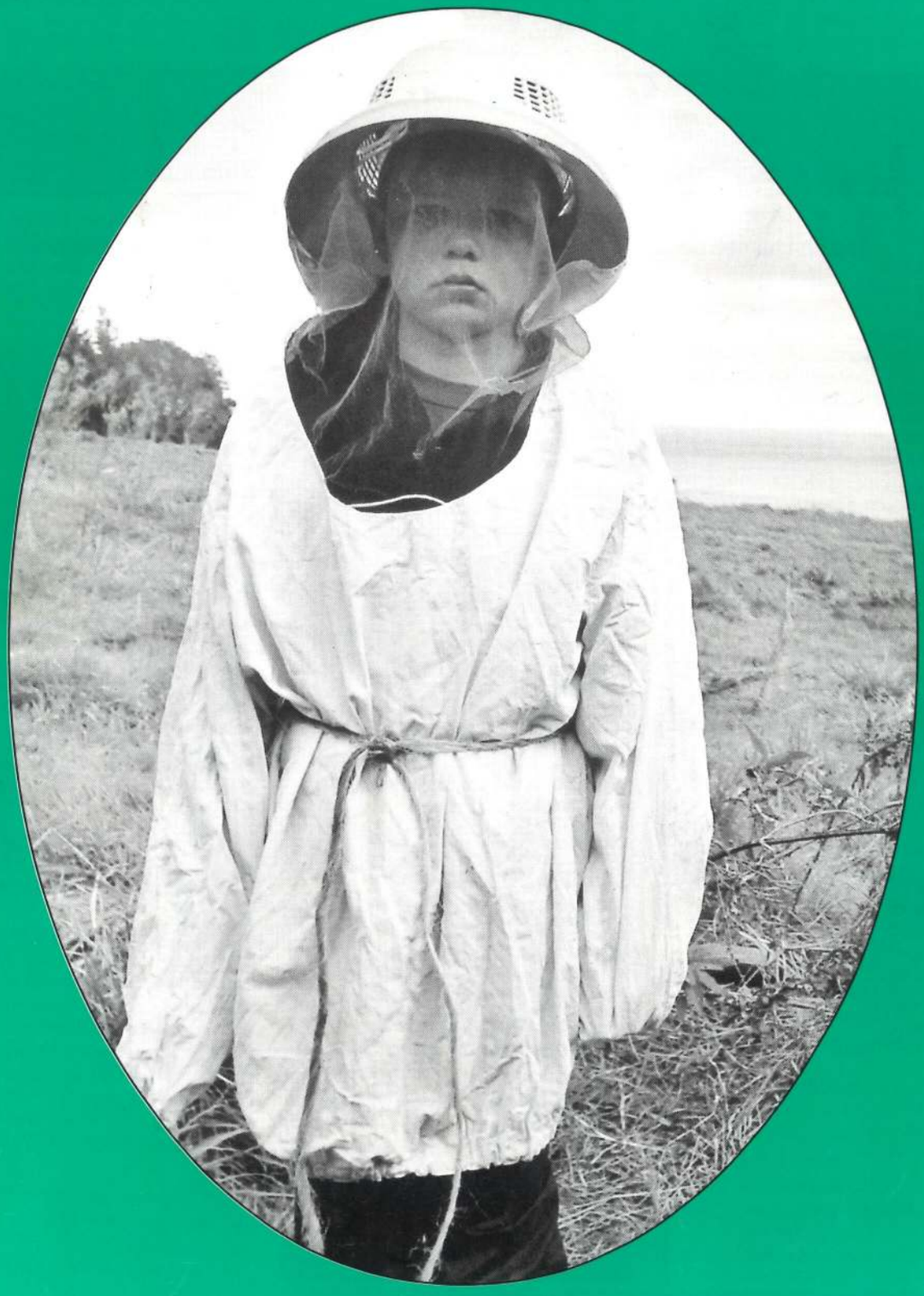
ISSN 0110-6325

The New Zealand BeeKeeper

DECEMBER 2000
VOL 7. No 10

The Official Journal of the National Beekeepers' Association of New Zealand (Inc.),



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1999 Subscriptions:
NZ $38.00 (GST Incl).
Overseas Airmail US $38.00.
Economy mail US $31.00.

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The New Zealand BeeKeeper is published eleven times per annum; February to December. All copy should be with the Editor by the 1st day of the month of publication except for December when copy should be received by **25th November.**

Letters to the Editor

Dear Sir,
Article/Letter on Varroa by G Hyink

The letter by Gerrit covers some interesting topics, I would like to address some of the misunderstandings that could occur as a result of the letter.

1. A fundamental of business is profitability, in fact sustained profitability not turnover that matters. Therefore the assertion that the NBA is there to protect industry turnover is incorrect. The NBA is a defacto industry body and does not have the necessary powers that go with the responsibility of protecting an industry.
2. The economic impact of not having a beekeeping industry is insignificant in comparison to the rest of the agricultural sector. Therefore the economic impacts on other industries is the relevant factor that Government will make decisions on, not just beekeeping.
3. There is a direct correlation between movement restrictions and economic impact in unaffected areas. That is the limitation of spread has a positive effect on the economics of unaffected beekeeping businesses. The movement restrictions are part of the Biosecurity Act therefore claimable if financial disadvantage can be shown.
4. Organisation reform. Before one undertakes any form of change management or reform one has to ensure that the basics of the organisation are in place. That is proper financial management, compliance, contract management, direction and administrative processes. The Governance committee has now been set up and is scheduled to meet in February. The author of the article was asked to participate and be a member of the Governance Committee but unfortunately, has declined.
5. The Governance committee will be looking at what the NBA needs to be and therefore the structures that are required to support that vision.
6. On vision and direction, this is the first time that Strategic Planning and then IMPLEMENTATION has really taken place. It is now instilled in the culture of the Executive and is measured.

Yours Sincerely
Richard Hatfield,
President,
National Beekeepers Association

Outcome of Privacy Complaint

History
Some two years ago there was a series of incidents around the "B Peterson" letters resulting in a claim by a member, Nick Wallingford, (the Plaintiff) against the NBA for breaching his privacy. This was taken to the Privacy Commissioner and he judged that the NBA breached Principal 6 of the Privacy Act, however determined that two other matters did not breach the Act.

The Commissioner advised that he could take his case to the Complaints Review Tribunal.

After some correspondence, a case was taken to the Tribunal in August. The NBA chose to defend the case and duly responded.

The basis of response was that the 'BeeKeeper' was a publication therefore exempt from the Provisions of the Act. The Tribunal decided that this matter needed to be determined before any further consideration. All parties (NBA, Plaintiff, Privacy Commission) made submissions. The Tribunal then deliberated and decided in favour for the NBA, that is, "Strike Out" the claim.

Facts
The Plaintiff brought the case against the NBA, not the other way round, as has been purported in some email.

The Plaintiff was claiming upwards of $10,000 in harm, loss of opportunity and legal expenses.

The NBA has spent $3,200, in defending the action plus executive time.

The NBA is seeking costs. The NBA did have a choice, defend itself or pay some form of compensation.

Outcome
The outcomes are:-

- This has cost the NBA in time and money over the past two years well above what will be compensation in costs.
- The NBA was forced into a position where it had to defend its interests over a member's interests, an unfortunate situation for all concerned.
- The flow on effects to the NBA executive, executive secretaries and members has been detrimental.

Conclusion
The NBA will always defend itself against actions it considers it has reasonable grounds to do so.

The NBA will take action against others when it considers it is owed money or there is a serious breach of its rights or responsibilities.

The concept of win and lose does not sit well with me, or other members of the executive and I, saddened that this matter had to go so far. I think we need now to close this matter and move on. I hope there are no ill feelings left over from this matter.

A copy of the Judgement is available from Executive Secretary, PO Box 715, Wellington 6015.

Cover photo: *This is a photo of our Grandson Nathan Rush, helping Grandad one weekend. "The future beekeeper after Varroa maybe?"* ***Francis Pimm, Opotiki.***

The New Zealand BeeKeeper

THIS ISSUE

Letters to the Editor

Dear Sir/Madam,

Having actively farmed bees in the Franklin/North Waikato regions for over 45 years, where the main source of honey has been Clover, I realise the important role it plays in the sward, not only for forage value, but also Nitrogen fixation.

Over recent years, we have lived with problems such as the Clover Flea and, more recently, the Root Weevil, Notwithstanding these problems, I have noticed a major decline of Clover in the dairying pasture over the last 2-3 seasons, culminating in what I see now as developing into a major problem - many farms are becoming totally devoid of Clover. Two years ago when I started to become concerned at this problem, I was interested to see that, on farms which were previously strong Clover-producers, paddocks were totally devoid of Clover, yet there was a strip under the fence lines and on the strips of the races where Clover still flourished, indicating that management was causing the problem.

Yesterday (15th November) I drove from Matamata to Bombay and a classic example of this situation is visible around the Ngarua School - paddocks totally devoid of Clover, while the road frontages are a mass of flowering Clover. The paddocks over a large proportion of the country I pass by in the South Auckland/North Waikato area have a yellow tinge, with the only green evident from nitrogen showing in patches where the cows have urinated.

Some paddocks I look at seem to have a sward consisting of daisies, buttercup, and chickweed all competing with the grass.

What is the problem? Is the cause of the Clover decline due to a dramatic increase in the use of nitrogen fertilisers? Has the drive for a quick burst of pasture growth killed the Clover?

It would seem that you apply urea, get a burst of growth, have it grazed off, and finish up with a yellow and green polka-dot paddock. Now that we have successfully eradicated the Clover, how long will our grasses stand up to this forced growth?

When the Varroa Bee Mite was discovered in New Zealand last April, the farming community was one of the loudest voices calling on the Government to attempt an eradication programme. The annual value of Clover to New Zealand was valued at over 1 Billion dollars annually, yet we are now losing our Clover by what I believe is simply due to current farming practices.

John Wright

Supplied with letter

Experts warn against NZ nitrogen crutch

With pressure mounting to meet the demand for 'clean' produce, various experts have looked at more environmentally friendly farming methods and have agreed that indeed there is an alternative to chemicals. With 40% of wells in the Waikato, and 23% in Taranaki nitrate polluted, their advice couldn't be more timely. New Zealand's clean green image is at stake and farmers need to act before they're compelled to, by legislation.

Farmers should look to clovers rather than chemicals to meet the nitrate needs of pastures, Professor Tom Walker told Taranaki farmers in a series of seminars held throughout the region last year. Professor Walker, an emeritus professor of soil at Lincoln University, told farmers that under optimum conditions clovers could fix their own nitrogen, free from the air at the rate of 400 kilograms per hectare per year.

Clovers can only fix nitrogen with the co-operation of Rhizonbium bacteria which are critical to healthy pasture. Living independent of plants, rhizobium bacteria thrive in soil which has a good humus content. It follows that anything farmers do to their soil which kills the micro-life, robs them of as much as 80lbs per acre of free nitrogen annually. (Dr Harold Willis - The Rest of the Story).

When farm consultant Robin Boom reported on Dutch research that highlighted the dangers of high Nitrogen inputs, he said it was responsible for increased metabolic problems such as milk fever, Grass staggers and bloat.

Artificial Nitrogen also promotes ryegrass at the expense of white clover which is naturally higher in calcium, magnesium, boron, copper, zinc and cobalt than ryegrass. In his address, Professor Walker told the Taranaki farmers that grasses have an enormous need for Nitrogen, while clovers he said need none at all, as long as they have the right balance of other nutrients.

In Europe, he said waterways and water tables have become so polluted as a result of agricultural use of Urea and Nitrogen, that farmers are being stopped from using it, a situation which could happen in New Zealand, he warned.

Use None At All

Professor Walker said he'd prefer farmers to use no nitrogen at all. A cost analysis of trails at Raukura had shown, he said, that of two herds, one grazed on supplementary feed and Nitrogen dressed pasture, and the other not, the second herd returned a better profit. In addition he pointed out, the herd that produced the smaller profit had involved the team farming it in a lot more work.

Robin Boom said that nitrogen should not become a crutch. Only sick people need crutches he said and only sick farms need to be propped up with artificial nitrogen. When 40% of Waikato wells and 23% of Taranaki water wells are reported having nitrate levels above the World Health Organisation safety levels, it's time to look at the effects of continued application of artificial Nitrogen.

Acknowledgement: Rural News, June 5 2000

Letters to the Editor

Dear Sir,

On reading the Presidents Notes in the October issue of the New Zealand BeeKeeper I am concerned by his comments in relation to the finances of the NBA.

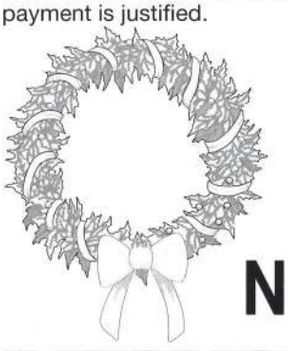
When I was a member of the Executive I became involved with the finances and had costs allocated to where they lay with the result every activity was accountable in respect of income and expenditure. On leaving the Executive I left the finances in a very sound position with ample cash reserves for an eventuality.

I find the comment the President made "I personally do not care how this came about" quiet irresponsible. He should care and make sure the situation does not occur again.

Perhaps if he had to pay thousands of dollars in levies over the years he may think twice about comments like that.

Having said that I would like to commend the action taken against those who dodge paying the levy and leaving the rest of us to carry them. I do realise that there are cases where non payment is justified.

Yours faithfully,
Gerard Martin



HAWKES BAY HANDS ON FIELD-DAY

Mark your diary for 3 February next year. There will be a 'hands on' field-day at John Berry's, 46 Arataki Road, Havelock North. John will demonstrate queen grafting but if there are any other aspects of beekeeping you would like included give him a ring on (06) 877-6205.

Start time is 9.00am and you should bring your own pot luck lunch. The Branch will provide tea, coffee, sugar, milk and maybe a surprise. There will be no charge.

Notice to Register an Apiary

From:
Registrar of Apiaries
AgriQuality New Zealand
Private Bag 50035
Mosgiel

NOTICE TO BEEKEEPER: RULE 15 of BIOSECURITY (NATIONAL AMERICAN FOULBROOD PEST MANAGEMENT STRATEGY) ORDER 1998

Take notice that the beehives situated at:

Chelmsford Road Extension, Invercargill, located on road side, south side of road, are not registered as an apiary as required by Rule 15 of the National American Foulbrood Pest Management Strategy

You are advised that you are required to register this apiary with the Management Agency at the address listed above within 30 days of the date of this notice.

If this notice is not complied with an Authorised Person may destroy these hives under the authority of Rule 25 of the Pest Management Strategy.

Dated at Invermay this Friday 1st of December 2000

Signed: _____

Authorised Person under the Biosecurity Act 1993 H:\AFB\FORMS\651.WPD

Procedure for reporting suspected unregistered apiaries

The NBA is asking all beekeepers to report unregistered apiaries to assist in exotic disease response and to lower your annual levy payments.

Note the location: Road, property, provide a good description, nearest rapid or fire number and the number of hives. A sketch or photograph would also assist. Grid reference if possible.

SUSPECTED OWNER OR REGISTRATION NUMBER:
DATE FIRST NOTICED:
DATE REPORTED:

Are you willing to make a sworn statement: Y/N

NOTE: All Information will be treated in confidence.
Apiaries located within the road side margin will also be reported to Transit for action. Hives without any registration number will be investigated immediately.

Tim Leslie, Executive Secretary
Fax: (04) 473-1081

Update from Head Office

Policies:
The Executive wishes the NBA to be as open in its dealings as possible. A policy protocol has been drawn up. All policies will be held in a policy folder at head office and signed by the President. They will be dated and reviewed at least annually on the anniversary of their implementation.

The first two policies are an Information Access Policy and a Mission for the Executives stance for handling Varroa. They appear below.

Information Access Policy
(Dated: 01/11/00)

As a general rule the NBA will be as open and transparent as possible with members. The Association will meet all reasonable requests (where possible) and reasonable numbers of individual requests for information within 48 hours of a request being lodged.

It is the policy of the NBA to have as much information stored electronically as practicable.

The following guidelines apply to information requests of a reasonable number:

Where a request is made electronically it will be acknowledged the day of receipt (not the day it is sent). If the information is stored electronically and easily available, it will be forwarded by electronic means by return email within 48 hours at no charge to the person/agency making the request provided the request can be dealt with inside of a maximum of 15 minutes.

Where a request is in writing (letter or fax) or by telephone it will be acknowledged within 48 hours. If an email address is supplied and the information can be sent by email the request will be replied to and met by email at no charge to the person/agency making the request provided the request can be dealt with inside of a maximum of 15 minutes.

If a request for information is made and the information has to be researched, a charge of $40.00 per hour (minimum charge of one hour) will be made for the time involved with the request.

Where hard copies are required to be made or are specifically requested, a charge of $0.10 per side of copying will be levied on the person/agency making the request.

Varroa:

The NBA Executive draft mission statement
for living with Varroa

Because the bee industry is now into the Stage II of the Varroa Management Programme and planning for stage III begins in early December 2000, the NBA Executive has adopted the following draft mission:

"To ensure that the economic, intrinsic and other values of beekeeping are sustained throughout New Zealand. This means:

- *That the commercial beekeeper remains financially viable.*
- *That the loss of domestic (hobbyist) beekeepers is minimised.*
- *That the environmental impacts of living with varroa are minimised.*
- *That bee product quality, diversity and viability is maintained.*
- *With a view to the long term eventual elimination of varroa, it retains its status as an unwanted organism."*

Your comments are welcome. Please forward them to Don Bell, Executive Member responsible for Varroa issues or Tim Leslie at the National Office.

Tim Leslie,
Executive Secretary

The BeeKeeper is to have a new structure from the first (February) issue of the New Year. These changes will include a new printer/publisher and a new editor.

The Executive wish to express their appreciation of the efforts of Bruce Doran and his team at Central Hawkes Bay Print during their time as printers of the magazine. They have always cheerfully accepted the need for flexibility in the content of the journal and particularly they have made allowances for late copy and have gone out of their way to print what was asked.
At times this has been a major ask!

The changes taking place are structural and represent what will be a major upgrade in the standard of "The New Zealand BeeKeeper." They absolutely do not reflect in any way on Central Hawkes Bay Print.

In the time since Harry and Janice Brown resigned Bruce has taken up a role as editor and this added burden has never appeared to be a bother. Thank you Bruce.

The future
For the February issue all inquiries, copy and letters should be passed to our Executive Secretary, Tim Leslie. Editorial Terms of Reference are being finalized and a publications committee is being put together. More of this in February.

Thank you. Lin McKenzie

Honey Marketing

by Bill Floyd

December Beekeeper
Thank you Peter and Graham!

The new Marketing Committee has been appointed by the Executive and had its first Planning meeting: our broad strategies for 2001 have now been set.

But first I have to say thanks to two retiring Marketing Committee members: Peter Bray and Graham Cammell.

I still remember my first meeting with Peter Bray, a tall lean laid back laconic lad with a razor sharp mind and an outstanding (encyclopaedic) knowledge of plants and bees and the international honey industry. I quickly learned to have my facts organised and correct when talking with Peter. Peter has been on the Marketing Committee with me from when I first joined the NBA and was involved for a number of years in setting up the levy structure previously to that.

Peter has made some significant contributions to the New Zealand honey industry: apart from the unstinting time he gave to the Marketing Committee, there's also his own company's innovations. Firstly the invention of the Honey Snappak. This promises to be one of the most exciting honey packaging innovations this decade: (just wait till that bites in and 5% of latte lovers are snapping some tawari or rewarewa into their morning fix); and secondly his honey quality systems which provides superb New Zealand varietal honeys that are second to none. I've often used his national varietal selection as a gift or to demonstrate the superb flavour ranges of New Zealand honey's. The quality and flavour differences never fail to thrill whoever I've given them to.

My thanks Peter; even when we disagreed I still respected your view. (I even think I might have been right once or twice. Okay, maybe once then.)

And now: Graham Cammell.

An innovator and a passionate beekeeper and honey enthusiast.

Graham was the first to develop a distinctive and unique product using Dr Peter Molan's research; and he is working on other exciting concepts right now: leading edge stuff!

Graham has served two separate terms on the Marketing Committee. He and I have spent many hours discussing industry issues. Some of you may not realise this, but it can be a bit of a political minefield at times developing a national view within beekeeping (grin: I know you knew that!).

And I always appreciated his counsel.

Thanks Graham: we agreed far more than not on most issues. I look forward to maintaining that dialogue with you.

Right everyone: I know that was quite a chunk of the column spent on talking about two retiring Committee members: but, I'm pleased to be able to use this column to record my appreciation of your contributions to the industry's generic marketing programme.

New Marketing Committee

The new committee is Phillip Cropp (Executive Committee sponsor), Jane Lorimer (Chair), Steve Olds (Deputy Chair), Barbara Bixley, Tony Taiaroa and John Hartnell.

I think the committee has a good geographical and demographic spread with a major New Zealand honey packer, a major international exporter, a light-pastoral type honey producer, a small packer operation, a major hive products added value producer marketer and an independent business management expert.

Having two executive members is a reflection of the importance the new Executive places on the industry's generic marketing programme.

And only two women and four men? Don't worry: Jane and Barbara are more than capable of standing their ground in any debate.

The Committee is working on the details of the Strategic Plan now: it'll be published in the February *BeeKeeper.*

Manuka Honey Demand Skyrockets

I've been told that virtually all stocks of manuka honey in New Zealand have gone! Peter Molan's article/interview in UK media has driven demand crazy over there. And I hear that buyers are trying to lock producers into forward contracts at very good prices. So if you produce manuka: now's the time to think strategically! Talk about longterm contracts: and be assertive: you deserve it!

Varietal Strategy for the NBA

The Marketing Committee's focus is now on our bush and dark pastoral honeys: the objective is to 'manukanise' them: ie develop consumer awareness of the antibacterial, anti-inflammatory and antioxidant values of those.

Manuka was always the spearhead brand: now's its time to rock and roll with our 3000 tonne plus bush and dark pasture crop: the research has reached the stage where we can start to define real and important consumer value potential in those honeys. 2001 is going to be an exciting year!

Never forget that the most potent display of superbug killing power yet, in a lab experiment by ESR, was actually achieved by a dark pastoral honey!

And of course: improve the price of our Cinderella bush and dark pasture honeys and they're no longer being used to dilute/extend premium clover honey.

And clover producers have better negotiating power. Mind you, the clover price is way up on last year already!

Again, as a producer: be aware, be assertive: prices are firming to increasing! Are yours?

STEVE LYTTLE makes a difference.

Good to see in the October Export News an article on Steve Lyttle and his partner Carolyn Ball and their honey company Honey Valley. Steve's honey fruit mixes are delicious on hot toasted bagels with Philadelphia Cream Cheese (I prefer the 'lite'.)

RATA HONEY hobnobs with the finest.

New Zealand catering guru, Ruth Pretty was contracted to provide a unique New Zealand dinner at the Chateau of French Champagne maker Veuve Clicquot, in France.

Her dessert (for some of the best palates in Europe); featured a high stack of zespri green kiwifruit with rata honey ice cream, brandy snap wafers and a passionfruit and orange caramel sauce washed down with a Veuve Clicquot Demi Sec Champagne! Wow that would have been sensational! That rata honey ice cream is just so seductive: so rounded and subtle and sublime!

Education Kits

A reminder about the very popular New Zealand beekeeping Kits for primary and pre schools. Contact Peter Smith producer of the kits at (03) 325-2258. Cost $29.95 or if you are an NBA member $24.95. Excellent photos and activities in both for children. It's an ideal gift for your local school or pre school, or for your own honey gate sales outlet as a display.

Organic Honey

An upsurge in demand for organic products to Europe and the US should be good news for organic honey producers and help to lessen our reliance on Japan. Overall world growth in organic markets exceeds 20% per annum a rate that has been sustained over the last five years according to Dr Hugh Campbell Director of the Centre for the study of Agriculture, Food and Environment at Otago University.

Let's hope some good decisions are made on organic certification and varroa treatment options: we'll keep you informed on that.

Cooking Fruits with Honey

Sandee's been checking some old cookbooks for substituting honey for sugar in recipes for cooking fruit. Cut down the amount of sweetener by half if using honey but taste for sweetness. A thin to medium syrup is best used with most fruit. Blend 1 cup of honey with 3 cups of water. Light mild honeys (eg clover!) are best for fruit to retain the fruit flavour, and not have the honey flavour overpower the fruit.

Pickling with Honey

When using honey for pickling the following will help you get it right. Once again light honeys are best. Boil the vinegar and spices together for the stated time and then add the honey, tasting the syrup as you add it to determine the sweetness. Bring the syrup back to the boil and pour it over the pickles and process.

Our honey Christmas cake is sitting maturing in the tin. Rewarewa is our favourite to use for that: truth is Sandee makes it six months out: and by Christmas the rewarewa honey and the chocolate and the brandied fruits and nuts have melded into a most marvelous melange of flavours (wow: alliteration plus!).

And so to all of you Merry Christmas and a happy New Year.

We know it's a busy time of year for beekeepers but hope you get some time off with family and friends. Despite varroa, and we are truly sorry for those beekeepers whose dreams and passions and incomes have been hurt by varroa, 2001 is looking good for the industry as a whole.

And the only way to reduce varroa's impact is to get the demand (and price potential) of our honeys up. We're committed to doing that.

Regards and best wishes
Sandee and Bill Floyd

The 2001 Marketing Committee:
(from left): Jane Lorimer, John Hartnell, Steve Olds, Barbara Bixley, Philip Cropp, Tony Taiaroa, Bill Floyd

National Beekeepers' Association of New Zealand Incorporated

Submission in Response to ANZFA Review of Health and Related Claims Full Assessment Report Proposal P153

October 2000

Background to Submission

This submission is made by the National Beekeepers' Association of New Zealand Inc (NBA).

The NBA represents the 5000 plus professional and hobbyist beekeepers of New Zealand.

The NBA is recognised by the New Zealand government as the official body of the pollination, honey and hive products industries in New Zealand.

The NBA is authorised by statute to collect a levy against beehive owners, and to use that levy for the development of the industry.

As part of its functions, the NBA operates the New Zealand Honey Advisory Service and the New Zealand Honey Research Unit (HRU). The HRU is a collaborative exercise with Waikato University.

The work of the NBA's HRU in researching the health and nutritional values of honey and hive products has been recognised internationally. In 1998 the American Honey Board entered a formal research relationship with the HRU, and has funded the HRU to investigate the nutritional and therapeutic values in American honey types.

Director of the HRU, Assoc Professor of Biological Sciences Dr Peter Molan MBE, is an internationally recognised researcher on honey. A summary of Dr Molan's work is attached (Appendix 1).

Submitted on behalf of the
National Beekeepers Association of NZ, Inc,
By: Bill Floyd
Floyd Marketing Ltd,
Contract Managers:
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Dr Molan is at present collaborating with research teams in the USA, UK and Australia on the nutritional and therapeutic values of honeys.

In 1998 Dr Molan was engaged by Australian honey company, Capilano, to prepare the case for honey to be gazetted as a medicine by the Australian TGA.

Dr Molan was successful: honey was gazetted as a medicine by the TGA in Australia in 1999.

Dr Molan is at present collaborating with USA research teams investigating the values of using honeys instead of refined cane sugars to improve athletic energy performance and muscle recuperation after exertion.

This research is expected to be completed March 2000.

However, the preliminary results have already shown that honey offers different nutrition function values to refined cane sugars: a copy of a media release provided by the USA's National Honey Board is attached (Appendix II).

Note that the final research results will not be available until March 2001, when they will be presented at the international Experimental Biology Conference. Depending on the timeframe for progressing P153, the NBA asks for the right to produce the final research results, in March, in support of our submission.

Background Ends

Proposal 153: The submissions of the National Beekeepers' Assoc of NZ, Inc.

This submission looks at the major issues the NBA has with the Proposed Regulation

Issue # 1: Promulgation of the Erroneous New Zealand Food Regulation 148.

The NZ Food Regulations 1984/Section 148 Labelling of Carbohydrate Food states: "...no honey...shall bear any statement stating or implying that the food value of the honey....is superior to that of sugar"

The NBA has always believed this regulation to be wrong in fact and of potential harm to both the honey industry and consumers, in that it denies consumers good information from which to make an informed dietary choice.

The current research being undertaken in the USA regarding the value of honey as a sports performance enhancer will, of itself, show the statement to be false. (Appendix II)

But notwithstanding that research, there is sufficient existing information on the role of honey in the diet to make this arbitrary discrimination against honey a nonsense.

And as the regulation is quite absolute in its 'judgement' we only have to prove it wrong in one facet to justify its being overturned. For example:

The Honey/Chromium value:

It is known that Chromium is an essential element required in our diet.

Chromium assists in the absorption and regulation of sugar in the blood; it helps regulate cholesterol, assists in the body's own manufacture of insulin, and assists in the processing of alcohol.

Lack of Chromium is believed to contribute towards adult-onset diabetes and heart disease.

Chromium occurs naturally in fruit, honey and sugarcane. But chromium in sugarcane is totally lost during the refining process to create refined cane sugar (sucrose).

Adult onset diabetes is on the increase in most affluent societies as is (coincidentally?) the consumption of refined cane sugar (sucrose). And (coincidentally) consumption of natural sugars (fruits and honeys) is on the decline in those same societies.

Health professionals have (rightly we believe) questioned the alarming increase in refined cane sugar/sucrose consumption but have mistakenly assumed that natural honey has the same negative potential.

A review of available literature on the honey/chromium value is attached (Appendix III).

Chromium RDI is 200mcg.

Chromium levels in honeys vary: limited data suggests a range of 0.3 - 0.6 (for Australian clover and stringbark honeys respectively); and 0.2-0.3 for a range of USA honeys. To be conservative, we have used the 0.2 as the basis for calculation (and are undertaking trials Nov/Dev 2000 to determine the range of chromium values in New Zealand honeys).

Therefore, at 0.2ppm, the RDA of chromium would be supplied totally by 1kg of honey per day; and 10% of the RDA would be supplied by 100g of honey.

(And if the honey had levels of 0.6ppm the RDA would be supplied by 33gm of honey per day.)

The chromium value alone is proof that honey is a preferable source of simple carbohydrates to refined cane sugar/sucrose. Given that the daily intake of sucrose from all sources is, in New Zealand, well in excess of 300gm per day, then a move to replace honey with sugar by individual consumers, to reach the 100gm per day consumption value, is easily (and enjoyably) achievable. Replacement of sugar with honey in hot drinks (teas and coffees) alone, let alone the traditional spreads use, would have a significant effect on achieving the daily target.

The Chromium value also becomes an incentive for innovative manufacturers to develop lines of foods and beverages with honey as a replacement: one New Zealand company already successfully markets a range of cola drinks that use honey instead of sucrose.

This Chromium connection alone justifies the reversal of the present unscientific and unjust regulatory discrimination against honey.

The literature also shows that honey has or may have a wide range of nutritional and health values. These include a gastroprotective effect, assistance in calcium retention, assistance in magnesium absorption, improvement in dystrophic condition, and significant differences between honey and other sugars relating to blood sugar levels.

A review of that literature is attached (Appendix III).

The conclusion from all of this material is that honey has very different health and nutritional values from sucrose (refined cane sugar).

But Regulation 148 has helped to perpetuate the erroneous attitude by health professionals that "honey is just sugar".

The Regulation also promulgates an erroneous and self-perpetuating attitude amongst regulatory authorities creating future Regulations.

As is now happening with ANZFA and P153.
The NBA submits that ANZFA is wrong in science and wrong in principle to treat "honey" as "sugar".

The NBA believes that the development of P153 should be used to address and correct the wrong of Regulation 148, instead of perpetuating it.

Specifically we recommend that:

4.2.2 (page 25) be altered to include, in the list of targets:

Option One/

"Encourage consumers to use natural honeys, instead of refined sugars/sucrose, when simple carbohydrates are used in the diet"

Option Two/

"Encourage consumers to use natural honeys and unrefined sugars, instead of refined sugars/sucrose, when simple carbohydrates are used in the diet"

Issue #2: P153 objective to "Decrease sucrose intakes"
The NBA has no quarrel with this target.

The NBA strongly agrees with the notion that refined cane sugar (sucrose) is not necessary in the diet, and can be counterproductive to good health.

This is because the refining process removes chromium and other micro nutrients found naturally in sugarcane and fruit and honey.

It should also be noted that honeys contain very little sucrose content (sucrose content of New Zealand honeys averages less than 2%).

Issue 3: The Inference that Current Practices by Food Marketers is Jeopardising Public Health and Safety.
ANZFA lists its Policy objectives (1.1 Policy Context) as:

1. Provision of adequate information relating to food to enable consumers to make informed choices and to prevent fraud and deception
2. The promotion of fair trading in food
3. The promotion of trade and commerce in the food industry
4. The promotion of consistency between domestic and international food standards where these are at variance

Item 1: "Public Health and Safety":
As this is given as the prime purpose: can ANZFA show the information used to identify that there is a present and real danger to the public good from current food labelling practices.

P153 appears to imply that this concern, (ie the issue of public safety), is in the area of Nutritional Function Claims. ANZFA states for example, that current legislation is being differently interpreted by various parties, creating confusion.

The NBA asks ANZFA to explain what this 'confusion' is and how it has been measured: and to what degree public safety has been compromised. What evidence is there of health risk to consumers: what type of risk and what volume of risk?

If in fact there is no authoritative, "convincing", or even "probable" statistical evidence of public harm, (using the rigorous evaluation definitions suggested in P153's own procedures), then the NBA questions the need for a regulatory approach to Nutrition Content Claim and Nutrition Function Claim legislation.

The compliance costs to provide a "totality" of research, to get virtual universal endorsement of potential professional opinion on food matters, to conduct complex trials, is simply beyond the scope of most small producer groups and small manufacturing companies.

We note that in a New Zealand television programme (the Holmes Show Oct 2000) the DG of ANZFA was asked why compulsory labelling of saturated fats content was not required on foodstuffs. Instead the Regulations only ask for Total Fat content. The reply was that it would be a major cost to small foods manufacturers. The interviewer then advised that the cost per analysis was $40. The DG persisted that this was a high cost and should not be imposed: despite the New Zealand Heart Foundation spokesperson on the same programme insisting that such information was essential for healthy diet choices.

The cost of obtaining the evidence required by P153 could be in the hundreds of thousands of dollars, not $40.

And yet the complex and costly procedures of P153 will in virtually all cases apply to existing products; products that have made Nutrient Content and Nutrient Function claims for many years, even decades. And in the case of honey: thousands of years!

The imposition of such costly and complex procedures will have the effect of reducing or completely stifling competition in some areas of food commerce; and will dramatically increase production costs (to the eventual cost of consumers).

It will also stifle innovation. This is because innovations traditionally come from small companies and industry groups seeking to find differentiation from their larger competitors. Such small companies will not have the resources to meet the (unnecessary!) research trial costs imposed by P153.

The NBA also notes that such negative impacts are in direct conflict with ANZFA's avowed ambitions of :

- "reducing the level of prescriptiveness to facilitate innovation."
- "That the impact of regulation on competition should be minimised."

Again, we have to stress that the proposed changes to Nutrition Content Claims and Nutrition Function Claims by producers/processors and marketers will place considerable additional costs on the operations of those entities.

In some cases it will be beyond the scope of some to continue in competition against others.

The result is a loss of competition, a loss of innovation, a loss of consumer choice, and increase in costs to the consumer.

Also: and perhaps this should be the prime determinant: P153 will result in a reduction in the general health of the community through denial of proven, cost effective foods with positive nutritional functionalities.

Recommendation:
Using P153's Continuum model as the basis for separating claims by type, the NBA believes that the Fair Trading Act is an appropriate regulatory structure to police commercial activities in the areas of:

- Nutrition Content Claims
- Nutrition Function Claims
- Enhanced health claims

However, the NBA believes that the proposed regulations and policing provisions in P153 for Risk Reduction Health Claims are acceptable: **but only if** ANZFA can demonstrate such action has been proven necessary for the public safety.

And the NBA agrees with a more rigorous approach to Therapeutic or Prophylactic Claims than for other claims.

This is because the NBA believes that a distinction should be made between "wellness maintenance" and "treatment of established and health threatening disease or illness".

The former does not jeopardise a condition or risk worsening a condition, it does not threaten health.

Therefore the degree of evidence required should not need to be "convincing', as defined in 10.7 Step 3, P153.

The NBA would accept a proof threshhold of "probable" or "possible" for Nutrition Content Claims, Nutrition Function Claims and Enhanced health claims. But only if ANZFA could demonstrate that this would be necessary for public safety.

These proof threshholds are defined in 10.7 Step 3, P153.

But note, in agreeing to this, the NBA expects ANZFA to use the same "convincing argument standard" to show a threat to public safety, as they propose being used against food producers defending the right to be in business.

The NBA doubts such a threat exists and urges ANZFA to adopt a reasonable, intelligent and constructive approach to the issue.

Issue #4: An ANZFA Bias Against Fresh and Natural, Unprocessed Foods!
ANZFA declares it's two major dietary objectives as being:

"Increased consumption of breads and cereals" and "Increased consumption of fruit and vegetables"

ANZFA is also strongly concerned about the health threatening issues of sodium, sucrose and saturated/trans fatty acid levels of consumption: and specifically states that it has the objectives of reducing consumption of these.

But, most sodium/sucrose/fat intake is from the consumption of processed manufactured low-density foods: therefore it follows that ANZFA must support and actively encourage the practice of consumers eating fresh and/or minimally processed high density foods if it is to achieve those reductions.

But the Substantiation Framework proposed in P153 with its extreme levels of 'Evidence Totality' and the need to provide "convincing" evidence as defined in 10.7 Step 3; is in effect the level of proof required for potentially dangerous drugs and pharmaceutical compounds.

As we have already stated, there are massive costs associated with the compilation of such evidence. And only companies with high added-margin operations will be able to afford compliance. They can create the products and research that comply with the letter of, if not the spirit of, the Standard.

Or, as is more lilely to be the case, they can enjoy increased commercial opportunities because highnutrient natural and unprocessed food manufacturers and producers will not be able to promote the consumer values in these better and more desirable foods.

High profit, high added-margin manufacturers are those producing the icons of low nutrient density foods (and beverages) that ANZFA has identified as being community health threats.

And ANFZA, through P153, is ensuring that fresh fruit and vegetable processors and marketers, honey producers and the like, will not be able to fund the "overkill research" and therefore consumers will be denied being given encouragement to eat these inherently better and more beneficial products.

In effect, through P153, ANZFA is creating an environment of support for the very companies creating the present dietary problems; and ANZFA is stifling growth and development of the industries that are attempting to provide the solutions.

Issue#5: The Unreasonable and Obstructive General Eligibility Criteria.
The NBA appreciates the desire to promote foods of good nutrient density: and we understand the motivations behind the concept of a 10% RDI requirement.

However, natural honey, because it has been simplistically and wrongly decreed as having no more nutritional value than refined cane sugar, it is not listed as a Primary Food, and it is not listed as having any RDI value.

Therefore, the NBA finds itself in the absurd situation where, even if the industry were to meet all of the Substantiation Procedures required to make a Nutrition Function Claim; and even if there was a "convincing totality of evidence", (ie the very highest level of proven efficacy as is applied to dangerous and lifethreatening drugs), even then, many of the justifiable Nutrition claims could not be made.

Because there is no RDI for honey.

That is a nonsense and a farce. And illustrates the fundamental flaw in P153 as relates to natural honey.

That is, that natural honey is treated the same as low-nutrient density refined cane sugar (or sucrose).

Recommendation:
That Honey be exempted from 10.13 General Eligibility Criteria.

Conclusion for Submission to P153:

The NBA has looked to the development of P153 as an opportunity to address the anomolies of New Zealand Food Regulation 148.

In a New Zealand TV Holmes Show programme earlier this year Ministry of Health officials were questioned as to why the difference between Australia and New Zealand on honey being able to be marketed as a medicine.

In the programme a UK boy was shown to have had his life saved by the application of New Zealand manuka honey dressings.

New Zealand Ministry of Health officials could not defend their stance other than to say it was "the law" and they had to administer it.

The New Zealand Honey Research Unit (HRU) at Waikato Hospital is leading the world in research into honey health and therapeutic values.

Through the work of the HRU there is already compelling evidence that a more scientific and open attitude is required by lawmakers in categorising and assessing honey as a food and as a medicine.

P153 is concerned with food values: ANZFA has the opportunity to redress the existing anomolies as relates to Honey as a food...

We urge that is does so.

If P153 is passed as per the draft provided to us for submissions, it is in effect a declaration of commercial aggression by ANZFA against honey, and against the New Zealand beekeeping industry.

And most importantly, it is cheating consumers of proven health giving choices.

It cannot and will not be tolerated. And will become a major public issue.

We believe our arguments are just and will prevail with the public if not the regulatory authorities: but in achieving that justice for ourselves we are concerned that much of the good intention in P153 will be lost.

We urge that ANZFA reconsider P153 in relationship to the draconian impact it will have on honey, and we urge that ANZFA recognises honey as a food with a unique nutrient value to the community.

Submission Ends

National Beekeepers Association of NZ, Inc

Proposal Submitted on behalf by, and any correspondence on this submission to:

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25 October 2000

Attached:
Appencices I-III

ANZFA Submission P153: Appendix 1
Summary of honey-related presentations by Assoc Prof Peter Molan MBE. Director of the New Zealand Honey Research Unit, Waikato University:

Public lectures
Royal Society of New Zealand, in Rotorua (2000), seminar series at the N.Z. Agricultural Fieldays (2000), Hamilton Science Festival (2000), University of Waikato College Tauranga Evening Lecture Series (2000).

Presentations to professional groups:
Naturopaths at the College of Naturopathy, London (1993), workshop on Apicultural Research, Ruakura (1994), members of the Health Food trade (1995), Vascular Workshop at Waikato Hospital (1995), health professionals in the Wanganui region, at Wanganui Base Hospital (1996), School of Biological Science, University of Auckland (1997), seminar organised by TRADENZ on the export marketing of manuka honey (1996), School of Biological Science, University of Wale Institute, Cardiff (1997), Wound Healing Research Unit, University of Wales Medical School, Cardiff (1997), Waikato School of Postgraduate Medicine (1999), NZ Wound Care Society seminar on Wound management (1999), invited audience of medical professionals in Vancouver, Canada (1999), tourism operators in Rotorua (1999), seminar on wound management at the Royal Newcastle Hospital (Australia) (1999), members of the health food trade in Sydney (1999).

Presentations at medical conferences:
National Wound Care Conference, Harrogate, U.K. (1996), Australian Wound Management Association Conference, Brisbane, Australia (1998), National Infection Control Conference, Rotorua, NZ (1999), Apimondia Congress, Vancouver, Canada (1999), Vascular Conference, Hamilton, NZ (2000), New Zealand Institute of Medical Laboratory Science Conference, Rotorua, NZ (2000), First World Congress on Wound Healing, Melbourne, Australia (2000).

Appendix I ctd: *selected publications by Assoc Prof Peter Molan.*

Molan, PC: Why honey is effective as a medicine. 1. Its use in modern medicine. Bee World (in press).

Molan, PC: The role of honey in wound care. Journal of Wound Care (in press).

Cooper RA, Molan PC, and Harding KG (1999): The effectiveness of the antibacterial activity of honey against strains of Staphylococcus aureus isolated from infected wounds. Journal of the Royal Society of Medicine (in press).

Molan PC (1999): The role of honey in wound care. Journal of Wound Care (in press).

Cooper RA, and Molan PC (1999): The use of honey as an antiseptic in managing Pseudomonas infection. Journal of Wound Care (in press).

Molan PC (1998): A brief review of honey as a clinical dressing. Primary Intention (The Australian Journal of Wound Management) 6: 148-158.

Molan PC, (1998) The limitations of the methods of identifying the floral source of honeys. Bee World 79: 59-68.

Brady NF, Molan PC, and Harfoot CG (1997): The sen-sitivity of dermatophytes to the antimicrobial activity of manuka honey and other honey. Pharmaceutical Sciences 2: 1-3.

Allen KL, and Molan PC (1997): The sensitivity of mastitis - causing bacteria to the antibacterial activity of honey. New Zealand Journal of Agricultural Research 40: 537-540.

Molan PC (1997): Honey as an antimicrobial agent. In: Bee Products: Properties, Applications and Apitherapy eds Mizrahi A, and Lensky Y, Plenum Press, New York.

Wood B, Rademaker M, and Molan PC (1997): Manuka honey, a low cost leg ulcer dressing. New Zealand Medical Journal 110: 107.

Appendix II: *Media Release by the USA National Honey Board re ongoing research into Honey's Use as a superior energy source for athletes:*

New Study Suggests Honey May Increase Recuperation after Workouts Natural Sweetener May be an Ideal Complement to Protein Supplements

ORLANDO... June 22, 2000... A research study presented today at the annual National Strength and Conditioning Association meeting suggests that combining honey with a protein supplement may boost post-workout recuperation and favor better blood sugar maintenance after exercise. Protein supplements are widely used to increase one's intake of dietary protein, which increases among individuals engaged in intense activities such as weight training, running, step aerobics and many competitive sports. Previous studies have shown that a combination of carbohydrates with a protein supplement can boost muscle energy recuperation and may favor better response to training.

"We were pleased to find that powdered honey promoted favorable changes in post-exercise markers of metabolism equal to that of the current standard, maltodextrin," says Dr. Richard Kreider, lead investigator of the study and Director of the Exercise and Sport Nutrition Laboratory at the University of Memphis. "We also found that the group receiving honey as the carbohydrate source did not display the typical drop in blood sugar 60 minutes after taking the other forms of carbohydrates. These findings support our previous study on honey."

The current study involved a group of 39 weight trained athletes both male and female. Subjects underwent an intensive weight lifting workout and then immediately consumed a protein supplement blended with either sugar, maltodextrin or honey as the carbohydrate source. Only the honey group maintained optimal blood sugar levels throughout the two hours following the workout. Additionally, subjects taking honey showed favorable changes in a hormone ratio that indicates a positive muscle recuperative state. "Our data suggest that honey functions well in all of the aspects associated with post-workout recuperation and energy repletion. In addition, honey appears to stand out as perhaps a better source of carbohydrate to ingest with post-workout protein supplements. These findings support our previous study presented at the annual Experimental Biology meeting in April," added Dr. Kreider. "In addition to promoting muscle recuperation and glycogen [carbohydrates stored in muscle] restoration, honey-protein combinations also seem well suited to sustain favorable blood sugar concentrations after training."

This study is the second of a series of studies funded by the National Honey Board at the University of Memphis Exercise and Sport Nutrition Laboratory. Located in Longmont, CO, the National Honey Board is a non-profit organization that develops research and consumer information programs to increase the demand for honey. The study was done in collaboration with IMAGINutrition, a nutritional research and technology think tank located in Aptos, CA.

Appendix III: *Literature regarding Value of Chromium in the diet and relationship between chromium and honey. Literature regarding other nutritional and health values in honey.*

Group One:

1. Davies S, McLaren Howard J, Hunnisett A, Howard M. Age-related decreases in chromium levels in 51,665 hair, sweat, and serum samples from 40,872 patients-implications for the prevention of cardiovascular disease and type II diabetes mellitus. Metabolism 1997; 46(5):469-73.
2. Grant KE, Chandler RM, Castle AL, Ivy JL. Chromium and exercise training: effect on obese women. Med Sci Sports Exerc 1997; 29(8):992-8.
3. Hahdi GS. Chromium deficiency might contribute to insulin resistance, type II diabetes mellitus, dyslipidaemia, and atherosclerosis. Diabet Med 1996; 13(4):389-90.
4. Houtman JP. Trace elements and cardiovascular disease. J Cardiovasc Risk 1996; 3(1):18-25.

5. McCarty MF. Fish oil and other nutritional adjuvants for treatment of congestive heart failure. Med Hypotheses 1996; 46(4):400-6.
6. Mahdi, GS. Coronary risk factors in people from the Indian subcontinent [letter; comment] 950710. Lancet 1995; 345(8955):982-3.
7. Overholser KA, Laughlin MH, Bhatte MJ. Exercise training-induced increase in coronary transport capacity. Med Sci Sports Exerc 1994; 26(10):1239-44.
8. Simon HB. Patient-directed, nonprescription approaches to cardiovascular disease. Arch Intern Med 1994; 154(20):2283-96.
9. Thomas VL, Gropper SS. Effect of chromium nicotinic acid supplementation on selected cardiovascular disease risk factors. Biol Trace Elem Res 1996; 55(3):297-30.

Group 2:

TITLE: Prevention of ethanol-induced gastric lesions in rats by natural honey, and its possible mechanism of action.

AUTHOR(S): Ali-ATMM

SOURCE (BIBLIOGRAPHIC CITATION): Scandinavian-Journal-of-Gastroenterology. 1991, 26: 3, 281-288; 28 ref.

LANGUAGE OF TEXT: English

ABSTRACT: Drugs and/or honey were administered subcutaneously or orally to 48-h fasted rats at different time intervals before oral administration of ethanol (0.5 ml/100 g). Mucosal damage and pH were measured 1 h later. Honey afforded protection against gastric damage, and reversed the changes in pH induced by ethanol. The effects of honey were dose- and time-dependent. Thus, pretreatment with honey (1.25 g/kg) 30 min before ethanol provided more than 80% protection. On the other hand, administration of honey simultaneously with or 5 min after ethanol failed to offer protection. The cyclooxygenase inhibitor indomethacin (IND) did not alter the protective effects when given before or after honey. The protective effects of honey could be reversed by treatment with the sulphydryl (SH) blocker N-ethylmaleimide (NBEM). Combined IND and NEM treatment caused greater reduction of the protective effects, but the values were not significantly different from those obtained with NEM alone. Thus, the gastroprotective effects of honey appeared to be mediated through SH-sensitive processes. Furthermore, the protective effects were supported by both macroscopic and microscopic findings. It is suggested that honey may be used clinically in preventing/reducing ethanol-induced gastric lesions in humans.
PUBLICATION TYPE: Journal-article
ACCESSION NUMBER: 921447226

TITLE: Differential effects of honey, sucrose, and fructose on blood sugar levels.

AUTHOR(S): Shambaugh-P; Worthington-V; Herbert-JH

SOURCE (BIBLIOGRAPHIC CITATION): JMPT,-Journal-of-Manipulative-and-Physiological-Therapeutics. 1990, 13: 6, 322-325; 30 ref.

LANGUAGE OF TEXT: English

ABSTRACT: A total of 33 students were involved in an oral glucose tolerance test comparing sucrose, fructose and honey. After an overnight fast students were given a 75 g carbohydrate load of sucrose (S), fructose (F) or honey (H) in 250 ml water. The blood sugar after 0, 30, 60, 90, 120, 180 and 240 min were 87, 135, 114, 95, 87, 80 and 84 mg/100 ml, respectively for H(n=22), 83, 140, 115, 94, 88, 83 and 88 mg/100 ml, respectively for S(n=22), and 86, 93, 93, 90, 88, 87 and 83 mg/100 ml, respectively for F(n=22). The areas under curve for H, S and F were 4405, 6596 and 6323, respectively. Many volunteers reported symptoms of discomfort and refused to repeat after first testing, but H produced fewer symptoms. It is suggested H should be recommended as a sweetener over S.
PUBLICATION TYPE: Journal-article
ACCESSION NUMBER: 921441348

TITLE: Rational use of honey in the diet of diabetics.

ORIGINAL NON-ENGLISH TITLE: Uso razionale del miele nell'alimentazione dei diabetici.

AUTHOR(S): Peretti-A; Carbini-L; Dazzi-E; Pittau-L; Spanu-P; Manai-M

SOURCE (BIBLIOGRAPHIC CITATION): Clinica-Dietologica. 1994, 21: 1, 13-21; 22 ref.

LANGUAGE OF TEXT: Italian

ABSTRACT: For a mean of 26 days, 28 men and women, mean age 47.8_16.8 years, with insulin-dependent diabetes, non-insulin-dependent diabetics (NIDDM) or insulin-treated NIDDM, in a good state of glycometabolic compensation, were given a diet providing 1600 to 2500 kcal daily rich in fibre (40 g) with supplements of honey (up to 7% of total energy intake). There was a significant decrease in fructosamine and in basal glucose values in blood and stabilization of post-prandial glucose values after treatment.
PUBLICATION TYPE: Journal-article
ACCESSION NUMBER: 951406856

Group 3:

Akhtar MS; Khan MS (1989): "Glycaemic responses to three different honeys given to normal and alloxan-diabetic rabbits." Journal of the Pakistan Medical Association 39 (4): 107-113.

Crapo P A, Olefsky JM (1983): "Food fallacies and blood sugar." New England Journal of Medicine 309 (1): 44-45.

Helm BA, Gunn JM (1986): "The effect of insulinomimetic agents on protein degradation in H35 hepatoma cells." Molecular and Cellular Biochemistry 71 (2): 159-166.

Katsilambros NL, Philippides P, Touliatou A, Georgakopoulos K, Kofotzouli L, Frangaki D, Siskoudis P, Marangos M, Sfikakis P, (1988): "Metabolic effects of honey (alone or combined with other foods) in type II diabetics." Acta Diabetologica Latina 25 (3): 197-203.

Lipkin EW, Teller DC, de Haîn C, (1983): "Dynamic aspects of insulin action: synchronization of oscillatory glycolysis in isolated perifused rat fat cells by insulin and hydrogen peroxide." Biochemistry 22 : 792-799.

Macdonald I, Turner LJ, (1968): "Serum-fructose levels after sucrose or its constituent monosaccharides." Lancet i (547): 841-843.

Rumessen JJ (1992): "Fructose and related food carbohydrates. Sources, intake, absorption and clinical implications." Scandinavian Journal of Gastroenterology 27 : 819-28.

Samanta A, Burden AC, Jones GR (1985): "Plasma glucose responses to glucose, sucrose, and honey in patients with diabetes mellitus: an analysis of glycaemic and peak incremental indices." Diabetic Medicine 2 (5): 371-373.

Simko V (1980): "Increase in serum lipids on feeding sucrose: the role of fructose and glucose." American Journal of Clinical Nutrition 33 (10): 2217.

Knott EM, Shukers CF, Schlutz FW (1941): "The effect of honey upon calcium retention in infants." Journal of Pediatrics 19: 485-494.

Ladas SD, Haritos DN, Raptis SA (1995): "Honey may have a laxative effect on normal subjects because of incomplete fructose absorption." American Journal of Clinical Nutrition 62 (6): 1212-1215.

Schlutz FW, Knott EM, (1938) "The use of honey as a carbohydrate in infant feeding." Journal of Pediatrics 13: 465-473.

Shambaugh P, Worthington V, Herbert JH (1990): "Differential effects of honey, sucrose, and fructose on blood sugar levels." Journal of Manipulative and Physiological Therapeutics 13 (6): 322-325.

Maglietta V (1968): "Sull'Impiego del Miel in Pediatria." [On the use of honey in paediatrics] Clinica Pediatrica 50 (9): 589-601.

Translation:

Although honey has always been used in medicine scientific study on its properties have started only in recent years. First studies by Sacks (1932) showed that honey has more complex action than glucose.

Follows general information on honey chemical composition and data on sugars, minerals and vitamins in honey (not translated).

A factor called "colinergic" has recently been found in honey: it is similar to acetylcholine and to a bactericide substance sensitive to heat called "Inhibin"

Pharmacological properties of honey are due to its sugar content. Trials on frog's heart showed that honey stimulates stronger and more regular heartbeat than glucose (Schiller) and trials on cats and dogs showed that there is a catalyse substance in honey that promotes glucose action on the myocardium (Schimert and Kraemer).

Trials on frog's heart showed same results: the factor that promotes sugar utilisation from muscles was called "Glykutile" (Kock)

These results have been confirmed in trials on frog's heart using electrocardiograph (Lenzi). More recent trials have confirmed the same results: mice that swam until exhaustion recovered far more quickly when fed with honey than when fed with glucose (Ribble, Kraemer).

Sudhof found that artery's muscles in a Sawasaki solution develop more glycogen with glucose (2%) than with honey (0.2 -0.4%); lactic acid follow the same pattern.

It is therefore confirmed that honey properties are not only due to sugar content but to other substances and in particular to acetylcholine. (Goldschimdt, Marquard, Vogg, Neumann & Habermann)

Acetylcholine action is essential for myocardium activity (Bulbring & Burn, Briscoe & Burn).

Biological properties of honey have been studied through the glycemic curves. Poggioli & Coppini have found that in guinea pigs injection with honey creates a higher and more persistent accumulation of glycogen in liver, muscles and heart than injecting only glucose.

Lenzi & Pellegrini have been studied glycemic, lacticemic and piruvicemic levels in people after injecting honey (10 cc of honey without protein concentrated at 40%) and a glucose solution.

Glycemia level increases of only 0.95% with honey against 4.6%-5.9% with glucose.

Clinical trials have shown again different results when giving glucose solution or honey solution to patients.

Honey has therefore a different action that glucose. The factor that can explain this difference could be the content of levulose in honey, that has different biochemical action.

Honey is often prescribed for diabetes for its high fructose content: the proven presence of acetylcholine in honey is probably the reason why the human metabolism can easily utilise honey.

Trials in paediatric have highlighted the very quick absorption and utilisation of honey in comparison to glucose.

Farioli investigating the glycemic curves in unweaned babies after giving them sugar and honey found out that the highest level reached in half an hour after the feeding was significantly lower with honey than with sugar. Furthermore elimination of excessive glucose was faster with honey.

Schlutz & Knott studied babies between 2 to 6 months and kids between 7 and 13 years. Within 15 minutes honey is absorbed far more faster than sugar and the glycemia level gets back to normal level faster.

Pacchioli & Mengoli studied the influence on faeces on 11 unweaned babies where 5% - 20% of honey was added to milk instead of sugar. No significant variation was observed in the pH level but there was an increase in the number of Gram+ germs. Therefore honey can be used instead of sugar in feeding babies without any side effect and with the advantage of eliminating any possibility of faeces putrefaction caused by milk. Sugar fermentation in the intestine is directly related to the degree of absorption of the sugar; the acidification action is the highest for lactose and caramelised sugar, decreasing gradually for maltose and honey and is the lowest for saccharose and glucose.

Commonly honey is said to have a laxative action: this action is nil in honey commercially heated while is the highest in honey still in comb and is due to volatile and sensitive to heat substances, such as ethereal oil (Giavarini) and maybe to an anthracenic glucose that is oxidised in the intestine in "ossiantrachinon", an activator of peristalsis in intestine (Spottel).

The anti-fermentation action in honey is attributed, besides its sugar content, to a bactericide factor called "inhibine"; even if its composition is not yet well defined we know that it is a protein substance, sensitive to heat and inactive at ultraviolet rays. It is normally found much more in honey produced in highland area than in flat areas.

Gyula De Szilvay, with in vitro trial, showed the specific action for many bacillus (salmonellae B, Sighae, Escerichia Coli, etc).

Pharmacy-biological action in honey is due to its sugars content as well as vitamins and minerals (above all calcium, phosphorus, magnesium, iron); normally mineral content is higher in dark honey.

Knot, Shakers & Schulz have studied calcium absorption in 14 babies and found that the quantity of calcium absorbed was higher when honey was added to milk, independently to the milk used and the addition of vitamin D. They also found that the quantity of magnesium absorbed by babies was higher when adding to skim milk honey instead of corn syrup. The average retention of magnesium per day was 24 grams for milk with honey against 16 mg for milk with corn syrup. Using skim milk with lactic acid the values found were 6 mg for honey against 0.4 mg with corn syrup.

Honey contains small quantity of iron and copper. There are not yet final results on this, but we have indications that honey can increase the haemoglobin in blood.

Haydak, Palmer & Tarquay have studied honey in anaemia in mice. 160 mice were divided into three groups: the first group was fed with whole milk with 20% dark coloured honey added, the second one with milk with light coloured honey and the third with milk and sugar (same %). After 15 weeks the haemoglobin level for the first group raised from 10.5 to 11 grams %; after 10 weeks the level went down to 4 grams % for the second group. In the third group the level decreases regularly down to 2.9 grams %. When dark honey was added to the diet of mice of the third group the level gradually raised but when light honey was added there was a decrease down to 3 grams %. The conclusion is that dark honey can be used to prevent anaemia in mice while light honey is less efficient.

Emerich fed 6 groups of kids (same age and same level of haemoglobin in blood) with milk and honey and only milk. Haemoglobin level raised in the groups where honey was added to milk.

Rolleder studied 29 couples of kids of same height, weight and haemoglobin level under a standard diet with the addition for one person of each couple of an extra tablespoon of honey. After six weeks the level of haemoglobin was increasing for those kid with honey in their diet.

Honey has been used in paediatric since the beginning of the century as an energetic food as well as for its trophic action.

Comby in 1926 fed 200 dystrophic kids with 1-2 tablespoons of honey per day and noted a significant increase in their condition. Magni had very good results changing sugar for honey in the Czerny-Kleinschmidt diet. Muniagarra in 1931 found out that in a diet for rehabilitation after an hydraulic diet for dispesis, sugar content could be brought to 10-15 kg to 40-50 kg per day without any fermentation problem.

Stancanelli in 1933 found that using doses of 2-3% of honey instead of sugar in the diet for dystrophic people with stomach problems was fixing the problem without affecting the entherite.

Many other studies have confirmed these results.

Other studies have been carried on immature babies: Szentkiralj & Obal adding 5-10% of honey to milk obtained an increase in weight from 588 to 710 grams in a month time. Alison and Narbouton added 10 grams every kg of body weight and obtained very good results.

A vast and unanimous result on the advantage of feeding infants with honey led to the preparation of commercial formulation of baby food with milk and honey: one of the most recent in Italy is 2/3 of milk powder with 2% of whole milk and 5% of honey (its commercial name is "Milupa"). On this preparation there many studies on its effects on healthy babies (Muller, Lehmaker, Castel), babies with dystrophy and dispesia (Hubner, Tison), premature babies (Alison and Barbouton, Jung, Schmoger, Von Vanura) and more recent work by Chappaz and Larcher.

Appendix III Ends

From the Franklin Beekeepers Club Newsletter

Hivemaster's Report

I wish to report that the queens purchased from David Yanke, were put into the club hives with the assistance of club members, at our meeting of the 8th of October. The queens were put into hives 3, 4, 5 and 6. The old queens were put into separate additional hives so that we could make the most of the old queens laying capacity. These will be reunited after killing the original queen. This ensures the new queen is accepted into the parent hive.

At this meeting a nucleus was made up for a club member, thus giving newer members an opportunity of seeing how best this is done.

On 20/10/00 with the help of Des, all hives were checked and fed. Unfortunately the old queen's colony taken from hive three has died out, mainly due to a lack of bee numbers and robbing. It is important that colonies are set up with sufficient bees to survive.

On 13/11/00 again the with support of Des, all hives were checked and fed with sugar syrup and supered up as required.

May I take this opportunity to wish members a Happy Christmas and a prosperous new year.

Peter

Education

Providing we get sufficient numbers attending, we will once again be running a course for beginners at the Pukekohe High School, commencing in July 2001. Tell those friends of yours about it.

December/January in the Hives.

Supering up - taking of a few frames. If your preparation for the coming nectar flow has kept apace with the Newsletter, you should now be able to lay back and dream of the festive season and gathering boxes of glorious honey. The speed at which a strong hive can bring in nectar, needs to be closely watched however, and should you get down to three or four empty frames, another super should be added. If, as often happens, you have placed all four supers on the hive, and the belt on your trou has broken and embarrassed you, resulting in not having spare gear to cope with incoming nectar, don't worry but just remove any full frames and extract overnight, and replace in the morning for the bees to refill.

Taking off a few frames.

President Bob mentions our coming honey competition of next March. Our February Newsletter will carry our honey competition rules, but a lot of beekeepers like to take off a little sample of the new season's honey, and practising for this event may make you more perfect.

As the bees process the nectar into honey, by changing the nectar sugars into honey sugars, they at the same time reduce the amount of moisture to between 18 and 20%. The nectar at this stage has become your thick honey and is then placed into cells, which when full, are capped over with a wax seal. In this state it has been known to keep for 4000 years in the even temperature of the Egyptian Tombs and taste and quality is not affected at all. The bees within the hive maintain an even temperature of about 34°C which prevents granulation.

Moisture content within the honey must also be exactly right at the above 18 to 20%, for if it is more than this it will ferment and unlike mead, fermented honey is not nice to taste buds. The moisture content is too great if when removing the frames, the capping is less than 90%.

Small amounts of honey can be taken off by using a steel jam spoon to gently scrape down to the foundation. With practice this can be done without too much damage. Put the honey and wax into a muslin or clean potato sack and strain overnight by suspending over a basin. The finer the strainer the purer the honey for the competition. For variety of taste and texture, go down towards the brood to honey collected from the earlier sources, for another frame and repeat the process above. For the competition, place in clear 500g plastic jars.

For the granulated section, you need to add and stir in 5% of a smoothly granulated honey from last year's crop, (Hollands or Sanatarium from the supermarket does fine). This starter will need to be softened by warming and stirred frequently and kept to a cool temperature of about 14°C. A chilly pad in a chilly bin usually does the trick. Classes judged in both runny and granulated are Light, Medium and Dark. The remainder of the competition will be published in February Newsletter.

Sadly I report the passing of a long time stalwart of the Auckland Bee Club

COLIN BELL

As a past president, swarm control organiser, general advisor and recently editor, Colin has been a wonderful worker for his club and will be sadly missed.

CONFERENCE 2001 - PRELIMINARY NOTICE

Otago Branch NBA

is pleased to advise that we will be hosting the

2001 NBA CONFERENCE AND AGM,

AT RYDGES QUEENSTOWN HOTEL,

Beach Street, Queenstown. 23rd to 26th July, 2001

Situated on the shores of beautiful Lake Wakatipu, Rydges Queenstown boasts unsurpassed views over the lake and surrounding mountains. Just a five minute walk along the lake-front from the busy centre of Queenstown, the 272 room, fully-serviced hotel is in the prime position for our conference, and for you to enjoy everything the area has to offer for a mid-winter break.

ACCOMMODATION:

We have secured a very good room rate of just $88 ($99 including GST) for a single or double room - which the hotel have agreed to extend either side of the Conference week for visitors who want to stay longer. There are also a number of two-room family units available - just enquire through their reservations service.

Enquires for accommodation should be made directly to the hotel:-

Rydges Queenstown, Reservations Department, PO Box 454, Queenstown.

Free phone: 0800 478-847 Fax: (03) 442-9653

Email: reservations_queenstown@rydges.com

We suggest earliest possible reservation - just advise the hotel that you are part of the 2001 National Beekeepers Conference.

Queenstown has many other alternative accommodation options ranging from houses to rent and heaps of motels to backpackers lodges and cabins in the camping ground situated close by the venue. You will be surprised at how reasonable the rates are at that time of year in the town. Too many possibilities for us to try to make recommendations, so we suggest you consult the AA South Island Accommodation Guide, or contact the Queenstown Accommodation Centre. Phone: (03) 442-7518. Fax: (03) 442-5177. Website: www.nz.com/Queenstown/Accommodation.

TRAVEL:

There are numberous daily flights in and out of Queenstown with both major airlines, direct from all over the country, and even Australia! We suggest you book early for these to take advantage of the best discount flight rates the airlines offer. In addition, 'all roads lead to Queenstown' and there are daily transport services into the town from many parts of the South Island.

Otago Branch has undertaken to provide a great Conference in a great venue - something of interest for everyone, and something a little different during Conference. We are looking forward to seeing you all there next July in Queenstown - the adventure tourism capital of New Zealand.

CONFERENCE CONTACTS:

Allen McCaw (Conference Convenor) Phone/Fax: (03) 417-7198 email: amccaw@clear.net.nz

Mike Vercoe (Branch Secretary) Phone/Fax: (03) 448-7811 email: dmvercoe@xtra.co.nz

Varroa control, a German beekeeper's experience

Dear Sir,
I have a German beekeeper staying with me who uses formic and oxalic acids to treat Varroa mites in the 500 hives he and a partner own. To follow is how he uses these controls and his experience with them. He uses only these treatments once in the winter with Oxalic and once in the autumn with formic acid. With good control no spring treatment is necessary in his conditions.

Oxalic Acid
This is used in the winter broodless period at a concentration of 2.1% pure oxalic acid to a 20% sugar 80% water solution. In his case he uses 30g to one litre of water/sugar solution as the oxalic acid they get is not quite pure crystal and comes with some moisture in it. He drops 20 to 50ml of this solution depending on the hive strength between the frames and onto the bees with the use of a syringe. This going into either a two box colony or one box wintering colony.

Oxalic acid sugar water solution works through contact and not evaporation so cooler conditions do not affect its action. However great care needs to be taken in using this treatment as an over dose will kill a hive. It only really works best in a broodless hive and so would possibly suit the South Island and parts of the North Island that may have broodless periods. The mite kill rate can be as high as 90% plus which he checks with monitoring off boards underneath. It could work with small patches of brood but that would need to be tried in New Zealand conditions. It will not work with more than a small patch of brood in the hive for what ever reason is unknown.

Oxalic acid can only be used once a winter season. Any more than this and it will kill the hive.

Formic Acid
Two methods of treatment can be used, a short treatment and a long treatment. What ever method is used an even evaporation of 20ml of formic acid per day at 60% concentration is the optimal evaporation amount to kill the maximum number of mites and not affect the colony too much. The formic acid is purchased at 85% concentration and diluted down to 60% concentration for the short term treatment.

Short term treatment
This involves tipping 10 to 40ml of formic acid from a glass measure on the end of a stick like a ladle onto an absorbent pad. In his case he uses baby's nappies as a pad placed on the top bars or in his case stapled to the inner cover over an empty box on top of the hive. If placed onto top bars it is best that the entire top of the hive can be covered with absorbent material to spread the evaporation. Two nappies may do or something also like these. Nappies are considered very safe as they seem to release formic very slowly and evenly. Other materials may at first release too fast resulting in absconding or killing the bees.

It is important to at first work out and calibrate the correct dose for the conditions the hives are in. He does this on day one by dosing test hives with 10ml of formic and 24 hours later looking at the mite fall. A dose of 10ml is considered a very safe dose and no problems should occur. This is repeated in successive days by increasing the dose by 10ml per day so day two is 20ml, day three is 30ml up to 60ml. For a two box colony 40ml is the norm while in say our conditions it is possible that up to 100ml maybe needed in say a three box colony in cold wet conditions but this would be unusual and needs

testing. Too much formic and the bees will leave the hive and cluster on the outside resulting in ineffective treatment. He monitors treatments looking for signs of 'panic' in the bees in response to formic acid and calibrates by looking at mite fall onto a cardboard tray under mesh with the first three days being say 250 mites per day falling to 100 mites per day and after that less than 50 mites per day which is considered a good control.

When the correct dose is found treatment involves three successive treatments of first 10ml which helps the bees get used to formic acid treatment then either 30ml or 40ml every four days over a 12 day capped brood cycle period. This will also kill mites in capped brood. Formic acid is put onto nappy pads under inner covers which are at first tuned up side down and left for ten minutes to evaporate an excess peak of formic into the air before being placed onto the hive. The hive is also smoked well before the formic pad is placed onto it to calm the bees. Some 100 hives ready to winter can be done in an hour using this method and is of course best if hives are close at hand as they are in his case.

Single Treatment over a longer period 10-20 days

The usual way of doing this is by the use of a commercial dispenser called a Liebig dispenser which is designed to release an even amount of formic acid over 10 to 20 days based on the principal of 20ml evaporation per day. These dispensers come with a calibration on them and once again the beekeeper will need to test and calibrate them for their own conditions. Large hives will evaporate more formic per day than say a weaker hive and weather and conditions will affect evaporation.

It is possible to build a dispenser like a Liebig dispenser and there is a book out by Liebig on how to construct this. It consists of a small medicine bottle with a dropper top laced in a wooden holder over absorbent paper towel material on a plate. The size of the plate and paper towel is important to control evaporation rate and achieve the optimal 20ml/per day evaporation. The larger the plate hence the faster the evaporation. In Germany cheap plastic plates are used for this purpose. This dispenser is placed inside an empty box over a colony and is generally used where hives are some distance away.

Some 100 to 200ml of formic acid at 85% concentration is put into the medicine bottle as follows;

(1) In a one box colony the plate should be 12cm across and the paper towel 14cm across and 100ml for formic is put into the bottle.

(2) For a two box colony the plate should be 14cm across and the towel 16cm across and treatment consists of 200ml of formic acid in the bottle.

Baby's nappies placed inside a plastic bag with holes in them can be used over longer periods as well as the Liebig type dispensers.

In Germany he treats twice a year with oxalic in winter and formic in autumn as well as using screened bottom boards and some drone trapping as further controls. He feels that here in New Zealand we may have to treat three times a year depending on our conditions with an extra spring treatment to knock mites down to low levels. It is important to monitor treatment success otherwise losses will occur and it will pick up mistakes and low kill rates. Wet weather will affect the formic acid treatment by diluting its effect hence this needs to be taken into account as well.

If all this sounds like a lot of work then yes it is but the good thing about it is that the cost of the chemicals is less that a $1.00 per hive per annum and there is no residue problems or resistance build up. He also maintains the quality of his wax and it is residue free.

Regards, Barry Foster, Gisborne

Q Non-chemical Control of Varroa

1. I keep reading of using drone comb and removing and melting that comb. Wouldn't it be a lot easier to put the frame in the freezer and then let the bees remove the dead brood and mites? Maybe scratch the cappings first? Maybe have two such frames and alternate them?
2. I keep an under-hive pollen trap on my hive and the first half of the season. Wouldn't this serve the same function as a screened bottom board? Maybe I've been getting the benefit of such without realising it.

Dan Hendricks
danhendan@yahoo.com

A

1. Yeah, I don't know who came up with the let's destroy the whole drone comb and melt it down scenario. Freezing combs while alternating them makes the most practical sense. However, there is a trade-off - the bees use energy and time to remove thousands of frozen, dead drone larvae. This is better than having to draw out new foundation every time though.
2. While the varroa mite can be quite fast when it wants to be, when they are isolated by distance from comb or access to honey-bees, they generally stop, are still and get into a questing stance. They are waiting for a ride to a honey-bee colony. Any distance, even a couple of inches, and structural obstacles that prevent their getting back into the colony on their own or with help, are great. If your pollen trap accomplishes this, then you have been eliminating a certain percentage of your Varroa population. Sounds good to me.

From the Colonies

by Frank Lindsay

November would be a month that a lot of beekeepers and orchardists would like to forget. Three cold fronts introduced prolonged periods of cold temperatures, high winds, frost and hail damage, and snow down south and on the NI mountain ranges.

Bees couldn't fly for long periods, which put them under stress from lack of nectar and pollen. This cold weather also affects nectar secretion and has held back the flowering of some plants. I rely a lot on cabbage tree *(Cordyline austraiis)* to boost the nectar in the hives and as a reference point for starting swarm control activities. They have flowered well this year but produced very little nectar. Manuka *(Leptospermum scoparium)* is beginning to flower but is the same, not producing nectar. The odd Rewarewa *(Knight tai excelsa)* is still flowering yet should have finished a month or so ago.

Thriving colonies have reduced in strength and now could be building up on the flow instead of taking full advantage of it. Yet a few valleys away, hives out of the wind, have collected quite a bit of Kamahi *(Weinmannia racemosa)* and are thriving.

I have received reports from beekeepers around the southern North Island indicating that in a few areas the bees suffered badly during November. A number of strong hives that had half a super of wet honey have starved. In a lot of hives, its easy to read the frames and judging by the stages in brood development, most just stopped laying for a few days to a week. However, those black bees, the difficult ones to handle without all the gear, seem to thrive and are coming along nicely.

This unusually cold November has caused pollination requirements to halve in some areas with a resultant loss of income to the beekeepers as well as the orchardists. As stated above, some crops have delayed their flowering, which means pollination hives are going in later this year and might not be able to capitalize on the flows that occur directly after pollination. Clover flowers are appearing along the sides of road and in paddocks. All we need is for the ground temperature to rise and the main honey flow will be on.

There is one positive side to this bad weather. Before the weather change, our district was showing signs of drought and local councils were introducing water restrictions. The rain was a welcome relief and has set the pasture and bush up nicely for honey production but watch for late swarming.

Hives in cities are a different story. They produce their own microclimate with all the roading and concrete buildings providing additional radial heating which tends to produce flowers on trees and shrubs earlier than country areas.

City hives already have a super of honey stored and are well into filling the second one. Checking hives is a pleasure as the bees are concentrating on their work and not you. Once the flow is on, you can change from swarm control procedures to supering.

The hum from the hives and the smell of nectar permeates the air around the hive. Bees work very quickly under good conditions and can fill a super in a week, so super ahead of time and keep the bees working.

There are two methods of supering. Under (lift the existing tops super and putting a new one directly above the brood nest) stimulated the bees as they have more room but it is a lot of work. Top supering is easier but a frame or two of honey should be put up into the new super to encourage the bees up into it. This method is quick and is usually adopted by most commercial beekeepers.

When to remove honey is always a question new beekeepers ask. They have waited all year and would now like to see some reward for their efforts.

Frames that are more than two thirds capped can be removed for extraction provided nectar doesn't come out of the cells when the frame is given a shake. A number of beekeepers extract their honey every few weeks.

This has two advantages.
Bees are stimulated into gathering more honey when wet frames are returned to the hive. Do this in the evening so that your excited bees do not disturb your neighbours.

Separate off the different varieties of honey as it is produced. This tends to go from dark (early bush sources) to the light honey produced around Christmas (clover and Pohutukawa) back to darker honeys again late into the summer and autumn.

This gives the beekeeper a potpourri of flavours to spread on their toast, use in cooking or mead making during the winter. It can be quite remarkable the different shades and flavours that the bees gather.

Remember that not all the honey in the hive is yours. Bees require a super of honey to winter over on so leave them theirs or feed sugar syrup in the autumn to make up this amount.

With the approach of Varroa, beekeepers should be considering replacing frames that contain patches of drone brood. Putting whole supers of foundation frames on top of a hive doesn't always work. Bees are loath to go up on to foundation unless the hive is totally crowded with bees and are forced to. Foundation frames are best drawn out immediately above the brood nest in the third or fourth super. Interspace foundation frames with drawn frames to encourage the bees into the super. Each week move the outside undrawn frames into the centre of the super to get them drawn or replace honey frames with foundation frames as you take them off. At the same time move those frames with drone brood up into the honey supers so they can be filled with honey when the brood emerges and then out for melting down after the honey is extracted.

It's also a good idea to replace any frames you can't see light through when held up to the sun. Again, move these to the honey supers and remove them when they are full or move them to the outside of the super so they can be removed in the spring.

Extracting is a messy business and you will only be allowed to use the kitchen once if you are not careful. Lots of newspaper and buckets are required. It takes twice as long as you planned and attracts bees around the house so be prepared and don't leave any combs exposed.

Essentially the equipment you require is as follows: An extractor (hire it from your local bee club) honey knife, strainer, muslin, squat square plastic bins that are available now from plastic wholesalers are ideal to uncap into. Plan the activity and get another beekeeper to assist you. Two hands are better than one for this job.

To set up the uncapping bin, a piece of wood is secured across the middle with a nail sticking up on which the frame is placed to uncap. A piece 2cm square of wood with a nail driven completely through is ideal. Place the end bar on to the nail, so the frame can be spun around to uncap the other side.

In the urban areas it is best to remove honey using an escape-board as this method least disturbs to the bees. Place escape-boards on the hives 24 hours before hand and brush or shake the remaining bees off the frames, cover the super and carry to the extracting area. Honey is easier to spin out of the frames if it is warm. I.e. straight off the hive. Uncapping is easier with a hot knife. A serrated bread knifes is excellent. Heat the knife up in a jug, wipe it dry and then using a sawing action move the knife down the face of the comb so the cappings wax falls away from. Indented areas of cappings can be scratched away with a fork.

Manuka doesn't spin out as it's a thixotropic honey (jelly like) so has to be handled differently. Rollers are available to prick the honey so that it can be spun out or one can scrap the frame down to the midrib, warm the cappings and wax and filter.

All honey granulates in time, as it's a super saturated sugar solution. Crystals build on each other and you end up with a coarse grain honey. A smooth grain starter honey (purchase from the supermarket) can be added to your honey and stirred in. Cover the honey and by storing in a cool place (14°C) for a day or so, the honey will start to granulate. Stir the honey two or three times a day but don't introduce air into it. When you see a bloom appear in the honey it can be bottled and left to fully granulate.

Summer is also a time when your neighbours enjoy their swimming pool. Bees require water to cool the hives and find these a most convenient source. If you receive these complaints, consider providing a source close to the hives. This can be a tray of wet sand or a container with floating objects in to allow the bees to land on.

If you are going away for Christmas holidays put extra supers on your hives. If they are still in the shed, the bees find it very hard to fill them.

No matter what you do, some hives will swarm. It can be heartbreaking. All that work, one missed queen cell and the hive takes off. Some hives continue to swarm and you are left with just a frame of bees.

Sometimes it's quite a bit later we discover the hive has swarmed. Its very evident the hive population has decreased and you can see the remains of broken down queen cells along the bottom of some frames.

Normally within 10 days after swarming the new queen is mated and starts laying but some hives don't. Some queens are lost on the mating flight or go into the wrong hive on returning. How can you tell whether there is a queen in the hive after it has swarmed?

Bees that are queenless or have a virgin queen "roar" when smoked. They all begin to fan their wings. Queenless? Look over all the frames for a virgin queen. She will be stunted (ready to mate) and will move very quickly over the frames. Not always easy to see and takes practice. However if you look at the middle brood frames you can also tell whether the bees have a queen. Honey scattered in cells through out the brood nest suggests it is queenless and you will have to order a new one. However if you see two or three frames with honey in a semicircle around the top of the frames and clean empty cells in the middle, you have a queen. Look in a few days time and you will see eggs. Close up and let the hives build up again for next year.

Weak hives do not produce much honey. Best to unite two weak hives together and get some honey off them. If both hives have good queens, make a four-frame nuc with one and unite the rest of the bees to another hive.

When uniting hives place the hives with the queen ON TOP of the queenless hive (separate the hives with two sheets of newsprint) otherwise the bees coming down through the paper will kill the queen. Put on an extra honey super and watch that honey coming in.

Catching swarms can also have its problems. Small after swarms headed by virgin queens, about the size of a football, are hard to settle. They will go into your hive but next day take off again. If you catch one of these, add a frame of brood to it from another hive and the bees will not leave the super.

Queen wasps are now making an appearance. I have squashed two in the last few days around my hives. They were looking for easy meat by taking dying bees in front of the hives. Remember everyone you kill is another wasp nest that doesn't develop.

Things to do this month. Check the food levels in your hives. Strong hives require a minimum of three frames of honey for a week of bad weather. Check for failing queen. A spotty brood pattern means the queen should be replaced or unite a nuclei to hive. Prepare honey house equipment: clean down with hot water and sanitize everything. First extraction in some areas but check for disease before removing and honey. Continue swarm control measures for those with later flows. Keep the weeds down from in front and around the hives. Fit foundation into frames.

All the best for Christmas and may we all have a bumper New Year.

SOUTHLAND FIELD DAY 2001

Saturday, February 3
Lee's Apiaries
Balfour
from 0930

Speakers/Discussion/Fellowship
Buy, sell and exchange/
Innovations/Barbecue.
Programme available from
Don (03) 246-9777

MISSING TROPHY

Are you the proud holder of the WT Herron Trophy?

The Southland Branch of the NBA would like to re-award this important prize at next year's field day but unfortunately we have lost track of the current holder and the debate at our last meeting failed to come to an agreed conclusion on the last recipient.

So if you have the trophy please get in touch, and if you'd like to give it a home for the next twelve months, bring your clever invention or innovation (beekeeping related) to the Southland field day at Balfour next February 3rd.

Regards
Don Stedman

The Cow Bomb...

A dairy worker in California who heard that bovine flatulence was largely composed of methane, and potentially explosive, decided to apply the scientific method to the theory.

While one of his contented cow charges was hooked up to the milking machine, he waited for the slight tail life which dairy workers know signals an impending expulsion, generally something to avoid. Our hero struck a match. His satisfaction at seeing the resulting foot-long blue flame lasted mere seconds, before the flame was subsumed by a rectal contraction.

The poor Holstein exploded, killing the worker who was struck by a flying femur bone.

Just as well Bee's don't fart or beekeepers might be at risk

From the Colonies
Hawkes Bay

November 4 dawned overcast with promise of rain, a few had even rung to see if there had been a cancellation. No way! The Hawke's Bay branch diseaseathon was on.

Thanks to an extensive ring around by Laine, more than 60 turned up at Robinsons' Apiaries for a 9am start to our annual inspection of hives which has been a regular feature of the Bay calendar for many years.

Prior to this, lists of hive locations had been obtained from AgiQual so that suspect areas or apiaries with a history of AFB could be targeted. MAF Inspection Forms were then selected by location with group leaders given a number of forms so that beekeepers could be phoned to find the exact location of their hives which they were advised were likely to be checked. This saved a lot of running around on the day, gave the owner the opportunity to be present and in one instance to veto the visit.

After a briefing by President Tom Taylor including a chance to examine a frame of diseased comb, equipment was issued and the groups set off with a warning that if they were not back by 1.30pm they stood a chance of missing out on the barbecue lunch.

The total area covered was from the plains and coastal fringes south of Hastings/Havelock North to Bay View north of Napier. Fortunately more distant hives do not have a history of diseases.

For the statistics a total of 45 apiaries with 177 hives were checked. 455km of travel were involved with a total of 207 manhours. Six samples were sent for laboratory testing with only two confirmed as AFB positive. Follow up has seen these two hives burnt.

Development of Miticide-resistant varroa

Resistance is where a pest, such as varroa, becomes more and more tolerant of the pesticide that is being used to control it. There are overseas reports of varroa populations developing resistance to at least five control chemicals.

Resistance occurs because all living populations contain a range of different genetic characteristics. In humans, this is reflected in the diversity of height, physique and hair colour. Less visible differences are also present, such as blood type. The same applies to insect populations, although the differences may not be so obvious to us.

Within any population of varroa mites, there are likely to be individuals who have a greater ability to survive the application of a pesticide. This could be a physical difference such as a thicker external shell, or a chemical difference that allows them to break down the pesticide before it affects them.

Under normal circumstances, there are likely to be very few of these mites in a population. The characteristics that make them different do not give them any advantage, and may in fact be a liability to them.

This changes when the mites are exposed to the pesticide. These mites have a greater chance of surviving and reproducing than nonresistant mites do. Descendants are likely to inherit some of their resistant characteristics, so the percentage of resistant mites in the population grows. If the mite population is continually exposed to a level of the same chemical, nonresistant mites have little chance to reproduce, and the development of a resistant population is speeded up.

Once a population of resistant mites has developed, they will quickly spread. While a majority of European and American beekeepers have used Apistan/Bayvarol according to label directions, a significant minority have not. The resistant mites created by the misuse of treatment products are now a threat to all beekeepers, whether they use pesticides correctly or not.

Fortunately, the rules on slowing the development of resistance are straight forward.

Use a product that quickly kills a high percentage of mites.
The fewer mites survive, the longer the interval can be between treatments

Apply a treatment for a limited period of time
Once the pesticide is removed, the resistant mites have no advantage over any other survivors, and the development of a resistant population will be slowed.

Do not use under-strength treatments.
Applying a weak dose of chemical will ensure there are more survivors, who may have a degree of resistance.

Do not rely on a single treatment product for an extended period of time.
Only two treatment products are registered in New Zealand, and they both come from the same chemical group. Getting a wider range of products registered is a priority.

The development of resistance in varroa overseas has been associated with the following behaviour:

1) Leaving treatment products in hives for long periods of time (ie not taking out strips)
2) Re-using treatment strips after their killing-power has decreased
3) Using home-made treatment products, which deliver the wrong dose of chemical for the wrong period of time.

If New Zealand beekeepers can avoid these three mistakes, the development of chemical-resistant varroa should be greatly delayed.

Restrictions on movement of Queen Bees

Transport of queen bees is one of the major means by which varroa has spread around the world. For this reason the current movement controls which apply to beehives also apply to queens. Queens are a particularly high risk because they can be moved more easily between areas than beehives.

New Zealand has been divided into three movement control zones:

• Upper North Island (Infected Zone) - Queens can be sent within this zone, but can not be sent from this zone to any other part of New Zealand.

• Lower North Island (Buffer Zone) - Queens can be sent within this zone and to the Upper North Island, but not to the South Island

• South Island, Stewart Island and Chatham Islands (Disease Free Zone) - Queens can be sent within this zone, and to any other part of New Zealand.

These zones will be reviewed periodically and updated as varroa spreads. If you are uncertain which zone you (or one of your customers) is in, please refer to the map sent to all beekeepers, or call the movement control officer on 0800 109-383.

Before queens are sent, the producer needs to know which zone he or she is in, and establish which zone the recipient in. To slow the spread of varroa, the whole beekeeping industry depends on queen producers taking care when shipping queens.

Movement controls are enforced under the Biosecurity Act 1993, which contains penalties including fines of up to $100,000 and imprisonment for up to five years. MAF will investigate reported breaches of movement control conditions, and will not hesitate to prosecute where a serious breach can be proved.

Where movement control causes a financial loss, compensation may be payable under Section 162A of the Biosecurity Act 1993. Beekeepers wishing to obtain information on compensation issues should call Ashley Edge on (04) 474-4213, or email: edgea@maf.govt.nz

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Comment

When a swarm is very high up in a tree, we have a technique that works well to get it down.

If you are blessed with a clear sun, the Mirror Method should work: beam the image of the sun just above the swarm with a mirror, and then 'push' the swarm down the tree by nudging the sun-image onto the top of the swarm. In my experience the swarm will proceed at a slow but steady pace down the tree as you continue to push them with the sun image.

Good Luck

Rob Mann
New Zealand

Reply

Whoa! You guys in New Zealand must have a lot of free time on your hands. How long does this take? It might be fun to try once, but I like the good old American way of dealing with those swarms 70 feet up in a tree... let them go!

FEBRUARY '00

MARCH '00

APRIL '00

MAY '00

JUNE '00

JULY '00

AUGUST '00

SEPTEMBER '00

OCTOBER '00

NOVEMBER '00

DECEMBER '98

CHB Print's
Bruce, Jodi,
Karen and Rex and all staff
who work on the BeeKeeper
wish you all a very
Merry Christmas and a
Happy New Year

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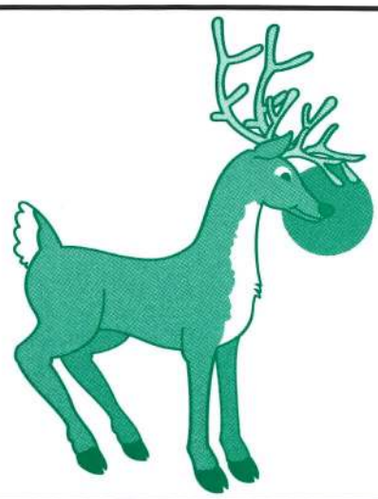
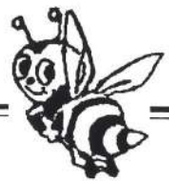


BEE ENTERPRISES



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RECIPES

Honey Bars

1/3 cup shortening
1/2 cup honey
1 egg
1/2 tsp vanilla
1-1/4 cups sifted flour
1/2 tsp baking soda
1/2 tsp salt
1/2 cup coarsely chopped walnuts
1/2 cup seedless raisins
1 6oz pkt chocolate morsels

Cream shortening and honey together. Add egg and vanilla and beat until smooth and light. Resift flour with soda and salt; blend into creamed mixture. Stir in nuts, raisins and chocolate morsels. Spread butter in well-greased 9" x 13" x 2" baking pan and bake at 375°F for 10-12 minutes. Cut into bars while warm.

Makes about 3 dozen

Honey Ice Cream

5 cups milk
4 eggs, beaten
1/2 vanilla bean or 2 tsp vanilla
4 oz melted chocolate or 3oz carob powder, optional
1/2-1 cup honey
1 qt cream, or equal parts cream and half and half
1-2 cups pureed fruit, optional

Heat milk over low heat. Remove from heat and gradually add beaten eggs, stirring constantly. Add vanilla (chocolate or carob, if using). Return to heat and cook until thick, stirring constantly. Let cool to warm. Add honey. Chill thoroughly. Stir in cream and fruit and pour into icecream freezer container. Churn according to individual freezer directions.

Steamed Vegetables with Lemon-Butter

Equal portions:
fresh cauliflower florets
fresh asparagus spears
fresh broccoli
fresh green beans
or sugar snap peas
Allow one serving of each vegetable per person
1 lemon, cut in wedges

Sauce:
1 serving per person
1/4 cup butter
1 tbsp honey
1/4 cup lemon juice
1 tsp cornflour

Prepare sauce first. Melt butter over low heat, stir in honey, lemon juice and cornflour. Keep warm until serving. Clean and prepare vegetables. Steam lightly until just tender. Arrange cooking order so all vegetables are done at the same time. Cooking time will vary from 3-5 minutes, or until desired tenderness. Arrange individual portions of steamed vegetables on plates, garnish with fresh parsley and lemon wedges and serve with individual cups of lemon-butter sauce.

Wax Pastel Crayons

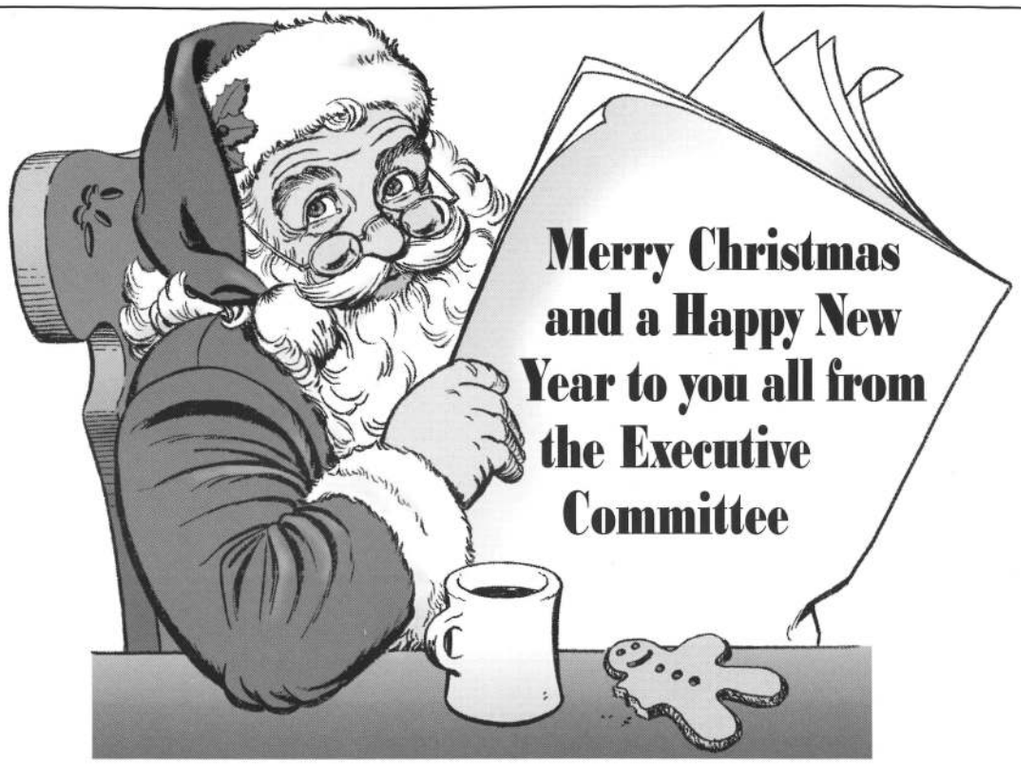
Parts by weight:
1 part grated soap
1 part beeswax
concentrated food-colouring paste

Melt the beeswax in a small can placed in boiling water. Add the grated soap and stir until the soap melts and the mixture is smooth. Colour the mixture with dry food colouring paste. Pour it into lubricated aluminum foil moulds. After testing the crayon, it can be melted again and more colouring added. Concentrated food colouring paste is sold with cake decoratings supplies. The crayons are food safe and they blend well. Their colour is almost as concentrated as the crayons made with the artist's pigment.

Summer Cookies

2/3 cup honey
1 tsp vanilla
1 cup diced apricots
1 cup flaked coconut
1 cup graham cracker crumbs
2 tbsp cinnamon

Combine honey and vanilla. Mix dry ingredients together. Stir honey and vanilla mixture into dry ingredients. Mix until well blended. Press into 8" x 8" x 2" pan. Chill thoroughly and cut into sections and serve.



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Contact: Mrs Hobson
Phone: (03) 312-7587

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Field Day November
Contact: Trevor Corbett
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CHRISTCHURCH HOBBYIST CLUB
These are held on the first Saturday each month, August to May, except for January on which the second Saturday is applicable.
The site is at 681 Cashmere Road, Commencing at 1.30pm.
Contact: Maggie James, 21 Humboldt St, Christchurch 8002. Phone: (03) 337-2421.

DUNEDIN BEEKEEPERS CLUB
We meet on the first Saturday in the month September - April, (execpt January) at 1.30pm. The venue is at our Club hive in Roslyn, Dunedin.
Enquires welcome to Club Secretary, Dorothy, phone: (03) 488-4390

FRANKLIN BEEKEEPERS CLUB
Meet second Sunday of each month at 10.00am for cuppa and discussion and at 10.30am open hives.
Secretary - Gwen Whitmore, RD1, Tuakau.
Phone: (09) 233-4332
All welcome - Ring for venue

HAWKE'S BAY BRANCH
Meets on the second Monday of the Month at 7.30pm,
Arataki Cottage, Havelock North.
Phone: Ron (06) 844-9493

MARLBOROUGH BRANCH
We are holding a Deca course and exam at the end of April.
For application forms and meeting dates contact
Jeff: (03) 577-5489

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

NELSON BRANCH
Phone: Michael
(03) 528-6010

POVERTY BAY BRANCH
Contact: Barry (06) 867-4591

NELSON BEEKEEPERS CLUB
Contact: Kevin
Phone: (03) 545-0122

OTAGO BRANCH
Phone: Mike (03) 448-7811

WANGANUI BEEKEEPERS CLUB
Meet on the second Wednesday of the month.
Contact Secretary: Neil Farrer.
Phone: (06) 343-6248

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

SOUTHERN NORTH ISLAND BRANCH
Contact: Frank
Phone: (04) 478-3367

SOUTHLAND BRANCH
Contact: Don Stedman,
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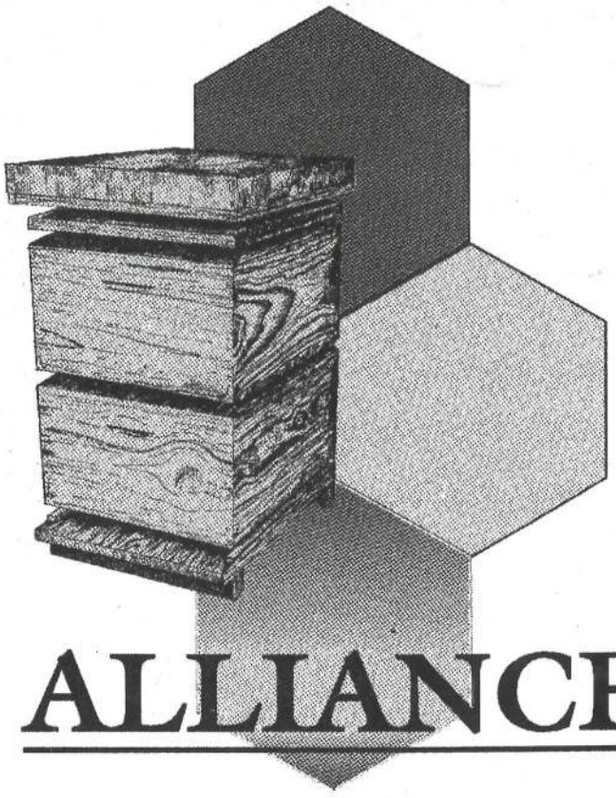
Phone: (06) 753-3320

WAIKATO BRANCH
Call Tony: (07) 856-9625

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

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



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