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Notes from the Executive

by Terry Gavin

National Beekeepers Association is in the most active and perhaps most perilous position it has ever been in its long history so I will try to cover, at least, some of problems faced by your Executive and, through them, you the members. I will give you my opinion but this may differ from an Executive decision.

The association has to appoint new administrators as Harry has indicated that, owing to ill health, he will not be able to continue with the full contract after the expiry of the present contract at the end of the year. Tony Taiaroa and Lin McKenzie are the Executive sub-committee working on this matter and will move, with urgency, to bring recommendations forward as soon as possible.

Residue testing, demanded by the European Union, continues to need attention to get the support of the exporters so that NBA can collect, through AgriQuality NZ Ltd, a surcharge of 1.6 cents per kilogram on all honey exports to the EU. We need exporter support so the NBA can have the confidence to finance next season's testing costs and be re-imbursed for his cost. If we are unable to get the necessary support then the European market will close unless another source of finance to fund the testing costs can be found.

Changing legislation is another area that consumes a considerable amount of Executive's time and I will not bore you with the details but we consider that we are accomplishing considerable gains for the beekeepers. Being political means that progress is slow and gains are difficult to recognise.

Research made possible by Trust funding is being carried out on several matters applicable to beekeeping by Mark Goodwin and his paper on surfactants is a sample of the outstanding work he does for this industry. This research on surfactants is getting worldwide attention. FORST also funds research on beekeeping matters and this work is carried out at Mt Albert by Louise Malone and her team.

Funding is our greatest challenge, with some hard decisions to be made at the September meeting to enable NBA to face year 2000 with confidence. I can not go into any detail at this stage but will assure you necessary decisions will be made. You will be advised as soon as possible after these decisions are made.

It is my intention that members will be kept informed on all matters at all times by whatever means are available. A move into the electronic media seems to be where most gains can be made in communications but old-fashioned paper will not be ignored. Considerable discussion has occurred on the meaning of "transparency" so I suggest this means that Executive decisions will be available to members at all times. However, if negotiations are in progress then members may have to wait until negotiations are complete.

My personal request is members put their shoulders to the wheel and assist Executive to bring about the gains we need to make the beekeeping industry more prosperous. Executive will accept constructive criticism at all times and be pleased to get it. Executive is prepared to put considerable time into industry affairs and looks forward to your support.

High-powered secret of bee flight

Ask a Scientist

Robyn Lang, of Woolston School, asks: How fast do bumble-bee wings flap, and how can it fly when it is so fat?

Simon Pollard, a zoologist at the Canterbury Museum, responds:

Bumble bees fly because they use their two pairs of wings like the rotary blades of a helicopter, rather than just flapping them up and down. If they just flapped their wings they would never get off the ground. It is an amazing feat of bee design that their small wings can beat fast enough for the bee to fly. In fact, their small wings beat at nearly 200 times a second, or 12,000 times a minute.

The power that is applied to the wings to make them beat so fast comes from muscles in the bee's thorax, the part of the bee's body where the wings are attached. The thorax is full of flight muscles, and like a high-powered engine, it requires a lot of fuel to keep them working. For a bumble-bee, sugar is fuel.

Given the size of a bumble-bee's body, it is not surprising that 90 per cent of the calories it burns are from its flight muscles. Like an engine, the bee's thorax generates heat, and if the bee did not have an efficient cooling system it would over-heat. Bumble-bees also need to keep their flight muscles above 30°C or they will not work. So, the ability of the bumble-bee to regulate its temperature is very important.

Sometimes, bumble-bees run out of fuel and you will find them walking around on the ground. If you give them a mixture of one-third sugar and two-thirds water, they should be able to refuel and take off.

Acknowledgment, The Dominion

New President

The 1999 AGM elected a new President Mr Terry Gavin and a new Vice President - Mr Bruce Stevenson.

Contact details on the inside front cover of the magazine.

The New Zealand **BeeKeeper**

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Cover: 1999 Conference at Ashburton, photo courtesy L Pluck.

Letters to the Editor

Sir/Madam

My name is Tee Turner and I'm 51 years old. I am looking for a job in the beekeeping field; I've had experience in Royal Jelly and Queen Bee work.

I did Royal Jelly while in jail for 14 months, and Queen Bee work for Haines here in the far north for three months.

I'm married with one teenage daughter; my wife and daughter live in Taumarunui.

I'm a sawdoctor-saw engineer by trade with around 20 years in the saw milling game. I was in the army for six 1/2 years back in 66-73. I've done fencing and scrub cutting and am quite handy with a hammer.

If you can help me or know of someone who can could you please contact me at the below address; for a job is number one, the money comes in second.

Thank you

Thomas G Turner, C/o PDC Ahipara, Northland

Dear Sir

It was a surprise to arrive home after Conference to be given a copy of correspondence off the Internet, which outline whom had been put on or off the PMS Sub Committee. This contained comments on what votes had been cast at the executive meetings before and after conference.

Are there any rules or conventions that make this practice unexceptable?

There are two reasons why I feel that this should not continue.

Firstly the Executive should be the first to notify the people concerned who are elected or removed from committees, it should not be printed over the Internet first by a member of the Executive.

Secondly the minutes are agreed upon by all of the Executive about the decisions votes that are taken at meetings, not the thoughts of one person. Executive members have a responsibility to their fellow Executive members.

An interesting quote from the floor at conference from a Bay of Plenty Delegate "The AFB Pest Management Strategy could make us millions?" I wonder who the us are?

Graham Cammell

Another insect invader discovered

By Adam Fricker

Another species of Australian moth has by-passed New Zealand's border security, putting the forest industry at risk.

The blackbutt leafminer, which destroys all green tissue in the leaves of eucalypts, was first located on January 6, 1998 in Auckland. It is believed that it arrived on foliage imported by florists. The Ministry of Agriculture and Forestry notified forest owners of the find but did not notify the public.

The latest find adds to concerns that our biosecurity is being compromised by weak border security checks. The chief forestry officer for MAF, Dr Ruth Frampton, admits the latest find raises concerns about potential pathways through border checks, but says the ministry has taken action to better manage those pathways, including imposing a ban on cut foliage imports.

The executive director of the Forest Owners' Association, Rob McLagan, says Japanese used-car imports are one pathway not being effectively policed. He is among forestry industry representatives calling for a ban on imports that have not been inspected, after numerous discoveries of gypsy moth eggs on vehicles landed in New Zealand.

Green Party biosecurity spokesman, Ian Ewen-Street, believes the fact MAF kept the discovery of the blackbutt leafminer quiet is symptomatic of our biosecurity problem.

"This new threat to our forestry industry is more evidence that our border control system can't keep up with demands of free trade," said Ewen-Street.

"Until recently, we had a competitive advantage growing eucalypts.

"With the introduction of parasites.... our international edge is being lost."

Limited biosecurity resources are being spread over a wider range of pests and eradication has again been ruled out by MAF because the latest invader is too widespread. Frampton said some form of biological control was the best solution but that the cost would have to be met by forest owners.

The pest - a small brown moth with a wingspan less than 1cm - has been found feeding on three eucalypt species in New Zealand. It is not yet know if native trees are on the moth's menu.

Acknowledgment, Rural News

GM offering lower inputs

By Howard Bezar

For the first time in decades, cotton is being grown in China without insecticides. In the US, farmers are reducing herbicide use and saving fuel with new soybean cultivars. Australian canola growers are planning to use new residue-free herbicides instead of older-style herbicides which currently cause residue and groundwater problems. How? With the use of genetically modified (GM) crops.

As the debate at consumer level hots up, evidence is mounting that GM crops are providing significant environmental benefits.

A recent study by University of Minnesota scientists show big economic and environmental impacts of using Roundup Ready soybeans in the United States.

They found that not only did Roundup replace older herbicides used at higher rates but better weed control encouraged the adoption of conservation tillage and promoted more sustainable farm practices.

About half of the farmers surveyed converted to no-till cultivation methods saving on fuel (33 litres/hectare less), time (122 hours per year per 100 acres), labour (21% less) and machinery expenses (estimated at $US 12.35 per hectare less). The study also reports on improvements in soil conservation and quality under the no-tillage soybean system.

The Greens have been lauding the Australian export on non-GM Canola for good prices, but about half the 1998 Australian crop was produced from Canola cultivars conventionally-bred to resist the triazine herbicides, atrazine and simazine.

Both these older-style herbicides are associated with soil residue problems, runoff into groundwater and waterways and possible effects on crops grown the next season.

According to Dr Mike Butcher, Secretary of the NZ Plant Protection Society, these environmental problems would lessen if GM crops such as Roundup-resistant Canola were used. Roundup has a herbicide toxicity of about one third that of the triazines and is inactivated on contact with the soil.

More insecticides are used on cotton than any other crop. The BT gene introduced three years ago enabled cotton farmers to revolutionise the management of the crop.

American farmers have saved approximately 3 million litres of insecticide through the use of insect-resistant cotton. In China last year, 650,000 cotton farmers planted GM cotton and entirely eliminated the need for chemical insecticide use. In India early results from last year's harvest show a 25% increase in yield coupled with a 70% reduction in chemical sprays, compared to the previous season.

* Howard Bezar is an information scientist for Crop & Food Research.

Acknowledgment, Straight Furrow

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Views expressed in articles published are essentially those of the contributor and do not necessarily reflect the views of the NBA Executive or the industry.

Adding value to pollen

The pollen which bees collect has long been heralded as having extraordinary medicinal properties because of its abundance of vitamins, minerals and amino acids. Astronauts eat it, athletes swear by it, and some enthusiast describes it as a complete food.

Worldwide it is becoming big business.

But commercial bee pollen comprises batches collected by bees from many sources. Ken Markham of Industrial Research is keen for the New Zealand health food industry to capture the full potential of local bee pollen by quantifying the specific make up and properties of individual batches, and using this as a marketing strength.

He says bee pollen is a highly variable mix of floral pollens with different floral sources such as gorse, dandelion and five finger giving different qualities to the product. Some pollens are high in anti-oxidant properties, whereas others have good antimicrobial properties.

"I've been saying to the health food companies that we ought to be able to market a premium product which has its composition and qualities guaranteed. Although the colour of bee pollen can be an indicator to its source, it can also be misleading.

"Our aim is to characterise bee pollens and analyse how much of each floral pollen is in a particular batch to give buyers a true picture."

In a world first Ken Markham and a Portuguese colleague have developed a new method for specifying its individual characteristics.

Using high pressure liquid chromatography he is able to match individual flower pollen patterns with bee pollen patterns and quantify how much of each flower type is present in a batch.

The only hold-up for the project is the limited available data on the patterns of different flower pollens.

"Basically we need the help of observant beekeepers to supply us with samples of pollens which they know have come from particular flower stock. Only the beekeepers can tell us what the bees are gathering in a particular season or area," Ken Markham says.

He estimates that there are probably only 20-30 different pollens which bees collect in New Zealand. So far they have characterised 10 of these.

Acknowledgement, Innovate - Industrial Research Ltd

New Zealand bee propolis could earn more

Bee propolis is probably the second most important product which beekeepers get from their hives after honey, Industrial Research's Ken Markham says. He has developed a way to analyse the qualities of New Zealand propolis to gain competitive advantage for local industry.

Propolis is a resin which bees collect from the surface of plant leaves and use to sterilise and block up holes in their hives. It is very high in flavonoids and has important properties such as being antifungal, antibacterial, antiviral and anti-inflammatory. It is commonly used as an ingredient in products like cough mixtures, toothpastes, tinctures and face creams and in the treatment of ulcers, colitis, inflammation and immune deficiency.

Ken Markham says Brazilian sellers of propolis to Japan get many times the price that New Zealand producers do, because they define and guarantee their product.

He believes the local industry could go one better by presenting buyers with analytical data on their propolis using the method Industrial Research has developed. This uses high pressure liquid chromatography to obtain information about the flavonoids, which are central to the therapeutic and financial value of the propolis.

"Propolis from New Zealand has some fairly unusual properties which are good promotional features.

For example, our propolis is high in dihydroflavonoids such as pinocembrin which is known to be very active against Staphylococcus aurous, a methacillin resistant bacterium."

He says the work the Industrial Research team has undertaken to date is widely acclaimed, with the UK including it in national propolis regulations, and the possibility that the rest of Europe and the USA may adopt the methodology as a standard.

Acknowledgement, Innovate - Industrial Research Ltd

Broad Beans

Every spring we get home gardeners complaining that although there are plenty of broad bean flowers early, very few actually set to form broad beans.

Often the short tongued bumble bees take a short cut through the back of the flower to reach the nectar and honey bees carry on using this access point.

The solution is to pull down the lower keel petals each time you are passing the plants. This triggers the stamen and pollinates the flowers resulting in a good crop of early beans. Later in the season the honeybees will do the rest once the weather warms up.

It doesn't really take that much time to make a worthwhile difference. I expect humming as you work will put you into the spirit of the task.

Gary

Canterbury Branch - August Evening Meeting

Date: 31 August 1999 Tuesday **Time:** 7.30pm sharp

Venue: Rumpletums, Avonhead Tavern, 120 Withells Road, Christchurch

Programme: 1. Report from the Rivers and Drainage Work-Workshop (if you keep hives near rivers and you don't read the newspaper, you need to be informed)

2. General Business.

Supper provided at $1.00 per head.

TW Corbett, Secretary

News from Canterbury: Our guest speaker at the July meeting was Bill Chisholm, Canterbury's consultant for Land Information New Zealand, responsible for riverbeds in Canterbury. He spoke on his roles and his responsibility for spraying these areas for weeds like gorse broom and old man's beard. He wants to work in with users of the river beds ie beekeepers, farmers, fish and wild life groups, visitors, campers, and recreational groups. By August each year he hopes to have his spray program published (read the newspaper) for the up coming season, so river users can be informed and object to the spraying program where it affects them.

This is what Land Information New Zealand is doing. To hear what the Canterbury Regional Council is doing about spraying, be at our August meeting. For out-of-town people coming to our August meeting, the restaurant we are meeting in serves a really good buffet meal.

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Bee death progress

By Kevin Geddes

The growing problem of bee deaths through chemical poisoning was highlighted at national annual conference of the New Zealand Beekeepers Association.

At the Ashburton conference on July 12-15, speakers expressed concern about deaths where hives are among or adjacent to intensive flowering/pollen producing crops.

Since the problem was raised in Mid Canterbury earlier this year, HortResearch and FAR have conducted research into probable causes.

Everybody involved especially beekeepers and arable farmers, consider it an industry problem that will be resolved by joint action between the two groups. Most research has focused on organo-phosphate sprays used to control insect predators on arable crops. It was thought if sprayed at the correct time of day, they are not harmful to bees.

But new research has indicated many commonly used surfactants are highly toxic to bees. Death is caused by the surfactant smearing across the bee's body and inhibiting the respiratory process.

So it is possible the cause of bee losses is not, as commonly thought, from the agrochemical but from the surfactants or 'stickers' used with them.

Surfactants are used with almost all agrochemicals to increase the efficacy of the chemical on the plant, allowing use of lower-strength doses. More research is needed, however. If some surfactants are toxic to bees, they must be identified and warnings placed on labels.

The resolution to tackle the problem is a positive example of how different land user groups, by harnessing their collective energy, will achieve far better results than if each goes it alone.

The bee death problem, while primarily a problem for beekeepers and the pollen honey industry, is a potential loss to arable farmers if the usual pollination process does not occur on their crops.

The research will be funded by both beekeepers and arable farmers. By utilising the combined resources of the total arable industry, this problem will be solved.

* Kevin Geddes is grains industry manager for Federated Farmers

Acknowledgment, Straight Furrow

Conference 99

Thank you Ashburton... marvellous Conference!

South Canterbury beekeepers put on a very well organised, enjoyable event... (the karaoke competition certainly showed some talent... or lack of... eh: John Berry!)... winning team Waikato produced a brief but lovely rendition of their Rugby supporters song as they basked in the glory of taking the inter-Branch trophy.

A lot of serious and sincere concern about the financial situation of the NBA: but a resounding vote in support of continuing generic marketing: Sandee and I were thrilled with the comments and feed-back from beekeepers at Conference. There are exceptional opportunities ahead for this industry... and they're so close to happening!

There are also some major threats... but they can only be answered and overcome by the industry capitalising on the opportunities anyway... so it's a case of go for it!... and go for it BIG!

Focusing the Marketing Effort

Our marketing work for the rest of the year is going to be literally fixated on two key objectives: creating functionality and fashion definitions for every honey type; and using our excellent science resource in Peter Molan and the Honey Research Unit to prove and promote those. All other work will take a back seat to these because they are the key to 'exporting'... and exporting our honeys as premium products is the most important and the most promising option available to us!

The border protection for disease control has made many in the industry internally focused. The protection has been appropriate. It has safeguarded our unique international advantage: the production of drug-fee honeys from healthy beehives.

But it has also meant that exporting has been seen as a way of getting rid of domestic surplus: when in fact exporting should be seen as the way of getting super-premium prices from sophisticated markets for those very same 'unique' international advantages: ie we have to become export focused!

Bill and the Bee in Illinois

So the Marketing Committee is looking to excite export: both by giving our own exporters a friendly 'push' (helping hand) and by interesting overseas companies to want to buy New Zealand honeys.

It's an ambitious programme: but we believe it can be made to happen.

It's the rationale behind our vision for the NZ beekeeping industry:

To lead the world's beekeeping industries in developing a new respect and demand for honey and hive products

As I explained at Conference, to say little New Zealand has the ambition to "lead the world" seems a trifle grand... but we have, through the Honey Research Unit, and the Honey Advisory Service, created world-leading strategies already. The largest honey marketing organisation in the world, the USA's National Honey Board, is now funding vitally important honey research here in New Zealand.

The world's honey industry is looking for a lead, for a way out of the present seeming impasse with honey values: and New Zealand could be the catalyst for creating a new Renaissance of honey ... for the world!

The value of taking that leadership role, for our own honeys, could be tremendous: A huge assistance to our Brand exporters.

North and South takes our message nationwide

Good article on New Zealand's generic research and marketing in next month's issue of North and South magazine.

During our USA in-market work in June we spent four days at the Nat Restaurant Assoc Show in Chicago. (Couldn't resist getting a photo taken with the honeybee mascot, and this dessert dish was in the culinary finals: Cinnamon rice cream with deep-fried rhubarb and dandelion-honey ice parfait!).

Christchurch Chefs Produce Culinary Magic with Honeys

Chef Karl Webb and his superb lamb salad won first prize in the Honey Workshop we held at the Christchurch Polytechnic in May.

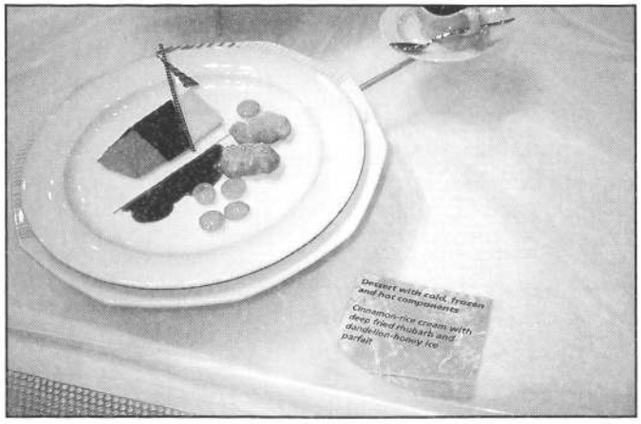
The dish was a Honeydew and basil marinated Lamb Loin served on a bed of char-grilled vegetables and apple, finished with roasted capsicum and a manuka honey vinaigrette.

It looked sensational... especially with the brilliantly bright orange-red of the capsicum based vinaigrette. Both the honeydew and the manuka honeys added complex flavours to the dish: Overall, quite exceptional.

More than 25 of Christchurch's top chef students took part in the honey-class and the competition afterwards.

We blind-tasted six honeys: and the favourite of the class was a superb golden sherry coloured Waikato amber.

Chefs couldn't believe it was an "orphan" (a problem honey) that didn't have a place in the market.



One of the finalists in the National Restaurant Association Show in Chicago.

That's going to change! My prediction to the Conference was that Waikato Amber would be the new 'manuka-type' rags to riches story for the industry.

British Beekeepers Follow Kiwi Example
The British Beekeepers Assoc has now produced an excellent Education kit for 5 to 11 year old children.

The British Assoc used our NZ kit as the basis for theirs, although the project organiser, Sylvia Chamberlin, commented to us that the NZ honey industry is obviously more commercial and plays a greater part in the NZ economy than is the case in Britain.

NZ Beekeeepers Upskill with Computer Technology
One of the most interesting trade displays at Ashburton was the BeesPlus 98 software programme. With where we have to go in 'quality' as an industry, this type of management and information system is the way of the future. Worth checking out!

Honey and Wound Healing
Published in this issue of the *BeeKeeper* is a complete reprint of the article by Peter Molan published in 'Primary Intention' the Australian Journal of Wound Management.

This is a major article: It also very heavy reading for the layperson... but worth persevering with.

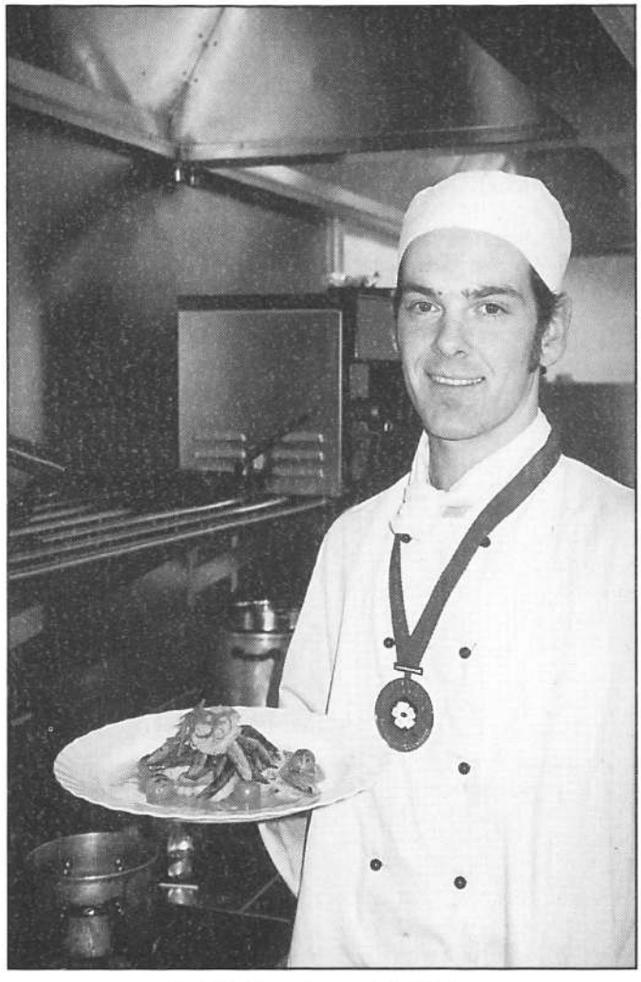
The major value it has for us is highlighting the potential of hydrogen peroxide-based antibacterial activity honeys for wound healing. ("Hydrogen peroxide honeys" are the 'ordinary manukas', the Waikato bush honeys, honeydew, rewarewa and others!)

Favourite Honey this month...
From Conference... some close calls but top honey has to be "Bee Healthy's Clover Honey". This is good old clover honey at its best... childhood memories came flooding back... the softest pale cream white; and a gentle texture like light, perfectly cooked mashed potatoes... I prefer that type of lightly-whipped creaminess to the thicker oily creaming of some other honeys.

(And John and Merle Moffat's raunchy muscley chewy delicious manuka was a close second!)

That's all for now

Bill Floyd



Carl Webb, winner of 1st Prize.

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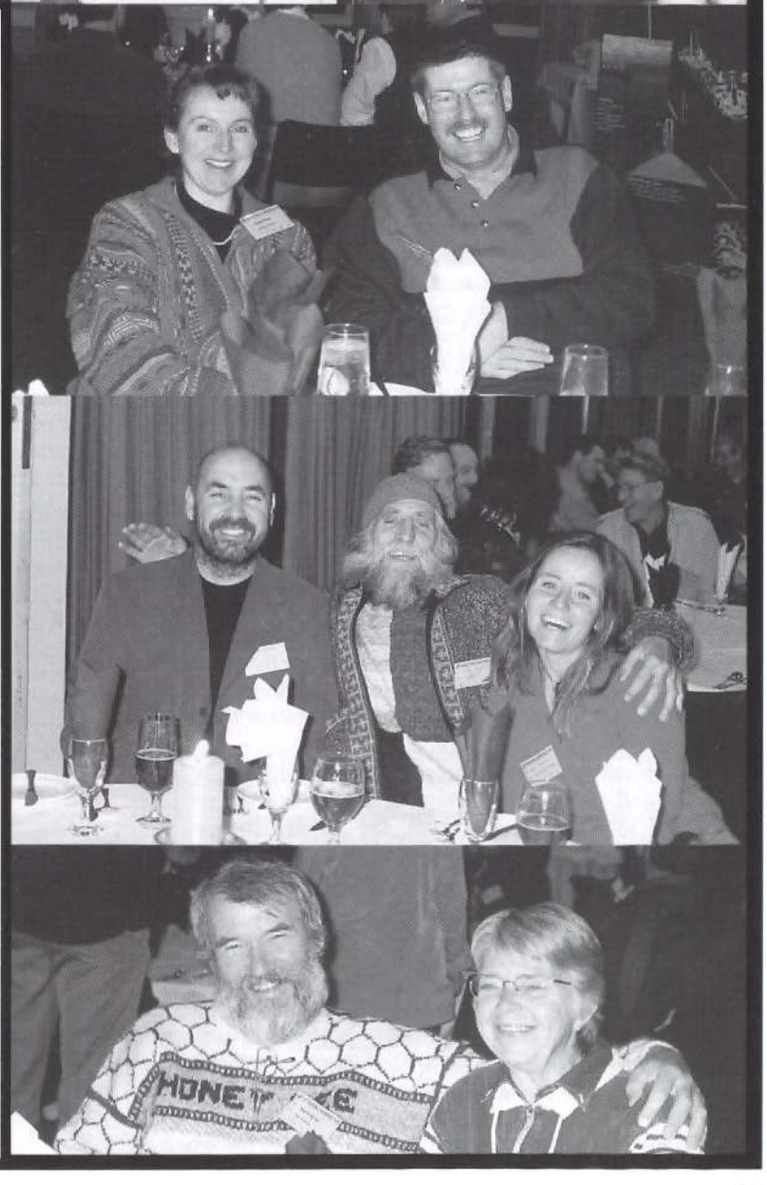

Establishing honey as a respectable medicine

PC Molan, Associate Professor of Biochemistry and Co-director of the Honey Research Unit, University of Waikato

Correspondence to the Editor of the *New Zealand BeeKeeper* in the past has been critical of research being carried out on honey because it is perceived that there is no need to do any more research as it has all been done already. The recent articles on the subject of the Chinese burn ointment being promoted by Patricia Holborow serves as a good illustration of why this perception is wrong. 'mei bao', or 'moist burn ointment' or 'moist ointment' as it is also known, is a honey-containing herbal preparation that has had a high profile for the spectacular results that have been claimed for it. It thus may be thought by some to need no further research. But there are some important points that are often overlooked. One is that for the protection of the consumer the regulatory authorities in developed countries require proper evidence before therapeutic effects can be claimed for a product - anecdotal evidence, like that for the effectiveness of 'moist burn ointment', is not enough. Another is that the evidence of therapeutic effect is matched against a comparative standard to see how effective the product is. The New Zealand Commerce Act 1987 provides for prosecutions against fraudulent advertisers. It places the onus on those who offer herbal remedies, homoeopathic and other products of doubtful efficacy to demonstrate in a court of law scientific facts to support their claims[1]. The legislative requirements in New Zealand for treating animals are even stricter - it is illegal to administer to an animal for therapeutic purposes any substance that is not a Licensed Animal Remedy. The Animal Remedies Board requires a similar standard of evidence of effectiveness as that required by the Ministry of Health.

The report in the Evening Standard that Graeham Gaisford's application to the Ministry of Health to have the ointment registered as a medicine in New Zealand was turned down because the evidence was unsatisfactory serves as a good illustration of the requirement for sound evidence. There may be some who would think that there is prejudice against herbal remedies involved, but the results of several clinical trials and trials on laboratory animals that been carried out on this ointment, published in the past few years, illustrate the soundness of this decision of the Ministry of Health in protecting the New Zealand consumer.

Results of a trial carried out on rats[2] showed that obvious infection occurred after the use of 'moist burn ointment' on burn wounds and healing was delayed, there was no improvement in the immune response, and scarring and deformity appeared after healing. In another trial on rats the burn wounds were infected with Pseudomonas aeruginosa[3] and comparison made between "moist burn ointment" or commonly used modern burn creams. It was found that more than 70% of the animals in the "moist burn ointment" group had invasive wound infection, and the 50% got septicemia. Testing on agar plates showed that, unlike the modern burn creams, "moist burn ointment" did not show an antibacterial effect.

In a trial to compare the therapeutic value of 'moist burn ointment' and betadine ointment in severe burns[4], with 30 patients divided into two groups, the results showed the difference between two groups was not great in superficial second-degree burn wounds, but 'moist burn ointment' was less effective than betadine in deep burn wounds. 'Moist burn ointment' had little antibacterial effect, wound healing was delayed, and incidences of infection, complication and fatality were higher. 'Moist burn ointment' did not have a noticeable effect in inhibiting scarring. In another trial[5], on patients suffering from middle and large sized burns, 42.3% who were treated with moist ointment developed septicemia, compared with 17.2% who were managed with the normal method. The conclusion of the researchers was that the moist ointment does not do well on third-degree burns because of the ensuing rampant infection. In a trial carried out on 115 patients suffering from deep second-degree burns[6], the patients were randomly divided into four groups, and treated with "moist burn ointment" or three commonly used modern burn treatments. The results showed that "moist ointment" group was significantly inferior to other groups in respects of healing of wound surface, antibacterial property, cost of treatment and formation of scarring. The researchers suggested that the use of 'moist ointment' in the treatment of deep second-degree burn wounds should be prohibited.

There have also been some adverse clinical reports on cases where 'moist burn ointment' has been used to treat burns. One reported a total of 23 patients with moderate or minor burns who had been treated with 'moist burn ointment' before admission to hospital[7]. All the wounds were severely infected except one with scar deformity, 17 cases were complicated by toxic symptoms, and seven cases were accompanied with septicemia. Three died within 48 hours after admission. Scar deformity resulted in 15 cases. Another reported on 21 burned children who had been treated with "moist burn ointment" before being transferred to the hospital after the occurrence of invasive infection and multiple systemic complications[8]. Four of the 21 patients died. It was concluded that the severe infection of burn wounds that had resulted from the application of "moist burn ointment" was the main factor causing multiple organ damage, and that "moist burn ointment" should be used with great caution.

These research findings reported for "moist burn ointment" contrast sharply with the results reported for clinical trials conducted on the treatment of burns with pure honey. The results of randomised controlled trials, published in peer-reviewed international medical journals, provide convincing evidence that pure honey is better than the methods of treatment that are widely used in modern hospitals[9-12]. In these trials the superior antibacterial activity of the honey could be clearly seen. This antibacterial activity is vitally important in obtaining rapid healing in burn wounds as in any other type of wound or skin ulcer, as the colonisation of wounds by bacteria prevents repair of the damaged tissue. If the growth of bacteria is not kept under control this leads to invasion of the blood by the bacteria, giving septicaemia which is life-threatening. (The fatalities that result from severe burns almost always result from infection of the burn wounds.)

But these clinical trials on burn wounds are the only properly conducted clinical trials that have been carried out on the use of honey as a wound dressing. For acceptance of honey as a legitimate therapeutic option for other types of wounds or for skin ulcers there is a need for further trials to be conducted to demonstrate that it is better than, or at least as good as, the dressings that are used in modern medical practice to treat these types of wounds. In order to get medical practitioners interested in conducting such trials it is necessary to provide evidence of there being a rational basis for the therapy. The natural remedies for which there are anecdotal claims for good therapeutic effects are multitude, but the medical view is that it is unreasonable to conduct trials on any of these for which there is no rational basis for their therapeutic effect[13].

The aim of the research projects being carried out at the Honey Research Unit at the University of Waikato is to establish a rational basis for the use of honey in medical and veterinary therapies. Although it has been known since 1919 that honey has antibacterial activity, it is necessary to demonstrate that for each type of infection to be treated the causative bacteria are sensitive to honey at concentrations that could realistically be achieved when honey is used therapeutically. So far we have done this for the bacterial species which cause stomach ulcers, infect wounds, cause mastitis in cows, and cause

diarrhoea. We are currently working on testing honey against the bacterial species that cause sore throats, and cause pink eye in sheep and cows. Shortly we will be starting work on the bacterial species involved in dental health. We are also investigating the components of honey which are responsible for the anti-inflammatory action of honey seen when it is used as a dressing on wounds and burns, and the stimulation of tissue regeneration.

Where we have successfully established a rational basis for using honey we have been able to get medical practitioners and veterinarians interested in conducting clinical trials. We are at the planning stage of, or have just commenced, trials using honey to treat scours in calves, mastitis in cows, and leg ulcers on humans. A major part of our research work has been identifying honeys with high levels of antibacterial activity, as it is important that if a trial is conducted the honey used should have the best chance of success. In the medical literature there are various degrees of effectiveness reported for honey clearing infection in wounds. Some personal communications from various medical practitioners who have tried using selected honey with high levels of antibacterial activity have indicated the importance of having a high level of antibacterial activity in the honey used - there have been in several cases a marked difference in the rate of healing when changing from a honey with a lower level of activity.

Also the Honey Research Unit has been conducting exhaustive literature research, and is monitoring all new publications in the professional scientific and medical literature, to be in a position to be able to present all of the evidence of effectiveness that exists for the use of honey as a therapeutic agent. This is considered to be of value to the honey industry for two reasons. One is that the information can be made available to medical practitioners and to the general public, to increase interest in using honey medically and thus creating another market for it. The other is that the information will be needed for the purpose of registering honey as a medicine with the Ministry of Health. Currently this is a requirement for any therapeutic claims to be made for a product, but proposed legislation will make it mandatory for all natural remedies sold.

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4. Zheng S, Li T, Chen W. Evaluation of therapeutic effects of moist burn ointment and betadine ointment in treatment of severe burn. Chung Hua Cheng Hsing Shao Shang Wai Ko Tsa Chih 1996;12(6):437-439.

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7. Zhang X, Li X. The observation and evaluation therapeutic effects of "moist ointment". Chung Hua Cheng Hsing Shao Shang Wai Ko Tsa Chih 1994;10(5):34.

8. Tang J, Yang X. "Moist burn ointment" brought about multiple systemic complications in children with burns. Chung Hua Cheng Hsing Shao Shang Wai Ko Tsa Chih 1994;10(5):350-352.

9. Subrahmanyam M. Topical application of honey in treatment of burns. British Journal of Surgery 1991;78(4):497-498.

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12. Subrahmanyam M. A prospective randomised clinical and histological study of superficial burn wound healing with honey and silver sulfadiazine. Burns 1998;24(2):157-161.

13. Skrabanek P. Acupuncture and the age of unreason. Lancet 1984;i(May 26):1169-1171.

Library News

Mr Ivor Forster, a highly respected, now retired, Apiary Advisory Officer, handed his private beekeeping library to the local branch. At the Conference in Ashburton I was given the opportunity to take those items we could do with for our collection. Please note the following titles in your copy of the catalogue:

Bastin H. Freaks and Marvels of Insect Life. 1954, 248 pp, UK

Hilgendo RF FW. Pasture Plants and Pastures of New Zealand. 4th ed., 90pp, NZ

Hilgendo RF FW. Weeds of New Zealand. 2nd ed, 238 pp, NZ

Hyde GE. Teach yourself Entomology. 1961, 158 pp, UK

Min. of AG. (UK). Swarming of bees. 1970, 38pp, UK

Sanders E. An insect book for the pocket. 1951, 349 pp, UK

Smith FG. Economics of beekeeping. 1965, 19 pp, Aust.

Also extra copies of 3 classics: The Life of the Bee by Maeterlinck,

The Honey Bee by Butler.

Bees - their vision, chemical senses and language by Von Frish.

Thank you Ivor and South Canterbury branch. These may not be recent publications but are full of interesting facts and info and still useful.

American Foul Brood Disease

Frequently we are shown photos of dead brood in various stages including the ropey stage.

However we need to find it much sooner if we are to stop the spead and make the disease scheme work.

What is not shown is the larvae at the earlier stage, perhaps still quite white but obviously dead.

If you touch diseased larvae at the early stage, very gently with a match, if there is no skin on the larvae, then it will be AFB and soon cells and more advanced stages will be seen. Best to destroy them, as "Murphies Law" will see that hive knocked over if anything happens in the yard, leaving other hives to rob it.

If the larvae **do have a skin** then it will **not** bee AFB. Sometimes some types of sac brood can look very much like AFB and I suspect even some experienced Apiary Instructors as well as beekeepers have been fooled into burning such hives at times.

Any dead larvae poked and stirred enough will rope to some extent and resemble the ropiness of AFB.

Annual Report of Telford Rural Polytechnic Apiculture Unit, to the National Beekeepers' Association Conference (Ashburton Hotel 12-15 July 1999)

Courses offered

A number of courses in Apiculture are now offered at Telford Rural Polytechnic. The **Advanced Certificate in Apiculture**, is a one year, 38 week full time course aimed at producing graduates to work in the commercial beekeeping industry. It concentrates on the practical aspects of running a semi-commercial beekeeping operation.

The **Certificate in Apiculture** by correspondence is a two-year course offered to students who cannot attend Telford and is structured to provide the theory of beekeeping with limited practical experience. Students undertake practical competencies in their local area with a competent commercial beekeeper. Both these courses follow the same 15 theory modules and include a collection of 40 plants and a major project related to a bee product from the hive.

The **Diploma in Rural Business (specialising in Apiculture)** is offered to graduates with the Advanced Certificate in Apiculture or in special circumstances graduates of the Certificate in Apiculture. The course concentrates on business administration and running a rural business, in the case of apiculture students, running their own commercial beekeeping enterprise. Students complete the Diploma in Rural Business requirements with all projects and case study reports being undertaken with a local commercial beekeeper.

The **Certificate in Queen Bee Rearing** is a new course that will be offered for the first time in spring 1999. This course can either be undertaken full time over three months or by correspondence for 3-6 months and then 4-6 week block course at Telford. This course will focus on rearing queen bees using the Cloake Board method so that commercial quantities of queen bees can be produced. We also hope to offer students the opportunity to learn instrumental insemination techniques.

The **Certificate In Agriculture** course offers students a week with the Apiculture Unit during which time the students have the opportunity to complete Unit Standard No. 17 "Perform elementary beekeeping practices" and in some cases No. 47 "Harvesting honey". Students undertake both the theory and practical components. The aim is to provide agriculture students who leave Telford with some appreciation of the beekeeping industry and its value to the agriculture sector from the role bees play in pollination of crops.

The cost of the courses in 1999: (NB: Study right is for students 21 years and under on 1 January of the year of study, or if they have been on a benefit for more than 26 weeks)

Advanced Certificate in Apiculture and Certificate in Agriculture: Study right $2,550, Non-study right $2,950.

Certificate in Apiculture (correspondence): $425 per annum.

Queen rearing course: Study right $850, Non-study right $985.

Diploma in Rural Business (specialising in Apiculture): Study right $1,950, Non-study right $2,150.

Current situation

There are currently 15 students enrolled in the two year correspondence course (July 1999), this compares with 18 correspondence students enrolled at the same time last year with a total of 29 correspondence students having enrolled by the end of 1998. Three students are currently enrolled in the one year full-time Advanced Certificate in Apiculture. One student is continuing from last year and two students started at the beginning of the year. This compares with only one student enrolled at the same time last year. One Advanced Certificate graduate from 1996 completed the Diploma in Rural Business requirements in 1998 specialising in apiculture. This is the first graduate to specialise in apiculture in the Diploma course and no doubt there will be others to follow next year.

Bursaries and 1998 Graduates

The NZ Honey Industry Trust now provides a bursary of $3,200 annually to students undertaking the full-time course, with the aim of two recipients receiving $1,600 each year. If more than two applications are received there is the provision to divide the bursary as the selection panel sees fit.

The NZ Honey Trust awarded $1500 to Darryn Earl in 1998/99 to James Hall, $1600 to Chris Ramage and $800 to Robert Rogers, in 1999. These bursaries are for students showing effort and promise in beekeeping.

Darryn Earl was awarded the Airborne Honey bursary of $300 for the best overall student, the Ecroyd Beekeeping Supplies prize of a smoker for the most improved beekeeping student and the Graeme Clark Cup for the most successful queen bee breeder for 1998 year. Darryn is currently working part-time as a beekeeper and as a warden in the halls of residence at Telford Polytechnic.

Timothy Samani, a CITEC scholarship student from the Solomon Islands, completed the Diploma in Rural Business in 1998 specialising in Apiculture and after working for four months with Dougal Macintosh in Methven he is now working for seven months in Canada.

A new bursary of $300 has been provided by Beeline supplies, this will be available to a student participating in the new queen-rearing course.

International conference

I was invited by the Apiculture Society of Korea to present a paper of "Advanced Technologies in Apiculture" to the '98 International Symposium on Apicultural Science in Suwon, South Korea, from 2-5 November '98. This paper was published in the proceedings of the conference (copies are available for loan). Guest speakers from FAO (Food and Agriculture Organisation of United Nations), Australia, Brazil, USA, Poland, Japan and Korea presented papers. The topics included world apiculture trends, pollen drying, propolis extraction and analysis, uses of natural products for AFB and Varroa control, bumble bee rearing, Japanese apiculture and *Apis cerana* in Korea.

Apiculture Unit activities in 1998/99

A beekeeping careers day was held for secondary school students interested in apiculture courses at Telford Polytechnic, on 14 October '98.

An evening course, "beekeeping for beginners", was run at Telford Polytechnic on 12 November 98 for those interested in owning a beehive.

I attended the National Beekeepers' Association conference at Waitangi from 20-23 July and screened the video produced by Mercury TV used to promote the full-time apiculture course. Copies are available free from Telford.

The Telford Apicultural Advisory Committee met on 1 October '98 to discuss the queen rearing course and modifications to the honey house.

Student activities in 1998/99

This year for the first time full-time students, as part of the requirements for the course, are required to complete four weeks of work experience. This gives students the opportunity to work with commercial beekeepers during autumn and spring.

Hive numbers have increased by 33 from 320 in June 1998 to 353 hives in July 1999. These hives occupy 22 sites in the Puerua Valley and at Clydevale. The aim will be to have 20 sites of 20 hives by the end of the 1999/2000 season.

This year the students produced 8,675 kg of clover including 50 kg of cut comb, 1350 kg of borage and 175 kg of manuka.

Total production was 10,200 kg from 330 producing hives with an average of 31 kg per hive. This compares with last years 320 hives that yielded 5,400 kg of clover honey, 1,400 kg of blue borage, 450 kg of manuka and about 50 kg for cut comb. This was a total of 7,300 kg and an average of around 23 kilograms per hive.

During spring '98 students were involved with feeding hives, pollen trapping, swarm control and making up nucleus hives. During the '98/99 summer, activities included supering hives and re-queening all the hives with protected queen cells in February/March '99. In autumn students were involved in removing honey from the hives, shifting 100 hives off borage pollination areas, extracting and production of bulk honey (300kg drums). Students also supplied honey for creaming and packaging, produced cut honeycomb (340g), wax blocks (8kg) and supplied retail outlets with packed honey. Winter months involved lectures, hive and frame construction, pollen processing and computer and welding skills.

One hive was detected with American foul brood on 15 February '99 compared with four hives during the previous season. All boxes and frames are numbered so that all frames are returned to the same hive the following season. New frames replace old frames in the brood area and gloves, hive tools and hands are washed between hives during inspection and hive manipulations.

The student project to combine Telford manuka honey and crushed deer velvet has progressed well during '98. Telford Farm has now adopted the management of marketing larger quantities of this product with assistance from students and a local apiarist for packing. This product received considerable publicity through local newspaper articles throughout Otago and Southland. This product, together with a range of other bee products, were promoted and sold at the Balclutha market day on 14 November 1998. Other projects this year include developing labels for pollen and producing honey mead.

This year we ran a honey house manager's competition with each student taking control of the management of the honey house for a day. This gave students the opportunity to oversee operations, comply with a quality control check and attempt to maximise production of honey and wax.

The three full-time students will be attending the NBA conference in Ashburton from 12-15 July with a short study tour after the conference.

Honey house

The upgrading of the honey house is almost completed. The improvements made were to comply with health regulations requested by the Environmental Health Officer on 9 May '98 for the purpose of obtaining Medical Officer of Health approval from the local council to register as a food processing premise. The upgrade included: lining ceilings of all areas where honey is processed, replacing the old window in the extracting room with an aluminium window with flyscreens and an extractor fan to reduce moisture build-up. Covering of fluorescent lights, painting walls and ceilings of all food processing areas. Replacement of the old wash basin and shelves with new cupboards and two wash basins, one for washing equipment (63 degrees minimum) and a hand basin (38 degrees minimum). The plumbing has also been upgraded to provide continuous hot water for the extracting equipment. See-through Perspex covers have been introduced over the baffle tank, honey filter and honey tanks and the pipes flowing into the tanks were realigned so that the honey flows down the side of the tank rather than falling from a height which introduces air bubbles.

The future

The NBA has the opportunity to promote Telford apiculture courses throughout New Zealand. Local branches could be more proactive, nominating potential candidates who could benefit from a full-time course to the NBA who, in turn, could consider recommending two selected candidates for bursaries from the Honey Trust.

The development of the Telford Crop Demonstration Unit, incorporating an apiary site and instrumental insemination and queen bee rearing facility, should provide a sound platform for the new queen bee-rearing course. The Cool Climate Crops group in conjunction with Telford will be involved in growing a number of demonstration plots of various oil seed crops with bees provided for pollination.

Dr David Woodward, Apiculture Head of Department

Frank reflects...

Last month I covered the assembly of supers and it was nice to be reminded of things I do automatically when fixing supers - skew nail (put them in at an angle) as this gives greater strength.

James Tew in the May 1999 Bee Culture and Ron mentioned in an Email to me, that spiral-shanked galvanised nails are also available and hold like glue.

Following on from last month, when you start putting a few hundred supers together you go into automatic mode, check the sides for warp, make sure the ends both face the same way before stapling or nailing. It all becomes a bit of a bore and the mind wanders a little. Its not until you stack them up or are about to hot wax dip them and you notice one or two have an end the wrong way around, the top rebate is upside down on one end. What to do. You can't take them to pieces again as they are securely nailed. These little embarrassments happen to all of us and the way around this problem is to router out a new13-mil rebate channel and handhold. Glue in and nail a piece of wood to the underside top-bar channel and nobody will be the wiser. (The bees won't complain).

Another thing that may be of interest is the actual colour we paint our supers. White used to be the dominant colour as this reflects heat and looks nice in a paddock. There are only a few areas in NZ that get really hot during the summer but for the majority of the country, it doesn't really matter what colour hives are painted. I prefer to paint supers in a mixture of darker colours as they help with bee orientation and warm up quicker in the winter sun. This also helps the bees to ripen the honey quicker in the summer.

Bees see in the ultraviolet range, that is, they see blue, blue/green, yellow and ultraviolet. Red to them is black, however they do see aluminium painted hives. We in our white bee suits look like bears and are sometimes treated accordingly. If the suits are washed in soap with the extra brightener, you look like a shiny bear and an easy target reflecting all that ultraviolet light.

What I have been leading up to regarding colours is the elimination of drifting; a problem often overlooked by beekeepers expanding their hive numbers. Bees coming home, for various reasons, sometimes cannot identify their hives so go into the ones on the end of the row. Hive placement has to be looked at but coloured supers can also help with orientation. Those with hives close together, all the same colour in a row must have drifting problems. The guards are alerted to the bee's different scent and are pounced upon. A bee in the wrong place won't fight but submits (has its abdomen pointing down) and offers nectar as a bribe to be allowed in. Sometimes this works, other times I have observed the stranger, having disgorged all its nectar, stung and thrown off the end of the landing board. Spacing hives individually or in pair's 2 metres apart, each facing a different direction, in a horseshoe or a sign wave shape, a circle, or between bushes all help to eliminate this problem.

Drifting becomes apparent early in the season when there is a nectar flow on and the bees are flying well. Those hives with a drifting problem will have a lot of guards on the landing board with little scraps going on. Those hives with only a few guards and bees coming and going without being challenged are OK.

Some may think this is only a minor problem but it does pay to correct it. Result - greater overall production, as much as another half a super of honey per hive.

Putting Frames Together

When I purchased my first hive, all the frames were date stamped each time they were re-waxed (approximately every six years). My oldest frame was the same age as me. Quite amazing considering they are made from untreated timber. What I am alluding to is that if you make a good job of them, they can last for many years.

Commercial beekeepers have assembling jigs and make up to 11 - 33mm frames at a time using a staple gun. A jig is easy to make and is a real time saver. They look like a cut down super, 50mm less in height than frames, the same width but the sides are a little shorter (you eliminate most of the end bee space). Slots are cut into each side to allow a tapered stick to hold the end bars in position. See the drawing.

Rest the tapered sticks in position, slot in the end bars, then push in the sticks a little further in to hold the end bars securely. Put a little glue in the top slots (optional) and press on the top bars and nail using 30-mm galvanised or glue-coated round head nails. Turn the whole jig over, glue and nail the bottom bars. (You may have to release the tension on one of the tapered sticks to allow the bottom bar to hold in correctly). Pull out the tapered sticks, lift the jig and the frames should fall out. Stack them ready for wiring.

I initially screwed the jig together until I got the end-bar dimensions just right, ie the completed frames came out without a struggle. If you are like me and the sticks are not identical, make them fit and then mark the slot they go into.

If you are nailing the frames, don't use the shinny, zinc coated nails as they pull out easily. If you are making only a few frames, you can put an extra nail into the face of the end bar to give extra strength but I feel that this is not necessary.

Wiring Frames

Wiring frames is time consuming and you require a wiring board to do this. There are several different designs that are easily made. Andrew Matheson's "Practical Beekeeping in New Zealand" book has a picture of one. You can eliminate the cotton reel pulleys and instead of metal clips to hold the frame use blocks of wood. The important parts are the off-set lever to compress the end bar and the rubber or leather loop to stop the wire releasing and causing a bird's nest.

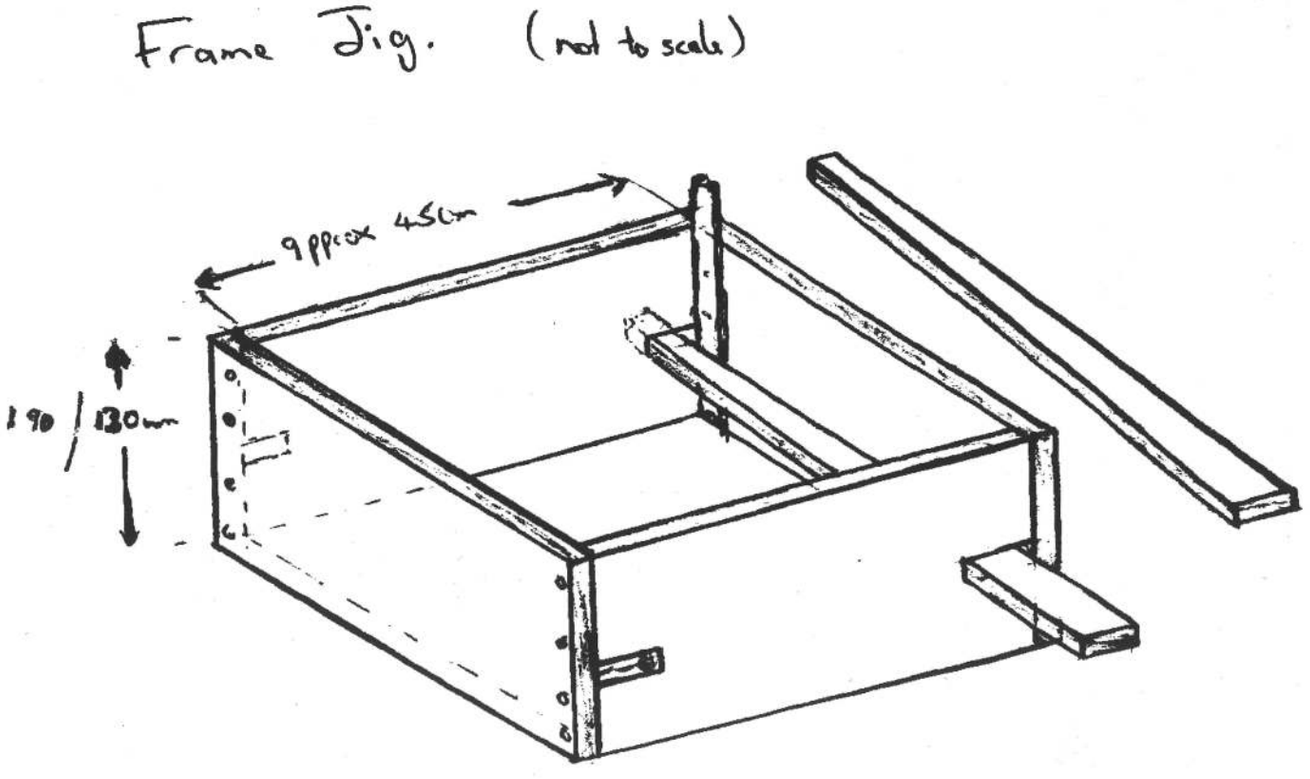
My one is similar but has an additional half-moon shaped piece of wood at the opposite end to the lever, which helps to bow the end bar when the pressure comes on from the lever. It is very shallow so that the wire can be easily threaded while the frame is held in the jig. Thread the wire, secure the distant end with a framing nail or two staples, (tacks are too expensive). Move the lever down until it forces a small bow in the end bar. Take out any slack wire by rewinding the wire spool, put in the frame nail (or staples), wind the wire around it three or four times, drive home and breaking it off by winding it backwards and forwards a few times.

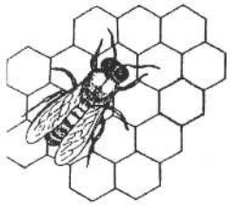
I usually just cut mine off with side-cutters but my assistant complains all the time during extracting when the small sharp edges left go through his thumb. The wire should be tight in the frame and twang slightly when strummed.

Even if you are not making an increase, you should have additional frames ready to use either for a swarm or as replacements for dark frames in the brood nest. Don't imbed the wax on to the frames yet, as it's a little too cold. (More on this next month).

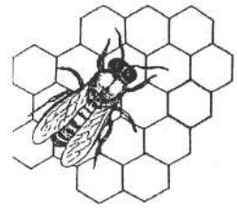
This month's work

Prepare for the new season's work. Get out the queen raising equipment and start feeding pollen and sugar syrup to the breeder and drone producing hives (this winter has been so warm, some hives have carried drones through until now - its just got cold). Check the hives for the stores by hefting the back up slightly off the stand, (one or two hives in some of my apiaries are now light) and feed where necessary. I also inspect under the lids to see that they are relatively dry and give a little more top ventilation if they are not. Clear away any weeds in front of the hives and otherwise see that the hives are in good order.





NZ BEESWAX LTD



BEESWAX COMB FOUNDATION PRICE LIST

Foundation	Dimensions mm	Sheets per kg approx	Kg per carton	Prices per Kg Conversion	Ex stock
Medium Brood Full Depth	422 x 200	17.5	15	$2.30	$10.84
Medium Brood 3/4 Depth	422 x 145	21	15	$2.30	$10.84
Seven Sheet Special	422 x 200	15.5	16	$2.10	$10.76
Extra Heavy Brood	422 x 200	13.25	16	$1.90	$10.67
Thin Super Full Depth	422 x 200	25	15	$3.20	$11.70
Thin Super 3/4 Depth	422 x 145	35	15	$3.60	$11.82
Thin Super 1/2 Depth Std	394 x 98	55	15	$4.25	$13.02
Thin Super 1/2 Depth	422 x 98	50	15	$4.25	$13.02
Thin Super 1/2 Depth 108	422 x 108	45	12.5	$4.25	$13.02

All prices GST exclusive. On conversion only, cartons are charged at $4.00 each. The Ex Stock price includes the carton. Returned cartons in good condition, complete with layers and dividers, net-returnable at $3.00 each. Incomplete cartons without layers and dividers $2.00 each. For less than carton lots of conversion 25% surcharge applies. For less than carton lots of ex stock 10% surcharge applies. We will also manufacture extra wide comb foundation (which reduces the gap at the bottom bar) or to your dimensions. For Manuka, Borage and other thixotropic honeys, try using extra strong Extra Heavy Brood comb foundation (EHB).

COMB FOUNDATION CONVERSION

Order your Comb Foundation early and avoid the last minute rush in December. If you are not close to our factory or one of our agents, think about working in with other local beekeepers to make up a combined shipment to send direct to our factory at Orari. For larger amounts, we are able to negotiate extremely good freight rates. This amount can be made up of wax for sale as well as conversion. Phone us to find out what specific deal we can do for you.

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South Canterbury Stockists of Ecroyd Beekeeping Supplies
Agent for BeePro pollen supplement

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South Canterbury

Postal Address:
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Geraldine 8751

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Fax: (03) 693-9780
A/H: (03) 693-9080

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Fax: (07) 825-2631

Agents
Masterton
Pete and Judi Ferris
Ph: (06) 378-7632
Fax: (06) 378-7632

Christchurch
Ecroyd Beekeeping Supplies
Ph: (03) 358-7498
Fax: (03) 358-8789

Technology New Zealand and Business

Carol Forbes and Helen Percy, Hort Research

Would you like to have access to scientific expertise or research, but don't know how to go about it? Technology New Zealand (TNZ) has a number of schemes which fund businesses of all sizes to access scientific knowledge, in partnership with a science provider (eg HortResearch). TNZ - part of the government's Foundation for Research, Science and Technology - aims to help businesses develop and adopt new technology.

For a start you can have a registered TNZ consultant (and many of HortResearch's researchers are registered under this Expert Access scheme), provide advice on your technology needs and ways to overcome them, at no cost to you.

Under another scheme - the Needs Assessment scheme - TNZ will underwrite expert consultancy to the value of $2,500, and as a business you are expected to have further financial input.

If you need research on a particular project then the Technology Assessment Projects (TAP) or Technology for Business Growth (TBG) programmes may be for you. TAPs projects (under the TechLink scheme) allow businesses to assess new technology with a short-term (less than 12 months) research project. TNZ will cover up to 50% of the cost to a value of $25,000 (includes GST). The business, or group of businesses, will need to contribute to the other 50% - of which 20% has to be a cash contribution. The remainder can be help 'in-kind' eg labour, access to hives etc.

A TBG is for a much larger project (greater than $25,000) that can last for 2 years. Once again TNZ will fund 50% of the total project cost and the business(es) pay 20% of their contribution in cash. As with the TAP projects, the remainder can be cash equivalents.

TNZ funds cover salaries, consumables, overheads, depreciation, overseas travel and accommodation. The funds do not cover the purchase of capital equipment or computers and software. External fees such as hiring a project manager can also be included in the project budget.

For more information contact Technology New Zealand at:

Wellington Office, Foundation for Research Science and Technology, PO Box 12-240, Wellington.
Phone: (04) 499-2559, Fax: (04) 499-2568
Email: technz@frst.govt.nz, Website: http://www.frst.govt.nz

Or your research provider - HortResearch:

Carol Forbes, Phone: (07) 858-4682,
Email: cforbes@hort.cri.nz, HortResearch, Private Bag 3123, Hamilton

Helen Percy, Phone: (07) 858-4676,
Email: hpercy@hort.cri.nz

HortResearch, Private Bag 3123, Hamilton

Honey money to blind foundation

A Matamata beekeeper has decided to share his honey sales success with the Foundation for the Blind.

Bryce Hooton, 32, a former dairy farmer, became a beekeeper after being blinded in two separate accidents in 1985 and 1986. Since then his business, Golden Flow Apiaries, has gone from strength to strength, which he attributes, in part, to the foundation's support.

As a result, Mr Hooton and his wife Susan will donate two cents from each pot of honey sold to the foundation, to go toward its talking books.

Mr Hooton said: "Last year we sold 100,000 pots of honey and we're expecting to sell at least half that again the year. At 2c a pot we're intending to donate up to $3000 a year to the foundation."

The foundation's adaptive support services divisional manager, Mary Schnakenberg, was delighted. She said the library issued about 220,000 talking books, 80,000 talking magazines and 3000 Braille books every year.

"Bryce Hooton's donation is an extremely generous one because it also boosts our profile in the community."

Acknowledgment, The Dominion

RECIPES

Coconut & Honey Mousse with Pears in Ginger & Gewurztraminer syrup

Light and delicious, this dessert can be prepared a day or two ahead, covered with plastic wrap, and kept in the fridge. Serve with a Gewurztraminer with a high sugar residue.

1 1/2 tsps gelatine
2 tbsps water
4 tbsps honey (a light honey such as clover or blue borage)
450mls cream
Grated rind of 1 lemon
4 tbsps coconut cream
Dried coconut chips and decoration

For the syrup

1 tbsp of fresh ginger, cut into fine julienne
2 tbsps sugar
1 cup Gewurztraminer wine
3 fresh ripe pears

Put the gelatine in a small saucepan and swirl in 2 tbsps water. Leave to soak for five minutes, then put the pan over gentle heat. Watch carefully as the gelatine melts, then stir in the honey.

Blend together well, stirring constantly. Remove from the heat and cool.

Whip the cream until it forms soft peaks, then fold in the lemon rind and the coconut cream. Stir the cooled gelatine and honey mixture through this mixture carefully and pile the mousse into 6 small ramekins. Refrigerate for a least 4 hours.

To make the syrup, tip the ginger, sugar and wine into a small saucepan. Stir until the sugar dissolves then bring to a rolling boil and reduce until half a cup remains and the liquid has become syrupy. Cool and pour over freshly peeled and sliced pears.

To serve, place a ramekin mousse on each plate and lay some pear slices alongside with syrup drizzled on top.

Serves 6.

Honey Pickled Onions

4kg small or pickling onions
1/2 cup salt
10 cups white vinegar
1 1/2 cups liquid honey
2 tbsps pickling spice

To easily peel the onions, pour boiling water over them and leave to stand for 1 minute. Drain, then cover with cold water. After a couples of minutes the skins and roots are easy to peel off.

Sprinkle peeled onions with salt and stir to coat evenly. Leave for 3 hours then rinse well and drain. Pack the onions into sterilised jars or a well-washed crock.

Bring the vinegar to the boil; add the honey and pickling spice. Turn off the heat and cool.

Strain the sweetened vinegar over the onions and cover with screw-top plastic lids. (The vinegar will corrode metal lids and evaporate through cellophane covers, so plastic lids are the best.) It's not necessary to exclude all the air. Store in a cool, dark place and wait three weeks before using the onions.

This following recipe is courtesy of Cuba's chef Franck Pecol.

Prawns Caramelised with Honey and Orange

24 large shrimps or prawns
Salt and pepper
Powdered ginger
3 tbsps olive oil
2 knobs butter
4 soup spoons of runny honey
200mls freshly squeezed orange juice

Shell the prawns, dry the flesh well on a paper towel and season with salt, pepper and ginger. Heat the olive oil in a frying pan, add the butter. When the oil is hot, add the prawns slowly sauteing them for two minutes on either side. Remove from heat and drain on a paper towel.

Discard the oil and butter from the pan, reheat the pan and then add the honey, allowing it to colour a little. Rapidly return the prawns to the pan allowing them to be coated in the hot, caramelising honey. Remove the prawns and place them on a warmed serving plate. Reheat the frying pan then add the orange juice. Allow it to reduce by half before pouring over the prawns. Serve with a chiffonnade of fresh spinach, sliced toasted almonds and slices of orange. Serves 4.

Ricotta & Polenta Hotcakes with Comb Honey

These breakfast hotcakes are essentially pikelets so the process is simple and familiar. Using ricotta and polenta, which are featured on many current menus, in an easy manner, I have added in comb honey, which is less used, but a very good match.

Honey

1 cup liquid honey
100ml water
1 vanilla pod, split
Zest of 1/2 an orange

Put everything in a small pan. Bring to the boil, switch off and allow to cool a little. Discard vanilla pod. (Rinse, dry and reuse.)

Hotcakes

1/4 cup coarse polenta
1/4 cup boiling water
1 cup flour
1/4 cup sugar
1 tsp baking powder
1/4 tsp ground nutmeg
1/4 tsp ground cinnamon
1 cup milk
2 eggs
25g butter, melted
200g ricotta
Zest of 1/2 an orange
Fresh fruit
6 tbsps comb honey

Pour boiling water over polenta and let rest 5 minutes. Sift dry ingredients together in a mixing bowl. Whisk egg and milk together with a fork then beat into dry ingredients with a wooden spoon. Add butter and wet polenta to the batter and beat again. Gently fold through ricotta and orange zest.

Cook small ladles of the batter in a well pre-heated heavy pan (or griddle iron) on low to medium heat, two or three at a time. Wipe the pan lightly with butter in between batches.

Turn each hotcake once bubbles form on the surface and cook until firm, about 3 minutes per side. Keep warm in the oven on paper towels on a baking sheet while cooking further batches. Serve in stacks of two or three with fresh fruit such as pear segments, berries or quartered nectarines, and crush 1 1/2 tbsps of comb honey on top. Spoon over honey syrup. Serves 4.

Acknowledgment, Cuisine

RECIPES

Honey Whole Wheat Bread

An old-fashioned bread with a delicious nutty flavour. For a more pungent flavour and a darker colour, try a dark honey.

1-1/2 tsp active dry yeast
1-1/3 cups bread flour
2/3 cup whole wheat flour
1 tsp salt
1/2 tsp cinnamon
1/4 cup carrots, grated
1/4 cup banana, mashed
1/2 cup water
2 tbsp oil
2 tbsp honey

To measure grated carrots accurately, add them to 1/2 cup of water until a 3/4 cup level is reached. Repeat procedure with bananas until 1-cup level is reached.

Place ingredients into pan in order listed. Select "Normal" program. Press Start.

Cajun Tomato Bread

The subtle flavour of this bread makes it a perfect accompaniment for beef stew or vegetable soup.

1-1/2 tsp active dry yeast
2-1/4 cups bread flour
1/2 tsp salt
1 tbsp chopped green onion tops
1 tbsp chopped fresh parsley
1 tbsp oil
2 tbsp honey
1/2 cup Bloody Mary mix (or spicy tomato juice)
1/2 cup water

Place ingredients into pan in order listed. Select "Normal" program. Press "Start."

Dutch Dill Bread

Taste the pungent combination of caraway, dill and yogurt in this special rye bread.

1-1/2 tsp active dry yeast
1-3/4 cup whole wheat flour
1 tsp salt
1 tsp dill seeds
1 tsp dill weed
1 tsp caraway seed
3/4 cup yogurt
1/2 cup water
2 tbsp honey
2 tbsp oil
3/4 cup rye flour

Place all ingredients except rye flour into a pan in order listed. Select "Normal" program. Press "Start". After bread machine has completed first kneading, press "Stop/Reset". Press "Start" again. After bread machine has completed first kneading again, lift lid and add rye flour. Rye flour will be kneaded into dough during second kneading cycle.

Honey Nut rounds

A perfect treat for breakfast or lunch

1-1/2 tsp active dry yeast
2-1/2 cups bread flour
1/2 tsp salt
1/2 tsp cinnamon
1/4 tsp nutmeg
3/4 cup water
3 tbsp oil
2 tbsp honey
1 large egg

Honey Nut Topping

Place ingredients into pan in order listed. Select "Dough" Program. Press "Start". Most bread machines will beep at the end of the program. Press "Stop/Reset"; remove dough.

Divide dough into 12 equal pieces. Shape into balls and press into 5-inch circles. Place on well-greased cookie sheets. Bake in a reheated oven at 400*F about 8 minutes. Remove from oven; spread on topping. Return to oven; bake 5 minutes longer. Move Honey Nut rounds from cookie sheets to cooling racks.

Honey Nut Topping

3/4 cup honey
3/4 cup chopped pecans, walnuts or almonds
1 tsp cinnamon

Combine all ingredients; mix well.

(From the National Honey Board)

Honey Blueberry Spread

Makes about 2/3 cup

Here's an alternative to butter and jam toppings

1/2 cup fresh or frozen blueberries, thawed
1/4 cup honey, divided
1/2 cup butter or margarine, softened

Bring blueberries and 2 tablespoons honey to boil over medium-high heat stirring constantly; cook 3 to 4 minutes or until mixture thickens and is reduced by half. Cool. Blend in remaining honey. Beat in butter.

Acknowledgment: American Bee Journal

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

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Year 2000 Conference

GISBORNE

18th-22nd of July

Contact Barry on: (06) 867-4591

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NORTH CANTERBURY BRANCH
Meet the second Monday of every month
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Phone: (03) 312-7587

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Peter Lyttle
Phone: (03) 693-9189

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Meet the last Tuesday of every month.
February to October.
Field Day November
Contact: Trevor Corbett
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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: Mr Lindsay Moir
33 Shackleton St,
Sth Brighton, Christchurch
Phone: (03) 388-3313

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

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

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Call Jeff on: (03) 577-5489

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Contact: James Scott, 280 Major Drive, Kelson, Lower Hutt.
E-mail: JLscott@clear.net.nz

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