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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 20th November.

Notes from the President

Nick Wallingford

The NBA funded a visit to the United States in January by Dr Jim Edwards to attend major annual meetings of the beekeeping industry and to the USDA (US Department of Agriculture) to further the cause of New Zealand honey-bees.

On our behalf, Dr Edwards made four presentations with Dr Robert Flanders of the USDA:APHIS. He emphasised the health status of New Zealand honey-bees and the size of the New Zealand beekeeping industry relative to that of the United States. He informed them of how to get more information about New Zealand beekeeping, and about the trends and requirements for international trade.

Dr Edwards attended the American Honey Producers Association Annual Convention held in Memphis, Tennessee, in conjunction with the Apiary Inspectors of America, The American Association of Professional Apiculturists and the American Bee Research Conference.

At that meeting, Dr Flanders announced the intention to complete the risk analysis for bee imports by the end of this year. He spoke of NAFTA and GATT (both trading agreements that the US has agreed to) and the plan to review the USDA bee and bee semen importation requirements during 1997. The US's 1992 Honey Bee Act is very protectionist, currently restricting the importation of adult bees to those from Canada and those permitted for USDA bee research purposes. Bee semen can only be imported from Australia, Bermuda, France, Great Britain and Sweden.

The USDA:APHIS regulates the international borders of the US, while each state still governs its own territory. The expected changes to the Honey Bee Regulations would enable both semen and live bees to be imported by people other than just research personnel. One driving force is the need to import new genetic material to investigate the

resistance of new strains against *Varroa*.

A Technical Advisory Group will be established to review the available data, determine the requirements for importation and post entry quarantine and provide an oversight of the whole issue. There will need to be both an environmental assessment and an environmental impact assessment.

The review process and risk analysis will result in the revision of the existing regulations, with the proposed changes being published in the Federal Register (the equivalent of our *Gazette*) by August 1997. The final rule would then be complete by the end of the year.

While the access of New Zealand packages into the United States has yet to eventuate, I believe that these steps are positive and constructive. The Executive will ensure that any involvement on the part of New Zealand beekeepers or officials is both timely and professionally done.

Sawfly found defoliating willows in Auckland

Another insect has slipped past New Zealand's border control and infested an Auckland suburb. This time Onehunga is the port-of-call for the invader.

The insect was found by an Onehunga resident defoliating his willow trees, and taken to Landcare Research, Mr Albert for identification.

Entomologists at Landcare Research have identified the insect as an European species of sawfly not previously reported in New Zealand.

Overseas experts will be sent specimens to confirm the initial identification of New Zealand's specialist, Dr Berry. The sawfly is thought to attack only willow trees. It may be the same species which invaded southern Africa in 1993/94 and severely defoliated exotic willows.

Landcare Research have alerted border control authorities to the presence of the

insect. While the sawfly is not thought to pose the same threat to trees as the white spotted Tussock Moth, border control authorities will take this report seriously. Willows are mainly used as shelter belts and along streams to prevent erosion. The Ministry of Forestry and the Ministry of Agriculture are expected to survey its distribution to see if anything can be done to prevent its spread, and to try to find out how this species invaded New Zealand.

Aucklanders can help authorities with the survey by checking their willow trees to see if they have clusters of caterpillars eating leaves of their willows. The sawfly caterpillar is about 15-18mm long when fully grown, has a dull darkish green body colour similar to the common white butterfly caterpillar on cabbages, and a light yellowish brown head with a distinctive dark triangular marking on the

front. The adults are light green and about 10mm long.

Another sawfly on willows already exists in New Zealand, but this species only causes small, reddish galls on the leaves of willows. The new sawfly is thought to have more potential to cause harm because it is a defoliator.

Scientific Classification of the sawfly:
Class: Insecta (insects) Order: Hymenoptera (wasps and bees) Family: Tenthredinidae (sawflies) Subfamily: Nematinae. For more information contact: Dr Trevor Crosby or Dr Jo Berry Landcare Research, 120 Mt Albert Road, Mt Albert, phone: (09) 849-3660, Brian Ellison, Media Liaison, Landcare Research, Lincoln, phone: (03) 325-6700 or (025) 221-4414.

Ack. NZPA

Correction: Levy Rate for 1997

On page 33 of the February 1997 issue of *The New Zealand BeeKeeper* there was an error in the notice of the rates of levy. The item in question is a copy of a letter from Nick Wallingford, NBA President, to Hon Lockwood Smith, Minister of Agriculture.

That letter stated that the rates were fixed at \$60 for each beekeepers' 1st apiary site and \$22 for each additional apiary site.

The rates fixed by resolution of the Executive and conveyed by letter to the Minister of Agriculture were \$50 for each beekeepers' 1st apiary site and \$22 for each additional apiary site. I regret this error and any confusion it may have caused.

Nick Wallingford, NBA President

Front cover... Courtesy Tourism Nelson.

Apologies to Tony Lorimer whose photo was used on last month's cover. Thanks Tony.

The New Zealand BeeKeeper

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Sweet reward for Canterbury honey exporter

by Luke Clark

Being nominated for a national export award is a sweet reward for Canterbury's Airborne Honey.

The Leeston company is a finalist in the Air New Zealand Export Excellence Award for a regional exporter, awarded to exporters outside New Zealand's five metropolitan areas.

Airborne is one of three Canterbury finalists in the 1996 New Zealand Export Awards, organised by Tradenz. The largest producer/packager and exporter of honey in New Zealand, it sells seven different varieties of liquid and cream honeys, plus a comb honey to markets in Asia, America, the Middle East, and Europe.

Veronica Marton, who supervises overseas retail marketing for Airborne, said its success came from offering "something other than just generic honey, which is basically how honey is sold the world over".

Until seven or eight years ago, clover honey was the only variety available in New Zealand, and was a successful export. But the need to differentiate came in the mid-1980s during a world honey surplus, when New Zealand had difficulty selling clover, a blend of different types. Airborne began looking at new ways to sell its honey stocks, and began to gather specific varieties, classify them, and pack them distinctively.

It was this differentiation that made the difference. "When we went into production like that, that's where we found that consumers were really interested, both here and overseas." The company aims to produce "high quality monofloral honeys," said Miss Marton, highlighting the individual tastes of the different varieties. "Kamahi's got a buttery, caramel flavour, and Southern



Airborne Honey managing director Peter Bray says a New York department store recently devoted 11 windows to promoting Airborne products.

Rata is a rich, white honey. And you certainly get a kick in the back of your throat from Honeydew." While some were for breads, others were ideal for marinades or cooking.

Being based at the bottom of the world was also an advantage in establishing and image for the product. "New Zealand only exports about 1 percent of the world's export honeys, but it gets the highest price," she said. "The clean, green, image goes a long way. We don't feed drugs to bees. Drugs are fed to bees elsewhere and turn up in the honey."

New Zealand's honey industry was viewed very highly she said, with very little disease among bees, and one of the most unpolluted environments. However, once tempted by such an image, international consumers had to be kept interested. Since it began exporting solidly in 1987, Airborne has also developed the ability to analyse and evaluate the honeys, with a laboratory recognised by the World Honey Institute in Bremen, Germany.

"We can tell what kind of honey it is, and track it right back to the apiary." With an aim to keep consistent flavour and colour, Airborne's contracts with beekeepers enabled it to get the product it wanted, said Miss Marton.

The company runs bees at the top end of the Rakaia Gorge, yet only around 5 percent of what it sells or packs is its own honey, with the rest bought from beekeepers in both the North and South Islands. However, as the centre of the operation, Canterbury was ideal for "not just our own production, but it's also a great location to port, to facilities in Christchurch, and we're right in the middle of the producers we buy from."

The company had a "slow, consistent growth" in export volumes since 1987. With little money to promote the product, Airborne relied on repeat sales and word-of-mouth to establish a market. Yet after persistence and some agents "who believed in the product," 75 percent of the operation is now in exporting.

According to Veronica Marton, consumers keep coming back "because, they're getting a different taste." Now relatively established, the company had moved from a cost-plus situation, trying to get rid of the product, to selling it at the best price. "The consumer's only willing to pay so much, but now it's value-added. And they're willing to pay considerably more for different honey types."

Of the 35 staff employed, two-thirds are dependent on the export market.

A recent highlight was an extensive promotion of Airborne Honey by the famous New York department store, Macys. Airborne managing director Peter Bray said Macys had 11 windows of its store devoted to Airborne Honey products. "It took up one whole city block."

Challenges ahead for the company included developing new honey types for new markets. Miss Marton said, such as a barbecue honey for China, "with all the associated herbs."

The winners of the Air New Zealand Export awards were announced on November 14, 1996.

Acknowledgement Christchurch Press

Letters to the Editor

If you write a letter to the Editor, or have an article you want printed as an article, can you clearly mark it as such.

Thanks, Ed

Dear Sir

I would like a New Zealand beekeeper to write to me, but I know French people are not very popular in your country, (Rainbow Warrior affair, nuclear bomb tests). Personally, I don't like politics, I prefer beekeeping!

Mr postal address is:

**Vincent Clap
2 Impasse Du presbytere
34160 Castries
France**

Please write directly to Vincent - Thanks Ed.

Dear Sir

I wonder if there is some out there who could help.

I have a small plantation of pines and would like to plant other types of trees that not only produce timber but nectar as well. I would like to plant something that would produce pollen or nectar in about February/March.

Can you help?

Please contact:

**Lindsay Feary
3 Manwhera Street, Dobson,
Westland**

Library News

Exporting honey into the Japanese Market: *A Research Essay by Fiona Betteridge 1996, NZ.*

This document is the result of a lot of study and research. It covers the many different aspects, problems and requirements associated with exporting into this special market valuable to the New Zealand Honey Industry.

Notes for beginners and others

Summer is over and it has not been a very good season for many of us. Here in the South we did get a real taste of fine warm weather at last. But it did come too late to secure a good honey crop. Not so crucial for hobbyists and part-timers but for those who make their living off beekeeping it will once again be a matter of trying to "hang-on".

There is still time for autumn re-queening and the setting up of some nucs (tops) to carry through the winter. Well worth the effort, it gives that extra security next spring if a colony, or more than one, has fallen by the wayside.

If you have just a few hives and you want to do your own extracting the best is of course to do it as soon as the supers have been removed from the hives as then the honey is still warm which makes uncapping easier and the honey will leave the cells without trouble unless it is thixotropic (jelly like) such as manuka.

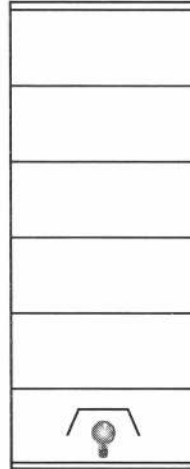
Honey flows well at a temperature of about 26°C., (75°F.). When the honey is cold uncapping with a knife becomes a tough job and combs will not extract clean with the risk of breakage also increasing.

There are a fair number of beekeepers of the "in between" category, the part-timers. They probably started as hobbyists, caught the bug properly and are trying to build up hive numbers and go commercial. I have experienced that stage and remember it very well indeed.

One is faced under those circumstances with real difficulties when it comes to extracting time. Financially probably not in the position to be able to afford a well set up honey house with a hot room etc. The simplest answer would be to find a

commercial outfit which would be prepared to extract the honey crop for you. But that is not always possible and then some of us just want to do our own thing. There are some alternatives to warm up combs before extracting without having access to a hot room. Only on a small scale of course but they work for amounts of up to approximately a couple of dozen f.d. supers.

Empty super on a drip tray with a 75 watt light bulb fitted inside. Drill a hole through the side of the super for the cord. Fix a shield made from tin, galvanised iron or aluminium about 50mm above the bulb to avoid concentration of too much heat onto the combs directly above the bulb. Will keep warm four to five f.d. supers or equivalent 3/4 d. Rig up several tiers if needed. Warming up very cold honey will take more than a day, probably 48 hours. Cover top of tier with an insulating board and extra cover over the whole tier will also help.



Another option, a little more sophisticated and probably more efficient is a long box heated by an electric fan heater taking 20 to 25 f.d. supers.

A fairly strong well made framework is needed as there is considerable weight involved when stacking 20 or more full f.d. supers on to it. Timber size for the long sticks at bottom and top should be no less than 75mm x 20mm. The same for the ends. Top and bottom to be connected with uprights. Line the sides and ends with hardboard, ply or pinex and insulation craft, the aluminium foil

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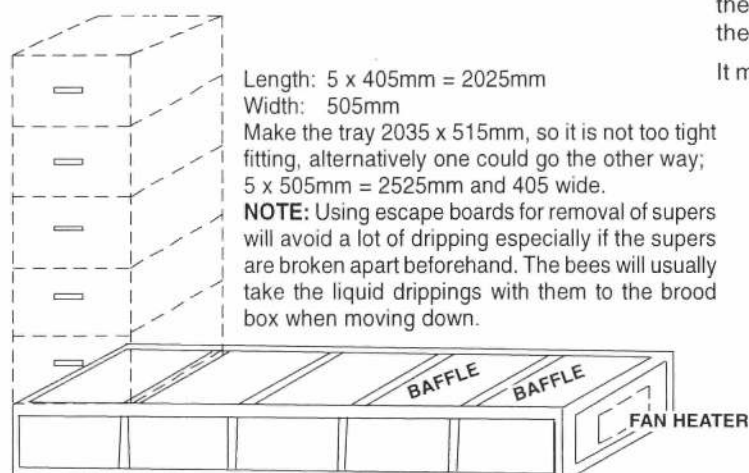
to face inwards. The height of the box is not all important, it depends on the heater you will use. One end must be cut out to correspond with the face of the heater so that it can fit snugly. No sense in wasting energy. The tops of the sides should be connected with pieces of 50 x 50mm so that all is flush on the top and at distances apart so that the sides of the supers to be stacked will rest on it. A similar piece of 50 x 50mm between the two bottom runners is advisable, extra strength and also helps to keep warping at bay.

The whole contraption should be placed in a shallow tray which may be made of stainless steel, aluminium or flat galvanised iron. The last is probably the cheapest but should be coated as honey will be in contact with it. A number of covers for the stacked supers have to be made, again making use of insulating material. Baffles over the first two or three compartments nearest the heater are advisable. The old flat zinc queen excluder make admirable baffles, if you can lay your hands on them, otherwise easy enough to make from some tin or aluminium plate.

Incorporation of a time switch or thermostat will be an advantage. You have to find out what the optimum setting should be. Be careful not to overheat, not only could things go up in smoke but collapsed combs and a sorry mess are guaranteed.

After stacking the supers and switching on the heater leave the covers off for a little while till the cold air between the combs has been driven out. It also pays to keep combs as well spaced as possible to facilitate circulation of the warm air.

After extracting one is always left with sticky wet combs and a quantity of cappings. The wet combs may be stored away as



such in a bee-proof building but in many cases it is more convenient to have them dried out. Please don't just stack them some where outside for it means wholesale robbing with all its consequences. Onto hives is the way. Best to keep this confined to a limited number of hives so as to minimize the risk of spreading disease. Wet supers are the main cause of AFB infection.

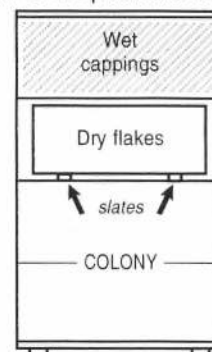
Cappings can drip out for a time in a warm room but one is still left with a sticky mess. It is pretty well impossible to remove the remaining honey without the use of pretty sophisticated and expensive equipment. You can of course use the cappings as a source for making mead. Otherwise let the bees do the job, it is a good and very simple solution.

Needed are two supers. Nail two slats inside one of them. These will support a tray which fits inside the super but leaves enough space between the outsides of the tray and the inside walls of the super for the bees to go through. Something like 10mm.

The tray will receive the dry flakes of wax when the bees work on the cappings in the second super above it. That super must have a queen excluder or a screen made from fine bird netting and will hold the sticky cappings. Select a colony for the job and place the box with the tray onto it. The tray can be made of metal, hardboard, or ply. Above this the super with the cappings. Secure hive and be sure it is robber proof. For greater quantities of cappings at the same time increase the equipment and use another one or two hives. Limit numbers as far as possible for the above mentioned reason and also because this windfall may well induce brood rearing at the time of the year when you don't want it. Don't pack the wet cappings tight into the super and give them a gentle stir after a while so that the bees can get it all.

It may be necessary to give the hive or hives doing the job an extra super with empty combs for storing the honey coming from the cappings. Empty the tray of the dried cappings and store these in a plastic bag, tie to secure from wax moths.

Speaking from own experience these gadgets work, are relatively easy to make and don't require much cash which is important if one is struggling to get established. Hives are still the most important, expensive gear comes later when the time is ripe.



Beekeeper abuzz for world record bid

Karl Christophersen, Tauranga, expects to be covered from head to foot with bees.

He intends wearing about 500,000 of them — weighing 50kg — as a "mantle". Fame is the spur, and the buzz it will give him.

The Katikati part-time beekeeper and a small group will gather at a spot near the western Bay of Plenty town and take a crack at the world record — set in 1991 when American Jed Steiner's 343,000-bee mantle made the *Guinness Book of Records*.

For the past 10 years Mr Christophersen

has been running a small beekeeping business and has always wanted to wear a bee suit.

"Usually, beekeepers get tied up completely with the pollination or honey-making side of the life," he said.

"The idea of enjoying your bees can be lost along the way."

The mantle will be built up over as long as three hours in a cordoned-off area.

Mr Christophersen's face will be uncovered, but silicon plugs will prevent his ears and nose from being invaded.

Acknowledgement NZPA

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Marketing

How to get more results from less money

The beekeeping industry needs packers and honey marketers to be more innovative with their own honey marketing.

Over the last four years beekeepers through the Marketing Committee and courtesy of the hive levy have developed promotional marketing initiatives, but packers and brands have been slow to pick up on these. In many instances the New Zealand Honey Food and Ingredient Advisory Service has been inter-facing with customers and centres of influence (customers, chefs, food writers and the like) when brands and packers should not be taking the initiative and carrying those tasks out themselves. The NZHFIAB can't make sales happen, it can only excite an appetite in people for honey products. The opportunities would be more efficiently and effectively capitalised on if the brands were doing some of that interfacing themselves and securing sales from the opportunities. It would also reduce the cost that beekeepers themselves are carrying through paying 100% for those marketing initiatives. That's something that the industry has to address, especially as the marketing budget for 1997 will be down on last year. The industry hasn't reduced the marketing allocation, but in 1996 the marketing committee had funds carried over from the previous year. Those internal reserves were fully utilised in 1996 and we start off with a clean slate in 1997.

The Marketing Committee's key role has to be in creating new initiatives, and generic opportunities. Now that we have proven some strategies we need brands and packers to pick up on those (presentations to chefs, food retailers, general retailers and the like).

Kiwi innovations picked up by the honey bear

The USA likes what we have been doing. I was thrilled to get a copy of the American National Honey Board's "Menu for Success", their marketing plan for 1997. The key to that plan is a new emphasis on consumer marketing and in particular the use of chefs, food writers and the like to achieve their objectives. The American Honey Board is to develop a honey sampling kit "To help the media understand the many colours and flavours of honey a sampling kit of 8-10 honey varieties will be developed".

The New Zealand industry pioneered that sampling kit concept and has been using it for 3 years now. It has been extremely successful and we are thrilled to see the American Honey Board picking up on the idea.

I could just about weep of course at

seeing how the American Industry is able to put vast financial resources into their new focus. We'll be monitoring the development of their strategies to see if we can beg or borrow from them. The American Honey Board has always been excellent in providing any information we've needed.

Honey Research Unit to look at honey's nutritional values

A new major focus is to be developed at the Honey Research Unit this year. Beekeepers will be aware that we have started to amass a national honey sample base. The intention is to have six representative samples of each of New Zealand's honey varieties. Those samples will be put through exhaustive analysis so that we can understand the inherent compositions of the honey types. From that understanding we can look to marketing opportunities from them.

New Zealand beekeepers have the amazing good fortune of both Professors Alister Wilkins and Peter Molan having a strong interest in our product. Alister Wilkins will be subjecting each honey to in-depth compositional analysis. Then Peter Molan will use that information to look at the potential benefits of honey composition to the human metabolism. New Zealand is the only country in the world where food labelling regulations prohibit us from making any claims that honey is anything other than sugar. We cannot claim that it has nutritional values greater than refined cane sugar. (That's always annoyed me!) This year we intend to research the differences so that we can lobby a case to the Ministry of Health to have a change made. It's not a 5 minute task, and it won't be easy, but it's going to be a very enjoyable task, and one worthy of winning! To that end the research being carried out by Waikato University will be essential in preparing our case. I was particularly interested to note that there is a change in official attitude happening that helps our cause. The following is a comment made by Dr John Birkbeck, Medical Scientific Director for the New Zealand Nutrition Foundation; it was published in Food Technology of New Zealand magazine, February 1994.

"There are two final messages which must be added to my initial proposition that is valid and effective to use nutritional claims to promote foods. The first is that our concept of what constitutes a "nutrient" must change, to encompass not only the traditional "essential nutrients" but any food component which has a favourable biological effect on human metabolism.

The second and crucial message: by all means use nutritional claims, but they

must be substantially valid. Never make a claim for which you do not have documented scientific evidence that it has a clear basis in fact.

Absolute proof is not necessary; indeed there are few absolute proofs in nutrition; but reasonable evidence certainly. Many years in advising food promoters teach (us) that honesty is indeed the best policy. If you stray from that, sooner or later you are exposed".

For me this is one of the most exciting research challenges and opportunities that we as an industry have. For some decades honey has been knocked by some nutrition professionals as being "simply sugar". I believe that with the assistance of the Honey Research Unit we can prove that honey is not simply sugar; it certainly has more nutritional value than refined cane sugar. It's going to be a challenge to change the professional's paradigm. Can we win? Of course we can. For a start, all sugars, in nature, exist alongside trace elements of chromium. Chromium is in fruit, raw sugar and honey. Chromium has a role to play in metabolising simple carbohydrates. Add that fact to John Birkbeck's comment and we know that honey is nutritionally better than refined cane sugar. We know that refined cane sugar has had the chromium removed. As I said, 1997 is going to be a challenging and exciting year for research and honey.

The Great Import threat has arrived

Well I've just tasted my first imported honey purchased in New Zealand. It's reinforced for me the superb value and quality of New Zealand honey's. Like many of you I was horrified to see that the Solomon Island's Honey Producers Co-operative have been allowed to export honey to New Zealand, where it is marketed by Trade Aid. I paid my \$4.50 retail for a 500 gram jar. I brought it home and did the taste aroma test . . . YUK! Yuk is a word not often used by professional food tasters, it is a word that I have never used at all in tasting any New Zealand honey. Some New Zealand honey's can be raunchy; Kamahi "gifted" with quintinnea for example, but they still have a superb overall flavour package. The honey can be "muscly" like a strong manuka, but this Solomon Island honey is a cross between burnt molasses and sour coconut milk. I can't see anyone enjoying it. I suppose we should be pleased as it reinforces how good our own honey's are; but I worry about the importing of any honey and the protection of our disease free industry.

Honey goes top of the morning with Brian Edwards

In last month's *BeeKeeper* I suggested that you listen to me on the Brian

Edwards Show on Saturday 22nd of February. I apologise to beekeepers who did as I asked. As you are now aware the programme was broadcast the following Saturday (not my fault I hasten to add: the producer had to change my day slot). An interesting exercise because although Brian was initially going to taste the honey with me, he has a sugar intolerance problem and advised me on air (he was in Auckland and I was in Wellington) that he couldn't taste the honey's with me. We also had some time constraints and had to push through the programme. Notwithstanding that I have had some very good comments from people who enjoyed the interview. My personal thanks to Nick Wallingford who faxed a quick reply to Brian when I couldn't answer his question to me about bees being dumb and stumbling around in the hive. As you are all aware I am not a beekeeper and have never kept bees and know only what I have read about beekeeping or been told, which is very little in the scheme of things; honey the food is a different story.

Drone Jelly

Now here's an interesting idea straight "off the wall", from someone who shall remain anonymous, but he is one of a pair.

One of two brothers who at one stage had a real dislike of the possum because of what they were doing on Rangitoto

Island to the Pohutukawa . . . so this anonymous one recently had a brainwave! They feed royal jelly to make Queens, they feed drone jelly to make the fertile males: ipeo facto could Drone Jelly be an exciting new wonder fertility food for flagging men, or should that be lagging?, . . . whatever. So for what it is worth I throw that into the product development arena. The concept of course being that drone jelly could be an exciting new product or tonic for men who are starting to wonder if there is such a tonic around. No doubt we shall hear more sometime, somewhere from someone on the topic.

My favourite honey this month, it would have to be Marlborough beekeeper Oliver Varcoe's Manuka. I got a jar of it last season and put it away in the cupboard and it's developed superbly, I used it in developing the recipe that I gave out on the Brian Edwards show. A wonderful, thixotropic, "hairy chested" manuka honey that gives incredible flavours . . . and for those who like the idea of fool proof cuisine here is the recipe from the Brian Edwards show. My family will confirm that it is one of the few times they look forward eagerly to my night on cooking. It's a superb sauce, never fails (and you will enjoy the onions that have been cooked inside the chicken).

Bill's Microwaved Honey Chicken

— a good "Blokes Recipe" it can't fail . . . and dead simple!

No. 8 chicken thawed
2 onions
2 tablespoons Manuka honey
2 tablespoons Soya sauce
1 tablespoon Worcestershire sauce
1 tablespoon sherry or wine
2 cloves garlic crushed
2 tablespoons fresh chopped rosemary
or 1 teaspoon dried

Peel the onions and place whole inside the chicken. Mix the liquid ingredients together and heat slightly until the honey is liquified. Add the crushed garlic and rosemary to the mixture. Glaze the chicken with the mixture. Pour any remaining liquid into the dish. Place the chicken breast down in the dish and cook on high (900 watt) for 15 mins covered. Turn the chicken and cook 15 mins. Check the chicken is cooked, the juice in the thigh joint should run clear, if not cook longer. Crisp the skin under the grill or drain and stand while you serve the rest of the meal.

Sauce

To make an incredible manuka honey sauce (skim off the fat) and reduce the liquid or you can add a teaspoon of arrowroot (pre-mixed in water) to thicken.

Regards Bill Floyd

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From the Colonies

Southern North Island

Totara Reserve Field Day February 22, 1997

About 60 of us made our way to the Totara Reserve in the Pohangina Valley at 10am on Saturday 22 February for a most interesting field day run by the National Association of Beekeepers. Yoko and I knew we were on the right track when driving out of Ashhurst we found ourselves behind a small truck bearing the number plate MR BEE. We were pleased to see 14 or more others from the Manawatu Beekeepers Club and to catch up with a fit and well Adrian King from Taranaki. Other people came from Wellington and Hawke's Bay.

True to the agenda we spent the morning observing the practical aspects of beekeeping. James Driscoll explained to us how to detect American Foulbrood in a hive with the aid of two infected frames kept carefully for the occasion by Frank Lindsay. One frame was quite advanced so it was the first time many of us had been able to see and smell the effects of AFB. Robin McCammon greeted us by saying that he was happy to share his site and expertise and suggested we all wear the right gear as his hives had only been placed there the day before and the bees were unsettled. The outfits donned ranged from one based on Ned Kelly's protective gear to merely a casual hat and veil but all worked well as we found when we went down to the hives.

Robin then demonstrated how to inspect hives by looking for well distributed brood, pollen, and honey on frames in the brood chamber; to assess if there was enough honey for over wintering; to assess the age of the queen to decide on replacement; to re-queen using queen cells; and how to split a hive using a third super which is then put back to front on top of the rest of the hive.

Meanwhile John Brandon was showing his expertise to another group in much the same way, letting the novices gain confidence by handling frames with his guidance. Frank Lindsay showed us another way to split a hive using five frames from each of two supers, making sure the queen is still in the original hive and popping a new queen cell or boxed queen into the new super placed with the entrance to the rear on top of the original hive. There were discussions on the relative merits of spring v autumn re-queening and on using queen cells for commercial operations but mated queens for hobbyists to add good genetic material to a small number of hives. Finally these meant treated us to a demonstration of how to remove the frames of honey from the hive and how to get rid of the bees either by using an excluder board or by blowing the bees away.

After eating our own excellent lunches we sat outside to listen to the main speakers and admired the backdrop of the lofty totaras and their wood pigeons whilst soaking up the sun. First to speak was John Brandon from Wanganui. He gave an interesting account of his trial of pollen-trapping on 20 hives. He has harvested between three and seven kilos of mixed pollen per hive without a noticeable drop in honey production. He stressed that he does not see bee products as miracle curers like some claim but the pollen, for instance, can be a good dietary supplement.

Sue Walker followed with great advice for those wishing to maximise their bee operations - gather pollen in spring, honey in summer and propolis in autumn. It seems New Zealand is short of pollen and the world is short of honey because disease has ravaged parts of the USA and UK and the climate has been unfavourable in South America and Australia. Sue told us clover honey sells well in Germany, comb honey sells well in Japan.

Gary Tweedale gave a well illustrated talk on the nuts and bolts of honey/wax extraction and how to build the necessary plant. This was spiced with interjections from the audience

with dire warnings about boilers that can implode or explode — until then we thought we only had stings to worry about!

Frank Lindsay then demonstrated the equipment he had brought along because he found it so useful — a trolley for easy pickup and moving of full drums of honey and a lifting device for stacking two or three combs on top of each other. A Marton beekeeper showed us his back support purchased from Protector Safety Ltd, Palmerston North for \$37, which seemed a great idea.

Finally Harry Brown gave us an outline of national issues particularly in regard to his difficulty in collecting hive levies nationwide. He urged people to supply him with accurate statistics; to make good applications to him for research grants from the Trust; and to help him build up a directory of expertise. For instance if someone from overseas calls for a supply of 40 kilos of pollen a month who can he tell? The group congratulated Harry on his excellent production of *The New Zealand BeeKeeper* journal. This now incorporates BeeFax and much more advertising so we know who sells what and how to get it.

All-in-all it was an enjoyable informative day spent with pleasant knowledgeable company. Whether a commercial beekeeper or hobbyist we offer thanks to the NBA, supported by MQM, for their time and effort which we all appreciated. Robin and Ted Roberts are specially commended for choosing the YMCA site.

Some tips I as a hobbyist learned from the day:

Better to winter with two supers — if more, the mice might move in

For each super you need half a super of honey for the winter, about 35 kilos

Best to put new frames in the hive in spring

Optimum size for hive entrances is about four inches the year round

Better to carry on with full sized supers for brood chambers but switch to three-quarter size for honey

Remember to bend the knees or kneel down when lifting, tending hives

How and when to re-queen with \$3 cells or \$15 boxed fertilised queens?

Two ways to split a hive

Hives will naturally downsize for the winter so do not panic if there seem to be a pile of dead bees outside the hive

Rosemary Clarke

Auckland Branch

Generally the warm rains with high temperatures seem to have given us the late crop that Bob, with his long experience in beekeeping says, does happen occasionally. Nice to read that the Bee Fax agrees with Bob's observation.

Brian from up on our northern boundary, but with hives through our central area, says that his returns are excellent.

Neil, also from up north, says that despite two cyclones, pohutukawa has produced a good crop, as have light sandy soils and hill sites. However, their Hauraki sites have not done well at all. Bob seems in agreement with the latter, when he says that unless the Hauraki has improved greatly within the past few weeks, he will be feeding shortly.

South Auckland Brian's bees have worked hard on Lotus, and a good late return is expected from this, while the early cold spring rain is now bringing it's reward of an excellent crop of Penny Royal. I myself, also in South Auckland, have been pleasantly surprised to find a recent build-up in the honey supers, but what a hotch potch of storage scattered throughout the four supers, with queens finding their nursery areas cramped with stored honey and pollen.

To the south, one of our beekeepers inadvertently left a couple of frames outside a one supered nuc. Came to his next visit

and his one supered nuc was choka, while the two frames on the outside had been filled and were now capped.

Can someone tell me?? Setting up my queen rearing site recently, though a warm morning, there was very little activity outside the hives, but as soon as I entered I was mobbed. The breeder hive which is exceptionally quiet and the first to be opened, objected to me strongly, and the same treatment was meted out to me by the remaining hives. By grub transfer time of 2pm, I was very apprehensive as I have to remove my veil to see well enough, but I had no trouble at all and had a good graft and not one sting. Why???

Jim



Condition reports from the branches

Branch:	FAR NORTH
Crop:	Very late start, good flows from the bush. Good February average to below
Conditions:	Hot and humid
Outlook:	Reasonably good for bush flows as bush flowered late
Branch:	NORTHLAND
Crop:	Too soon — probably better than average
Conditions:	Good at the moment, summer has arrived
Outlook:	The season is over
Branch:	AUCKLAND
Crop:	Very late — but looks good. A good late flow
Conditions:	Very hot/cold till mid-February
Outlook:	Hives in good condition for the autumn
Branch:	WAIKATO
Crop:	Below average
Conditions:	Windy and cool nights
Outlook:	Flow is over
Branch:	BAY OF PLENTY
Crop:	Fair
Conditions:	Hot/windy
Outlook:	Average
Branch:	HAWKE'S BAY
Crop:	Varies, near the coast good flows — Inland not so good
Conditions:	Varying/hot rain encouraging late growth
Outlook:	Flow starting to ease
Branch:	POVERTY BAY
Crop:	Anything at altitude is poor. Tawari down
Conditions:	Poor, cloudy and cool
Outlook:	Hoping summer will arrive
Branch:	SOUTHERN NORTH ISLAND
Crop:	1/3 down on last year. Taranaki very dry
Conditions:	Reasonably settled
Outlook:	Flow just finished on the lowland
Branch:	MARLBOROUGH
Crop:	Slightly above average manuka, clover not so good
Conditions:	February has been warmer than January. Temperature very late, lots of wind and cold nights
Outlook:	Autumn has arrived
Branch:	WESTCOAST
Crop:	Fair to average
Conditions:	Late summer but it did come
Outlook:	Autumn has arrived, early winter predicted
Branch:	CANTERBURY
Crop:	Better than January but down on last year
Conditions:	Cold
Outlook:	Early autumn on its way
Branch:	SOUTH CANTERBURY
Crop:	Below average. Too cold. Coldest summer for 13 years
Conditions:	Too wet
Outlook:	Autumn has arrived — season over
Branch:	OTAGO
Crop:	Varies. Lawrence/Roxburgh area 30kg, lighter nearer the coast - down to 10kg per hive
Conditions:	Not enough heat
Outlook:	Season finished
Branch:	NORTH OTAGO
Crop:	Poor. 50% below average
Conditions:	Cold — no sun
Outlook:	Season is over
Branch:	SOUTHLAND
Crop:	30kg per hive
Conditions:	Erratic, summer arrived at the end of January
Outlook:	Season over — honey is off the hives

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William Charles Cotton

Grand Bee Master of New Zealand

Part VI - The Maori, New Zealand's first commercial beekeepers

While Cotton can be credited with being New Zealand's first Grand Bee Master, the group of New Zealanders who arguably deserve the title "New Zealand's first commercial beekeepers" are indeed our own indigenous population, the Maoris. It is significant that one of the two New Zealand books written in the 1840s concerning how to manage bees was printed in Maori.

Cotton wrote this book which he titled *Nga Pi*, meaning *Bees*. It was published after his 1847 departure for England by St John's College Press in 1849.

One suspects that in the Maoris Cotton saw the vision of a group he could instruct in the 'Gentle Art' of keeping bees in a sustainable way without using the outdated method of brimstoning hives to kill the bees prior to harvesting the honey. His book's subtitle 'and the methods of taking care of them, of honey production and hive making' supports this idea.

Hopkins described the brimstone method "A small pit was dug a foot or so in depth; half-way down two cross-sticks were placed, on which some sulphured rags were hung, a match was applied to the rags, and the box (or skep) containing the bees placed over the hole, covered by a sack. In a short time the sulphur fumes killed the bees, and what honey was in the box could be removed with safety to the owner." Hopkins noted some exceptions to this style of beekeeping "settlers who had profited by the teaching of the Rev. W. Cotton, and secured the honey without destroying the bees, but the majority used the sulphur pit."

A major theme of Cotton's early writing directed at the English cottager beekeepers was preaching against this cruel senseless practice. In his 1842 *My Bee Book* he wrote "... NEVER KILL YOUR BEES ... every one of you must feel some sorrow when you murder by thousands in the autumn those who have worked hard for you all the summer, and are ready to do so again next year."



A 19th century cottager's bee hives

With the Maoris Cotton could start off with a receptive audience unburdened with old fashioned techniques. They received his instruction in the state of the art practices in bee management. An introduction to the craft went as follows "Friday March 15th 1844. Bees working very hard today. Binata stung just below the eye. Saturday March 16th. Binata came again in the morning with his eye to my great astonishment not at all swollen. He brought Wm King his master, and several other Maoris to see the bees. Their admiration was very great, especially when I gave them a 'very small taste' of honey all round, by dipping the end of my finger in some which was lying on a plate and then putting it to their lips.

The universal expression of admiration is *He mea uka wakarahara* 'a very exceeding sweet thing', the last word, the highest superlative, pronounced with great energy."



Wiremu (Wm) Han, Maori beekeeper, Nov. 1844

King was possibly a Maori, but there is no doubt that Han was a Maori beekeeper as evidenced by the portrait of Han in one of Cotton's journals. Seven months after recording his introduction of beekeeping to Binata and company, Cotton recorded

"Saturday November 2nd 1844. ... instructing the Maoris in beekeeping. Many of the most respectable will take to it well. Wm Han and Wm King have each made themselves a box hive. The former is to have the first swarm which is to spare. I took a comb out of one of my box hives, now only three weeks old, and gave a taste of Waimate honey all round — it is most fragrant."

A week later Cotton had native help to move his hives to Kerikeri, arriving there at 8:15 in the morning "My natives called me at 4am, walked slowly for the sake of the Bees. Had a great deal of talk with them (the Maoris) all the way down, about apiarian and other matters. I never had better lessons in Maori than those which I got during this walk. "



A flat topped straw hive

The Maoris proved to be accomplished pupils in the now lost art of manufacture of the old skep straw hives. In his *A Manual for New Zealand Beekeepers*, Cotton relates, "I lately shewed the stitch, and the mode of using the leathern pipe, to some maoris at Otaki, and I had not to spend long about it; in an hour I was fairly beaten by my pupils, and before evening several of them had finished their first hive. At Waikanae I did the same, and the old man who has the care of the bees in that place was so ready at the work, that his second trial produced as strong and handsome a beehive as I have ever seen in any country. I doubt not but that before long maori made hives will be sold at eighteen pence or two shillings each in every town in New Zealand." The 'stitch' that Cotton mentions is the fundamental technique used in the manufacture of skep hives and made with a skep needle typically fashioned from bone which was thrust through the straw when introducing the binding. The 'leathern pipe' or a similar tool made from a hollow section of cow's horn about two inches in diameter was used to form straw rope of an even thickness which was sewn to the adjoining course.

Cotton noted that not many pakehas knew how to make hives because they did not know the stitch. He hoped that the settlers would soon learn "... at all events the natives will supply as many as they choose to buy, or teach the unhandy pakeha how to do the stitch." In *Nga Pi* he wrote "You like the skep woven out of wheat straw ... This work will be easy for the Maori people to carry out, with their knowledge of the methods of basket work it will not be long before a hive has been completed for you. ...

make the hive strong, not full of gaps but with even stitching."

Those Maoris who used flat topped straw hives rather than Cotton's alternative of top-bar box hives should not be thought of as using sub-standard methods. Cotton wrote in his Manual "... bees are not particular as to the hive they are put into, that they will build combs and make honey anywhere. The advantage, therefore, which one hive has over another is not so much in its material, straw or wood, as in the greater or less ease with which your honey may be taken from it. ... Even the common straw hives may be so managed as to yield a large return ..."

At the time Cotton was writing the Dark European honey-bee was in the process of rapidly expanding into the huge untapped ecological niche that the native flora of New Zealand provided. In March 1844 Cotton lost his first swarm "**but the Bush will get stocked, and it is only carrying out my intentions of letting one swarm in the house its liberty.**" The feral honey-bee population was on the rise.

Cotton believed that the Maori would play a central part in the development of beekeeping. "**and when our woods are fully peopled (ie., with bees) then will be the time for honey without stint, and wax in such plenty as to become an article of export. The maoris will make capital bee hunters; their accurate power of observation exactly fits them to track a bee to its home; and their ingenuity, to adopt the best method of preparing honey and wax. I, for one, will do my best to put them in the right way, as well as to supply them with swarms.**"

The New Zealander for 13 March 1847 mentioned Maori beekeeping aspirations "**Mr Cotton, we understand, has commenced to teach the natives the practical management of bees, and they have now amongst them several hives, and appear to understand the subject, and are anxious to become bee masters. Mr. Cotton has two hives at Otaki, in order to teach the natives ... and they have proved apt scholars under his tuition. They have taken swarms themselves, and manufacture straw hives equal in many respects to the model with which they have been furnished.**"

His respect for Maori ingenuity is further evidenced in anecdotes of Maoris collecting bee swarms. "**A Maori having seen a stray swarm settled on a branch, and having no hat to his head, managed to hive them in a garment he did possess, his only one in addition to his blanket. He took off his shirt, and wrapping it carefully round the bees, cut the branch off, carried it home, and put them into a box. ... another maori at Coromandel Harbour ... used his trousers for the same purpose, having first tied up the legs**

with a piece of korari."

Charles, Baron de Thierry, resident on the Hokianga and frustrated self proclaimed King of New Zealand, also noted the Maoris abilities with bees. Writing in 1856 of their wide adoption of white mens' appliances and practices "**They gather vast quantities of wild honey, and bring into Auckland a considerable amount of fruit.**" (Hyde, p.274)

It is worth reminding readers here that the first English or Dark European honey-bees were a pure and gentle race. Collecting swarms naked (ie., without protective clothing) was probably much safer than today with the hybridised nature of today's bush bees. Try this at your own risk! The hybridization of the New Zealand bee stocks with races such as the Italian honey-bee might however be proffered as partial explanation why the Maoris became less involved in beekeeping as time moved on from the 1840s to the 1880s. In *Nga Pi* Cotton gives advice on beekeeping attire for Maori beekeepers "**As for suitable beekeeping clothing, that can be their choice. The Maori cloak is very good but it must be very carefully cleaned to be suitable.**" I am still left with this unfortunate vision of a fearless Maori beekeeper lifting his cloak higher and higher to protect his face only to find himself vulnerably exposed!



A cloaked Maori, Hoani Weiteri, 1844

While at Otaki on Monday, 14 December 1846, Cotton again wrote of his association with Maori beekeepers "... I found both swarms of Bees all safe, they had come on to Otaki in a canoe from Pourua. One swarm is to go back to Waikanae.

There was hardly any body in the Pa. The people being ... inland at their cultivations". Two days later "**Walked inland to choose a site for the Bee House. Found a beautiful spot sheltered by some young Koraka trees.**" On 22 December Cotton assisted in locating another site "**I went up river**

with Martin to his cultivations and chose a sheltered spot for the Bees."

Christmas Eve 1846 "**Returned to Waikanae, a Maori carrying the Hive which is for this place.**" This hive was placed in its bee kainga or apiary on Saturday 26 December "**Walked inland to bring the bees to the Kainga.**"

On Saturday January 9th 1847, Cotton "**walked inland to see the Bee House which the Maoris have put up here for their Bees.**" The following Thursday, 14 January "**Taught three Maoris to make straw hives. I just know the stitch well enough to put others in the way of it, but I was soon surprised by my Maori pupils. Returned home by way of Martin's Bee kainga - the new swarm doing very well. We found a very small canoe at their place to take us down the river. It was not much bigger than a large butcher's tray and wd just float four of us. The canoe was at least 1 1/2 inches above the water.**" The next day "**Returned to Waikanae going by way of the Bee kainga as Martin wished me to explain to 'Tima' (Seymour) the English carpenter the mode of making the Bee boxes.**"

The newspapers of the day made comment on the initiative that Cotton had taken in education of Maori beekeepers. *The New Zealander* for March 13th 1847, commenting on bees states, in parts somewhat condescending "**The introduction of bees into a new colony is a subject of great importance, particularly to the agricultural settler ... Now, when we consider how very fast they increase, and the opportunities which exist for keeping bees, particularly amongst the native population, we conceive we are not too sanguine in anticipating that in a few years, honey and wax may be added to the exports of this colony. However this may be, every colonist must rejoice at their introduction among the native population. Whatever tends to excite among them an increasing desire for the blessings of civilization, to improve their food, to promote settled habits of industry, and to strengthen the ties which each day are insensibly (ie., slowly and unconsciously) drawing both races closer together, must be acknowledged to be a good, and we hope both the settlers and the maoris may in a few years realize for New Zealand the description given to the Israelites of the Promised Land, and by their united efforts render this colony literally 'a land flowing in milk and honey - the glory of all lands'.**"

History does not paint a clear picture of the relative importance of beekeeping to the Maoris during this period, however it is a matter of historical record that in the early to mid 1800s the Maoris were a very dominate economic force. They grew the majority of the food and involved

themselves in a wide range of business opportunities. Our 20th century Grand Bee Master, Isaac Hopkins, writing his reminiscences in *Forty-two Years of Bee-keeping in New Zealand 1874-1916*, noted that for some years after his arrival in New Zealand 1865 **"the only honey I saw for sale was what the Maoris hawked about in old kerosene tins ... A conglomeration of honey, wax and bee grubs ... all mixed together."**

Cotton's vision of the development of beekeeping as it related to the Maori did not run according to plan but he could never have foreseen the swamping effect that the huge continuing tide of settlers would have. The complicated period after 1860 with the land wars saw the end of Maori economic power as the settler population became less and less dependent upon the Maoris. The move away from skeps and spirit boxes to the new and exiting movable frame hives may also have had a negative impact on Maori beekeepers. It meant beekeeping required a capital outlay not easily obtained.

The arrival of the AFB (brood disease) scourge and subsequent outlawing of all hives other than movable frame hives probably signalled the end of the beekeeping activity of many Maori beekeepers. Hopkins relates that he received communication in 1883 from a Mr Bagnall from Thames complaining of an outbreak of AFB. Bagnall blamed the outbreak on a neighbouring apiary comprised of bees bought from Maoris in box hives. Bagnall warned Hopkins that the disease was likely to be a considerable distance up the Thames valley among **"other Maori box-hives"**. The criticism of Maori beekeepers per se, was probably completely unreasonable. The Maori 'box hive men' along with the settler box hive men were the unwitting victims of the scourge of AFB which rapidly decimated hives in the 1880s. It was the settlers who imported the disease, not the Maoris!

Despite his vigilant precautions, there is a possibility that it may have been Hopkins himself who unwittingly introduced AFB to New Zealand because he was the leading importer of new genetic material. In 1880 he has the honour, just behind a Mr J. H. Harrison of Coromandel, of importing the first Italian stock from the U.S.A. In 1884 he went on to import more Italians, this time from Italy as well as Swiss Alpine bees, Syrians, Holy Landers, Cyprians and Carniolans, all from their respective countries.

AFB became rampant by the late 1880s and the 'box men' quickly became viewed as the culprits and not the victims. The reason for this was simple. Skep and box hives had no easily movable frames and particularly the box hives, were not capable of ready inspection. When they died out they were left in situ until another

swarm was placed in them and so spread disease.

When Hopkins accepted the job as Government Apiarist in 1905 he accepted the challenge stating **"The opportunity of getting at the Box-Hive men was too great an allurements for me to miss"**.

Hopkins surveyed 119 apiaries in 1905 for his first official report and noted that of the 2,450 hives he inspected, nearly 25% were in common boxes. He quickly came to the conclusion that Government regulations were needed to 'oust' the careless box men **"... subsequently I found in some districts as many as 60% of box hives, hundreds of them empty of bees, but still on their stands, the inmates having succumbed through disease and starvation. These diseased boxes were free for other bees to enter and carry away infectious germs, yet in the absence of legislation there was no legal power under which I could destroy them."**

Hopkins clearly had one or two problems with AFB himself. In 1907 he established a model apiary for the Christchurch Jubilee Exhibition. To quote Wilfrid Lennon's book about the early beekeepers from the South Island, *Bees In Their Bonnets* **"Those who knew Mr Hopkins forthright and rather dogmatic manner can understand his wrath when he discovered that Mr James Drummond, a beekeeper from Otago, had entered the apiary, examined the hives in his absence and discovered foul brood!"**

Hopkins went on to spearhead the drive towards the first Apiaries Act. It was passed in 1906 and modified into a workable form and repassed in 1907. The 1907 Act gave a sunset date after which the box hives became illegal. Forcing beekeepers to change into using the new Langstroth type movable frame hive and the impact of AFB probably saw the demise of the Maori involvement in beekeeping at that time. Records of Maori involvement seem scant, however as late as 1914 the Maori were still beekeeping in the Bay of Plenty. Wilfrid Lennon detailed the life of Otago beekeeper Mr Robert Stewart **"During a trip to the Bay of Plenty in 1914, Mr Stewart saw the Maori way of keeping bees in box hives. The bees were in boxes about the size of a tea chest with a sack hung over the front. When some honey was wanted, it was an easy job to lift the sack and take out a piece of comb honey. It was not so easy however for Mr Westbrooke, who was then Inspector, to find the owner of the hives. In characteristic Maori fashion of those days, no owner could be found when the Inspector was about. Strangely enough these hives were free from disease."**

Stewart's account gives further evidence that the Maori were indeed innovative beekeepers, adapting ideas to suit their

situation and materials available to them. By definition they must be accorded the recognition as New Zealand's first commercial beekeepers.

Cotton thought enough of one Maori's efforts that he titled one journal page for November 1846 'Appreciation of Bees'. Two letters are pasted there, each from Na Wiremu Hoete of Te Huruhi. Cotton wrote beneath them **"Two letters from William Hoete of Huruhi. The first to say his Bee house is done and asking for a swarm. The second thanking me for the Bees after they had arrived."**

*Bruce Stevenson and Peter Barrett,
January 1997*

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Notes

1. Words underlined are a best attempt at unclear handwriting.

Wow!!!

Bankers in New Zealand tend to be more civilised over bad debts than some in Vietnam. A deputy manager led 16 employees of a Ho Chi Minh City bank, armed with Czech-made AK-47 assault rifles, to a clothing firm which owed \$805,400. They cordoned off the area, snipped phone wires, and confiscated three truck-loads of equipment.

"Most banks here," says a New Zealand executive, "discourage tellers from using assault rifles while on duty."

BEEFAX



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IT'S NOT TOO LATE FOR AFB SAMPLES

As part of its commitment to improving control programmes for American foulbrood (AFB), the National Beekeepers' Association has requested MAF Quality Management to conduct an adult bee testing programme during the current beekeeping season.

Recent research carried out by Dr. Mark Goodwin and his team at HortResearch, Ruakura, has shown that a sample of adult bees taken from a hive can be analysed successfully for the presence of spores of *Bacillus larvae*, the causative organism of AFB.

This research has the potential to improve the way we currently do AFB inspections. While the presence of *Bacillus larvae* spores in a beehive does not mean that the hive necessarily has a clinical case of AFB, it does mean that visual inspections of hives carried out by paid inspectors can be more effectively targeted to apiaries which show at least a potential for developing clinical infections of the disease.

The NBA executive is keen to trial the spore testing method, and especially to see whether the method can be of use in its up-coming AFB Pest Management Strategy. Last season, a provision was put into the AFB Control Programme contract to test the response rate from hobbyist beekeepers. This year, your association decided to conduct the test with commercial/semi-commercial (50+ hive) beekeepers, and included a provision in the 1996-97 contract to test 500 samples of bees from around the country.

Two hundred commercial and semi-commercial beekeepers were chosen at random to take part in this project. They were sent test kits in October, and told that the first 100 beekeepers who sent in samples would have them tested by the Ruakura lab. All testing and associated costs are being met by the NBA Disease Control Contract. Results of the tests remain confidential to the beekeeper, the lab, and the beekeeper's MAF Qual Apicultural Officers. No individual test results will be released to the NBA.

If you're one of the lucky beekeepers who were chosen to take part in this year's adult bee testing trial, you may be thinking that it's now too late to send in any bees. However, so far we have only received back and processed 29 sets of samples from beekeepers. A total of 134 hive samples have been tested, which means that we can still take samples from another 73 commercial/semi-commercial beekeepers this season.

Autumn is just as good a time to take these samples as spring, so if you have been sent a sampling packet, I would encourage you to spend a bit of time collecting bees from some of your apiaries, either when you are taking honey off, or when you do your wintering down. The sampling procedure is actually very simple, and the results you get back may give you some interesting information on the potential for AFB outbreaks in your hives. You will also be helping your association to determine the usefulness of the bee testing technique for future AFB control programmes.

- Cliff Van Eaton, AFB Control Programme Contract Manager, TAURANGA

DO BEES SLEEP?

I'm always fascinated by the questions children ask about bees and beekeeping. There's nothing like a young, active mind to make you think twice about all the things we often take for granted in our profession. A classic example occurred not so long ago, when a friend's daughter asked the seemingly innocent question, "Do bees sleep?"

I thought about the question for awhile, and then had to confess that I really didn't know. But I promised her that I would research the topic, and what follows is the very interesting information I found.

A scientist named W. Kaiser has studied the subject, and reported in the *German Zoological Journal* (77:297), on experiments he conducted in 1984. Kaiser spent lots of sleepless nights (for him, at least) watching the behaviour of bees in observation hives illuminated with red light (since bees don't see red light).

He found that bees in many areas of the hive at least rested. They formed clusters, stood motionless on empty cells, and remained in a state of continuous muscle contraction. Some bees even laid on their sides. The only bees which remained active all night were those on brood combs (the ones working on the "night shift")

Single worker bees observed in a special chamber containing empty comb displayed similar behaviours. The only signs of life were a series of breathing movements in the abdomen, brief leg movements, and occasional brief antenna movements. At times, bees even crawled into empty cells and rested, lying on either their side or back!

Kaiser found two different resting states in bees, differentiated by how quickly the bee reacted to infrared light stimulus (how quickly they woke up?).

Kaiser didn't prove conclusively that bees slept (I'm not sure how he would have been able to do that, really). What he did do, however, was show that bees displayed a series of behaviours that we normally identify as related to sleep.

INVERMAY EXOTICS SAMPLES REDUCED

As part of the New Zealand government's surveillance programme for exotic bee diseases, beekeepers are required to collect a sample of bees from each apiary producing bulk bees or queens for export. These samples are then sent to Invermay Animal Health Laboratory in Mosgiel, where they are tested for exotic mites.

The exporter part of the programme results in approximately 500 samples from beekeepers being tested each year. As well, a further 500 samples are collected by MAF staff from apiaries in high risk areas (such as those in close proximity to ports and rubbish dumps). When the two sets of samples are added together, this means that approximately 1000 apiaries per year are inspected and tested for exotic pests and diseases.

It is this surveillance programme which allows the New Zealand government to state with confidence that we do not have honey bee pests like varroa and tracheal mite in New Zealand. The surveillance programme, which is tax payer funded, saves the beekeeping industry a considerable amount of money each year in the form of inspection and testing fees. It enables us to make "country freedom" declarations to satisfy our trading partners' concerns regarding the safety of our produce.

This season, exports of bees are expected to be considerably greater than in previous years. As a result, if we were to follow the same sampling regime as in the past, exporters and their suppliers would send us many more samples than is necessary to confidently confirm our disease-free status.

Therefore, for this season only, the number of samples required from any beekeeper producing bees/queens for export will be 1 sample from each of the first 20 apiaries used for export.

This will hopefully save time and money for some queen and bulk bee producers, while not putting our surveillance system in jeopardy.

-Ted Roberts, Apiculture Export Certification Manager, PALMERSTON NORTH

CHALKBROOD AND AFB VIGILANCE

During the spring of 1992, a Marlborough beekeeper submitted a number of chalkbrood disease samples to MAFQual for laboratory analysis, because in his opinion, "They were definitely chalkbrood mummies, but they looked a bit brown in the larval tail area".

The lab results, of course, confirmed the presence of *Ascospaera apis*, the causative organism of chalkbrood. However, they also indicated that the chalkbrood mummies had a very high level of *Bacillus larvae* spores. The hives showed none of the classic clinical symptoms of American foulbrood disease (AFB). Regardless, the beekeeper chose to burn the infected hive.

At the time, it was my theory that the larvae were being fed *B. larvae* spores by nurse bees. However, due to very high levels of *A. apis* spores and an ideal environment, the larvae were also being invaded by that organism as well, and the chalkbrood symptoms were showing up instead of the AFB symptoms.

My theory remained just that until 1993, when I read a report from the USDA on chalkbrood and AFB, written by Drs. Shimanuki and Knox. They stated that, "Preliminary tests demonstrate that a diffusible substance is produced by the (chalkbrood) fungus...We have named this Ascophaerin...It appears that Ascophaerin is active against other bee pathogens and organisms...including *Bacillus larvae*".

For the next two beekeeping years, I didn't see any further instances of high levels of chalkbrood in AFB hives. However, during the 1995/1996 season I found cases of hives struggling with chalkbrood on both the West Coast and in the Nelson area.

After lengthy inspections, flicking off dozens of cell caps, I found one or two classic "in-cell" symptoms of AFB. These symptoms included slumping and light brown colouring of larvae, through to dark, tacky, ropy larvae, and in some cases pupal infection.

When I found these hives, I became concerned that the beekeepers I was working with were generally responded with an "Oh, it's a bad case of chalk, I'll paper it onto another hive" approach to the problem. However, if those beekeepers had carried out a longer inspection, spending up to 15 minutes of "cap



flicking" (a time we would usually agree is too long to inspect one hive), it's quite possible they would have found a few cells of AFB.

The problem was that in each case there were no AFB symptoms obvious on the face of the comb -- no sunken cappings, no darkening of the cell, and no serrated holes. The only indication that anything was wrong was a drier, lighter, perhaps thinner cap. Had the beekeeper passed it off as just another "chalky" hive, my bet is that subsequent inspection checks would finally reveal a case of AFB.

This season I have seen four more cases of "subdued" AFB in heavily "chalked" hives. One had just been papered onto a strong unit and was to be relocated to a more favourable site some kilometres away.

Beekeepers should be aware of this apparent potential for AFB symptoms to be "hidden" in amongst larger, more obvious infections of chalkbrood disease. In my opinion, they should devote considerably more time to flicking caps off apparently healthy cells in "chalky" hives. If they do, they will be rewarded with an earlier detection of some AFB infected hives.

- Dave Grueber, AO, BLENHEIM

BEEKEEPING MAY GROW IN SAMOA

Beekeeping may once again start to grow in Western Samoa, thanks to the Food and Agricultural Organisation (FAO) of the United Nations. A preliminary study has now been carried out, and may result in the development of a small beekeeping industry in this Pacific island neighbour.

The FAO was approached by the former Western Samoa Minister of Agriculture, the Honourable Misa Telefoni Retzlaff, who requested a Technical Cooperation Program (TCP) for beekeeping. Mr. Retzlaff realised that beekeeping could be good for his country, both because honey is a valuable food commodity, and because beekeeping could offer productive employment opportunities for Samoans.

Murray Reid, AAO, Ruakura, and James Driscoll, AAO, Palmerston North, were contracted by the FAO to prepare an industry development plan for Western Samoa. They also carried out a bee disease survey, and conducted workshops for Western Samoan MAFF staff and trainers from that country's Ministry of Women's Affairs.

Honey bees are not new to Samoa. It is generally believed that bees were introduced at the turn of the century by missionaries, who brought with them the dark European honey bee *Apis mellifera mellifera*. In 1975, a New Zealander named George Kelsall began beekeeping in Samoa, and introduced the Italian honey bee, *A. mellifera*

ligustica. Kelsall built up to 40 hives before selling out in the late '70's to what became the Samoan-American Bee Company (SABCO).

SABCO increased hive numbers to 900 by the beginning of the '80's, running 28 apiaries on the main island of Upolu. The company also built a factory, and in 1980 exported 15 tonnes of honey to Germany. Unfortunately, the company suffered a number of misadventures and folded after 1981.

In the early 90's, after 2 devastating cyclones, beekeeping in Western Samoa more or less disappeared. At present there are large numbers of feral colonies found throughout the two major islands, but there are very few live colonies left in hives.

MAF Quality Management's role, as the contract deliverer, was to develop a business plan for FAO, which would then be presented to the Samoan Government. MAF Quality Management is also likely to play a role in ensuring that the appropriate regulations are in place to protect Samoa's re-developing industry against exotic disease outbreaks.

Bee disease surveillance and agricultural quarantine will be of vital importance for Samoa when it seeks to assure trading partners about the health status of its bees and bee products. Up-to-date information will also be needed if the sanitary phytosanitary provisions of the World Trade Organisation are to be used to protect this health status.

A bee disease survey recently conducted in Western Samoa confirmed that there has been no change in the bee health status since 1987, when New Zealand MAF undertook the last bee disease survey. Indications are that Samoa has one of the healthiest bee populations in the world.

It is expected that the Western Samoan government will use the report to seek the assistance of an aid donor, and MAF Quality Management hopes to be considered as consultants should the industry development plan be adopted. At this stage, everything appears to be on track and the future looks promising for beekeeping in Western Samoa.

- James Driscoll, AAO, PALMERSTON NORTH

NO MORE SPILLS

Filling honey drums can be a pain, and each year at least one tank of honey seems to end up on the floor of somebody's honey house. Recently, Jack and Blair Dale showed me their solution to the problem when I visited their honey house in Middlemarch. No more standing over filling drums, and no more honey to meet you when you open the door!



Jack and Blair have a set of Avery scales -- the balance-type with a swinging arm and sliding weights, as found in many beekeeper's honey houses. But what is different is that these scales have a "proximity switch" (with 5mm of movement) fitted above the swing balance arm, which operates a relay. The relay in turn controls a portable Lega reversible honey pump (2000kg/hr).

To begin the process, an empty drum is put on the scale platform with both bungs removed. A clear plastic hose is attached to the large bung hole by a hose attachment screwed into the drum. The plastic hose is suspended from the ceiling with the other end attached to the outlet of the honey pump. And the inlet of the honey pump is attached to the honey tank which sits about 400 mm off the floor.

Once the hose is connected to the drum, the end weight (drum + honey) is calculated and set on the balance beam. Then the relay is turned on and Jack and Blair can leave and get on with other work.

The pump starts to fill the drum with honey. It takes 10-15 minutes, depending on temperature, to fill a 200 litre drum. When the drum is full, the weight pushes the swinging arm on the scale's balance beam up. The upward movement of the arm pushes the proximity switch, which then turns the pump off via the relay.

When the filling is complete, it is important to reverse the pump to remove the excess honey from the hose. The drum is then removed from the scales with a drum barrow and small ramp.

Jack and Blair have also added a neat feature for taking drum samples. A small tap has been inserted into the hose just above where the hose attaches to the drum. To take a sample, a small jar is placed on top of the drum and under this tap. When the tap is opened, some of the honey being pumped into the drum is redirected into the jar as a drum sample.

One of the features of Jack and Blair's system is that each drum is filled with the same amount of honey. The filling process may be a little slower than the conventional method, but the really good part is that there is no need to stand over the drum. Filling drums becomes the job you do between other jobs. Thanks to the Dales for sharing their system with us.

-David McMillan, AAO, INVERMAY

PEOPLE-POWERED DRUM LIFTER

It seems appropriate, since we're on the subject of honey drums, to tell you about an amazing new drum lifter I saw recently. The lifter is a cross between a forklift and a Jiffy pallet truck (the kind used to move pallets of kiwifruit around sheds).

But instead of just being able to lift a full drum of honey a few centimetres off the floor, this device allows you to raise the drum 1.5 metres in the air, rotate the drum on its sideways axis, and even

move it wherever you want around the honey house, all without the aid of any motor.

The device, called a Drum Lifter Rotator, is manufactured by Merton Equipment Ltd, a New Zealand company, and is used extensively in food manufacturing, or wherever heavy drums have to be moved, lifted and decanted. The device uses a clamp, similar to a truck load binder, to secure the drum. The flexible nature of the clamp has the advantage of allowing the machine to securely lift almost any shaped drum, including bent and damaged ones.

To lift a drum, you fasten the clamp, and then pump the steering handle up and down, the same way you do with a Jiffy truck. The hydraulic pump that does the lifting comes in two ratios, which means the operator doesn't have to pump the handle up and down so many times for a heavy drum.

And to rotate the drum (on its central axis), you just turn a handcrank on the self-locking 60-1 ratio gearbox. When you want to pour the contents of the drum out, you simply open the bungs and slowly crank the handle, keeping up a steady flow of the liquid as you lift the drum towards its horizontal position.

As you can imagine, to hold a drum containing 200kg of honey 1.5 metres off the ground in a horizontal position, the Lifter Rotator has to have a pair of long, heavy duty legs extending out below the drum itself. The legs are fitted with large, 200mm nylon, iron or polyurethane wheels, which allow you to move the whole machine (with the honey suspended) over fairly rough ground. In fact, you could conceivably even use it to load and unload full honey drums off of trucks, since when fully extended the arms reach out 1.3 metres.

For more information about the Drum Lifter Rotator, contact Merton Equipment, Inc., PO Box 13-111, Onehunga, AUCKLAND. Their Freephone number is 0508 636 636.



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“CHE Bee” How an Industrial Therapy Department helps beekeeping industry

The Industrial Therapy Department (ITD) of the Nelson-Marlborough Crown Health Enterprise is based at Ngawhata, at Stoke, just south of Nelson City. The department is run by Peter Rees, who has a background in biochemistry, and overseen by Mr Kevin Rossiter, a joiner by trade.

The department might easily be renamed “CHE Bees,” because it has been making beekeeping woodenware for over twelve years. However, only in the last three years has production really soared. The people at the workface have either mental illness disabilities or intellectual disabilities. There are usually about 12 clients working at the ITD. Some clients live on-site while others travel to the facility from the outside community.

“We are a little known department” says Peter, “and I am sure most people imagine us to be very different from what we actually are. We want to become part of the business community of Nelson. Our aim is to provide vocational activities, funded by the Mental Health Contract, for daytime activities.”

Peter says. “We also want to structure good work habits so that our clients more easily handle the transition from institutional living to their integration into the community.”

“It is a huge challenge for our clients to move from long-term institutional care to becoming more worthwhile members of the community. If ITD can instill reliable personal and work habits then that transition will be smoother,” says Peter.

The workplace is run as an independent business unit, and provides a normal working environment, within the requirements of OSH, where clients are paid for their time. Social events are also held periodically.

Historically the ITD sourced the timber from Southland, since not only was the quality superior; it could also be landed in Nelson considerably cheaper than timber provided locally! However, over the last two years, according to Peter, “We have moved slowly away from total manufacturing to one of assembly of components.” Peter’s aim now is to make use of

existing products, such as frame components, assemble and wire them, and then re-ship the finished articles to their clients.

Frames, for example, are purchased in the North Island, shipped south, assembled, wired and re-shipped north ex ITD

at \$0.77 each, which is very competitive. As Peter says, “Much of the work here at ITD is design and development to client specification.” A good example of this is the design and production of hundreds of pollen traps for beekeepers and beekeeping equipment retailers.

Many retailers, such as Ecroyds, Beelines and Ceracell make use of ITD products or services because, according to Peter, “We can generally provide a specific and timely service, nationally, to these major retail clients.”

However, with a strong market for pollen this also be produced. This year, at least 1000 pollen traps will

year will, in fact, be ITD’s best ever!

Peter keeps detailed production figures and says that the 1994/95 season was the most productive so far, with ITD producing 2750 boxes and 48,500 frames.

Although there is considerable pressure from CHE management for the unit to move into cottage industry-type incentives which the clients can undertake in other less structured, community based activity providers, Peter and Kevin are resisting this move. According to them, the unit if fully committed to the beekeeping industry and is “in it for the long run.” This commitment to service will be enhanced by a proposed relocation for the ITD workshop and will achieve the CHE’s goals of



Framing room... Noel Thomas assembling frame. He can do 225plus per work period. A new workplace record.



Pollen trap assembly. Shane Rowe screws together the components of the ITD pollen trap.

community integration.

Peter and Kelvin are of the firm belief that clients get the most benefit when they produce a meaningful product that is in demand nationally and perhaps internationally by a major industry. Let’s hope that in the future politics and budgets don’t impact too heavily on this national service provider to the New Zealand Beekeeping Industry.

D.R. Grueber, Apiaries Officer, MAFQual, Blenheim

America's endangered honey-bees

The American wild honey bee virtually died out last winter and, in some states, 80 percent of commercial honeybee colonies died out as well. Gardeners accustomed to the familiar buzz heard instead the sound of silence. With no bees to bring pollen from plant to plant, gardeners raised fewer apples, cucumbers and zucchini, and what did grow was puny. As cold weather bears down again, bees are once again endangered. The American honeybee faces the worst threat in its history, one with potential consequences for the one-third of the national diet that relies, directly or indirectly, on honey-bees for pollination.

The chief culprits are two mites that invaded the United States in the mid 1980's. The tracheal mite, first seen here in 1984, lives in the insect's breathing tubes. It kills a whole bee colony at once. The Varroa mite, which came three years later, sucks the bees' blood and causes an early death. They have spread to most states and are particularly deadly in places with long, cold winters. Last winter more than half the commercial honeybees in New York and Pennsylvania died.

The bee disaster has not yet produced a crop disaster. Diligent beekeeping can help more commercially raised bees survive this winter. Beekeepers are learning to kill the Varroa mites by hanging chemical strips in the hives twice

a year. The tracheal mite, which has weakened in the last few years, can be killed with menthol crystals. Even in states that lost their honeybees, large agricultural producers last summer rented colonies from less affected states. Michigan apple growers, for example, trucked bees up from Florida. The mites have raised the rental price of a bee colony, but pollination is a small part of a crop's cost - such a small part that fruit and vegetable shoppers have probably not noticed any effect on consumer prices.

While the Varroa mite may follow the tracheal mites and become more benign, it also could take a sinister route, developing resistance to the one miticide beekeepers in the United States can use to kill it. This has already happened in Italy. Researchers are working on new mitocides. But this is not the best long-term solution. They must find insects that can replace the honeybee, which does 80 percent of insect pollinating. Or they must develop new strains of bees that the mites cannot kill. Even if the perfect bee appeared tomorrow, it would take quite a number of years to spread the strain throughout the United States.

Because it has not yet greatly hurt commercial agriculture, the threat to the honey-bee has not generated much publicity or needed research funds. About a dozen researches in the United States are working on the problem, in an

Agriculture Department-funded lab and at several universities. While Agriculture Department officials say the researchers have the resources they need, the researchers disagree. They say they cannot pay for needed trips to Italy or Russia to examine resistant strains of honeybees. Researchers have also received some grants of a few thousand dollars from beekeepers' groups, California's Almond Board and state agriculture departments.

The money crunch betrays short-term thinking on the part of both the Agriculture Department and commercial fruit and vegetable producers. Bee researchers say \$100,000 would make a lot of difference. This is not an excessive sum to save the honeybees from declining further and possibly taking with them much of what American farmers grow.

Thanks to Sue Walker, Honeyland



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**NBA AMERICAN FOULBROOD DISEASE CONTROL PROGRAMME
PROGRESS REPORT: March, 1997 (Reports to 15/2/97)**

TABLE 1: MAF STAFF AND BEEKEEPERS UNDER MAF CONTRACT

Apiary District	Apiaries			Hives		Staff Used	
	Assigned	Inspected	AFB	Inspected	AFB	MAF	Contract beekeepers
Whangarei	116	40	14	487	24	2	0
Hamilton	116	108	12	1035	31	6	0
Tauranga	141	86	18	716	31	3	2
Palmerston Nth	161	96	10	541	16	19	0
Blenheim	81	66	12	756	32	2	0
Lincoln	211	223	21	1556	27	3	0
Invermay	164	108	14	1022	15	4	0
Total	990	727	101	6113	176	39	2

TABLE 2: NBA INSPECTORS

NBA Branch	Apiaries			Hives		Letters of Appointment	
	Target	Inspected	AFB	Inspected	AFB	Issued	Used
Far North	--	--	--	--	--	--	--
Northland	69	--	--	--	--	--	--
Auckland	--	--	--	--	--	--	--
Waikato	--	--	--	--	--	--	--
Bay of Plenty	144	83	6	447	10	14	8
Poverty Bay	74	37	1	127	3	5	5
Hawkes Bay	100	63	3	295	3	12	10
S'thern Nth Is	148	80	7	210	10	12	12
Marlborough	46	32	3	356	4	6	6
Nelson	55	33	2	122	2	14	7
West Coast	28	9	2	209	4	4	3
Canterbury	244	117	4	938	12	24	12
Sth Canterbury	82	28	0	116	0	7	7
North Otago	--	1	0	2	0	1	1
Otago	--	--	--	--	--	--	--
Southland	--	--	--	--	--	--	--
Total	990	483	28	2822	48	99	71

TABLE 3: AFB COMPLIANCE

Apiary District	No. Notices served under S19* Apiaries Act	No. beekeepers not complying with notice	No. actions taken by MAF** S45
Whangarei	2	1	–
Hamilton	0	–	–
Tauranga	1	1	1
Palmerston North	0	–	–
Blenheim	13	1	0
Lincoln	21	0	0
Invermay	9	1	–
Total	46	4	1

* Notice to destroy

** Hives destroyed and costs recovered

Both sections used as powers necessary for the proper administration of transitional control of bee diseases (Section 182, Biosecurity Act 1993)

NB: All beekeepers with AFB found in their apiaries are verbally instructed to take appropriate remedial action. Notices are served where willing compliance may not be expected.

TABLE 4: LOCATION KNOWN AFB TROUBLE SPOTS* OR OUTBREAK AREAS

Apiary District	Location Known Trouble Spots/Outbreaks
Whangarei	Hauraki Plains, West Auckland
Hamilton	Taupo, Ohaupo, Te Kawhai
Tauranga	Waihi, Edgecumbe, Opotiki, Pongakawa, Te Puke
Palmerston North	Kapiti Coast, Greytown
Blenheim	Bell Hill, Jackson, Inchbonie, Nelson
Lincoln	Sefton, Hororata
Invermay	Alexandra, Invercargill, Oamaru

* Areas where AFB is endemic eg ferals in bush, or not being managed by beekeepers and is causing or has caused AFB in neighbouring apiaries.

Legal risks in worker negligence

Employment Matters

by Peter Cullen

Employers may be liable for exemplary damages if the negligence of one of their workers is so high that the worker's conduct can be described as displaying an outrageous and flagrant disregard for the safety of others and if the worker's conduct results in personal injury to another.

Gerald Somerville was badly injured when a tyre exploded in premises belonging to McLaren Transport at Ranfurly in Otago.

Mr Somerville suffered severe shock, intra-abdominal bleeding, damage to the liver, lacerations to the scalp, a puncture wound over the left shoulder, a fracture of the left arm, fractured fingers, ribs and the near severance of the left leg through the knee.

At the hearing in Dunedin District Court, the judge explained that Mr Somerville, a farmer and agricultural contractor, had gone to the defendant's garage at Ranfurly to have a new tyre fitted to a wheel from his hay conditioning machine.

During the fitting in the defendant's tyre bay, Mr Somerville was severely injured when the tyre exploded on the wheel rim as it was being inflated.

The judge granted Mr Somerville exemplary damages, and the case went on appeal to the High Court at Dunedin.

It is clear from the High Court judge's decision that a worker at McLaren's tried to fit a 15-inch tyre on to a 15.3-inch rim.

He inflated the tyre to over twice the recommended pressure in spite of a written warning that he apparently did not bother to read. It was embossed on the rubber of the side wall.

He tried to fit the tyre on at least three occasions. In spite of the obvious perils of what he was doing, he did not see fit to use a tyre cage that was available.

The employee allowed Mr Somerville to assist without any suggestion the exercise was potentially hazardous.

The case came before Justice Tipping in the High Court at Dunedin in July 1996.

Mr Somerville had commenced a case alleging negligence and had sought exemplary damages.

Ordinary compensation for negligence for the harm done is prevented because of the Accident Rehabilitation and Compensation Insurance Act.

The issue, however, was whether exemplary damages could still be obtained despite the ACC legislation.

Justice Tipping thought exemplary damages could be awarded. He added that the courts should not allow a compensatory element to be included in any assessment of exemplary damages. Any suggested inadequacies in the present ACC scheme should be addressed otherwise than in the courts.

It was not for the courts to develop the law of exemplary damages so as to remedy any perceived shortcomings in the statutory scheme, the judges said.

The judge also emphasised that exemplary damages were designed to punish or deter rather than to compensate. He added that the seriousness of the defendant's conduct was what was at issue, not the seriousness of the harm that had befallen the plaintiff.

Exemplary damages for negligence causing personal injury may be awarded but only if the negligence is so high that it amounts to an outrageous and flagrant disregard for the plaintiff's safety, meriting condemnation and punishment.

Justice Tipping concluded that the level of negligence displayed by the employee in question was so high that it did amount to an outrageous and flagrant disregard for Mr Somerville's safety. He upheld the award of \$15,000 by way of exemplary damages.

The case is a very significant one and will no doubt result in a

growth in the use of exemplary damages by plaintiffs and their legal advisers.

Employers now have triple exposure for what might be called gross negligence on the part of one of their workers.

While injury results to another, the employer may be prosecuted by the occupational safety and health division of the Labour Department.

They may be sued for exemplary damages, as in the case here. In certain circumstances, they might have to pay additional money through their ACC levies.

Peter Cullen is a Wellington lawyer specialising in employment law. His column alternates with Brent Gilchrist's taxation column.

Acknowledgement The Dominion

Advocacy role in demand

by Claire White, Hastings CAB

Many New Zealanders still wonder what the Citizen's Advice Bureau (CAB) is, where it is located and what it does.

Yet at some time during our lives, each and every one of us could have need of a CAB.

The Citizen's Advice Bureaux group consists of 91 agencies situated throughout the country. We are the key referral agency in your community by assisting clients with information, advice and support on a vast range of topics.

These include consumer problems, education, training, housing, legal, personal and family problems, budgeting, health and welfare information, and travel and transport enquiries.

The bureau staff are here to listen to whatever your problem or concern.

Our aim is to empower people to make informed choices about how they live their lives and deal with the highs and lows that face us all. Our trained staff are here to supply our clients with information which allows to make these choices.

An extension of this service is the advocacy role, which we are finding ourselves doing more and more.

Many of our clients are now asking us to assist by acting on their behalf — with either government departments, shops, businesses, landlords and other agencies big or small. Especially with people using English as their second language or where the client's confidence or self esteem is hampering their efforts to handle the problem themselves.

So remember, "whatever the problem, CAB is here to help." Just call your nearest Citizen's Advice Bureau.

Acknowledgement Hawke's Bay Herald-Tribune

Wax, Comb, Candle

Wax, wax, wonderful wax,

Soft or hard,

Comb or block

Comb, comb, wonderful comb,

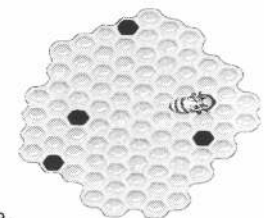
Full of honey,

Tasting nice when it is runny

Candle, candle, wonderful candle,

Shining bright,

Guiding light.



Rebekah Dalby, 10, England

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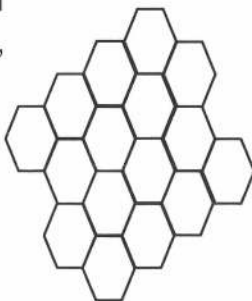
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Beekeeping Memoirs

The sex life of a bee

by Ron Mossop

Most beekeepers know all about the sex life of a bee, but hands up all those beekeepers who have given a talk on this subject whilst lying in an operating theatre waiting for an operation!

About five years ago my doctor informed me that he wanted a sample of my bone marrow. When he saw my startled look he told me that this performance was really no problem. I'm not sure why doctors say this when they are sitting behind their desks with a smug look on their face, it may be no problem for them. I wasn't born yesterday and I knew that to get some of my bone marrow the surgeon would have to bore his way through my skin, my flesh and halfway through my bone to get what he wanted. What am I supposed to be doing whilst all this is going on? My doctor said that he would arrange everything and I would be notified by the hospital when they were ready for me.

In due course I was notified to attend the afternoon-stay ward where they were going to do the job. I didn't know if they were going to cut, or drill or how they were going to get the stuff. They gave me a theatre gown and I got on to a bed with wheels on. This was in the Tauranga Hospital which I still consider to be probably one of the best hospitals in New Zealand. I have been carried into there on two occasions in recent years and walked out smiling both times. The doctors and nurses are marvellous people — I think I should mention this fact in case someone who works at the hospital happens to also get the *BeeKeeper* journal and takes umbrage to this story. Anyway on this particular day about eight other people were doing the same thing as I was and all lying on their beds waiting for the big moment.

My curtain was eventually pulled aside by one of the theatre nurses who informed me that I was the first to go into the operating theatre. Two other nurses were waiting for me with instruments at the ready and professional smiles on their faces. An operating theatre is not my favourite spot. In fact I can think of all sorts of places where I would sooner be.

They wheeled me over to the "Knockout - drop machine" and put a tube in a vein in my wrist. I liked that idea, because it meant that they were going to give me some knockout drops instead of a local anaesthetic which I don't like. So I just lay there and waited. Every so often one of the nurses would go out, then return and whisper something to the other nurses. As time dragged on I had ample time to look about the theatre and I didn't much like what I saw. The nurses must



Ron Mossop

have spotted my eyes rolling and head turning. They must have thought I was going to leap off the table and take to the bush, so to put me at ease one asked me what sort of work I did? When I answered, that I was a semi-retired Commercial Beekeeper she asked me if I knew a relation of hers who kept a few hives of bees? Soon the other nurses started asking questions about bees and since this was one of my favourite subjects it didn't take me long to get going. I told them about the three casts of bees, the queen, the worker and the drone and the different times each took from egg to when they emerged from their cell. They wanted to know why the drone took 24 days whereas the queen took 16 days and the worker 21 days? I told them that I thought the drone took longer because he was not as important. Naturally, as females, they applauded that one. Nurses seem to have trouble getting their minds to focus around bees having three different birth stages, sixteen days, twenty-one days and twenty-four days as they seem to have this fixation of nine months for humans, whether male or female. The nurses kept firing more questions at me so that with my loud voice combined with their shrill voices it must have sounded like some wild party to the other patients waiting their turn.

It was obvious that the surgeon had been delayed somewhere, so the questions continued on. They still wanted to know more about bees. I described the bit about the males insemination organ being flat and when he had finished inseminating he was either pushed back or fell back, his insemination organ turned inside out trapping air which exploded paralysing the drone who fell back to the ground dying. One of the nurses found this particularly amusing and when she had left the room to attend to one of the other patients, the one remaining nurse

remarked to the other one, "I bet she won't be able to get home fast enough to tell Bill that one."

Once I had everybody laughing and in good humour I thought I would ask them how they went about getting this marrow of mine? They said I would find out in due course, which wasn't really much help. There was no clock in the theatre that I could see so I had no idea how long I had been lying there so I continued to tell them about the glands on a worker-bees stomach and that the wax was used extensively for the manufacture of lipstick etc.

Just then a man walked into the theatre carrying a box. One of the nurses informed him that I would like to see how my bone marrow was going to be obtained. After some hesitation he showed me something sealed in a clear plastic container, it was about the size of a 2-inch nail, hollow and with provision made for joining a handle on to one end. After this device was pushed into the centre of my bone a vacuum connection sucked the marrow out. I expect he knew when to stop sucking. At that moment the theatre door burst open and in rushed the surgeon with a sandwich in one hand whilst struggling to put a coat on. I knew the boss had arrived because everybody snapped to attention and readied themselves for business. So it was "lie on your side, please. Pull your right leg up higher, higher yet!" They were aiming for the bone that sticks out when you do this.

Next thing came the knockout drops and I woke up in the ward with a large patch on my rump. The nurses continued to wheel people into and out of the theatre and each gave me a big smile as they went by my bed, I expect it was the first time they had ever had a lecture on bees from one of their patients in the operating theatre. I am glad they enjoyed it as I don't intend to give them a repeat performance. I don't know how long the surgeon was delayed for but it must have been a life or death situation for someone.

As a beekeeper who learnt to relax at his work years ago I would advise the surgeon to slow down a bit and to stop having his meals on the hoof if he wants to live to a ripe old age.

Sharing

*Buzz says the bee
Way up in the tree
Up in his little house
That he shares with a mouse
He won't sting me!*

Naomi Dalby, aged 13, England

Getting a buzz out of selling

by Sinead O'Hanlon

Getting stung by bees at least a dozen times a day is not really as bad as it sounds, says beekeeper Tom Stewart.

After all, what is a mere dozen stings when you work in the midst of 30 million bees.

Tom Stewart and his wife Sue run 500 hives high up among the purple borage of the remote Molesworth station. They have built up a niche market for their New Zealand Alpine borage honey in recent years, specifically marketing it to overseas tourists and exporting smaller quantities to Japan.

Tom has been a beekeeper for nearly 20 years. He started off with a couple of hives as a hobby and was surprised to later find out there was such a thing as a commercial beekeeper. After a stint working for beekeepers in Ashburton and Marlborough, he decided to strike out on his own about 13 years ago when access to the Molesworth was opened up. A ballot for beekeepers was held and Tom was awarded the use of the southern third of Molesworth.

His furthest hives are a 5 1/2 hour drive from his home through rivers, up and down mountains, and along rough tracks. A former army Unimog truck is the only reliable way Tom can get access to his hives.

For many years Tom and Sue struggled to make a living from beekeeping, selling most of their honey to supermarkets and similar outlets. Honey from the United States flooded the market about five years ago and made life tough for local producers.

It was not until the Stewarts changed their marketing approach about three years ago and targeted tourists shopping for New Zealand-style gifts that their hard work began to pay off.

They repackaged their honey using colours and designs appealing to the Asian market. This included lots of blues and mountain scenes on the packaging, but no bees in sight. "Apparently, anything with insects or bugs on it does not go down too well with the Japanese," said Tom. "Borage honey does well because of its delicate flavour and very white colour."

This change about three years ago heralded a "colossal jump" in terms of production. The Stewarts built a packaging shed behind their house and Sue became more involved in the day-to-day running of the business and several casual workers have been employed.

Sales jumped

They now extract about 8.5 tonnes of honey a year using a centrifugal process which flings the honey from the comb.

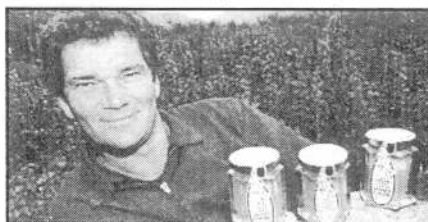


Photo: Stacy Squires

North Canterbury beekeeper Tom Stewart among flowering blue borage at Molesworth.

Sales of chunk honey (solid comb surrounded by liquid honey) jumped from 300 units a month to 1500. Sales of liquid honey also increased dramatically.

Tom likens the honey business to any other farming operation. He is constantly at the mercy of the vagaries of the weather and the resultant effect on production. The main difference is that beekeeping is exceptionally labour intensive, but not as capital intensive.

Although business has certainly improved dramatically for the Stewarts since changing direction, Tom Stewart says his story is still a matter of survival rather than success. He is not counting on getting rich off the fruits of the bee.

Over the years the Stewarts have supplemented their income with part-time jobs in the Hurunui area. Sue works as a relieving teacher to local primary schools and Tom has had stints working at the Hanmer Springs thermal pools, the Hanmer hospital, and local forestry operations. Now honey production has become a full-time livelihood.

January is the most crucial month for the Stewarts. It is the time when the borage flowers and the Stewarts find out how much honey they will get for the year. So far 1996 is not looking like a bumper year for borage crops because of a lack of moisture and warm conditions in January.

The Stewarts and their three children, James, 11, Adele, 10, and Sam, 8, enjoy the country lifestyle that comes with beekeeping, but its time consuming nature has impacted on their family life. Holidays can only be taken for a short time in certain months, if at all.

Acknowledgement Christchurch Press

Wax

*Wax can be soft or hard
All candles are made of wax
Christmas smells of burning candles*

Swarms

*Swarms cluster up to keep
Warm against the wind
All swarms have a queen
Rising up and
Moving on
Settling on another branch*

Naomi Dalby, England

Top Award to a New Zealand Label Printer and Honey Creations Limited of Taupo



Leading New Zealand label printer, Label and Litho Limited, was delighted to win a Gold Award at the recent Fasson Awards. The Fasson Awards are an annual label printing competition conducted by Fasson Limited who are major suppliers of self adhesive label printing papers.

The competition is New Zealand and State wide in Australia and the winners are then judged to find an overall Australasian winner. Label and Litho Limited won the New Zealand section and then went on to the final to win the gold award in the important Food and Beverage section.

The award was presented to Mr David Kincaid at an award dinner held in Sydney and in his speech Mr Kincaid stated that "competition is the mainspring of improvements in quality and service".

The winning label was produced for Mr Mike Jensen of Honey Creations and Mr Jensen is delighted with the customer reaction to his new label. The label has been particularly well received overseas as it presents a picture of a clean fresh New Zealand scene.

Label and Litho Limited are based in the capital city, Wellington, and employs 50 permanent staff members, including four full-time sales representatives. Sales representation covers the entire New Zealand market - with an emphasis in the food and beverage industries.

Another source of pride for the company was the prizes received by a number of our clients at the recent New Zealand cheese awards. Some 44 awards were won by Label and Litho clients, including the supreme award that went to Kapiti Cheese.

Random Thoughts — Beekeeping

Today's random thought is about moving honey stocks. That time of year has finally arrived, the bees survived the winter, launched into an early spring only to have a poor summer thrust upon them. Naturally the crop is late, and in trying to estimate just when the crop would be available I have fallen into the trap of delaying the ordering of honey pots. None of us relish the thought of spending money when the stock is only going to be held in limbo until the bees are finally ready to surrender to the plunder of the beekeeper. Unfortunately other influences come to bear on our precious stock of money, and with the bank account holding a bundle it is all too easy to start to whittle away the funds on non-essential items. Justification of that new full length bee suit, a new smoker and of course a new hive tool all contribute to the toll. Those employing labour will know the staff need to be catered for in supply of these items and before long the budget has approached "fiscal deficit". More subtly expressed, you're broke!

All too few are aware that in the background of our operation we are blessed with a financial saviour, the bank manager. My pictures of him rubbing his hands together in glee when I go into overdraft is not the most pleasant visualisation, but having learned to get my priorities sorted correctly, I rest easy with the knowledge that the bank, of course, will always have first dip into any surplus funds I appear to be gathering. This assurance gives me great pleasure when ordering stocks of honey pots I would otherwise be totally unable to pay for. Hence the delay in ordering. Late ordering and delivery will put off the term in which interest is due on the overdraft, will it not? My friendly wholesaler of honey pots will be only too happy to keep the shelves full in anticipation of my coming in out of the blue one day to uplift large quantities of stock. The bees in turn will release the crop the day after all the

honey pots arrive, packing will begin in earnest and the sellers I supply will all be waiting on the doorstep, cheque in hand, for the new season's crop. That of course is the dream, the Shangri-La our entire operation is based upon. This season has been bad weather-wise, so the bubble burst. The bank manager called me in for a "chat", told me what everyone else knows, that I'm a nice chap, then not so subtly let slip that the bank's funds have been slipping into a bottomless pit, and would not be so freely available this season. With this assurance under my belt I nipped around to the honey pot supplier, smiled sweetly and placed the order, then intimated that I would bring the truck around to the loading bay. He also invited me in for a "chat".

Now I can only drink a limited amount of tea or coffee, and the possibility of my system becoming saturated was fast approaching with all these "chats". The shelves of the wholesaler it seems were not full this year, orders would be taken and processed in sequence, with at least one month's delay being the norm. Company policy also had been overhauled, with the directors decision to accept a deposit of 20 per cent with each order, irrespective of the size of the order. On delivery cash payment was required on all orders under a stated amount, based on the customers previous account status and payment record. Now, leave your deposit with the order and we will advise you when the goods come into stock.

To say this upset me was to put the situation mildly. I was hopping mad! Gone was any credibility built up over the years of paying my accounts on time. Gone was the instant service I had come to expect from the stock being on the shelves. Gone was the trust in my good name. Some cold hearted individual who could only see in dollars and cents had seen fit to ruin my day. Was there an answer to all this? Not



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You can no longer drink the most expensive wine at work parties simply because the boss is paying for it.

Working through your lunch break is a necessity, not just a way to grease a pay rise.

You know even before you get to work if your boss is in a good mood or not.

You can't lie about already having made plans when you are needed to work late.

You are no longer part of the 'public' when it comes to public holidays.

Not only does the buck stop with you but it starts with you also. Your salary really does depend on how hard you work.

Working overtime is a non-negotiable part of your contract.

Thanks to Clutha C.O.C. and Allen McCall

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Contact: (07) 315-7650 or (025) 758-110

immediately, but given time there no doubt would be. The order I placed, with the required deposit was considerably less than the intended order. For the immediate future there were some stocks of honey pots surplus from last season, these would see me through until the new stocks arrived.

The crop was duly brought in and packing commenced into a limited range of pots, mostly the larger sizes. Phone calls to the sellers soon uncovered another glitch in the supply and demand situation. Sure, they wanted to sell my honey, but the market was a bit tight at the moment and they would be ordering only a smaller quantity, mostly in the smaller size pots. Naturally this left me with stocks of the larger sizes of potted honey nobody wanted. The cost of re-potting was not to be contemplated, anyway the new stock of honey pots had not arrived, and when they did would have to be paid for on delivery. Approaches to a local supermarket proved unrewarding, their barcode system prevented them from impulse purchases on a local basis, and the price they were prepared to offer was ludicrous to say the least. Fate had decreed that my efforts to date were wasted, or so it seemed. When the chips are down there are two avenues available; First approach start blaming everyone you have dealt with, the end result no doubt is the loss of any future dealing with them.

Second approach is to get the thinking cap on, quick smart, and look for ways out of the dilemma, starting with asking yourself how you got into the predicament now facing you?

Next ask are there any solutions?

What effort is necessary to overcome this bind?

Can any profit still be obtained if new moves are made?

Back now to the case in point.

Applying the second point showed that my own stupidity landed me with the "lemon" of honey in large containers the market did not want. But hang in there, the supermarkets are still stocking the larger size containers so there must be some sort of market. Look at the local area, lots of factories and workplaces varying in size from one-man bands to the corporate that has over three hundred workers. Who of these likes honey on their toast in the morning? Who buys the honey from the local supermarket? How easy will it be to tap into this market?

Remembering that the stock was originally destined for on-selling gave an advantage, lower price to the end user if only they could be approached directly, that attack is the best method of defence, then get out there and adopt an aggressive

selling approach. With this in mind the van was loaded with stock, I donned my cleanest bee suit and set off to do battle. At each "small" business I came to the point, honey was available at a good price, a choice of four flavours, and single pot sales were welcome. Price was rounded off to the nearest dollar to avoid hassles with small change.

At the larger businesses I asked for the social club secretary, explained what I had to offer and either sold a carton or two for them to on-sell, or was invited to return in the tea break or lunch break and sell direct to the workers. By taking the product direct to the end users my "surplus stocks" were considerably diminished in a short time span. The balance was moved by attending a "Boot Sale" down at the local hall.

Because my name and address were on the honey labels, a few people phoned with repeat orders after only a few weeks. Leaving recipe sheets with each honey sale was a further inducement for my new cliental to start using more of the product.

Naturally this was not an overnight miracle, it took time, patience and courage to get out and create a new market. A series of "no-sales" can be dispiriting, but then the next visit would make up for the frustration just experienced. Direct selling is not easy, nor is it everybody's solution. At times it is downright boring, but to get anywhere you must keep plugging on. For those not inclined to sell direct, there are other avenues to explore. Your local school is directly involved in fundraising, so get them to sell honey, a natural food, instead of sweets. Always allow them a reasonable margin to on-sell, even generate a new label for them if they wish it. The sales market is infinitely variable in both attitude and approach. Always give your client what they want, even to the stage of getting them to think that what you are suggesting was their original idea in the first place!

If you run out of honey, as I did, and have to hurriedly buy in more stocks, then this shows that the approach you adopted has worked. Gauging the market requirement is something best developed by experience, or expensive market surveys. Remember always that if you want others to do your selling then it will cost YOU. Love marketing or hate it, without it your commercial career is in tatters. Decide on the market niche you wish to fill, work your butt off generating the market and then, only then, will you possibly get to the position of moving all your honey stocks, and with a little luck, some of your mate's stocks as well.

Ham Maxwell

Update on the PMS

Since the National Pest Management Strategy for the Elimination of American Foulbrood was presented to the Minister of Agriculture on February 6th, 1996, there has been a steady pressure applied on Government to make the final adjustments to the document so that the strategy could be notified. Ministry of Agriculture Regulatory Authority have made suggestions which have necessitated minor adjustments to the document. These adjustments have just been completed and will be presented to the Minister in the next few days. Then notification will be requested.

When the strategy has been notified the Minister will call for submissions from the beekeepers and this is when the NBA will expect support from those in favour of the PMS as those opposed will certainly make their views known. Your support at notification time will be vital.

The Biosecurity Act has needed amendment 4 to make the Act workable and this amendment was presented to parliament just prior to the election. It appears unlikely that amendment 4 will be considered before June. The Minister has indicated that no PMS will be approved until amendment 4 has been passed and this suggests that perhaps amendment 4 could contain changes to the notification procedure. The Disease Control Committee has suggested to NBA that the industry set its sights on July 1st, 1998 as the start date for the PMS.

While most of us have been suffering from bureaucratic strangulation over the past year or so, we must remember that many Government departments and agencies have to peruse the PMS document and perhaps this is the way things are done when a new law is being drafted. However, it does seem to take a long time.

It is interesting to note that Government has decided to take agricultural security more seriously by creating a separate department with a Minister of Biosecurity at its head. Perhaps the fruit fly problem of a year ago and the tussock moth trouble at the moment prove the old proverb of "prevention is better than cure".

In the meantime, the Disease Control Committee is at work developing all the nuts and bolts needed to make the Strategy workable. These include:—

The AFB elimination manual

The Starting with Bees manual

Update the Brood Diseases pamphlet (was Aglink FPP124)

Design the Disease Elimination Conformity Agreement Form

Design all the contractual agreements considered necessary.

I hope this report will bring all members up to date on where we are at the moment with the PMS.

Terry Gavin

Banana and Honey Ice Cream

A good way to have a celebration is with some ice cream. Although vanilla is always popular, why not try this next recipe for a different, delicious treat.

- 2 cups mashed ripe bananas
- 2/3 cup heavy cream
- 2/3 cup plain yoghurt
- 2 tbsps lemon juice
- 5 tbsps honey
- 2 egg whites
- toasted slivered almonds for decoration

Put the bananas in a bowl Blend in the cream, yogurt, lemon juice and honey until smooth. Pour the mixture into a container, cover and freeze, beating twice at 45 minute intervals. Whip the egg whites until stiff but not dry then carefully fold into the banana cream after the second beating. Pour the mixture into a container. Cover and freeze until firm. About 30 minutes before serving, transfer the ice cream to the refrigerator. Serve each portion decorated with tasted slivered almonds. *Serves 6.*

Hilary Walden

Orange Julius

This recipe is a refreshing drink that can be used for breakfast as well as any other time of day.

- 1 cup milk
- 1/4 cup honey
- 1 tsp vanilla
- 1 cup water
- 6 ounces undiluted frozen orange juice

Put all ingredients in blender and blend until smooth. Add 10 ice cubes and blend.

Kansas Honey Producers Cookbook

Mango Breakfast Smoothie

If you like mangoes you will certainly want to try starting your day with this drink. It's a good way to celebrate both dairy products and honey.

- 2 cups plain yoghurt
- 1 tsp vanilla
- 3/4 cup orange juice, chilled
- 1 mango, peeled and cubed
- 1 tsp lime juice
- 1 tbsp honey

Place all ingredients in a blender. Process until combined. Divide between 4 chilled glasses. Grate the lime zest on top for garnish. Serve.

Makes four 8 ounce glasses.

William Sonoma

Apple Cheese Muffins

This next recipe uses cheddar cheese and are muffins with a difference. They are wonderful.

- 1/2 cup shortening
- 1/2 cup honey
- 2 eggs
- 1-1/2 cups all purpose flour
- 1 tsp baking powder
- 1-1/2 tpsps baking soda
- 1/2 tsp salt
- 3/4 cup quick oatmeal
- 1 cup apple, chopped fine
- 2/3 cup sharp cheddar cheese, coarsely grated
- 1/2 cup pecans, chopped
- 1/2 cup milk

- 12-15 slices unpeeled apple
- melted butter or margarine
- cinnamon sugar

Cream shortening and honey. Add eggs, one at a time, beating well after each addition. Sift dry ingredients; stir into shortening mixture. Stir in oats, apples, cheese and pecans. Mix well. Add milk gradually, stirring only to moisten other ingredients. Fill well-greased muffin pans 2/3 full. Dip apple slices first in melted butter, then in cinnamon sugar. Press one slice into batter in each muffin. Sprinkle lightly with cinnamon sugar. Bake at 375° for 25 minutes. *Yields 12 to 15 muffins.*

Honey Recipes, North Carolina State Beekeepers Assn

Carrot Candy

- 1 pound carrots
- 1 pound honey
- 1 cup sugar
- 2 tbsp oil
- 1 tsp ginger
- 1/2 cup finely chopped nut meats

Wash and scrape carrots. Put through food chopper using fine blade. Combine honey, sugar, oil and ginger in saucepan, bring to full boil over moderate heat. Add ground carrots and chopped nut meats to honey mixture. Boil slowly stirring frequently to prevent burning, 50 to 60 minutes or until mixture is thick, dark and glossy. Turn out on dampened board, pat out to 1/4-inch thickness. Dip sharp knife into hot water and mark candy into diamonds or squares. Let cool 3 hours or until candy hardens. Remove to lightly buttered serving plate. *Makes about 4 dozen pieces of candy.*

(From: Cooking with Honey by Connie Brite and Arnold Krochmal)

Honey Fruit Cake

- 4 eggs
- 1-1/2 cups sugar
- 1-1/4 cups honey
- 1 cup cooked coffee
- 1-1/4 cups shortening
- 2 pounds flour
- 3 tpsps baking powder
- 1 tsp baking soda
- 1 rind of an orange
- 1/2 of juice from the orange
- 1/2 of juice of a lemon
- 1 tsp cinnamon
- 1 cup walnuts, chopped
- 1 cup raisins
- 1 small jar maraschino cherries
- 2 ounces mixed glazed fruit

Mix the eggs with the sugar and honey. Blend in the shortening. Mix well. Add flour and cinnamon to the creamed mixture alternately with the coffee. Bake in a greased per-lined pan. Pour in half the dough and top with half of the fruits and rinds and walnuts. Then pour in the other half of the dough and top with the other half of the fruit. Mix the maraschino cherry juice in with the fruit before topping the cake with it.

(From : Cooking with Honey by Connie Brite and Arnold Krochmal)

Peanut Butter Honey Balls

- 1/2 cup honey
- 1 cup dry powdered milk
- 1 cup peanut butter
- 1/2 tsp vanilla

Mix honey, vanilla and dry powdered milk. Add peanut butter and mix well. Shape into balls. Roll in coconut, nuts, etc. Can be used to stuff dried fruits or dipped in chocolate.

(From: Hossier Honey's Cookbook by Indiana Hoosier Honeys)

Think before you act — Think Safety

by Russell Berry

Do you put your hand between the spinning baskets and the stationary outside drum of the honey extractor to see whether the honey has finished extracting? Not likely! Unless you relish the fact of being torn apart!! In other words, you can see by doing one unsafe action it is liable to have very serious repercussions — you would probably be killed!

There are occasionally people who cannot even see this sort of action and reaction. They are unemployable! You just cannot afford to employ these people. There are others who see the very obvious dangers only — these are the people who must think carefully before they act and you must also be thinking for them to stop that injury occurring. It is a matter of thinking safety of your fellow workers and yourself, before you act. I will not go into all the normal dangers of everyday living and working around machines and motor vehicles but I would like to mention a few special ones that I have run into in the beekeeping world.

Oops, darn that glass door!!

I hopped into the truck the other day with one shoelace undone. Drove down the road to the first corner and could not get my foot off the accelerator! (Shoelace shut in door).

No matter, I've been practising those 180 turns, I wound the steering wheel around and got one of the strings of the suicide veil (the net veil you are guaranteed to get stung in), wound round the steering column pushing the horn full on - the string had worked itself under the horn ring! There was only one thing to do, put the truck into reverse - gosh! my head was on the floor. I had not noticed the other string of my veil was out the door and I just backed over it.

I wonder if the manufacturers of these fine veils have ever thought how important it is to make the strings the right length so they can be tied correctly with no long ends dangling. You know, the strings seem to be made a lot shorter every year — perhaps it is just inflation!

I managed to get the truck stopped and out of gear and one of my keen beekeepers leapt onto the back of the truck to sort out the load. For the past week we had been using a truck with an 8 metre deck — this truck had a 5 metre deck. He stepped back to admire his handiwork - my gosh that tarseal was hard!! The other keen fellow beekeeper decided that a strap should be thrown along the load to secure it - you should have heard the cry of anguish from the person lying on the ground as the buckle hit him.

He lay there thinking how lucky he was. He could have fallen head first into a tank of honey, or touched that revolving stirring blade and been pulled into the tank, or been walking across empty 200 litre open-topped drums with loose lids and the one he walked on, fell in — Ooooooh!

Or he could have been stacking bags of wax and when he turned away the bags ever so quietly slid over and buried him - or been stapling boxes with 65mm staples when fingers edged too close and ended up by driving a staple through his fingernail or walked across the sticky floor and fallen over. Perhaps, in trying to get up to climb the ladder to reach the First Aid kit, once again the honey took over and the ladder slipped sideways. The forklift then backed over him, the carrying of a power cable around his leg. His last thoughts were . . .

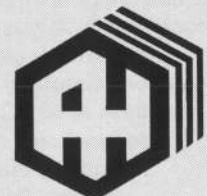
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\$15.00 KG C.O.D. + GST

For more information please phone Russell Berry

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IMPORTANT DATES FOR 1997

BRANCHES SEND YOUR MEETING DATES IN FOR 1997. NO CHARGE.

MAY - 20th CONFERENCE CALL
JULY - 21st AT CONFERENCE - IN NELSON
SEPTEMBER - 2nd and 3rd - CHRISTCHURCH ? *To be confirmed*
DECEMBER - 2nd and 3rd WELLINGTON ? *To be confirmed*

MAGAZINE Copy/advertising deadline 1st of month. EXCEPT for DECEMBER issue. DEADLINE 25 NOVEMBER

COMING EVENTS...

PROPOSED NBA DATES FOR 1997

NBA Executive Elections Send out nomination forms Closing for nominations Voting forms posted out Closing date, return of votes	Wed 16 April Fri 16 May - 5pm Fri 23 May Mon 23 June - 5pm	Conference Specialty group meeting Seminar Conference/AGM Special Meeting Last date, remits in Last date, rule changes in	Mon 21 July Tue 22 July Wed 23 July - Thu 24 July Wed 23 July - 8am Sun 8 June - 9am Sun 8 June - 9am
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1997 CALENDAR AUCKLAND BEEKEEPERS CLUB

April 12	12.30 pm	Apiary requeening	May 10	10.00 am	Working bee
		Check winter stores		12.30 pm	Check winter stores

Contact: (09) 838-8567, Jill Dainow, AUCKLAND BEEKEEPERS CLUB INC.

★ ★ ★ BRANCHES... PUT YOUR MEETING DATE IN HERE... FREE ★ ★ ★

AUCKLAND BRANCH
Call Jim on (09) 238 7464

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

POVERTY BAY BRANCH
Barry Foster (06) 867-4591

NORTH CANTERBURY CLUB
Meet the second Monday of every month March to November inclusive. Next meeting April 14
Contact Mrs Hobson
Phone: (03) 312-7587

FRANKLIN BEEKEEPERS CLUB
Meet second Sunday of each month at 10.00am for cuppa and discussion. Secretary — Yvonne Hodges, Box 309, Drury. Phone: (09) 294-7015
All welcome — Ring for venue.

SOUTHERN NORTH ISLAND BRANCH
Phone: Frank 478-3367

SOUTH CANTERBURY BRANCH
Phone: Noel
(03) 693-9771

HAWKE'S BAY BRANCH
Meets on the second Monday of the month at 7.30pm. Cruse Club Taradale. Phone: Ron (06) 844-9493

SOUTHLAND BRANCH
Contact Don Stedman,
Ph/Fax: 218-6182

CANTERBURY BRANCH
Phone Brian Lancaster
Ph/Fax: (03) 318-6966

MANAWATU BEEKEEPERS CLUB
Meets every 4th Monday in the month at Newbury Hall, S.H. 3, Palmerston North. Contact Joan Leckie
Phone: (06) 368-1277

TARANAKI AMATEUR BEEKEEPING CLUB
Phone: (06) 753-3320

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 Peter Silcock
Phone: 342-9415

NELSON BEEKEEPERS CLUB
Phone: (03) 546-1422

WAIKATO BRANCH
Call Tony (07) 856-9625

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

OTAGO BRANCH
Phone Bill (03) 485-9268

NORTH OTAGO BRANCH
Phone: Mr Peter Cox,
38 Rata Drive, Otematata
Ph: (03) 438-7708

WELLINGTON BEEKEEPERS ASSOCIATION
Meets every second Monday of the month (except January) in Johnsonville. All welcome. Contact Frank Lindsay
(04) 478-3367.