BEE AWARE MONTH

The NEW ZEALAND BeeKeeper

SEPTEMBER 2016 | VOLUME 24 No. 8

Show me the Honey!
ApiNZ Management Team

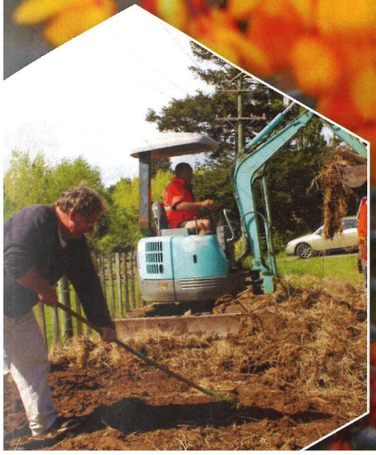
The Naati Beez challenge to Trees for Bees
Linda Newstrom-Lloyd

Bee Pathogen Programme summary
Ministry for Primary Industries

Working with Te Rūnanga o Ngāi Tahu
D. N. MacLeod

love our kiwi bees

Bee Aware Month

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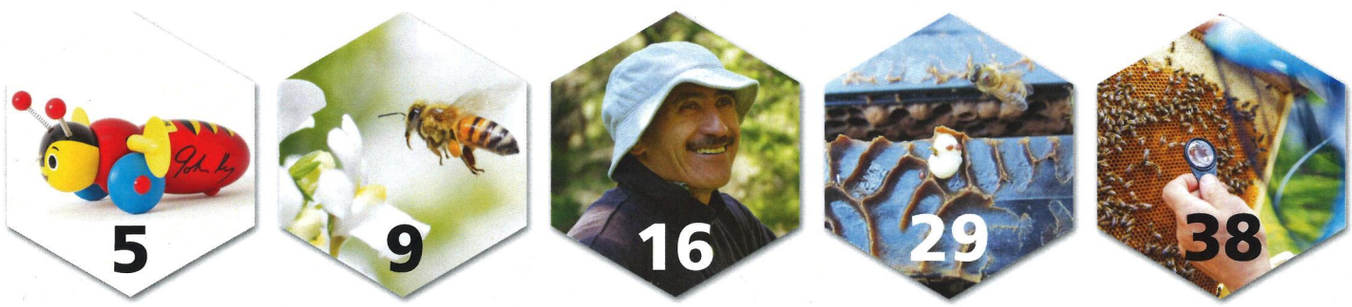

Front cover: Darwin's barberry (Berberis darwinii). *This plant is on the National Pest Plant Accord but like other pest plants, it is very good for spring build-up. Photo: Frank Lindsay.*

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ApiNZ website: www.apinz.org.nz

MANAGEMENT TEAM:
Chief Executive Officer
Daniel Paul
Email: ceo@apinz.org.nz
Secretary
Email: info@apinz.org.nz
Accounts and Subscriptions
Pauline Downie
Email: memberships@apinz.org.nz
PO Box 10792, Wellington 6143
Ph: 04 471 6254

APICULTURE NZ BOARD REPRESENTATIVES:
Dennis Crowley
Barry Foster
Stuart Fraser
Sean Goodwin
John Hartnell
Ricki Leahy
Peter Luxton
Russell Marsh
Paul Martin
Bruce Wills (Acting Chair)

EDITORIAL/PUBLICATION (excluding advertising):
Nancy Fithian
8A Awa Road, Miramar, Wellington 6022
Mobile: 027 238 2915
Fax: 04 380 7197
Email: editor@apinz.org.nz

ADVERTISING INQUIRIES:
Certa Solutions,
PO Box 2494, Dunedin 9044.
Phone: 0800 404 515
Email: beekeeper@certasolutions.nz

PUBLICATIONS COMMITTEE:
Frank Lindsay
26 Cunliffe Street, Johnsonville, Wellington 6037
Ph: 04 478 3367
Email: lindsays.apiaries@clear.net.nz

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All articles/letters/photos to be with the Editor via fax, email or post to Nancy Fithian (see details above).

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CONTACTS TO THE NEW ZEALAND BEEKEEPING INDUSTRY:
Rex Baynes, AFB PMP Manager
PO Box 44282, Lower Hutt 5040
Email: rbaynes@ihug.co.nz
Ph: 04 566 0773
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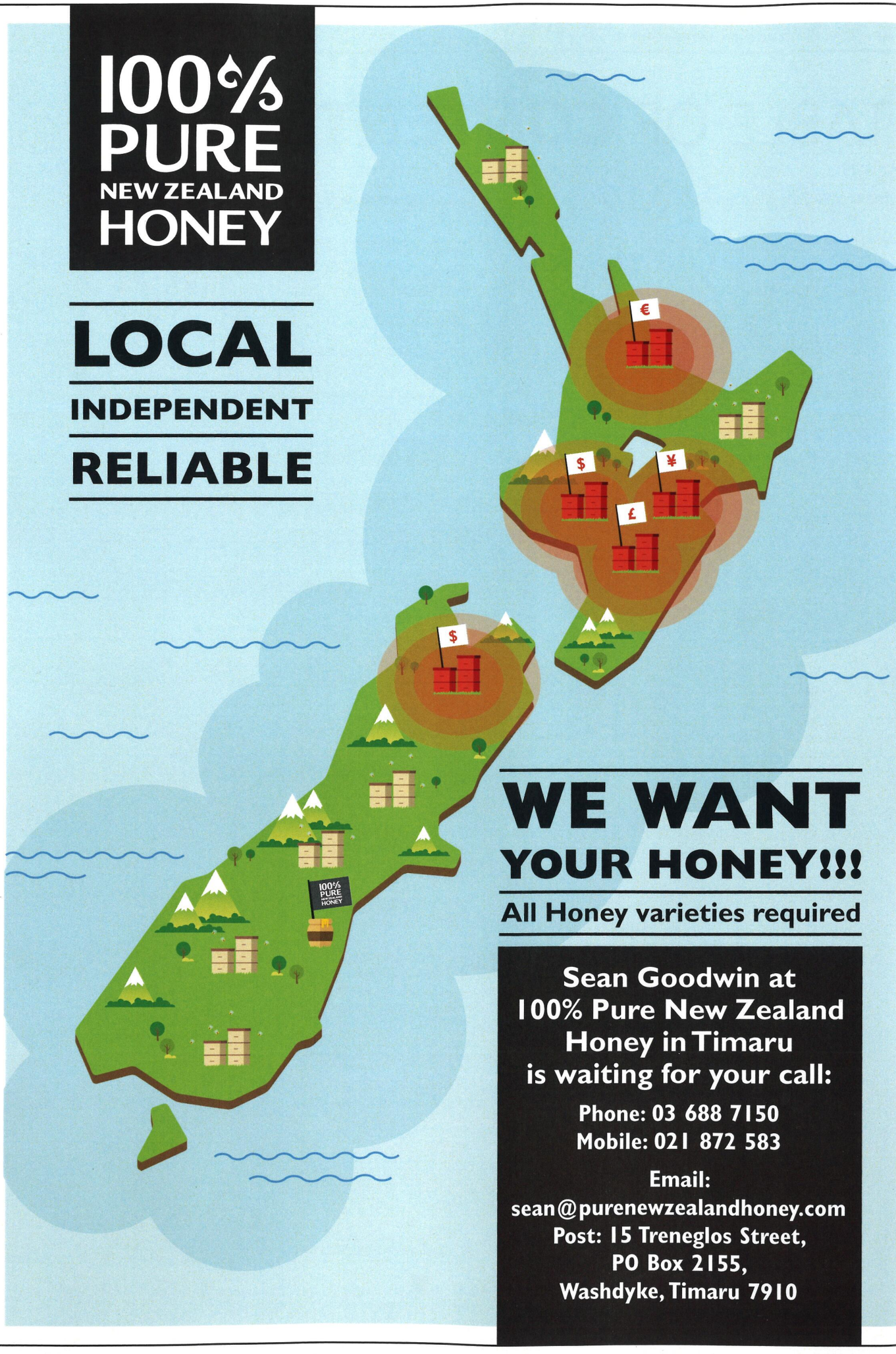
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THANK YOU FROM KIDSCAN

Julie Chapman, CEO and Founder, KidsCan Charitable Trust

What an amazing night we had at the Apiculture New Zealand dinner. We are thrilled with the amount raised for KidsCan (over $33,000). This has helped us to reduce our waiting list by 24 schools, which means a greater number of children in need will receive food, clothing and health items.

A real highlight for us was the painted beehive (which was just beautiful), and also the late auction entry of the Buzzy Bee signed by John Key, which sold for $3,150—the largest amount ever raised for one of these!

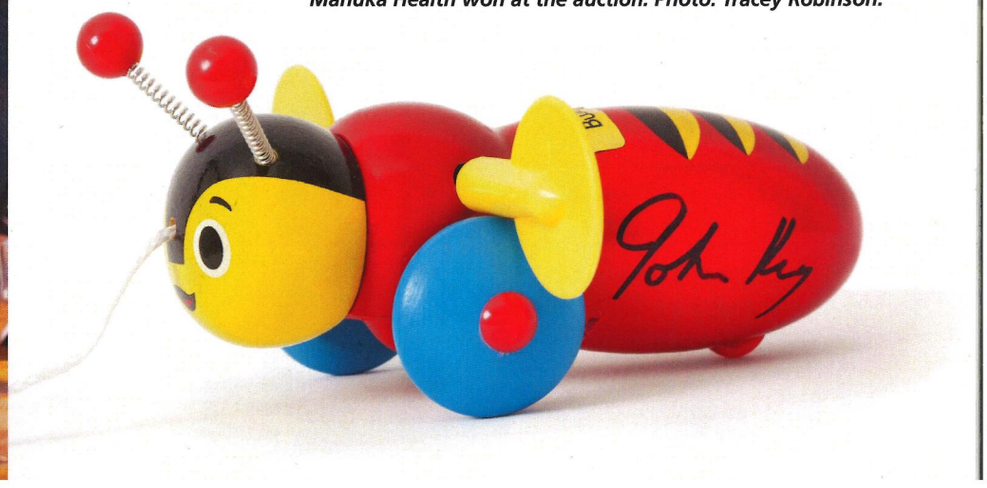
We wanted to thank everyone who worked so hard to make the event such a success. We really do appreciate the support, which will make a real difference to the health and wellbeing of thousands of children.

Wishing you all the very best for the rest of 2016.

Hitiri Turner of Manuka Health puts in the winning bid for Buzzy Bee at the KidsCan auction. Photo: Tracey Robinson.

Painted hive for KidsCan auction. Photo: Frank Lindsay.

Here is the Buzzy Bee, autographed by Prime Minister John Key, that Manuka Health won at the auction. Photo: Tracey Robinson.



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WHEN GOOD DRUMS GO BAD ...

Frank Lindsay, Life Member

Sera Grubb and Bobby Leef of Mana Kai Honey, Kaitaia, won the 'Oh Darn' and 'People's Choice' categories of the Ecrotek National Photographic Competition 2016 for their photo of an exploding honey drum. All commercial beekeepers have experienced this misfortune at some time in our careers and hopefully have learned from it.

Once a drum explodes, you pay greater attention to the moisture content of the honey. Outside frames in the honey super often have much higher moisture than inside frames, even when the honey is capped. In a wet season, measure the honey in both inside and outside frames in a number of supers and work out a rough average moisture content before you extract it. Sometimes you can reduce the moisture content by using dehumidifiers or just by removing outside frames from the boxes.

Those who store wets immediately after extraction rely on the bees cleaning them out before the next crop is stored in the frame. (This method has the advantage of reducing wax moth damage and saves two trips to the hives.) In a mild winter, some of the wet honey will start to ferment and if the bees don't clean this out before storing fresh nectar in the frames, the resulting honey has already begun to ferment. Because it's a chemical reaction, the fermentation process will continue even after it's been stored in the drum.

Mana Kai Honey won the 'Oh Darn' and 'People's Choice' categories of the Ecrotek National Photographic Competition for their photo of an exploding honey drum.

Left to right: Bobby Leef and Sera Grubb of Mana Kai Honey (centre) are presented with their 'People's Choice' award by Dave Wrathall (left) and Stuart Ecroyd (right) of Ecrotek Beekeeping Supplies. Photo: Tracey Robinson.

SEND US YOUR **HIGH-RESOLUTION PHOTOS!**

Readers will have noticed that we are publishing more photos. As the old saying goes, a photo is worth a thousand words.

We are having to use some stock photos, as we don't have a lot of high-resolution photos in New Zealand settings that suitable for publication in an A4 format.

Please take a camera out with you and take pictures of those beautiful places we put our hives. Spring, summer and autumn scenes are required, as well as unusual things that happen to or are in our hives. You never know, you could end up with a competition winner.

SETTLEMENT OF JUDICIAL REVIEW

JOINT STATEMENT FROM APINZ AND RUSSELL BERRY

The Board of Apiculture New Zealand Incorporated and Mr Russell Berry are pleased to advise that they have agreed to settle the High Court proceedings issued by Mr Berry challenging the Special Vote process and restructuring of the National Beekeepers Association of New Zealand Incorporated into ApiNZ.

The terms of settlement require Mr Berry to withdraw the proceedings and both parties have agreed to bear their own legal costs to date. Both parties recognise that the continuation of the legal proceedings is not in the best interest of the apiculture industry.

Both ApiNZ and Mr Berry agree that collaboration and co-operation is essential and in the best interest of the industry in order to make progress on key issues that affect industry stakeholders.

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BEE AWARE MONTH 2016

SHOW ME THE HONEY!

Apiculture New Zealand Management Team

September is finally here and that means a month fully dedicated to celebrating bees! Not that we don't do this all year round but we have an excuse to do so even more than usual this month.

Apiculture New Zealand is very excited to continue to run the highly successful and ever-growing Bee Aware Month (BAM).

There's a buzz in the air

New Zealanders are celebrating BAM with a number of fun activities.

Keep an eye on the ApiNZ website http://apinz.org.nz/bee-aware-month/and the BAM Facebook page (https://www.facebook.com/Bee-Aware-Month-155550234605563/) for lists of events and activities, competitions, giveaways and information all about honey.

Be good to bees because ...

BAM is devoted to making New Zealanders think about the honey bee and its critically important role in our biodiversity and economy.

New Zealand's bee population contributes about $5 billion to our economy annually and they support about one third of everything we eat. New Zealand's mānuka honey is some of the highest valued honey in the world.

Shifting the focus to honey: Show me the Honey

Apiculture New Zealand CEO Daniel Paul says the numbers of beekeepers and hives, particularly in the hobbyist/non-commercial sector, have been increasing over the past couple of years.

The focus of this year's campaign will be honey—it's on our toast, in the supermarkets, in our beauty products and even has medicinal properties. Every Kiwi has a use for honey (even if they don't realise it).

Through the theme *Show me the Honey*, we plan to demonstrate the increasing importance of honey—and therefore bees—to New Zealanders, Mr Paul says.

continued...

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"It will be an opportunity to further position New Zealand honey as a value-added product that sits alongside Kiwifruit and our wine industry, among others, as lucrative export earners on the world stage."

Mr Paul says this theme allows for several topics to be explored. For example, encouraging honey and honey product sales, highlighting the health benefits and multiple uses for honey, educating the public about the different kinds of honey produced in New Zealand, and their different tastes, etc., and showcasing the significant economic export value and potential within the industry.

Enter the world of the honey bee with Comvita

Comvita New Zealand is celebrating Bee Aware Month with a variety of community engagement programmes planned. It is proud to support Apiculture NZ and Bee Aware Month in celebrating all things bees and honey.

Experience Comvita, at Comvita's head office in Paengaroa is running its 'enter the world of the honey bee' guided tour in support of Bee Aware Month. Entry is just $5 per person and all proceeds will be donated to Bee Aware Month. To book, call 0800 BEES BEES.

Experience Comvita Education is launching its new Bee Aware and Beekeeping educational experience in September. The first class to book the new educational experience will visit for free!

Comvita Kiwi Bee apiaries are engaging with schools in their local apiary and landowner areas with an interactive beekeeping and bee aware experience. This session includes a 'Bee Healthy' snack for children to encourage healthy eating and the important role bees play in honey production and pollination.

For more information about Comvita's Bee Aware Month activities, contact Kathy. broadhead@comvita.com

continued...

Analytica Laboratories providing information about honey

For any new beekeepers out there, there can be a lot to get your head around when you first start. Throughout the month Steve Howse, the Executive Director of Analytica Laboratories, will be providing helpful information suitable for newcomers and honey-producing veterans, all fitting in with our Show me the Honey! theme.

The first item appears below and others will be published online throughout the month.

Making sure honey is safe to eat—tutin testing

By testing honey harvested after Christmas for tutin, you are making sure that your honey is safe to eat.

Tutin is a naturally occurring plant toxin, which comes from the native tutu plant *(Coriaria arborea)* that is found through the North Island and in the upper part of the South Island. Tutin is very toxic, and in years gone by has been responsible for sickness (or even death) of a number of people. Beekeepers in areas like the Coromandel and East Cape have long known that they should collect their honey boxes before Christmas to avoid the risk of producing toxic honey. After a case of tutin-related poisoning in the Coromandel area, the Ministry for Primary Industries put some regulations in place about testing honey for tutin, and these have recently been updated.

It's a common mistake to think that the problem comes from bees collecting pollen or nectar from the plant—it actually results from a sap-sucking insect called the passion vine hopper *(Scolypopa australis)* which tends to be active during the summer and autumn. The vine hoppers suck sap from the stem of the plant, and excrete a sugary honeydew (which contains the tutin toxin) as they do. Bees are attracted to the honeydew as a source of sugar, and take it back to the hive. The honey made from this honeydew contains tutin.

You can send your honey sample to an accredited laboratory, and ask them to test for tutin. The test requires use of half-million-dollar pieces of equipment, so it is not particularly cheap, but if you know other beekeepers there is an option to combine up to 10 samples in a composite test as a way of reducing the up-front cost of testing. Just check on your preferred lab's website to get more information.

There are some links at the end of this article to places you can go for more information. Thanks to clear guidelines from MPI, and modern testing techniques, there is no reason why anyone's safety should be at risk from honey that contains tutin. It's well worth investing in.

Further information about tutin

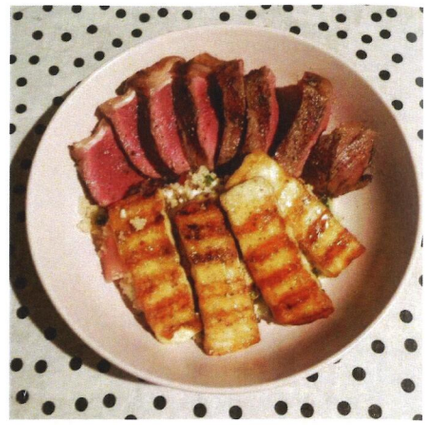
Notes from the Bee Products Standards Council: http://www.bpsc.org.nz/node/159

MPI guidelines: http://www.foodsafety.govt.nz/industry/sectors/honey-bee/tutin/index.htm

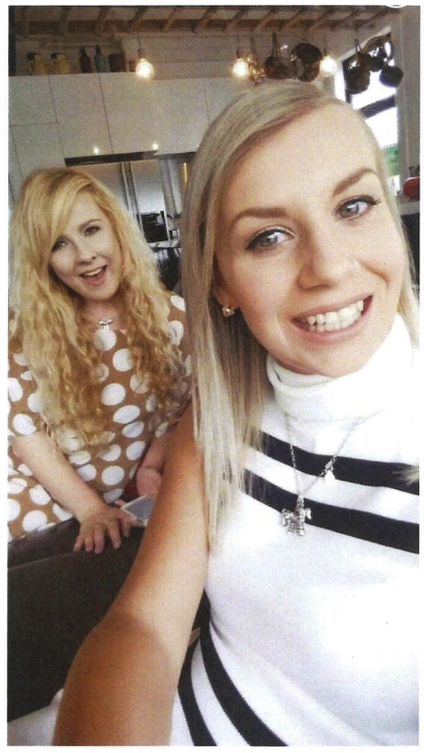
Testing options: http://www.analytica.co.nz/Tests/Honey-Testing/Tutin

- Steve Howse, Executive Director, Analytica Laboratories

Passion vine hoppers* (Scolypopa australis) *on tutu. Photo: Frank Lindsay.



Left to right: Stella and Jess will be dishing up honey-related recipes during BAM like the watermelon and cucumber couscous with honey mustard dressing with honey glazed halloumi and a rare Chicago steak (pictured above). Photo supplied by Stella Robertson-Hale.



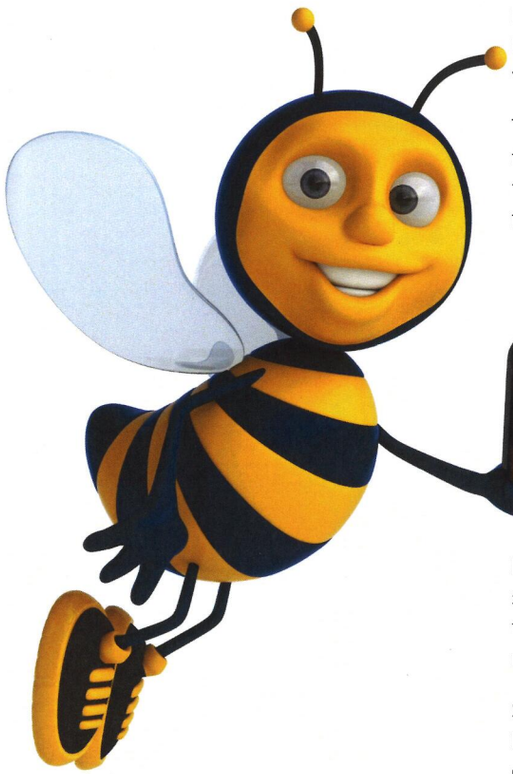
Yummy honey in my tummy

We are so thrilled to have the winners of My Kitchen Rules New Zealand, Stella Robertson-Hale and Jess Rolinson-Purchase, supporting Bee Aware Month this year.

Stella and Jess are amazing cooks—anyone with a sweet tooth will love their amazing dessert creations. And Jess is a beekeeper with her own domestic hive.

Each week the girls will be posting a honey-themed recipe on the BAM Facebook page which you can all try at home.

(https://www.facebook.com/Bee-Aware-Month-155550234605563/)



Raising a glass to honey

Honey mead is mankind's oldest known alcoholic beverage and has many strong historic links to a variety of cultures over the centuries.

The product honey mead is a ferment made from a wort comprised of honey and water that is fermented with a yeast that converts all fermentable sugars into alcohol.

From the present day, mead can be traced back to strong cultural ties through countries from Eastern Europe, the Norse Vikings, medieval times like that of Robin Hood, right back to Persia BC to man's first recorded encounter with alcohol, when a hive of honey had naturally fermented its contents with the uncontrolled addition of a wild yeast introduced through nature.

Nowadays, ferments are begun by adding a selected winemaking strain of yeast and added to the wort where the ferment is controlled and monitored.

Special thanks to Dennis Greeks from Alchemy Beverages for suppling this information. Head on over to the ApiNZ BAM website page http://apinz.org.nz/bee-aware-month/ to read more about this delicious honey beverage and a fantastic mulled mead recipe certain to warm your cockles on a cold winter's day.

Alchemy Beverages' 1st Night manuka honey wine. Photo supplied courtesy of Alchemy Beverages.

Nelson Repertory Society members Alli Campbell (seated), Allison Cormack (standing). Photo supplied by the Nelson Repertory Society.

Spotlight on bees in new panto

The Nelson Repertory Society have found a novel way to put bees centre stage.

Nelson women Alli Campbell and Allison Cormack have written *Buzz*, a new pantomime about a hive, the bees that live there and Bizzy Lizzy, the evil wasp queen.

The two women were brainstorming ideas for a potential pantomime to be the traditional end of year Nelson Repertory Panto and Allison had an idea about bees and solving the puzzle of their dilemma.

While Allison came up with the idea, writing the script was Alli's job. "Many lines were inspired by comments my mother made about how working together, we can achieve anything," Alli says.

The result is BEEautiful: a traditional, modern pantomime, full of fun, interaction and ... education.

"Our vision is to convey the importance of bees to humans. Without them we'd struggle to survive", says Allison.

continued...

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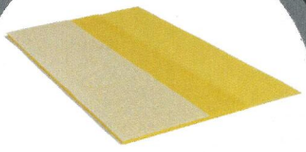

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Councils give it a good grow

Blooming wonderful to see local councils across New Zealand wanting to get on the Bee-Friendly bandwagon again, and it's great to see some councils taking it even further than just one patch.

Dannevirke Community Board is one of those continuing to grow its Bee-Friendly Garden, eventually having it span one kilometre along the roadside.

Tim Delaney and Ernie Christison spent their Labour Day Monday earlier in the year, not at the Woodville Races, but racing along the roadside in Riverdale Road to prepare the ground for planting, all to help the bees.

"Council asked if the community board would carry out the work and Ernie and I were happy to help," Mr Delaney said.

"We're clearing 50 square metres of the roadside to allow local scouts and cubs to come along and plant seeds to encourage bees back to the area. Locals here, Trish Sweetman and Ena Williams, have kept bees and to plant this up will provide a wonderful place for the bees to come too."

Bees will forage on flowers for nectar and pollen which provide carbohydrates and protein for growth and energy.

Well-nourished bees are more capable of fending off disease and parasites. Wildflowers are naturally organic. They are not susceptible to bugs or diseases, can help control garden pests and they attract bees and beneficial insects into the garden.

The mix that Dannevirke scouts and cubs will plant contains annuals which will provide food for bees through the season.

"I've been told if bees disappear we've only got four years left on the planet," Mr Delaney said.

Special thanks to Christine McKay, *Dannevirke News* chief reporter, for supplying wording and photographs.

[Editor's note: keep an eye out for more Bee Aware Month coverage in the October journal.]

Dannevirke Community Board members Tim Delaney, left and Ernie Christison working to expand the board's Bee-Friendly Garden. Photo: Christine McKay.

TREES FOR BEES CORNER

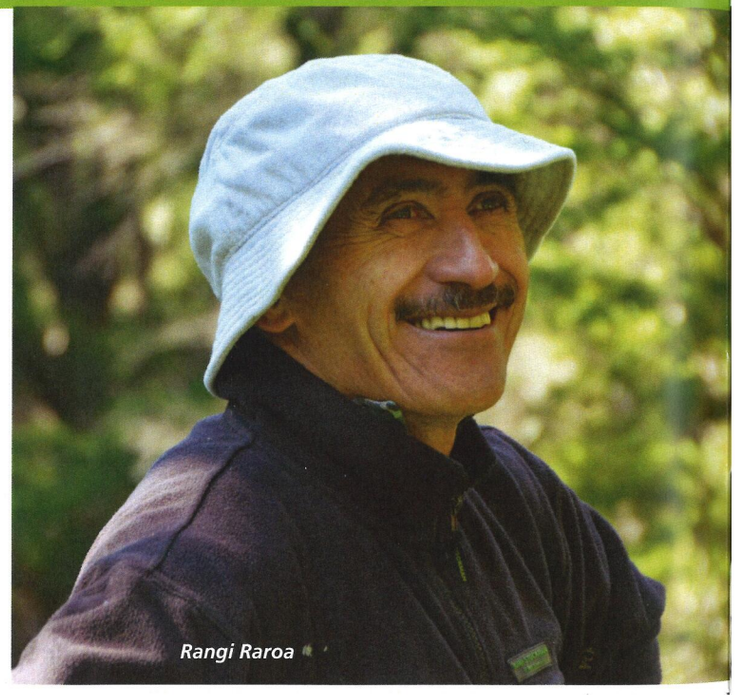
THE NAATI BEEZ CHALLENGE TO TREES FOR BEES

Linda Newstrom-Lloyd (Trees for Bees)

The Naati Beez vision for long-term beekeeping on their East Cape land has been a big challenge to the Trees for Bees programme. Naati Beez holds strong values for their land, including long-term sustainability for rural employment, environmental protection and cultural sensitivity.

Naati Beez is a local group of Ngāti Porou beekeepers in Rangitukia directed by Willie Kaa and Rangi Raroa, who each have over 10 years' beekeeping experience. Last year's pilot project funded by MPI Sustainable Farming Fund (SFF) was a great success, but more research is needed to meet the Naati Beez challenge. The main goal is to create long-term residential apiary sites to support honey harvesting by using locally sourced native plants. The first results of the project were reported in the August edition of *The New Zealand BeeKeeper* (Newstrom-Lloyd, et al., 2016) and information was distributed at the Naati-Beez-Trees for Bees exhibit at the National Māori Mānuka Conference in Rotorua, 4–5 August 2016.

Over the next three years, Trees for Bees will continue this SFF project with the Naati Beez team: Willie Kaa, Rangi Raroa, Maia Taare and Rapata Kaa. This new research will broaden the range of native plants and deepen our understanding of environmental and cultural values. For Naati Beez' beekeeping to be successful and sustainable, permanent residential apiaries are preferable because local employment is a priority and environmental and cultural protection a necessity.

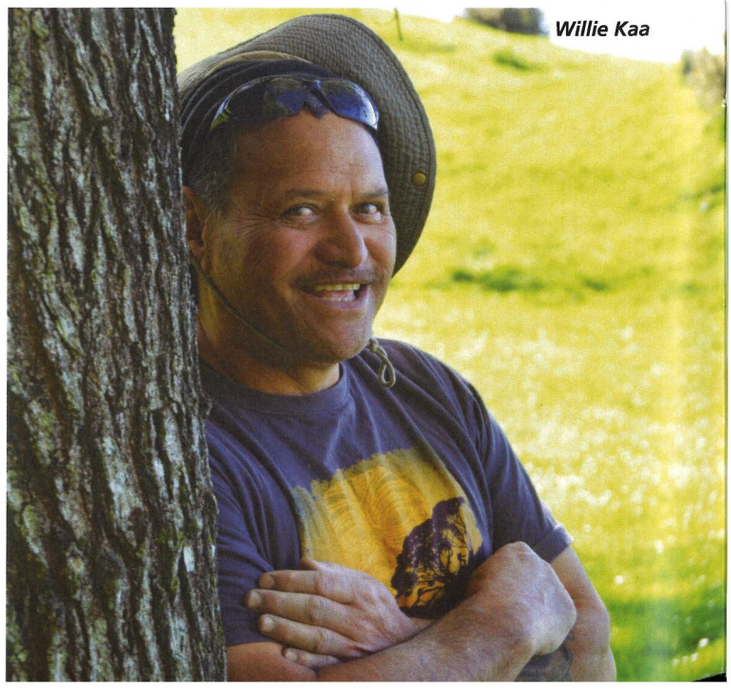


Rangi Raroa

The main goal is to create long-term residential apiary sites to support honey harvesting by using locally sourced native plants.

One of the obstacles to residential apiaries is a dearth of pollen and nectar sources for the 44 weeks of the year when mānuka is not flowering. We strive to install the best native plants close to apiaries to build up pollen and nectar sources in spring and autumn. This results in more productive apiaries with reduced labour costs for feeding and transporting bees and less external inputs (protein supplements and sugar). This makes the beekeeping occupation more attractive as a rural employment opportunity.

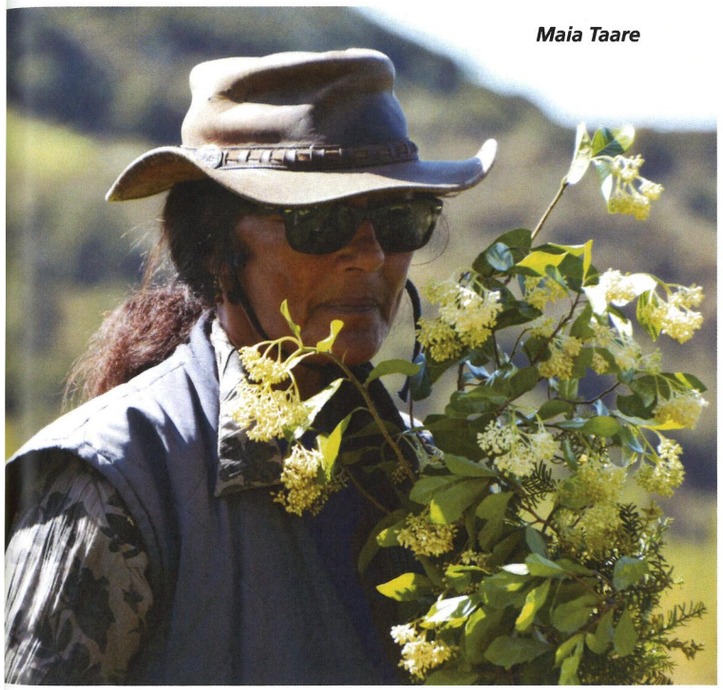
Maximising productivity is one thing, but carrying capacity is another. In these days of overstocking hives in mānuka areas and competing for wintering sites, how can the Naati Beez environmental sensitivities be supported? At what point are honey bees taking too much pollen and nectar, leaving nothing for the native bees and other pollinators?



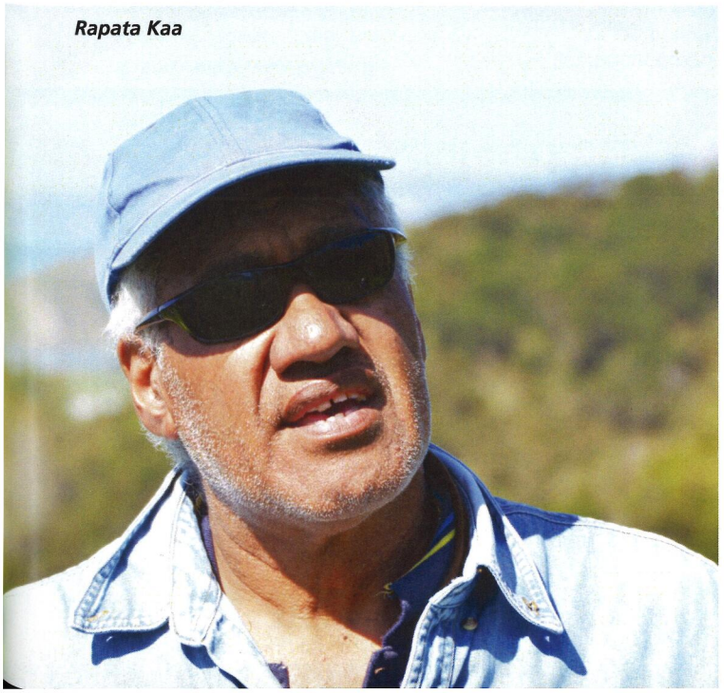
Willie Kaa

At what point are honey bees taking too much pollen and nectar, leaving nothing for the native bees and other pollinators?

Native bees and honey bees are able to share in both native and exotic flowers but excessive populations of honey bees will drive native bees to decline. This year, Naati Beez will embark on research to determine how to best monitor native bee populations to make sure they survive and continue to thrive. Increasing mānuka production by planting more locally sourced mānuka along with spring and autumn support plants helps protect native bee populations.



Maia Taare



Rapata Kaa

A holistic approach

The Naati Beez challenge is a holistic approach embracing all aspects of beekeeping on their land. They recognise the importance of meaningful work as the most effective means of improving the wellbeing of *tangata whenua, whanau, hapū* and *iwi*. The most critical guiding principles adopted by Naati Beez is to provide *mahi* (employment) and to protect the natural environment. But there is another important aspect too–*waahi tapu*–the respect for sacred areas of land and the need for not placing hives on these areas. This cultural sensitivity in beekeeping operations is something that all Māori will understand.

The opportunity is great for a land-based, Māori-owned extractive industry that protects highly valued native flora and fauna while upholding significant cultural values. The beekeeping livelihood fits this ideal for Naati Beez.

Reference

Newstrom-Lloyd, L., McPherson, A., Raine, I., & Li, X. (2016, August). Naati Beez planting Trees for Bees for East Coast mānuka support. *The New Zealand BeeKeeper, (24)*7, 26–27.

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The New Zealand native seaweed species (Ecklonia radiata) is batch-brewed with specially selected essential herbs for up to 90 days to make our Bee Nutrition tonic. The natural brewing process eliminates the use of processing with heat, chemicals, freezing or dehydration that might 'denature' the sensitive nutrient balance, allowing the micro-nutrients to be released in an active form to enhance bee survival over the crucial winter period. AgriSea's Bee Nutrition holds a wide variety of trace elements in a naturally chelated form that ensures easy and ready uptake by the Bee. The availability of amino acids also important for bees over winter are also readily available.

FEATURE BENEFITS

- **Convenient and cost effective**
- **Organic source of minerals, vitamins & essential Amino acids for Bee health in a naturally balanced and available form**
- **Improved Hive Health**
- **Improved Population**
- **Improved Production**
- **Essential Trace elements**

RECOMMENDED DOSE RATES

20mls per litre / 20L per 1000L added to syrup

PRODUCT ANALYSIS

Minerals and Trace Elements (mg/L - ppm)

Nitrogen 50.35	Phosphorus 10.07	Potassium 2134.84
Sulphur 271.89	Calcium 90.63	Magnesium 211.47
Sodium 1701.83	Iron 0.703	Copper 0.064
Manganese 0.041	Iodine 454.50	Molybdenum 0.01
Selenium 0.01	Zinc 0.360	Boron 6.060
Cobalt 0.010		

Vitamins Vitamin A, Vitamin C, Vitamin E, Vitamins B1, B2, B3, B5, B12, Fucoxanthin, Choline, Folic Acid

Amino Acid (mg/100gm)

Aspartic Acid 7.17	Threonine 1.72	Serine 1.91
Glutamic Acid 19.19	Prolin 0.90	Glycine 2.62
Alanine 8.64	Valine 1.90	Isoleucine 0.87
Leucine 1.71	Tyrosine 1.41	Phenylalanine 1.31
Lysine 1.85	Histidine 0.68	
Arginine 1.50	Cystine 2.05	
Methionine 0.47	Tryptophan 0.21	

WE ADD AGRISEA TO EVERYTHING

"I have been trialling AgriSea for the past year and I am very impressed with the low losses I have achieved this year (1%), plus it just makes sense that the nutrients, amino acids and vitamins in AgriSea must be assisting the health of the hives when compared to using straight sugar syrup. When used in high concentrations 30ml per litre of syrup I have seen brood rearing mid winter and believe that the nutrients in AgriSea go a long way in assisting brood development."

Stu Ferguson

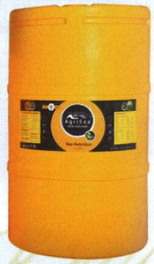
SEPTEMBER BEE NUTRITION SPECIAL

(VALID FROM 1 - 30 SEPTEMBER)

Purchase 100L or more and receive a FREE AgriSea Swanndri Shirt and cammo hat

100L - $50 OFF
& Free Freight
NOW $1086

200L - $100 OFF
& Free Freight
NOW $1970
All prices include gst



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AgriSea NEW ZEALAND

Ceracell BEES FOR LIFE™

MPI/PEST AND DISEASE CONTROL

SUMMARY OF THE BEE PATHOGEN AND READINESS PROGRAMME AT MPI

Ministry for Primary Industries

The Bee Pathogen Programme is a three-year research project running through to March 2019, being supported and funded by MPI's Operational Research Programme to develop capability in honey bee diagnostics. This work will make it possible for MPI to respond more effectively to biosecurity and wider threats for apiculture in New Zealand.

World-class honey bee diagnostics are being developed by MPI's biosecurity laboratories. The development of diagnostic techniques is being led by Dr Richard Hall, a virologist at MPI's Animal Health Laboratory and Qing Fan, an expert in honey bee mites at MPI's Plant and Environment Laboratory. This work is vital to ensuring long-term sustainability of our apiculture sector and for New Zealand's increasing international trade in bee products.

The Bee Pathogen Programme has the following additional work-streams:

1. Adaptation of international protocols to work specifically in New Zealand for apiary sampling, counting varroa mite and fungal spore loads per bee, and measuring viral loads as well as other pathogens.

2. Developing new surveillance questionnaire and data collection templates for clinical hive inspections and beekeeper data on apiary productivity, colony losses and apiary management practices.

3. Contracting and training and with qualified apiary inspectors throughout New Zealand to provide clinical inspections and collect data from apiary managers.

4. Upskilling MPI staff on detection of bee pathogens using newly developed techniques and developing measures of apiary health related to bee biosecurity.

5. Connections between the national bee pathogen results and clinical signs of bee diseases in the hives will be measured. Both of these will be matched against total pathogen loads and information on hive losses, hive management and hive productivity.

AP2 Data Collectors and MPI Scientists working on the Bee Pathogen Programme. From top left to right: John Maynard (AP2), Dan Van Greevenbroek (AP2), Allan Richards (AP2), Norbert Klose (AP2), Dan Lambert (AP2), Daan Vink (MPI), Stephen Black (AP2), Grant Hayes (AP2), Tony Roper (not in Pathogen Programme), Kim Kneijber (AP2), Richard Hall (MPI) and Wlodek Stanislawek (MPI). Front Row left to right: Peter Ferris (Inspector Coordinator), Trevor Bryant (AP2), Barry Foster (Inspector Coordinator), Lou Gallagher (MPI), Christie Webber (MPI) and Qing Fan (MPI). Photo: MPI.

The first sampling round begins in September 2016. MPI will sample the same 60 apiaries throughout New Zealand every spring and autumn until the end of 2018. Trained inspectors will be working with individual beekeepers to conduct clinical inspections of beehives, to collect bee samples and to record specific information for each apiary two times a year. Participating apiaries will receive written reports of their full pathogen load results against the national sample, following each inspection round.

Endemic biosecurity threats to New Zealand bees include varroa mites and American foulbrood. We are also concerned about the possible arrival of European foulbrood, small hive beetle and Israeli Acute Paralysis Virus (IAPV) from overseas, as well as other emerging pests and diseases of concern.

The outreach systems, laboratory and inspector capabilities being developed for the Bee Pathogen Programme will make it possible for MPI to respond to both endemic and exotic biosecurity threats more efficiently.

[Editor's note: please go to page 21 for information about the NZ COLOSS survey being conducted by Landcare Research on behalf of MPI. The NZ COLOSS survey is separate to the MPI's Bee Pathogen Programme.]

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New & Improved Medium 9.5 Litre Top Feeder

As low as **$7.50 ea** for 100+ (excl. gst)

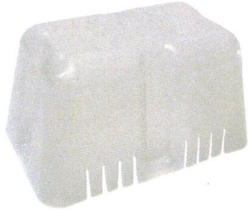
The most popular size, extra heavy duty and now with a new patented corner access system so no syrup is left anywhere. The bees get it all!

Corner Caps for the Medium Top Feeder

$2.50 for pack of 4(excl. gst)

The translucent corner caps protect the bees while feeding on sugar syrup. A nice accessory for the new blue top feeder. Easy to remove for feeding solid raw sugar.

Chimney Cap for the Medium Top Feeder

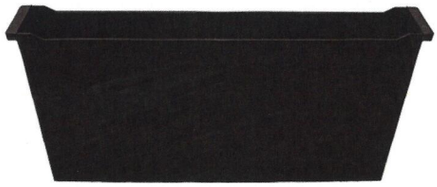


$2.50 ea (excl. gst)

Single Frame Division Feeder 2.5 Litres

As low as **$6.90 ea** for 100+ (excl. gst)

2 Frame Division Feeder 4.5 Litres



As low as **$7.40 ea** for 100+ (excl. gst)

3 Frame Division Feeder 2.5 Litres

As low as **$7.60 ea** for 100+ (excl. gst)

Please Sir...I'd like some more!

If a hive is going to starve, it is most likely going to starve in the spring. Brood is expanding and bee numbers are growing, but forage is often lacking for both nectar and pollen.

Feeding in the spring is one of the best investments you can make. Sugar in all its forms is cheap, averaging around $1/kg or less. With honey fetching $12/kg and more, any help you can give to build up the strength of your hives will give returns of several hundred percent. So do it now! Feed your bees.

Ceracell is the largest sugar wholesaler/agent in the country. We can quote delivered prices for bulk solid and liquid sugars and invert sugar to anywhere in the country. We also stock FeedBee pollen supplement, the proven protein and mineral boost, formulated by entomologist nutritionists.

PEST AND DISEASE CONTROL

NEW ZEALAND **COLONY LOSS AND SURVIVAL SURVEY UNDER WAY NOW**

Ministry for Primary Industries

The second New Zealand Colony Loss Survey and Survival (NZ COLOSS) is under way now. This survey looks at 2016 winter hive losses and the potential cause of losses and will provide valuable information for the industry and for beekeepers themselves. The anonymous survey summaries will enable beekeepers to compare their experience with national averages.

Beekeepers have been invited to join the New Zealand Colony Loss and Survival survey by e-mail. **Check your in-box for an e-mail with a link to the online survey. If you do not have the e-mail, visit www.landcareresearch.co.nz/bee-health to take the survey.**

For most beekeepers, the online survey is very straightforward and takes 15–20 minutes to complete, a little longer for bigger operations. The survey is confidential and your information will not be identifiable.

The first New Zealand Colony Loss and Survival survey in 2015 had excellent participation from beekeepers. We hope that even more beekeepers will participate this year using the simplified online questionnaire.

The New Zealand Colony Loss and Survival survey is conducted by Landcare Research on behalf of the apiculture industry and MPI. It is not the same as your annual disease return (ADR) or other surveys currently being conducted by MPI.

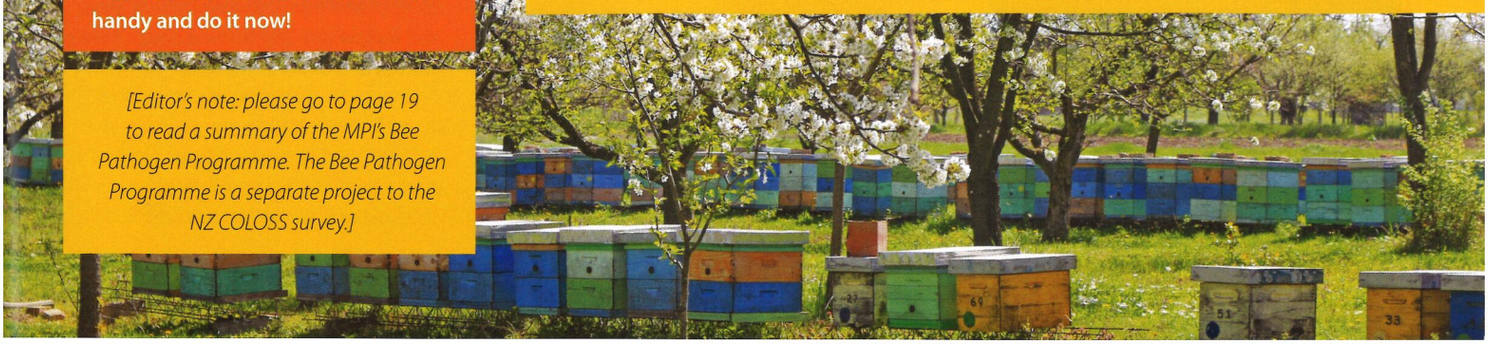
An added incentive to complete the survey is a prize draw for one of ten 'smoko break' vouchers to the value of $100.00.

2015 Survey

The national average rate of hive losses in winter 2015 was estimated to be 11% and most frequently attributed to queen problems, colony death (especially starvation), and wasps. Information from the 2015 survey has already proved valuable for the beekeeping industry, for MPI, and for many beekeepers. Details from the 2015 survey are available on the Landcare Research website www.landcareresearch.co.nz/bee-health

If you have not already done the survey, get your spring inspection notebooks and June 2016 ADR return handy and do it now!

[Editor's note: please go to page 19 to read a summary of the MPI's Bee Pathogen Programme. The Bee Pathogen Programme is a separate project to the NZ COLOSS survey.]

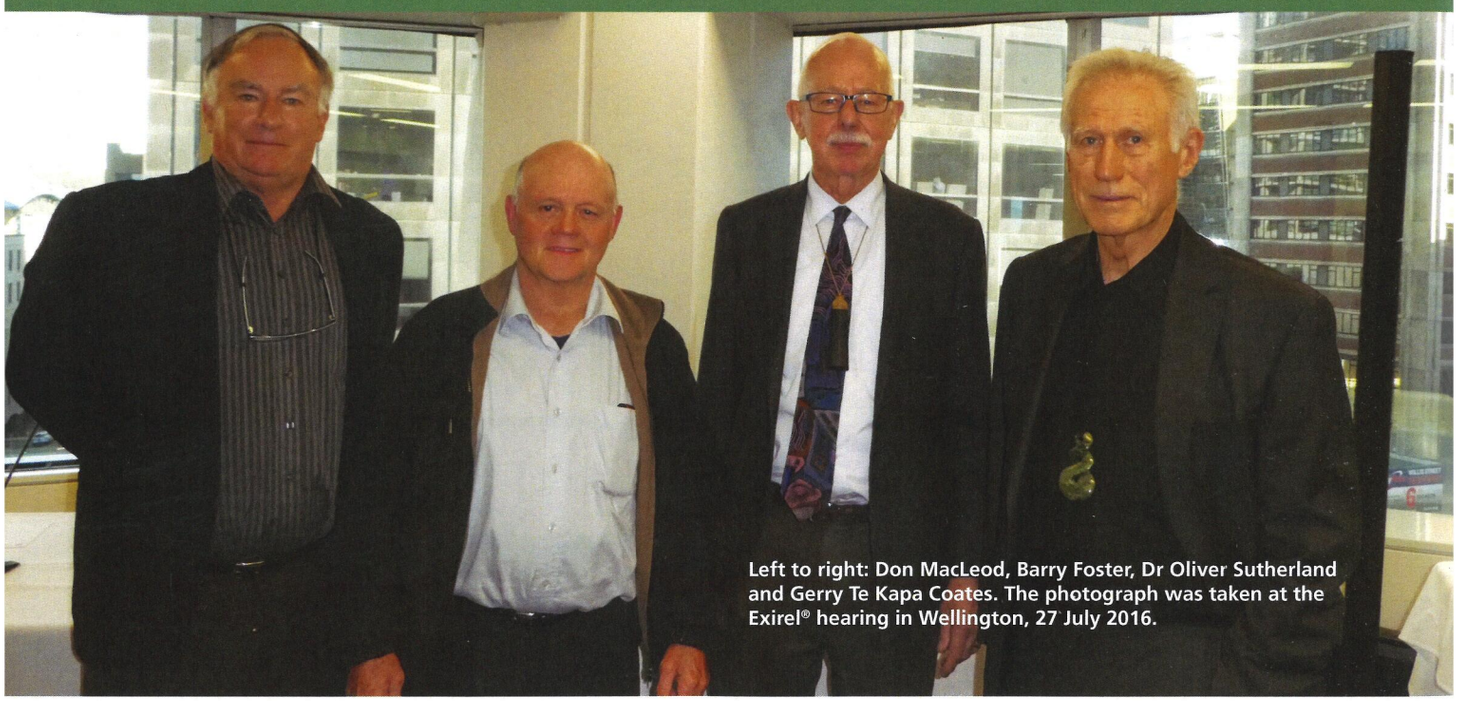


FOCUS GROUP REPORTS: TECHNICAL

WORKING WITH TE RŪNANGA O NGĀI TAHU

D. N. MacLeod, Technical Focus Group member

The ApiNZ Technical Focus Group (ApiNZ TFG), as a result of representing ApiNZ at recent EPA hearings, has begun direct communication with the representatives of the Te Rūnanga o Ngāi Tahu Hazardous Substances and New Organisms (HSNO) Committee. All beekeepers will be interested in a common thread in our activities in protecting our environment.



Left to right: Don MacLeod, Barry Foster, Dr Oliver Sutherland and Gerry Te Kapa Coates. The photograph was taken at the Exirel® hearing in Wellington, 27 July 2016.

The primary function of the Technical Focus Group is to help protect bees and ensure that they are safe whenever hazardous substances are used. Te Rūnanga o Ngāi Tahu has a broader mandate with the role of kaitiakitanga (stewardship), which is to work actively to protect the people, environment, knowledge, culture, language and resources important to Ngāi Tahu for future generations.[1] The rūnanga has a much broader role with respect to managing the environment than the ApiNZ TFG has. But that may change, as Te Rūnanga o Ngāi Tahu has recently purchased 50% of the beekeeping company Watson and Sons and Manuka Med®.[2]

All beekeepers will be interested in a common thread in our activities in protecting our environment.

Te Rūnanga o Ngāi Tahu and the ApiNZ TFG have very similar interests with respect to the management of hazardous substances and the Environmental Protection Authority (EPA) process, as outlined below.

1. At the hearing for Grizly Max insecticide (APP202093), Te Rūnanga o Ngāi Tahu strongly criticised the EPA for not releasing draft pesticide labels. The ApiNZ TFG strongly supported this and the next day the EPA released the labels for the Exirel® aerial application, APP202774. Both the ApiNZ TFG and Te Rūnanga o Ngāi Tahu made submissions on this application.
2. ApiNZ is concerned about overspraying on flowering plants adjacent to a crop, where bees may forage. Te Rūnanga o Ngāi Tahu is concerned about overspraying on māhinga kai which may be gathered from the surrounding areas and waterways. This was the basis of their written and oral submissions.[3]

[1] From Te Rūnanga o Ngāi Tahu presentation to EPA hearing APP202774, 27/7/16.

[2] http://ngaitahu.iwi.nz/our_stories/a-sweet-deal/

[3] The Environmental Protection Authority defines māhinga kai as "food gathering practices and traditional Māori foods including indigenous shellfish, inland fish (eels, freshwater crayfish) and plants (pūhā, kumara etc)."
Source: http://www.epa.govt.nz/Publications/Maori%20user%20guide.pdf (Page 19, Appendix 2.)

Brassica crop being fed to cows near Matawai Township, near Motu River, Gisborne, July 2016. Photos: Barry Foster.

Te Rūnanga o Ngāi Tahu is represented at hearings by Dr Oliver Sutherland (formerly with the Department of Scientific and Industrial Research and Manaaki Whenua Landcare Research) and Gerry Te Kapa Coates, who has a background as a consulting engineer and is now a multi-specialist in sustainability and technology. Gerry is also a poet and writer. They are backed up by the Te Rūnanga o Ngāi Tahu HSNO Committee, which comprises seven well-qualified people.

The ApiNZ TFG believes that with common interests, we can only strengthen our position by sharing information with Te Rūnanga o Ngāi Tahu.

EPA Hearing APP202093: Grizly Max

Grizly Max is an insecticide trimix containing the insecticides, imidacloprid (175g/l), novaluron (30g/l) and bifenthrin (20g/l), designed to be used on onions and potatoes. Of concern to the Technical Focus Group was the lack of testing of the mixture. The applicant had only an acute oral test for bees and could not demonstrate whether or not there were any synergistic effects. The crops are of low foraging value to bees but the chemicals are all very toxic to bees, so areas surrounding the crop are of importance.

The EPA staff evaluation and review report did not support approving the product, based on the lack of benefits of the mixture and the fact that the rate of application of imidacloprid was significantly higher than other foliar sprays containing the same active ingredient. The ApiNZ TFG supported the EPA in this decision and demonstrated our concern with examples of flowering weeds adjacent to onion crops. As of 5 August 2016, the EPA had not released its decision on this product.

EPA Hearing APP202774: Exirel® aerial application

To date, DuPont Exirel® (active ingredient 100 g/L cyantraniliprole) has been permitted for use as an insecticide on fodder brassicas by ground spraying only. This application sought EPA approval for aerial spraying of fodder brassica crops. The wApiNZ TFG was not against aerial spraying of this product, especially in hill country, which the applicant highlighted as a safety issue for ground spraying equipment. Our primary concerns were with respect to the proposed controls, two of which were deficient, as one was ambiguous and the other not practical.

The applicant proposed a 100-metre downwind buffer zone, based on analysis conducted in cotton (a flat land crop). The EPA downwind buffer zone, again calculated on a flat land analysis, was 10 metres for helicopter spraying. The applicant offered us six pages of an analysis totalling at least 198 pages, which was insufficient. The EPA could not and would not explain the difference between their 10-metre buffer zone and the 100 metres proposed by the applicant.

The ApiNZ TFG wishes to see greater transparency about the methodology from both calculations before accepting these buffer zones as suitable controls. The data and calculations should be open to public scrutiny if we are going to accept these measurements as controls to protect our bees.

Our preference was for a simple control: Do not spray when the crop is in flower or 'in crop' and/or neighbouring weeds are in flower! Very simple controls, when applied correctly, can mitigate risks and provide good outcomes for all.

Hill country fodder brassica crops often have steeper slopes and/or gullies not cultivated, which are refuges for flowering weeds and clover for foraging bees. Spraying these areas with an insecticide is a risk for our bees. Again, the EPA had not yet released its decision as of 5 August 2016.

continued...

REVOLUTIONARY Beekeeping

Turning HONEY into MONEY ... without the hard work

This award-winning and patented mobile honey harvesting system makes beekeeping easy, enjoyable and profitable.

Convenient, Clean, Cost-Effective System

The best innovations solve a painful problem. In Grant Engel's case, the hard physical lifting, hours spent carting honey boxes and waiting in line for his honey to be extracted were the catalyst for inventing his mobile honey harvester. Now all suppliers to RevBee use Grant's harvester and say that not only is their workload reduced but their honey is cleaner, and their hives healthier than before.

So how does the honey harvester work?

The mobile honey harvester is a lightweight stainless steel box that allows you to harvest honey directly from the frames right next to the hives. As you push the frame through the harvester, the honey and wax is scraped off the frame and flows directly into a food-grade sealable pail that sits underneath. The harvester comes fully MPI certified with an RMP.

That sounds too easy!

Well, it gets better. RevBee collects the honey from their suppliers at RevBee's expense. The suppliers get paid (then more than a few like to go fishing).

8 Reasons the RevBee Honey Harvester is a Winner

- **Eliminates heavy lifting** – you carry only a lightweight honey harvester and pail. No need to remove and transport honey boxes.
- **Select frame harvesting** – hand-pick quality honey frames and bank it.
- **Healthier hives** – no honey boxes waiting to be processed and open to dirt and disease.
- **Remote locations are now accessible** – set up hives in places that were previously too hard to manage.
- **Cheaper outlay** – only one honey box is needed as it can be harvested multiple times. Run more hives at less cost.
- **Fast and convenient** – no more booking or waiting in line. Your honey is collected from your door at RevBee's expense.
- **Competitive honey prices and great cash flow** – you receive prompt payment for your honey.
- **MPI certified** – with RMP in place.

I can handpick frames to harvest so I control the quality of the honey – especially when Manuka is flowering. Stephen (Large Commercial)

Previously my boxes would sit for up to 2 weeks before getting spun out and that's time when dirt and disease gets in. There's none of that with this system – I harvest the honey directly into a food grade box, put the lid on and that's done. Luke (Commercial)

The machine is simple and lightweight. You can keep the hives to 2 boxes high so I'm working at an easy level. You're just taking honey, not transporting heavy boxes and frames. And by harvesting directly into a bucket, you can see exactly what volumes are being produced from that hive. Mark (Large Commercial)

This is my second year using it and I don't think you can beat it. It's quick, cost effective, and allows you to set up hives in locations that otherwise you wouldn't bother going. It's just too easy. Luke (Commercial)

The 4 Step RevBee Supplier System

1. Sign up as a RevBee supplier and start harvesting your honey with the mobile honey harvester.
2. Phone the RevBee team to arrange collection of your honey.
3. RevBee will collect your honey right from your doorstep *at their expense.*
4. Receive your payment – they do the rest!

Turn your honey into money! If you have 50 hives or more, please get in touch with Grant or Kim Engel to receive your free supplier information pack and join the RevBee revolution.

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Find out more and watch a demonstration of the mobile honey harvester in action at **www.revolutionarybeekeeping.co.nz**

Fieldays INNOVATION WINNER 2013 LAUNCH NZ AWARD

Velvetleaf import follow up from MPI

Last month we featured a story about the non-approved chemicals imported in the coated fodder beet seed to New Zealand (MacLeod, 2016, August). We would like to point out that despite two chemicals being toxic to bees, the likelihood of bees being adversely affected by these chemicals in fodder beet is extremely remote. This is because fodder beet is not grown through to flowering in New Zealand, so is not likely to be visited by bees.

The investigation has also confirmed that the bee-pollinated crops of canola and brassica seed for multiplication are imported in coated form to New Zealand and now we wish to identify the pesticides used.

We did ask the Ministry for Primary Industries for a statement at the end of June and we received this statement from Allan Kinsella, Director, Systems Audit, Assurance & Monitoring, MPI after the cut-off date for the August issue. We wish to share it with you. We wish to thank MPI for its effort in responding to our questions.

Of concern is that we may have a governance issue with respect to importation of pesticides. (Note: MPI Biosecurity is not a border enforcement agency for the EPA.)

1. MPI has an exemption for imported coated seed containing pesticides under the Agricultural Compounds and Veterinary Medicines (Exemptions and Prohibited Substances) Regulations 2011.

2. The EPA is clear that all three insecticide seed treatments are not in compliance with the Hazardous Substances and New Organisms Act 1996.

Velvetleaf in flower in the USA. Note the small yellow flowers. Photo: Frank Lindsay.

Allan Kinsella's reply:

1) **How many pesticides are entering NZ and being used without registration by the approvals unit MPI?**

No pesticides which fit the definition of an agricultural compound under the Agricultural Compounds and Veterinary Medicines (ACVM) Act 1997 may enter NZ or be used as pesticides in NZ without an appropriate ACVM approval. ACVM approvals include registration, provisional registration, or approval under special circumstances. Products which fit an exemption category may enter NZ and are then subject to relevant conditions under the ACVM (Exemptions and Prohibited Substances) Regulations 2011.

2) **Is the MPI aware of these imports when they enter the country at the border?**

If MPI is aware of any product that they think may require ACVM registration at the border, the product will be stopped until appropriate approvals are obtained. This also applies to other relevant legislation, for example the Hazardous Substances and New Organisms (HSNO) Act 1996 administered by Environmental Protection Authority.

3) **Why has MPI not approved by registration the trade name products TACHIGAREN and FORCE MAGNA into New Zealand, prior to its arrival and subsequent use in the New Zealand environment?**

Treated seeds are not regulated under the ACVM Act as they do not fit the definition of an agricultural compound. This is the same situation for seed treated with a pesticide in New Zealand. The bags of treated seed are not subject to the ACVM Act, but the pesticide used to treat the seed is. The pesticides themselves would require registration under the ACVM Act if the pesticides were imported and treatment was applied in New Zealand. Seeds which are already treated with pesticides on entry into the country do not require ACVM registration, but would require HSNO approval.

In addition, where pesticides are specified in an Import Health Standard for biosecurity purposes under the Biosecurity Act it is because the pesticide is shown to be prophylactic or curative for a specific regulated pest. Pesticides combinations listed on the IHS are approved treatments and are only applied to a certain number of plant species.

4) **Does MPI support the importation and use of pesticides without prior risk assessment for foods and animal foods by MPI?**

Under the ACVM Act, it is illegal for unregistered agricultural compounds which do not fit an exemption category to be used in New Zealand for a purpose listed in the ACVM Act.

5) **Why is Hymexazol and Telfluthrin not listed in MPI Maximum Residue Levels for Agricultural Compounds dated 15 February 2016.**

Maximum Residue Levels (MRLs) are set for active ingredients on foods for human consumption that are subject to the ACVM Act. For imported food, the importer is responsible for ensuring the food complies with the MRL Notice. In the case of imported seed, the MRL would relate to the food that is produced and harvested from the seed eg cereal grain produced from the cereal crop. The Food Regulations 2015 specify that for imported food, any residues in the food must comply with either a Codex MRL, the NZ MRL, or where no MRL exists for the active ingredient/food the default MRL of 0.1mg/kg.

In this case, the default MRL of 0.1mg/kg would apply to the food commodity produced from the treated seed.

Reference

MacLeod, D. N. (2016, August). It pays for everyone to read the label. *New Zealand BeeKeeper, 24*(7), 21–24.

RESEARCH

POLLINATING GOLD3 KIWIFRUIT UNDER HAIL NET: A NEW APPROACH

Beth Kyd (Zespri)

Zespri has been working with Plant and Food Research over the last 18 months to try to understand why the use of covering orchards with hail net to protect Gold3 kiwifruit from hail and wind damage is having such a detrimental effect on standard honey beehives. The research to date has shown that the overhead nets are impeding the bees' ability to locate the sun's position and also suggests that a typical honey bee hive may not be the most suitable for pollinating under hail netting.

The Ministry for Primary Industries' (MPI) Sustainable Farming Fund (SFF) has now approved the project "Optimising pollination of Gold3 kiwifruit under hail netting." While led by Zespri, this SFF project is very much about the wider industry. Research outputs will benefit both kiwifruit growers and pollination beekeepers, and the knowledge generated may well assist other horticultural industries.

Three key projects undertaken by Mark Goodwin and his team at Plant & Food Research have led to this SFF-funded project:

1. **Impact of cover type on colony strength**

   In spring 2014, standard pollination hives (four full-depth frame equivalents of brood and 12 frames covered by bees) were introduced to 10 covered Gold3 orchards. In all cases, the colonies had less brood when removed from orchards than when they were introduced. The impact on bee numbers increased with increased enclosure of the hail net structure: roof only→ roof + sides to canopy level→ fully enclosed.

2. **Impact of hail net on bee navigation**

   The large number of bees observed clinging to the sides of some of the covered orchards suggested the bees were having issues navigating under the nets. Trials in winter 2015 demonstrated that foraging bees had difficulty in recruiting other bees to food sources under the nets and in using sun positions in their navigation.

Beth Kyd presenting on the topic of kiwifruit pollination requirements and hail net challenges, Apiculture New Zealand National Conference, Rotorua, 21 June 2016. Photo: Frank Lindsay.

3. **Colony size and feeding impacts on hive health**

   Twenty-four hives with a range of colony sizes were introduced into a covered Gold3 orchard with sides that came down to canopy height. The hives were placed under the net approximately 50m from the edge and pollen traps were placed on the hives to determine how much pollen they were collecting. The area of brood and number of bees were assessed on the day the hives were introduced and again eleven days later when they were removed from the orchard. Twelve hives were also fed a pollen supplement to augment the pollen they could collect in the covered orchard.

   The colonies which were fed pollen supplements were better able to continue brood rearing than unfed colonies (Figure 1). The pollen supplement was not able to completely maintain normal brood rearing; however, the use of a different pollen supplement/substitute, or beginning to feed the hives several days before the bees were introduced to the orchard, may be able to completely mitigate the negative effects of the enclosed orchard environment.

   Hives beginning with fewer adult bees had proportionally lower losses when the colonies were in the covered orchard. Smaller hives usually have a higher proportion of pollen-collecting bees (which tend to forage closer

to the hive and are therefore less likely to encounter the walls of the orchard), whereas larger colonies have a higher proportion of nectar-foraging bees.

What does this all mean?

These results suggest that much of the negative effect of covered orchards on honey bee colonies could be alleviated by using smaller colonies and feeding them a pollen supplement/substitute. To reduce the risk of poor pollination, and until further information can confirm appropriate stocking rates, sufficient small colonies should be used so that there is the same number of frames of bees and brood per hectare as is used in uncovered orchards. They should also be fed pollen supplement to promote brood rearing.

For this coming spring season Zespri has commissioned further research that may lead to new recommendations on stocking rates of hives, a much reduced sugar-feeding programme, and an enhanced pollen supplement feeding programme.

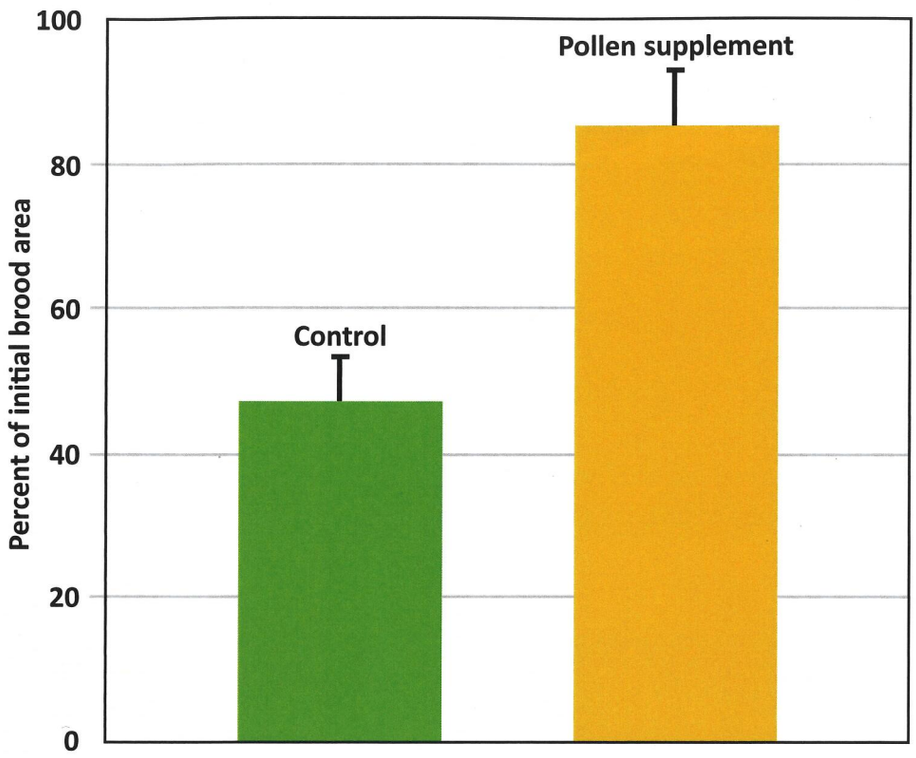

Figure 1. Average amount of brood in control colonies and colonies fed pollen supplements when they were removed after 11 days in the covered orchard, expressed as a percentage of the amount of brood they contained when they were first introduced. The vertical lines are standard error bars.

PEST AND DISEASE CONTROL

VARROA MANAGEMENT SURVEY

Claire Hall, Mark Goodwin, David Pattemore, ApiNZ Research Focus Group

What do you think about an Integrated Pest Management approach to *Varroa* control? At the June Apiculture Conference in Rotorua, Plant & Food Research and the ApiNZ Research Focus Group hosted a workshop on *Varroa* control. We presented potential research topics that would be key to development of an integrated pest management programme, and we sought feedback from the more than 300 participants. We posed four questions to the participants and we summarise the responses here.

As you may have seen in the August edition of *The New Zealand Beekeeper*, we have also been running a SurveyMonkey questionnaire to gather more detailed feedback and ideas; we will update you on this in October.

While estimated annual hive loss rates for New Zealand in 2015 were 10.7% (NZ COLOSS Survey), the increasing resistance of *Varroa* mites to synthetic miticide treatments could see annual hive losses increase to over 30%, as seen overseas. This would seriously jeopardise both honey production and crop pollination.

Although an integrated pest management (IPM) approach has been suggested since *Varroa* was first found in New Zealand, we have lacked the tools needed to date. At the workshop, presentations outlined how the use of new technology in an IPM programme might include:

- Remote, automated, *Varroa* monitoring to determine which treatments to apply and when
- A data pipeline to develop and evaluate new *Varroa* control methods.

Feedback was sought on the overall goal for *Varroa* management, how important it is compared with other bee health issues, the value of the different approaches, and new ideas.

First, we asked participants to consider the goal of "By 2021, beekeepers will be able to monitor *Varroa* in their hives automatically and know when they need to implement integrated control strategies to keep their *Varroa*-related hive loss rates under 10% per year".

Fifty-nine percent of respondents thought that the 2021 vision was achievable, although ~20% thought that a 0–5% hive loss rate was preferable and achievable. About 5% suggested we aim for eradication. Many felt that remote monitoring was high risk and might not be achieved in that timeframe, with many comments that beekeepers should be actively monitoring *Varroa* as part of routine hive visits and whether remote monitoring would result in "losing touch" with other potential issues. Over 15% mentioned funding and the link between timeframe and investment.

Photo: Frank Lindsay.

Second, the participants were asked to prioritise the four research goals outlined in Table 1.

Theme	Title	Activity
One	*Varroa* sensors	The development, testing, and validation of multiple monitoring technologies
Two	Hive health thresholds	Establishing the *Varroa* susceptibility of hives from various hive health factors to determine specific thresholds for treatment
Three	Control tool pipeline	The development, testing and validation of new and existing *Varroa* control tools
Four	Integrated control	Identifying the efficacy of complimentary treatments

Table 1: Potential Research Themes to develop a Varroa IPM programme

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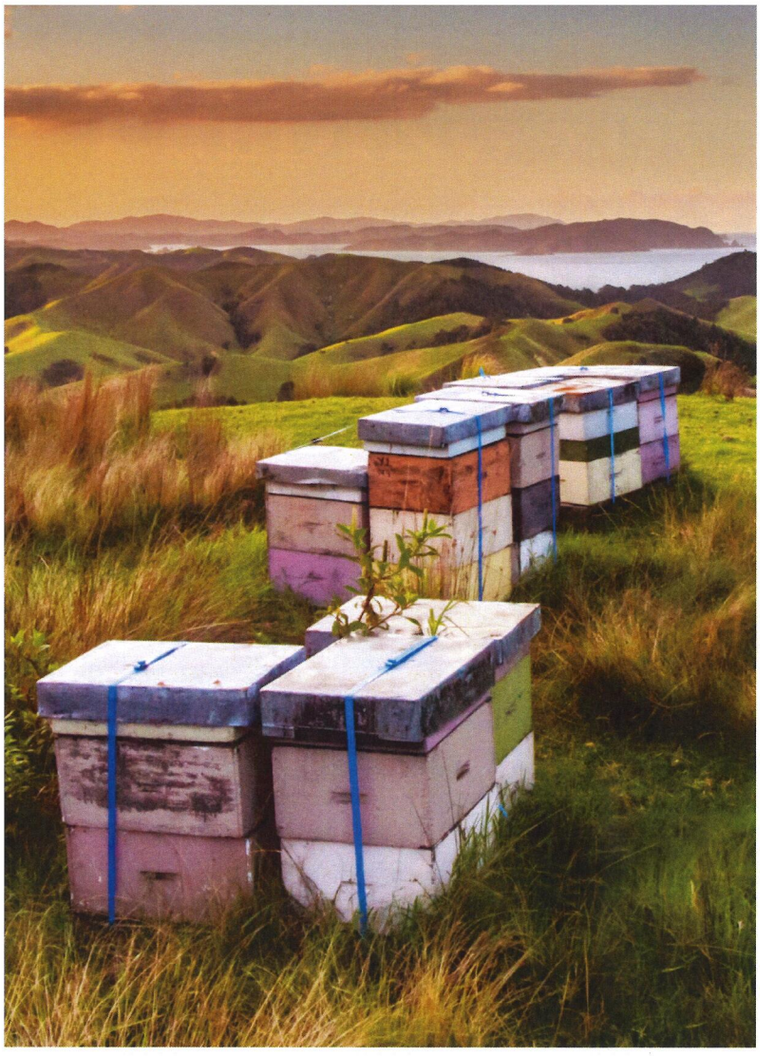

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As shown in Figure 1, the development and validation of new tools was ranked as the top priority, followed by understanding hive health thresholds. Many comments stressed that new tools were needed now—and that these needed to come first before the rest of the toolbox. Many would like a focus on mechanical control tools (less risk of resistance) and for bee genetics to be integrated as a key part of IPM. In contrast, many commented that all four elements are needed to be successful and couldn't be ranked. About 5% asked if we were using current tools optimally. Feedback also included asking whether we are sharing information effectively about experiences with current tools. Several participants felt there could be wider use of current methods to monitor *Varroa*.

We then asked "How important is *Varroa* control to you compared with other bee health concerns?" asking them to consider AFB, *Nosema* and other issues.

As shown in Figure 2, *Varroa* was most frequently ranked as the most important bee health issue, followed by American Foulbrood, then *Nosema ceranae*.

If respondents ranked "other" as high importance (1 or 2), they were asked what this priority issue was. The three most common issues noted were wasps, viruses and ants, but other issues included nutrition, overstocking, small hive beetle (not currently in New Zealand), Giant Willow Aphid, and wax moths.

Finally, we asked for components that had been missed in the discussion that would be critical for successful ongoing *Varroa* control.

The participants wanted to know more about non-chemical approaches, organics and understanding how to use them and improvements through bee genetics. In this era of big-data and tools to analyse large data sets, how can hive data be used for this research and *Varroa* management? They wanted more information on how best to use current options, noting it was great to get together and share experiences. Communication was a key theme, ensuring we tap into all the beekeeper expertise, and knowledge from other research fields.

These results (and those from the Survey Monkey questionnaire) will be shared with the research community and other stakeholders to help drive research directions.

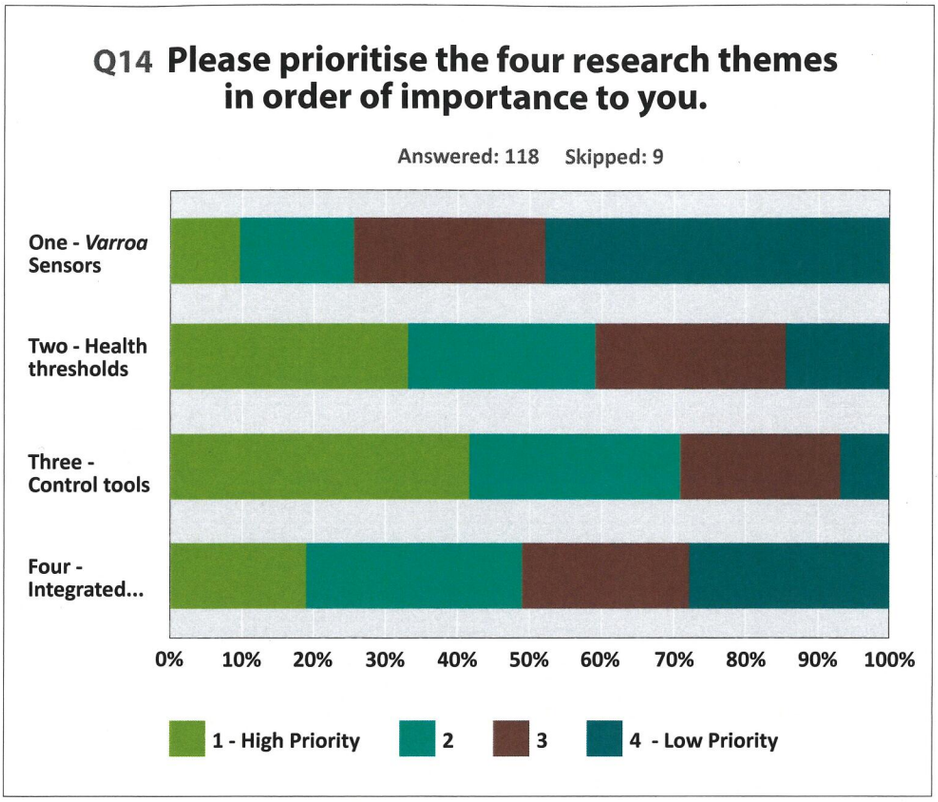

Figure 1: Prioritisation of Research Theme

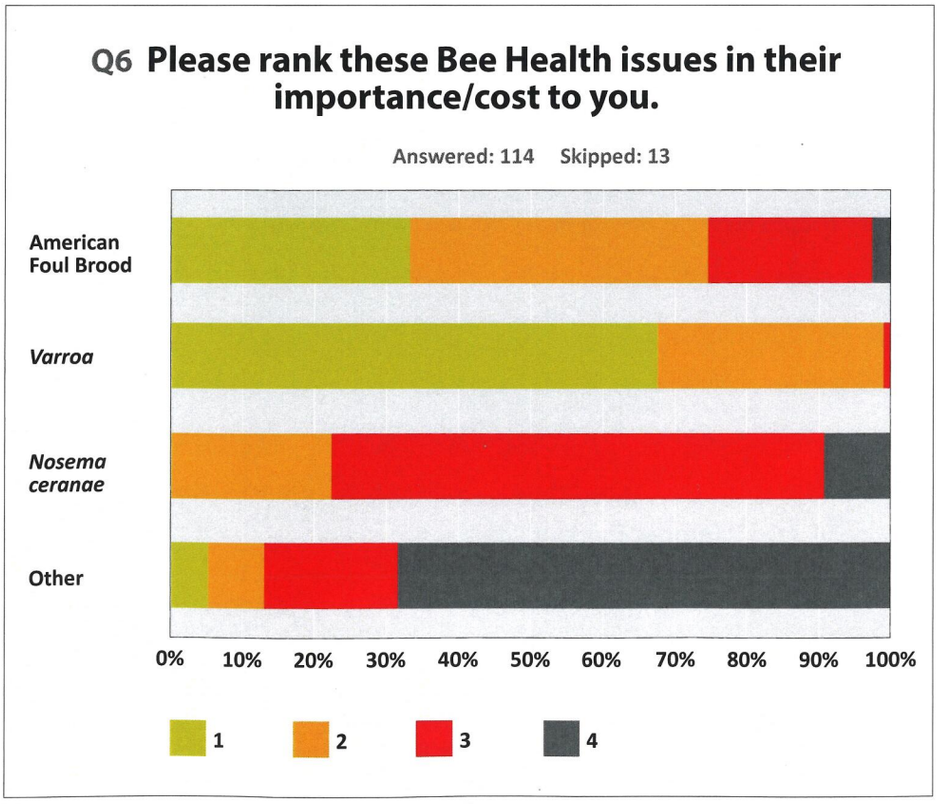

Figure 2: Relative importance of different hive health issues

The authors wish to acknowledge Dr James Sainsbury, Dr Phil Lester, Dr Max Suckling, Dr John McLean and Barry Foster for their presentations and input at the workshop.

REGIONAL REPORTS

FROM THE COLONIES

AUCKLAND

The Auckland region has had its share of rain back in July for winter and it seems to just continue—talk to anyone here and we are over it. Along with rain has been wind on rainy and fine days, and the wind has come from all directions. More like tropical storms, but in winter. In my own backyard, a very large blue gum crashed down across my double garage. I'm sure that the only thing holding the roof and tree up from complete collapse has been the stack of boxes/frames.

The temperatures were slow in dropping, on fine days out of the wind it could be very pleasant. Winter is here now: no real frosts, but the damp is uncomfortable and I am sure the bees are thinking the same. On the fine days I was able to still visit apiaries around Auckland, and have found some already had eaten through the stores left to them and were looking hungry. It's going to be up to the beekeepers to provide the food till new nectar comes in. I have seen some winter nectar being collected in some areas and flights on fine days have been rewarding—this is when city gardens have the advantage.

The Auckland Hub needs to have a get-together. In the meantime, we are using a SurveyMonkey survey to give some direction to find out what people need and will suit them. Please complete and return the survey: this is your hub.

Finally, we hear of bees being stolen. My car has been broken into three times in this year alone, and stolen once (we gave chase and got it back). So my bees have come to the rescue while waiting overnight for new door locks. More than once now, I've leant a strapped beehive on the front seat against the steering wheel. I then unstrapped it and placed a piece of hessian over the top of the box of bees. I've named this set-up 'Bee Alarmed'.

- Kim Kneijber, Hub President

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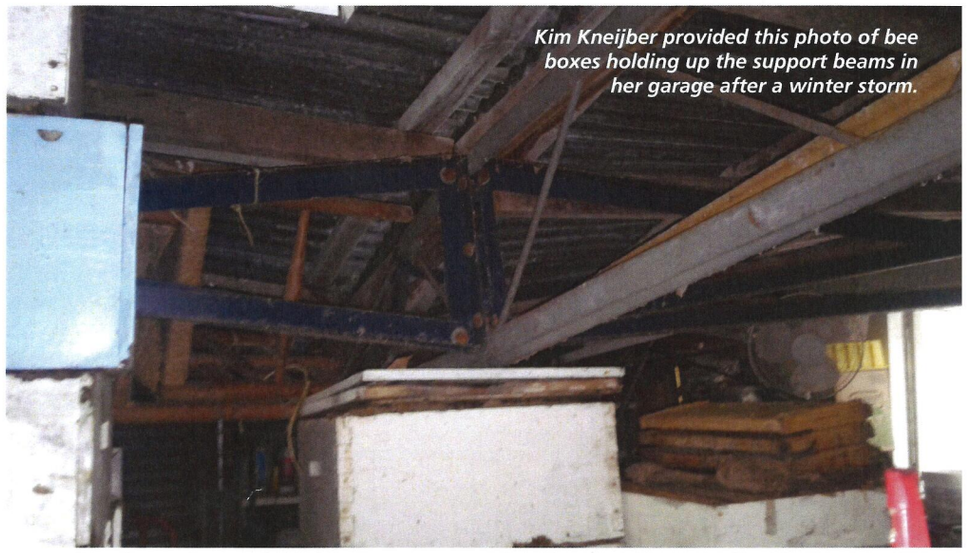
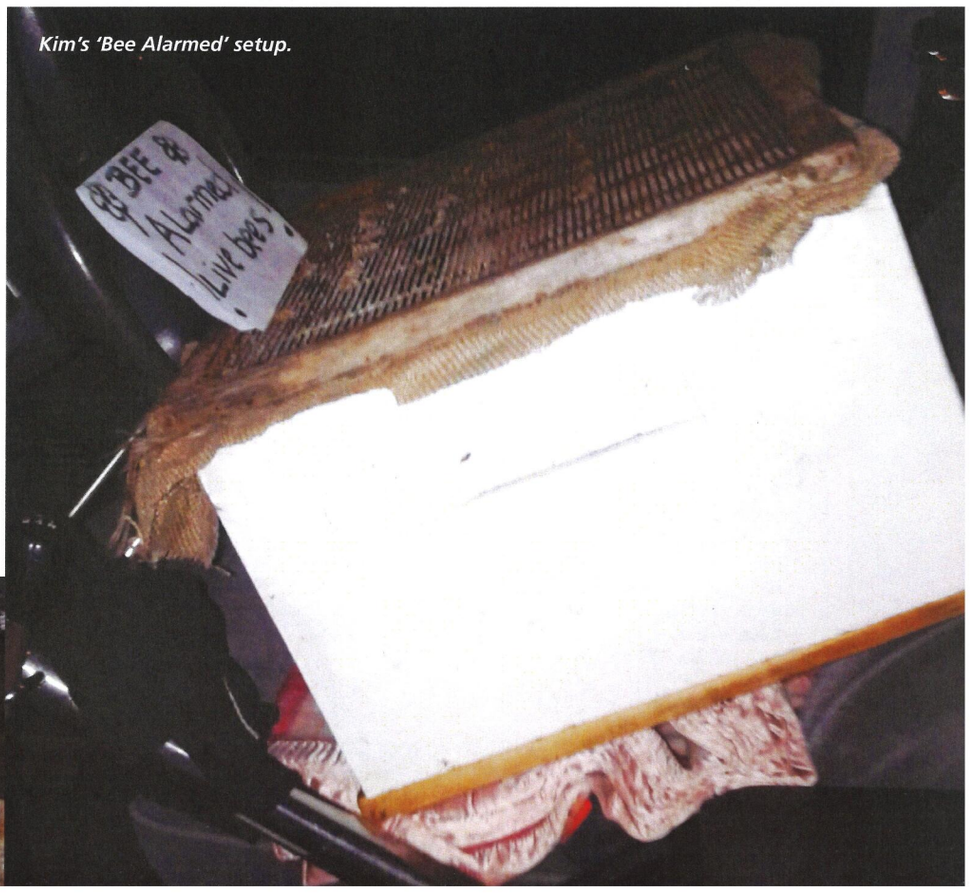


Kim Kneijber provided this photo of bee boxes holding up the support beams in her garage after a winter storm.



Kim's 'Bee Alarmed' setup.

WAIKATO

Slightly longer days, and bees are foraging in the little bit of sun that we get. Beekeepers are sugar feeding where there are no stores left on the hives and some are concerned that *Nosema ceranae* could be an issue given the cold, wet conditions. Here in the Coromandel there is pollen coming in but apparently the pollen loads are very small, probably sourced from weeds such as *Albizia*. On this side of the peninsula there is not a lot of gorse about.

John attended a local bee club meeting recently where a participant came in carrying a paint bucket. Turned upside and opened, it revealed the most beautiful natural art work—a nest of the common wasp *Vespula vulgaris*. Fortunately, its occupants had all been despatched. While new bee combs are themselves a work of art, this is also gorgeous, very artistic paper-making.

Over the border northwards, last weekend I assisted our daughter at the Tree Crops Association market in the Auckland Botanic Gardens. I was delighted to see honey for sale and even more pleased to see displayed the cup awarded to Urban Honey, the Supreme Award winners at the 2016 National Honey Show. Their honey was beautifully packed and presented, and they deserve to do well with it. It made be proud to be a part of this industry.

- Pauline Bassett, Life Member

BAY OF PLENTY

Our bees are wintering exceptionally well in the Bay of Plenty. A lot of gorse and heather certainly helps and amongst the rain we still have 15–18°C degree days popping up frequently. Certainly a lot of hive activity during these days.

Winter pruning of the kiwifruit is well under way and I am getting calls frequently of orchards that no longer have beekeepers because they are off after mānuka. Pollination is critical to orchardists, it is guaranteed income for beekeepers and generally orchardists are very aware of bee health and are very careful not to spray or jeopardise our bees. Don't let them down.

The ground is very wet and boggy at the moment and walking into some yards to check the bees wears off quickly—hurry up summer!

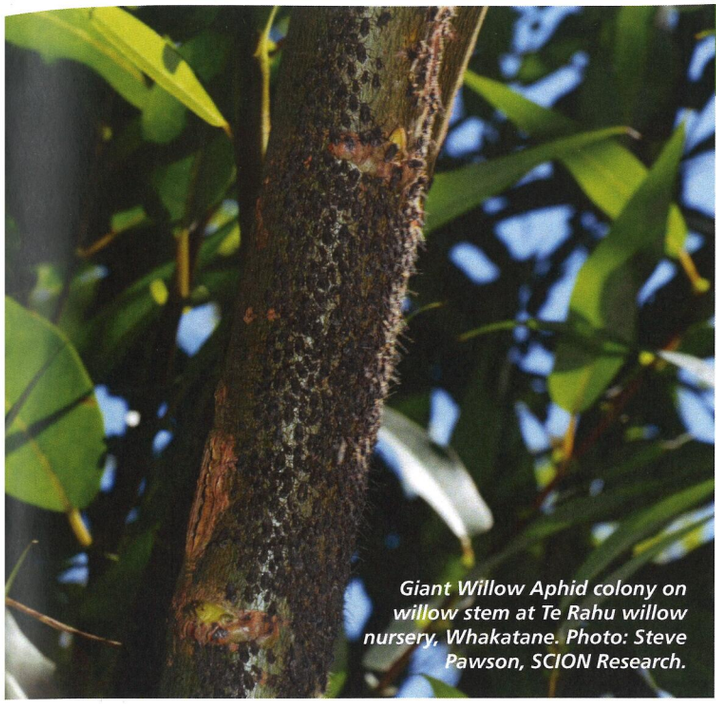
Haven't done as much fishing as I would have liked, as there is always heaps of winter maintenance to catch up on.

Happy beekeeping, everyone. It is a great job.

- Bruce Lowe

continued...

One very artistic wasp nest. Photo: John Bassett.



Giant Willow Aphid colony on willow stem at Te Rahu willow nursery, Whakatane. Photo: Steve Pawson, SCION Research.

NELSON

Despite the recent snow on the hills, there have been great sunny days. Many beekeepers are beginning to gear up for the coming season, with bee activity on the rise. There is a concern how much the flowering of willow trees will be affected by the Giant Willow Aphid feeding. This early flowering is useful to help build up hives. Many trees are showing a lot of black sooty mould and look less vibrant due to previous aphid infestations. It is great that some funding has been approved to find out more about this recent pest that has rapidly spread throughout the country.

The inaugural Nelson Hub meeting was held in Motueka. There was good attendance and discussion on several topics concerning the industry, which was helped with the great pizza and refreshments.

The Nelson Beekeepers Club recently had an excellent evening, with talks on queen rearing and wax rendering. Nahum Kelly provided a valuable insight to commercial beekeeping, which was appreciated by all present. The club is looking forward to Frank Lindsay's attendance at our next meeting.

- Jason Smith

HAWKE'S BAY

As I write this in early August, it seems like we're having the first real 'rain day' in months in Hawke's Bay. While checks last week showed most hives had reasonable stores and a trickle of fresh nectar coming in, the extra feed won't last five minutes if the weather closes in, and we'll be out and about feeding.

Hawke's Bay has had a couple of reasonably large sized hive thefts lately, and with the owner's co-operation we're taking the opportunity to get this issue in front of the public. It's early days yet, but we've been very encouraged by the response from the police, both locally and from officers working on the national front, and they certainly now recognise this as a serious and widespread problem. I spoke with an analyst from the police though, and he was able to show me local crime statistics that made it clear that bee and hive thefts are just not being reported. Historically as an industry we've tended not to talk about this issue, possibly not wanting to offer inspiration or information to aspiring thieves, but I think it's safe to say at this point that the cat is well and truly out of the bag.

I encourage all beekeepers to report all thefts, small or large, to the police, and engage with your local community. The one certainty in all this is that no-one can help you find your hives if they don't know they're missing.

By the way, it was an observant beekeeper who saw a broken box on the roadside and notified me that alerted us to the theft. He thought he was just reporting a dropped box, but it turns out he's given us the best opportunity to tackle this crime because he bothered to make a phone call. Would you have bothered to call it in?

- Deanna Corbett

ABOUT THE APIARY

HELP YOUR **BEES THRIVE** IN SPRING

Frank Lindsay, Life Member

The cold winter weather has finally arrived. Up until now, the warm conditions have promoted the flowering of our winter species and maintained the flowering of a lot of ornamentals in the urban areas. Along the coastal fringe, tree lucerne and some species of wattle are in full flower. Once the frost has cleared and the afternoon sun has warmed the hives, the bees are able to fly and bring in valuable pollen and nectar, which is necessary for continued brood rearing.

With increased brood production, more and more of the hive's reserves are being used. These are being turned into bees that will replace your winter bees that have worn out through maintaining a brood temperature and feeding larvae. Quite a few will be lost during these afternoon foraging trips, caught by a cold breeze or a rain shower. Some of our darker bees are better able to withstand foraging in these marginal conditions.

Bees build a hive population that will bring in a crop for us and enough for them to winter over next year. That's the idea, but some beekeepers strip out all the honey and feed back sugar syrup. Opinions differ whether this affects the bees. My opinion is that beekeepers doing this are ageing their autumn bees by requiring them to turn the syrup into honey. Natural honey contains minerals and a few vitamins that bees need which are not present in sugar, so they use their body reserves to substitute these. The same applies to pollen. Supplements are good at stimulating brood development but they do not provide everything a bee requires, so some natural stored pollen is also required.

Some hives bolt ahead in the spring while others just chug along. Those that bolt ahead generally have a new productive queen and are relatively free from nosema and other malaise, but these hives can quickly run out of feed if sufficient stores were not left on the hive or fed to them in the autumn.

Generally, in the spring commercial beekeepers start feeding a 65% sugar/water mix and a pollen substitute patty to stimulate brood rearing. This has to continue on a two- to three-weekly basis until natural nectar and pollen sources are available. The amount fed depends upon the colony size. We like the bees to take up this supplement quickly so it's not wasted.

Doing the maths

To work out how far five litres of sugar syrup will go, do the numbers. Think about the quantities bees require to produce a bee: a cell of pollen and a cell of honey. To produce one frame of bees requires one frame of pollen and one of honey. Sixty-five percent sugar syrup is only 50% of the same volume of stored honey, as it has to be inverted and dehydrated to below 20% moisture.

One litre weighs one kilogram. A full-depth frame holds 2.5kg of honey. So with each five-litre feed, you are providing only the equivalent of a frame of honey. A strong colony, two storeys high with eight to 10 frames with brood can use three frames of honey in a week of inclement weather when bees cannot forage. Some beekeepers also provide raw sugar in the other side of the feeder to cover the gaps when beekeepers may not be able to access hives to feed them due to wet, sodden soils. It's a good reason to winter hives near all-weather access tracks.

Once feeding starts, it's important to carry on feeding.

Setting up a five-frame nuc: two frames of capped brood, two with pollen and honey and one complete honey frame, plus young bees to cover and a cage queen towards the top with a jellybean candy plug in the cage. All that is required now is a miticide strip and another foundation frame for the bees to build out. Photo: Frank Lindsay.

Once feeding starts, it's important to carry on feeding. Strong hives can quickly run out of honey. When this happens, the bees will cannibalise drone eggs and then worker eggs before starting on the larvae. By the third week without food, the bees would have started cannibalising capped larvae. If the hive was fed at this point, the nurse bees will have to start again rearing brood but there will be no emerging brood for 21 days, so the bee population will decline considerably as the older foragers die off. If this happens, it's best to give the hive a boost of brood and nurse bees to get the hive back on an even keel of growth.

Begin your hive inspections

As the weather permits (i.e., when it's warm enough to have your arms exposed without them feeling cold), we start spring brood inspections. During the inspection you will notice that some hives have large populations of bees and brood. As soon as the bees have spare resources they will commence producing drone brood. Drones require more food and bee resources, so the colony has to be really productive with good pollen and nectar coming in before they start drone production. The hives that are the first to produce drones are the hives most likely to swarm. Mark these for special attention next inspection.

The hives that are the first to produce drones are the hives most likely to swarm.

Check that each hive has at least three frames of honey and start feeding when the hive reaches this level. Do a complete inspection of all brood frames for AFB. Learn to flick off the cappings of those capped cells that remain in a patch of emerging brood. Learn what healthy brood looks like and check anything very carefully that's off-coloured. If you are not sure, get a second opinion or send in a sample after advising our AsureQuality team.

Check that the hive has an adequate ring of pollen surrounding the brood and check the number of cells missed amongst the sealed brood. If more than 15 per 100 cells are missed, then consider replacing the queen. Don't just assume you have an old queen if there is spotty or patchy brood. It may be because the bees were short of pollen when these bees were produced. Look at the patches of new larvae. If they are even and all the same age, the queen is OK. Sometimes the brood produced earlier in the month was produced under stressful conditions, so might not be as good as that produced later in the month when the hive had better nutrition.

I also find and mark my queens. Don't assume because you find one queen that there isn't another in the colony. Some colonies supersede the queens but the old one is not killed and can be found not far from the new queen, although the old queen is laying at a reduced rate. (Some of these two-queen hives boom away early because of the increased laying rate.)

In my inspection, I also clean off the propolis build-up on the shoulders of the end bars so I end up with frames that are hard up against each other, giving the correct bee space.

I'll also move any old frames, those with more than 10% drone brood cells, are too dark to see light through and those with broken lugs to the outside of the supers so they can be changed when I next go through the hives. Try to institute a frame replacement regime where 30% of the brood frames are replaced each year to promote better bee health.

Don't assume because you find one queen that there isn't another in the colony.

continued...

This alcohol wash container is made by Dr Medhat Nasr in Canada. It uses #8 wire galvanised mesh (the same as used in pollen traps). Lids are fused together with a soldering iron but can be plastic welded. Photo: Frank Lindsay.

Replace any gear that won't take you through the season, starting with the hive stand or the pallet the hive(s) stand on. Nothing is worse than a hive full of honey frames tipping over and damaging the frames when the weight goes on.

Place varroa strips during inspections

Put in varroa strips at the same time that you inspect your hives. Follow the instructions on the packet. Most now go by the number of frames covered in bees (one strip for up to five frames of bees, two strips for six to 10 frames covered in bees, and so on). What we have learnt from overseas beekeepers is that we should sample the bees to determine the mite percentage before we put in strips, and sample again two weeks after the strips are removed at the end of a 42-day treatment period.

You can do this by sugar shake or an alcohol wash technique. What is important is that you take 300 nurse bees (half a cup) from a frame of 'open' brood. This is where the phoretic mites are mostly located so it will give an accurate mite count. Leave the bees in the jar and apply either icing sugar or an alcohol or soap wash so the bees are well covered. Leave for a few minutes and then shake the mites off. The sugar shake should be repeated again to get up to 76% of the mites off the bees. Canadian beekeepers test hives with an alcohol wash if they get seven or more mites in 300 bees they treat. I would recommend we do the same.

These treatments are well explained on Randy Oliver's website (http://scientificbeekeeping.com/an-improved-but-not-yet-perfect-varroa-mite-washer/). Alternatively, Google 'varroa mite sugar shake' for a PDF of instructions.

It's really important that New Zealand beekeepers adopt these practices as we now have mites that are resistant to both Apistan® and Bayvarol® in some areas. Failing to check could see your hive dead and robbed out halfway through the season. The days of putting in strips and expecting a 96% kill are gone.

When to super your hives

If the bees are filling most of the bottom super frames and are hanging down below the bottom of at least half the frames, it's time to put on an additional super of drawn frames to give the bees room to expand.

Bees do not see foundation frames as a resource, so just putting a super of foundation on a hive does nothing as the bees will be slow to move into it. If you only have foundation frames for the next super, lift two outside frames from the super below and place them in the centre of the new super, with foundation frames either side of these. (Replace foundation frames in the spaces left below.) Don't try to put foundation frames into the middle of the brood nest as this will split the brood nest. If the weather suddenly turns cold, the bees could abandon one side of the brood nest, which could result in chilled brood.

Finally, if you are feeding or have excess moisture down the sides of the super or covering the whole of the inner cover, raise the inner cover/crown board/split board up slightly from the top super by placing small twigs or matchsticks at each corner under the board so the excess moisture can get away. Replace the roof and mark the calendar for the next inspection in 10 days' time.

On your next visit 10 days later, the bees will have started drawing out the cells on the foundation frames next to the drawn-out frames. Move one of these newly drawn or partially drawn frames into the middle between the drawn frames to encourage the bees to draw out more frames on either side again. If they haven't started and you need more drawn frames, feed the hives sugar syrup.

Keep your hives building

By the end of the month, really strong hives may have started building queen cell buds.

This is normal and removing them only makes the bees create more. I tend to remove any in holes or at the side of frames but leave those created along the bottom bars of the frames. This means that when I do quick inspections, I only need to split the top brood super and look along the bottom bars for larvae in the queen cell buds. If any have eggs or larvae, the hive is going to swarm and you have to provide corrective action. If you don't, the hive will swarm and there goes your honey crop into the trees.

Far too many hobbyists miss this or fail to act on time. Don't let it happen to you this spring. Start checking for queen cells using this two-minute check of splitting the first and second brood supers and looking for queen cells every nine to 10 days.

Nowadays, commercial beekeepers don't let hives get into this position. During the first inspection in September, they will equalise all hives so they contain the same amount of bees and frames containing brood. They may reduce a hive with brood in eight frames back to six frames, adding frames of brood and bees to strengthen weaker ones. Another technique to strengthen a hive is to add more nurse bees by shaking them on to the entrance of a weak hive and guiding them in with a little smoke.

I use Miller type (dry sugar) feeders with a centre hole on my hives. If you aren't using them as a feeder, turn them over so that excess nurse bees will start to gather in the feeder to relieve congestion in the brood chambers. It's just a matter of swapping the feeder to a weaker colony. Spray the top of the hive they are being transferred to with air freshener to disguise the difference in hive scent. Generally, unless they are a different species, they will be accepted without fighting.

The same can be done with small nucs, or you can put in a frame of emerging bees to a weak nuc, but make sure the queen is not on it. A nuc can take an extra frame or a shake of bees but if more frames of bees are added at one time, the new bees are likely to kill the queens unless we dismantle the hive's pheromone defences with a spray of air freshener. In fact, it's a good idea to use this spray technique whenever extra bees or brood is added. And it's preferable if the new frames of brood are placed between the existing brood frames to preserve the shape of the brood nest.

Don't forget: before removing or placing new frames in a colony, check both for AFB.

Things to do this month

Do an AFB check. If you find any, separate off the stored supers that came from that particular hive and destroy them. If you can't identify the individual supers but know which supers came from that apiary, put an apiary quarantine on that particular apiary for 18 months using those supers only in that apiary.

Feed hives if necessary: hives should have a minimum of three frames of honey in them at all times.

Spray or weed whack the vegetation surrounding hives.

Check stored supers for wax moth. Cull old frames from the brood nest or work them gradually to the outside if they contain brood so they are replaced within a month.

Get the wax dipper going to dip new and reconditioned supers so that replacement hive parts are ready for another season.

Put in early mite treatments or check mite levels using sugar shake or an alcohol wash. Recording the natural fall using mesh bottom boards over a week will give you an indication of mite numbers but not the percentage. Don't forget to rotate treatments to prevent further resistance developing.

Plant a bee tree close to your apiary for future pollen and nectar.

pī·ā·ora BEES GIVING LIFE

APICULTURE NEW ZEALAND

APICULTURE NEW ZEALAND (INC). BOARD REPRESENTATIVES

DENNIS CROWLEY (C)
Ph: +64 7 579 2554
E: crowleys@slingshot.co.nz

BARRY FOSTER (C)
P: +64 6 867 4591
M: +64 27 449 7131
E: bjfoster@xtra.co.nz

STUART FRASER (M)
M: +64 21 868 343
E: stuart@naturalsugars.co.nz

SEAN GOODWIN (M)
M: +64 21 872 583
E: sean@purenewzealandhoney.com

JOHN HARTNELL (M)
M: +64 21 578 754
E: john@hartnellnz.com

RICKI LEAHY (C)
P: +64 3 523 9354
E: beechdew@farmside.co.nz

PETER LUXTON (M)
M: +64 21 447 944
E: varpluxton@xtra.co.nz

RUSSELL MARSH (C)
M: +64 21 730 004
E: marshshoney@xtra.co.nz

PAUL MARTIN (N)
M: +64 27 262 9566
E: perenphord@xtra.co.nz

M (Market), C (Commercial), N (Non-commercial)

APINZ REGIONAL CONTACTS: First named is President/Chairperson. The second named is Secretary.

NORTHLAND
Interested parties wishing to start a regional hub, please contact the ApiNZ secretary:
E: info@apinz.org.nz or
P: +64 4 471 6254

AUCKLAND
Kim Kneijber
P: +64 9 418 1302
E: kimk_bees@hotmail.com

Clare McCallum
E: clarem_66@hotmail.com

WAIKATO
Kim Poynter
374 B Hamurana Rd
RD 7
Rotorua 3097
P: +64 21 926 937
E: birchwoodfarm@xtra.co.nz

Pauline Bassett
E: pjbee@actrix.co.nz

BAY OF PLENTY
Dennis Crowley
PO Box 16156, Bethlehem, Tauranga 3147
P: +64 7 579 2554
E: crowleys@slingshot.co.nz

POVERTY BAY
Paul Badger
19A Pine St, Gisborne 4010
P: +64 6 868 4785
E: p-mbadger@xtra.co.nz

Tim McAneney
11 Oak St, Gisborne 4010
P: +64 6 868 9446
E: tim@mcaneney.gen.nz

HAWKE'S BAY
John Berry
46 Arataki Rd, Havelock North 4130
P: +64 6 877 6205
E: jrberry@ihug.co.nz

Deanna Corbett
P (Home): +64 6 876 8852
E: djcorbett@xtra.co.nz

SOUTHERN NORTH ISLAND
Gary Sinkinson
189 Reid Line East
Feilding
P: +64 6 323 0554
E: sinkybees@xtra.co.nz

Kate Smith
Waireka Honey Centre Ltd
2221 State Highway 1
RD3
Palmerston North 4473
P: +64 6 324 8224
E: info@wairekahoney.co.nz

NELSON
Murray Elwood
21 Whiting Drive
Wakefield
P: +64 3 5418929
E: info@mountainvalleyhoney.co.nz

Nicky Elwood
21 Whiting Drive
Wakefield
P: +64 3 5418929
E: info@mountainvalleyhoney.co.nz

CANTERBURY
Barry Hantz
E: barry@hantzhoney.co.nz

Maggie James
E: mjqueenb@xtra.co.nz

OTAGO
Frans Laas
Wildlife Solutions Ltd
102 Gladstone Road
Mosgiel 9007
P: +64 3 489 4597
E: f-laas@xtra.co.nz

LIBRARIANS
Roger and Linda Bray
Braesby Farm, RD 1, Ashburton 7771
P/Fax: +64 3 308 4964
E: birdsnbees@xtra.co.nz

APIMONDIA OCEANIA COMMISSION
Jodie Goldsworthy, President
PO Box 450
Corowa NSW 2646
AUSTRALIA
P: +61 2 6033 2322
M: +61 429 059 242
E: Jodie@beechworthhoney.com.au

Maureen Conquer, Vice President/NZ representative
P: +64 9 292 8282
M: +64 21 956 349
E: maureen@wildforage.co.nz

IF YOUR DETAILS HAVE CHANGED...
...please email editor@apinz.org.nz and info@apinz.org.nz so that we can update your details in the journal and on the ApiNZ website www.apinz.org.nz.

www.pharmapac.co.nz

pharmapac™

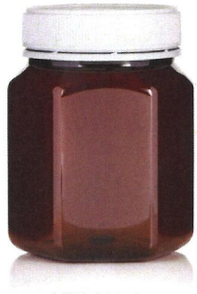
500g Tall Round Jar

500g Round Jar

340g Round Jar

250g Round Jar

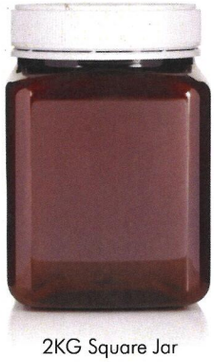
2KG Hex Jar



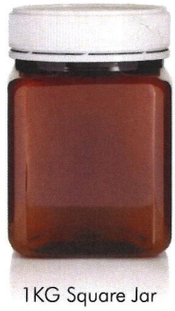
1KG Hex Jar

500g Hex Jar

250g Hex Jar



2KG Square Jar



1KG Square Jar

500g Square Jar

250g Square Jar

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Pharmapac's range of export quality packaging for honey contains square, hex & round jars. Sizes range from 250g - 2kg.

Pharmapac is a New Zealand owned company, with more than 30 years in the business of designing, manufacturing and producing plastic packaging solutions for not only local, but an ever growing list of international clients.

We are continually developing new products & services based on the feedback and requests from our customers.

Our stock jar colours are amber & clear. Stock closure colours are white, blue, gold, green & black. Custom coloured closures are available (minimum orders of 5000 units will apply). No supply contracts are required.

For more information or product samples please contact us at:

Pharma Pac Limited
125 Sunnybrae Road,
Hillcrest,
Auckland 0627
+ 64 9 444 9631
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