The New Zealand BeeKeeper

1985

Spring

The New Zealand BeeKeeper

OFFICIAL PUBLICATION OF THE NATIONAL BEEKEEPERS' ASSOCIATION OF NEW ZEALAND INCORPORATED

CIRCULATION 1,450

To Members of The National Beekeepers' Association of NZ Inc who own more than 50 hives each and so are legally subject to the annual hive levy. THESE HIVE LEVY PAYERS OWN APPROXIMATELY 87% OF ALL BEEHIVES IN NEW ZEALAND.

To Beekeepers with less than 50 hives who subscribe to the journal at $15.00 a year which also includes membership of the National Beekeepers' Association of NZ Inc.

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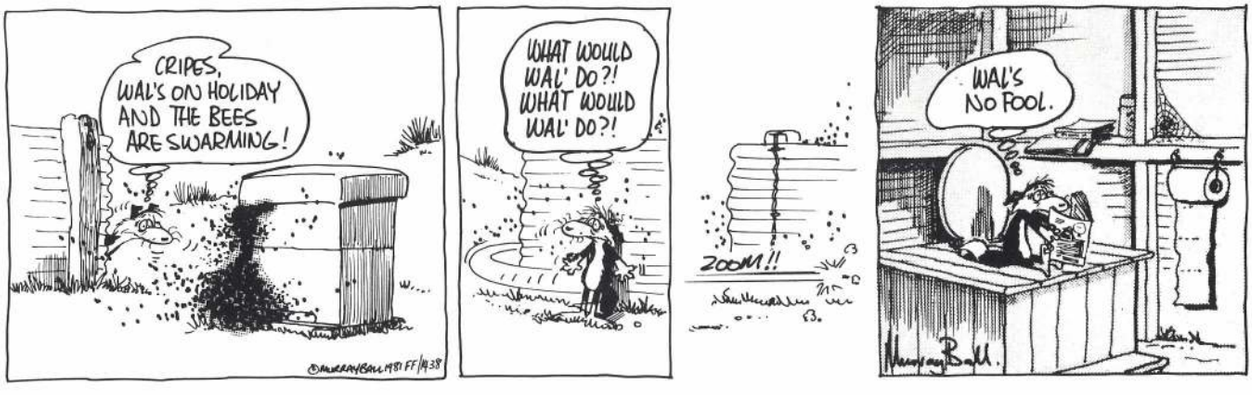

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Let's not be shortsighted

Conferences are like icebergs: eight-ninths lie beneath the surface. Unfortunately, however, some people fail to see them that way. In their eyes the value of a conference resides solely in the one ninth above the surface. To them it is the visual only that matters. If the remits are contentious, meaty, then it portends a good conference. If the discussion of these remits leaves a deal of blood on the carpet, then they consider it has been an excellent conference, and we can all return home satisfied that time and money have been well spent. If not, they think, why bother with a conference at all? We might just as well choose a central site and have an annual booze-up.

A most short-sighted view to say the least. The value in any conference must be contained in the people attending it. Man does not live by bread alone, he needs human contact, and in the case of a conference he needs that contact not only during the formal sessions but the informal; certainly sometimes with glass in hand, although that glass may frequently contain nothing more potent than lemonade.

This is not to denigrate the formal side of a conference and, in the case of Conference '85, the accompanying MAF Workshop. As a democratic body the NBA demands the formality of remits, that these remits be thoroughly discussed, and that decisions should stem from those discussions. And certainly no one would belittle the value of the MAF Workshop: an essential vehicle for such strong messages as that delivered by Don Gibbons on the need for every beekeeper to constantly watch for the accidental introduction of an exotic disease.

But there is more to a conference than that. Many minor matters need discussing: such as petty misunderstandings and irritations, frequently hardly worth mentioning, but which rankle and destroy understanding and cooperation. At a conference these matters can be discussed man to man (with or without a glass) in a relaxed atmosphere.

During informal meetings we can let our hair down and discover, sometimes with surprise, that the whole thing arose from one perhaps not quite understanding the point of another. These informal sessions also give Joe Blow the chance to realise the kind of man John Doe is, and why he thinks the way he does. They allow each to adjust to the other's personality and open the way to communication that might otherwise be stilted, even stillborn, through a misunderstanding.

A beekeeping conference is also a gathering of the clans. Beekeeping is a small and scattered industry which may frequently be seen more as an extended family, certainly much more so than many larger industries. Consider the warmth and enthusiasm of the welcome extended by the West Coast Branch to the rest. Clearly the Branch saw it as a privilege, not a chore, to welcome us all. Their welcome was that normally extended to relatives. This relationship is a strength not found too frequently. It is an old-fashioned value, sadly missing from much of modern life, and should be jealously guarded and nurtured. Certainly it cannot be replaced by an annual booze-up at some central point.

Michael Burgess

To the Editor

Dear Sir,

Mr Karl Showler, of the International Bee Research Association, suggested I write to you for help.

I have been an enthusiastic hobby beekeeper for five years. I recently heard a talk by someone who had worked with an apiarist bee farming on a large scale in New Zealand. I had no chance to question the speaker on details after the lecture.

I would like to stay as a working and paying guest with various beekeepers in New Zealand from mid-January to mid-February 1986. I believe this is a very busy time of the year for beekeepers in New Zealand. I am fit and not afraid of work. Could you put me in touch with any apiarists who could offer me bed and board during this time?

C.A. Parrott
6 Pady Court
Cirencester
Glos. GL 7 1YY
England.

Dear Sir,

After having completed my master thesis dealing with pollen supplements in 1980 I got a degree in zootechnics at The Agricultural Academy in Poznan, Poland, where I specialised in apiculture. Since then I have been conducting a little apiary of my own and working for the local Apicultural Cooperative as a beekeeping instructor. Now I intend to occupy myself in artificial insemination.

I wish to get in touch with anyone interested in apiculture who would like to exchange personal experiences of it or publish interesting articles on apiculture, bee-diseases, breeding methods, trade problems etc. in the Polish journal "Pszczelarstwo". Anyone interested please write to me.

Apart from this I should like to ask you to send me the addresses of factories producing beekeeping equipment, the addresses of apicultural schools in your country, and apicultural journals enclosing additional information about which of them have practical and which scientific character.

Piotr Jurga,
ul. S1owianska 22/9
60-651 Poznan
Poland

Dear Sir,

I support your editorial in the Autumn 1985 issue all the way. As a bee keeper since before WWII and a returned soldier I should like GP Elwell-Sutton to know that if it was not for the Americans, New Zealand and Australia would now be under the control of Japan and Germany. I should also like GP Elwell-Sutton to know that the idea of a nuclear-free Pacific is a big farce. New Zealand could not defend itself against the big build-up of Russian warships and nuclear subs without the aid of the United States Navy. I support America all the way over this stupid banning of their warships in this country, and if America does get tough on the importation of New Zealand goods the Labour Government will be to blame. After all, the United States is overstocked with food as it is. Finally I should ask GP Elwell-Sutton if he has seen the huge American war cemetery in Hawaii filled with men who gave their lives to save New Zealand.

"A Returned Soldier"

(Editor's Note: Abridged in the interests of space.)

Dear Sir,

Business works essentially on amoral principles. If there is a deal to be made, the businessmen will trade. Politics rarely affect trade in the way the editor suggests. A recent TV documentary illustrates my point. The Pepsi/Coca Cola soft-drink rivalry showed how during WWII soft drink brewed to the American formula was sold in Nazi Germany. We could go back as far as the American Revolution to show how an "independent" America, which had just won a war of independence continued to trade extensively with Britain. America today is one of the major exporters of grain to Soviet Russia. New Zealand in the 1980's has made no stand for or against Iraq or Iran, yet we are trying very hard to sell our sheep meat to Iran to the point of killing according to their Islamic religious conventions. That war is a religious war — so do we back Iran? Of course not. Politics does not enter into the question. Yes, our politicians did once say: Where Britain stands, we stand," just as there used to be chivalrous stories about knights. Tilting at the windmill comes early in Cervantes book. Don Quixote's madness serves to illustrate how the old chivalric literature has become dated, outmoded.

In trade and commerce it is value for money that counts. The Americans will continue to buy our queens so long as New Zealand remains relatively disease-free. Whether our lamb and honey continue to appear in British shops depends on our lobbying with the EEC. There will always be a percentage of any population who will buy according to its beliefs or ethnic background. But for most it is value for money that dictates rather than political ideals.

Alan Pearson

This correspondence is now closed.

Editor

Dear Sir,

The other day I completed a questionnaire concerning the "Beekeeper". Since then I have thought of couple of suggestions.

To the Editor (cont)

(1) I think that most readers would be interested in a long-range weather forecast. Such things are available, though they may cost money, but even so I think it would be worth a lot to the industry to have available what information there is concerning next season's weather.

(2) Could you get somebody who's business it is to know, to write an article or such, on appropriate exercises, techniques, etc., that beekeepers could use to help prevent bad backs through lifting boxes or hives?

Chris Ogilvie

The Meteorological Service tells me that, unfortunately, it cannot forecast that far ahead. The Accident Compensation Commission is sending some material on lifting techniques that might make an article for the next issue.

Editor

Dear Sir,

I am into beekeeping in a small way. I can hardly claim to be an authority on the subject and yet perhaps in my own small way I have something to offer. Before beekeepers, as such, came on the scene, I would claim that the bees managed their affairs very well. Their designer must have known a thing or two. In the light of this would it not be foolish for us to ignore their basic methods of survival? To use wooden boxes and moveable frames is necessary for the control of disease etc; but is structured on the bees nature, "fair enough", but could we lay claim to wisdom by introducing them to refined sugar? In defence you might well say that it is necessary in order to secure a commercial crop and that honey is, after all, only sugar.

This could only be viewed as gross ignorance, for honey by analysis contains many wonderful properties. By taking honey from the bees and substituting sugar aren't we introducing the grave risk of undermining their strength and ability to resist disease?

Let me paint a canvas of how it may have been in those early days. With no veiled and scowling monsters in sight, they would have set up home mostly in hollow tree trunks or suitable cavities which would provide them with space, warmth, and shelter. Their colonies would not have been arranged a few feet apart and drift of disease would have been minimal. If the colony experienced problems they would have tried to overcome them. Failing this they would have filled up with honey and swarmed to set up home somewhere else. When a suitable site had been found the honey would have been consumed in the making of new combs and the disease would have been purged from them. How else would they have survived with no inspectors to order their destruction?

Is it not incumbent on us to look again at the ways things may have been and to try to overcome disease in a wholesome way without resort to fire? Would not amateur bee enthusiasts more readily seek advice and register their hives? We surely ;need each others' support whether we have one hive or a thousand! We could take example from the Langstroths' and Dadant's of former times who went in from square one. Perhaps the rawness of their situation made it easier for them to keep their feet on the ground.

If we attend to the quality of life (and bees surely have life) will not all good things follow?

Ron Shrubshall

Dear Sir,

Our daughter Dianna, who is a beekeeper, is at present overseas through the International Agricultural Exchange Association. She has just finished her work in Sweden, and was able to attend an international conference of beekeepers there and met Brother Adam and his assistant. Whilst she is in the United Kingdom she will be taking up the offer from Brother Adam to visit Buckfast Abbey and view their work.

Dianna trained under one of the South Island's eminent beekeepers, Ivan Dickinson, and she has certainly put the training from Ivan to good use overseas. Not only did she learn a very good standard of beekeeping from Ivan, she also learnt how to apply herself to work hard and to deal with difficult situations, like Sweden in minus thirty odd degrees during the winter: not beekeeping just trying to stay warm.

When she did her training with Ivan Dickinson a female beekeeper was almost unheard of, particularly in the South Island. I can always recall Dianna being really mad when going to Beekeepers' Association meetings and hearing jibes about: "Has Ivan got himself a secretary now?"

Dianna has now finished her commitment in North America and Sweden and hopefully will be travelling in the next six to twelve months through various countries in Europe and the Mediterranian. I have provided her with a list of various research contacts in the universities. I am very hopeful that she will bring home some more information about beekeeping, particularly if she manages to get down into Italy and make contact with my research colleagues.

Ernest New

Controlling Nosema Levels in Queen Bees in mailing cages

by Andrew Matheson, AAO, MAF, Nelson

(This article begins a regular column by MAF officers, summarising recent research which is of interest and use to beekeepers. Andrew Matheson is writing the first four articles.)

Mated queens are sometimes superseded soon after being introduced to colonies. This loss is a significant cost in many requeening programmes, but there is a simple way of reducing it.

Queen bees infected with *Nosema apis* at introduction are usually superseded. *Nosema* levels in caged queens can be reduced by feeding them fumagillin: this will increase the chances of successful introduction.

Fumagillin must be fed in sugar syrup — mixing it with water is not very useful, as the attendants don't take it up very readily.

In an experiment to test the effectiveness of fumagillin in syrup, a US Dept of Agriculture scientist fed queen bees with about 100,000 *Nosema* spores. After a week back in the hive the queens were caged with six attendants and stored for another week in an incubator. Half of them were fed fumagillin in syrup, while the others were fed straight syrup.

The results:

Queens not fed fumagillin — average of 18 million spores per queen.

Queens fed fumagillin — no spores detectable.

The syrup was 1:1 by weight, with fumagillin added at the rate of 100 mg active ingredient per 3.8 litres of syrup. That's one quarter of a small (0.5g) bottle of Fumidil-B per 4.8 litres of syrup, or the whole bottle per 19 litres.

There are two other main ways of reducing *Nosema* levels in caged queens, but both are used by the person who rears and cages them.

Firstly, *Nosema* infection in queens can be prevented by feeding fumagillin in sugar syrup to bees in mating nuclei. This ensures that the queens have low or nil *Nosema* levels when they are caged, but is not much use if uninfected queens are caged with workers that are infected.

Experiments have shown that healthy queens caged with workers infected with *Nosema* soon become infected themselves. If all the attendants have *Nosema*, 50% of the queens become infected after 12 days in a cage; and 30% of queens if only half the attendants are infected.

If the attendants are *Nosema*-free, the queen stays free too. Attendants should be taken from hives prepared specifically, with a comb replacement programme and fumagillin feeding to minimise *Nosema* levels.

If you're rearing your own mated queens, there's a three-point programme for reducing supersedure rates by controlling *Nosema* levels:

- Feed fumagillin to mating nucs, and cull old combs too
- Do the same to colonies which supply escort bees
- Feed fumagillin in syrup to caged queens if there's been a delay between caging and introduction.

If you're buying mated queens there's still one thing you can do:

- Feed fumagillin in syrup to queens when they arrive, even if you are going to introduce them soon afterwards.

Reference

Lehnert, T. 1977. *Nosema* control in queens in mailing cages.
Journal of Apicultural Research 16:(3): 163-164

Fumagillin Mixture

Use 1:1 syrup

Add:

- 100mg active ingredient per 3.8 litres of syrup

OR

- One quarter of a small bottle (0.5g) of Fumidil-B per 4.8 litres of syrup

OR

- A whole small bottle (0.5g) of Fumidil-B per 19 litres of syrup.

COMMENT

FROM DON GIBBONS

Panic stations! All the writing I have done has been on inspiration, but now I've been and gone and went and dunnit. I've accepted an invitation from our editor to do the "Comment" column for the spring edition. What do I do about it? He kindly gave me a couple of weeks to have it prepared!

I could talk about the yards of rain we've had in this area, but who cares except us and those poor devils down south who've had none at all. But now, as I drive along in my wife's car, is this some sort of inspiration? My vision is almost totally wiped out by that stuff that pours off the back of stock trucks. The wipers can't cope. Someone should do something about it. Why don't they? I pity you guys with rust-easy cars like most on our NZ roads. Cockies can't put it in the rivers, but these guys can really throw it around.

Well, having safely negotiated the road to Whangarei yet again I have arrived home after a meeting with Denis Anderson. Who is he? Well might you ask. I am astounded. How could anyone in NZ find a guy like Denis Anderson in Aussie? First, he can eat a steak the size of a double blanket, and then pinch chips off someone else's plate whilst eyeing my fillet. Then he goes to our meeting and puts up with a lot of discussion that must have been very boring for him. It was at that stage that we began to realise what a great asset he will be to us (quite apart from consuming our surplus beef). Yes, our very own bee pathologist. Let's hope he doesn't retrace his footsteps along the path back to Canberra in too big a hurry.

He told us stories about various bee diseases: fungal, bacterial, and viral, complete with photographs, and what was more we could even understand him.

He told us about future methods of virus controls in bees that sounded like something from a science fiction magazine.

His speciality is "Virileogy" (my word), and he talks about an RNA virus which has been identified by its "Aunty body" in rabbits' blood, having the doors on its host closed by jumping in some "jeans" that have been tampered with. Anyway, the outcome is that the honey bee is resistant to that particular virus after this operation. **See** I **do** understand!

Congratulations to the people concerned in bringing such a valuable guy into NZ. (NB: His map of NZ looks remarkably like a sketch of Australia and Tasmania).

Remember John Smith's trip to Poland? One of his most important messages after artificial insemination was how they planted trees for bees over a period of years. The combined result was that the national crop had increased sixfold. This biological control over gorse thing should be making us put more and more effort into planting for our own bees. More available nectar and pollen might just show how well bred our bees really are. Are you doing your bit?

Finally, I have been involved in beekeeping longer than anyone under 30 can remember, and there is one thing above all that bowls me everytime it occurs. We are supposed to be intelligent people, and not a few beekeepers believing themselves to be good businessmen. So how is it then that beekeepers can go through year after year working their way through bad seasons hardly able to make ends meet. Then, when a good season does arrive it seems to be the signal to start a price war, and we see honey for sale both privately and in stores at prices of 10 years ago. I could suggest a way of improving this situation but it would require everyone' cooperation. Surely this is one question that should be discussed by honey producers and buyers at Conference and an answer found before it spreads into other branches of our industry.

I wonder how many beekeepers find themselves just as poor after a good season as before it? I'm sure the bottom line of our new system of industry planning is all about improving the beekeepers' — your — lot, and basically it arrived with a do-it-yourself kit. So come on beekeepers, let's see you do something about it.

It has been my aim to be constructive in my comments. If you feel I have not been, then write to the editor about it. Our magazine is only as good as its contributors. Let's face it, its all part of your do-it-yourself kit and it also shows that you care.

Beekeeping monitoring — Part I

by Trevor G. Bryant, AAO, MAF, Tauranga

What is Monitoring?

Beekeeping industry monitoring is the gathering, collation, and compiling of financial and physical data from participating beekeepers by MAF Advisory Services Division apiary advisers.

Monitoring Objectives

The primary objective of the beekeeping monitoring scheme is to provide a regular description and evaluation of the financial and physical situation facing beekeepers in each of the apiary districts. At the national level this information will be used by those who make policy decisions which may/will affect beekeeping.

Considerable importance is attached to ASD's farm and horticulture monitoring reports by politicians and officials, from the Prime Minister's Department, Treasury, the Rural Banking & Finance Corporation, and producer boards.

In 1983 advisers in Tauranga and Gore involved in monitoring were able to assist the industry by providing data to support the industry case for exemption from the price freeze regulations and assistance for relief after a crop failure. In both instances hard facts and data were available to help pinpoint the industry's needs and requirements so necessary for ensuring the right decisions were made.

At the regional level monitoring information can be used by advisers as a guide to budget preparation as it provides typical financial and production indices. By identifying significant regional trends and problems monitoring will also aid in the preparation of advisory work plans and alert local NBA branches to concerns which may affect individual members or the local industry, enabling steps to be taken which may overcome problems before they eventuate.

For the individual beekeeper the monitoring system will provide assistance in cash budgeting and budget updates during the year. This will help ensure that financial (particularly expenditure) decisions made are based on an accurate knowledge of the annual cash situation facing the beekeeper.

Beekeeping monitoring provides beekeepers and advisers with the opportunity to influence industry policy by ensuring that the NBA Executive and desk-bound policy makers in Wellington receive an accurate picture of the current situation in the beekeeping industry.

Beekeeping Monitoring Method

Ideally each apiary adviser will monitor four-six beekeepers in his region — from the established producer group and developing beekeepers. Because of the many production variables, honey, pollination, queen rearing, the producer/packer, the bulk producer, the cut comb producer, exporter/local packer, initially it is proposed to concentrate on the honey producer with district variations: viz. Tauranga will include pollination.

Annual cash forecast budgets will be prepared in consultation with participating beekeepers in August and these will be revised in March and August. Actual figures (taken from accounts/cash books where possible) together with the first forecasts for the next year will be required the following August.

From the monitored beekeepers a 'consensus' budget representative of each beekeeping operation in the two categories and a summary of important developments, trends, and problems within the industry will be prepared for each region.

Individual budgets of participating beekeepers **will not** be sent to Wellington, nor will they be identified; information will be treated in strictest confidence.

After each budget preparation and revision regional reports will be collated and a national report compiled in consultation with a regional advisor (economics). This will be sent to apiary staff for approval prior to being sent to ASD's Chief Advisory Officer (Economics) for inclusion in the National Monitoring Report. It will then be released to the various groups mentioned who are involved with horticulture, agriculture, and beekeeping policy.

To date beekeepers in the Gore, Tauranga, and Waikato apiary districts are participating in the scheme. MAF would like to thank these beekeepers for participating. To those beekeepers in other regions who do decide to participate, consult your resident apiary adviser; we realise that without your co-operation beekeeping monitoring could not operate and take this opportunity to thank you, should you participate.

Conference '85

The President's Report

My second term as President has proved to be interesting, enjoyable, satisfying and a lot of work. Interesting, because of the new ground we have covered, enjoyable, because of the people I have met and worked with, and satisfying because of what we have accomplished.

Once again I would like to give special thanks to all those who have helped with the work load. To my wife Pat, the rest of the family and the staff of Arataki who had to look after our family and business while I have been attending to NBA matters. To Steuart Goodman, Olive Hebron, and the other staff of the Pork Industry Board. To Vice-President Allen McCaw and the other four members of the Executive. To Elisabeth and Michael Burgess; to Murray Reid and the other apicultural advisory officers; to Pat Clinch and the team from Wallaceville; to the many other people from the MAF and the DSIR and the Agricultural Quarantine Service; to the members of the branches and to the many others who have helped — Thank you.

The Honey Crop

After below-average honey crops for several years that for the 1984-85 season has been an improvement in many parts of New Zealand. Earlier indications suggested we were heading for a 10,000-tonne crop, but some areas reported a poor finish so it is probably lower than this. I am very concerned at the lack of up-to-date information on the crop available to the NBA. "Better Marketing" is one of our responsibilities, but we are not able to advise on marketing strategies unless we have up-to-date estimates of what honey is available for sale. I suggest we address this problem through our Industry Plan. A monthly report from branches on honey crops, stocks, and prices may be an answer.

Honey Marketing

During the past few years rising costs have not been matched by increases in the price of honey. The 20% devaluation helped with our export prices, but beekeepers are finding that the price at which honey can be sold is not related to its production costs. The same applies to other agricultural and horticultural products although we do have the advantage of being able to store our honey for long periods at comparatively low rates. However, high interest is having a marked effect on the cost of storing honey. To keep a stable honey market in New Zealand we need to export sufficient to ensure the local market is not oversupplied while being careful not to over-export and leave the New Zealand market short. I am also concerned that the NBA does not have up-to-

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Conference '85
President's Report (cont)

date figures on the amount of honey being exported and suggest we must remedy this as soon as possible.

Cost Savings

While beekeepers can do little about cost increases they must still keep a close watch on them. The NBA has helped here with the deal of industrial raw sugar which means that beekeepers can buy sugar about 10% cheaper than last year in spite of the recent increase. Members will have noticed the Conference expenses this year were down $9 thanks to the efforts of the West Coast Branch. Many members are buying low-cost, used 200-litre drums for holding their honey crop and others are taking advantage of the competition which exists in the transport and packaging industries to negotiate price reductions. The old saying "a dollar saved is a dollar earned" is very relevant today and it also helps keep honey prices competitive with other spreads.

Importation of Honey to New Zealand

Concern has been expressed that the recent removal of honey from import licencing control could result in imports of foreign honey into New Zealand. There have been some import licences for honey advertised for tender in recent years but virtually no honey has been imported because of the agricultural quarantine restrictions. The NBA was asked for its views before the removal of import control and we expressed strong opposition to the move. Unfortunately our opposition did not prevent the removal of import controls but for as long as New Zealand remains free from EFB I see no possibility of foreign honey being imported. There is in effect a virtual ban on importing bees, bee products, or used bee equipment into New Zealand because of the risk of importing exotic bee diseases which could have a devastating effect not only on our beekeeping industry but on horticultural and agricultural crops which depend on honeybees for pollination.

Pollination by Honey Bees

The number of hives used for kiwifruit pollination continues to grow rapidly and the income provided by pollination is becoming increasingly important to beekeepers. There are plenty of hives available to meet all pollination requirements and probably always will be provided returns are satisfactory to beekeepers, and provided disease doesn't become a problem with orchard hives. Kiwifruit is not the only crop needing pollination however, and I thought some figures from Mr John Paynter, Director of the Apple and Pear Board could be of interest. Production of apples in New Zealand this year was 14.3 million carton equivalents. By 1990 this will probably rise to 25 million and this could double again to 50 million by the year 2000. Apart from the large growth taking place in Hawke's Bay and Nelson we are also seeing a very keen interest in pipfruit plantings in South Auckland, Waikato, Gisborne, Wanganui, and Canterbury. In Canterbury, for example, where production is currently around 300,000 cartons a year, there are already enough trees in the ground to produce four million cartons by the early 1990's. To top off these figures, stone fruit production in New Zealand is forecast to treble in the next five years. This adds up to a lot more pollination work for our bees.

Promotion

At present honey is being promoted heavily. Supermarket specials, often at low prices, are continually bringing honey before the public. Recently five different TV ads have featured or mentioned honey. Several firms have advertised New Zealand honey in publications to overseas buyers, and Trade and Industries have actively investigated possible overseas markets. The NBA has a policy of gradually building up a supply of reasonably-priced promotion material available to members through branches. Uncertainty about the availability of trust fund money has resulted in the supply of these materials being slower than many would have liked, but from now on we expect faster progress in this area. The West Coast branch had a sales table at Conference with the various promotion materials and publications available from the NBA.

Industry Trust Funds

These were established on 1 July 1984 and the three trustees, David Kay, Russell Berry, and Ivan Dickinson, recently held a meeting at which some trust money was allocated to projects which will benefit the industry. The main allocation was $25,000 for Dr Denis Anderson's salary and expenses during the second year of his appointment as bee pathologist at the DSIR, Mt Albert. The accounts for the trust funds as at 31 December 1984 show a total of $838,717. These two trust accounts should be of great benefit to our industry in the future.

The Industry Plan

This has proved a very worthwhile exercise and I have high hopes it will make a significant contribution to the future planning and efficiency of our industry and the NBA. Allen McCaw, who has handled much of the work associated with the industry plan has suggested we need an extra Executive meeting in May of each year. This sounds like a good idea as it will give us more time for industry planning before conference.

Beekeeper Education, Agriculture Quarantine, and the NZ Beekeeper

These are other important matters to which the executive have devoted much time this year. Agriculture Quarantine was discussed at the Industry Planning Workshop and we had reports on Beekeeper Education and the NZ Beekeeper.

The Future

Our motto "Better Beekeeping — Better Marketing" is what we must all strive for. That means more honey and beeswax production per hive at the lowest cost per kilogram; more hives put to pollinating the expanding horticultural crops; more queen and package-bee exports; more diversification wherever profitable markets can be found for such things as pollen, propolis, and royal jelly; more emphasis on achieving the maximum profits possible from each beehive, or to put it another way, producing the maximum return for capital invested.

Finally I suggest that the greatest single influence on the profitability of the beekeeping industry in this country is the ability of those within the industry. That is what Conference is all about — talking with each other and working together.

Ian Berry

Conference '85

Librarian's Report

"Do people make use of the Library?" and "Does the job take a lot of your time?" are some of the questions put to me from time to time.

And indeed what would be the purpose of having and expanding a collection of bee-books and other material if it was for the sake of keeping it in the safety of a dark cupboard?

I took out some figures to satisfy the questioners and also myself. The following is from the past 12 months:

In all 161 books, 187 (mainly) overseas magazines, and 18 lots of course notes went into the mail to 45 different borrowers. As for the time factor, others would surely be more efficient as too often I become absorbed in something that has to be parcelled up, and there go the hours.

It was decided in August 1984 to transfer $350 from the cheque account to a POSB investment account for obvious reasons. Mr McCaw and myself are the trustees.

About $160 has been spent buying new books. Others came to the Library as review copies. Mr Jack Glynn donated some of his own books. The Nelson Branch made a gift of $10.

The fairly healthy state of the Library fund is mainly due to the fact that about $260 was transferred from a special account held in Timaru. Also the insurance premium was paid by the General Secretary. Thanks to all who have donated in some way or another to our collection or fund, and to Messrs Goodman and Burgess for passing on magazines and books.

The space allotted in the Beekeeper to Library news is much appreciated both by me and some readers judging by requests received shortly after a new issue of our magazine appears.

Loan fees of 30 cents per book are chickenfeed if compared with the amount involved in buying something new or even with postage for a decent-sized parcel. However, we can probably hold it at this level for another year.

As expected the initial rush for catalogues has eased and our supply will last for a good while. It is up to users to keep their copies updated.

I hope our library may continue to play its role as a source of information and education within our industry.

John Heineman
Honorary Librarian

Conference '85

How the Editor functions

by Michael Burgess

During Conference I discovered that some beekeepers were not quite sure how the editor fitted into the general scheme of things. "How independent are you?" — "Who says what goes into the magazine?" — "How do you chose the subject for the editorial?" — "Can we have a say about what goes into the NZ Beekeeper; if so, how do we go about it?" These were typical questions, so I decided that an article about an editor's role, and how he (or she) puts a magazine together would not go amiss.

In general the editor has the final say about what goes into a magazine, but unless he owns the magazine himself he is not independent. The publishers of the magazine — the owners (in our case the NBA) — naturally lay down some guidelines they expect the editor to adhere to. And rightly so. The publishers of a prohibitionist magazine would hardly welcome an article extolling the food value of a glass of whisky, however sound the facts might be. It would be against their policy. Nor would the editor of an anti-vivisectionist publication hold his job long if his columns defended the use of animals for medical experiments. However, as long as he toes the "party" line the editor is independent, although he will constantly confer with the publishers about the slant of the publication and do his best to comply with their wishes.

Just recently the education committee of the NBA circulated a questionnaire asking readers for their views on the NZ Beekeeper. When the returns from this are evaluated the result may suggest to the publishers that some changes of general content are needed, perhaps more of one kind of article, less of another. However, whatever the result, your Executive will direct me accordingly: not as to which specific material I should use, but as to the kind.

The choice of which articles are run — and which are not — their layout and presentation, are the prerogative of the editor. Most, like this one, have several sources of material. A certain amount always arrives unsolicited across his desk. He may ask certain people to write specific articles or regular columns, or he may "lift" from overseas magazines. Some articles he writes himself, and he always writes the editorial.

The subject of the editorial is usually something topical at the time and which the editor considers is of interest to his readers. Given the hypothetical situation of two editors working side by side at the same time on the same publication it is likely that you would get two different editorials, not only in treatment but in subject. You may like or dislike the one you get. That's the way the cooky crumbles with editorials. If you feel strongly about it either way then write a letter to "The Editor".

Sometimes the editor can use unsolicited articles and sometimes he cannot. Your perfectly good article may not be used because he already has a similar one, because he has been inundated with stories about mad beekeepers recently, or simply because it ran to 27 column inches and all he had left were 17. If its a story that doesn't date then he may sit on it for when he's short of material. There are about 500 good reasons why your story did not appear, none of them derogatory to you.

If you have an idea for an article then drop the editor a brief note, outlining it, and asking if he'd like to see it. That way, both you and the editor know where you stand. It also allows the editor to plan ahead.

Planning ahead is essential with a good magazine. All magazines should have a balanced content and, ideally, regular sections, No magazine should be a hotchpotch simply of what arrives through the mail. I have been feeling my way until now, but I would like to begin organising the NZ Beekeeper into regular sections, with a good article in each section each quarter. Established so far we have Beginners' Notes, Library Notes, and Comment. Beginning with this issue we have a new section by Jenny Bee. if you either like or dislike it then please write to "The Editor" and say so.

Now how about an equipment section? For an excellent example of the kind of material needed for such a section see Clive Vardy's article on page 23 of the Winter issue. Another section might be about various beekeepers, their trials, tribulations, how they got started, etc. But for these two sections I shall need the help of you out there in the field. So how about it, beekeepers?

Another way you can contribute if you wish is through the Comment page. Contributors to this section have something to say. The choice of subject is theirs, and they may make their points as pungently as they like as long as they stick to them and are neither libellous nor indecent. Neither the editor nor the publishers need agree with the views expressed. If you feel you'd like to contribute, then drop me a brief note outlining your subject.

A final word — on advertising. All magazines need advertising if they are to be solvent. Contrary to popular belief advertising is not easy to get. No one likes spending money unless he, or she, can see a good potential return for it. A big strike against the NZ Beekeeper, where the advertiser is concerned, is the small print run of 1,450. However, advertising in the Beekeeper is "precision" advertising. By "precision" I mean that everyone who reads the Beekeeper is interested in bees, anything associated with bees, and is a likely customer. "Precision" advertising is distinct from "shotgun" advertising, such as newspaper advertising, which is aimed at the public in general, of which only some will be interested in the advertised product.

If you know anyone who should advertise in the Beekeeper and doesn't then how about pointing out the value of the Beekeeper and giving him a nudge?

Don't forget, increased advertising will provide more money to produce a better magazine for you.

Conference '85:

A Real Veteran

Veteran beekeeper Ralph Glasson is not quite a contemporary of Adam but he certainly remembers a West Coast most of us know only through history books.

Born in 1906, into a family that eventually included six sisters, he recollects a way of life quite different from that which we know now.

"I don't think I could stand it today", he reminisced. "Six sisters, that is. Imagine having to fight your way through six sets of pantyhose to get into the bathroom for a wash. Fortunately pantyhose were not then invented."

That doesn't mean that Ralph and wife Nardie are not with it. Before we could have a chat we had to wait for Nardie to appear from the Kings Motor Hotel hairdressing saloon. They made a good job of her hair too.

Back in the old-days she'd probably have had it done in Blackball, then a thriving community. In the 1920s the town had three hotels, two bakers, two butchers, two big halls, and two movie houses.

When Ralph first went to Blackball primary school he joined 200 other children and six teachers. He left there to become one of the first pupils at Greymouth Tech. Such was travelling in those days that it meant catching a train at 6.45am and frequently not getting home until 5pm, later if the train was delayed by the coach over Arthur's Pass.

After four years at Greymouth Tech. studying engineering, Ralph became an apprentice blacksmith's striker in Blackball. Among other strange jobs he remembers having to shoe horses down the mine.

His involvement with bees came through his miner father who, like most miners, kept a hive or two to provide sugar because supplies by ship or over Arthur's Pass were sometimes irregular.

The number of Ralph's hives "growded like Topsy" and he became a regular beekeeper in 1924 with an apiary site at Healy's Gully, some four miles from Blackball.

About that time he bought, with his father, one of the first trucks in Blackball. A one-ton Chev. It was something of a conversation piece.

After a strike at the mine around 1930, Ralph became a full-time beekeeper and gradually built up until, by 1940, he had 260 hives and 140 nucs.

Later he formed Glasson Apiaries with his two sons as partners. When they bought out another beekeeper who had a honey house, one son took over that part of the business and named it Brunner Apiaries.

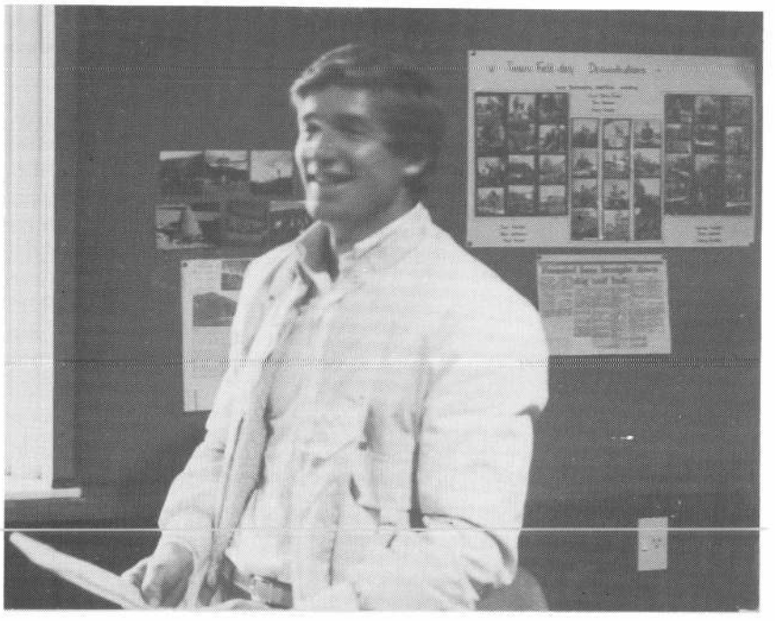
Ralph is now retired and his other son runs Glasson Apiaries. In 1960 Ralph was made a JP, and, in 1971 a life member of the Association. He was also awarded an honorary diploma in beekeeping.

His grandson, Gary Glasson, a fourth generation beekeeper, attended Telford last year and is now in Canada as a beekeeper-trainee at Fort St John, on the Alaska Highway.

Asked if he had any advice for young beekeepers, Ralph said: "Yes. Start out with a few hives and build up gradually. Feel your way."

Conference '85: Buzzing at

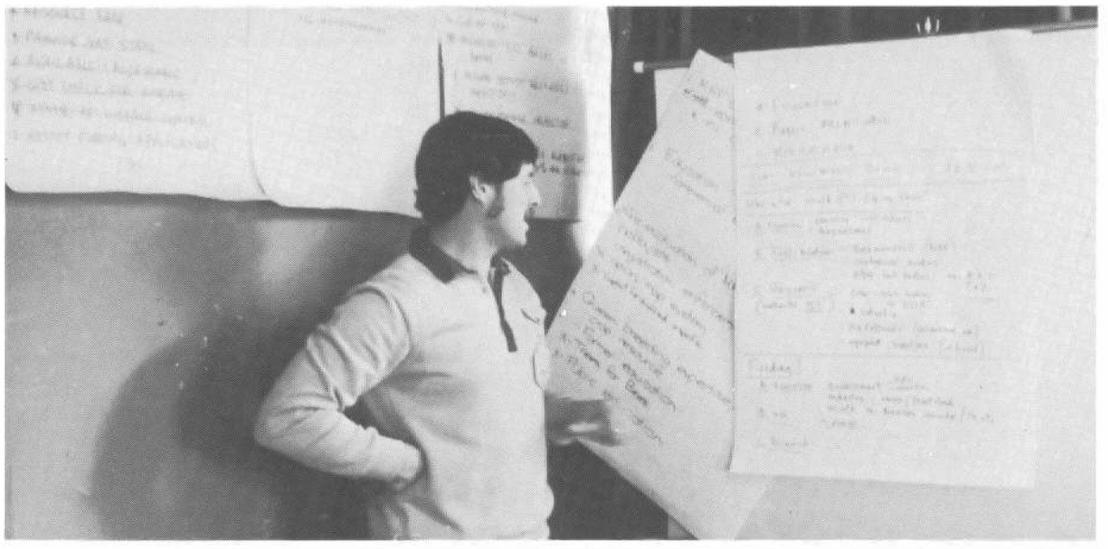
Librarius Beekeeperus Honarius. Very shy species of homo sapiens. Very difficult to photograph. (And wouldn't stand still either).

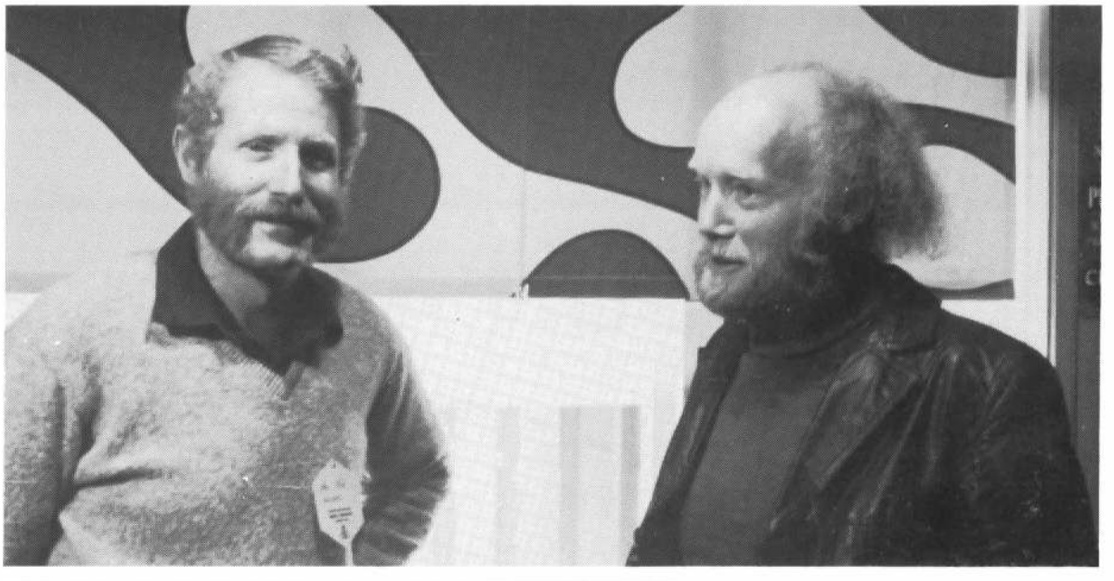


(Above) Lindsay Hansen, Waikato Secretary, speaks to a remit. (Left) Lindsay and Daphne Feary, President and Secretary respectively of the West Coast Branch, guard the door to the conference room. (No tickee, no shirtee)

(Right) Keith Herron (left) and Russell Berry enjoy the Conference function.

Conference '85





Top: Vice President McCaw elucidates the results of one of the buzz groups.
Middle: Rex Tod, Waikato, and Rod Buchanan, Westland, share a joke during a spell at Conference.
Bottom: Dr Richard Hill, DSIR Entomologist, (right) makes a point to National AAO, Murray Reid (left), and our very own bee pathologist, Dr Denis Anderson (middle).

Conference '85:

It's Our Responsibility

By Don Gibbons

When I received an invitation to speak at the MAF Industry Planning Workshop my initial reaction was to run away and hide. Let's face it, an Industry Planning Workshop run by the MAF is not my responsibility! In fact it's *too* responsible for me. I'm a clown: that's why I run Clown (oops Crown) Queens. This was "their" responsibility. "Their", like "them" and "they" being anyone but me.

Then I realised that the automatic response from the majority of people is to avoid responsibility in a serious situation. "They" should do it. It is "their" job.

So I took the bait. After all, the future of our industry is what we will inherit from our efforts or otherwise. Each of us has a responsibility to impress on all beekeepers, hobbyist or commercial, the need for constant vigil.

My brief assumed that I agreed that quarantine and the constant vigil required to keep exotic diseases from our door is our responsibility much more than that of the MAF or Customs. And so it is.

Both Customs and MAF have immense responsibility. Their responsibility to us is a very small part of their total job. However, small as it is in their overall role, the task of intercepting bees, bee products, or any other bee material and destroying them before they possibly introduce a new disease is very real. And yet no matter how well they do their job they still have to rely to a large part in the honesty of people and the inscriptions on packaging.

I understand that some imported pollen substitute, according to its label free from pollen, did indeed contain pollen, and what is more contained mummies of chalk-brood.

Yachts, tourist vessels, and foreign fishing vessels can discharge garbage into the sea miles from our coastline. An empty honey container from that garbage, arriving on one of our beaches, can be the source of an exotic bee disease. We can spend the rest of our lives wondering who the "they" responsible were, but unless we act ourselves it will not take a lifetime to destroy our plans for tomorrow.

Let's assume that this happened at a Waipu Beach. I might be lucky and find the container before the bees, and before harm was done, but I doubt it. More than likely my first indication of that diseased honey container would be from what I found under a hive lid. What then

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It's Our Responsibility (cont)

from page 18

must I do? Immediate quarantine, of course. I must stop all sales of queens and all movement of any kind between yards. I must immediately notify my AAO. I would also hope like hell that the news media handled the discovery with more common sense than has happened in the past. And I am not only talking about chalkbrood. What we will need is the truth and the facts only, and from the mouth of a responsible person with first-hand knowledge. Livelihoods are at stake. Not only could I go broke, but so could all other queen-breeders and exporters of honey and its by-products. All from the result of one inaccurate and sensational press or radio story.

During the chalkbrood epidemic some 18 months ago one newspaper ran the emotive headline: "Killer Disease Hits Northern Beekeepers". Good stuff to sell newspapers, no doubt, but a near disaster for many beekeepers. I believe mine was the only queenbreeding business in the North not to suffer serious financial loss. One queenbreeder over 200 miles away in Whakatane lost an export order from a country where chalkbrood exists: a disease that was subsequently reported by Dr Shimanuki as being of no more importance than sacbrood and less serious than nosema.

However, I digress (almost). The fact is that the earlier a newly-discovered disease is acted upon the more chance of its being isolated and eliminated. But no Customs or MAF official can do anything without the initial effort of each and everyone of us.

It is our responsibility and all he or she can do is assist us to protect our industry.

An uncontrolled outbreak of a serious exotic disease would destroy my business and waste the five years I have spent endeavouring to develop the best possible line of queens for the New Zealand beekeeper. It would not only destroy my morale, but that of my wife and family who have put up with my tantrums and who have given up so much for me to pursue my first love. It would also destroy the aims and aspirations of all queen breeders, honey producers, and pollinators in New Zealand. If it ran unchecked through the country, kiwifruit growers could expect to harvest a considerably-reduced amount of export-quality fruit and, as hive numbers diminished, pasture would eventually be affected by lack of clover pollination.

Believe me, I am not crying wolf. It could happen. But we can help put off the devastating effect of a serious exotic bee disease, perhaps forever, by:

(1) Ensuring that we beekeepers (and this means you) are constantly on the alert for anything unusual in our hives. If we do find something then we must immediately report it to our AAO.

(2) Watching for foreign honey containers, not only on our beaches, but also on rubbish tips, **AND** on the tables of our friends.

I know of one beekeeper who knew of foreign honey on a table but said nothing in case he offended his friends!!! Some friends! What friend would want to see his mate's business destroyed? Another beekeeper incredibly brought a piece of used bee equipment into New Zealand so as to copy it. He was most embarrassed when he stopped to think what he might have done. He burned it, but should he not have thought *before* he imported the piece?

(3) Checking that all hives you know of are registered. The chalkbrood survey revealed many unregistered hives in North Auckland. I guess North Auckland to be no exception.

Constant vigil by us is our protection for the future security of our industry. We can have all the boards, authorities, and government departments we like, but without our own efforts the "theys" of the world are helpless.

Now hear this ...

I'm surprised at you folks. **Everyone** but **everyone** knows that Don Gibbons has a diabolical sense of humour, and yet so many of your actually **believed** his letter to The Editor in the Winter Beekeeper. So Oyez, Oyez, let it here be known that DG does not need a loan (well, not much anyway), and that DG should not be taken seriously unless it concerns a steak, what goes in a glass, or his bees which as everyone knows are as good as you can get anywhere.

Conference '85:

Report from the B.O.P. Community College Beekeeping Tutor

In this, my third annual report on beekeeping education at the Bay of Plenty Community College, I have pleasure in announcing the The Certificate in Beekeeping course, prepared jointly by the College and the NBA, is up and running. After calling for registrations in last summer's issue of the NZ Beekeeper we accepted 84 students for this year's intake.

Unfortunately we had to turn others away, partly because their registrations were late, and partly to keep numbers manageable during the first year of the Course. Next year this intake will carry on with the second, and final year of the Course and a fresh intake will begin its first year.

I am pleased to report that the Authority for Advanced Vocational Awards has validated this Certificate in Beekeeping Course. After completing the Course, students will receive a certificate issued by the NBA validated to the Ordinary National Certificate level by AAVA.

There has been some concern expressed by other examining authorities about our choice to use the Authority for Advanced Vocational Awards. Putting all educational and horticultural policies aside, I have no doubt that we have done the right thing. The validating process gives us as beekeepers the important power over prescription and examining functions. In this manner I hope the Certificate in Beekeeping Course will remain both up-to-date and applicable to the industry for which it was designed.

A Certificate Committee, to oversee all aspects of course design and application, will meet at the end of this year to evaluate work so far done. This Committee will consist of two members from the NBA, one from MAF, one from the BOP Community College, one from the Department of Education, and one from the AAVA. It will act on the beekeepers' behalf in reviewing the prescription and ensuring that the Course is run in such a way that the reputation of the Certificate is upheld.

In conjunction with the apicultural advisory officers of MAF, a number of short courses have also been run at the College. Topics include Queen Rearing, Management by Objectives for Beekeepers, a Honey Bee Pest and Disease Workshop, and Expanding into Commercial Beekeeping. These courses have been well supported by local beekeepers as well as others who have come considerable distances to make use of facilities.

In the future I hope to offer a wide variety of other educational opportunities for the beekeeping industry. Such things as educational packages aimed at primary and secondary schools which will get our concerns across to eager and impressionable groups. Packages could contain handouts for reproduction, including practical projects for students, reference material for teachers, and either slide/tape or video for use in classrooms. With an enthusiastic but not necessarily knowledgeable teacher, students could examine bees and beekeeping from such angles as botany (nectar and pollen sources), nutrition (honey as a food), communication (dance language and pheromone use by bees), and social behavior. By so exposing such groups to bees and beekeeping topics I hope that some ongoing interest can be developed in both our industry and its products.

In the meantime, most of my time is involved in running the Certificate in Beekeeping Course. Corresponding personally with 84 students keeps me fairly busy. Next year will be even busier! However, with the preparation of the Course and the mass of paper work needed to get the validation now completed, I look forward to the programme settling down to provide the level of training planned.

Thank you all for the opportunity to take part in this very exciting field of beekeeping education.

Nick Wallingford

OBITUARY

Mr Thomas Stimpson Winter, late of Paekakariki, died on 6 July 1985 at Porirua Hospital, aged 89 years. His funeral service, held at the Porirua Hospital Chapel on 9 July 1985, was followed by a private cremation.

People at Conference '85

Conference '85:

Report from Apiculture Section, Wallaceville

Staff

The Apiculture Section now consists of Mr Pat Clinch (Scientist, Section Leader) and Mr Anton ten Houten (Technical Officer). Mr Mark Schrader left the Section to become an Apicultural Advisory Officer. In addition, we have had the part-time assistance of Dr Allen Heath (Scientist) and Mr John Tenquist and Mrs Dallas Bishop (Technical Officers) of the Ectoparasitology Section, Wallaceville.

Kiwifruit Pollination

Number of bee visits required for pollination

Although research has established that honey bees are essential for kiwifruit pollination, little is known of the number of bee visits female flowers require to develop into fruit of export weight. It is necessary to know this so that by adjusting the number of honey bee colonies used, the density of bees on the crop can be maintained at an effective level.

Using male and female vines caged together, honey bees were allowed to visit female flowers for different lengths of time. No flowers visited by honey bees for a period of less than 10 seconds developed into fruit of export weight. Even when flowers were visited for more than 160 seconds, less than half formed fruit of export size. It is therefore clear that more than one bee visit per female flower is required to set a crop of export fruit.

Comparative roles of bees and wind in pollination

Although honey bees are the major pollinators of kiwifruit, wind plays a part in the pollination of the crop. The exact proportions that can be attributed to bees and wind have not been established because no one has been able to prevent bees from visiting flowers without using sleeves or bags that have significant resistance to wind. Recently, a new cloth sleeve made of mesh with half the wind resistance of previous types was developed, and has been tested in comparison with sleeves of other mesh sizes.

Groups of female kiwifruit flowers were enclosed in sleeves for the whole of the blossom period. Sleeves were of three mesh sizes: the smallest to prevent all pollen reaching the flowers; the largest, with minimum air resistance, to permit maximum wind pollination, but prevent entry by honey bees; the medium, intermediate between the other two. Very few fruit developed from flowers in sleeves of the medium or small mesh. Sleeves of the large mesh failed to completely prevent honey bees from reaching the flowers, although the level of visitation was low. About 40% of flowers in these developed into fruit of export-size compared with 80% of the unsleeved controls. Total yield of export-size fruit from these sleeves was 40% that of the controls. From these results it appears that pollination by wind combined with a low level of honey bee visitation gives yields of less than half those obtained by a high level of honey bee visitation.

Competing pollen sources

Kiwifruit flowers produce pollen, but not nectar. As a consequence, flowers of plants that secrete nectar attract honey bees from colonies in kiwifruit orchards. As these competing nectar-secreting flowers also usually produce pollen, fewer pollen-gathering bees visit kiwifruit. Some areas around Te Puke have been reported to have a monoculture of kiwifruit and consequently little competition. In contrast, some areas near Tauranga, containing much pasture, appeared to have greater competition. Pollen traps were therefore used to quantify differences.

Low-efficiency pollen traps were fitted to hives taken into kiwifruit orchards for pollination. As in 1983, these were single orchards at Te Puna and Bethlehem near Tauranga, and near the highest points of No. 1 and No. 3 roads at Te Puke. On the sixth day in the orchards, the percentages of kiwifruit pollen collected by the colonies were nine, 23, 71 and 97, respectively. The percentages of kiwifruit pollen collected in the two orchards near Tauranga did not differ significantly. However, in the orchards at Te Puke, significantly more kiwifruit pollen was collected by colonies in the orchard at No. 3 road than by those at No. 1 road ($P < 0.05$). Colonies in both orchards at Te Puke collected significantly more kiwifruit pollen than those in the orchards near Tauranga ($P < 0.01$). The major competitor near Tauranga was honeysuckle (*Lonicera* sp.) and at Te Puke, white clover (*Trifolium repens*). These results show that there can be very large differences in competition dictated by the location of orchards.

Effect of Pesticides on Honey Bees

Pesticides applied to kiwifruit during flowering

The large number of honey bee colonies used for kiwifruit pollination could be put at risk if a pesticide applied during the blossom period was toxic to bees. The compounds currently in use appear to present no hazard. We have now developed a small-scale field test that will allow us to assess the risk to honey bees of new compounds. By the use of this we will be able to prevent serious problems arising in the future.

Export of Queen Bees and Packages

Agar-sugar syrup gels

Dr Shimanuki, USDA bee nutritionist, suggested that agar-sugar syrup gels, used by some queen breeders in the USA, might be suitable for feeding package bees sent from New Zealand to Canada. The first batches of packages were despatched before any reliable results could be obtained. Using different concentrations of agar and sugar syrup in laboratory tests, we have found some mixtures that appear suitable. Bees fed these gels live as long as bees fed sugar syrup. Our next step is to test the gels on packages.

Test for hoarding behaviour

To ensure that only high-quality lines of queen bees

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Apiculture (cont)

from page 22

are exported, it is desirable to determine the honey-gathering ability of each line. This would be a very expensive task to undertake in the field. However, research in Canada has shown that the honey-gathering ability of lines of bee can be assessed by a laboratory "hoarding behaviour" test. Hoarding behaviour is measured by enclosing worker bees in small cages and determining the quantity of sugar syrup that they take from feeders and store in pieces of comb. We have already started assessing the reliability of the method.

Diagnosis of Brood Diseases

During the year, samples of brood from colonies showing abnormal brood conditions were examined microscopically at Wallaceville. American brood disease (*Bacillus larvae*) was found in some samples. *Melissococcus pluton*, causative agent for European brood disease, was not found.

With the arrival of bee pathologist Dr Denis Anderson, this work will be handed over to him.

G.S.T.

by Trevor Bryant

Government plans to indirect taxation through the introduction of the Goods & Services Tax will have a great deal of impact on the Beekeeping Industry. As beekeepers, primary producers, providers of a service, GST will have to be added on to all transactions.

The key features of GST are:

- ★ The tax is a consumer, not a producer tax.
- ★ With few exceptions GST will be levied on the supply of all goods and services.
  Two notable exemptions are land sales and the rental of private dwellings.
- ★ Registered suppliers of goods and services are entitled to a refund of any GST they incur on the purchase of production inputs.
- ★ Registered supliers of goods and services are entitled to a refund of any GST they incur on the purchase of production inputs.
- ★ At two-monthly intervals each registered supplier of goods and services will reconcile with the IRD the differences between GST received on the sale of goods and services and the GST paid on production inputs.

Beekeepers will have to keep accurate and up-to-date business cash records for the two-monthly GST returns they will have to file with the IRD. There is no reason why beekeepers cannot prepare their own GST returns, but some will no doubt opt to have their accountant do the work. But regardless of which option is chosen, book keeping will become an essential part of your business, one which cannot be put off until the end of the year. Start now to put your records in some semblance of order.

NATURALIST DESIGNS NEW INSECT STAMPS

British artist and world-famous naturalist, Gordon Beningfield, the designer of five British Post Office stamps featuring insects, pictured in his studio in Hemel Hempstead, southern England, with an enlargement of the 17p value, showing the indigenous buff-tailed bumble bee. The stamps were produced to coincide with the centenary of the Royal Entomological Society of London's Royal Charter pioneering conservation organisations in Britain. They were issued on March 12.

The exquisitely coloured 30x41mm stamps were printed in photogravure by Britain's Harrison and Sons (High Wycombe) Ltd, in vertical format.

Conference '85:

A.S.D. Report

Organisation and Staffing

A number of changes have occured in the apiary section this year, beginning with the retirement of Mr Bill Rodie from Palmerston North. Bill has been in the MAF for over 35 years.

Two new officers, Mark Schrader (Oamaru) and Clive Vardy (Gore), completed their training and took up permanent positions. Cliff van Eaton was transferred from Gore to Whangarei and Ted Roberts took up Palmerston North on August 26 when his employment as senior lecturer at Massey University expired.

Mr Brian Milnes, formerly apiary instructor, MAF, Auckland, has become a field officer. The contributions of both Milnes and Rodie to the beekeeping industry are acknowledged.

A significant number of field officers, livestock officers, and beekeepers were employed as part-time inspectors. Their assistance is appreciated.

Figure 1: Beekeeper, apiary, and hive statistics: Tauranga district

Year	Beekeepers	Apiaries	Hives
1979	353	1,733	18,812
1980	388	1,668	22,006
1981	533	1,920	25,982
1982	577	2,238	30,316
1983	717	2,680	37,026
1984	772	2,939	43,313
1985	801	3,332	48,143

Figure 2: Beekeeper, apiary and hive statistics for NZ: May 1985

District	Beekeepers	Apiaries	Hives
North Auckland	657	1,878	18,265
Auckland	1,467	2,715	18,594
Hamilton	739	3,013	45,466
Tauranga	801	3,332	48,143
Palmerston North	1,395	3,793	36,274
Nelson	582	2,133	22,775
Christchurch	780	3,528	45,169
Oamaru	353	3,455	46,006
Gore	351	2,171	28,736
Total	7,125	26,018	309,428

Beekeeping Statistics

(a) Beekeeper, Apiaries, and Hives

There were 7,125 beekeepers owning 309,428 colonies of bees, representing an increase of 32,423 colonies or nearly 12%. Some of this increase represents a continued expansion of beekeeping and some is due to improved data processing now that apiary records are on computers.

The region with the most dramatic increase in colony numbers over the past few years is Tauranga.

b) Honey Crop

The crop was assessed at 10,314 tonnes compared with last year's 5,818 tonnes. This is the first time the estimated crop has gone over 10,000 tonnes but it is not the largest crop on a per hive basis. This season's production represented 33 kg/hive while in 1975 the crop was 36 kg/hive, 39 kg/hive in 1978, and 32 kg/hive in 1980.

c) American Brood Disease

It has not been possible to get an accurate figure of disease levels this year. However, two large outbreaks of disease in commercial outfits were cause for concern. One of these involved the destruction of over 1,227 hives.

Bee Diseases: General

a) Apiary Register

Keeping the apiary register up-to-date is onerous, time consuming, and expensive. It is quite common for apiary registrars to have 14-20% of the returns still outstanding by March, four months after they were due despite two or three reminders. The Ministry is looking closely at the whole question of maintaining an apiary register and the possibility of recovering some of the costs involved in disease inspection. Current costings from two regions suggest that these are around 50¢ a hive on all hives in the districts.

b) Importation of Beltsville Bee Diet

Three separate importations of pollen substitute patties were made from Bio Serv in the USA but only one of these shipments was found to contain bee-collected pollen. This particular shipment also contained chalkbrood spores. Before the diseased pollen patties were released from quarantine, advice was sort from the importer, from DSIR, and from the manufacturer as to whether the patties contained pollen or not. The Beltsville bee diet formula, which these patties claimed to be made to, did not contain pollen.

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Figure 3: Honey production in tonnes by apiary district as at May 31.

* The Christchurch crop includes honey dew

	Auckland/ Northland	Hamilton	Tauranga	Palmerston	Nelson	* ChCh	Oamaru	Gore	Total	kg/ hive
1984	300	731	682	495	800	1,150	1,100	560	5,818	21
1985	1,502	1,697	1,550	1,088	685	1,650	1,352	790	10,314	33

A.S.D. Report (cont)

from page 24

In the light of this experience MAF and Customs procedures have been tightened and any future importations of bee fodder will be held for laboratory examination before release.

c) Agricultural Quarantine Service (AQS) Interceptions

AQOs are currently intercepting some 200 samples of honey and bee products per month at four main airports. The AQS is under pressure to clear passengers as quickly as possible, but it still has to rely on passenger honesty to declare illegal foodstuffs.

d) Sale of Diseased Hives

A number of beekeepers (including commercial beekeepers) continue to sell hives of bees without a permit or even consulting MAF before or after a sale. Some of these transactions have involved hives infected with Bacillus larvae.

e) Sacbrood and Paralysis

Dr Shimanuki made the observation that New Zealand bee stocks had a rather high level of these virus diseases. These viruses could be causing more lost production than we are aware of and beekeepers and queen producers were advised to select breeder queens that appeared to be free of these diseases.

Advisory Activities

a) Industry Plan

ASD has a continuing commitment to assist agricultural organisations to become more effective. Apiary staff have worked closely with the Executive and members of the various pollination and queen breeders' associations.

A course on strategic planning was held for commercial beekeepers at the Bay of Plenty Community College. The success of this course may encourage other AAOs to hold similar courses in their regions.

The beekeeping industry leads other agricultural organisations in the application of management by objectives and we are being used as a model by other groups.

b) Export of Queen Bees and Package Bees

The first shipments of package bees were made to Canada, along with a significant number of queen bees. Quality assurance documents and transhipment details for the package bees were completed in time so the exports were not held up.

A trial shipment of 50 queen bees was sent to the USDA at Beltsville, USA, for stock evaluation and testing for pests and diseases. The presence of Mellitiphis mites on some of our package bees to Canada is cause for concern and may mean the United States will not accept our queen bees or our packages.

The major limiting factor in expanding package bee exports to Canada will be lack of suitable transport. New Zealand beekeepers will need to co-ordinate their efforts to make the most of these export opportunities.

c) Research Work

Dr Dennis Anderson from Canberra has taken up a position as a bee pathologist at DSIR, Mt Albert. Dr Anderson's appointment is the end result of negotiations by ASD, by DSIR, and by the Executive of the NBA. The beekeeping industry will fund the second year of Dr Anderson's programme.

A recent list of people currently doing research work or survey work on honey bees (excluding pollination) has been compiled by the apiary section. There are approximately 28 people engaged in this research.

d) Export Manuals

Two manuals called "Queen Bee Export Manual" and "Honey Export Manual" have been prepared. The Secretary of the NBA is holding copies of these manuals and is authorised to make copies for anyone who wishes to obtain them.

The manuals contain examples of all the government certificates currently in use for both honey and queen bees. The certificates have been stamped with the word "cancelled". This is a defacing mark only.

e) Pesticide Analyses

Sixty-four samples of honey bees or pollen were analysed for pesticides last year by Wallaceville or Ruakura. Many other bee kills were reported by samples were not required.

Areas of mixed horticultural plantings continue to cause the most problem: eg kiwifruit and peaches or raspberries, citrus and apples, etc. The orchard and apiary location maps maintained by the Fruit Growers' Federation in North Auckland, Auckland, and the Bay of Plenty helped reduce pesticide damage to honey bees. Our thanks go to the Fruit Growers' Federation for their efforts on our behalf.

Pesticide analyses in the future will be charged for and this charge will probably be passed on to the beekeeper.

f) Kiwifruit Pollination

The number of hives required for pollination continues to grow. A survey of pollination hives was conducted in 1,120 Bay of Plenty orchards involving over 160 beekeepers. Approximately 60% of the hives surveyed were satisfactory pollination units, with 40% marginal and 10% judged as being below standard.

American Brood Disease *Levels in Apiary Districts 1984/85 (To May 31st) (1983/84 Figures in Brackets)

Apiary District	Diseased Apiaries No.	Diseased Apiaries %	Diseased Colonies No.	Diseased Colonies %	% Apiaries Inspected
Whangarei	48	0.2	107	0.5	
Auckland	63**(71)	2.3 (2.5)	152 (187)	0.8 (0.9)	
Hamilton	165 (86)	5.4 (3.3)	220 (140)	0.5 (0.3)	14.4
Tauranga	268 (110)	8.0 (4.1)	676 (283)	1.4 (0.8)	10.4
Palmerston N.	(64)	(2.0)	(152)	(0.5)	
Nelson	153 (92)	7.2 (3.4)	340 (167)	1.5 (0.8)	7.5
Christchurch	40 (30)	1.1 (0.8)	303 (150)	0.7 (0.4)	
Oamaru	88 (69)	2.6 (2.4)	188 (144)	0.4 (0.4)	8.8
Gore	129 (72)	6.2 (3.4)	296 (102)	1.0 (0.3)	8.5

* Figures represent a 16 month period

** 1983/84 figures in brackets for Auckland represent Auckland and Northland.

Prepared by G.M. Reid
National Apicultural Advisory Officer
Hamilton

Conference '85:

I Didn't Get There (Again)

By Lin McKenzie

Who am I? I'm a one-man operation running 3000 hives in Central Otago who packs 20 to 25 tonnes a year, supplies the co-op with a drum or two, and knocks off a drum or two elsewhere. One of those thieving SOB packers, or an arrogant co-op shareholder, or one of those slobs who doesn't know where he's at or what he wants to do when he finds out, depending on where you're standing.

I nearly went to the conference this year (again). On Monday 22nd July I read again the statement made by a well respected member of the industry. During a discussion about a price rise he observed that of course everyone has to move at once. This from a man who hasn't moved on the last two rises in this area and is now 12 cents per 500 gr pot under my wholesale price. At 10 at night I started to pack my bag but when my wife pointed out that I hadn't got around to getting new tyres on the ute and snow was forecast in the mountains, I went to bed instead.

I have my own "Industry Plan". Earlier this year I noticed we had an unexpected downturn in sales which had lead to an unscheduled cash flow crisis. My "Industry Plan" indicated a visit to the bank before it "invited" me to do so, followed by a "market survey". Off into town we went and what did we find? In the first two supermarkets I called into my honey was 20 cents per 500 gr above the house brand. Enquiries of the managers followed and I was told this was the group policy. The chain wanted to promote the house brand of grocery products and that was how they were doing it. Knowing that the house-brand honey was being supplied at within a cent of my price I again consulted "The Plan". A visit to the wholesaler was indicated. I pointed out that:

(a) We had remained loyal to them over the honey shortage a couple of years ago, rather than approach any new markets
(b) We had, at their request, channelled our sales through the warehouse rather than direct to supermarkets
(c) We had, again at their request, bar coded
(d) We, of course, were packing a product of a quality far ahead of the aforesaid house brand.

All these arguments were of no avail and a discussion on the lack of parental marriage vows didn't help much either.

Where is all this waffle leading you may well be asking — if you haven't gone on to something more interesting. Bear with me!

Another ongoing "market survey" under "The Plan" has me nosing around in the kitchen cupboards of any house I get into. (It gets me thrown out of a few too!) What do I find? Nearly everyone has a jar or two of *censored* jam (Ed — print the brand name if you dare*), and a jar of marmite or vegemite, but by no means do the majority have a pot of honey. Back to the supermarket. The jam associated with the *censored* on TV with *censored* has about twice the shelf space allocated to all the brands of honey. There is no house brand jam either!!!

I feel quite strongly that the proliferation of individual brands puts us in a very weak position in the market place. Most of the grocery products today are sold through the major supermarket chains and these are ruthless organisations, big enough to dictate their own terms, get into TV advertising (well done Airborne) and conduct meaningful market surveys and action them.

I am not advocating "easy pickings" for PR consultants, advertising promoters, and marketing consultants, but when honey retails below our wholesale price in Dunedin supermarkets, well, ask yourself.

Is the Co-op the answer? I believe it could be if it marketed on the "spread" market generally, rather than joining the price battle for a shrinking honey market. But then the Co-op has that retention thing, hasn't it? Come on, how the hell can the thing be financed otherwise. Especially with other sectors of the industry offering to pull out the rug financially. The Co-op has the potential to increase the consumption of honey. Under present policy I can't see it happening. Perhaps, after the remits put forward this year it can't be blamed!

But, we have an "Industry Plan", don't we? This just could be it. After two years, what have we? A little sticker to put on our mail and, wait for it, the promise of bumper stickers! My God, the mind boggles!! And all this has taken but two short years! Where will we be in 10 years. In 15 years we will enter the 21st century and I wonder if our industry is yet in the 20th.

What about my own crisis? Well, we are back on budget again. But I'm not telling you what I did. Someone might get an idea and sell some honey. But I'll tell you this, I have got through 250 copies of "The Story of Bees and Honey" in the last week.

It's a quarter past five in the morning and perhaps I won't be brave enough to send this away come daylight. But me mate Stan down the road says: "Print and be damned" so maybe I will.

I'm going to put an "I love my honey" sticker on the envelope too.

How long have I been involved in the industry, did you ask? Just five years commercially so how could I know? I mean, the industry is so different I couldn't possibly know could I? I couldn't possibly have brought in any relevant ideas from outside, could I?

Perhaps I might go to Conference next year. If I'm brave enough!

* I daren't. We'd meet in the deepest, darkest, dampest dungeon in Mt Eden if I did. I'd have loved to, though. There ought to be a law against our stringent libel laws. Editor.

Pollen analysis of honey

By Neville T. Moar

Most honey contains pollen grains brought in with nectar taken by foraging bees. Pollen grains are very small objects, and because of wall characteristics, one pollen-type can be identified from another. They are also highly resistant to extraction techniques. It is therefore relatively easy to concentrate and to extract pollen grains from honey, and using a compound microscope, to identify and to count them. Ths technique — pollen analysis —makes it possible to identify nectar sources in a honey and it is now widely used overseas to monitor claims as to floral source and purity of a honey.

The potential of pollen analysis for the scientific study of honey was considered as a possibility about 100 years ago, but the foundations were laid by the German scientist, Zander, 50 years later. Since then the subject has been developed in various countries and melissopalynology, as it is now called, is recognised as a valid technique for determining floral and geographical origins of a honey.

The topic has been pursued intermittently in New Zealand since 1915 but the first serious palynological study was made in 1947 when Harris and Filmer used pollen analysis during the search for the toxic principle in honey from the Bay of Plenty. Although their work did not solve the problem —the source of the toxin is now known to result from the activity of the passion-vine hopper on tutu —they demonstrated that pollen analysis could offer insights into the sources of New Zealand honey.

Their work was not followed up, probably because of a negligible export market and a home market favouring the production of clover honey. However, as interest developed increasing export markets for characteristic New Zealand honeys, including kamahi and honeydew honey, it became clear that pollen analytical criteria were being used by importers to check claims made for our honey.

At Botany Division we had enough data accumulated to know that the pollen content of different honeys varied, but our base was too narrow for anything but broad generalisations. To overcome this, we decided to extend our observations into a coherent pollen analytical statement of New Zealand honey which could meet the requirements of importing countries. The objective was to examine honey samples, with the emphasis on specialist honeys, from as many districts as possible in the country; through the good offices of apricultural advisory officers, MAF, and apiarists throughout New Zealand we received some 200 samples for analysis in just over three years.

To meet our objective we decided to use quantitative and qualitative pollen analysis. Quantitative analysis allows calculation of the total number of pollen grains in a honey sample, the numbers of any particular pollen in a sample, and the comparison of one honey-type with another. Qualitative analysis permits calculation of relative pollen frequencies based upon the total number of pollen counted, and permits rapid recording of the pollen assemblages in different honeys, or of any pollen-type characteristic of a particular part of the country.

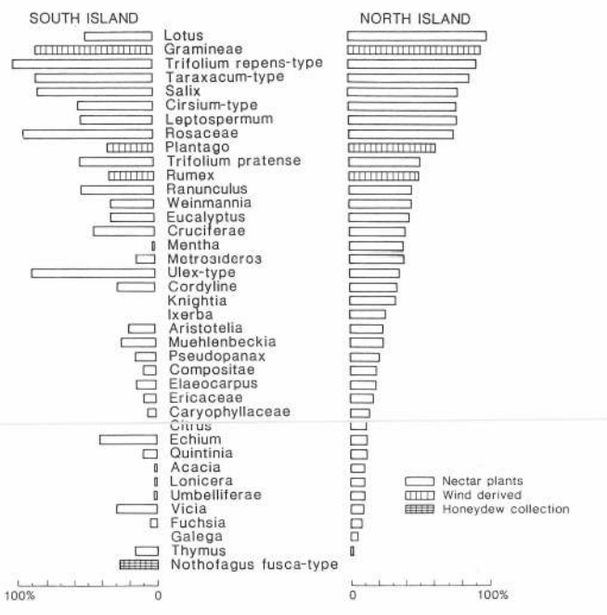

Figure 1: The frequency, as a percentage of samples examined, of pollen types recorded in New Zealand honeys. Similarities and differences between the North and South Islands are clearly illustrated. Only about one third of the pollen-types identified in honey are recorded here.

Processing methods were simple and rapid. Standard 10 gram samples were treated by acetolysis procedures — widely used in pollen laboratories — involving the use of concentrated sulphuric acid and glacial acetic acid. This technique destroys cell contents and cleans the pollen wall which makes for easier presentation and identification of the pollen grains. During processing the sample is "spiked" with tablets containing a known number of *lycopodium* spores, usually between 10000-11000 spores per tablet. A minimum of 500 grains, together with any *lycopodium* spores, are counted and identified; the ratio of pollen to spores counted is used to calculate the absolute pollen content of a sample, the numbers of any particular pollen in a sample, and to compare one honey-type with another.

The quantitative data obtained in this way provided the basis for separating New Zealand honeys into three groups.

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Pollen analysis, cont

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1. "normal" — total pollen content ranges between 20000-100000 grains per 10 gram sample
2. "over-represented" — total pollen content is greater than 100000 grains per 10 gram sample
3. "under-represented" — total pollen content is less than 20000 grains per 10 gram sample.

A "normal" honey is accepted as a unifloral honey, and is defined as unifloral, if the predominant pollen in it is present in frequencies of 45% or more. In these terms an "over-represented" honey is unifloral only if the predominant pollen is present in frequencies considerably in excess of 45%; an "under-represented" honey implies that the predominant pollen is present in frequencies less than 45%. Since pollen numbers depend upon the floral characteristics of any particular species it is important to know what these are. For example thyme produces female and hermaphrodite flowers on different plants, but both produce nectar. We would thus expect to find less thyme pollen in thyme honey than clover pollen in clover honey since clover bears hermaphrodite flowers on all plants. Manuka produces many anthers on each flower and is an abundant nectar producer so that the numbers of manuka pollen in a pure manuka honey are very high. In this context, thyme pollen is "under-represented", clover pollen is "normal" in representation, and manuka pollen is "over-represented".

Qualitative data help identify the geographical origins of New Zealand honey with varying degrees of precision. Goats rue pollen occurs only in honey from the Manawatu, tawari pollen identifies honey from forested sites in central and northern North Island, and rewarewa pollen characterises any North Island district where there are forests or forest remnants containing rewarewa.

In the South Island relatively high frequencies of thyme pollen are characteristic of Central Otago, the regular occurrence of vipers bugloss pollen identifies honey from drier inland areas east of the Main Divide, and kamahi, pokaka, quintinia, and rata pollen is representative of bush honey from Westland. Honeydew honey, produced in beech forests in the Canterbury mountains, and to a lesser extent in Westland, is characterised by the presence of the spores and hyphae of a sooty mould, by low numbers of beech pollen, and by othe pollen types which identify a Canterbury, from a Westland honeydew honey. For example Canterbury honeydew honey contains clover and other herb pollen while Westland honeydew honey is noted for the presence of the tree pollen already mentioned.

Some of the differences between North and South Island honeys in terms of their pollen content are illustrated in Figure 1 and some pollen-types in Figure 2.

This brief discussion attempts to demonstrate that pollen analysis can offer a means of quality control to the industry and can help the exporter know more clearly the characteristics of his product. It is sometimes important to know these before export: it is easier to know that tawari pollen is under represented for example, and so inform the importer, than to have him return a shipment of honey because the significance of a low pollen count is not properly understood.

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Pollen analysis, cont.

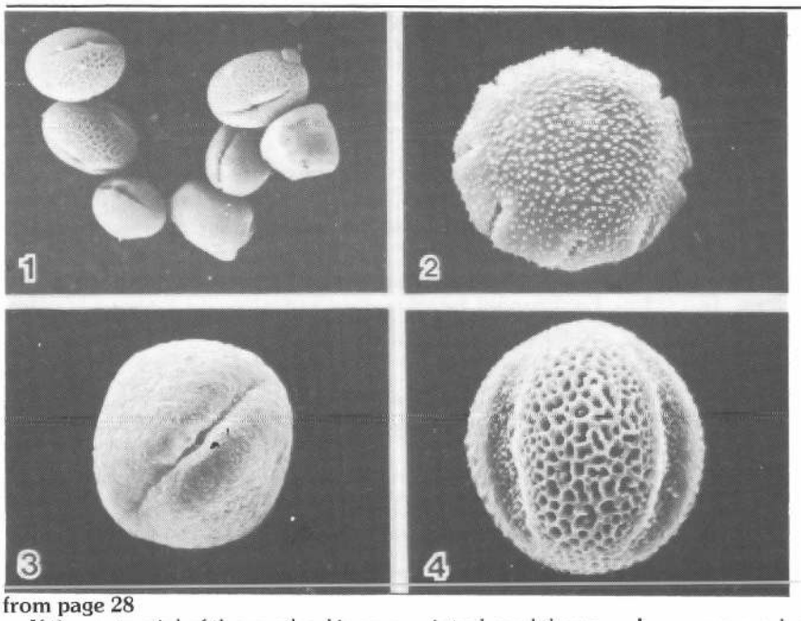


Figure 2: Scanning electron micrograph of some pollen-types found in New Zealand honey. 1. Five Alsike clover grains with fragments of Acacia x 400 2. Beech pollen, a type regularly found in honeydew honey x 1500 3. Matagouri pollen, commonly found in honey from inland Canterbury x 1500 4. Willow pollen, a pollen-type occurring in many New Zealand honeys x 1500.

APOLOGY
Because of presure of material for this issue the Jenny Bee page will not begin until the Summer issue.
Editor

from page 28

If the potential of the method is appreciated, and there is a prospect that the technique can be made more accessible to the industry, apiarists should have a sound basis for monitoring the quality of their product. It should be possible to monitor the honey in terms of floral source and purity and to recognise with varying degrees of precision the region of the country in which the product was produced.

To this end DSIR is sponsoring a research contract with the honey inudstry to encourage the commercial application of pollen analysis of honey. It is considered that such application would improve the marketing opportunities for specialist honeys in premium overseas markets.

Feeding sugar to bees

By Skep

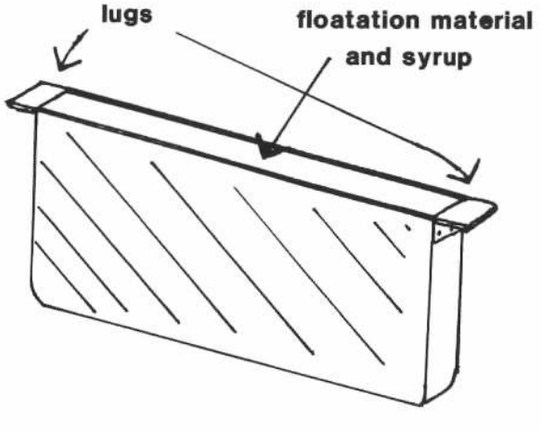
When a beekeeper talks about feeding colonies people inevitably ask: "Why feed bees? Can't they feed themselves?" It usually takes a bit of explaining about floral sources in an area, surplus honey, and winter stores. But it is still a legitimate question. Why DO we feed bees? Many beekeepers, by leaving enough honey with the hive when they take the honey crop off, rarely if ever have to feed frames of honey saved for the purpose or sugar syrup.

The esence of being a good beekeeper, to me at least, is in being a good manager. Beekeeping is not a "leave alone" activity. To be good at beekeeping you manage and manipulate your colonies. This is primarily for your purposes, of course. You want to produce a crop of honey. It is also in the interest of the colony. Your interests and those of the colonly coincide to the extent that you both want the colony to survive.

Where the two sets of interests differ, however, is in the overall objective in producing honey. The bee colony would be quite content in gathering only enough for their immediate needs and to get them through the coming winter. You as the beekeeper are trying to get them to gather not only that amount, but a surplus for you to take from them as your 'cut' for the work you put in.

And that's where feeding sugar can come in. It is a tool of management. If used properly it can enable the colony not only to survive but to prosper. And yes, it is manipulation of the bees. Its not 'natural', whatever that might mean in this context. It is an artificial means of controlling the colony's development.

Because part of my initial interest in beekeeping was the 'health food' movement, I have always felt a little funny in feeding ordinary white sugar to my bees. Isn't this the same sugar that I know is not good for me, and yet I have the nerve to feed it to my bees so as to get more honey from them?



If you study the problem a bit more you will find the nectar that they gather from flowers is primarily sucrose! Sucrose (ordinary white sugar) is a disaccaride. That is, it is a complex sugar. Bees have the ability to 'invert' this sucrose. Inversion is the process of breaking down the complex sugar into the simple sugars dextrose and levulose.

Bees are able to do this very well, thank you, and we as beekeepers need feel no moral qualms about feeding sugar syrup to them.

Why feed bees?

When do we need to feed our bees?

Three basic categories stand out as good reasons to feed:

To keep the hive from immediate starvation
To stimulate a hive for queen rearing
To provide winter stores.

There are other reasons, and variations on these, of course. Stimulating a colony in order to build it up unusually early to provide a special pollination service, for instance, is a good reason for sugar feeding.

Feeding to avoid starvation

When many beekeepers think of keeping a hive from starvation, they think mostly of the winter. In fact, most hives that starve do so in the spring. Colonies do not really need all that much honey to get them through the winter. Only when they begin large amounts of brood rearing in the spring are their stores rapidly depleted.

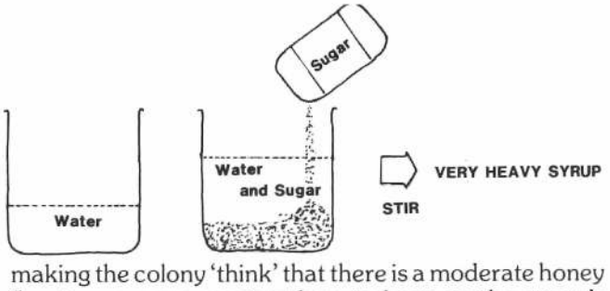
An excellent "rule of thumb" to follow in the spring is to never let the amount of sealed stores in the hive drop below two frames. As soon as you hit this point, the queen will start to taper off egg laying. When I talk about feeding to avoid starvation, then, it is really a matter of feeding before that time or else you'll run into all sorts of other problems trying to get the hive up to strength for the honey flow later on.

Feeding for stimulation

Feeding can be used for another purpose apart from merely providing the stores the hive needs to keep from starving. Beekeepers argue long and hard about how best to stimulate hives when you want to and avoid it when you don't.

The actual urge to rear brood in the hive is a complicated matter. In its most simplified form it is stimulated by pollen being brought in by foragers, but only maintained with an intake of nectar.

We as beekeepers can influence this by feeding,



making the colony 'think' that there is a moderate honey flow in progress, causing them to keep up the queen's

continued page 31

Feeding sugar to bees, cont.

from page 30

egg laying. But since it is a complicated process feeding all on its own won't have this effect. Other factors such as temperature, pollen availability, and genetic characteristics come into play as well.

What happens when you need to feed the colony but you don't want to stimulate brood rearing? Some beekeepers feed dry sugar for this purpose, but be forewarned. Feeding dry sugar is only successful if the colony is able to get out to gather either water or real nectar. A weak or starving colony will not be able to handle dry sugar at all.

Feeding for winter stores

One of the most common mistakes of the beginner-beekeeper is to take the phrase "winter feeding" at face value. If you wait until winter to feed your bees, you have waited too late.

Bees have to use up a lot of energy in the conversion of sugar syrup into stores. They not only have to invert the sucrose, they have to evaporate off the excess moisture. To provide winter stores hives must be fed in the autumn.

The best date to feed will vary with your area. If you feed too early in the autumn, you risk stimulating the queen into a renewed burst of egg laying. If you wait too late, cold weather will make the feeding difficult for the colony to handle.

Types of feeders

Again, I get to use my "position of authority" in writing this column to trot out some of my pet prejudices and peeves. If you don't agree with me be sure to complain loudly!

Though I am a keen gadget beekeeper, I cannot for the life of me see the need for the numerous and complicated varieties of feeders available. For my own hives I have division-board feeders of the plastic variety and can find no reason to even try others now.

Division-board feeders take the place of a frame in the hive and are really just a trough to place sugar syrup in. Though these feeders were not homemade, as is much of my equipment, and thus cost me a few dollars, I consider them a necessary and justified expense. They are virtually indestructible, hold as much feed as I ever want to feed at one time, and take away much of the worry associated with feeding syrup.

They must have some sort of floatation material so the bees will not drown in the syrup. I use bracken fern; when it gets too old, there's plenty available to take its place!

I consider the Boardman feeder that is often foisted off on the unsuspecting beginner to be a real abomination. This feeder which supports an upturned Agee jar of syrup at the hive entrance has everything going against it. It does not hold enough syrup, bees are not really able to use it in colder weather, and it encourages robbing by feeding at the entrance of the colony. How anyone would defend it is beyond me. (Doesn't that sound like a challenge?)

How to mix sugar syrup

Beekeeping books, especially those written for English conditions, spend pages on how to mix syrup, giving different concentrations for different times of the year and discussing the merits of feeding syrup warm.

Dare I be a disbeliever and tell you to ignore all that? For my experience the best thing you can do is feed as 'heavy' a syrup as you can mix. Beekeeping research backs me up on this.

My rule of thumb for this one is simple. Take whatever container you are mixing in, be it saucepan or 44 gal (200 litre) drum, and imagine it divided into thirds. Fill it one third full of water, either warm or cold. Warm water works faster in dissolving the sugar but it isn't essential.

Now start pouring sugar into the container. The water level will begin to rise (Remember the Aesop's Fable about the crow wanting to drink water from the jar?). Keep adding sugar until the level reaches almost to the two-thirds level of the container. Now stir with vigour. Unless you used very hot water the sugar will not all dissolve. Go away and leave it for a while and come back and stir again, digging deep to lift the gluggy mass from the bottom.

After a few stirrings like this, over a period of an hour or so, the syrup will change from milky colour to almost clear. And that's it! You may find some sugar still undissolved on the bottom because this mix is actually slightly heavier than will stay in solution at normal temperature.

If you're one of those people who need recipes for everything, Cliff van Eaton, Apicultural Advisory Officer,

continued page 32

Feeding sugar

from page 31

9 KILOS SUGAR •

5 LITRES WATER =

10.8 LITRES SYRUP

Whangarei, gives a good answer. Nine kilos of sugar mixed into five litres of water will give 10.8 litres of heavy syrup.

How much to feed

Your local conditions will cause some variation. I find that a full-depth feeder of syrup will last even the strongest of hives two to three weeks in the spring. Another rule of thumb I work to is that five litres of heavy syrup is about equivalent to two frames of stores.

The bees should take the syrup out of the feeder within just a few days; if they haven't its possible the colony is too weak to handle the volume given, or there is some other complicating factor.

I hope these few notes will help you some in your beekeeping. Do not feel intimidated when you find you need to feed. It is one of the important tasks of management that you will need to learn to be competent.

★ ★ ★

Library Notes (August 1985)

The notes in the last issue got somewhat muddled I am afraid. I hope you have been able to sort them out. If not please consult the Editor.

From Andrew Matheson: **EXPANDING INTO COMMERCIAL BEEKEEPING.**

Notes of the course held at Telford farm Training Institute on 25-26 June last. Very neatly presented. Thanks Andrew.

POLLINATION DIRECTORY FOR WORLD CROPS, by Dr Eva Crane and Penelope Walker, 183 p., 1984, UK.

Very thorough and well organized, as is to be expected with anything coming from these well-known authors. Great value to all involved with growing plants and crops no matter where.

POLLEN ANALYSIS OF NEW ZEALAND HONEY, by Dr N.T. Moar (DSIR), 70 p., 1985, NZ.

This paper is the result of a three-year study. It will be a valuable contribution to the safeguarding of the quality of our NZ honey, especially when earmarked for export to certain countries.

★ ★ ★

New Queen Bee Producers Assn

A Queen Bee Producers' Association was formed at Conference '85. Membership is open to all commercial producers of over 500 queens per season.

The Association, formed with the assistance and encouragement of Cliff van Eaton, AAO, Northland, aims to simplify contact between members and overseas buyers and also to support its often isolated members.

A major concern will be to foster the development and evaluation of improved stock for the export market with the promotion of the highest ethics in serving this market.

With the Association's policy of marketing best-quality queens only, shipped to arrive in top condition, buyers should gain confidence in dealing with members, says Publicity Officer Dilyse Mead.

"We look forward to a future when New Zealand-bred queens are known world-wide for their quality.

"The Association should also benefit the domestic market by striving to produce ever better quality queens," she said.

Officers elected were: President, Terry Gavin (Northland); Vice-president, Gavin White (Nelson); Sec/Treasurer, Malcolm Haines (Northland); committee members, Bruce Stanley (BOP), Dilyse Mead (Canterbury).

★ ★ ★

CONTRACT EXTRACTING CHARGES
1984 — 85 SEASON
for lots of 100 supers and over

Answers to questions asked by several beekeepers who extract for others.

1. $2.00 per super — Honey and wax returned — Trash retained
2. 1Kg. per super — This 1kg. includes all wax
3. $0.13 per kg. of honey extracted — Honey and wax returned — Trash retained
4. $1.65 per super — Honey and wax returned — Trash retained

NOTE — Trash includes wax — may be 30% of total wax.

What the consumer should be told

By: Vikram Singh

The public needs to be told that all honeys are NOT the same, that low supermarket prices for clover honey need not neccessarily be matched by the price for bush or native honey. Usually small businesses only, such as health shops, carry these rarer honeys. These small shops can offer a wider range than supermarkets, because supermarket prices are based on bulk purchases of one or two of the more common honeys. Besides, there is not the supply of these unique native honeys to match the bulk demands of supermarkets.

The public should be told of the value of having a large range of honeys to choose from, and that it is only the small man who is interested in, and able to, retail these rarer honeys. In so doing small shops support the small-scale apiarists producing their own unique blends. The large-scale apiarist may be more interested in producing a uniform blend that suits their packaging and sales to supermarkets.

My business "The Honey Bee Trading Company" sells seven different kinds of honey. I encourage all customers to taste before buying. The response has always been good. Everyone enjoys tasting and determining the right honey for his or her palate. I tell my customers about the major nectar source of each honey and the value of honey as a health and dietary aid.

Its time honey was looked upon as being more than just a healthy product. It is that, but it also has a fine bouquet, a range of colours, a graduation of textures, varying degrees of viscosity, and above all a variety of delightful flavours. For these reasons we must regard each kind of honey as an individual.

Few people realise the skill and hard work involved in producing a crop of honey. All expect honey to be a pure fresh product, yet it is heavily discounted in super-markets, the average selling price being $1.30 per 500 g for clover honey. Customers often ask me if the honey I sell is cheaper than that in supermarkets. I explain why my honey is slightly dearer. So price-cutting of honey to below its worth by supermarkets has an important bearing on honey prices.

In the free market, sellers find that supermarkets set the bottom line for honey prices. Therefore for the small businessman what would be a fair price ends up as expensive. The public use supermarket prices as a yardstick, yet apiarists know that the value of honey is not determined by its price tag but by its flavour, colour, scent, texture, etc. Often the various bush or native honeys leave the traditional clover honey "for dead".

The public should be informed of the kind of honey it is buying! The rarer the honey, the greater the variance in price. Clover honey is the largest variety produced in NZ, hence its per kilogram monitory value tends to be lower than bush or native honey, produced in limited quantities. As producers and sellers of honey, all apiarists and retailers involved in the trade must enlighten the public about the varying personalities of honey. They must teach people to treat each variety as an individual and delicate product worthy of enjoyment.

From the colonies

POVERTY BAY

The winter so far has been fairly mild, with wattle and a few of the early spring blossoms flowering in early August. Preparations are underway to begin early spring feeding of sugar syrup.

Local beekeepers have lost altogether around 500 hives by the floods on July 25. Most hives were swept out to sea on swollen rivers: a lesson we locals didn't need at all. After weathering drought, wet seasons, and now floods, what climatic onslaughts are there left! Be this a lesson for ever, beekeeper. Either keep your hives on high ground or buy some insurance. And not only have beekeepers suffered losses; many others have as well.

Let's hope for a good spring build-up. I'm sure we deserve a break. Let's hope!

Peter Lamb

SOUTHLAND

By the sound of the birds, the buds on the trees, and the daisies on the lawn, spring is on the way. Unlikely that any extra heat from the West Coast got this far south, but it has been reported that Southland's average temperature for July was 1° higher than average. It has been a good winter with rainfall in Waikaka averaging 41mm per month for the three months to August 7 and plenty of frosts with fine sunny days following.

Southland beekeepers are due to come out of hibernation anytime now to gear up for the record crop ahead.

Russell Rhodes

CANTERBURY

Canterbury had yet another dry winter with below-average rainfall, mild day temperatures, and a little frost.

Although it is early yet, first indications are that stores are light, hives are strong, and what with the 6½% increase in sugar price it doesn't make for a good start.

The hives in the honeydew areas are in good order with some gathering surplus over the winter.

The Branch has benefited greatly from the bulk raw sugar purchase by the Association.

The annual general meeting was well attended with much discussion on pollen shortages and retail marketing of honey in New Zealand. Afterwards David Butcher MP talked to us on GST and its effects on our industry.

Let's hope the season is favourable to us all this year.

Richard Bensemann

WAIKATO

At the last two pre-conference meetings of the branch a lot of time was spent discussing the low interest rates being paid for industry funds on loan to the Honey Co-operative. Members are upset that the Co-op has such a big financial advantage over other packers, and there is anger and resentment towards the Co-op.

The winter has been very mild with one heavy frost and a few light frosts. I don't remember a previous winter where bees have been active on so many days. Wasps have also been active over a wide area as many empty hives will show.

Branch members have a two-day queen rearing course to be held on August 28 and 29 at the Bay of Plenty Community College and a one-day honey bee disease workshop at the Waikato Technical Institute on August 30. These courses give members a great opportunity to get up-to-date on both subjects. With the huge increase in hive numbers, the disease workshop should be a must.

Ray Robinson

NORTHLAND

Northland has had a very mild but wet winter —almost to the stage where the ducks are treading very carefully! We are even considering asking Kevin Ecroyd if he would stock boots for bees. Hives are building up well though.

The Van Eatons have settled in well and the locals have found a new extracting shed— MAF office. Meet-

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From the colonies, cont.

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ings in Kaitaia, Whangarei, and Warkworth to enable Cliff and Bonnie to meet members were well attended.

The Northland Pollinators' Association has been formed to further the welfare of its members.

Northland Queen Producers' discussion group met and thrashed out a proposed set of rules for the NZ Queen Producers' Association.

Greymouth turned on good weather as well as a successful conference and thanks to the West Coast Branch from the Northlanders who attended.

Pat Gavin

WESTERN DISTRICTS

We are suffering in the marketplace from the consequences of a good average harvest.

Its agreed that our normally exposed and windswept western coastlands did produce well this last summer; but producing a good crop by the combined skills of bee and beekeeper has led to marketing problems.

To advertise at a lower price is not the only way to sell honey, although it might help one apiarist to sell his crop. A better way is to promote honey, then ALL beekeepers can sell their crops at worthwhile prices. And what about export opportunities?

More bees for more orchards. Both enterprises are on the way upwards in our region. At our next branch meeting (August) we shall be forming a pollination liaison committee to set guidelines for both apiarists and orchardists involved in pollination. It will be modelled on the experiences of the Bay of Plenty and Nelson districts.

Pollination demands that beekeepers work together in several practical ways, and ideally this cooperation should extend to the orderly marketing of honey.

Spring now draws us out of the office and workshop into the field once again. We look forward to a favourable build-up for the start of another season.

John Brandon

OTAGO

A mild autumn has been followed by a very reasonable winter. Many good days, some frosts, and only once a bit of snow to low levels. The pussy willow is starting to show, wattle and early bulbs are giving their first colour. Some rain has fallen in most places and it looks as if the country will once again recover from its previous dryness.

The Otago-Southland Convention was held in Dunedin early in June. Interesting speakers. We had an officer from the Agricultural Quarantine Service telling us about the safeguards taken at Customs to keep unwanted creatures and diseases out of the country. Amazing how much is impounded, just in the field of bee products. Discussed what we as beekeepers can do to help. Other speakers kept our full attention. The evening was completed with films.

Our thoughts and sympathy go out to the Foote family. Mrs Foote died suddenly. The Foote family has been involved with this branch for as long as we can remember and Mrs Foote was always there, at home with a cup of tea, or at field days helping to look after everyone. She will be missed indeed by her husband and family and all who know her.

With Conference passed and now a good memory (compliments to our hosts), we are starting to think about the new season and opening up hives. First Branch event will be our Spring Field Day on 28th September. Venue as yet not known.

John Heineman

WESTLAND

Winter to date has treated us kindly, continuous mild weather for this time of year with lower rainfall than normal. Hives therefore are, at the time of writing, in quite good shape, and provided weather during August and September is average or better, should see us through with minimal winter losses.

Winter maintenance this year has been somewhat restricted due to Conference being held in Greymouth and the necessity to attend to all those little jobs that require doing in preparation for the big event.

During the week prior to Conference we had three days of stormy, northerly weather with strong winds, low cloud and rain, giving a little concern to us wondering if the Airport would be open or closed when members were due to fly in. But we weren't disappointed. Sunday dawned fine and mild, likewise Monday and for those who flew in I'm sure the Coast and Southern Alps must have been a picture.

So Conference got off to a good start. Monday evening's get-together was attended by about 70 people

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From the colonies, cont.

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and the opportunity to meet old friends and make new acquaintances was appreciated. With Tuesday's MAF Industry Planning Workshop well-attended, Wednesday saw the commencement of Conference proper. Members were welcomed by the Mayor of Greymouth who was presented with a "Trees for Bees" yellow pohutukawa. With the arrival of Mr David Butcher, Undersecretary for Agriculture, Conference was officially opened. Wednesday's bus trip to Punakaiki was well attended, 38 people taking the opportunity to visit the area, and by all reports the tour of the pancake rocks, blow holes, and visitor centre for afternoon tea, was thoroughly enjoyed. Wednesday evening's dinner dance was very well attended with 112 indulging!!

Thursday saw the inevitable rush to finish all Conference business on time, and for those who were flying out the weather was again ideal.

It was our pleasure to be your hosts and we hope those who attended will remember their stay. As our Conference Logo depicts ... "our weather's not always like that!"

Sandy Richardson

MARLBOROUGH

A very mild winter with few frosts, but a lot of rain. Some hives already have a lot of brood and some drones.

We have formed a Pollination Association, completely autonomous to the NBA, in order to promote a more professional image. It will be necessary when the local plantings of cherries come into production — Blenheim having the only cherry packhouse in NZ certified for the Japanese market.

Conference has come and gone: three busy days making contacts and absorbing information. I personally was amazed that some of those attending failed to grasp the fact that with hive numbers increasing at 10% a year and an average sort of crop year achieving 10,000 tonnes, then we will always be producing more than our internal consumption.

Andrew Matheson, for our July meeting gave us an interesting talk on bee diseases. During the week of the Urban Tree the bee club manned a demonstration stall, showing the usual bee products, etc, and relating this to the garden pollination.

James Jenkins

SOUTH AUCKLAND

To date, August 1, it has been a very mild winter with the bees raising brood continuously and I have had drones flying from my hives in June and July. The workers have been flying just about every day bringing in loads of pollen. Hives that started the winter with plenty of stores are very strong, although maybe in six or eight weeks the story will be different if a watch is not kept on honey reserves in the hives.

On August 10 a field day held at the Agriculture Quarantine Station, Mangere Airport, was well attended. A tour of the fumigation station was very interesting, as was the display of bee products confiscated at Auckland sea and airports. Colin Rope, MAF, gave an address on "How to Make Beekeeping Pay". After lunch Dr Denis Anderson gave a brief description of his work at the DSIR, Auckland. Air NZ cargo staff told us about the transport of bees by air and experienced exporters spoke on the removal of bees from hives for packaging. The day was rounded off by Colin Rope on: "The Economics of Packing Honey", with Auckland packers forming a discussion panel. Our thanks go to the sub-committee that organised the day.

Dave Young

HAWKES BAY

July gave us two and a half times the average monthly rainfall, and most of this came down in three days. It left us with bee yards stranded, hives sitting in water, and one of our members had fifteen hives swept out to sea. Those of us without four-wheel-drive vehicles are wishing we had because we have to carry boxes of feed honey and sugar across wet and sticky paddocks. With this after three drought seasons we wonder how the coming season will treat us.

Recently our Branch started a monthly newsletter, which is sent to all members in time to give notice of our next meeting. Our editor, Dean Compton, compiles and writes it. The newsletter includes a summary of the last meeting so those unable to attend know what is happening. Dean is looking for information and articles, so come on Hawke's Bay, let's get behind him.

We extend our congratulations to Ian Berry on his re-election as President. Hawke's Bay is lucky in having Ian Berry and Dudley Ward as Branch members. See you in the next issue.

John Walker

Common interest makes for friendships

By John Heineman

I am certain that no matter where we travel in New Zealand, from Invercargill to Kaitaia, we can always knock on a beekeeper's door, be made welcome and have a yarn about the little buzzers and what goes with them while the kettle boils. More than likely we will still be there for tea and perhaps be offered a bed for the night. I have found the same also applies outside this country.

Two years ago my wife and I had a look at Rarotonga. We liked it so much that we repeated the exercise this year. Rarotonga is much in the news just now as the venue of this year's Pacific Forum and of the Pacific Mini Games. As it's currency is the NZ dollar the Cook Islanders are cashing in on tourism and making hay while the sun shines.

Shortly after our arrival the first time we wandered along those delightful little back roads and saw honey bees working all sorts of flowers. Question: any beekeepers about? A call at the MAF office assured me that indeed there was, and so a Saturday was spent with Charlie Brothers among his hives and at his home.

Now Charlie has a fair number of irons in the fire. Besides his bees, which he partly runs on Rarotonga and partly on Manaia (another island in the southern Cook group), there is the farm with poultry, pigs, and goats and growing all sorts of things: all very neat. But that's not all. He and his family also run a greengrocer shop, prepare and deliver boxes of fruit to the plane that leaves for Auckland, and if there is time to spare they go fishing in their boat.

Working with his bees was a pleasure. Smoker (fibre from a cocos tree for fuel) and hivetool were needed, but there was really no call for overalls, veil, and hat, let alone gloves. A pretty reasonable breed as Charlie had introduced Italian queens, purchased through some Auckland go-between. We made good friends in a very short time. Of course we visited them again this winter. Finished up having a terrific meal with the family. Umu (hangi) cooked pork and chicken, tarro, kumara, veges and all sorts of fruit plus coffee and home baked cake. What a meal, a true feast not to be bettered even by the chef of the "Rarotongan".

This time I also met Dr Koekoe Motopuko. The retired head of the Health Service he now devotes his time to his hives (about 60) and his interest in coconut cream venture (export). He and Mrs Motopuko also run a little neighbourhood shop.

This day too was past before I knew it had started. Almost before it was dry after an early morning downpour, I noticed the bees flat out working cocos flowers. Again the colonies were easy to handle notwithstanding the fact that we did a fair amount of stirring among bees that were pretty far from pure Italian and on a day that was not all that warm.

There were some nucs. They had cells introduced a little over four weeks before. Young vigorous queens, albeit cross mated. Four combs with eggs, larvae, and sealed brood, and a fair amount of fresh honey. So Dr Motopuko had proved that he could graft into plastic cell cups and get some well-grown and mated queens. They were put to good use that day: it was high time or the nucs would either have grown out of their pants or the queen would have become honey-bound.

After that we talked and talked bees and asked more questions than either of us could answer. And that bottle of Steinlager was just beauty! By the way, Jessie Motopuko is this year's Miss Cook Islands and was at Miami at that particular time.

I also visited the college and farm of the Seventh Day Adventist Church on Rarotonga. An impressive farm where a lot of things such as fruit and vegetables are tried out with apparent success. But their small stand of beehives was sadly overgrown with weeds and creepers. That of course does happen in a very short time.

All the same the colonies looked in need of attention. Lifting a lid I was greeted by a fair sized gheko and the hairiest and largest centipede I have ever encountered. These hives also suffered from the attention of the greater wax moth. They are a pest and will play havoc

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Common interest, cont.

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with any unoccupied combs.

During our first visit I enquired about BL. That was then not noticed in the Cook Islands. However last year some hives got burned. The question now of course is how it got there. Imported queens, imported honey?

Wild hives are about and Rarotonga's interior is pretty rugged and bushclad. A big job to clean it up with the road round the island only 32 km long.

The Cook Islands, Southern and Northern groups, are spread over an enormous distance. Situated roughly four hours flying from Auckland in a NE direction, Rarotonga lies a little north of the Tropic of Capricorn with the northermost island within 10° of the Equator. The Society Islands (Tahiti) are to the east and Tonga and Samoa lie to the west. Of all the islands only Rarotonga, Manaia, and Atiu in the Southern Group have bees. And from a beekeeper's point of view are far from occupied.

We also flew to Aitutaki where we spent five days in what goes down in the book as true paradise on earth populated by the kindest and friendliest people we have met anywhere — but without any bees. I was told however that there is an interest in having a project started.

To think that one knows all about beekeeping in a certain part of the world after seven weeks all told would be very stupid indeed. But still an impression is gained. I have no doubt that there is a potential, especially in the Southern Group, for enough honey to satisfy the demand that could be created among both islanders and tourists. Cocos palms, bananas, pawpaw, citrus, beans, coffee, and many native trees and weeds secrete much nectar. Sugar feeding is never needed because at least a trickle is coming in on most days. Plenty of pollen. The climate is gentle with temperatures mainly between 20° and 30°C. The honey we saw, had on our toast or with fruit, is amber, very papatable, but runny unless it has been in the fridge for a few hours.

As they are able to produce such a good local product it is a pity in a way to see NZ honey on the shelves of the Avarua (capital) stores. Some of the creamed honey looked really dreadful with an inch or so of frothy liquid on top. It did not look good and was certainly not advertising our NZ product to a fair number of Australian, American, and Japanese visitors.

Considerable amounts of overseas aid funds find their way to the Cook Islands. I climbed up to a new seven million gallon water reservoir: a joint project of the Cook Islands, USA, and Norway. Australia was helping in the communications field. A brand new truck and two large tractors were sitting in the MOW yard — just arrived and donated by NZ.

That's fine and good luck to them. However, it would be nice to see the Cook Islands natural resources developed to their full economic capacity.

The genuine West Coast Bee. NB. Dave Tozier, Alaska. These little "B"s are up to swimming to water-logged blooms.

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