commercial beekeepers face the same situation but most are now on a three- or four-weekly feeding round, adding about 15 litres to the top feeder each time. The bees are rearing brood from the stored pollen and early pollen sources. When they find a weak or dying hive, they check it for disease and if it's clean, they unite another hive on top of it using a sheet of newspaper. It's not worth putting a lot of time and effort into a hive that might not produce a crop.

If your hive is in a shady spot, you might notice a lot of bees with pollen loads in the long grass or just short of the hive. These bees are coming back chilled and haven't the energy to fly again if they land short of the entrance. Clear away any grass in front of the hive and place a sloping board against the landing board so that those bees landing short can climb up and into the hive. You can also move the hive half a metre a day without disrupting the bees too much. They'll quickly reorientate to the new spot each day.

Those in the North Island with varroa should be planning this year's treatment regime. It's important to monitor mite fall midwinter or early spring before hives get into serious brood rearing. One or more mites falling naturally each day at this time of the year means that mites will build up to a dangerous level before the end of the honey flow. You have to make a judgment call when to treat.

It's a good idea to vary the treatment from that used in the autumn to prevent mite resistance to the chemicals. We now have a range of alternative treatments available that can be used to achieve this, from a simple 'T' candle method using oxalic acid, to prepared products. See the advertisements in this and earlier magazines. If you choose to wait a little, make sure the mites are reduced right down in November and that all treatments are out of the hive/s a week or so before the commencement of the main honey flow.

Things to do this month:
When it's wet, it's back inside making up gear for the spring. When it's dry it's really nice being out amongst the hives.

Make up replacement gear and get ready for the spring. Put together new frames and wire them ready for wax when it's warmer. Check hives after storms and tidy up around the hives. Quickly check the weight of hives and feed when necessary (when they are getting down to three full frames of honey). Check for natural mite fall — more than 0.5 per day and your hive is likely to collapse before the end of the season, (page 39 in the varroa manual). It's too late to order spring queens as they are all usually all booked until November but it's a good idea to plan to have a few nucs to add to hives that have either swarmed or just aren't making it. Late queens are generally better mated than early spring ones and you are not competing with commercial queen orders. Spring is already there in the North but just around the corner for the rest of us — Bee prepared.

- Frank Lindsay

From the Archives

Inside Story of Feeding Sugar to Bees

By Murray Reid, Apicultural Advisory Officer, Christchurch

The practice of feeding sugar (either dry or as a syrup) is becoming more and more popular with beekeepers. This trend partially reflects the increasing price paid for honey, also the need for extra winter stores due to the paucity of late autumn and early spring nectar sources.

Many beekeepers pour the sugar into the hive, close the lid, then hope for the best. Sometimes when they come back the bees have converted all the sugar into ripened stores. In other hives, maybe an adjacent one, the sugar (either dry or in a syrup) is still in the feeders, and could be in various stages of fermentation. It is a strange fact that two hives can appear equal in bee strength, brood and stores, yet one will readily store sugar while the other will not, especially if dry sugar is fed. I wonder if anyone has noticed any correlation between the productivity of a hive and the rate at which it stores sugar? In other words does a hive that produced a good crop of honey relative to others in the apiary, also store sugar more readily?

What does the bee do with the sugar?

Bees must invert or "digest" the sucrose molecules, before they can assimilate them, as well as reduce the water content. In the case of dry sugar the bees add a great deal of water to the crystals, more in fact than to concentrated sugar syrups or honey. This will mean the bees have to make extra foraging flights to collect water. According to Simpson, food containing more than 50 per cent or more sugar is diluted first before being ripened. The enzymes (particularly invertase) which are necessary for reducing the sucrose molecules are produced in the hypopharyngeal glands of the adult bees. These are the same glands that first produce royal jelly for feeding larvae and the queen, and are most active in bees aged 5-13 days. From 17 days onwards during the summer, the glands rapidly shrink in size, and cease producing royal jelly, but the amount and activity of the enzymes secreted is increased. Enzyme production, naturally enough, reaches a peak after three weeks when the worker bees begin foraging. In the winter time bees of all ages have large glands rich in invertase.

Effect of disease on the hypopharyngeal glands

Nosema disease is known to affect the glands of bees and reduce the amount of royal jelly produced. Nosema also affects the levels of protein and amino acids in the blood but it doesn't seem to influence the levels of blood sugar at all.

The effects of enzyme production on honey yields

Some recent research work carried out in Russia suggests that the honey production in a hive could be related to the efficiency of enzyme production by the bees and that this efficiency varied from hive to hive. Naturally the strongest hives, with bees producing most inverting enzymes also produced the most honey.

Storage of sugars in the body

Bees have the ability to store surplus protein in their fat bodies and also in their blood. However, they do not have any storage organs as such, for sugars. Rather the sugars remain free in the blood and the levels are not regulated as in mammals, but fluctuate markedly according to the diet and activity of the bee. Thus, when a bee first emerges or when it is resting on the comb it has very little sugar in its blood. However, when it is out foraging, blood-sugar levels become very high.

Physiological demands on the bees

Converting sugar into honey and storing it is a very exhausting process, in terms of energy used by the bees. The bees must first produce the enzymes, and secrete them, they must suck up the syrup and invert it, they need to keep the hive temperature high to evaporate excess moisture from the syrup, as well as secrete and manipulate the wax to store the honey in. Let's look at some of the processes involved and see how we can help the bees to be more efficient. In all these considerations timing is reasonably important. In most areas April-early May would be suitable for feeding sugar to winter the bees on.

(a) Inverting the sugar

We want to get the sugar inverted and ripened while the maximum number of older bees with active glands are in the hive. These bees are mostly expendable and will not survive long into the winter anyway. Ideally we want a balance between having enough older bees but not too many to consume excess food.

(b) Heating the hive

Bees generate a lot of heat from the sugars they eat. Of this heat Wedmore calculated that 60-70 per cent is used to heat the bees, 29 per cent is used to evaporate water, and 10 per cent is used to heat the air, so a significant amount is used solely to evaporate water. And as warm air is able to hold much more moisture than cold air it is to our advantage to feed the sugar before the weather gets excessively cold and damp. The warmer the ambient or surrounding air the less energy the bees need to consume solely to keep themselves warm and evaporate moisture.

(c) Eliminating the water

The energy required for ripening large quantities of nectar is appreciable; for instance Ribbards calculated that the elimination of each pound of surplus water involved the wastage of 4-5 ounces of sugar. This is about 25 per cent and approximates Wedmore's figure of 20 per cent. Further the actual consumption of honey also releases water as the "water of combustion" plus the 17-18 per cent water naturally in honey, and this too demands energy to get rid of it. This extra water may be as great as one-half to two-thirds of a pound for every pound of honey consumed. Some of this water is lost by evaporation but the great majority is stored temporarily in the rectum then disposed of during cleansing flights. Again the bees should have ample opportunity for flying during the period in which they are ripening sugar stores.

(d) Wax production

One researcher found that one pound of wax can be built into 35000 cells which would hold 22 pounds of honey. Other

workers have found that it takes somewhere between 6-10 pounds of honey to make one pound of wax. So a significant amount of our original sugar stores are also going to be used up in producing the wax as well as maintaining a high cluster temperature needed to manipulate the wax scales into comb.

(e) Case study

Let's take an example and see just how much of our original sugar we can expect to be converted into sealed stores. Let's feed 4 gallons of 2:1 or 62 per cent white sugar syrup. This will contain 32 pounds of sugar at the rate of 16 pounds to the gallon and could weigh in the vicinity of 52 pounds. Assuming our ripened stores will contain 18 per cent moisture we have to lose 20 per cent water or about 10.4 pounds of water, Now this represents an elimination cost of nearly 3 pounds of sugar, if 4-5 ounces of sugar are lost per pound of excess water. This sugar itself when consumed by the bees will release excess water of combustion that will require energy to eliminate. However, that is getting a bit complicated.

Now the bees are going to use something like 5-9 pounds of honey or sugar to build enough wax to hold the syrup, although this could fluctuate depending on how drawn out the combs were. But from our original 52 pounds of syrup we have lost or used up 10.5 pounds of water, and say 11 pounds of sugar to eliminate the water and produce the wax. This leaves us with about 10.5 pounds of ripened stores. As a rough rule of thumb in estimating stores produced from syrup, the final weight of ripened stores in the comb is slightly less than the weight of dry sugar in the original syrup — in our case we could expect about 30 pounds of ripened stores from 32 pounds of sugar.

Recommendations

Don't leave your sugar feeding until too late in the autumn. Feed while:

- There are plenty of older expendable bees with active glands still present.
- It is not too cold to secrete wax.
- It is not too cold or damp for the efficient evaporation of moisture out of the hive.
- There are still some natural honey stores in the hive.

And remember:

"BEES DO NOT FREEZE TO DEATH — THEY STARVE TO DEATH".

THE NEW ZEALAND BEEKEEPER, MAY, 1974

Despairing GM Firms Halt Crop Trials

(Sent by John Salt)

All the major biotechnology companies have abandoned GM trials in the UK this year and only one crop — a GM pea — has been granted a licence to be planted this summer.

The lack of applications, which peaked at 159 in 2000-2001, shows a dramatic change in the fortunes of a technology which had the backing of the government but remains unpopular with the public.

Although the figures of field trials were inflated by the bio-tech companies' three-year trials of oilseed rape, sugar beet and maize, the slump to 140 in 2001-2002. 42 last year and only one trial this year is a remarkable decline for what the government claims is a sunrise industry.

The one crop that will be grown this year is a herbicide-resistant pea being tested for drought resistance in polytunnels at the John Innes research centre, Norwich. The trial began last year.

All the big companies — Novartis Seeds, Aventis CropScience and Bayer CropScience — have told the government that no crops are being grown this year. The largest British research centres, including the Natural Environment Research Council, which uses the Rothamsted research establishment at Harpenden in Hertfordshire, have also stopped GM trials.

The testing of crops in British conditions is necessary before commercial planting. After years of effort, only one crop, Chardon LL maize, has been given the commercial go-ahead by the government, and that was withdrawn last month because Bayer said the conditions were too arduous.

The failure to test further varieties of crops is interpreted by industry watchers as despair at ever getting the technology accepted in Britain. Sue Mayer, of Genewatch, said: "It is a sign of how fully the British public has rejected GM, and how the companies are giving up. It is reflected across the rest of Europe. Research is now being directed elsewhere to other ways of improving crops which do not involve GM."

In 2002, when there were 140 licences issued to grow GM crops, 105 were associated with the government's trials to see whether three key crops were better or worse for the environment than conventional varieties. Another 17 were unrelated trials to check whether GM crops reseeded in subsequent years, and others were to test whether crops such as GM barley and potatoes were successful in the British climate.

Last year Bayer abandoned further field trials because of government insistence that it should give grid references of plantings. The company claimed that as a result most of its trials had been "trashed" by GM opponents. The government still maintains its enthusiasm for GM crops, which it says it will be dealt with on a crop-by-crop basis after applications. Yesterday, however, it showed a renewed interest in the organic

sector by announcing new payments for environmental benefits.

Organic farmers will get £30 sterling a hectare as a recognition of the benefit to wildlife and the damage avoided by not using pesticides and other chemicals which get into water supplies and rivers. Conventional farmers will be able to earn GBP30 a hectare and organic farmers a second GBP30 under a points system for other improvements, such as looking after hedgerows and providing field margins for wildlife.

Source: *The Guardian*, Paul Brown, Environment Correspondent, Thursday April 15, 2004

Small Hive Beetle
Simulated Exercise: Tauranga 28-30 April 2004

An exercise simulating an incursion of a Small Hive Beetle incursion was held in Tauranga in late April 2004. The exercise was part of an annual training event organised by AgriQuality and brought together personnel from industry and within AgriQuality. Support from the industry was pleasing with 23 beekeepers attending the exercise. Both industry and AgriQuality staff worked exceptionally well together and the result was that 422 hives in 32 apiaries were inspected and sampled for the Small Hive Beetle despite the adverse weather conditions.

In addition, an Authorised Person (AP2) training course was held on the Wednesday prior to the exercise. The attendance level was high and a number of beekeepers successfully completed the training. This has addressed the low numbers of AP2's in the Bay of Plenty, which has been a problem in recent times.

AgriQuality would like to thank all beekeepers who attended and helped to make this exercise a success, and extends a special thanks to Bruce Stanley for his work in arranging for beekeepers to attend.

Byron Taylor

Apicultural Advisory Officer

Innovation in timber treatment for the industry!

HOMETEAM

PEST DEFENSE®

If our customers win, how can we lose

A Joint venture between Hometeam Supply Services and Ceracell Beekeeping Supplies Ltd has developed the latest innovative product for treating your timber.

No longer do you need to put up with handling a Class 3 Flammable liquid, solvent fumes or messy mixing.

The new CopperTreat2 (Green) and ZincTreat4 (Clear) are now available from Ceracell Beekeeping Supplies and we have taken all the guesswork out of it for you.

Supplied in 5, 10, 20 and 200 litre drums.
Supplied READY TO USE, we mix it so you don't have to.
No need to buy kerosene, diesel or thinners separately
Within specification each time, every time.
Unique solvent carrier eliminating harmful fumes.
Non-Flammable rating making transport, storage and handling easier.
Safe, secure and simple!

Treat your Hives well with Ceracell CopperTreat and ZincTreat.

Contact:

Trevor Cullen

Ceracell Beekeeping Supplies Ltd
24 Andromeda Crescent
EAST TAMAKI, Auckland.
Ph 09 274 7236
Fax 09 274 0368

Ministry of Agriculture and Forestry
Te Manatu Ahuwhenua, Ngaherehere

27 July 2004

Canterbury Varroa Movement Controls Lifted

The controlled area currently covering the whole of North Canterbury has been reduced to a 10km zone around the Oxford property at the centre of the varroa investigation.

MAF Varroa Programme Coordinator Paul Bolger said that most beekeepers are now free to resume normal beekeeping activities.

Movement restrictions will remain on apiaries within this zone and any hives outside of the 10km zone which are also owned by beekeepers that have hives within the zone.

Mr Bolger said that since the 4th of June over 350 beekeepers have been affected by movement controls in North Canterbury. With the new controls the number of beekeepers directly affected will be reduced to 23.

Restrictions were lifted at midnight last night after further testing was completed in the 10 to 15km radius around the affected site.

Depending upon the weather, movement controls will remain in place at Murchison until testing is completed by early next week.

If there is no further evidence of varroa, the Oxford investigation will be called off by the end of August. To continue with current controls would seriously disrupt the commercial operations of beekeepers and potentially those industries that rely on bees for pollination services, Mr Bolger said.

The varroa investigation was initiated in June after a single varroa mite was found on an Oxford apiary. The investigation was extended to include Murchison following the detection of a mite on the outside of a plastic bag containing sticky boards used in varroa surveillance from a Murchison property.

For more information on the South Island varroa investigation please go to: www.maf.govt.nz/varroa

For more information contact:
MAF Varroa Programme Coordinator
Paul Bolger 025 869539

Varroa Response, Oxford

As the Movement Controls in the Central Canterbury Beekeeping region have now been eased, perhaps it is time to reflect on the incursion response as undertaken by MAF Biosecurity.

The initial find of one varroa mite on a sticky board from a reasonably remote part of Canterbury sent a shock wave through the Canterbury beekeepers (and indeed South Island beekeepers).

The initial response with the surveillance teams failed to find any further mites within the defined incursion area. Tracing was carried out and surveillance undertaken of the bees that had moved from the area, as well as of other hives from beekeepers who had contact with the infected site (queen breeders, etc). The negative result posed an immediate question, "Where did the mite come from?" There are many 'opinions' about the possible source of the mite and an answer may never be found; as well, the possibility exists that there may be other mites as yet undiscovered at any location in the Canterbury region outside the arbitrary 5-15km radius of the infected site. A point to note is that the area is in close proximity to SH 73, the main highway from Canterbury to the West Coast. During the season beekeepers move hives and equipment along this road — there has been minimal testing of these beekeepers or hives — could the initial 'find' be a secondary infection, with the primary source still undiscovered?

Although the find was in the 'winter' period, beekeepers became increasingly concerned at the effects of movement control and their inability to carry on the normal activities of beekeeping.

MAF held a meeting in Wellington attended by representatives of the beekeeper groups, as well as members of the VPG, to look at 'options' for the continuation of the response.

There were further 'options' which would have necessitated continued movement controls and further intensive surveillance. Given the uncertainties concerning the source of the mite, the disruption to beekeepers, and the reluctance of MAF for further surveillance with an increasing compensation liability, as well as the consideration of a further mite find in November that would make eradication unfeasible, the option of scaling down the incursion response was agreed to. Although South Island beekeepers do not want varroa in the South Island and wish to see the current restrictions of risk goods maintained, we perhaps need to concentrate more on keeping varroa out rather than a "detection when it arrives" policy.

The fact that there has been a 'confirmed' varroa finding in the South Island indicates that varroa does not follow the rules with regard to any movement control lines.

In conclusion, with the removal of movement controls, if beekeepers find more evidence of varroa during the coming season have we let the cat out of the bag with respect to an eradication possibility? Or if we do not find any more varroa, can we say that South Island, New Zealand was the first country in the world to successfully eradicate varroa?

- Roger Bray

The effects of attendant bees, second queens, and drifting bees during queen introduction

W.A. Mangum, Mathematics Department, Mary Washington College, Fredricksburg, VA 22401

Queens killed during introduction are an expensive loss in bee-keeping. Initially bees tend to display hostility towards a new queen by balling her protective cage. In the typical scenario, the number of ballers decreases, and they are not present upon the queen's release. Queen acceptance is expected to decrease by factors that extend the duration of balling. One of these factors may be the presence of the attendant bees. Previous experiments (presented last year) indicated a shorter balling period without attendant bees (under marginal foraging conditions). Once the number of ballers went to zero, it did not rebound, though infrequently 1-2 ballers were observed on some cages. In contrast, the number of ballers on cages with attendant bees exhibited complicated patterns of aggression. In addition to the typical scenario (termed a decay), some colonies had no decrease in the number of ballers (chronic balling), or the number decreased to zero and then suddenly showed a dramatic increase subsequently decreasing to zero again (reversion) or never decreasing to zero again (reversion and chronic balling). At the termination of the experiments, colonies continuing to ball were checked for second queens, and those with them were removed from the above experiments. Some colonies displaying chronic balling, reversions, and both of these scenarios only had one queen. Nevertheless in colonies with second queens, the number of ballers fluctuated over time and formed some interesting patterns of aggression that will be shown and discussed.

Single queen colonies showing a reversion prompted further experiments to investigate why balling resumed. Other observations suggested that drifting might be a possible cause. Since chronic balling, reversion, and both scenarios together were only observed in colonies with attendant bees, it was hypothesized that some interaction might be occurring between the attendant bees and the drifted bees to cause the resumption of balling. In a preliminary experiment, queens were introduced into observation hives with and without attendant bees. An additional treatment was included where

Continued on page 20

BAYVAROL®

NZ's No 1 VARROA TREATMENT

Why?

- it's the most effective
- it's the easiest to use
- it's the safest to use
- it has twice the contact area
- very kind to beeswax, propolis and comb honey
- it can be used during the honey flow

NEWSFLASH
— 8 Week treatment now approved in N.Z.
— showing no signs of resistance

So why would you use anything else?

Current prices

20 to 96 strips	$1.87 + GST each
100 to 796 strips	$1.75 + GST each
800 to 8800 strips	$1.57 + GST each*
9600 plus strips	$1.35 + GST each

* For orders of one or more cartons, enquire from us to find out how to join in with a bulk purchaser and receive your strips at the best possible price.

Packets contain 20 strips, cartons contain 800 strips, Orders of 100 strips or more are despatched freight free to anywhere in New Zealand. Payment is required prior to despatch by Visa, M/Card, Cheque or Electronic Banking.

For any enquiries or orders, contact Stuart Ecroyd
Free Fax: 0800 233 929 or email: Bayvarol@beehealthy.co.nz

BK121

***Bayvarol*® - Registered trademark of Bayer AG Germany - Approved under the Animal Products (Ancillary and Transitional Provisions) Act 1999**

Ecroyd Beekeeping Supplies Ltd

Distributors, Exporters & Importers of Beekeeping Equipment
Distributors of Bee Healthy & Beeway Honey & Bee Products

E B S

P.O. Box 5056 Papanui, Christchurch, New Zealand • 6A Sheffield Crescent, Burnside, Christchurch
Phone: (03) 358-7498 • Fax: (03) 358-8789 • Free Fax 0800 233 929 • Email: ecroyd@beehealthy.co.nz

Continued from page 18

the attendant bees shipped with the queens were replaced with bees from the recipient colonies. When balling ceased, these hives were switched with other observation hives having established queens. This procedure resulted in numerous foreign bees entering the hives over several days, thus mimicking a severe drifting problem. In four of the five colonies with queens accompanied by attendant bees (irrespective of the source), some balling resumed, though the response was variable in both bee number and duration. The worst case had 3-27 ballers for the last six days of the experiment and resembled a reversion. Balling resumed in one of the three colonies having queens without attendant bees. That response was weak with only 2-4 ballers for about 24 hours. It resembled, though to a slightly greater degree, the minor transient balling (1-2 bees) infrequently seen in the decay pattern when queens were without attendants. Biologically, drifted bees in colonies with attendant bees may be associated with the recurrence of balling. However compared to colonies without attendant bees, the recurrence of balling was not significant (P = 0.28, Fisher's exact test). This result may be due to the small sample sizes. Larger experiments are planned to resolve this issue.

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

Letter to the Editor

Dear Editor

I am 34 years old and I come from the Slovak Republic. This year I started bee farm in Slovakia. Now I run with 50 beehives. Next year I'll want to expand my bee colonies. In September in Slovakia bee season finished and I would like to find some job on the bee farm for two or three month in New Zealand.

I have interested with beekeeping for 18 years. Beekeeping is my hobby and I am very interested to get more information about technology to use in New Zealand and in all new information about beekeeping. Two year ago I participated in a queen breeding course. This year I started to breed queens. I breeded about 60 queens. In future I'll want to deal with queen breeding more. Last year I was in Australia for 8 month. Six month I studied English in Brisbane and after I visited two beekeepers. Charlie Hacker who lives close to Noosa in Queensland. He run with 600 beehives I helped him for two weeks. Second was Ken Gell from Maryborough in Victoria. Ken Gell run with 1200 beehives and I helped him for one month. I helped to requeening, extracted honey, shifted bees and other activities.

I feel that work on bee farm in New Zealand would be very interesting for me and that I would be able to use my various skills and knowledge in this job.

I look forward to hearing from you.

Peter Kondas
Barcianska 13
040 17 Kosice
Slovakia
e-mail: condy@zoznam.sk
Ph: 00 421 915917109

Response to July 2004 Letter to the Editor

Your comments on the PMS are valid and the voluntary nature of the set up of the Operations Committee has in the past impeded them into giving their full consideration to the PMS. We were in a situation of fighting fires.

However, we have now appointed a PMS Manager to coordinate PMS activities, and this year we have allocated money for Branch/Industry Diseaseathons and the auditing of apiaries. Also, the committee is setting up protocols to recover costs from beekeepers found to be in breach of the Biosecurity regulations. No longer will the majority of beekeepers be subsidising those who fail to fulfil their legal requirements.

We feel a greater emphasis on compliance and auditing will address yours and other beekeepers' criticism. We urge all beekeepers to report incidences of AFB as soon as it's found. These reports are often our first indication of a hidden problem.

In order for beekeepers to keep up on more than a six-monthly basis, we urge all beekeepers to either join the association or to subscribe to the journal. We also urge all beekeepers to become informed and involved.

Ian Spence
Chairman
PMS Operations Committee

Residues

Residues are a problem for a lot of beekeeping nations. Recently we have seen the banning of Argentinean and Chinese imports from European and the North American markets because of minute amounts of antibiotics in the honey. The finding of chemical residues in honey has greatly dented the reputation of honey's clean pure image in these markets. Happily, we in New Zealand are not permitted to feed 'drugs' to our hives to control diseases. However, like the rest of the world, we in the North Island do use chemicals to treat for varroa mites. These can create residues in our hives if they are not used according to their labelling requirements. Following on from Mark Goodwin's talk at the 2004 NBA Conference, this is what's happened in two countries to combat possible residue problems.

Canada

Maximum Residue Level for oxytetracycline and Tylosin: Oxytetracycline hydrochloride (OTC) has been in use as an antibiotic for more than 40 years. When it was first registered for use there was no federal requirement to set a maximum residue limit (MRL) in honey. The food inspectors operated on an unofficial "administrative tolerance" of 0.1 ppm (100 ppb). In the past this has not been a concern because residues below 0.1 ppm were not detectable. However, advances in technology now mean that the scientific equipment for checking residues can detect levels as low as 0.006 ppm (6 ppb). Without an official MRL, the Canadian Food Inspection Agency enforces a zero tolerance for oxytetracycline in honey. The Canadian Honey Council (CHC) is actively pressuring Health Canada to set an MRL and we expect a resolution to this situation within the next few weeks.

-Extract from the National Coordinators Report, HiveLights, Vol 16 No. 5

United Kingdom

UK – Changes to statutory procedures for controlling European foul brood disease are being introduced in 2004 – Chris Baker, Mike Brown & Ruth Waite, PhD

Longer residue breakdown period: The conventional method of applying OTC to infected colonies in a sugar syrup solution was first introduced in 1967. This practice has continued with few changes since then. Normally, a standstill period of eight weeks is placed on the treated apiary to allow any antibiotic residues in the honey to break down completely before it is harvested, either for personal consumption or onward sale. However, analytical methods used to detect residues of veterinary medicines in food have now greatly improved. Recent studies commissioned by Defra and completed at the end of March by the Central Science Laboratory's National Bee Unit (NBU) have established that OTC residues remain detectable in honey substantially beyond the eight-week standstill period.

While these residues are not considered harmful to human health, legislation does not permit any detectable residues to be present in honey offered for consumption. In light of the conclusions of these studies, Defra has agreed with the NBU that steps should be taken from this season to modify policy and operating procedures for treating EFB, in order to limit the scope for antibiotic residues in harvested honey to enter the food chain, while still maintaining effective disease control.

Option 1 - compulsory destruction
No change in the present procedure. Compulsory destruction of severely infected or weak colonies. Infected apiaries will be placed under standstill for six weeks, after which a follow-up inspection will take place to ensure there is no recurrence of the disease.

Option 2 - shook swarm only
For lightly infected colonies, there is the option of the application of the 'shook swarm' without antibiotic treatment. This technique although fully investigated has proved to be a promising method of control. The procedure will involve removing all the infected brood combs (a potential source of re-infection) from a colony and destroying them. The remaining adult bees will be shaken onto fresh wax foundation in new or sterilised brood boxes. Infected apiaries will be placed under standstill for six weeks after which a follow-up inspection will take place to ensure there is no recurrence of the disease.

Option 3 - conventional OTC treatment
Normal treatment for lightly infected colonies. If EFB does not recur within the six weeks following treatment, the standstill will be lifted, allowing colony movement. However, the withdrawal period for the honey produced on treated colonies will be extended to six months to allow residues to break down before consumption or sale.

- BeeCraft, June 2004

Fungicide Residues In Honey Bees, Pollen, Larvae, Brood Food And Nectar During Almond Pollination

R. Rivera, F.A. Eischen and H.R. Graham (USDA-ARS Beneficial Insects Unit, Weslaco, Texas)

About 1.2 million honey bee colonies were used during the 2002 almond pollination season in California. During almond bloom, the weather conditions are frequently moist and cool. Spraying one or more fungicides either singly or in combination actively controls fungal diseases such as almond blossom rot. Fungal diseases are controlled during early and peak bloom using iprodione (Rovral®), myclobutanil (Rally®) sprays. During moist conditions, Captan® is typically used prophylactically at late bloom and petal fall. Occasionally it is sprayed during peak bloom.

Honey bee colonies placed in the orchards for pollination are exposed to these fungicides either directly during their application or more commonly by foraging for nectar and pollen. Beekeepers have reported problems during pollination. Anecdotal evidence suggests fungicides as the cause for the problems involving both immature and adult bees.

Atkins (1977) estimated that the LD50 for Captan to be 5.30 ug for a 3-day old larvae and indicated that based on the level of mortality observed in his laboratory assay, that 30-40% of brood could be killed by the sprays applied to trees. Mussen (personal communication) reported that in a laboratory study, giving spiked brood food containing as little as a few ppb of Captan killed 100% of the larvae.

We determined the levels of three commonly used fungicides, Captan®, myclobutanil (Rally®), and iprodione (Rovral®) associated with adult bees' pollen, nectar, brood food and larvae in colonies pollinating almonds in California. Samples of these were collected at 24, 48 and 72 hours after spraying the orchard. The analyses for Captan®, Rally® and Rovral® were conducted using gas chromatography with an electron capture detector. Captan® was found in corbicular pollen at 97 ppm (range 0 to 707 ppm) stored pollen at 14.7 ppm average, (range-0.07 to 17 ppm), adult bees, 0.49 ppm (0 to 3 ppm), nectar, 0.13 ppm, (0 to 1 ppm), brood food, 0.18 ppm (0 to 5 ppm) and larvae, 0.13 ppm (0 to 2 ppm). Myclobutanil (Rally®) was found in corbicular pollen at 20 ppm (0 to 57 ppm), stored pollen, 14.24 ppm (0 to 34 ppm), bees at 0.01-ppm average (0 to 0.05 ppm), Larvae, 0.33 ppm (0-3ppm) and Brood food, none detected. Iprodione (Rovral®) was found in corbicular pollen pellets at 10.3 ppm (0.4 to 22 ppm), stored pollen, 2.98 ppm (0 to 15 ppm), bees at 0.49 ppm (0 to3.2 ppm), larvae, 1.5 ppm (0 to 6.3 ppm) and brood food, 3.98 ppm (0 to 25 ppm). Based on these results of field collected pollen, we are feeding pollen with Captan® to caged honey bee colonies to determine the effects on adult and immature honey bees.

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

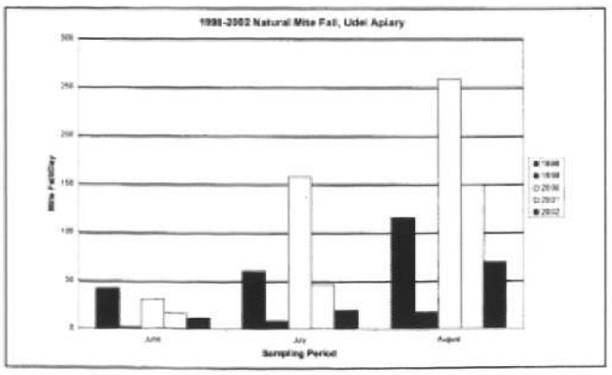
Monitoring Varroa Mite Populations

D.M. Caron and J. Hubner

Department of Entomology and Applied Ecology, University of Delaware, Newark, DE 19717

We compared natural mite fall from mid-June to mid-September over several seasons. There is considerable variation in colony and season in mite numbers demonstrating monitoring is essential in an IPM approach to control (see figure below). We examined several recommended sticky board materials and three commercially available sticky boards (from IPM Technologies, Portland, Oregon; Great Lakes IPM, Vesterburg, Michigan; and Olsen Industry, Medina, Ohio) for reliability in retaining dropped mites in order to obtain threshold estimates of total mite populations. Vaseline proved satisfactory but vegetable oil, cooking oil spray or contact paper were significantly less reliable; all three commercial products performed well. We also compared sampling whole colony with sticky boards with adult bee (ether roll and powdered sugar methods) and drone brood sampling. We found little predictability between the three sampling techniques. We feel comfortable with a threshold of 50 mites/day natural fall on sticky boards as a threshold for a mid-August miticide decision threshold but meaningful numbers for ether roll/powdered sugar sampling from adult bee bodies or drone brood sampling are not available.

Figure 1 – 1998-2002 Natural Mite Fall, Udel Apiary



- From the Proceedings of the 62nd Canadian Honey Council-Conseil Canadien du Miel (CHC-CCM) Annual Meeting, Poster 3; HiveLights, Volume 16, No. 5, Supplement 2003

Expanding Options for New Zealand Beekeepers Project – Update

This project was established three years ago with the overall goal of providing resources for beekeepers to strengthen their businesses by improving their business skills and if appropriate develop an expanded range of income streams so that they can survive and prosper into the future. A number of initiatives have been completed. The business skills development workshops have been especially popular, with over 28% of commercial beekeepers having attended these so far. Over the next three months it is planned to run two more series of workshops.

1. Business Skills Workshops for Commercial Beekeepers

Eric Livingston from the NZIM will again run these courses. The workshops will extend the areas covered in the earlier workshops and cover the following three relevant business skill areas that will strengthen attendees' potential for improving their business viability and efficiency from a management perspective:

1. **Business Planning,** providing a unique opportunity for beekeepers to update or develop their own business plan during the workshop
2. **Staff employment and performance** to further enhance beekeepers' ability to management staff more effectively and efficiently
3. **Beekeeping business analysis and financial monitoring** to provide a sound basis for attendees to improve the viability and profitability of their business using modern monitoring and analysis methods specially adapted to beekeepers' needs.

The one-day business skills workshops will run at the following locations. You can choose the location and date most convenient for you.

CITY	DATES	VENUES
Whangarei	Monday 16 August	Flames International Hotel
Hamilton	Wednesday 18 August	Novotel
Gisborne	Friday 20 August	Gisborne Hotel
Rotorua	Week of 30 August – 3 September	To be advised
Wanganui	Week of 30 August – 3 September	To be advised
Palmerston North	Week of 30 August – 3 September	To be advised
Nelson/Blenheim	Week of 13 – 17 September	To be advised
Christchurch	Week of 13 – 17 September	To be advised
Timaru	Week of 27 Sept – 1 October	To be advised
Balclutha	Week of 27 Sept – 1 October	To be advised

These workshops are are limited to 14 places per session and are open to managers, decision-makers and business partners. Please register now.

2. Computer Skills Training Workshops

The workshops will be provided by Auldhouse Computer Training. The aim of these workshops is for commercial beekeepers to extend their business management ability by improving their skills in the use of computers and associated computer programmes. Computers have a wide range of possible roles in enhancing the ability of beekeepers to operate commercial beekeeping businesses including:

- Financial management – To prepare and manage financial budgets. To participate in benchmarking and other monitoring exercises.
- Business management – To prepare documents such as letters, reports, compliance documentation.
- Communication – email is a very cheap and fast means of communication that has been widely adopted for both business and personal uses.
- Information – The Internet has many sites dedicated to beekeepers with an incredibly wide range of information available.
- Marketing – to use the Internet for marketing as well as to produce marketing documentation.

These workshops are designed to improve beekeepers' current level of computer skills to assist them in operating their businesses more effectively. The workshops will be streamed to ensure that the teaching level is tailored to the needs of those beekeepers attending.

The workshops are limited to 7-10 places per session and can be run in the following locations: Whangarei, Auckland, Hamilton, Rotorua, Gisborne, Palmerston North, Wellington, Blenheim, Nelson, Christchurch, Timaru, Dunedin and Invercargill over August, September and October.

REGISTRATION CONTACTS

Katrina Young, NZIM, PO Box 13 044, Christchurch,
Ph: 03 374 8523,
E-mail katrina.young@managementsouth.co.nz or
Jon Manhire - The Agribusiness Group,
Ph: 03 365 6806, E-mail jon@agribusinessgroup.com