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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 Executive

At the time of writing these notes, PMS has been notified and the time for making submissions to the Minister of Agriculture is passed. The next move is up to the Minister as to whether there is sufficient opposition to warrant a Board of Inquiry. We understand that the Biosecurity Act Amendment Number Four makes a Board of Inquiry mandatory but we do not know whether, when the amendment is written into the Act, this clause will still be there in its present form. The great difficulty in drawing up the PMS has been inability of the Biosecurity Act to deliver workable disease prevention and control. Hopefully, amendment four will rectify the situation. We would have had less problems writing the strategy if we had been number fifty-one instead of being the first producer developed and funded strategy. The Bovine TB strategy has been developed partly by Government. We hope to soon have the Minister's decision on the Board of Inquiry. Another on going problem is border control (quarantine service) and Executive are taking steps to strengthen this industry's efforts to assist the quarantine service whenever we can. The

first six remits to the last conference were expressing concern with border control and imports of pollen, royal jelly and Pacific Islands honey. Your Executive will continue to lobby Government to maintain vigilance to keep bee diseases out. The Endemic Diseases and Pests Response, which has a new name which slips my mind, is still in the melting pot but a training exercise was held in the Waikato area late August using beekeepers as well as MAF Qual staff. One of our beekeepers was able to give information which brought about the seizure of a shipment of pollen which had been brought into the country illegally. We understand that a prosecution is pending. Importation of bulk pollen has been suspended until protocols can be worked out.

Concern at the presence of the Clover Weevil in the Auckland and Waikato areas has been expressed and Executive will give its full support to the remit on this matter which was passed unanimously at conference.

The Marketing Committee has continued to do good work in this area and their program has continued with very good

results. The Honey Research Unit at the University of Waikato continues with many lines of research and much of this is at no cost to the beekeeping industry. Well done by all those at the unit. The 1996 conference asked the NBA for a set of quality standards for manuka honey and the Marketing Committee was asked to draw up these standards and to present them to this year's conference. This was done at the Packers Association meeting prior to conference. However, Executive asked the Marketing Committee to not launch these standards until Executive had studied them at the September Executive meeting where, I hope, we can clear them for launching. Well, these are some of the things on Executive's plate and we expect to continue to make progress. However, we need the support and tolerance of members to be able to get the full benefit of our efforts. Executive makes an enormous effort to improve the situation for the benefit of all, repeat all, beekeepers. Your understanding will help.

Terry Gavin

New Zealand Honeys Get a Chef-Competition

The New Zealand honey industry has appointed Christchurch-based Chef-Tutor Dennis Taylor as its Chef-Consultant to the Industry.

Dennis is a chef tutor at Christchurch Polytechnic... and before that was a chef at Park Royal Christchurch. He was trained in the RNZ Army and has been based in both Singapore and Scott Base; has worked on food exhibitions for trade missions to Japan and was chef for the Heads of Government Meeting at Tuvalu.

Dennis assisted the NZ Honey Industry with the format of its chef honey training programme and is developing culinary application strategies for the honey industry.

For this year's Beekeeper's Industry Conference Dennis created a honey-desert theme that the NZ Honey Industry could use for national and international marketing.

The dish features a medley of natural honey-based ice-creams, honeycomb biscuit, mead and saffron sauce and spun honey decoration. The dish was created in front of the Conference and received an outstanding ovation from delegates.

A key feature of Dennis's presentation were the bowls of eight different honey ice-creams that were prepared for all delegates to taste. Delegates argued passionately (and with obvious pleasure)

over which honey made the best ice-cream... Dennis used Rewarewa, Tawari, Nodding Thistle, Manuka, Thyme, Honeydew, Rata and Kamahi to create the eight different flavours.

The ice-creams were made to an old-fashioned 'profile' and delegates were amazed to find that despite the creaminess, they were made simply from honey, eggs and standard milk. The honey and milk combine very well, accentuating the flavours of the honeys and adding a full-cream mouthfeel despite the lack of fat in the recipe.

Letter to the Editor

Dear Harry,

During the recent NBA Conference in Nelson I was fortunate to overhear John Moffit of the Organising Committee comment that 'fines' from the Ball (paid by those party-poopers who wouldn't dress up) would be given to a local Charity. As Chairman of Whakatu Riding for the Disabled I asked (forced?) him to consider this group as recipients of the new 'levy'.

This morning we have received a cheque form Michael Wraight, Conference Secretary for \$404.50!

On behalf of everyone involved with WRDA I would like to express my thanks for this very generous donation, which will

be used to purchase a new horse for RDA. Without quality horses the work of RDA is much more difficult. Using the donation in this way will mean that many disabled people in Nelson will benefit directly from this gift. I sincerely hope that all those poor souls forced into paying this levy will be comforted by the thought that their hard earned cash will be such great benefit to the disabled community in Nelson.

Many thanks to all of you who contributed. Special thanks to John and Michael and the rest of the Nelson Branch for their excellent work in making the Conference run so smoothly, and for their kindness and generosity towards RDA.

Peter Rees, RDA, Ngawhatu

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Front cover...

The NZ Honey Industry's consultant-chef, Dennis Taylor, with the 8-Honeys Dessert Dish created for Conference 97. (Recipes in next month's BeeKeeper).

National Beekeepers' Association Sub Committees

As is normal procedure for the September Executive meeting, all committees are reviewed, as well as the committee guidelines. Special thanks must go to the Committees, as they carry out a lot of work behind the scenes, and advise the Executive on many issues. Also thanks to those people who put their names forward but were unsuccessful in filling a role for 1997 - 1998. We trust you will again put your name forward next year.

Sub-Committees and current Personnel from Sept 1997 to Sept 1998:

Nature	Name	Members
Sub-Comm of Exec	Marketing Comm	Neil Stuckey, (Chair) Allen McCaw, Peter Bray, Jane Lorimer, Bill Floyd, (advisers/consultant), Harry Brown (Sec)
Sub-Comm of Exec	Apicultural Research Advisory Comm (ARAC)	Mark Goodwin (Chair), Ted Roberts, Ross Blackman, Ben Rawnsley, Michael Wraight, Ted Roberts, Russell Berry, Harry Brown (Sec)
Sub-Comm of Exec	Export Certification Comm	Russell Berry (Chair), Malcolm Haines (live Bees) Peter Bray, (honey) Harry Brown (Sec)
Sub-Comm of Exec	PMS Review Comm (Formally Disease control)	Terry Gavin (Chair), Richard Bensemann, Graham Cammell, Bruce Stevenson, John Moffat, Peter Sales, Cliff Van Eaton (Adviser/consultant), Mark Goodwin (Adviser,) Harry Brown (Sec)
Sub-Comm of Exec	Exotic Disease Investigation Comm (New)	Peter Berry (chair) Russell Berry, Don Bell. balance of Comm TBA
Sub-Comm of Exec	Library Comm	Keith Herron, Allen McCaw, John Heineman
Sub-Comm of Exec	Publications	Tony Taiaroa, (Chair) Allen Richard's Harry Brown (Editor)
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Exec resp	Branch resp (Waikato, Southern North Island, Hawke's Bay)	Russell Berry
Exec resp	Branch resp (Bay of Plenty, Poverty Bay)	Terry Gavin
Exec resp	Branch resp (Marlborough, Nelson, West Coast)	Tony Taiaroa
Exec resp	Branch resp (Canterbury, South Canterbury, North Otago)	Don Bell
Exec resp	Branch resp (Otago, Southland,)	Keith Herron
Exec resp	IHEO USDA, statistics	Keith Herron
Exec resp	NZ Queen-Bee Producers Assn	Terry Gavin
Exec resp	Pollination Associations	Russell Berry
Exec resp	Foundation for Research Science and Technology	Russell Berry
Exec resp	Trusts and Trustees	Russell Berry
Exec resp	Federated Farmers Land User Forum	Don Bell
Exec resp	Landcare (wasps and possums)	Don Bell
Repr of Exec	Agricultural Security Consultative Comm	Terry Gavin
Repr of Exec	Agricultural Security Consultative Comm (Invertebrates)	Ted Roberts
Repr of Exec	Pesticides Board	Don Bell
Repr of Exec	Ruakura Apicultural Research Unit (RARU)	Jane Lorimer
Repr of Exec	Conference 1998	Terry Gavin
Repr of Exec	Methyl Bromide	Terry Gavin
Repr of Exec	Agricultural Compounds and Veterinary Medicine Adv	Don Bell

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Letters to the Editor

Dear Sir,

The Auckland Beekeepers Club is celebrating its Golden Jubilee this year. We would appreciate it greatly if, through your column, we could appeal for ex members to contact us with the view to joining us in celebrating our 50th birthday. We would also ask you to appeal to any of your readers who may have any old Club memorabilia, old beekeeping equipment or old fashioned protective clothing; in fact anything relating to bee keeping over the past 50 years.

I believe the Golden Jubilee committee is planning a special function and BBQ at the beginning of December 1997.

Please address all communications to:

The Convenor of the Golden Jubilee committee,
Mrs Royce Dinnington,
Phone number (09) 296-1201 or
The President Mrs Jill Dainow,
Phone/fax (09) 838-3567.

I am enclosing a brief resume of the Club activities for your interest.

Hoping you can assist,

Royce Dinnington, Convenor

Dear Sir,

I am a new beekeeper from Israel.

I love this profession very much and intend to work in this occupation as much as I can.

Also, this year, I intend to come and have a visit in your beautiful country, for a few months and I would like very much to work in one or some of your bee houses for a while.

Will you be able to help me by giving me some information, how can it be done?

With many thanks

**Gruber Rykuans Dona
Hagesher St. 23
Hod Hasharon
Israel
Fax: 00 972 9 7406567**

Please apply direct. **Ed.**

Dear Sir,

I wish to thank Mr R B Gulliford, Editor, The Australian Beekeeper, for his comments on my report on the PMS in the May issue of the NZ Beekeeper. I apologise for having given the wrong impression on the control of AFB in Australia. It is indeed interesting to get the picture from someone on the ground there.

It is the intention of the Pest Management Strategy to get beekeepers to stand on their own two feet and get rid of their own AFB themselves, in their own interest and for their own gratification, as suggested by Mr Gulliford in this last paragraph.

I trust that one day we will be able to discuss with Australian beekeepers matters of common interest.

Kind regards,

**Terry Gavin
NBA Vice-President**

Dear Sir,

I'm pleased to write to you today. I'm looking for work in an apiary.

The reason why I want to work for a beekeeper is because I plan to become a marketing manager or commercial beekeeper sometime later after gaining enough knowledge, skills and experience by working hard.

At this stage, I don't have relevant experience, knowledge and practical skills, so I intend to take up Unitec's "Spring Colony Management" course starting October 6, in order to get started. Classes meet Monday evenings and Saturdays.

Now could you please help me to find a job by introducing me to a prospective beekeeper? They may consider putting me to use as a Korean interpreter, if they want to tap into the Korean market, or to increase sales to Korean shop keepers here in New Zealand.

Regarding my personal details, I am a 48 year old migrant from Seoul, Korea and my specialities include interpretation/translation (Korean-English) and buying/export sales (steel products).

Contact: Tony Chong, 28 Ribblesdale Road, Sunnyvale, Auckland.

Hospital hopes for honey of a cure

Honey may be tested as a dressing for skin-graft wounds and burns in a clinical trial being considered at Middlemore Hospital.

Dr Nigel Rankin, staff specialist with the intensive-care unit, said that if approval was granted, honey would initially be applied as a dressing to the "donor site" — the area where skin was removed for grafting.

Its performance would be monitored and compared with dressings already in use. If it proved effective, honey might eventually be tested as a dressing on burns as well, Dr Rankin said.

"We will see how it compares with the best alternative dressing and if it performs better or at least as well, and causes no problems, it would seem possible to try it on burns themselves."

Honey has been used in ulcer research and was recently tested for its ability to fight antibiotic-resistant "superbugs."

Laboratory trials showed clover and manuka honey to be effective in killing seven strains of multi-resistant bacteria. Work is under way to set up clinical trials to further test its effectiveness in that area.

Dr Rankin said honey had antiseptic properties and research pointed to its offering advantages over conventional dressings.

Benefits of using honey could also include its price and that it was a New Zealand-made product, he said.

The trial was in the early planning stage and he was in the process of making a submission to a Transitional Health Authority Ethical Committee for approval.

Acknowledgement NZ Herald

Biocontrol went 'haywire'

A weevil introduced in North America to control rampaging European thistles itself went haywire and started preying on native plants.

Scientists said the case illustrated the dangers of using living organisms to control pests, and recommended United States authorities be more careful about such imports.

European milk thistle and other similar species had long been the bane of

farmers and ranchers. "It is just a hideous weed," said Don Strong, a Professor of Biology at the University of California.

In the late 1960s, experts introduced the weevil *Rhinocyllus conicus*. But it liked all kinds of thistles, and started eating native species, reported Svata Louda at the University of Nebraska and colleagues at the University of Tennessee in the journal **Science**.

Writing a commentary on the findings, Dr

Strong called the weevil scheme "a biocontrol project gone haywire".

Dr Strong and Dr Louda's team both said it highlighted the dangers of importing alien species.

Dr Strong said public concerns about such issues were much stronger elsewhere. "Europe and Australia and New Zealand are ahead of us on this."

Acknowledgment Reuters



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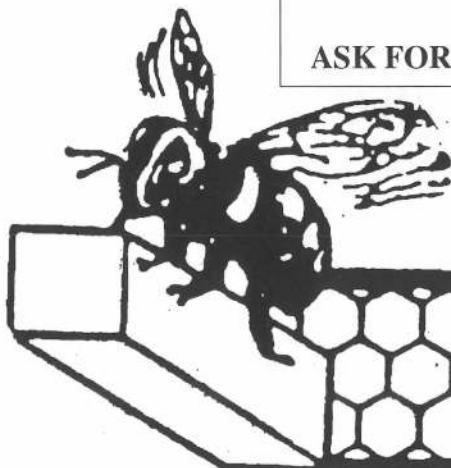
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Marketing

- Honey & Garlic a Winner
- Honey Ice Cream Recipe to Enjoy
- Manuka Standards Await Industry Decision
- Exports Looking VERY Good Again!
- How Do You Answer Something Like Peter Berry's Article.
- Four Companies won an Innovation Award at this years NBA Conference.

This month the *BeeKeeper* publishes the media release put out to a number of magazines and newspapers about the Wairau Valley Garlic Company, one of the 1997 Honey Innovation Award winners. The release notes some of the compelling arguments for companies to develop products with honey included in them: honey adds more than sugar! Not only in terms of flavour enhancement but in the case of these garlic sauces the honey improves mouthfeel and of course, taps the incredibly positive attitude towards honey that most New Zealanders have.

The other Innovation Award winners (Arataki Honey, The Jean Coombe Honey Collection, and the REG Actimel Manuka Honey Company) will each be profiled in similar fashion in coming editions of the *Beekeeper*.

• Honey Ice Cream Recipe

Dennis Taylor's stunning ice cream recipe is included in this month's Marketing Column what is particularly interesting is the lack of butter and cream in the recipe ... it's remarkably low in fat ... and yet has such incredible mouthfeel ... 'full and creamy!' ... and that's the result of the honey adding fullness to the milk. This 'milk enhancement' is something that we've noted in a number of product trials....

Honey Ice Cream (2 portions)

200 mls milk
1 egg

50gms Mono-Floral Variety Honey

Heat the milk and the honey together until simmering.

Lightly whisk eggs in a separate bowl.

Pour the hot milk mixture over the eggs and whisk together to combine. Return this mixture to a gentle heat and stir gently until it starts to thicken.

It is important to cool the mixture as soon as it starts to thicken otherwise the eggs will scramble. This can be done by placing the pot into a sink of cold water and continuing to stir the mixture until cool to the touch.



Bill Floyd

The key to a smooth textured ice cream is the churning process. The traditional hand churned method employs a bed of ice and rock salt and involves stirring the mixture in a metal bowl until it is smooth and frozen. You could try it this way with small quantities.

If you have access to an ice-cream machine (there are domestic varieties which are quite reasonably priced) the machine will churn and freeze the ice cream. If you do not have a machine you could freeze the mixture to the point where it is semi frozen, beat it by hand and return it to the freezer. Repeat this process several times.

Milk exaggerates the varietal flavours in honey and honey exaggerates the full-rounded creaminess of milk ... all that 'land of milk'n honey' stuff is obviously because of the intrinsic magic and synergy that comes from a combination of these two core foods.

• Those Manuka Standards

At the time of writing this column we're waiting for the results of the Executive consideration of the draft standards and the Honeyqual mark. The draft is based upon the paper presented to the Packer's Association at conference.

The issue of varietal integrity for honeys is one that will become increasingly important around the world. New Zealand's been one of the first to have to face the issue: because of the big difference in price between manuka honey and other honeys. It's an unfortunate fact of life that some packers are having problems knowing which of their honeys is manuka and which isn't. Not helped by the fact that manuka is worth twice as much as other honeys. That's simply not acceptable to us as an industry. I believe that the average person

(consumer) holds beekeeping and beekeepers as an honest and likeable profession (because of the high esteem in which they regard honey!). A situation where people are buying product not true-to-label in the honey-world is not acceptable. But only we as an industry can do something about it. I look forward to getting a positive direction from the industry.

• Exports looking good!

Export prices are looking very good! The following prices were as at end of May; and are shown as the average price per kg on an FOB basis:

Bulk Honey - 506 tonnes - \$3.269

Retail Packs - 150.6 tonnes - \$5.410

Comb Honey - 72.06 tonnes - \$13.094

Honeydew - 22.77 tonnes - \$2.933

Other Honey - 16.98 tonnes - \$9.536

Total 768.4 tonnes for first five months at average FOB price of \$4.72. Extrapolate the monthly average out to twelve months and we'll have exported over 1800 tonnes this year. On top of last year's record 3,000 tonnes, and allowing for average honey crops over the last three years... and you'd have to say that there can't be a surplus of honey... in fact, as I've often said, if supply and demand create the price it seems an intelligent conclusion to assume we're on a rising price market. (Although I'm sure someone will try and prove me wrong!).

• The eminently acerbic but quite likeable Peter Berry

Last month Peter Berry wrote an article about parasites and apiphytes and things that grow in the moss and muck of the forest... a highly entertaining article that had me rushing for my dictionary and a mirror. Thanks for not looking into my eyes at Conference Peter... I do appreciate that! I did wonder why all the general questions and conversations we had... but I enjoyed the result. Never had anything like that written about me before... my mum is still trying to work out whether she should like you or not! I told her you're okay! And you're right! I do totally enjoy this job... find it hard to believe I get paid for doing it... (but don't worry...I'll keep sending the invoices).

I can't finish this month's column without acknowledging the support from Frank and Mary Anne Lindsay at Johnsonville. 17 examples of different honeys from their region for the data base ... and all supported with good information. A huge effort. Thanks.

And that's all for this month....

Regards Bill Floyd
Marketing Committee

Notes for beginners and others

We are under way again. I love this time of the year with its fresh young green, the beauty of spring flowers and every mild nice day a godsend. There is hope for a good and profitable season. HOPE of course is what keeps us going, especially beekeepers.

It is time again to do some spring requeening and for the smaller beekeeper I have advocated to use queens purchased from a good queen breeder as that is probably the best guarantee for stock improvement, introduction very simple and if done properly pretty near fool-proof. However many a hobbyist and part timer will always love to try their hand at queen raising. Not just to save a few dollars but for the challenge. And why not? I have been told that God loves a trier!

An enormous lot has been said, written and shown about queen rearing, there seem to be about 101 different opinions about the best way to go about it. But it all boils down to a few essentials.

- a selected colony with the desirable characteristics to breed from;
- the natural urge of a queenless colony to produce queen cells;
- the right conditions for the queenless colony to be able to properly nourish those grubs earmarked as future queen bees;
- the availability of mature drones for mating with the virgin queens and the right weather conditions at mating time.

The following method is very simple, easy manipulation and there does not need to be any set-back for any of the colonies used.

Step 1. Locate the cell-raiser. Should be a reasonably strong double storied colony with a good amount of stores, honey as well as pollen. Remove top box, place on upturned lid. Find queen if possible. Sort over brood combs, place combs with eggs and mainly unsealed brood into bottom box and the mainly sealed brood into the top box.

Queen goes into the bottom. Have at least two but better three combs with brood in the top. Two good feed combs and some pollen in the bottom, same for the top. All brood in the centre with pollen and honey adjoining. A queen excluder onto the bottom super with the top super onto the excluder. Only eight frames should go into the top leaving a comfortable space for the frame with cells to be inserted later. If no nectar is coming in or you don't trust the weather reduce to seven frames and put a division board feeder into the top box for syrup. Alternatively use a jar with perforated lid as a feeder on top inside an empty super.

If desired start feeding syrup, not too thick about 50/50 is OK and not more than 500ml. at the time. Close up the hive and leave it for the next five days but give it a little syrup every day unless the bees gather some nectar regularly. If you unfortunately could not locate the queen shake all the bees into the bottom box, they will soon come up through the excluder to cover the brood while the queen stays down below.

Step 2. Turn the cell-raiser hive round so that the entrance faces backward. Insert a division board with a fairly wide entrance above the queen excluder with the entrance facing towards what was the hive's front. Bees flying from the bottom box will orientate to the hive's front looking for the old entrance place but will go to the entrance one storey up. This can be facilitated by placing a piece of hard board or tin against the hive, sloping between the ground and just under the division board's entrance. Enough bees will stay behind with the old queen to take care of her and the brood present in the bottom box. The brood which has been above the excluder is now near hatching thus providing a supply of young bees while any of the youngest generation will be past the age for cell raising.

Step 3. Having selected the best colony to breed from look for a comb with very young larvae. Depending on the number of cells you want to raise have either a top bar or a frame with two removable bars for fastening cell cups or a "strip" onto. A single bar will comfortably accommodate 12 cells. Now graft the smallest possible grubs into the cell cups which may be home made wax cups or the familiar plastic ones. Fasten these onto the bars with some molten bees wax and place into the cell raiser between the combs with brood.

In lieu of grafting you may elect to use the strip method. Disadvantage is damage to a comb, advantages easier when eye sight is not too good and also grubs are not touched at all. Same thing again: look for those very small grubs or even eggs. Place comb on flat surface and cut along both sides of the row of cells you want leaving one single row of cells (not perhaps a full length, shorter pieces can be joined). Then cut off one side of this strip just under the mid rib. A small knife with "snap off" blade is ideal for the job (\$1.00 at my hardware shop). There is no need to cut the strips from a real good comb, an older and perhaps already damaged comb is alright as long as the knife is very sharp and the blade thin. Place the strip(s) onto the bar with the mid rib touching and carefully pour some molten wax along both sides. Then keep cell no.1, flatten with knife or small stick no.2 and 3 and keep 4. So you keep

every fourth cell and they will be just the right distance apart and easy to separate when they have to be taken out.

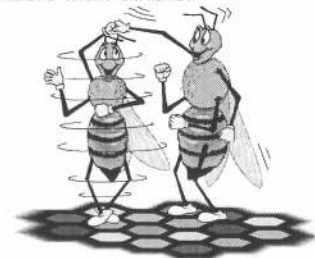
After placing the grafted cups or strips into the cell raiser fill up the syrup feeder again and scrape open a bit of the sealed honey and close up the hive.

It is advisable when using cell cups to have these onto the bars a day or so before grafting and hang them into the cell raiser for a clean up and getting the smell. Now leave the cell raiser alone but for a little feeding if the weather is poor and no nectar coming in. You could have a look after about four days to see how it is going. The cell raiser in this case will also be the cell finisher.

Step 4. On the 9th or 10th day after giving the graft or strip to the cell-raiser it is time to take the cells out to the hives you have made queenless or to the nucs you have prepared. Leaving them any longer than the 10th day is very risky, you may well finish up with one virgin queen running around in the cell raiser and with the rest of the cells destroyed.

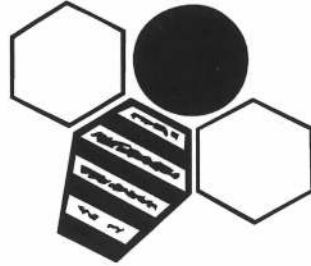
Lastly deal with the cell raiser. If it needs requeening leave one cell in the top, wait till the virgin has mated and is laying, showing a good pattern and then unite with the bottom using a double sheet of newspaper which has a few slits. At that point the hive can be turned around and assume its original position. Bees from the top half will soon get used to the bottom board entrance. If requeening is not wanted then simply remove excluder and split board and unite (with paper) and turn the hive around. You can of course make a temporary back door with a few sticks between bottom board and super to catch those bees used to the back entrance.

Some extra dollars. Who does not want them? One of our Otago Branch members who operates about 200 hives always carries with him a tin and a scraper. He conscientiously cleans the propolis off frames, boxes etc. without being fussy. He dries the stuff at home so that it does not get mouldy. Gathered 12 kilos during the season and sold it as such (not refined) for \$75 per kg. That is \$900.00 for just a little extra time input. He explained that not all his sites are good for propolis production and also some colonies are much heavier propolizers than others.



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Random Thoughts — Beekeeping

Today's random thought is about sufficiency - do I have sufficient honey to see me through to next season?

by Ham Maxwell

The one thing most beekeepers come up against is the fact that with increasing the hive numbers the need to dispose of the crop is a necessity, if only to maintain a financial balance. To achieve the ultimate goal of total disposal, two avenues are open. Sell off the crop in bulk to a packer or set up a selling method of your own.

Selling to the packers is not all beer and skittles, as the first hurdle is the price offered. I always find it surprising the justification given to the seller for the low price offered, namely the market will not sustain the additional quantity of honey being offered. If not, then why is the packer prepared to buy more stock? When this argument is satisfied, the next approach is to reel off a horrendous list of costing the packers are subjected to in the running of their plants, as if it is my concern, and therefore it is up to me to suggest that a lower price would be quite in order. Well, I couldn't care less what the costings of operating the packing plant are. That is the packers concern, not mine. No doubt there are high costings in the running of a packing plant, but any business, to remain viable must contain these costs, whether by paying minimal wages or providing staff training. Once a deal has been struck it is not all plain sailing. Agreeing to pay is one thing, actually getting the money is another.

Suggesting payment on delivery produces a reaction that leads one to

think an indecent suggestion has just been made. Yet the same packer will demand payment on delivery from his/her customers and not bat an eyelid in doing so. Well, if the packer wants financial accommodation, the banks are there for just that purpose, the major difference being the banks will demand interest on the accommodation. I am not supposed to demand equal compensation for money outstanding apparently.

Delivery to the plant is another bone of contention. Below a given amount of supply it seems delivery is at my cost, and getting the packer to even look at the output of just a few hives is not the easiest of jobs. In real terms delivery is expensive, and these costs must be loaded out on the supplier where possible. Well, I went to school in past years, and am not as naive as I am expected to be. Suggestions that collection from my depot could be part of a combined collection run in the area brought forth only scorn and finished with my being told to mind my own business.

Well, I am doing just that. In minding my own business a dilemma has arisen. My own honey stocks are virtually depleted, and requests for me to continue with my honey selling are frequent. Here then is the dilemma. I must now join the ranks of the packers and buy in honey? Survival of my business is the critical point to be considered.

Supplies of honey is not the problem. Fellow beekeepers are more than willing to supply me with their stock, the price they receive being greater than that offered by the big boys. Also I usually go with them to take the honey off the hives, so getting the full story on the supply source. Could this be the start of a future co-operative? In meeting these challenges, a lot of consideration to the long term possibilities will need to take place. The irony is that this is all taking place at the stage of my lifetime when the majority of people are giving active consideration to winding down their involvement in any form of business.

Listening to the local radio talkback programs can lead one in to thinking that the hard times being experienced are all the fault of the current mob in charge of the country. In looking around for ways and means to dispose of the honey crop it appears there are a lot of opportunities available for one to take advantage of, such as direct selling at the gate, using the local flea markets, marketing through one of the local service groups and selling through your local supermarket. From finding suitable containers in which

to pack your product, to finally receiving the cash for the product is not always an easy ride, but herein lies the challenge. DON'T DEPEND ON OTHERS TO DO THE WORK FOR YOU. Everyone will require a fee of some kind, and it is your job to determine best value for monies outlaid. Get together with other beekeepers and form a small co-operative, with a common policy on the supply of your product. I have already proved over three seasons that it is possible to get an excellent return on the product if only you formulate a policy and stick with it. Have an understandable policy, back it with a guarantee, and honour the guarantee. My guarantee has cost me only one pot of honey in three seasons.

My business will survive, it is naturally in my interests for it to continue. The best way for this to occur is, and will remain, my decision. I will not be made beholden to those seeking to grind me down as part of their own self seeking interests. If this sounds overconfident so be it. Unless I have this confidence I would not be able to continue, and would no doubt become another digit in the local unemployment lists. That I do not wish to be on such a list is perhaps unusual to some. If some of this determination could be rubbed off on to others I meet, this would perhaps go a long way in overcoming the malaise which permeates our labour force today.

Beekeeping to me is a challenge, initially in setting up an apiary, then expanding, this in turn leading to the challenge of disposal of the crop. In doing so I have little time left to reflect on how the world, be it the local government, owe me a living. If only others could be involved in similar enterprise we may be in a position to improve the situation around us and reduce the reliance of the population on handouts.

Yes, the stocks of honey are running low, showing that my efforts have not been without success. With one success leading to another it does seem that if one is determined, there is an opening for anyone else to tread the same path. For real success to be a reality, we must endeavour to instil a positive attitude in the population in general. Nothing succeeds like success, and perhaps the beauty of beekeeping is that this is not an overnight wonder. It takes time for the hives to develop, and time is necessary to ensure that the necessary understanding of the ways in which the bees work is absorbed. By taking aboard this knowledge a realisation and appreciation of the world around us develops.

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Roy Paterson Trophy

The winner of the inaugural presentation was John Thomson of Pirongia. The following story is from Mr Dudley Lorimer from Hamilton who was the driving force behind ensuring that Roy Paterson was recognized for his efforts to the NZ Beekeeping Industry.

This will be an annual event with the Vice-Chairman of the NBA finding the winner each year and the Trophy will be presented at the Annual Conference.

The Trophy was made by wood turners extraordinaire our own John and Peter Berry of Havelock North in the Hawke's Bay.

The Trophy is made of and tells the tale of Beekeeping through the years from the log hive through today's hive.

The following is Dudley's story about the winner.

John Thomson the first recipient of the Roy Paterson Trophy.

John is married to Dorothy, and they have two sons and a daughter. They are very proud of their Scottish heritage and John is a member of the local Highland pipe band.

He was born in Wanganui, and at an early age was introduced to the art of keeping bees by his Grandfather.

As a sixteen-year-old he worked for D Jurgeons in Taumarunui a commercial beekeeper.

During his early years he worked for Hillcrest Apiaries and he still recalls an incident as seventeen year old when Alan Bates of Matamata offered him a double whiskey, only to be told by Dudley Lorimer, he is far too young and the only double he should have is a double lemonade, and that cross John has cheerfully born to this day.

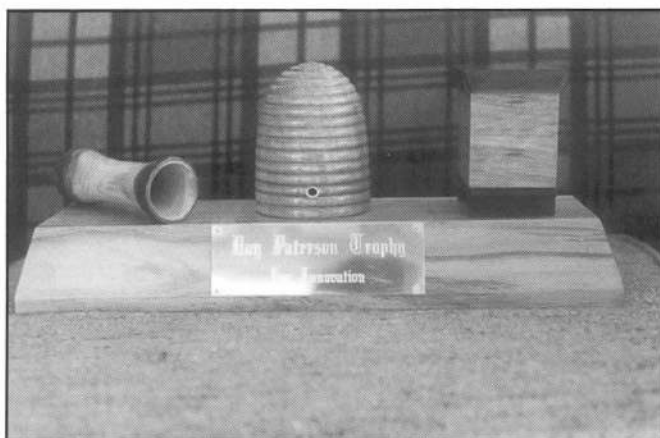
He is a very keen fly fisherman and after work would be off to the Aratiatia rapids with Aubrey Balle, another staff member, catching his fair share of the trout.

He was for ever suggesting innovate ideas, and one in particular raised the eyebrows of passing motorists, was his wind turret for stirring sugar as he travelled between Apiary sites.

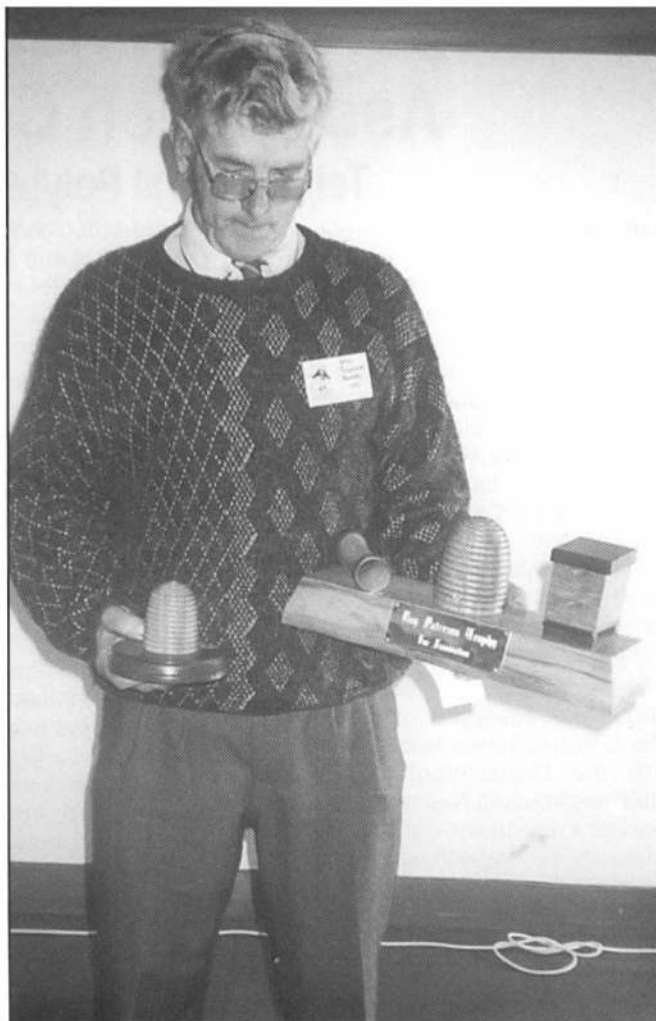
He also invented a vibrator facilitating the task of shaking bees for packaging. Another practical idea was a jig to hold a frame of bees and the queen mounted on the side of a hive instead of an end position resting on the side of the hive where a queen could be lost in the grass. These are only a few of his ideas and indicate his continuing interest in improving efficiencies within the industry. John I believe, is a worthy recipient of the Roy Paterson Trophy and I endorse with pleasure his award.

John currently runs between 300 and 400 hives in conjunction with being a fencing contractor (yes he has made gadgets to help him with his fencing interest as well). He is planning to give up fencing and is going to manage a beef farm as well as his bees.

Thanks to Tony Lorimer *Ed.*



The Roy Paterson Trophy.



John Thomson

Memorial Trophy

When John and I were asked to design and create the Roy Paterson Memorial Trophy we decided that, as it is a trophy for innovation, it should reflect the advancement of beekeeping over the years. The plan we hit on was a stylised representation of various hives, from the ancient to the modern.

The curved hollow tube on the left represents a log hive, the most ancient form of beekeeping hive-ware and of course the sort of place a wild swarm still inhabit. It was turned from a piece of firewood of unknown parentage.

In the centre is a straw skep, made from totara with an alabaster insert in the hole to represent the traditional hollow bone entrance. Legend has it that this bone was usually the thigh bone of one's grandmother, so I asked my Nanna but she reckons that she is still using it, the elderly can be so selfish!

Modern beekeeping is represented on the right by a two-storey scale model of a standard New Zealand full depth hive. The boxes of this hive are made from rimu while the lid and floor are Californian black walnut. The lid does not come off because I glued it down to stop people like you lifting it off and losing it.

The three representations of hives rest on a plinth of Maire, a very dense and heavy native timber which is why the committee has decided (on the recommendation of OSH) not to present the trophy to anyone with a crook back. I made the trophy while John turned up the smaller skeps which are to be presented to each recipient as a keepsake of their achievement in winning this prestigious award.

Peter Berry

Report to the National Beekeepers' Association Conference 1997

Telford Rural Polytechnic Apiculture Unit

Staff Changes

Nick McKenzie finished as Apiculture Tutor on 27 March 1997 and departed for Canada soon afterwards. Nick is looking to expand his international experience in beekeeping and will be working with a commercial apiarist while in Canada. I would like to take this opportunity to wish Nick well for the future and thank him for his contribution to Telford and the Certificate in Apiculture course. Nick spent several days exchanging information with me prior to his departure. This was invaluable as it assisted in maintaining continuity for the full-time students.

I began as Apiculture Tutor on 7 April 1997. I was employed for seven years prior to this as Senior Apicultural Adviser with the Department of Primary Industries in South Australia. I spent two years as a research scientist for Adelaide University working with leafcutting bees.

I completed a Doctorate in Entomology at Massey University working on bumble bee domestication and foraging. I completed a Bachelor of Science and Master of Science in Ecology at the University of Canterbury. I first became interested in bees while working with Dr Barry Donovan and Dr Rod Macfarlane at the Agricultural Science Centre at Lincoln. Students started the second term on 21 April. Mrs Valerie Bell remains as the Apiculture secretary.

Enrolment

During the first six months of 1996 there was one full-time student, this increased to two students in the second half of the 1996 year. During the first half of 1997, three students were enrolled in the full-time course. In the second half of the 1997 year it is anticipated there will be two full-time students who will continue until the end of the year. Agriculture students also participate for one week on the apiculture programme. Currently only one third of the agriculture students participate in the apiculture course and the rest gain agriculture work experience on farms. It is hoped that a greater proportion of agriculture students may gain apiculture experience in the future as part of their course requirements.

There were twenty correspondence students on 1 July 1996. As of 10 July 1997 the number has increased to 23 correspondence students and these numbers help to maintain and justify the continuation of the Certificate in Apiculture course at Telford.

Course fees

Full-time students undertaking the 38 week Certificate in Apiculture course pay

a fee of \$1600 (includes GST) for a study right student and \$2500 for a non-study right student. For the extramural two year course, the fee is \$350 per annum (study right and non-study right).

Full-time students also pay \$50 enrolment fee and \$200 student association fee.

Accommodation and meals for students staying at the hostel ranges from \$144 (five days) to \$177 (for seven days). All students outside Australasia enrolling in the full-time course are required to pay course fees of \$14,000. Any person interested in Telford courses should ring free phone 0800-805-657.

Course activities

Students have been involved in a range of activities during the first two terms of 1997. These activities have included: rearing and marking queen-bees, requeening hives, removing honey. Checking hives for American foul brood, taking honey samples for testing by MAF, numbering boxes and frames and weighing supers, extracting honey, sugar feeding and wintering down hives. They have also been melting down wax and replacing equipment in the field. Students and staff completed a First Aid course on 7-8 July.

Field activities in the second term included a visit to a commercial apiarist on 17 June to observe the production and packaging of creamed honey and the rendering down of wax from old combs. Creamed honey produced by students is sold locally at Telford Farm. Staff and students attended the Otago Branch meeting in Dunedin on 6 June and the Southland Branch meeting at Gore on 13 June. Also, the MAF Coastal Otago discussion group meeting on 26 June at Invermay, was attended.

Visits to the Telford Apiculture Unit included: 80 third formers from South Otago High School on 23 May to observe manipulation of beehives and honey extraction; 40 careers advisers on 24 May to observe honey extraction, and also 220 students and the general public looked through the honey house on the Telford Open Day on 2 July.

Improvements to honey house

New aluminium doors have been installed in the extracting room to bee-proof this area and safety switches for appliances introduced. Excavation for a new 5x6m bee storage shed and workshop has improved the drainage. The new shed should be erected in the next 12 months, budget permitting. Within the next four-six months the storage room walls will be lined and new doors and a ramp will

be introduced to improve the movement of supers through the plant.

Hive management

As of 1 July 1997 there are 367 beehives being overwintered in two areas, the Puerua Valley and Clydevale. There are 153 hives on nine apiary sites in the Puerua Valley and 214 hives on 11 sites at Clydevale. A total of 26 sites are currently registered with MAF for use.

It is anticipated that hive numbers will be increased to around 400-425 producing hives. Hive production is currently being recorded on a per hive and apiary site basis and this information will be used by students to determine the most suitable sites and the most productive hives.

Queen-bees from these productive hives will be used for queen mother and drone mother production next season.

American foul brood (AFB)

A total of 13 hives were identified with AFB from February 1996 to February 1997. These hives were subsequently destroyed. No further outbreaks have been detected to date. Since April, the students have been encouraged to maintain good hygiene when inspecting hives, including washing gloves and hive tools in water with disinfectant when moving between hives. No frames or boxes have been swapped between hives with the exception of introducing nucleus hives and these have all been recorded. Frames and boxes have all been numbered so that the frames are returned to the same box after extraction and the boxes are returned to the same hive next season. As very little brood was present during late autumn when final disease checks were undertaken, honey samples (30-50 ml) were removed from brood frames of each hive in each apiary. Honey samples from each apiary site (20 total) were submitted to MAF, Invermay and tested for AFB. The results were all negative.

A policy of replacing two-four brood frames per hive with new frames of foundation will be introduced in spring/summer to improve the quality of brood frames and to reduce the bacterial build up and spore load in brood frames.

Awards/Scholarships

Following an interview on 8 July, Karen Bassett, from Wanganui, was awarded the NZ Honey Industry Trust Intramural Certificate in Apiculture Award for the first two terms of 1997. The award of \$1000 is made on a term by term basis to a student showing effort and promise in beekeeping with up to \$2000 awarded per year.

The NZ Honey Industry Trust awarded \$2660 for two full-time students to undertake a study tour including attendance at the 1997 NBA conference and seminar in Nelson. The Apiculture Tutor and the students will visit the NZ Honey Producers Co-operative (Pleasant Point), NZ Beeswax (Orari), Airborne Honey (Leeston) and Ecroyds Beekeeping Supplies (Christchurch) while travelling to and from the conference.

Summary of results from the 1996 questionnaire

The questionnaire was undertaken to determine whether the training needs of the apiary industry were being met by the current apiculture courses offered at Telford and whether by adapting tailor-made courses for industry needs the enrolment in apiculture could not be increased.

Questionnaires were sent out in June 1996 to 226 beekeepers (4% of total beekeepers) who owned 300 or more hives and who in total owned 196,818 hives or 67% of all hives owned in New Zealand. The questionnaire was in three parts: Section A for employees of beekeepers, Section B for beekeeper employers, who employ at least one staff member and Section C for beekeepers whether or not they employ staff.

Employees of beekeepers (Section A) 16 respondents (7%)

Employees from throughout New Zealand responded; 69% of these respondents were working all year for their employer; 75% worked for an employer running over 500 hives with 93% being honey producers and 50% were involved in pollination and/or queen rearing (25%); only 31% had formal qualifications; 81% would be interested in further beekeeping training; 55% wanted training for one-two weeks maximum; 50% preferred training in late autumn or winter with 38% preferring the early spring or late summer/early autumn period; 75% of beekeepers would travel for training with 38% prepared to travel within their region and 38% were prepared to either travel to Telford or within their island; nearly all (94%) indicated support from their employer to undertake training and 56% indicated they would be given financial assistance by the employer; the type of training requested included: disease recognition and control, queen rearing, all aspects of running a commercial operation, management for honey production, bee behaviour, artificial insemination techniques and honey extracting technology.

Beekeeper employing one or more staff (Section B) 21 respondents (9%)

Beekeepers responding were employing between one (52%), two-three (29%) or more than three (19%) staff; 48% owned an operation with 500-1000 hives and 52% owned over 1000 hives; 90% were

honey producers and 57% also provided hives for pollination with 38% also involved in pollen production or queen rearing; over two thirds (71%) would release their employees to attend training and provide financial assistance; 48% preferred training from one day to one week with 71% preferring the autumn or winter for training; two thirds (67%) would travel at least within their region for training and those in the southern South Island (19%) would travel to Telford; one quarter (24%) had employed a student from Telford and others would consider doing so in the future; the type of training included: disease recognition, queen rearing and breeding including, a.i. techniques, hive management for pollination, understanding brood cycles, time and financial management including computer skills, botany and mechanics.

Beekeepers own needs (Section C) 61 respondents (27%)

Beekeepers from throughout the country responded; two thirds of respondents (66%) did not employ staff, those that did, employed either one person (18%), two staff (10%) or more (6%); half (51%) were in operations with 500-1000 hives, one quarter (26%) had 100-500 hives and 18% had over 1000 hives; 93% were honey producers, 37% were also involved in pollination and 7% solely in pollination, and 18% were also involved in comb production or queen rearing; 18% had formal beekeeping qualifications; 61% of respondents were interested in receiving further training; 46% wanted training from one day to one week with 7% wanting longer training; the majority (57%) wanted training during the winter or during spring/autumn (16%); 54% would travel within at least their region for training with 16% prepared to travel to Telford, while 13% would only attend a local training program; the type of training requested included marketing, record keeping and year planning, computer applications, two queen hive management, queen rearing and a.i. techniques, bee nutrition and pollen supplements, disease identification and inspector training, bee behaviour, honey plant and hive management; it was also recommended that use be made of field days to visit successful operations and to make use of up-to-date publications and books.

My impressions

Telford provides an excellent opportunity for learning land based skills. The facilities at Telford, especially in apiculture, are good but require improvements to bring them in line with new food hygiene requirements. Telford is positioned in a unique part of the world with regard to scenery and adventure and the lifestyle is unique, although the weather conditions are not as conducive for apicultural field work as other areas of Australasia. However, the opportunity for ecotourism based education would

surely be considerable. The opportunity to attract students from overseas to either full-time or correspondence study has not been fully explored either through advertising or on the Internet.

The disease status of New Zealand is unparalleled by most countries in the world and this has not been fully exploited to date. The opportunity for export of queen-bees and package bees is enormous but weather conditions and technology have limited the full exploitation of this market to date. With the increase in honey prices and the innovation in alternative bee products the viability of the industry has improved, although it will always remain a difficult industry to maintain viability because of fluctuating seasonal conditions and overseas markets.

New Zealand beekeepers have always had an ability to add value to high quality products and to respond to internal and external changes, a position that is jealously respected by other competing neighbours. If Telford can assist in providing state of the art training in the latest technology it will have achieved its objectives in providing industry with a market edge and also provided a service to the wider community.

*David Woodward,
Tutor in Apiculture*



Apology

The phone number in the August issue for Michael Wraight's Ecroyd advert, was incorrect — It should be (03) 528-6010.
Apologies *Ed.*

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BEEFAX

Vol. 2, No. 11



September 1997

“OR” EXERCISE A BIG SUCCESS

During the last week of August, NBA members and MAF Quality Management (MQM) staff took part in an Outbreak Response (OR) exercise in Hamilton. OR is the new term now being used by MAF for Exotic Disease and Pest Response (EDPR), and this OR exercise continues on with the exotic bee disease outbreak response training which has been a feature of MQM's involvement with the New Zealand beekeeping industry in recent years.

Beekeeper participation in the Hamilton OR exercise was tremendous, and exceeded MQM's expectations to the point that it was almost an embarrassment. MQM's management abilities and transport arrangements were put under some pressure by the number of beekeepers who wanted to take part, but this just added value to the event as a training exercise, since surely all of us would be under pressure in a real response.

A total of 2525 hives in 261 apiaries were inspected by 34 teams over two days. Each team consisted of a MQM Field Team Leader and several NBA members. American foulbrood was used as the disease subject, so the exercise also filled the role of a diseaseathon under the terms of the NBA's American Foulbrood Disease Control Programme contract.

During the exercise, 49 AFB hives were found in 31 apiaries, or 1.9% of the hives in 11.9% of the apiaries inspected. While these figures are considerably higher than the 1996-97 New Zealand incidence figures of 0.46% of hives and 2.9% of apiaries, it should be realised that the total incidence figures represent all reports of AFB from all beekeepers throughout the country (including those beekeeping outfits and areas where AFB is almost non-existent).

A better comparison can probably be made with the NBA volunteer (diseaseathon) inspections which were carried out in 1996-97. In those inspections (which, like this OR exercise, were partially targeted to areas or beekeepers with known AFB problems), the infection rate was 1.5% of hives inspected, and 5.5% of apiaries.

The large number of inspections was made possible by the efforts of 45 beekeepers from the Waikato NBA branch, and 11 from the Auckland branch. Beekeepers

contributed 640 hours and travelled 5500km to do these inspections. As well, many participants travelled a long distance to get to the exercise. A total of 35 MQM staff were involved in Emergency Headquarters roles and as Field Team Leaders

The event, which was run from the Hillcrest Motor Lodge in Hamilton, was designed to test MQM's procedures for responding to an exotic bee disease and to train MQM staff and beekeepers in a realistic simulation situation. In a real response to European foulbrood (EFB), for example, if the Chief Veterinary Officer decided to proceed with a response, it would be run in almost the same way, except that field teams would be looking for EFB, rather than AFB.

Russell Berry, your NBA President, and Tony Lorimer, the Waikato NBA branch Secretary, were in the Emergency Headquarters as observers. They contributed several suggestions as to how beekeepers could help in the headquarters side of the operation. Tony and Jane Lorimer also attended the final debriefing and again were able to make a valuable contribution.

Recently, there has been a change in government policy regarding OR, with policy makers saying that affected agricultural industries will be expected to contribute more to exotic disease and pest outbreak responses. With the Hamilton OR exercise, the beekeeping industry has once again demonstrated that they are already well down that track.

– Derek Bettsworth, *Bees OR Process Manager, WHANGAREI*; Cliff Van Eaton, *NBA AFB Control Programme Contract Manager, TAURANGA*

KOREAN IMPORTS...GOOD NEWS, BAD NEWS

In the July issue of the *Korean Monthly Report*, published by the New Zealand Embassy, Seoul, comes a report that Korea is finally opening up its market to foreign honey. Korea has for years had a closed market for honey and other agricultural products, although it is now taking steps to liberalise its trade in preparation for entry into the World Trade Organisation.

Under the country's Minimum Market Access quota system, 287 tonnes of honey will be able to be imported

by the National Livestock Cooperatives Federation and the Korea Tourist Supply Centre, although a 20% duty will be applied.

That's the good news. The bad news is that honey imported outside the Minimum Market Access will be charged a duty rate of 261.9%! The report goes on to say, however, that the low tariff rate quota amounts will be increased every year through to 2004, after which time only tariffs will apply.

We understand that no export certificate will be required for imports of this honey, provided the consignment meets the honey standards set by the Korean Food Code. Beekeepers should be aware that the maximum HMF level for honey sold in Korea is 40mg/kg, which is half the maximum level allowed in the Codex Alimentarius world honey standard (for an article on HMF and honey quality, see page 4 of this edition of *BeeFax*).

SNATCHING DEFEAT ...

At this year's NBA Conference, Ian Berry of Arataki Honey, Havelock North, read out a quote during debate on remits concerning the funding and reviews of the Honey Marketing Committee.

The quote was from Gil Simpson, the chief executive officer of the Christchurch-based Aoraki Corporation, and one of the country's leading computer company operators (he founded Cardinal Network, developed the LINC system used by many overseas companies, and recently established JADE, which specialises in the use of customer-friendly information kiosks).

The quote appeared in an article about Mr. Simpson in the July-August 1997 issue of *Aotearoa*, the Air New Zealand Link in-flight magazine. The quote is as follows:

"When I began in business one of the things I consciously prepared myself for was managing success. Managing failure is so easy -- it means not investing money, cutting back, closing down.

"I want to tell you something I heard the other day -- 'snatching defeat from the jaws of victory.' That is classic New Zealand.

"New Zealand society is very good at doing that to itself. It stops just as the trumpets are about to sound and liberty is at hand. We get a good idea, go for it, and then pull out at the last minute. We need to have the courage to finish things."

BREEDING FOR HYGIENIC BEHAVIOUR

Most New Zealand beekeepers are probably aware that selecting for hygienic behaviour is the most cost effective means of reducing bee brood diseases such as chalkbrood, sacbrood and American foulbrood. It is also a defence against pests like the varroa mite, and possibly other pathogens like nosema and viruses. Hygienic bees detect and remove diseased brood before the pathogen becomes infectious, and remove

mite-infested pupae, interrupting the reproductive cycle of the mite.

Selecting for hygienic behaviour can be as simple as choosing breeder queens whose colonies consistently show very low or zero levels of infection (especially sacbrood, chalkbrood and paralysis virus). If you want to be more scientific then you need to challenge select colonies with 50 x 50 mm squares of sealed pupae that have been freeze-killed.

The square of dead brood must go in the centre of a brood comb...and, yes, you do make a mess of a bunch of frames. But the benefits of finding good hygienic breeder queens are well worth a few frames. Hygienic queens are those whose bees remove all the freeze-killed brood within 48 hours over 2 trials.

Ben Oldroyd, at the University of Sydney, attempted to find out how widespread hygienic behaviour was in Australian bee stocks. He purchased 10 sister queens from each of 10 queen bee producers from NSW, South Australia, Victoria and Tasmania. The 10 lines included Italian, Caucasian and Carniolan strains, with the sister queens within each line open-mated.

Ben found that 80% of the colonies did not show hygienic behaviour when tested with freeze-killed brood on 3 separate occasions. Two of the 10 lines showed good hygienic behaviour and 2 colonies were very hygienic.

Oldroyd goes on to say, "As hygienic behaviour is recessive, it should be possible for breeders to produce hygienic queens for sale by selecting hygienic breeder queens and using them to produce both queens and drones and carrying out matings in an isolated area."

"Colonies comprised of 50% hygienic bees are disease resistant. Therefore, provided that at least 50% of the drones available for mating in queen production areas are hygienic, it should be possible for queen producers to provide commercial queens whose daughter workers will also be disease resistant."

This is in a controlled mating environment, but most beekeepers use queen cells in their apiaries, so even if the queens were from selected hygienic stock they probably would mate with unselected males produced from non-hygienic queens. In this situation, the question becomes, "Would we still get hygienic worker bees?"

In a word, yes. American researchers have found that hygienic queens raised from inseminated stock did in fact retain the hygienic trait when outcrossed with unselected males, and that this hygienic behaviour translated into increased production and less disease.

Spivak and Reuter (1997) carried out some field trials in Texas and Wisconsin during March 1996, where they set up 49 hives with selected hygienic queens that were open-mated and compared these to 46 colonies headed by unselected commercial queens. Both lots of queens were open-mated in the same location.

The scientists found that the hygienic colonies had significantly lower levels of chalkbrood, and produced



significantly more honey (41 kg/hive vs 30.4 kg/hive). The hygienic colonies also had significantly lower levels of varroa mites in 3 out of the 4 test apiaries. Frames of brood and bees, and temperament, were the same for both lines of queens.

What this means in practical terms is that all beekeepers should be using hygienic queens for queen cell production. The freeze-killed brood test is a bit time consuming, but it is currently the best test of hygienic behaviour we have.

However, a PhD student at the University of Sydney is currently attempting to genetically map the genes which control hygienic behaviour. If successful, scientists will be able to supply beekeepers with a biochemical test for hygienic behaviour. The tests are similar to those used in humans for diseases like cystic fibrosis or breast cancer.

Hopefully the tests will be cheap enough to screen a lot of potential breeder queens, as Oldroyd suggests only about 20% of the bee population would show some hygienic behaviour, and of this 20%, only a few colonies would show superior hygienic behaviour on all occasions.

References:

Oldroyd, B., 1997. Evaluation of Australian commercial honey bees for hygienic behaviour, a critical character for tolerance to chalkbrood. *Australasian Beekeeper* 98 (a):370, 372-374.

Spivak, M. and Reuter, G., 1997. Performance of hygienic colonies in a commercial apiary. *American Bee Journal* 137 (3):228.

- Murray Reid, AAO, HAMILTON

HEARD AT CONFERENCE

Over the years, we've enjoyed bringing readers "quotable quotes" from the NBA Conference. There's always a lot of wit, and often more than a little wisdom, in the speeches and debate. What follows are the quotes we collected at this year's conference in Nelson:

"As King Henry VIII said to his wives, I won't keep you long." -- *Deputy Mayor, Tasman District Council, at the beginning of his speech opening conference*

"While some may see the bee industry as small, your industry's contribution, both directly and indirectly to the economy, is very large." -- *John Luxton, Associate Minister of Agriculture*

"Bigger government doesn't bring a bigger economy, normally the opposite. Or perhaps put another way, we are better to have you building new beehives and putting bees in them than government building another beehive in Wellington and putting more politicians in it." -- *John Luxton, Associate Minister of Agriculture*

"I would prefer that the questions directed to the Minister end with a question mark, rather than an exclamation point." -- *Nick Wallingford, NBA President*

"I don't want to take money out of my pocket to fund clover weevil research. But I also don't want to end up, as a result of this pest, having no money in my pocket at all." -- *Peter Berry, Hawkes Bay*

The NBA President, in recognising Peter Bray, who wished to speak to a remit: "Mr. Berry...I mean Mr. Bray." Peter Bray, in reply: "Mr. Freud...I mean Mr. Floyd, might have something to say about that!"

"Does anyone know how to turn this mike on? (pause) I mean the microphone, not Michael Wraith!" -- *Bill Floyd*

"Someone has accused me of talking up the price of honey and giving beekeepers false expectations. That publicity resulted in \$4 million more for the beekeeping industry. So I guess I'd better apologise for that." -- *Bill Floyd*

"The most frustrating part of my research on honey is getting beekeepers to send me samples for free testing." -- *Dr. Peter Molan, as told by Bill Floyd*

Heard amongst the thank you's to the Nelson branch for hosting the conference... "Thanks for the break!" -- *Mike Stuckey, who ruptured his Achilles tendon doing a square dance at the conference dance*

"When I was President, and you were on Executive, you used to annoy the hell out of me sometimes. But you were usually right -- and that used to annoy the hell out of me even more!" -- *former NBA President Allen McCaw, in a speech of appreciation to out-going NBA President Nick Wallingford*

ROYAL JELLY DEVICES AND HUNGRY FORAGERS

I'm not one to gossip, but... you can be forgiven for wondering what's going on in the world of royal jelly production. If you read overseas beekeeping magazines, recently you will have seen full page ads, many in colour, for a revolutionary new system for producing royal jelly and/or queens. These units are being marketed by Apian Technology Ltd of Whenuapai. Meanwhile, a similar unit (EZI Queen and Royal Jelly Systems) is being marketed by Royal Jelly NZ Ltd and Ceracell Beekeeping Supplies and advertised in local magazines.

As it turns out, the units are the same and the two promotion names come about as a result of a split in the partnership that developed the product. Marketing politics aside, beekeepers have been asking -- do the units work? I haven't personally tested them, but some Waikato and Auckland beekeepers have been using them for over 2 seasons to produce queens and commercial quantities of royal jelly. The units are extremely well made by a Hamilton plastics engineer, and I see no reason why they won't work a treat.

Still on the subject of royal jelly, the distribution of royal jelly within a bee colony was discussed in the February 1993 issue of *Bee Culture*. I always thought that royal jelly was fed to queen larvae, to worker and drone larvae in a modified form, and to adult queen bees.



However, it seems that about half of the royal jelly produced by nurse worker bees is consumed by adult bees, including foragers.

Researchers injected nurse bees with a radioactive material that became incorporated in their brood food glands and the royal jelly that these glands produced. They then measured how this labelled royal jelly flowed around the colony. The results were surprising -- younger workers received larger amounts of jelly than older ones, but considerable amounts were also given to foragers. So, it looks like the workers maintain the protein balance in a colony by producing, distributing and eating royal jelly, as well as collecting and feeding on pollen.

- Murray Reid, AAO, HAMILTON

START UP/SHUT DOWN LIST

In February, I paid a visit to Peter and Ross Ward's honey house in Hawea Flat, in Central Otago, and among all the extraction and processing equipment I saw an idea so simple you'd wonder why every New Zealand honey house doesn't have one.

It's just a step-by-step list on how to start up the honey house in the morning, and shut it down at night. The list is encased in a laminated plastic sleeve and hung in a prominent location so that it is easy to access and read.

According to Peter, they decided to use the list because they employ a range of staff in the honey house, many of whom are at least initially unfamiliar with how all the machinery works together. Peter admits, though, that even after having worked in the plant for years, it still pays to check the list every now and then, just to make sure that all the jobs are being carried out correctly.

Starting up and shutting down machinery like heat exchangers, boilers and spin-float wax separators is a complex business, and Peter believes that giving staff written directions to follow (as opposed to easily forgotten verbal instructions) has paid dividends in less machinery breakdowns/repairs and a cleaner, tidier shed.

HONEY QUALITY AND HMF

Hydroxymethylfurfural (HMF), along with the enzymes amylase and invertase, naturally occur in honey. The levels of HMF and these enzymes are variable between honey floral types and are affected by environmental factors such as temperature. The levels of HMF and these enzymes in honey can be used as indicators of excessive heating of honey during processing--the presence of HMF increases, while the levels of amylase and invertase decrease.

Internationally, the HMF content of honey is used as the standard measure for the exposure of honey to heat during processing. Currently, the international standard (Codex Alimentarius) for the maximum content of HMF in honey is 80mg/kg.

From the beekeepers' perspective, how quickly does HMF accumulate in honey? This is dependant on several factors: the floral type, acidity of honey, heat of exposure, and duration of exposure to heat.

White et. al. (1964) subjected three honey samples to storage temperatures ranging from -20°C to 60°C, and then analysed them for HMF. To accumulate 40mg/kg of HMF at 20°C (ie., normal storage), it took approximately 800 days, whereas at normal hot room temperature of 48°C it took only 10 days. At 60°C it took only about 1 day. Interestingly, to accumulate 200mg/kg of HMF in the same samples it took 1100 days (at 20°C), 60 days (at 48°C), and 5 days (at 60°C).

Hadorn and Kovacs (1960) studied the increase of HMF in three 300kg drums of honey during normal liquefaction in a hot room at 48°C. The honey had reached 48°C after 24 hours, and after 120 hours the HMF levels in the three drums had increased from 12mg/kg to 22, 24, and 27mg/kg.

From these studies we can say that if honey is stored for a long period (years), or exposed to heat during processing, then consideration must be given to the likely increase in HMF from processing and/or storage.

HMF analysis can be carried out by several honey quality analysis labs in New Zealand, including MQM's Lynfield Food Services Centre (ph. 09-626-6026), and the Cawthron Institute (ph. 0800 809 898).

For further reading and the above references see White, J.W. (1978) *Advances in Food Research*. Vol. 24, Pages 285-375, Academic Press.

- Robert Rice, AAO, LINCOLN

POWERED BY HONEY

The Australian Honey Corporation is getting on the Sydney Olympics bandwagon in a print advertising campaign for its Capilano Honey brand. In the August 1997 Australian edition of *Inside Sport* magazine, they've got a full page ad, with the words "Powered by Honey", and a picture of Susie O'Neill, a gold medallist in swimming for Australia at the 1996 Atlanta Games. The ad quotes Susie as saying, "Being a success in swimming takes more than endless laps of the pool. My diet is important and I have to make sure I have the right fuel for my body. For instant energy you can't beat Capilano Honey. When I swim, I'm powered by honey - nature's perfect energy source." The Capilano ad also includes the logo of the Australian Institute of Sport.



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Mention of any product or service in this publication does not constitute endorsement, or preference over any other product or service not so mentioned.

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From the Colonies

Auckland Beekeepers Club

The club meets once a month, except for June which is considered a 'dead' month as far as beekeeping is concerned. We try and hold our meeting on the second Saturday of the month, starting at 12.30pm. Meeting or as some members call them, field days, usually last about two and a half to three hours, starting with an explanation of what is to be done to the hives for that particular month, followed by questions and answers, all very informal. In the meantime the billy has had a chance to come to boil, so tea and coffee are available for a small silver donation, then it's on with the hat and veil etc., and open one or two hives to begin the appropriate monthly chore. The Apiary Manager and his assistant always explain what is happening as they go along. Most new beekeepers wish to see the queen and she is always looked for. There is usually an opportunity for members to hold, and inspect at close quarters, several frames of eggs and brood.

The December meeting takes the form of our Xmas BBQ which is open to family members who might not otherwise wish to attend. February is extraction day (honey), and again all members are given the opportunity to take a turn at everything, as well as there being a demonstration of honey extraction without an extractor. In March we hold our annual honey show and the shield for the year's best beekeeper is awarded. As a matter of interest it has been held for the last three years by a lady beekeeper. July is our annual general meeting.

All our meetings, including our honey show and annual general meeting are held at Unitec, Carrington Road, Mt. Albert. We are fortunate to be located on Horticultural land right opposite the Horticultural Department Buildings. Gate 2 off the Carrington Road gives the best access.

The Horticultural Department run beekeeping courses every year beginning around July/August, and are advertised in the Club Journal. They run for five or six weeks, one evening a week plus two or three Saturdays in their own apiary. Brian Milne, MAF's Bee Advisory Officer takes the course, and the Club strongly recommends anyone aspiring to beekeeping to take the course. It is felt that the Unitec course and knowledge gleaned from some of the 'older' members of the Auckland Beekeeper's Club, compliment each other.

The annual subscription is \$20.00 which includes four issues a year of the Club Journal. The unitec Beekeeping course as well as correspondence courses are advertised in the journal. Also, members may advertise, free, anything relating to beekeeping.

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National Beekeepers Association of New Zealand Inc. Southern North Island

FIELD DAY

Date: Saturday, 27 September 1997

Time: 10.00am

Place: Waireka Honey Centre, Cnr State Highway 1 and Rongotea Road. Wet or fine. \$5.00 per MEMBER, \$10.00 per FAMILY — look for the signs.

AGENDA

- 10.00 REGISTRATION AND MORNING TEA
- 10.30 Welcome by Peter Ferris who will introduce Kevin and Marjorie Kibby and confirm the programme.
MORNING SESSION HAS PRACTICAL ASPECTS FOR ALL BEEKEEPERS.
- 10.40 Disease Recognition by James Driscoll MAF Qual.
Hobbyists - Groups to look into nuc and hives. (30 mins)
Commercial - Truck Loading Code talk by Kevin
Competition between Hobbyist Clubs
- 12.20 LUNCH (Sausage Sizzle \$1.00 each).
- 1.00 Co-operating to Compete (A way for small business to Export) - Leo Austin Associates Lower Hutt. (Leo will meet with interested parties after afternoon teas).
- 1.40 Chainsaw Safety - Steve Williams, OSH Palmerston North.
- 2.20 Shaking Bees for live Export - James Ward, Kintail Honey Dannevirke. (What he requires from us).
- 3.00 Afternoon Tea

If wet, the venue is a hall 700 metres south of the Honey Centre. The morning programme will be slightly altered.

Bring gear along for display, demonstration or sale. Don't forget your protective gear, and lunch. Hobby Groups a smoker, fuel and frame cleaning gear. Tea and coffee provided.

Because Kevin's is situated along a main road, we ask you all to park in the side street to the north of the centre.

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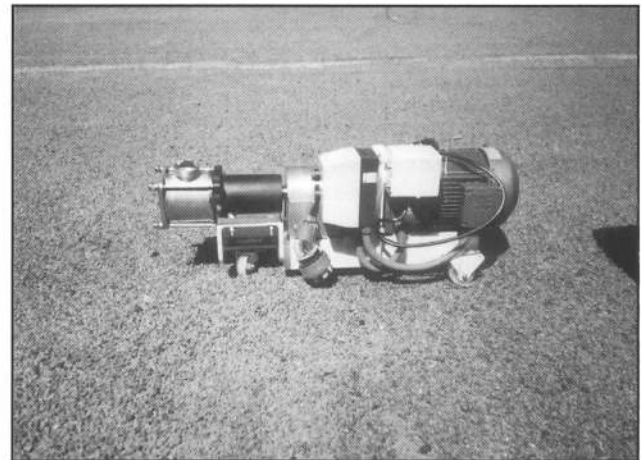
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Funding for business growth

By Iona Boase, Crop & Food Research Journalist

Delivering technology to the rural and horticultural sectors has not always been straightforward but this is changing. The Foundation for Research, Science and Technology (the Government agency which administers the science vote) is managing a scheme called Technology New Zealand in which the government supports the development of, or the transfer of, technology that will enhance a business's capabilities. Technology New Zealand was established to strengthen technology growth in New Zealand business and to encourage partnerships between technology providers, like Crop & Food Research, and businesses. The aim is to strengthen the position of New Zealand businesses in the domestic and international marketplace. The value of projects funded each year has grown from \$2 million in 1990 to \$13 million last year.

Technology New Zealand operates the Technology for Business Growth (TBG) programme which funds up to 50% of the research or technology transfer costs. The business is expected to provide the remainder. The split is worked out on a full cost basis, so the business contribution is often made up of labour, materials and cash.

TBG supports both the development of technology by industry and the transfer of technologies to industry. Applications are categorised by size. Small project applications are processed within one month. (This fast track processing of smaller applications is only available to small and medium sized business.) Large projects are processed within two months.

Small projects include technical assessments (limited to \$25,000 support from TBG) and other projects where support from TBG is less than \$75,000 and where the company works with an independent research agency to complete its project. Standard TBG projects include all other development and technology transfer work.

TBG grants are made to applicants who can show that a successful technical outcome of the project should result in commercial success.

A recent addition to the portfolio of Technology New Zealand programmes is TechLink.

It is designed to assist businesses to evaluate international know-how and to develop and implement research and development of technology strategies for

business networks.

TechLink will fund up to 50% of approved projects.

Crop & Food Research staff are involved in several TBG projects and our business managers have extensive experience in assisting clients to prepare applications for funds. They are happy to work with businesses seeking TBG grants. Their contact details are provided below.

We respect the commercial sensitivity of our TBG projects, particularly those involving technology development and will feature them when appropriate.

Contacts:

Corporate Business Manager, Graham Smellie, Crop & Food Research, Private Bag 4005, Levin. Tel: (06) 368-7059. Fax: (06) 367-5656.

Food Business Manager, Dr Chris Downs, Crop & Food Research, Private Bag 11030, Palmerston North. Tel: (06) 356-8300, Fax: (06) 351-7050.

Arable Business Manager, Alistair Clough, Crop & Food Research, Private Bag 4704, Christchurch. Ph: (03) 325-6400 Fax: (03) 325-2074.



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Syd Line 1903-1996

Sefton (Syd) Line was born in Dunedin in 1903 and grew up in the South Island, moving from Dunedin to Lumsden in Southland, then to Sumner in Christchurch. He attended Waitaki Boys' High School. At some stage during Syd's later teen years, his parents moved to Wellington, which then became his base as a young man.

Syd trained first as a cabinet maker, passing his mastership with a Wellington firm, before the 1930's depression forced him, like many others, to look for alternative means of support.

He subsequently bought a small block of land in Leamington, near Cambridge and became an apiarist.

He also had another small apiary at Karapiro prior to the building of the Karapiro Dam. The site is now under water.

After WW2 was declared, Syd volunteered for military service but, just as he was to embark for overseas service, he was rejected by an administration that looked to the post-war requirements of the country, with apiary experience being preceived as being of greater importance than military service.

Marrying in 1939, Syd brought his new wife to Leamington where they began to raise a family.

When his wife developed cancer, Syd worked on the construction of Karapiro Dam to help with the financial situation. His wife died in 1947, leaving him with three youngsters, the oldest only six.



Syd Line

A vacancy arose for the position of Apiary Inspector with the Department of Agriculture in Invercargill and, in 1948, Syd took the position. His children and his mother followed in the middle of an Invercargill winter, to a house warmed by a welcoming neighbour.

During his years based in Invercargill, Syd would travel around Southland, often with one or more of his children, visiting various isolated beekeepers throughout the district. Many of these people became friends, often providing accommodation for Syd on his travels. Names that come to mind are Mr and Mrs Tsukigawa of Balclutha, the Hurst family of Clinton, and Jack McFadyen, though there were many others. Radio talks, and articles in the Journal of Agriculture were regular commitments.

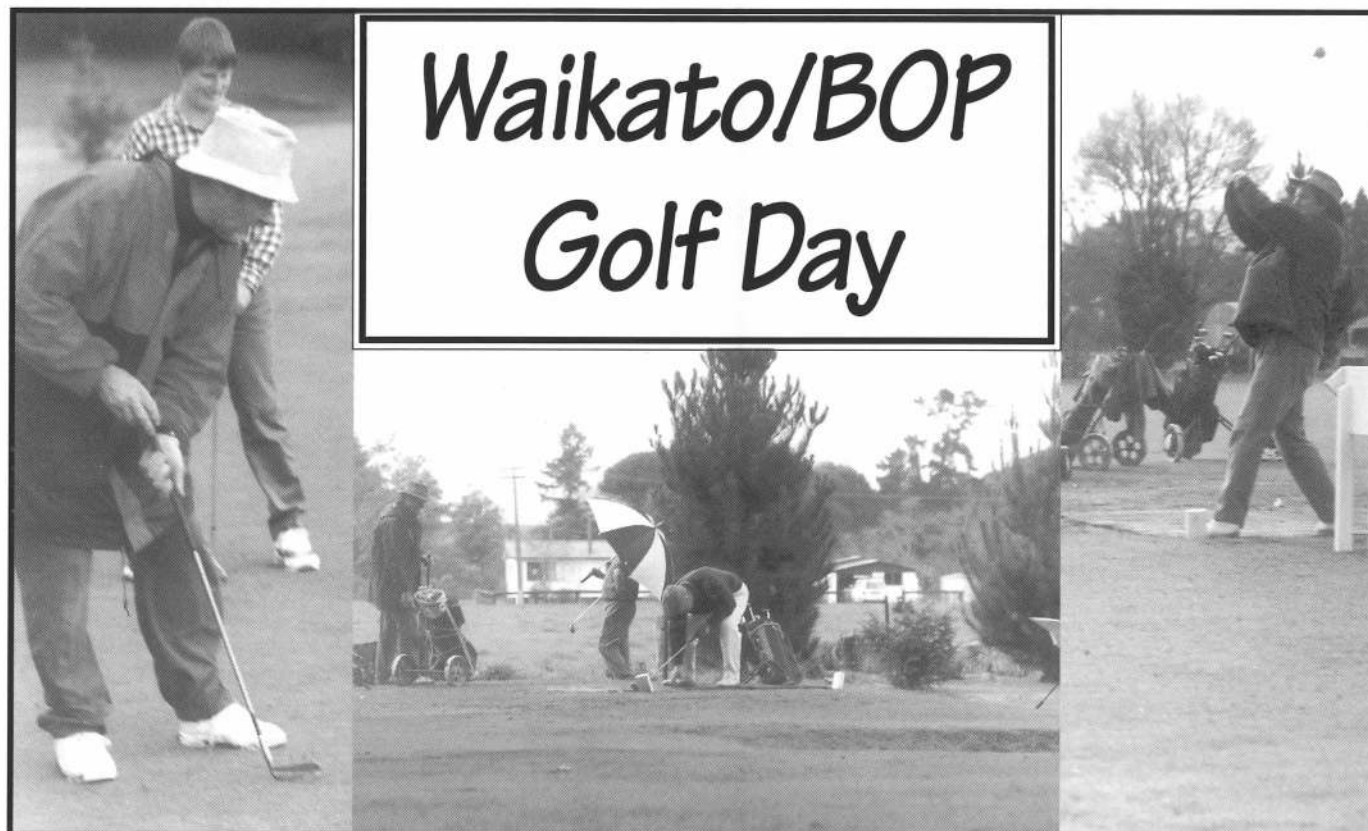
There was also the Apiary stand with information and a glass-encased honey comb with bees that Syd would put on display at the annual A & P Shows. A second marriage during these years was not a success.

About 1955, Syd transferred to Hastings as the Apiary Inspector for the Hawke's Bay area, and he continued in that position till his retirement about 1963. Again, in Hawke's Bay, Syd would travel around visiting various beekeepers, giving advice, destroying hives infected with foulbrood or removing rogue swarms that settled in unwanted places, such as the chapel roof at Te Aute College.

Despite the constraints imposed by his work, Syd continued to enjoy working with wood and made many beautifully shaped pieces for friends and family. One of his more notable pieces was an alter table for a Wellington church. He was also an enthusiastic photographer and used the opportunities provided by his travels to take thousands of colour slides, particularly of country scenery and architecturally interesting buildings, especially churches. Another of his habits was to plant trees as he travelled around the countryside.

Syd enjoyed the weather of Hawke's Bay and lived there until his health deteriorated to the extent that he was moved nearer to family members in the Wellington area. Syd died in Upper Hutt on 21 March 1996.

Thanks to Ivan Dickinson.



But soft ! What light through yonder window breaks?

It is the dawn and I wish I was in bed

For those of you who are envious of the extra cash flow and profit that those of us who do large amounts of pollination work earn, I let the title of this column speak for itself. I should note that I'm talking about not yet being in bed, not having just got up. To me the anti social and unnatural hours make jobs like sorting combs or wiring frames look like a holiday camp compared to pollination. Mind you it's an awful lot easier nowadays than it used to be.

I didn't do a huge amount of kiwifruit pollination around the Te Puke area during the heyday of the kiwifruit industry and the nature of the work tends to mean that your brain is either in neutral or in a very low gear that tends to slip cogs a lot, but one night stands out in my memory. This night was at the height of the kiwifruit pollination madness, both in terms of total numbers of hives going in and the numbers going in on this particular night. Back then everything was rosy in the kiwifruit garden and money in vast quantities being the object of the exercise, kiwifruit growers were putting in every hive that they could lay their hands on. I was staying at Waiotapu and during the afternoon we sorted out hives down, I think it was, Ohaaki Road, (it's funny but I can't remember the day of the week half of the time, but work a yard of bees once, then drive past fifteen years later and I'll turn around and say, hey! there used to be a yard of bees in there behind that hedge - drives Glenda crazy). Then after a good feed (anyone staying with Russell and Annette who goes home lighter than they arrived is dying of something), we set off and loaded up our freshly sorted and hence somewhat grubby charges and drove of through Rotorua past the redwoods and over some bush clad hills. The drive was remarkable for two things, the number of morons throwing lit fags out their windows and the hold-up caused by the bush fire no doubt caused by the aforementioned morons. I know it's hard to imagine but the Bay of Plenty has had dry springs in the admittedly somewhat ancient past. On arrival at Te Puke we started driving around delivering hives. Unlike Hawke's Bay a lot of the country was rolling which didn't help at all, kiwifruit orchards are also very tight, designed for maximum production, not ease of access. Often the orchardist would drive the truck while we unloaded a hive each time he stopped. On this night we were lucky and didn't get knocked off the back of the truck, but there are a lot of low branches and wires in a kiwifruit orchard and a lot of orchardists who don't realise that they are there even when asked about the hazards. Good grief, as I write this more of the horrors of kiwifruit pollination have just come back to me. I've just remembered what we were driving, a petrol Dyna, it's a small truck, under two tonne from memory, and its main feature of note is its cab which is designed to fit a small five foot four Japanese person. After one minute you feel like a large Kiwi shoved into a small Japanese truck cab, after one hour the pain is well set in, after a whole night it helps to keep you awake but that is all that can be said for it.

At the time it was quite an eye opener for a young Hawkes Bay lad to see all the flash houses with half mile long cobblestone driveways and three car garages, all filled with cars and boats that were definitely not Mark Two Zephyrs and old plywood dinghies. Nowadays we tend to think of kiwifruit orchardists as poor people who work for the bank until prematurely retired but back then the place reeked of money. Still I'm getting off the point again, must be a streak of jealousy. After putting down our first load we had to collect a second and third load from dump sites where several hundred hives were stacked two or three high from previous nights, or brought in earlier that night by the bigger trucks. Bees are at their best to shift just before dark, if picked up then they remain calm and inside the hives most of the time unless they have been unduly harassed, come 9 or 10 o'clock and bees, especially ones that have been shifted around earlier come out and hang all over the hive waiting to get their own back on the people who have been harassing

them, everything in the way of veils, gloves etc. must be perfect and after you have put the hives down you have to pick the bees off your overalls and veils because they crawl everywhere and they only have one thing on their minds. As we were driving along the road to where we were to drop off our last load, we spotted a hive lying on its side on the grass verge. Despite the late hour we stopped on the way back to do the decent thing, only to find that it was one of our hives. After a bit of looking around we found some more downed but definitely not out for the count hives and a pickled orchardist literally dropping hives all over his, and for all he was aware of half the neighbours properties, as well. He had obviously put the time spent waiting for his load to arrive to good purpose and was in no fit condition to drive a pedal car let alone a forklift around a hilly orchard with hives on the back. By the time we had finished placing that lot the night was well advanced indeed and it was hard to keep awake even with the cramped driving position forced on us by a xenophobic Japanese masochist and part-time vehicle designer. Fortunately every now and then a bee that we'd missed would wake us up in a most salutary manner and as we finally drove back past the redwoods in Rotorua the sun came up on another day of extra cash flow and profit.

Peter Berry

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Field excursion to National Beekeepers' Association Conference at Nelson

We left Telford Rural Polytechnic for the National Beekeepers' Association Conference on July 18 1997. On the way we stopped at NZ Beeswax Supplies Ltd. I was really impressed with the way the wax was purified. Beeswax, purchased from beekeepers, was melted down to remove any impurities and moisture that might be present. The wax was first melted in a tank and transferred via a pipe into a second tank where it was strained and left to settle and harden. From there the wax was melted into another tank and the dye added. It was amazing to see all the different kinds of coloured foundation which were produced.

As for myself, an international student, it was a great experience for me to visit a place where the actual processing of the wax foundation is undertaken. It gave me a wider understanding of how wax is processed into foundation sheets that we use in our hives.

We left NZ Beeswax and visited Airborne Honey Packers. While we were there we looked through their factory. We went into their laboratory where they test honey samples under the microscope to identify how much pollen is present. After that we went through the creaming processing room and the packaging room. We also had the chance to taste some of the varietal honey samples produced such as manuka, kamahi, white clover and honeydew.

On Saturday we visited Ecroyd Beekeeping Supplies Ltd in Christchurch. We went through their warehouse where they display beekeeping equipment. I was delighted to visit Ecroyd Beekeeping Supplies because while working in the Solomon Islands Honey Co-operative in 1989, we usually ordered our beekeeping equipment from Ecroyds in New Zealand.

We spent the weekend in Christchurch and had a look around the city. On Sunday morning we left for Nelson, it was a long drive and we arrived there in the evening.

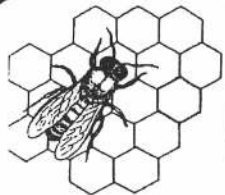
At the Conference

On Monday morning we drove to the Rutherford Hotel and set up our stand for the duration of the Conference. About 17 groups took part in the trade display with a range of different kinds of products, such as honey, pollen, royal jelly and bee equipment such as hive boxes, frames and beeswax foundation.

During the Conference, beekeepers throughout New Zealand come together to share their ideas and thoughts with other beekeepers. Both hobbyist and commercial beekeepers gathered together at the Nelson Conference. The National Beekeepers' Association Conference is held once a year, either in the North or South Island. This year's conference was hosted by the Nelson Branch in the South Island. About 300 participants attended the Conference, some beekeepers also brought their families.

The Conference was supported and sponsored by the following organisations:

Tepak Industries Ltd, Nuon Industries, Ceracell Beekeeping Supplies, Comvita NZ, Ecroyd Beekeeping Supplies Ltd, Anatoki Apiaries, Robert Harris, Arnotts Biscuits, Telford Rural Polytechnic, Easi-bind Systems NZ Ltd, Whitcoulls Office Products, Century Systems, Ebos Group, Tourism Nelson, Glendenning Shortbread, Ministry of Agriculture Quality Management Ltd, Cawthron Institute, NZ Sugar Co, Pierco Australasia, NZ Beeswax Supplies Ltd, BeeLine Supplies Ltd, Royal Jelly NZ Ltd, Mahurangi Hiveware and McKay Refined Sugar NZ Ltd.



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Monday: July 21 1997

Many topics were covered during the day including: Queen Bee Genetic Improvement, Queen Bee Producers Association, Honey Packers, Honey Exporters, Comb Honey Association and the Pollination Association. During the discussion many beekeepers expressed their concerns from the above associations to improve their services in the beekeeping industry in New Zealand. After discussion some of these associations elected new office bearers and committee members.

Tuesday: July 22 1997

The official opening of the Conference was on Tuesday, with a welcome speech by the Mayor of Nelson, Hon Philip Woolaston and the chairman Mr R. Bensemman. Following the official opening officers from MAF gave a talk on **exotic diseases and pests of honey-bees**. This was an overview of the current state of knowledge of European foulbrood, Varroa mite, Tropilaelaps mite, Acarine and Africanised honey-bees. The discussion focused mainly on the history of honey-bee diseases and how they spread throughout the world. The MAF officers emphasised very strongly all the measures required to control some of these exotic diseases which are not yet present in New Zealand. Many questions were asked from the beekeepers regarding these dreadful diseases which affect honey-bees.

The next presentation, on the Biosecurity Act, related to exotic honey-bee pests and diseases. This was followed by a group discussion on industry responses by all participants in the seminar. Each group reported back on their views of the steps which the Biosecurity Act could implement to safeguard these exotic bee diseases from entering the country.

Some other topics covered during the day included honey marketing issues, honey standards, the relationship between producers and brands, New Zealand honey food and bee product ingredient service and presentations by Conference sponsors. During the presentation each group explained what roll they played in the beekeeping industry.

The honey testing competition was one of the highlights of the evening, delegates were put into teams for the testing of honey beers, honey mead, brought by the beekeepers, with prizes awarded.

Wednesday: July 23 1997

On Wednesday the President's speech was delivered, this was followed by an official address by the Hon John Luxton Associate Minister of Agriculture and Fisheries. The Minister was impressed with the beekeeping industry and he encouraged all beekeepers to work together for the benefit of the industry in this country. He said that beekeeping has contributed to the economy in producing honey and honey products.

The President highlighted some of the Past-Presidents of the National Beekeepers' Association Executive Council and gave recognition to life members. The Conference photo was taken outside Rutherford Hotel to remember the 1997 National Beekeepers' Association Conference participants at Nelson. One session that I really enjoyed was the discussion on the remits. It was interesting to hear views from representatives of different brands, voicing their concerns about the future of the bee industry. Some of the concerns included the importance of maintaining surveillance and prevention of entry of exotic diseases, the importation of honey and honey products from overseas, MAF development of border control and training of quarantine officers in the identification of bees and bee products.

Thursday: July 24 1997

Our tutor, Dr David Woodward, gave a brief report about Telford Rural Polytechnic. The opportunities which Telford offers in apiculture to train those who would like to be engaged in the beekeeping industry, were outlined. The facilities which are available at Telford for students to undertake their training was described. He emphasised that Telford provides an excellent opportunity for land based skills for both national and international students.

On the way back to Balclutha we visited the NZ Honey Producers Co-operative. We went through the creaming and packaging room. It was interesting to see different varieties of honey which were produced. We also looked through their warehouse where they stack honey drums. We were each presented with a pot of honey as a sample.

Attending the Conference helped me to understand how the beekeeping industry here in New Zealand operates, also it gave me an opportunity to meet other beekeepers. I learnt a lot during the Conference and considered it worthwhile attending.

I would like to thank the New Zealand Beekeepers' Association and the Honey Industry Trust for giving me the opportunity to participate in the Conference at Nelson and to Ivan Dickinson many thanks for your direction. Finally to the Principal and staff of Telford Rural Polytechnic for providing us with transport to and from the Conference.

*Timothy Bryan Samani,
Telford Apiculture Student 1997, (Solomon Islands)*

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Sting in the tale for bees

It was only supposed to kill pests, but genetically engineering rape seed could turn out to be a very mixed blessing

Plants that have been genetically engineered to ward off destructive insects could also harm beneficial ones such as bees, shortening their lives and impairing their ability to recognise flower smells, researchers have found.

Minh-Ha Pham-Delegue of the laboratory of Comparative Invertebrate Neurobiology in Bures-sur-Yvette, France, and colleagues in Britain and Belgium have investigated the effects of engineered rape seed on pollinating insects. The rape seed contains genes, found naturally in some plants, that produce protease inhibitors - proteins that interfere with enzymes in the intestinal tracts of insects.

The idea is that beetles and other pests feeding on the leaves and stalks of the engineered rape seed should develop a lethal case of indigestion. But bees would also be exposed to the destructive proteins, through nectar and pollen. "Rape seed is particularly important to bees," says Pham-Delegue.

"The plants do not depend strictly on bees to pollinate them, but it is the first plant to bloom in large quantities in the spring. Bees harvest a lot of nectar from them."

The researchers found no protease inhibitors in the pollen or nectar of the rape seed. But they suspect that because the proteins are expressed in the leaves and stem of the plant throughout its life, they could be present in the pollen and nectar at levels too low to be detected. If so, they could eventually become concentrated in honey stored back at the hive, which the bees feed on.

To find out how bees might be affected by high levels of protease inhibitors in stored nectar, the researchers exposed captive bees to sugar solutions containing up to 100 times the concentration of proteins found in the tissues of the engineered rape seed. Bees fed on this solution for 3 months died up to 15 days earlier than those fed on normal sugar. After 15 days, the bees had trouble learning to distinguish between the smells of flowers.

The researchers are now studying whether the toxic proteins do build up in hives of bees feeding on the concentrated sugar solutions and on the transgenic plants themselves, and if so, how quickly they accumulate. They point out that the engineered rape seed that eventually appears in farmers' fields could secrete higher levels of protease inhibitors than the plants they tested. Their work is part of a three-year project begun last October to evaluate the impact of transgenic plants on pollinating insects.

Acknowledgement New Scientist

Thanks to Brian Alexander.

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Zucchini Relish

- 4 cups chopped zucchini
- 3 cups chopped carrots
- 4½ cups chopped onion
- 1½ cups chopped pepper
- ¼ cup salt
- ⅓ cup salt
- 2¼ cups vinegar
- ⅓ cup honey
- 1 tsp celery seed
- ¾ tsp powdered mustard
- 1 tsp turmeric
- 1 tsp curry powder

Combine chopped vegetables and sprinkle with salt. Let stand overnight in the refrigerator. Drain and rise with cold water. Mix together the remaining ingredients. Add the zucchini mixture. Simmer for 20 minutes until the vegetables are just tender, but still crisp. Pack into hot sterilized jars to within ½-inch from tops. Complete seals. Process for 20 minutes in a boiling-water bath.
Yield: 5 pints

Apple Chutney

- 12 apples
- 6 green tomatoes
- 4 white onions, small
- 3 green peppers
- 1 cup raisins
- 2 tbsps mustard seed
- 2 cups honey
- 4 cups vinegar
- 2 tsps salt
- 2 tbsps ground ginger
- 2 tsps ground allspice
- 1 clove garlic, crushed

Cube the apples. Chop the tomatoes, onion and peppers. Mix together with the remaining ingredients and simmer it all until thick. Stir often as it begins to thicken. Spoon into hot sterilized jars to within ¼-inch from tops. Complete seals. Process for 10 minutes in a boiling-water bath.
Yield: 6 pints

Pickled Peaches, Pears or Apricots

- 12 pounds peaches, pears, or apricots
- 1 quart vinegar
- 6 cups honey
- 1 tbsp ground cloves
- 1 small piece ginger root
- 5 sticks cinnamon

Peel the peaches or pears, apricots may be used unpeeled. If they are to remain exposed to the air for any length of time, soak in a mixture of 2 tablespoons salt and 2 tablespoons vinegar to 1 gallon of water. Do not leave fruit in the mixture for longer than 20 minutes, and rise well before packing. Make a syrup of the vinegar and honey. Tie the cloves and the ginger root in a square of cheesecloth; add to the syrup. The cinnamon sticks can be placed directly in the syrup. Heat to a boil. Add the fruit and cook until it is tender. Remove from heat, cover, and let stand overnight. Next morning, remove the spices and pack into sterilized jars. Fill with syrup to within ½-inch from the tops of jars. Complete seals. Process for 20 minutes in a boiling-water bath.
Yield: 6 quarts

Sweet Mixed Pickles

- 2 quarts cubed cucumbers
- 2 quarts tiny pickling onions, peeled
- 1 large head cauliflower, cut into florets
- 2 large sweet red peppers, seeded and chopped
- 8 cups vinegar

- 2½ cups honey
- 1 cup salt
- ½ tsp turmeric
- 2 tbsps mixed pickling spices
- 4 inches of stick cinnamon
- 12 whole cloves
- 2 tsps mustard seed

Combine the vegetables, sprinkle with salt, cover with cold water, and let stand overnight. Drain, rinse in fresh water and drain again. Combine the vinegar, honey and turmeric in a large kettle. Tie the spices in a square of cheesecloth and add them to the vinegar mixture. Place over medium heat and bring to a boil. Cook for 10 minutes. Add well-drained vegetables, bring to a boil. Cook for 5 minutes. Pack into hot sterilized jars to within ½-inch from the tops of jars. Complete seals. Process for 10 minutes in a boiling-water bath.
Yield: 6 pints

Zucchini Bread-and-Butter Pickles

- 2 quarts apple cider vinegar
- 2 cups honey
- 6 tbsps salt
- 4 tsps celery seed
- 4 tsps dill seed
- 2 tsps ground mustard
- 8 quarts fresh zucchini, sliced
- 2 quarts onion, sliced

Bring vinegar, honey and spices to a boil. Pour over the zucchini and onions. Let stand for 2 hours. Heat mixture to a boil and cook for 3 minutes. They will get mushy if cooked longer. Pack into hot sterilized jars. Insert a knife down the edge of the jars to remove any air bubbles. Complete seals. Process for 15 minutes in a boiling-water bath.
Yield: 6 quarts

Sweet Gherkins

- 30 small gherkins
- 2 cups lime
- 2 gallons water
- 2 quarts vinegar
- 4 cups honey
- 2 tsps whole cloves
- 1 tsp salt

Dissolve the lime in water. Pour over the gherkins to cover. Let stand for 24 hours and rinse well, then let stand for 3 hours in clean water. Drain. Mix the vinegar, honey, cloves and salt and heat just enough to dissolve the honey. Pour the mixture over the drained gherkins and let them stand overnight. Next morning, bring to a boil and cook for 30-35 minutes. Pack the gherkins into hot sterilized jars to within ½-inch from the tops of jars. Pour in the brine to just cover them. Complete seals. Process for 5 minutes in a boiling-water bath.
Yield: 10 pints

Pickled Cucumber Chips

- 4 quarts medium-sized cucumbers, sliced
- 1½ cups onions, sliced
- 2 large cloves garlic
- ⅓ cup salt
- 2 quarts ice cubes
- 2 cups honey
- 1½ tsps turmeric
- 1½ tsps celery seed
- 2 tbsps mustard seed
- 3 cups vinegar

Wash cucumbers, scrubbing lightly with a vegetable brush. Drain well. Slice into 1-inch slices; discard ends. Add sliced onions and garlic to the cucumbers in a large bowl or crock, add salt and mix thoroughly. Cover with ice and let stand for 3 hours. Drain, removing garlic cloves. Combine spices and vinegar and heat just to a boil. Add honey, cucumbers and onion slices and heat for 5 minutes. Pack into hot sterilized jars to within ½-inch from the tops of jars. Complete seals. Process for 5 minutes in a boiling-water bath.
Yield: 8 pints

Acknowledgement American Bee Journal

Breeders to go native in search for a busier bee

British bee breeders are seeking to restore the racial purity of the native honey bee after more than a century of "mongrelisation" caused by imports of foreign strains. Those behind the ambitious project believe years of cross-breeding have created bad tempered, sting-happy bees that are becoming less productive because they are ill adapted to Britain's unpredictable climate.

This year the cool and rainy summer has kept most bees in their hives when they should have been out foraging for nectar, and honey output is forecast to be no more than about half what would be expected in a good season.

Devotees of the native dark European honey bee, *Apis mellifera mellifera*, also known as the British black, say it is more docile to handle and performs much better in bad weather than the hybrids of foreign origin which most beekeepers now stock. Tom Robinson, of the Bee Improvement and Bee Breeders Association, says the native bee may also be better equipped to cope with the deadly varroa mite which reached Britain from the Continent five years ago and has wiped out up to 70% of hives in some southern counties of England.

"We are finding that some of the native bees groom each other and remove the mite and kill it," Mr Robinson said. "We are trying to locate and identify the main colonies of surviving pure-bred natives with the aim of selecting and breeding from them."

Until about the middle of the last century the dark European honey bee was the only kind found in Britain. It had adapted to local conditions after moving north



The native British black: More docile to handle, performs better in bad weather and even grooms its friends.

from the Mediterranean at the end of the last Ice Age.

Imports of foreign bees began in 1859 and increased hugely after the First World War to restock hives devastated by Isle of Wight disease, an infection of the respiratory tract.

Although the vast majority of bees reared by Britain's estimated 35,000 beekeepers are now mongrels, colonies of native or near-native bees still exist in Ireland and, the association believes, in isolated areas of northern England and Wales. "We are inviting beekeepers to send us specimens from these colonies," Mr Robinson said. "The bees will then be passed on to biologists at the University of York for morphometric measurement."

The technique of morphometry involves detailed measurement of bodily features such as tongue and abdominal hair length and the vein pattern in the wings. Scientists know exactly what to look for because of the existence in museums of specimens of "uncontaminated" pre-1859 British bees, including one found during

excavation of a 10th century Viking settlement in York.

Alan Johnson, national chairman of the British Beekeepers Association, thinks the idea of restoring the native bee is a good one in theory, but doubts its practicability. "I fear man's interference has already gone too far to be reversed," he said. "To have any impact the project would require huge co-operation between beekeepers, many of whom swear by cross-breeding. Put ten beekeepers in a room and you get ten different viewpoints."

Queen bees mate on the wing with any drones that happen to be in the vicinity, so even if beekeepers restocked with pure-bred natives they would find it difficult to prevent interbreeding with other strains of bees, except in remote areas miles from other hives.

Artificial insemination is possible, but it is a difficult technique requiring equipment costing more than £1,000 and beyond the means and capabilities of all but a handful and highly dedicated beekeepers.

Other techniques include "time isolation" in which the queen and chosen drones are released for mating at a time of day when other drones do not normally fly. But for this to be effective all or most of the beekeepers in an area would have to agree to use such methods. Britain may have to accept that its bees are as irrevocably racially mixed as its people.

Acknowledgement *The Times*

Thanks to John and Helen Wright, South Auckland.



1997 Conference Delegates listening to remits.

Marlborough's 'Superb Herb' wins gold with a saucy combination

Garlic and honey, and garlic, kiwifruit and honey are the bases of two new sauce-marinades form the Wairau Valley Garlic Company.

The new products created a buzz with NZ Honey Industry and won the producer, the Wairau Valley Garlic Company, a Gold Medal for Honey Innovation in the Honey Industry's 1997 National Innovation Competition. The sauces won the Foods and Beverages category of the competition.

The Marlborough-based company already has an international



Thelma Sowman and Honey Gold Medal
Honey and garlic have proved a saucy, gold-medal winning combination.

reputation for its fresh garlic and shallot bulbs; which are exported to Australia and the Pacific. The development of garlic-based manufactured products was a logical extension to our business says Thelma Sowman, Company Director and International Marketing Manager.

"Our fresh product is sold directly into key retail channels, and those channels were asking us for a quality sauce-marinade that would capitalise on our fresh Marlborough produce reputation", says Thelma Sowman.



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Please direct all enquiries to our Supply Manager — Lawrence Edwards

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25 YEARS IN NEW ZEALAND**

"We produced two basic sauces, Original, and Hot 'n Spicy. They are successful in their own right," says Thelma Sowman, "but we wanted to increase the uniqueness and so we looked at developing garlic and honey combinations."

"Research from the Honey Industry showed that using honey instead of sugar could add mouthfeel and flavour intensity; and that the inherent 'goodness' of honey would attract more consumers. Although honey is more expensive than refined sugar the difference to the retail shelf price is not seen as a negative: the honey added value more than cost."

"As a result we produced two new sauce-marinades: a Honey and Garlic; and a Kiwifruit and Garlic with Honey."

"The results have been exceptional. We didn't expect the Kiwifruit variant to really sell until summer but it's already moving ... and fast!"

"The Wairau Valley Garlic Sauces are now established throughout most of New Zealand, we're taking them to Sydney next month, our UK agent is looking at establishing the product with a national chain there, and we've been approached by a Japanese retail group to supply direct to them," says Thelma Sowman. "The New Zealand 'Clean 'n Green' theme, coupled with the positive perspective people have, internationally, for honey and garlic, is working very well for us," she adds.

Marlborough-based Wairau Valley Garlic Company's Thelma Sowman and her gold medal winning sauces. Strong export inquiries for innovation by the New Zealand Honey Industry have followed introduction of the company's sauces onto the market this year.



First Episode of the Lad

John G McKenzie

In a leaky old hut, with a creaky door,
with beetles in my bed and fleas galore,
I sit all alone and think of my dismal plight,
nothing but work, from early morn' 'til night.

I just get to bed, to snatch a bit of sleep,
when in through the window, a face does peep.

Come on Jack, it's time you were awake,
the breakfast's ready, manuka honey and carrot-seed cake.

No tea to drink or cocoa in this hungry place,
but you're allowed to have water, from the race.

You're allowed five minutes, to swallow your snack,
then up from the table, get the supers on Jack.

Get the truck first, put juice in the tank,
then cock up a wheel with a 10 foot plank.

Block the front wheels, then put on the juice,
then swing the handle 10 minutes to get things loose.

Another 10 minutes, and you get a bit of a sputter,
but that's all you get, and old Simp does mutter.

He says give me the handle, you work the spark,
he twisted and turned, at last she gave a bark.

Another 10 minutes, then from amid the smoke and flame,
the wizen old face of old Simpson came.

After adjusting the coils and also the bands,
and pouring in oil and skinning your hands,
there's some flat tyres to pump up tight,
the mixture to set and then she's about right.

How much longer I'll last, is hard to say,
I feel as though I won't hang out another day.

I used to be small, but now I'm tiny.
My jaws are all hollow, the top of my head shiny.

In fact I'm so light, I'm under four stone six,
and when a nor-west blows, I have to carry bricks.

One in each pocket, or I'd blow right away
and Simp wouldn't find me, for many a day.

How I wish I was back where I long to be,
Back at old Arno and sweet old Lizzie.

Some day, if I live long enough, I may be free
to go away home, away from misery
so I'll just keep working, all through the day
and in time old Simp will let me away.

He might give me 6d, if I work very well,
but I am not too sure, you never can tell.

So very very empty, my tummy does feel,
to find time to write this, I've missed a meal,
and I've used my last penny, to buy a stamp,
so I've got no money now, like a tramp,
but I take it all as a joke, then it's not as bad
and it takes a lot to hurt this same old lad.

Today's T.I.P.

I have nothing against grey
hair, I just wish they were
the ones that fell out.

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Mobile: 025-240-2171

IMPORTANT DATES FOR 1997

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

EXECUTIVE MEETING DATES

DECEMBER - 2nd and 3rd - CHRISTCHURCH

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

COMING EVENTS...

NELSON BEEKEEPERS CLUB SPRING '97

WE'VE GOT SOMETHING FOR EVERYONE IN OUR SPRING PROGRAMME - SO GET THOSE DIARIES OUT FOLKS.

AGM: On July 29th was well attended (minutes available on request) and most of the discussion was centred on the following programme.

1. QUEEN RAISING DEMONSTRATION: With Ron Stratford. WHERE: Ron's place, 40 Ellis St, Brightwater. WHEN: 10am, Saturday, 20th September. Afterwards we can repair to Snowden's Bush for a family picnic.
2. DOUBLE QUEENING: It's easy. Come and see how. WHERE: Nigel's Apiary, Brook Gardens, next to the OK Corral, Brook Valley. WHEN: 10.30am, Saturday, 4th October.
3. BEGINNER'S FIELD DAY: MAF Apiary Inspector Dave Gruebar, will give a disease presentation and go through a hive. Focused mainly on the beginner but there may be items of interest for everyone. WHERE: Industrial Therapy Unit, Ngawhātu, Pete and Kevin's place. WHEN: 10am, Saturday, 18th October. Tea and coffee available - bring a picnic lunch.

NB, WITH THE EXCEPTION OF NO. 3 THESE EVENTS ARE WEATHER PERMITTING.

WAX DIPPER: Club member Rene Muller has kindly consented to the club using his paraffin wax dipper to preserve hive parts. It has been out of use for ages so it may need some attention before it is ready for group use. The aim is to have it operative by October. Any member who has gear they want dipped please contact Nigel.

SUBS DUE FOR THOSE WHO PAID IN '96: Please pay treasurer Pete Rees at Industrial Therapy Unit, Ngawhātu, or at one of the Field Days by 4th October. Amount \$10. CLUB CONTACT: Pete and Kevin, Ngawhātu, 546-1422. Nigel Costley, 13 Brook St, 548-3121 or ph/fax 548-3101.

CANTERBURY BEEKEEPERS CLUB NOTICE OF MEETINGS

SEPTEMBER EVENING MEETING. DATE: Tuesday, 30 September 1997. TIME: 7.30pm sharp. VENUE: Farmers Alliance Building, West St, Ashburton.

OCTOBER EVENING MEETING. DATE: Tuesday, 28 October 1997. TIME: 7.30pm sharp. VENUE: Burnside Cricket Club, Avonhead Rd, Christchurch.

NOVEMBER FIELD DAY. DATE: Sunday, 9 November 1997. VENUE: Tom Penrose's place, North Loburn, (see map and advertisement in October issue).

AUCKLAND BEEKEEPERS CLUB INC. — SECRETARY - Terry Buckley Ph: (09) 415-9853

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

AUCKLAND BRANCH
Call: Jim (09) 238-7464

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

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

CANTERBURY BRANCH
Meets the last Tuesday of every month.
February to October.
Field Day November.
Contact: Trevor Corbett
Phone: (03) 314-6836

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: (03) 342-9415

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.

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.

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

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

NELSON BRANCH
Phone: Michael
(03) 528-6010

NELSON BEEKEEPERS CLUB
Phone: (03) 546-1422

OTAGO BRANCH
Phone Bill (03) 485-9268

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

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Saturday, 20th September.
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SOUTHERN NORTH ISLAND BRANCH
Phone: (04) Frank 478-3367

SOUTHLAND BRANCH
Contact Don Stedman,
Ph/Fax: (03) 218-6182

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

WAIKATO BRANCH
Call Tony (07) 856-9625

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

WELLINGTON BEEKEEPERS ASSOCIATION
Meets every second Monday of the month (except January) in Johnsonville. All welcome.
Contact: Shauna Tate, 6 Martin Street, Porirua East. Saturday, 27th September - Field Day