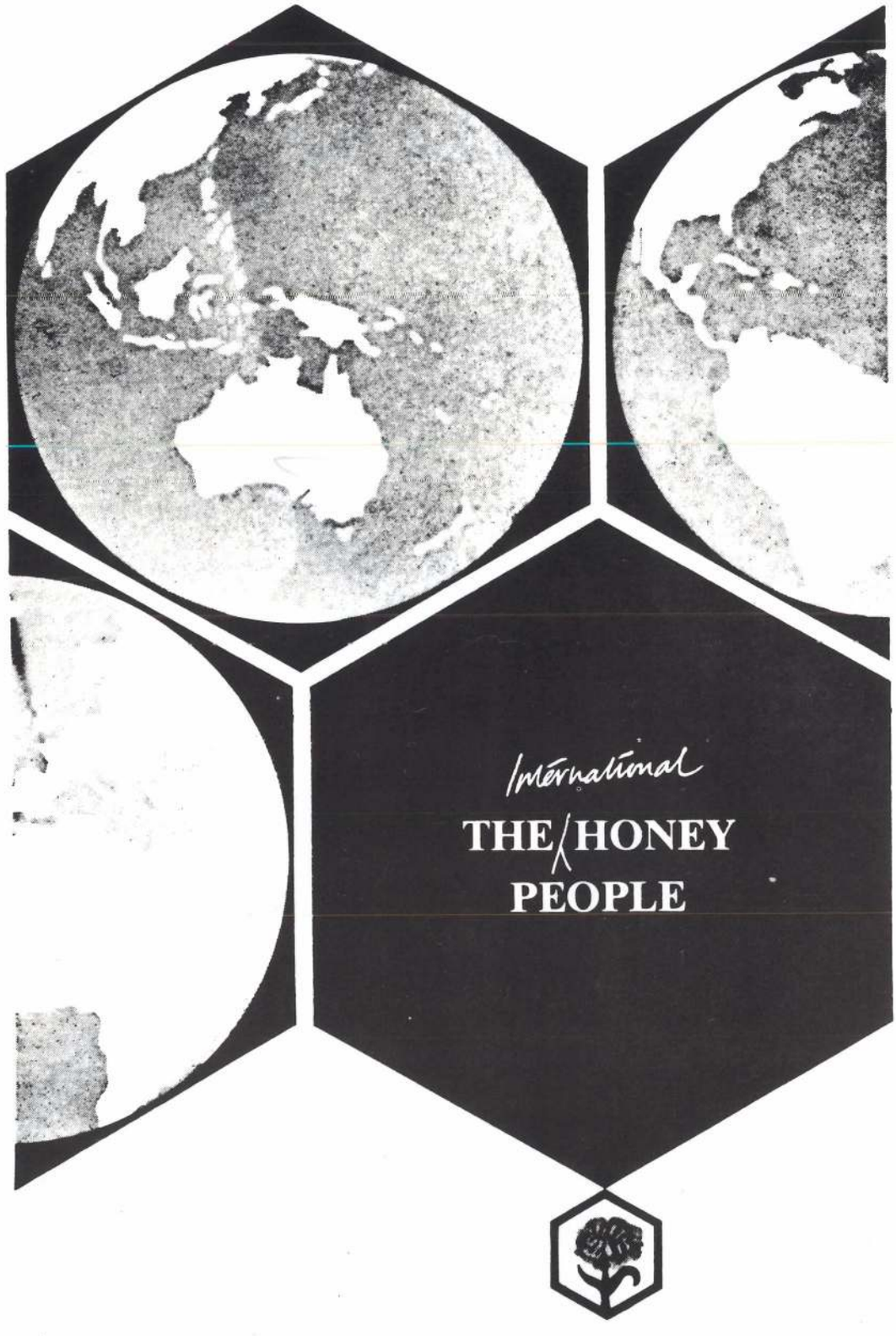
THE NEW ZEALAND beekeeper

SEPTEMBER 1983



International

THE HONEY PEOPLE

KIMPTON BROTHERS LIMITED

Honey and beeswax specialists

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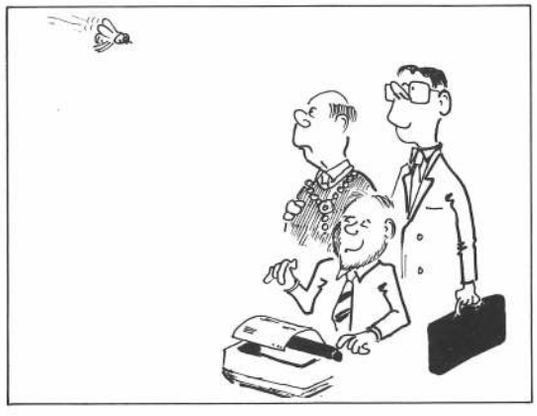

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Production charges
Advertisements should be provided in a camera-ready form or as photolitho negatives. Where copy has to be typeset, or where film work or bromides are required, these will be charged to the advertiser on a time and cost basis. Minimum charge $10.

Beekeeper rates
Registered beekeepers selling queen bees, used hives, used plant and other used apiary equipment are eligible for an advertising discount of 20 per cent of the appropriate commercial rate. Where the appropriate rate is in doubt, the editor's decision will be final.

Production charges only apply to single insertion beekeeper advertisements or where special artwork, filmwork or bromides are required.

Classifieds
Available only to registered beekeepers selling used hives, used plant and other used apiary equipment, and those seeking work in the industry. $5 a column cm. No discounts apply. No production charge. Maximum size: 1/6 page.

SUBSCRIPTIONS

Commercial beekeepers: The NZ Beekeeper is distributed free-of-charge to beekeepers with 50 or more hives, subject to payment of hive levy.

Others: Beekeepers with fewer than 50 hives and other subscribers: $12.50 a year. This includes (for New Zealand subscribers only) membership of National Beekeepers Association of New Zealand (Inc).

KING BEE

(WHERE THE NBA HAS ITS STING)

Qantas querulous

Despite indications last year that Qantas would be willing to provide pottles of New Zealand honey to first-class passengers on its flights to and from New Zealand, this no longer appears to be the case. Former NBA executive member Steve Lyttle reported to the executive that Qantas catering staff were reluctant to upset present arrangements relevant to the provision of Canadian honey on their trans-Tasman service.

A tape library

NBA librarian John Heineman has agreed to extend his duties to include the handling of film tapes and cassettes. He is keen to obtain copies of any relevant recorded material for inclusion in the library. There is a small budget available for payment where necessary.

Steve Lyttle, after making enquiries with the NZBC archives section has discovered that they only have two beekeeping tapes on file – Ivan Forster's 'Story of Bees' and another one with the perplexing title of 'Miss Mould'. Both of these half hour tapes are available from the broadcasting service at a cost of $20 each. Ian Berry told the NBA executive that he could obtain a tape by L. Swindel.

Levy heat increases

Before the NBA executive can take legal action against beekeepers suspected of understating their hive levy returns, it is necessary to find out the legal remedies and penalties available.

With some evidence of understated returns now in executive hands and with producer feeling becoming intense on this matter, a test case would not be out of the question, according to executive secretary Steuart Goodman.

New NBA president and vice-president

Tony Clissold did not seek re-election as president of NBA. He thanked conference for the great honour of their office over the last two years and said it was now time to stand aside for another man.

Ian Berry was the only nomination (Stuckey/Lyttle). He pledged his best toward this extension of his life's work with bees.

Mike Stuckey rose again to nominate "A young man I think has a contribution to make and who will go far in the industry, Allen McCaw," for the vice presidency. Tony Clissold seconded and Allen McCaw, the only nominee, was elected.

Conference tree

In keeping with established custom, a tree was presented by the 1983 NBA Conference to the people of Nelson, this year's host city.

A fine specimen of Grevillia robusta was accepted by the deputy mayor, Mrs Pat Tindall, from Tony Clissold. She assured delegates it was most welcome and that council staff were well aware of their responsibility to plant multi use tree types.

Museum piece

Mervyn Cloake suggested to conference that thought be given at branch level to the setting up of a beekeeping museum.

Many memories and relics were disappearing with the passage of time. Collections of historical documents and photographs should also be organised.

"The industry owes considerable debt to the pioneers," he said, "and every year we wait now, increases our chances of losing touch with those days and those people."

Export advisory service here

by Ian Berry

THE NBA executive has set up an informal export advisory service, to meet the needs of honey packers who wish to export.

This follows 1983 NBA conference support for "the executive to investigate the need for an export advisory service to assist in the orderly exporting of all honey, packed, bulk and comb, as well as other bee-related products."

At their meeting after the conference, the NBA executive decided the most practical way to provide this service would be to publish a list of beekeepers who were involved in the export of honey and other bee products, and who are prepared in the interests of orderly export marketing, to offer their advice and experience to other beekeepers who wish to enter the export field. Time did not allow the compiling of a very full list for this issue of 'The NZ Beekeeper' but it is hoped to publish a list in each issue of the magazine from now on.

It would be appreciated if any beekeeper who feels they would be able to assist with this practical and worthwhile exercise could contact the general secretary or the president so their name and address could be published in the next issue. We thank the following who have already agreed to be in this service.

Terry Gavin, Gavins Apiaries Ltd., P.O. Box 1582, Whangarei. Phone Mangakahia 893.

Michael Stuckey, Waitemata Honey Co Ltd., P.O. Box 35233, Browns Bay, Auckland. Phone Auckland 4038778.

John & Helen Wright, South Auckland Apiaries Ltd., Portsmouth Road, Bombay, South Auckland. Phone Bombay 628.

Percy Berry, Arataki Honey Limited, P.O. Box 16, Havelock North. Phone Hastings 777300 Business, 777843 Private.

Jasper Bray, Airborne Honey Ltd., P.O. Box 28, Leeston. Phone Leeston 569 Business, 792 Private.

Gary Jeffery, Mountain Beech Apiaries, Loburn, 2. R.D., Rangiora. Phone Loburn 745.

Keith Herron, Greenvale Apiaries, 5 R.D., Gore. Phone Waikaka 738.

Murray Ballantyne, Southland Comb Honey Co-operative, P.O. Box 7, Woodlands, Southland. Phone Invercargill 393090.

Price freeze exemption for BOP pollinators

But they must still be careful to avoid price-fixing allegations

THE BAY OF PLENTY kiwifruit pollination service industry is exempt from the price freeze. The exemption was granted in July following intensive research and lobbying by all parties involved in the industry.

President of the Bay of Plenty Pollination Committee, Bruce Stanley, reported to the NBA Conference that it was "most significant" to see it established that the pollination service industry must be self supporting financially to achieve rapid, orderly, growth.

"There is no doubt in that unless the exemption was granted there would have been, from this season, serious effect to the Kiwifruit Orcharding Industry."

A Department of Trade and Industries team carried out a full investigation of the committee itself, local orcharding groups and more detailed investigation of 10 randomly chosen beekeepers.

The Kiwifruit Pollination Service Industry was accepted by Trade and Industry as being a new but essential and strongly developing industry whose costs were not fully reflected in charges when the Price Freeze was set up.

While application for exemption was made on behalf of the national industry, Trade and Industry finally restricted the exemption to the Bay of Plenty suppliers.

Mr Stanley paid tribute to the spirit of co-operation which came from all parties involved in the submissions: "We had strong support from beekeeper groups, from the orcharding community and from Trevor Bryant and Murray Reid of MAF when we asked. Murray Reid said MAF were responding to solve a problem which was vital to the kiwifruit industry. All the local MPs were co-opted for help and used to our maximum benefit."

For the future, Mr Stanley said the orcharding industry must receive the best possible service. Beekeepers and MAF are combining to offer intensive workshop courses.

Some beekeepers feel an independent and professional association to set and police standards is essential. The question of standards is receiving much consideration and there is commitment of all in the industry to high standards of service.

Trade and Industry have warned that there must be no contravening of the Trade Practices Act: no price fixing.

"In the past there has been a wide range of prices, but most have accepted the security, for beekeeper and orcharding interests sake, of charging similar rates.

"I thought that beekeepers would experience some difficulty in addressing this problem. So long as individuals freely set their own charge-out rate there is no contravention of the Trade Practices Act."

60% more hives needed

Hive requirements will increase by around 60 per cent per annum to 1986 and possibly greater increases to 1990 are expected in the Bay of Plenty.

"From this season, all the slack from existing available honey producing hives will be taken up. Therefore all extra hive requirements are from increases. There are an estimated 56000 hives needed by 1986 alone. This year 18000 hives are in use."

The delicate beekeeping question of sites will be the subject of a workshop in August.

New and skilled beekeepers will come from new work opportunities, the Bay of Plenty Community College and with MAF assistance. Several new beekeepers are setting up now. The Bay of Plenty branch of the Beekeepers Association has instituted a 'Young Beekeeper of the Year' award.

The past attitudes of lending institutions to beekeepers may prove to be a major problem to resolve. New beekeepers adopting a 'fast track' approach to development could well be handicapped by existing financial practices.

Another potentially critical problem area could be material supplies: Foundation, queens etc. This needs to be investigated along with the logistics of moving say 100000 hives into the Bay of Plenty in 1990 over a three or four week period. Public safety must also be considered.

It is also essential that beekeepers keep up close liaison with orchardists over spray damage.

Introduced insects feature at MAF Nelson seminar

ABOUT 140 people, mainly beekeepers, attended the Ministry of Agriculture & Fisheries seminar in Nelson last month. The purpose of the day was to acquaint beekeepers with the latest developments in pollination research, and pollen production and marketing.

The programme also included discussion on the DSIR's biological control programmes, because of the recent controversy about the effects of these on beekeeping.

Three scientists spoke about pollination research – Dr Dan Pearson of DSIR on white clover, Dr Murray Hopping of MAF on spray pollinating kiwifruit, and Dr Barry Donovan of DSIR about the insects that visit kiwifruit.

Mr Lindsay Jeffs spoke about a work skills programme that will increase nectar and pollen supplies for beekeepers, and Mr Adrian Tasman shared his experience in the processing and marketing of pollen.

Biological control programmes have been in the news lately, and at the seminar were two DSIR scientists, Dr Richard Hill and Dr Barry Donovan. They spoke about control of weeds and German wasps. Dr Donovan also reported the discovery of another serious wasp pest in Dunedin.

MAF will be publishing the proceedings of the seminar and copies will be sent to everyone who registered for the seminar. They will also be available for purchase, but please do not enquire about this yet, as an announcement will be made when copies are available.

Bee venom desensitisation is a curious process

But fortunately it's one that works

BEE VENOM desensitising works as a treatment for anaphylactic reactions to bee stings and it is safe but an arduous and time consuming process.

No-one understands why it works or can see any prospect of immediate breakthrough to an improved treatment.

Dr David C. Sutherland, senior lecturer in Clinical Immunology at the University of Auckland Medical School, has been researching anaphylactic (the severest type of allergy reaction, which can lead from swelling to total physical collapse in two to 20 minutes) reactions for three years now.

"We are working in two areas really, the first being how treatment works, and we are also looking for a test which allows us to confidently say who is immune and which patients are still at risk."

"There is a compounding variable involved too: Forty per cent of people who have an anaphylactic reaction to a bee sting will not have one next time they are stung.

"We now think that the mashed up bee body treatment claimed its success from among that forty per cent and really had no effect itself at all."

Desensitising has been around for about fifty years. A very tiny dose of bee venom – about one five hundredth of a bee sting – is administered at first and slowly built up to two stings weekly, then two weekly, then monthly.

"A working beekeeper marks his calendar to ensure he gets the two stings every 28 days. If he does not then he usually goes out and stings himself."

It appears the stinging must go on ad infinitum. Researchers at the Mayo Clinic and Baltimore in the United States have been treating people for four years now.

"What they are saying is keep it up for five years then come back and we will look at it then," said Dr Sutherland.

And what that means is they at least by then will have five more years of test results behind them and some results may be showing up on the concept level to indicate why the treatment works.

Is El Nino to be 1984's no-no?

LAST NOVEMBER the Pacific rose 20 centimetres and seven degrees above normal and Peruvians knew El Nino (the Christ child) had arrived a month early.

Global havoc was wrought as a consequence of this climatic aberration. Its effects were felt as storms over Tahiti, drought in Australia and Africa and floods in Central and South America.

Satellite borne research indicates the dominance of the Pacific on world climate and El Nino is a graphic example of the power unleashed.

Storms turned swank Californian suburbs back into beaches and flooded 600000 acres of Mississippi farmlands. India had poor monsoons in 1981, none last year and drought now afflicts three quarters of the country.

In New Zealand constant winds blew away honey crop prospects last season. And no-one knows what will happen this year.

The best American predictions are centered around temperatures in the Pacific dropping. Over in Peru it is winter now and the Humboldt current should be flowing up the coast strong and cold.

Water temperatures have only dropped one degree and the south west trades have not picked up. Indications are that even if El Nino stays away this year it will take at least a further year for global weather to stabilise.

And that can only intensify the famine, agricultural and property damage holocaust of the last year.

OBITUARIES

John Lloyd

MR JOHN Lloyd well known in beekeeping circles has died in Hawera after a long illness.

John was first introduced to bees at a young age by his father who was also a beekeeper.

As his hive numbers increased, a brother joined the business, which became widely known in the 1930s and 40s as H.E. Lloyd and Sons, and was based at Manaia. For many years, the firm packed and sold retail packs of honey. In latter years all the honey produced was sold as bulk.

Eventually when his beekeeping business was sold, Mr Lloyd kept a small number of hives and still continued to assist anyone who came to him with their beekeeping problems.

His wider interests included poultry, Jersey stock, vegetable gardening and trout fishing.

Mr Lloyd is survived by his wife Margaret.

Peter Lucas

THE SUDDEN death of Mr Peter Lucas on May 17, 1983, has ended a very close relationship with the NBA over 50 years.

Peter was one of the coast's pioneer beekeepers and kept bees in the Hari Hari area until the early 1970s. His first hives were purchased in Hari Hari and were carried by stretcher to their new sites. New hives were obtained by catching wild (black) swarms, often resorting to banging on a kerosene tin in an effort to settle them. Hari Hari, of course, was not lush pasture as it is today, but heavily timbered and required much hard work to establish apiary sites.

Many NBA members will remember Peter for his warm hospitality as they travelled through Westland, and for his many humorous stories that he was gifted at telling.

Until his death Peter played an active roll in the West Coast Branch by writing the West Coast notes for this magazine.

With Peter's passing goes a wealth of knowledge on beekeeping from pioneer days to present times, and ends a lifetime love of beekeeping.

Three new beekeeping courses

BAY OF PLENTY

TAURANGA HAS become a centre for teaching and training in beekeeping with the appointment of Nick Wallingford to the Bay of Plenty Community College.

His brief is to develop methods and materials for teaching and training in beekeeping. His courses and packages are to be applicable to the whole country and made available for use by other groups.

Essentially he will be reaching out to three separate groups: Hobby beekeepers, workers in commercial beekeeping and the general public – especially growers and students of horticulture and agriculture that affect, and are affected by, beekeeping.

More than 400 people took up hobby beekeeping last year and they join 5000 others throughout the country. Many of these people see a beehive as an extension of the home garden, others seek honey as a natural food, some keep a hive in response to economic conditions.

"They need to learn the skills and techniques of beekeeping to avoid disastrous consequences which would affect us all. If you lose interest in your garden, all that will happen is weeds taking over the carrots, but neglected bee hives are a potential menace and source of disease infection," observed Nick Wallingford in a report to the 1983 NBA Conference.

A workbook is in production to inform the hobbyist on equipment and management and, hopefully, instil in them "a very real sense of the responsibility needed to keep bees as a hobby."

For the commercial beekeeper and his workers there will be a certificate level programme.

"The National Diploma in Apiculture has produced five graduates – all advisory staff within MAF – in the 20 years of its existence.

"A lack of tuition and feedback has caused most students to drop out."

Tremendous growth is projected in Bay of Plenty hive numbers – 50000 by the end of the decade and Nick Wallingford sees his appointment as direct response to this. And to recognition of beekeeping as a growth area with development potential for

Kevin Hearle, principal, Bay of Plenty Community College and tutor, Nick Wallingford.

exports of hive and pollination products.

Training of personnel to meet these needs will be done using a series of modules which students can take at their own pace.

"Each module will contain reading lists, explanatory notes and supplementary material. A series of questions on the topic complete each module and tutors can suggest further study if needed. Examinations would be the final stage for each module."

Facilities are being built at the College to house demonstration honey house and apiary. These will be the focus for practical education through two or three day workshops.

"Two such units are being organised in conjunction with MAF to run this spring: one on queen rearing and one on pollination."

College facilities will also be made available to the industry and MAF for field days and seminars.

One of the most valuable features Nick Wallingford sees in his appointment is the education of future growers to more fully grasp the importance of what beekeepers do.

"Provision of nectar and pollen sources, care in the use of pesticides, orchard layouts with the beekeeper and pollination in mind – all these and more need to be presented to non-beekeeper groups as part of our 'beekeeping education' programme."

In the long term, Nick Wallingford seeks to benefit all of beekeeping through these educational programmes. While encouraging response from within the industry – "both positive and brickbats" – he invites us all to take as wide a view of the industry as possible.

"I would hope that you will see that even the work that I do that doesn't apply to you directly will in the long term serve to benefit all of beekeeping and I ask for your support in this work as well."

POVERTY BAY

Dr Alan Barber, tutor in communications and beekeeping, reports on developments at the Tairawhiti Community College.

HORTICULTURE AND beekeeping is receiving new emphasis at Tairawhiti Community College, with the purchase of a 15 acre block of land in the middle of Gisborne. A fully productive horticulture unit, supporting green house, shadehouse, and the usual nursery facilities, is being developed here as is a model apiary of twenty hives which is protected by a shelter belt of basically tree lucerne, but including various natives and exotics which will provide year-long pollen and nectar.

The focus is on beekeeping as it relates to horticulture and regular classes are being taken with the various horticulture courses offered by the College. These include night-classes for hobbyists.

The biggest development, however, will take place in the last term of this year, from September to December, when there will be a twelve week course in beekeeping under the Department of Labour's YPTP (Young Person's Training Programme) scheme. Fifteen students will be selected from those registered as unemployed in the Gisborne–East Coast area, and they will be trained in all aspects of beekeeping, including queen raising, with a view to tapping the potential market for both full-time and seasonal work

in beekeeping.

Two and a half days a week will be devoted to classroom activities which will include financial management and taxation, basic carpentry, engineering, motor mechanics, horticultural practice (including tree identification), and environmental studies, as well as all aspects of the theory of beekeeping.

The apiary at the horticulture unit will be used for practical lessons and a queen raising unit will be set up. For the other two and a half days of the week, the students will be engaged in practical hive management using the resources offered by local beekeepers who have been very generous in their support. This will include the nitty-gritty work of box-assembly, framing and so on, through to kiwifruit servicing and spring inspections.

This course is, necessarily, a pilot one and there may be some hitches, but it is hoped that the farming community will benefit from it as much as the Community College and the students. By the end of the course the College apiary here should be in full operation and a honey-house with attendant facilities could be the next step.

SOUTH OTAGO

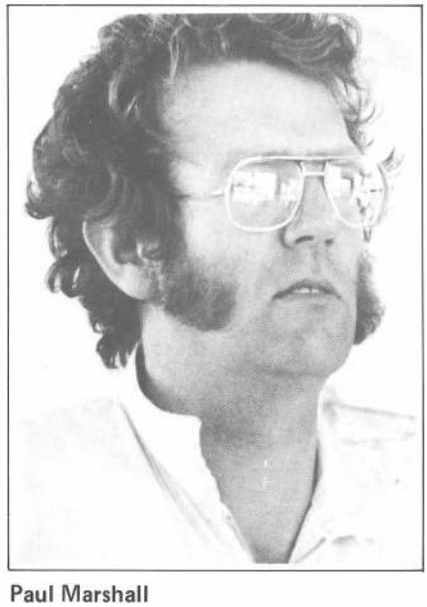
LAST OCTOBER Paul Marshall was invited to set up a beekeeping unit as an educational aid for the Telford Farm Training Institute at Balclutha, in the southern half of the South Island.

Telford, a 1600 acre property is divided into four farms of sheep, dairy, mixed farming and a lamb and beef unit, which are used in the training of some 50 one year agricultural students. Also in the set-up is a piggery, a horticulture unit, a farm forestry unit, as well as wood and metal workshops.

A board of management sets the policy for the running of Telford, and employs the managers of these units, which must be managed to the point of being self-supporting. The administration of the hostels, workshops, tutorial staff and the numerous short courses are the responsibilities of the Ministry of Agriculture and Fisheries. In other words, Telford can be likened to a private institute which has government blessing.

On meeting with the board, Paul Marshall was advised that they were looking to establish a self-supporting commercial beekeeping unit as an educational aid for the agricultural students. While of the opinion that this was the best proposed public relations job ever offered to the beekeeping industry, Mr Marshall suggested that for a more balanced approach to the proposal, that Telford should perhaps include two to three beekeeping students in their yearly intake, the industry only being able to handle this input in any one year.

These cadets would not leave Telford at the end of their year as fully fledged beekeepers, but as useful employees, able to be of immediate use to their employers, who have not had the expense of a year's training. Hopefully, they would be well grounded in the basics of beekeeping, and be able to make intelligent decisions if a situation so demands.



Paul Marshall

However, in this early stage of beekeeping training development, Mr Marshall feels that the industry cannot afford to sit back and let it all happen. The industry must indicate the areas it would like developed in a training scheme. The Telford Institute as its name indicates, is in the area of training, while MAF handles the education side. In this aspect, the beekeeping unit would be added value to the short courses that are held from time to time at Telford.

While Mr Marshall was at Telford the board of management outlined their beekeeping aspirations:

1st year	500 hives and beekeeping students
2nd year	Increase of 200 hives
3rd year	The unit to be self-supporting.

Assistance has already come to hand from many beekeepers, Ivan Dickinson and Tony Clissold providing much needed support and advice.

But in the initial stages, Telford is working on a shoe string budget, a situation not new for beekeepers. So, with much interest in next year's beekeeping cadetship being evident, help with donations of any old surplus gear such as floorboards, lids, super and nuc boxes, is badly needed. While nucs of bees, and queens, at "mates rates" will be gratefully received.

Paul Marshall believes the concept of having a beekeeping unit working alongside a Farm Training Institute is an exciting, worthwhile project that puts beekeeping into proper perspective in the overall agricultural industry.

BEE TREES

Beautiful NZ scheme now underway

BEE-TREE advocates are advised that large scale tree plantings are being planned along scenic highways and byways under the Beautiful New Zealand Scheme.

The Advisory Committee is seeking advice and involvement from the community on both local and national projects.

Their main guidelines are:

That projects should bring improvement in the landscape,

That they are associated with a main tourist route and

That they should 'help to create jobs for the unemployed or promote skills leading to potential longer term employment.'

Those individuals or groups who would wish to influence the selection of tree species or suggest schemes should contact:

The Secretary,
Beautiful New Zealand Advisory Committee,
Ministry of Works and Development,
Box 12-041,
Wellington.

or their local District Commissioner of Works.

At the 1982 industry conference, MAF spokesman Mike Gould chided the NBA for its poor public relations. He also said that the minister of agriculture had consented to the transfer of the full hive levy to the NBA on the understanding that it would gear up its head office operations so that they were strong, professional and effective.

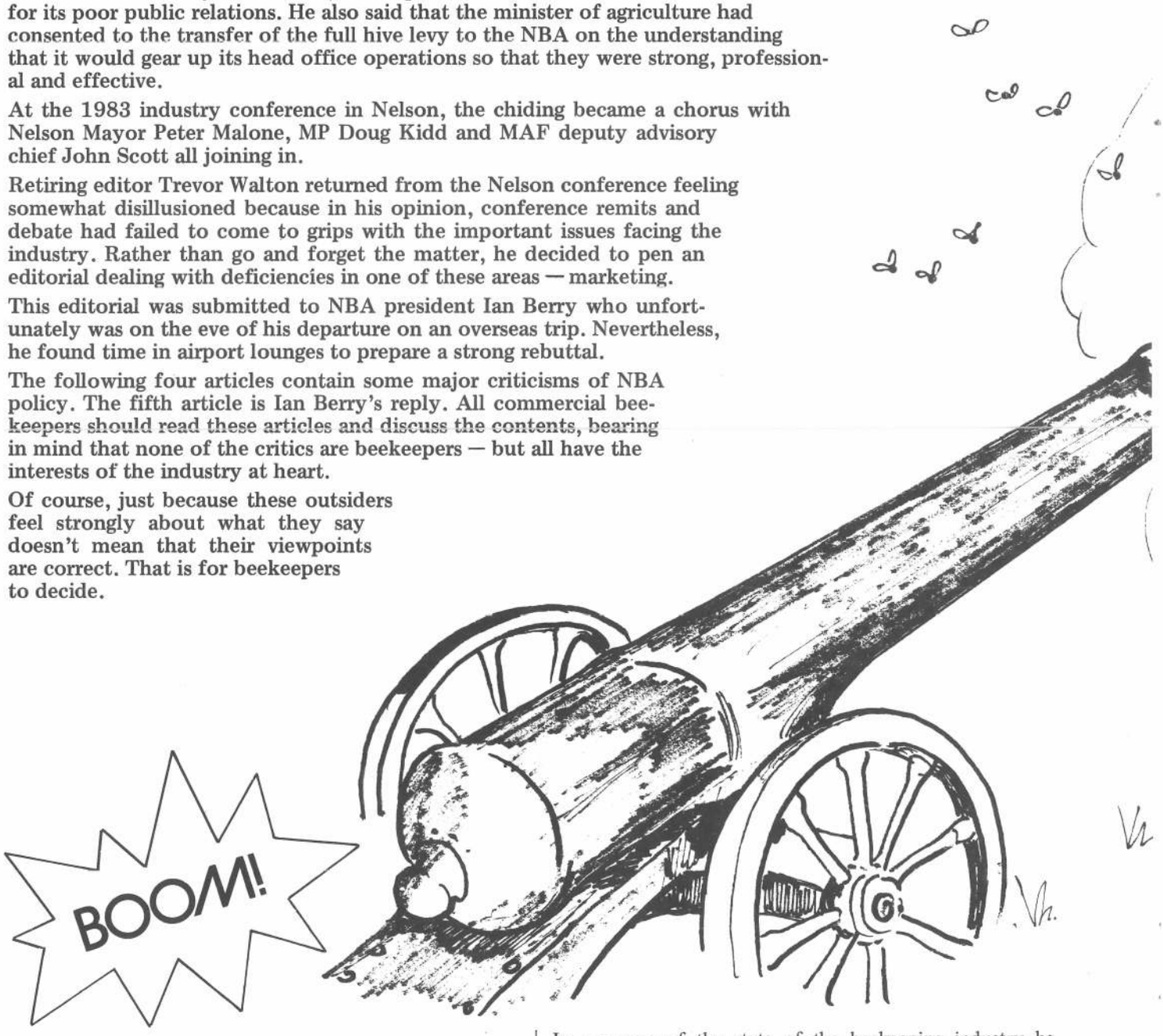
At the 1983 industry conference in Nelson, the chiding became a chorus with Nelson Mayor Peter Malone, MP Doug Kidd and MAF deputy advisory chief John Scott all joining in.

Retiring editor Trevor Walton returned from the Nelson conference feeling somewhat disillusioned because in his opinion, conference remits and debate had failed to come to grips with the important issues facing the industry. Rather than go and forget the matter, he decided to pen an editorial dealing with deficiencies in one of these areas — marketing.

This editorial was submitted to NBA president Ian Berry who unfortunately was on the eve of his departure on an overseas trip. Nevertheless, he found time in airport lounges to prepare a strong rebuttal.

The following four articles contain some major criticisms of NBA policy. The fifth article is Ian Berry's reply. All commercial beekeepers should read these articles and discuss the contents, bearing in mind that none of the critics are beekeepers — but all have the interests of the industry at heart.

Of course, just because these outsiders feel strongly about what they say doesn't mean that their viewpoints are correct. That is for beekeepers to decide.



Marketing– our Achilles heel

ONE TONIC Mr D.L. Kidd, MP for Marlborough, recommended in his address to the 1983 NBA Conference was cider vinegar and honey to be consumed for the relief of individual human unease.

He also saw the study of promotion and marketing as a necessary tonic.

"Marketing has been our Achilles heel for generations and is only now being recognised as an important science.

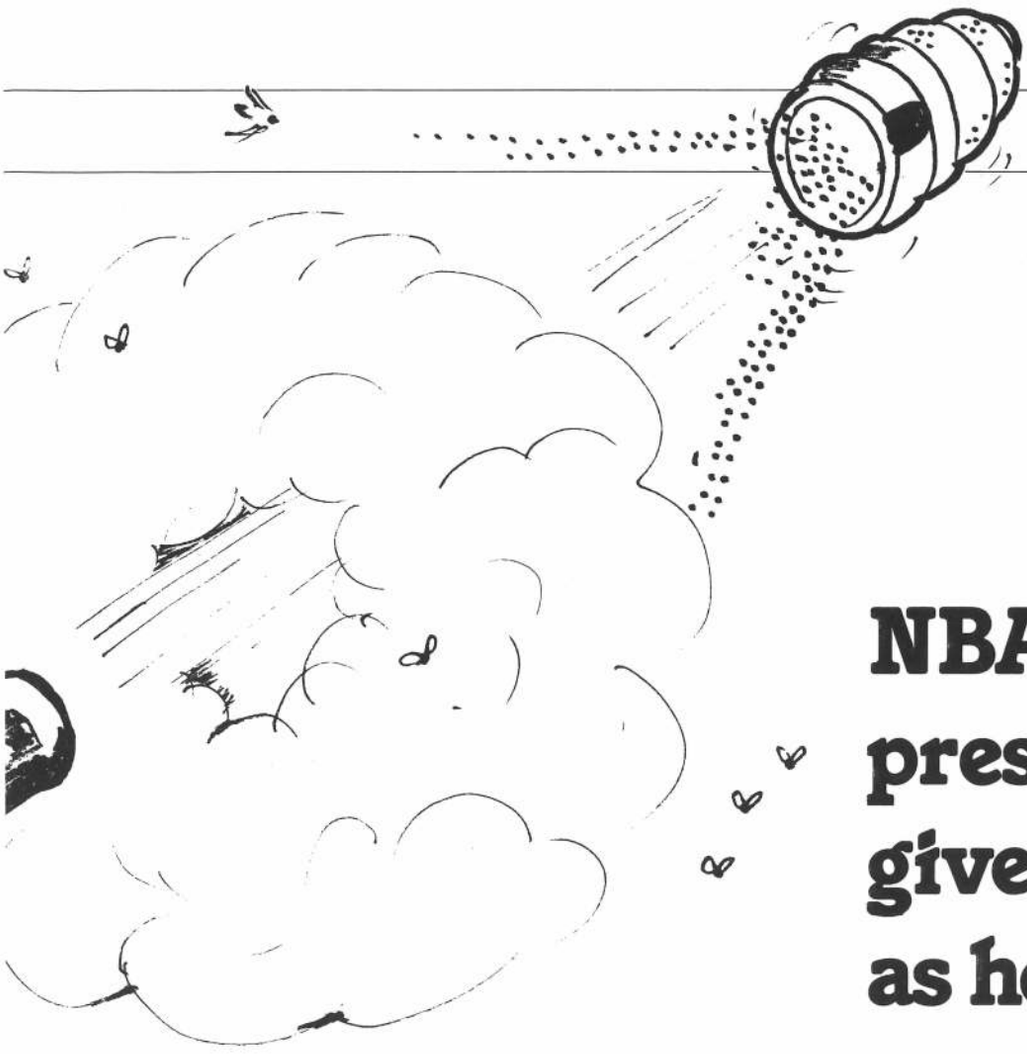
"We have got to purchase the best advice in this field in order to persuade people overseas to purchase the best products in their marketplace; ours. Always remember, when you pay peanuts you get monkeys."

In a survey of the state of the beekeeping industry he recognised the challenges and changes ahead. Projections show a four fold increase in the number of hives in Nelson alone over the next five years. Allied to this was change from production to a service industry with involvement in the kiwifruit industry.

"It is no longer enough to work hard and honestly – life is more cruel than that," he said. The maximisation of individual returns was of paramount importance. If this was best achieved through the combining of large numbers of individuals then it should be remembered, he said, that far from being socialism, this was classic capitalism in action.

As to the future, Mr Kidd recognised the strong growth of the industry at present: "Yours is an industry which goes back to the edge of time and is central to life itself.

"Goodness knows what sized venue you will need to hold your conference in a few years time."



NBA president gives as good as he gets

No export drive without central planning

"I FIND IT difficult to see why MAF should continue to allocate resources to an industry which does not appear to want to play a part in planning its own future."

Thus spoke Mr John Scott, deputy director of advisory services, MAF, at the 1983 NBA Conference in Nelson. He continued:

"Growth in exports is MAF's focus and we see this as where our publicly funded resource can achieve the most beneficial result for the country as a whole.

"There are a number of individual groups within horticulture with clear opportunities for increased volume of exports. Others have possibilities.

"I believe the government of the people of New Zealand, through MAF, should be making resources available to assist particular individual groups to further examine product opportunities and marketing opportunities."

"There is a major challenge facing sheep farmers to adapt management techniques to produce lamb in line with the new Meat Board grading system. Larger, leaner lambs.

"We at MAF have a role to play in helping farmers achieve this objective.

"I find it difficult to see why MAF should continue to allocate resources to an industry which does not appear to want to play a part in planning its own future. But which is prepared to seek further research without clear ideas of what the significant research needs are. And which seeks the assistance of an advisory service in running seminars without stating the industry goals.

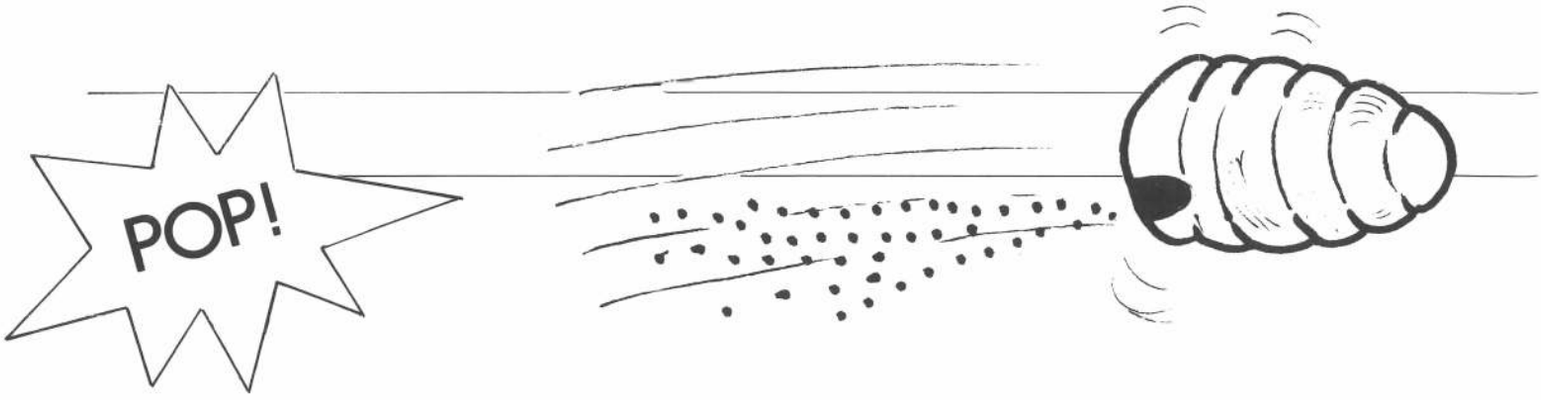
"I believe that the current beekeeping advisory group, small though it may be, is a highly competent and enthusiastic force which over the years has done much to help beekeepers.

"We have now reached the stage however where the industry itself, if it is going to make progress, must take some responsibility in charting its own course and specifying to research agencies the major barriers to progress and where the advisory input will have its greatest impact in planning.

"MAF will provide what assistance it can to help in the planning process but the initiative must come from the beekeepers national organisation.

"Our attitudes are a reflection of priorities we are being forced to adopt when the resources allocated are not keeping pace with the opportunities we see.

"I am quite sure it is wrong to think an export drive can be developed without any central organisation at all." ▶



You must learn to use the media

ON A CRISP clear Nelson Wednesday, Mayor Pat Malone extended a fulsome welcome to conference in his fair city.

Rambling around our industry he observed that, like most other members of the public, he knew little of beekeeping other than the fact that, "bees collect pollen and convert it to honey."

Why, then, does the public not know more, he asked. "Maybe, just maybe, you haven't used the media enough to publicise it," he answered.

"For", he added, "those with a message for the public must learn to use the media."

Does, for instance, horticulture adequately value the part of bees in their enterprise? His research had shown him that over a period which had seen a twenty fold increase in overall retail prices, honey prices had only increased six-fold.

"It seems that something has to be promoted," he said. "Could it be that it must be the bees themselves, so the public is made aware of the absolutely vital role they play in the chain of life?"

Wake up your marketing ideas, NBA

by Trevor Walton.

GOODNESS ONLY knows what beekeepers mean when they talk about marketing. Because little understanding of the marketplace was shown at this year's industry conference.

Remits asking for money from the industry trust to be spent on promotion of honey were accompanied by some extraordinary statements. Among them:

- "There's no need to advertise or promote right now, because there's likely to be a shortage of honey later in the season and promotion might increase pressure for imports . . . and that's a Pandora's box of a different shape altogether."
- "I believe that promotion should be carried out by individual packers. Why should the industry have to do things which should be the responsibility of individuals."
- "What moral right do we have to encourage New Zealanders to eat more honey, when they are already some of the biggest honey-eaters in the world."
- "We have seen the effects of the 'Bigger Block' and 'Trim Pork' promotions, couldn't ex-HMA funds be used to increase NZ consumption so as to benefit the whole industry?"
- "We have been told that when you pay peanuts for promotion, you get monkeys. But equally, you can spend megabucks and still get monkeys. Promotion is not necessarily a matter of money – when Ed Hillary climbed Mount Everest it resulted in a big increase in honey sales and it didn't cost us a penny."
- "If we have a surplus of honey it will be very wise to have some idea of what to do with it."

It is time that beekeepers (both as an association and as individuals) put as much effort into marketing hive products as they do into producing them. It's a fact of life which Doug Kidd and John Scott tried to impress on the 1983 NBA conference to no avail. It's something which appears self-evident to outsiders, but fails to strike a chord among apiarists.

In the promotion debates at this year's conference, for instance, there was a total focus on promoting for increased sales, principally on the local market. Delegates wanted to be able to shift honey mountains in the event of a glut year.

With so many producers in financial straits right now, without a surplus, why didn't anyone call for a marketing plan which would increase returns year in and year out? Is it the practice of beekeepers to keep bees for the benefit of the bees, or doesn't the concept of a fair return for a lifetime's work strike a chord in the industry?

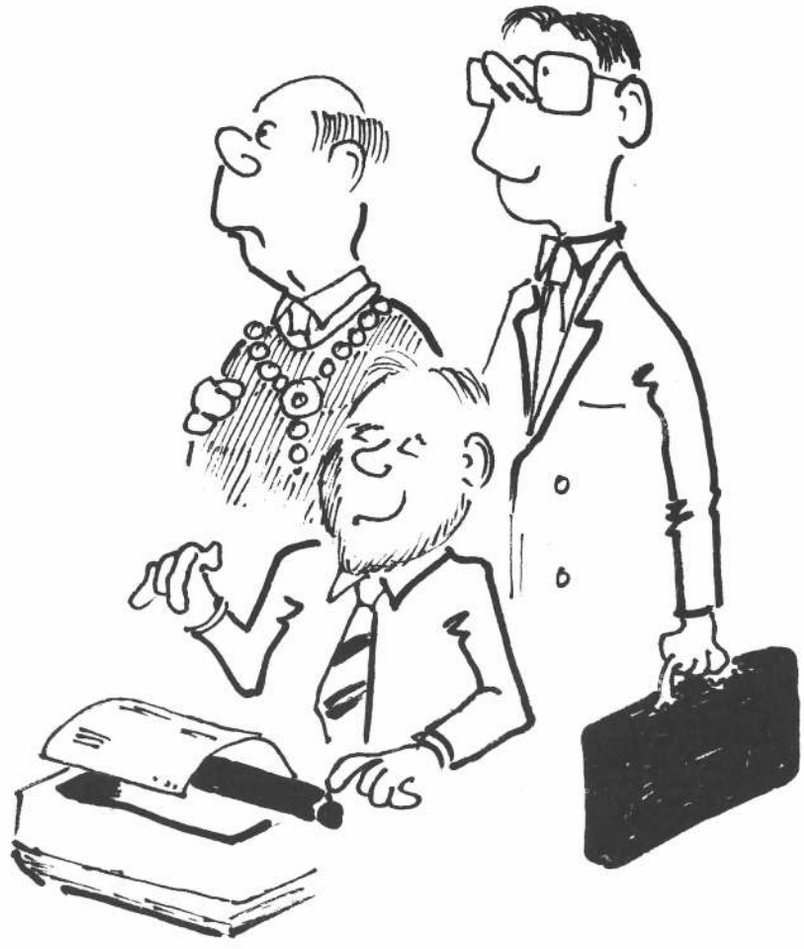
With the rest of New Zealand agriculture waking up to the benefits of adopting a marketing approach – they've seen how well the kiwifruit industry is going and have witnessed the success of 'Trim Pork', 'Bigger Block' and 'Just Juice' – it's time the honey industry plugged into what's happening.

A market-oriented honey industry

1. There are two types of industry: Those which are market-oriented and those which are production-oriented.

   Market-oriented industries manage all aspects of production and marketing so as to maximise returns for all involved in the production-marketing chain.

   Production-oriented industries gear virtually all their decision making to their ability to produce. Cost minimisation and yield maximisation are used as tools to



increase returns but in unfavourable years, production-oriented businesses have no influence on the market-place – they are price-takers.

2. The NZ honey industry is a classic example of a production-oriented industry. By and large honey is produced and sold regardless of conditions in the market-place, with individual sellers having minimal influence on the price they receive for their product.
3. Like most primary producers, beekeepers are many and isolated, while the buyers of their produce are few and well-informed. This disadvantage is compounded by the tendency of the seller to see his fellow producer as his competitor, when in fact his main competitor is the manufacturer of alternative products – in the case of honey, spreads like jam, peanut butter and so on.

   In this situation, co-operation among sellers is essential if they are to market their produce effectively. But the buyer still has the advantage that most sellers are wedded to a nebulous concept of free enterprise and it is extremely easy for a buyer to convince a seller that co-operation is a sell-out to socialism, rather than a basic principle of workable capitalism.
4. An individual beekeeper with honey to sell will invariably see supply and demand as the sole determinants of the price he receives. Because he holds this simplistic view and because he sees himself as competing with other beekeepers for sales, it is extremely easy for buyers to get sellers to undercut each other during times of apparent surplus . . . even though price may have very little effect on the total volume of honey consumed.
5. There has always been an awareness among primary producers of advertising and promotion, though there is almost no awareness that these techniques are only part of a marketing package.

   The 'Bigger Block', 'Trim Pork' and 'Just Juice' promotions are just the tip of a marketing iceberg. Unseen, behind the highly successful TV commercials, is extensive market research and analysis used to devise better product formulations and quality control, packaging, brand names, market segmentation, pricing, merchandising, promotions, consumer education programmes and so on.

   Unless approached in this way, promotion during a time of surplus may just be money down the drain – in effect, alerting consumers that a product is El Cheapo and ensuring that more is sold for less.
6. To stabilise markets for any primary product, it is necessary to move as far as possible away from commodity selling. Product which is packaged and sold under a brand name in an established market is far less likely to be subject to supply/demand fluctuations on the commodity market.

   To the extent that branded, packaged lines can be slotted into elite market segments, the better. Because ▶

▶ the higher the incomes of target consumers, the lesser the importance of price in their purchase decisions.

7. A basic of good marketing is that once a market is established, it must always be supplied with adequate product. If this means satisfying the local market by importing honey from Australia in lean years, so be it. Of course, the market-wise local packer will make sure he does the importing, rather than allowing an overseas agency to dump product to fill the gap.

   A good example, is the strong demand for heather honey in the United Kingdom being partially met by blended NZ manuka honey sold under heather honey brand names.

Currently, there are many beekeepers who work very hard for little financial benefit. The way-of-life they originally pursued when they entered the industry has been sacrificed in pursuit of the money-go-round ... more hives, more work, more debt servicing and little time for families or relaxation.

It's a pattern which is not unusual in primary industries the world over. The only way it can be broken is by adopting a marketing orientation. The science of marketing being based on the satisfaction of consumer needs, while ensuring adequate profitability for all involved in the marketing chain from original production through to retailing.

In essence, the aim of a marketing approach is to change producers from being price-takers to price-setters.

Because of the high quality of NZ honey and the relatively small part it comprises of world production, such an approach is highly likely to succeed. It should be possible to develop consumer brand-name markets in New Zealand and overseas for all our better lines of honey, catering for all our production in poor to average years. In glut years, some of the extra production may have to be sold packed or in bulk at a discount, but if the marketing job has been done properly, this should have minimal effect on the price received for the majority of the crop.

To take such an approach will, of course, cost money – something which is not very close to the industry's heart. At this year's conference one delegate went so far as to say that the industry needn't have worried about subsidising beekeeper education programmes because, "now we have two courses – one in each island – and they've been organised without any cost to beekeepers." The delegate was using this example as an argument against spending large sums on promotion of honey. He concluded that the industry didn't need to rush into planning or spending because often something turned up free-of-charge in the end.

In fact, when it comes to marketing, public relations, education and research – matters which the industry usually handles on a shoe string or not at all – things don't usually turn out trumps when left to themselves. The financial state of most beekeepers over the last few seasons is evidence enough of that. So too is the almost non-existent public image of beekeeping.

It is perhaps a pity that there will be an industry fund available to fund some of these activities from now on, because it will insulate beekeepers from the need to make decisions about paying for the services they want. In all other businesses, planning and spending are seen as being essential to the achievement of goals and there is no reason why beekeeping should be any different ... it's a vital discipline.

The average pork producer pays about $1000 a year in levies to fund his industry marketing strategy alone. He also pays administration levies for the political and public relations work done on his behalf.

Members of the catering trade cast a critical eye over Trim Pork dishes.

Since this marketing work has dramatically increased the market share of pork at a time when total meat consumption is declining and because – for the time being at least – it has eliminated the pig industry's annual boom-bust cycle, virtually all pork producers are behind their board. By way of contrast, this year's beekeeping conference heard a few grizzles about a levy of only $150 a commercial beekeeper.

Doug Kidd said, when opening the conference, "Pay peanuts and you get monkeys." Perhaps that's why there are grizzles about the hive levy. It's so small, that little can be done with it. As a result, many beekeepers probably feel that they're not getting very good value for money from their association.

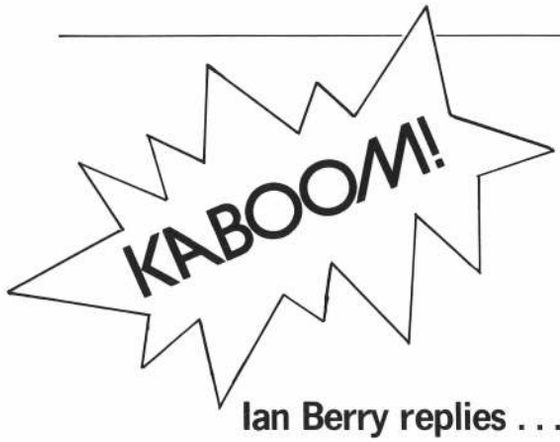
To get round this Catch 22, there's a desperate need for the NBA to start planning for the future of the industry. As MAF's John Scott said after the industry seminar, it was difficult for MAF, government or anyone else to provide for the industry's needs if there wasn't a plan to work to.

Without a plan, the NBA is not likely to make much progress either. Only by setting goals, funding budgets and analysing progress can beekeeping ever make it as a worthwhile and profitable occupation.

In any such plan, marketing must inevitably play a major role. With a proper plan, someone would have asked Nick Wallingford why marketing wasn't mentioned as a major part of his beekeeping course profile at the Bay of Plenty Community College. And someone would have asked the president why the NBA hasn't even had observer status at the talks involved in setting up the new Horticultural Export Marketing Council.

Because of a lack of awareness of the importance of marketing and its influence on the livelihoods of all beekeepers, the NBA executive must take the lead. Only beekeepers will suffer if they don't.

Trevor Walton is editor of "The NZ Beekeeper" and managing director of Agpress, publishers of "Southern Horticulture" and "The Deer Farmer". He also works as a public relations consultant to the rural marketing division of ICI Tasman Ltd, the NZ Woolbuyers Association and the NZ Pest Destruction Council.



Ian Berry replies . . . .

"The success of the industry is largely dependent on a correct balance being maintained between production and marketing....."

WHEN MR JOHN Scott made his stinging attack on the NBA executive after the Nelson seminar, my reaction was that we obviously have a communications problem with Mr Scott not having been informed about our industry, and that we must rectify this situation. When the person we employ as editor for our journal launches such a broadside of inflammatory inaccuracies frankly I wonder whether our policy of employing a professional to edit our journal wants reviewing. After all, our journal has had some excellent beekeeper editors in the past with the names of Wilf Lennon and John McFadzien coming to mind.

The motto of the NBA is "Better beekeeping – better marketing". A well balanced motto and the success of the industry is largely dependent on a correct balance being maintained between production and marketing. In the past, grave imbalances have occurred and we must remember and learn from the mistakes of the past.

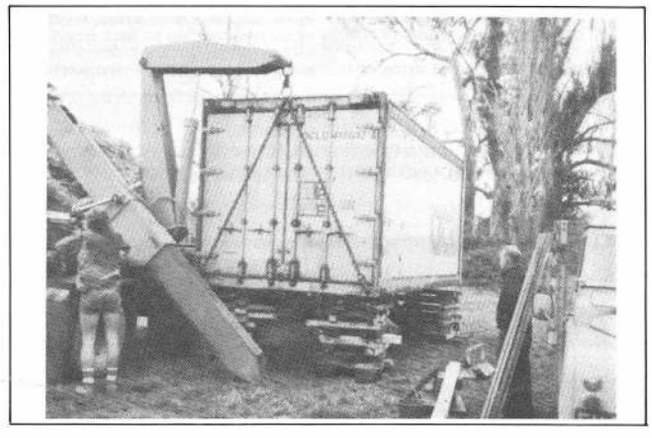
I understand that many years ago, further back than my memory goes, the ridiculous mistake was made where the amount of money spent on honey promotion for a particular market exceeded the total value of the honey available. I understand it was one of the industry's earlier attempts at so called organised marketing.

I can however, well remember the many long years of marketing problems which divided the industry, dominated conferences and lead to the situation where hives of bees were only able to be sold at very low prices compared with the cost of establishing new hives. An example of this was during the time of the Korean War when the late Mr Dick Hobbs of Palmerston North found it more profitable to kill his bees, melt out the combs and sell the wax rather than sell his business as a going concern.

Marketing problems behind us

The industry would be wise to remember well the problems which organised marketing have caused this industry since the 1950s. Problems which were put behind us only three or four years ago. During these last few years, the industry has seen unprecedented financial returns to producers and an incredible growth rate in the number of beekeepers and beehives during a period of economic stagnation.

In any horticultural industry, there will always be a few producers who, through mismanagement or sheer misfortune, find themselves with financial problems. The



fact that in spite of two difficult production years there is not a single beehive offered for sale in the June issue of "The NZ Beekeeper" is an indication of the present economic health of the NZ beekeeping industry. Furthermore, the industry is now working together in a more united and harmonious manner than for many years.

One of the recent examples of this is our new export advisory service first suggested by our ex president Tony Clissold, and which appears for the first time in this journal. The first eight beekeeper-exporters who were asked to help with this service all agreed to allow their names to go forward. They represented many different avenues and types of industry exports from Whangarei to Invercargill and our thanks go to these people who are prepared to help beekeepers help themselves. This is the sort of co-operation your executive will be working to encourage among beekeepers.

Now, to cover some specific parts of the editorial. While production rather than marketing dominated our Nelson conference and seminar, this is because with two poor seasons and little surplus honey about production is the immediate problem. This can of course change but we are aiming for a balanced industry where both production and marketing are considered.

There has been a tremendous amount of time and effort spent by a lot of beekeepers marketing hive products over the past few years. Perhaps these efforts have had insufficient publicity. The HMA has been responsible for market-

▶ ing until recently but with its demise the NBA will in future be putting more effort into promotion and marketing.

If all NZ food industries in NZ carry out a bigger block type of promotion the end result must be: People in NZ will still eat about the same amount of food they are eating now – they will pay more for this food and the producers will receive less while the promotion and advertising people will prosper. I would suggest both the producers and consumers should beware of trained salespeople talking us into costs which should be avoided.

Fortunately, there are many ways honey can be promoted to enable us to hold our own against the big spenders without spending much money.

During times of apparent surpluses, it is comparatively easy to store honey for years if necessary and in these seasons there should be no reason why all the honey has to be sold within 12 months. There is one sure way of ensuring promotion during a time of surplus is not just money down the drain and that is not to spend it in the first place.

The NZ market for honey, which takes most of our production, is normally kept well supplied, with the surpluses being exported when available. The success of our present method of packing and marketing is surely borne out by the fact that NZ beekeepers are receiving a much higher price for their honey than Australian beekeepers and the consumption of honey in NZ per head of population is such, that if it was equalled by Australian consumers, Australia would be one of the world's larger importers of honey rather than one of the larger exporters. At present all imports of honey are banned into NZ to enable us to keep out certain bee diseases so the question of importing Australian honey in lean years does not arise.

The two education courses for beekeeping did not "just turn up free of charge in the end". Because of a considerable amount of work and planning at both branch and national level, the beekeepers themselves were able to set the ball rolling with the result that other organisations became keen to assist and we finished up with what should prove to be an excellent education programme at no direct cost to the NBA. Surely this proves the point that it is better to research and plan a project through ourselves rather than rush in and spend money when this may not get the desired result. This is, I believe, the approach most of our members would want the executive to use when planning our honey promotion, public relations, education and research programmes.

As one whose business pays $3000 per year, the figure of "a levy of only $150 a commercial beekeeper" seems somewhat low. I do find it difficult to understand how the many beekeepers who produced little or no honey at all this year would have benefited by having their rate of levy at more than six times the present level so as to enable promotion of something they didn't have to sell.

The editor can rest assured that there is no "lack of awareness of the importance of marketing and its influence on the livelihoods of all beekeepers". He can also rest assured there will be no easy pickings for public relations consultants, advertising promoters or marketing experts from our industry funds.

Readers of this journal who are members of the NBA can rest assured too that while the present executive is in office, marketing, forward planning and promotion will receive careful consideration along with the many other facets of our industry. And above all, the funds of this small industry will only be spent after careful consideration and study to ensure they are spent in a way which will result in the maximum benefit to beekeepers.

Ian Berry,
President.

Town and country beekeeping: *An urban beekeeper with his hives in a shanty settlement – the hives are on stands to prevent toads from eating the bees off the landing board; and the hives and honey house of a country beekeeper.*

The land of water, wood (and cheap rum)

by Andrew Matheson, apicultural advisory officer, Nelson.

WHEN THE Arawak indians arrived from South America 1000 years ago, they called it "Xamayca", which means "a land of water and wood". To me it was more like a land of many people, as even the countryside always seemed to be crowded. But I suppose that's not surprising, as Jamaica is only the size of Marlborough county, and yet has a population of over 2¼ million people.

I recently spent two months "on the island" (as they say), and never lost the feeling of being hemmed in by humanity. If you stop on a back country road in New Zealand it might be an hour or more until someone comes along, but in Jamaica it is only minutes before people start materialising out of the bush – small children playing, women walking by with baskets on their heads, and men with donkey loads of produce.

I was in Jamaica under contract to the Food and Agriculture Organisation of the United Nations (FAO); not to teach beekeeping, but rather to carry out an investigation of the future prospects for the beekeeping industry and to draw up a plan for its development.

Jamaica has a history of beekeeping going back to the early English settlers, and in the past it had exported quite a lot of its famous logwood honey. It appeared that the industry was in decline, and a big beekeeping development was being proposed.

In fact, Jamaica still does have plenty of beekeeping activity, with perhaps 25 000 hives or more (no accurate statistics are kept). To my surprise nearly all the hives that I saw were of the movable frame type, usually Langstroth or a home-made version of that design.

Fixed-comb hives probably make up less than 10 per cent of all the hives in Jamaica, and are usually just old packing cases turned upside down (in one apiary I saw New Zealand butter cases being put to good use). As Jamaica has no pre-European beekeeping tradition, the country is fortunately free of the pottery and clay rustic hives that are common in many other tropical countries.

Most beekeeping in Jamaica is done on a small scale. Rural families are very poor, and a few dozen hives is an important way of getting some cash income. A typical beekeeper would be a rural small holder, with half an acre or a couple of acres of scrubby land, some animals (pigs, goats, chooks), a vegetable garden, fruit trees, and the bees. Any cash income from selling produce might be supplemented by some casual work, but jobs are hard to come by when there's over 30 per cent unemployment.

Our typical beekeeper will have his hives on the property, or possibly in one or two sites nearby. Without a vehicle, it's not possible to migrate hives, so all his sites will be permanent.

Hive management is pretty simple. Seasons aren't as sharply defined as they are in New Zealand, and there are nectar and pollen sources available to bees in most areas for most of the year. Brood-rearing continues through the "winter" (December, January and February – when the average daily temperature plummets to 24 deg. C) and the beekeepers try to encourage colonies to build up enough to take advantage of the spring honey flow (February to April).

Brood chambers are almost always kept to one full-depth box, and queen excluders are universally used. But when the honey flow comes, most Jamaican beekeepers put on a super containing only a few frames. More frames are added as the colony fills up the others, but this kind of management during a flow wastes considerable amounts of honey.

Swarming takes place mainly at the end of the honey flow, and little is done to prevent it. There is no requeening to speak of, and little examination of the brood nest, so plenty of bees end up hanging in trees. Just like with the old-style skep beekeeping, this time of year is a busy one for beekeepers as they race around collecting swarms to use for increase.

After the honey flow, summer (May to July) is a time when the colonies gather at least enough nectar to survive, but in autumn there is often a serious dearth of food, mainly

▶ because of high rainfall. Many beekeepers feed dry sugar or syrup at this time.

It's very difficult to gauge how much honey hives produce each year. The figures given by beekeepers varied widely, depending on whether they viewed me as working with the government (and thus in league with the tax man), or a great white sahib from over the sea who needed to be impressed about Jamaican beekeeping.

Earlier writers have estimated average annual production per hive at less than 15 kg and I wouldn't disagree with that. Well-managed colonies would produce a lot more, but the low average simply reflects the low level of beekeeping skills used.

I didn't see a motorised extractor anywhere in my travels, and most beekeepers extract at the yard with a 2– or 4– frame hand-driven machine. The extractors are like the foundation mills owned by many beekeepers; they'd been handed down from generation to generation, and are now almost in the family heirloom category (with an appearance to match).

Extracting in the open doesn't produce many problems as long as there is still some honey flow on, although the more serious beekeepers have a shed on site to prevent robbing. Cold knives are used for uncapping over a cut-down 200 litre drum, and the cappings wax is usually melted up in a kerosene tin over a fire. Scrapings and cull comb wax is almost always discarded in the apiary, and it was surprising to me that simple solar wax melters were very uncommon in Jamaica.

Honey is a highly respected commodity in Jamaica, and there would be few families without some in the house. However, the Jamaicans' consumption is not high, because it is mainly eaten in small quantities as a medicine or tonic. No honey is imported because of the disease risk, and production has not been able to keep up with a rapidly growing population. This has put the cost of honey up, and so the consumption per head has decreased.

Honey is sold in recycled 750 ml liquor bottles (of which there is no shortage on the island). After most of the rum has been consumed, the bottle is filled with about a kilogram of honey, and sold for $NZ 3.00 to $4.00. As with most food stuffs in Jamaica, some honey is sold in shops and supermarkets, but most is sold in open markets or by roadside traders (known as "higglers").

So what of the future? Jamaica has a lot going for it as a beekeeping country – a favourable climate, abundant nectar and pollen sources, no serious bee diseases, plenty of low-cost labour, and a good domestic market for honey.

Against all that is the absence of any training facility for new beekeepers, very little in the way of an advisory service for existing beekeepers, to help them learn new techniques and increase production. Farmers need assistance and access to finance to increase their hive holdings, but the market for extra honey production is certainly there.

FOLK LORE

Wassailing beehives – what next?

by P.J. Brunt

ON READING a book on Sussex (A Sussex Garland, by Tony Wales, published by Godfrey Cave) I came across a reference to wassailing. Harry Secombe (ex Goon) has a song about this ancient English event which seems to have been carried out at Christmas time through to January 6.

Wassailing, or charming, whostling or howling, was an ancient custom of unknown age which seems to have been usually carried out around fruit trees, in particular, apple trees. Flaming torches lit the night sky in orchards as men chanted and paraded around the trees.

The implications of this event were to wish the trees good health in the coming year and also to banish evil spirits that may have been hanging around in the orchard. This seems to suggest a pre-Christian origin, for this type of event relates to the pre-Christian nature religions which flourished prior to the christianising of Britain, though Eva Crane in her 'A Book of Honey' disputes this.

The term 'howler' was common for a group of men and boys who used to congregate in an orchard with cider and/or ale, singing rhymes and songs, accompanied by a cow horn. Guns loaded with powder were fired into the trees . . . toasts were drunk to the trees and toasted bread put into the branches. Perhaps some of our customs viewed in a few centuries will appear equally unusual. The custom lasted throughout Sussex until last century with the last local wassailing being performed in 1920.

Beehives were also wassailed although this was a far less common event and only performed in some villages.

As beekeepers we all know the respect we must have for our bees. I can find no reference to firing powder into beehives, but save for that, the same encouragement as given to fruit trees seems to have been given to beehives. In Sussex in the past, and perhaps even today, the bees are 'told' of important events in the family. If a family member died the bees were told and the hives draped with black crepe. After a wedding, the bees were paid a visit by the bride, still in her wedding finery. Crane confirms this but not just in Sussex.

These customs were observed apparently to minimise swarming, for if they were not carried out, then the bees could leave. Wales reports in his book that after speaking to a women's institute an elderly lady stated to him that as a small girl, whenever she visited an old friend of her family she was invited "to come and meet the bees".

Little folklore exists about wassailing beehives but this rhyme does remain:

> Bees, O Bees of Paradise
> Does the work of Jesus Christ
> Does the work which no man can
> God made bees, and bees made honey
> God made man, and man made money
> God made great men to plough and to sow
> God made little boys to tend the rooks and crows
> God made women to brew and to bake
> And God made little girls to eat up all the cake
> Then blow the horn.

Most beekeepers would agree that many non-beekeepers do have an almost unhealthy awe of beekeepers, attributing some magical power to the keeper who can fearlessly handle 50 000 bees. Perhaps this apparent mysticism dates back to the wassailing of beehives.

FROM THE COLONIES

SOUTH WESTERN DISTRICTS

The slower pace of winter has given us time to reflect and to plan ahead.

Not for a long time have our district beekeepers had to consider Rural Bank emergency finance. Arising from our AGM, we sent a letter to the Rural Bank confirming the very low honey yields experienced by most in this region from Wellington to New Plymouth.

With the onset of spring, supplementary feeding is likely to be heavier than usual. This has raised the question of sugar pricing. How can an apiarist obtain cheaper sources when we understand the world price of sugar is falling?

Perhaps willows by the kilometre along our highways and byways can replace a bag or two of sugar. Our branch is planning a 'Trees for Bees' field day for November. It is to be held in the Manawatu primarily for beekeepers and followed up in the autumn by suitable promotion amongst the farming community and servicing bodies.

So now with the warmer weather, we emerge from our farm office or workshop determined to make the new season match our hopeful budgets.

John Brandon,
Wanganui.

NORTHLAND

Northland winter conditions have been average with some frosts. Hives appear to be in a condition expected for this time of the year. Preparations for the pollination season are underway with liaison between beekeepers and fruitgrowers working very well. A seminar is planned by MAF for October to give the latest information to beekeepers and fruitgrowers.

Conference was most enjoyable, meeting up with beekeeper friends and getting the latest information on matters of interest. Thanks Nelson for your efforts from your Northland visitors.

Terry Gavin,
Whangarei.

SOUTHLAND

Earlier this year a very successful Southland field day was held at Keith Herron's property, with Dr Cameron Jay speaking on his work relating to the problems of drift. Another speaker was Mr John Third, principal of the Telford Farm Training Institute, Balclutha, who spoke on the establishment of a commercial beekeeping unit at the institute. Since then Mr Paul Marshall has taken up the position of tutor, and local beekeepers are attending a working bee on August 19–20 to help get the unit operational. To succeed the unit must be commercially viable as well as provide educational services.

Another project which is receiving good support from local beekeepers and the farming community is the production of a booklet by Ian Spence and MAF apicultural adviser, Cliff van Eaton. The booklet, 'Trees for Bees', describes trees and shrubs suitable for farm shelter belts and amenity plantings which will provide bees with a longer pollen and nectar season in the various areas of Southland and South Otago. The booklet is available free of charge from Box 378, Gore.

Recently members of the branch received MAF cuttings ordered from the plant materials centre, Palmerston North, of a new variety of willow just released from quarantine. It is claimed that this variety has a much longer flowering period than others presently available. A trip is being organised for a visit to the ministry of works tree nursery at Alexandra.

Weather during the winter in Southland has been very wet and cold following the disastrous wet period called in some places "summer". Many inland areas have also been affected by snow.

Les Foster,
Gore.

WEST COAST

Reflecting on our weather over the last twelve months, from June, 1982, to the present, it seems incredible but we have had snowfalls on the Alps every month and in some cases, such as November, up to three falls. So winter seems to be the norm here. Perhaps twelve months of summer is in the offering? Not according to the long range forecast however. They are predicting more of these upset weather patterns. Indeed, from reports in our media, it is very evident the world in general is experiencing some unusual extremes in climate, to say the least.

Gorse, our main winter pollen source, began flowering early this autumn and beekeepers' thoughts, no doubt with the usual optimism, turned to hives adequately provisioned with pollen for winter. But as the weeks passed, with little flying time being experienced, the beekeepers' thoughts inevitably became more and more contorted in an effort to retain a semblance of that optimism.

But in winter time when all else fails, we have the round of NBA branch meetings to attend. Nothing better for restoring optimism! Oh, and the suppers the ladies put on! But then, when it comes time to leave and you step out the door and in the dark find yourself floundering through a gigantic pothole, one's optimism takes a bath. Only the stout-hearted or foolhardy can overlook the climatic disaster we've inherited. But then there's the ultimate fruit of our optimism – mead.

So far this winter the bees haven't had much opportunity to fly, which doesn't augur well for their overall condition, and spring dwindling may be our next problem. September will tell.

Sandy Richardson,
Ahaura. ▶

MARLBOROUGH

The recent Wairau Valley floods don't seem to have affected beekeepers as badly as first expected. Most beekeepers lost only one yard although one lost over 60 hives (one apiary with feed honey still on). Hobbyists were badly affected as they tend to place their hives in the area where the flooding was worst. Altogether about 200 hives were lost.

Another problem that has emerged this winter is the spraying of Spanish heath with 2, 4, 5-T while it is in full bloom. Although herbicides are not meant to affect insects, at least one beekeeper has reported dead bees and it is felt that it is irresponsible to spray while in full bloom.

The area in question is very important as it provides a good winter flow and stimulates the bees for the spring. As it is handy to the orcharding area of Marlborough it is being used as a base for pollination. It would be a pity to see this area come under threat from sprays too as the intense horticulture area around Blenheim already has.

At our branch AGM in May, it was pleasing to see a good turnout and to get commitment from people for this year's branch activities. It is often surprising how much hobbyists can contribute to commercial beekeepers and vice versa. Mind you, all official business is left to a steering committee and branch meetings are strictly to discuss bees!

Members of our branch have been finding it difficult to get queens early in Marlborough, especially the apiaries around the coast as this country is very early. At present we have four members who are steadily developing their queen rearing skills, and it is hoped that this year local queens will be available for the first time and that next season we can hope to see a good number of local queens bred. All we need now is a windless sunny spring for a good start to the season.

Craig Deans,
Blenheim.

NORTH OTAGO

For those of us living near the coast, the quiet time is over and with the trees bursting into flower, it makes us realize how close spring and spring work is. In the inland areas and especially the back country, heavy snow and frosts still prevail and until things warm up a little, we won't know how the bees came through what was one of the worst winters for years.

Early in July the local branch in conjunction with the MAF held a film evening – speakers were Cliff van Eaton, Murray Reid and Kerry Simpson. Cliff gave an address on queen rearing in Canada and the problems that they have, but the main theme to arise from the talk was that we must keep out all these diseases that are prevalent in the rest of the world. New Zealand has a clean bill for the export of queens and in the next decade queens could easily be the main export of our industry; let's hope we keep it that way.

Murray Reid and Kerry Simpson spoke on beekeeping in our island territories and although they might have a tropical climate all the year round as well as virtually a honey flow for 12 months of the year, I doubt very much that many New Zealand beekeepers would want to change places. In all a very enjoyable evening.

With the willow flow only a month away, we are hoping for a continuation of this mild weather and hopefully a willow flow to match that of last year; in the meantime we will keep our fingers crossed.

G.E. Winslade,
Oamaru.

OTAGO

The prediction of a long and wet winter for this part of the country has come true. Paddocks need to dry out alot before long or we will be in trouble. It is too early to tell how the colonies have wintered. But pussy willow buds are breaking and poly clumps and daffies show their welcome colours. Spring can not be far away.

Our Otago–Southland Convention at Queens Birthday weekend was a good get-together. An interesting and varied programme. Guest speakers were people from the Otago catchment board. They told us about their activities. Often we see those willows cleaned from the river banks and feel that at least to our industry a lot of harm is done. We found out, however, that much is also being done in the way of planting from which our bees will ultimately profit. Appreciation and understanding of each others' problems always helps in improving relationships.

Before conference we knew that one of our branch members had become a member of the NBA executive but we did get a bit of shock to see him elected as vice-president. That was certainly very unexpected. Our best wishes to Allen McCaw for a fruitful and pleasant term of office.

We are also pleased to welcome Paul Marshall now as a member of our branch. To him too our best wishes for his job at Telford Farm Training Institute. It is exciting to see training and education in beekeeping getting underway in earnest. A number of us southern beekeepers plan to gather at Telford in a couple of weeks time for a two day working bee. Knock up a lot of equipment and so do a little to get the scheme off the ground.

Plans for a field day are in hand. It will be a spring occasion, to be held at Middlemarch in early October.

John Heineman,
Milton.

AUCKLAND

The unusual fine and mild weather we have had has stimulated the bees into action with some nectar coming in. It seems, after discussions with growers of kiwifruit, that there will be enough hives available for pollination from experienced beekeepers for the next few years.

A. Ellis,
Mt. Wellington.

WAIKATO

The last meeting was for votes on remits to conference, and the outstanding memory I have, was the very poor attendance at this meeting and indeed, many of our meetings. Some apologies are received but large numbers of branch members are taking no interest in the branch at all. I would appeal to those not attending to make an effort in the future to attend and add your bit which makes meetings more interesting.

Members are concerned about the possibility of the large numbers of hives on kiwifruit pollination being shifted over the Kaimais and into the Waikato, causing difficulties to beekeepers established there. One member commented on what he would do if any are put near his apiaries. Suffice to say that it would be very effective indeed but I don't agree with such action. I don't see why the bees should suffer for their unprincipled owner.

The Waipa County Council has some 600 to 800 employed under the government TEP scheme clearing willows from streams and rivers in the county. A branch member, Bill Bennett, wrote to the council pointing out the loss to beekeepers of a valuable spring source of nectar and pollen caused by the removal of the willows. The letter was read out at a council meeting and reported on by a local newspaper.

A new editor for the "NZ BEEKEEPER"?

The current editor/publisher of the NZ Beekeeper, Agricultural Press Co Ltd, of Masterton, has notified the NBA that it will not be seeking to renew its editorial contract at the end of 1983.

The NBA executive would therefore be interested in receiving letters of intent from any readers who would be interested in taking on the editorial role.

If you consider you have the necessary skills, please write to the NBA General Secretary, giving a brief outline of your background and qualifications for the job. Do not provide a detailed editorial/publishing proposal at this stage; this will be called for later.

Write to:

Editorial Position,
National Beekeepers Association,
P.O. Box 4048
WELLINGTON.

At this stage it looks as though council is going to replant with trees useful to beekeeping. The branch will follow up this breakthrough as it develops. It would seem that to go to a council and talk to executive officers is not as effective as writing a letter, which places your request in front of a full council meeting and becomes part of official council business.

Branch members wishing to plant willows should approach president Bryan Clements who has matsudana willows available at a reasonable rate.

Weather at the moment is very spring like, mild days, wattles in bloom and bees flying well. Shifting some hives last week I was surprised how they had got through stores, always a problem after a poor year. We have not had normal winter rains and the weather is showing a similar pattern to last year's.

Ray Robinson,
Waihou.

BAY OF PLENTY

The winter has been quite an active one, with many of our members involved in preparations for the next season. At least two, Russell Berry and Barry Hoskin, have been on trips to the US and Canada to study beekeeping businesses there. Hopefully, the things they learn will spread to the rest of us through meetings and field days.

The branch has been active, with meetings being held now at the Bay of Plenty Community College. Trevor Bryant showed some of his slides from beekeeping in Canada, and at our last meeting we had an assortment of jigs, including box and frame assembly, frame wiring and iron bending. It was quite enjoyable to see so many take part in the programme.

After a flurry of submissions and appeals the Pollination Committee managed to achieve exemption for the Bay of Plenty region kiwifruit pollination service from the price freeze. Through concerted effort the beekeepers involved are now free to raise their fees for the coming pollination season to whatever they can individually negotiate with growers. With the increasing demands for pollination services and an increasing awareness by growers of the value of bees and the costs of providing the service to them, the beekeepers involved should manage to secure fees that will accurately reflect the work expected of them. Details are available from the Branch president or secretary.

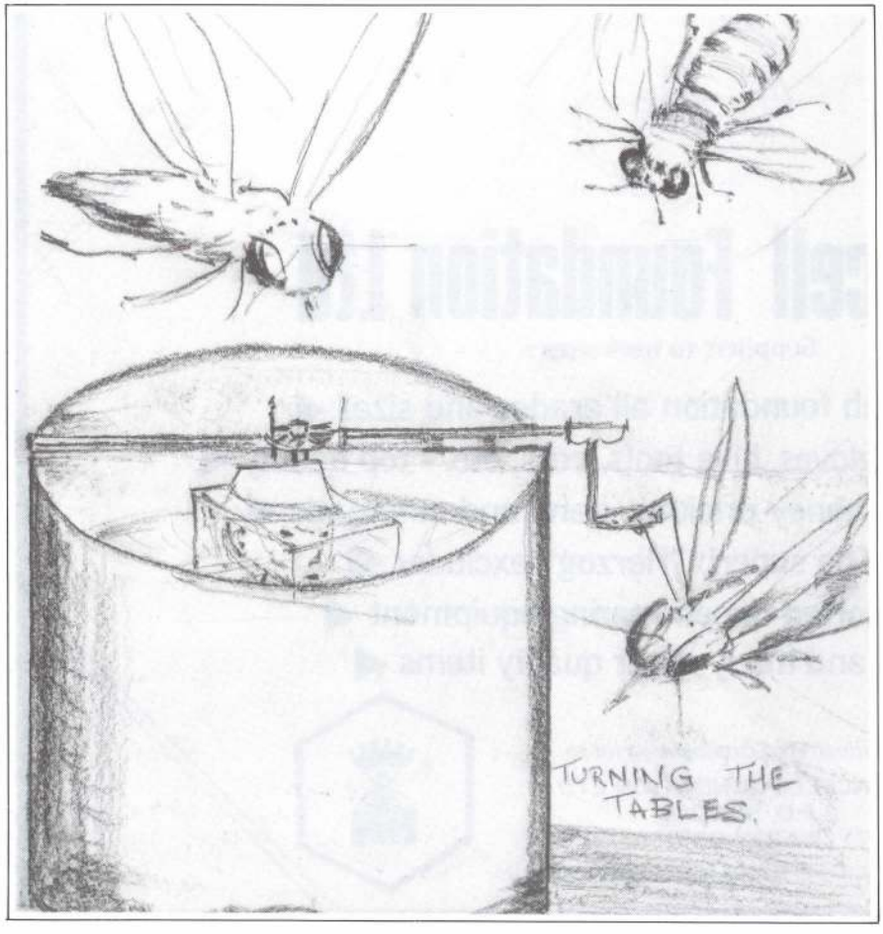
Several short courses and workshops will be held by the Bay of Plenty Community College and MAF this spring, including a Pollination Workshop and a Queen Rearing Workshop.

The weather for July was quite dry, after a week of frosts. The earlier frost of the season in the first week of June caused considerable damage to kiwifruit still on the vines. Bees seem to be coming into spring in reasonable condition. One beekeeper told me last week that all the hives he had been checking up on have good stores left and are starting to raise brood. I have had a nucleus that I have used to repeatedly stock an observation hive through the winter that never had less than 2 frames brood.

Nick Wallingford,
Tauranga.

Highly successful features of the 1983 NBA Conference in Nelson were the honeymead and photographic competitions. Most impressive photo and the winner in the Bees and Flowers section was this one by Kerry Simpson. Its caption, "Not a bumblebee in sight, call the DSIR."

Murray Reid, the national apiculture specialist based in Hamilton, recently rediscovered some humorous drawings created at the Waikato Branch field day held earlier this year at Arataki's Waiotapu factory. The winning entry (with unfortunately no name attached) appears on the left below, "Turning the tables." On the right, a very competent bee characterisation by G.B. & S. Harly.



The final word for this issue must go to an unnamed Waikato jokester as follows:

Q: Why do bees buzz?

A: You would too if you had honey between your legs.

Next issue: Honey recipes from the Waikato field day.

BURRCOMB

from the editor

Insecticided bees

Your mysteriously dead bees consigned to Wallaceville Research Station will arrive in prime condition for analysis if they are packed in moisture absorbent cardboard.

Pat Clinch advises samples of about 50 best suit their requirements. If they are packed in a cardboard box, a little larger than a matchbox, they dry out and so are preserved.

He advises dry storage works where deep frozen samples decay rapidly as they thaw out, making them useless for analysis.

Burglar-proof hive brand?

Securing hives for loan purposes may necessitate branding, a practice which would also have the benefit of making identification easier in the event of theft.

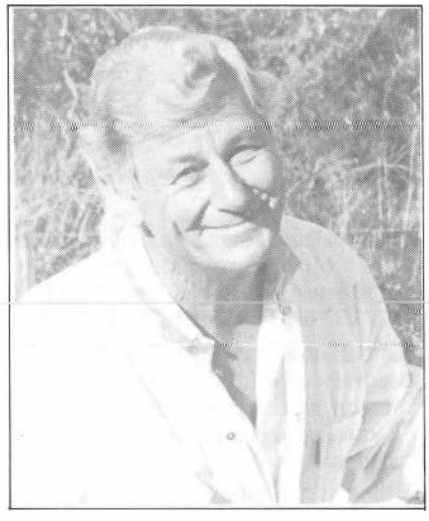
Industry identity Fred Bartrum told the 1983 conference that branding hives with his initials "F.B." not only made them identifiable, it also made them burglar-proof. "No one seems to want them," he lamented.

Historic gavel travels

Final HMA chairman Ivan Dickinson had few words to say about the activities of his organisation during the last 12 months – as it is now little more than a name. However, when speaking to the NBA conference, he took the opportunity to present to retiring NBA president Tony Clissold a gavel and stand bearing the names of all former HMA chairmen.

The gavel and stand was originally presented by HMA staff to their board following the retirement of long-standing HMA chairman Russell Poole. Tony Clissold said the gavel would now be kept at the NBA head office in Wellington.

Briscoe honoured



It was good to hear at the NBA conference that former advisory stalwart, Doug Briscoe, had been honoured with a branch life membership by Bay of Plenty beekeepers. Doug, until his retirement a couple of years ago, made one of the biggest contributions anyone has made to the welfare of bees and beekeepers with his efforts to bridge the understanding gap between pesticide users and pollinators.

It is great to see such diligence honoured.

Prospector bees

Scientists on both sides of the Atlantic have found a new role for bees – mineral prospecting. Because pollen has been shown to contain traces of minerals found in the area in which it is gathered, it can be a good guide to agricultural and mineral prospects.

Dr John Free of Rothamsted Experimental Station in Britain says that bees could be used for prospecting, detecting pollutants and for determining the agricultural potential of land.

"A bee can cover more than a square mile a day, and a colony can visit more than a thousand flowers in that time," said Dr Free. "If you had hives spaced all over the place, you would quickly build up a pattern of mineral deposits."

In a parallel study in Canada, scientists have found that pollen can show up small quantities of zinc, copper, lead, even gold and silver. "It is quite amazing just how accurate searches with bees can be," said Professor Harry Warren, of British Columbia University in Vancouver.

"At first people thought it was just a joke. However, several prospecting firms have now taken an interest, and I expect at least a couple will begin searches with bees in a year or so."

The suggestion for this use of bees was first put to the British and Canadian teams by Dr Robert Pinsent, a former research adviser to the Royal College of General Practitioners.

"Many doctors now suspect element imbalance could be the root of a lot of minor illness, although this is very hard to investigate," he said.

Sometimes polluted soil can affect plants which may then be eaten by humans, or sometimes by animals that are in turn eaten by man. To pinpoint affected areas, scientists have to carry out lengthy tests and surveys at present.

"Bees on the other hand could do all the work for us," Dr Pinsent said.

–The Observer

Contacts, please

Beekeeping contacts needed please!

Goran Gunner from Finland, and Scotland's Ralph C. Garrett would like penfriends who share their interests in beekeeping. You can contact Goran at SF-66850 Jeppo, Finland, and Ralph's address is 4 Ritchie Street, West Kilbride, Ayrshire, Scotland, K423 9AL.

Gilles Ratia, a technical apicultural adviser, has just completed a one year contract on Reunion Island in the Indian Ocean, where he has been helping to establish apiculture. He is very much interested in either a long or short term contract in New Zealand, in an advisory or managerial position, so if you can help please write to: Gilles Ratia, 'Clos du petit bois', Forton, 33126 Fronsac, France. ▶

NZ only a minor exporter

Of the 206000 tonnes of honey entering world trade in 1981, New Zealand's contribution was only 2000 tonnes – or less than 1 per cent. When compared with export giants like China (54111 tonnes), Mexico (42616 tonnes) and Argentina (28729 tonnes) we're very much the small fry . . .

LIBRARY NOTES

I AM PLEASED to bring some good library news this time. Have just received confirmation from the general secretary to go ahead with binding of "The NZ Beekeeper". This entails a considerable expense but it has to be done if we want to be assured of at least one complete set.

A full inventory of all library material has been completed and a new catalogue compiled. With the co-operation of Mr Goodman we hope to have a supply on hand within very long.

We have been groping in the dark as to the value of our library collection. This is pretty difficult to determine. However, we have now received a letter from Dr Eva Crane, director of IBRA and a very well known authority in the bee world, that she is prepared to do a valuation for us. This indeed is the very best we could hope for.

A second copy of 'Bees and Mankind' by J.B. Free has been donated by Mr E. New from Invercargill. Very welcome, both copies are out on loan with two more people waiting for them.

A box full of books and papers was dropped off by Cliff van Eaton and we also got a parcel from Trevor Bryant. I have not had the time to sort it all out (took some holidays!). From our editor's office a further supply of overseas magazines. Thanks to one and all.

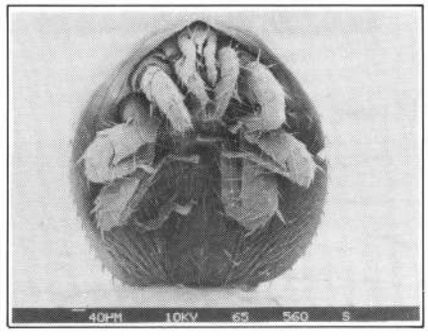
A replacement copy of the lost book 'Some Important Observations in Bee Management' has now been received and we will try to get it out to all those who have requested it as soon as possible. So please don't keep it any longer than required.

If requesting books for the first time, would you please enclose $3 with your letter for loan fees and postage. It simplifies my job. Any balance is credited on your account.

John Heineman,
Technical Library,
P.O. BOX 112,
MILTON.

though that's an advantage when you have a product which is among the world's best, produced by a country which is seen in overseas markets as a pollution-free Eden.

Rare parasite found on NZ bees



New Zealand's high bee health status takes a bit of a psychological knock in the latest edition of 'Bee World', with UK MAF scientists V.A. Cook and C.E. Bowman reporting the discovery of a little-known honeybee mite on worker bees accompanying NZ queens imported into the United Kingdom.

Although the article states that the mite *Mellitiphis alvearius* "is not known as a pest", the publicity cannot do the nation's queen bee exporters much good.

The mite has previously been reported in Britain, continental Europe and New Zealand, but nothing is known about its biology. The authors conclude that, "since *Mellitiphis alvearius* may be detrimental to honeybee colonies, its distribution, life history, and particularly its feeding habits, should be investigated."

Stalwart retires

Mrs Jean James, clerical assistant to the secretary of the NBA, has retired after three years in the position. Her predecessor in the job, Mrs Pauline Norton, has rejoined the NBA head office staff – ensuring that the changeover has been smooth and efficient.

Mrs James' retirement follows a period of illness. The president and executive of the NBA have wished Mrs James a happy retirement and have expressed a hope that she swiftly returns to good health.

Editor resigns

Agpress, editors of the NZ Beekeeper since 1975, have notified the NBA executive that they will not be seeking to renew their editorial contract when it expires at the end of 1983.

CORRESPONDENCE

FACTS OF LIFE

Dear Sir,

Murray Reid's article in the June issue left me scratching my head. I wondered if the Facts of Life as I had learned them behind the school bike shed were correct. He talks of kiwifruit having female pollen, and of female flowers producing pollen. Please explain.

Yours,

Piers Mclaren,
Takaka.

P.S. I'm over 16.

Mr Mclaren's letter was referred to Murray Reid, apicultural advisory officer, who replied:

Kiwifruit flowers are a bit AC and DC; a term I'm sure you learnt behind your school bike shed! They are also dioecious which means the functional male and female flowers are on different plants.

However, each flower has both male and female sexual components although not all parts are functional. For example, the male flower has a small non-functional ovary along with its well developed male parts, the stamens which produce viable pollen.

The female flower, on the other hand, has a large functional ovary along with numerous stamens. These stamens also produce pollen, but it is not viable and won't fertilize any female flowers.

ELECTION THANKS

Dear Sir,

I would like to thank those who voted for me in the election for the executive and to assure them I will do my best to justify their confidence.

My congratulations to Mr Dudley Ward on his return to the executive after a long absence, I am sure he will have much to contribute and to Jim Courtney and Trevor Rowe, thanks for allowing your names to go forward for nomination. You didn't make it this time, but you have taken the first steps towards a position on the executive in the future.

Yours,

Ian Berry
Havelock North.

A realistic approach to kiwifruit pollination

by Trevor Bryant, apicultural advisory officer, Tauranga.

HONEY BEES are the major pollinators of kiwifruit *(Actinidia chinensis)* at present and will remain so for the forseeable future. The implications of this to the beekeeping industry are enormous.

Pollination is no longer a 'maybe' crop but a vital, expanding service which must be viable and profitable to the beekeeper and the industry if the projected hive requirements of the future are to be met.

In the Bay of Plenty, the number of hives used for kiwifruit pollination has rocketed from 1600 in 1975 to 13200 in 1982 with an anticipated 18-19000 required in 1983. By 1985, if this growth is sustained, at least 35 000 hives will be required. Hive registrations in the same period have increased 100 per cent to 32 000 in the Bay of Plenty (total Tauranga Apiary District less Poverty Bay, MAF Apiary Stats).

The expansion of kiwifruit orchards has brought about major changes in beekeeping and beekeeping practices in the region with many of the problems experienced here now becoming apparent in other parts of New Zealand; eg Auckland, North Auckland, Gisborne, Hawkes Bay and Nelson.

Traditional honey pasturage has disappeared, no longer is a honey crop assured or available in many areas unless hives are moved away from orchards; preferred honey producing pasturage is becoming overstocked; pesticide damage is income lost rather than an accountable expense; sites are at a premium; the effect of pollination on cash flows/production has made orchardists acutely aware of bees, the beekeeper and what constitutes a pollinating hive.

On the opposite side is the very real impact the orchardist's management (or lack of) has on pollination. Too often in the past downturns in the expected export yield was blamed on pollination, an easy scapegoat to explain away other more obvious problems.

There are many components to producing an export quality crop (Fig. I) and the orchardist's inputs are every bit as vital as the beekeeper's.

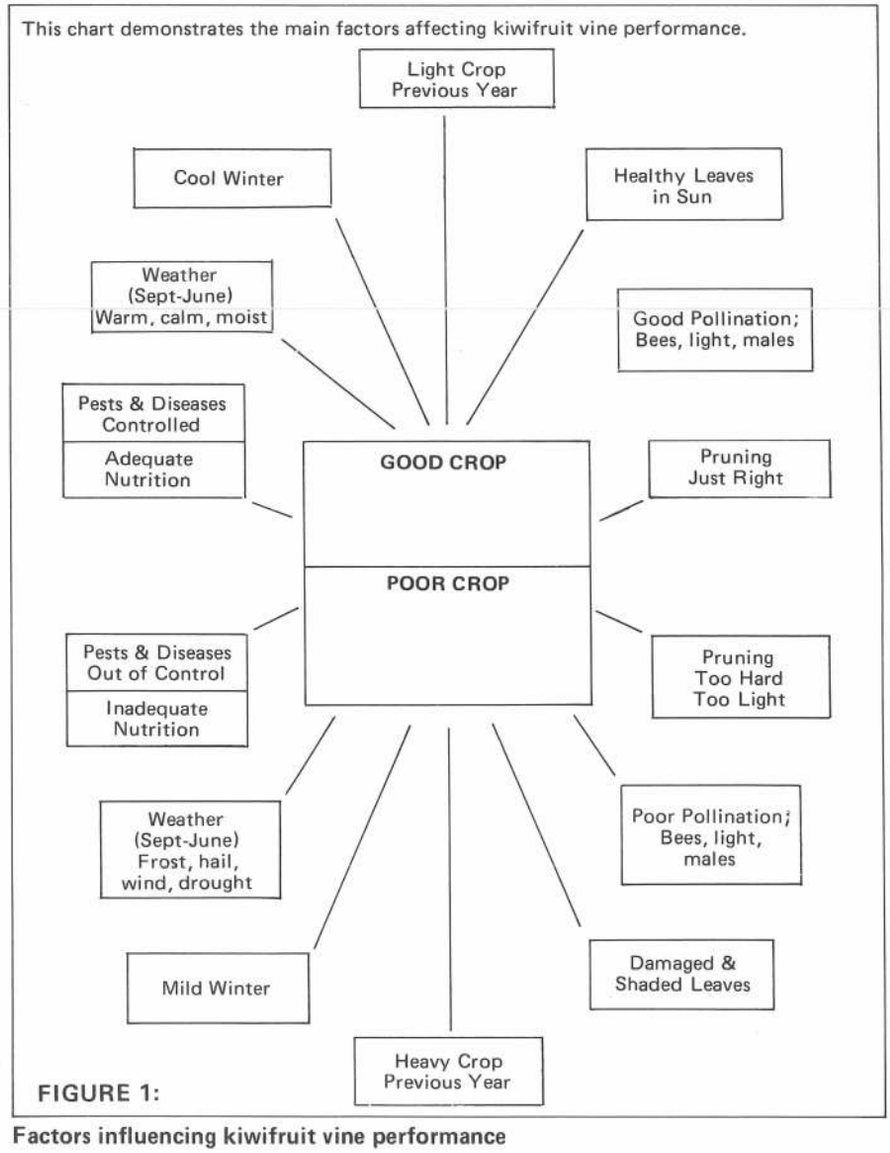


FIGURE 1:

Factors influencing kiwifruit vine performance

Orchards require shelter but it must be permeable to be effective and not shade the vines nor deprive vines of nutrients. Light (sunshine) is paramount for plant and fruit development and a good pruning regime is essential.

Male to female plant ratios and adequate male distribution is vital if pollen is to be evenly dispersed throughout the canopy.

Pat Clinch's work has shown conclusively that the 8:1 female/male ratio with males in every third row significantly reduces fruit size beyond 3 metres of the male vine, in some instances the equivalent of a row of vines has small fruit which may or may not develop to an exportable size because of inadequate pollination.

The kiwifruit flower and pollen is attractive to bees, the flower is receptive for eight days, even after petal fall and readily worked by foraging bees. It is therefore recommended that bees be brought in to the orchard at 15 to 20 per cent ▶

▶ female bloom to ensure bees remain active throughout the blooming period.

Other components over which the orchardist has control are nutrition, pest, disease and weed control, vine management, irrigation but he cannot control the weather nor honey bee activity, but through management and orchard design/layout influence the impact of both. It is therefore interesting to compare the performance of the average and the top producer.

(a) **Kiwifruit – mature**

	Export trays/ha
New Zealand average	5500
Record BOP yield	10000

(b) **Kiwifruit – developing orchard**

Cumulative yield – year 6

	Export trays/ha
Average BOP	4000
Top BOP	20000

I quote: "Top orchard performance depends on a husbandry system that includes careful attention to detail. My observations suggest that the average orchard development has a huge potential to increase crop yield by lifting the standard of orchard practices."

The beekeepers' inputs are crucial in the overall scheme. The pollinating unit must be a developing colony of bees with a population of at least 30-35 000 bees, have a young queen with a high fecundity rate, a minimum of seven full frames of brood, be disease free, have adequate honey provisions with empty cell space for brood expansion.

To suggest colonies should have a population in excess of 50 000 bees is nonsense, and quite beyond the capabilities of even the most prolific queen in a colony developing under perfect conditions, and worker bees living out their lives to their majority.

Pollen gatherers are the most efficient pollinators of any crop because they are more likely to transfer pollen to the stigmas and carry a greater amount of pollen on their bodies. Foragers must therefore be encouraged to forage for pollen and this can be achieved by having all the brood transferred to the bottom brood chamber. Returning foragers thus come into contact with the brood and nurse bees demanding (begging) pollen which provides the necessary stimuli for foragers to gather pollen and can redirect nectar gatherers to a pollen gathering role.

The feeding of sugar syrup from feeders inside the hive (or outside) can also cause nectar gatherers to change to collecting pollen; similarly the provision of a good supply of water close to the hives diminishes the foraging time spent on this activity and makes more bees available for pollen collection.

The preparation of colonies for pollination requires many skills and is not cheap. It has been demonstrated here in the Bay that the annual cash cost to prepare a pollinating hive is 50 per cent higher than preparation for a honey producing hive, hence the relatively high pollination fee. Colonies managed for pollination rarely produce a surplus honey crop, and with ever decreasing bee pasturage and pressure on existing honey crops increasing, it is realistic to budget on a crop of 5 kg surplus honey per hive. A comparison is shown in Fig. II.

The pollination fee is likely to be in the vicinity of $60 to $65 a hive (the price freeze exemption only applies to the Bay of Plenty) for the 1983 flowering period. This may appear high to the layman not fully up to date with the costs incurred by beekeepers to produce good pollinating hives but providing all the components are put in place, the right pollinating unit + hive management + the right site + orchard management and layout add up to a reduced number of hives per hectare in the orchard; the eight hives/hectare as at present recommended could conceivably be reduced to three to five hives/hectare. Growers pay more per hive but the gross pollination charge per hectare should be no greater than previously.

The cost of pollination in relation to other production costs in an average producing orchard is minimal, only 1.6 per cent of cash expenses where eight hives/hectare are costed at $55/hive. By comparison the impact of pollination on production is immense, and to put it into perspective, every 1000 hives put into orchards returns to the beekeeping industry $48 000 (1982) and $10 million (approx) of export quality fruit is produced.

Equally important in the pollination sequence, is the siting of hives in orchards; position hives in the sunniest, warmest, driest location within each block or orchard. They must have complete protection from prevailing winds, particularly at the hive entrance (bees will fly in wind *if* encouraged to leave the hive). In orchards with poor air drainage hives should be placed on stands above ground level – the use of upturned fruit bins is suggested.

To promote maximum bee activity even during cloudy, damp, cold, windy conditions avoid: potential wind tunnels and siting under vines or pergolas and shady areas as these reduce flight activity.

Foraging bees disperse throughout the orchard, despite shelter belts, surprisingly quickly and it is recommended that hives be placed in groups ▶

FIGURE II : A COMPARISON BETWEEN HONEY PRODUCTION AND POLLINATION MANAGEMENT OPERATING COSTS

		Pollination	Honey
	Beekeeping Income	72 500	87 584
	Beekeeping Expenses	44 861	29 372
	Beekeeping Nett Income	27 639	58 212
LESS	Drawings, Taxation, Financial Charges	26 270	16 879
	Surplus for Plough-back	1 369	41 333
LESS	Development and Capital Purchases	6 110	35 271
PLUS	New Borrowing	6 000	
CASH SURPLUS:		1 259	6 062

Note: Both businesses established over past five years and developing. Pollinator operates 1000 colonies; honey producer 520. Pollinator has 1000 hives into orchards at $65.00 per hive and produces 8 tonnes honey for local market; honey producer – export cut comb and retail local market plus 150 colonies for pollination.

rather than singly in rows, in the latter drifting becomes a major problem.

Don't be committed by growers to any action against your better judgement – be tactful. You, the beekeeper have the necessary knowledge of bee lore and pollination expertise to know how to get the best possible performance from honey bees. With all the components to maximise fruit production in place the benefit to growers, beekeepers and the nation is immense.

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Price cutting and kiwifruit pollination

by Ian Berry

AT CONFERENCE time I was asked for suggestions on how to go about obtaining orders for hives for kiwifruit pollination and what was my opinion on cutting prices to get these orders. I decided to write a letter to the beekeeper concerned setting out a few thoughts on the matter and by the time I had finished realised it had become an article for "The NZ Beekeeper".

The following is an extract from that letter:

Dear Beekeeper,

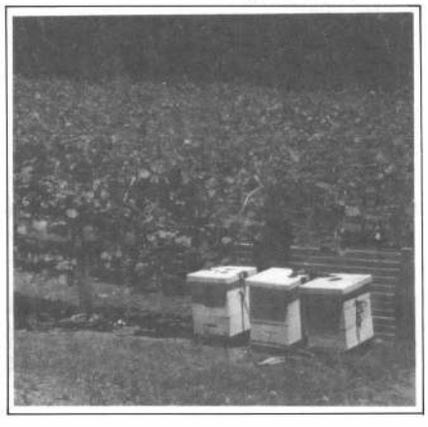
I have given some thought as to how it would be best for you to go about getting more orders for kiwifruit hives, and for a person in your situation where you are already hiring out some hives for kiwifruit pollination I would suggest the following:

First – find out all the facts you can from the kiwifruit growers by contacting their organisation or some of the growers. Ask them if they feel there will be plenty of hives to meet their needs and whether the hives they are getting now are doing a good job of pollination.

Are the growers getting the hives moved in and out quickly enough after they phone for service? Are they satisfied with the business efficiency of the beekeepers they are dealing with (easy to contact by phone – clear and accurate accounts – pleasant and courteous staff delivering hives)?

Do they feel uneasy that beekeepers supplying the hives might let them down by not being willing or able to meet their needs in the future? What is the range of prices being paid for hives at present?

Having done this I would suggest you then contact the horticultural advisory people at the Ministry of Agriculture and Fisheries and ask them the same sort of questions.



After getting all the available information together, think things over and decide in which areas are you best able to offer the growers a better service. e.g. Could you offer a faster more efficient service with hives on pallets? Can you convince the growers you are running a sound, stable business that will be in a position to supply hives for the forseeable future? Can you, because of your expertise and experience, in both beekeeping and pollination and because of the number of hives you have to select your pollination hives from, offer hives of bees that are in the best condition for pollinating kiwifruit.

Having thought these matters over, then decide how many hives you could efficiently place in the kiwifruit without causing too much disruption to the rest of your business and estimate your costs to do this. Then and only then should you work out what price to charge and I would suggest you go about deciding as follows:

Ask yourself were the growers and the MAF satisfied that there would be plenty of hives available, both at present and in the forseeable future, and were they satisfied the hives being supplied were in the right condition for pollination work. Also were they happy in all ways with the service being provided by other beekeepers. Then check and see if the normal price being charged for the hives was too low to enable you to meet your costs and leave a satisfactory margin of profit. If the answers to all the above questions were yes, then I suggest you drop the whole idea and have another look next year.

If it appears however, there could be a shortage of hives and/or the growers are not too happy about ▶

The minister's warning

REMEMBER THE price freeze will still apply to all pollination charges until the end of February 1984, except that hives moved into the Bay of Plenty region for the pollination of kiwifruit have been exempted subject to the following conditions:

(I) That before implementing any increased pollination service fee, each beekeeper provides my Department with details notifying his proposed new fees,

(II) That beekeepers undertake to negotiate any increased pollination service fee with kiwifruit growers in the Bay of Plenty region on an individual basis.

Hugh Templeton,
Minister of Trade and Industry.

the service they are getting, then I suggest you carry on and work out a price that you feel will interest growers to the point that they will order the number of hives you want to put out. The price will need to be high enough to leave a good profit to your business after meeting your costs while at the same time not being unreasonable to your potential customers. Obviously, if you can provide better hives or better service you will not need to charge less than other beekeepers but you should work out how much more you can charge and still be able to show the growers would be financially better off getting your hives.

Remember, the cost of pollination hives is not the main concern to the grower. The main concern to the grower is to produce maximum crops of export fruit, and poor hives in unsatisfactory condition could prove very expensive to the grower, even if he was charged nothing at all for the use of the hives.

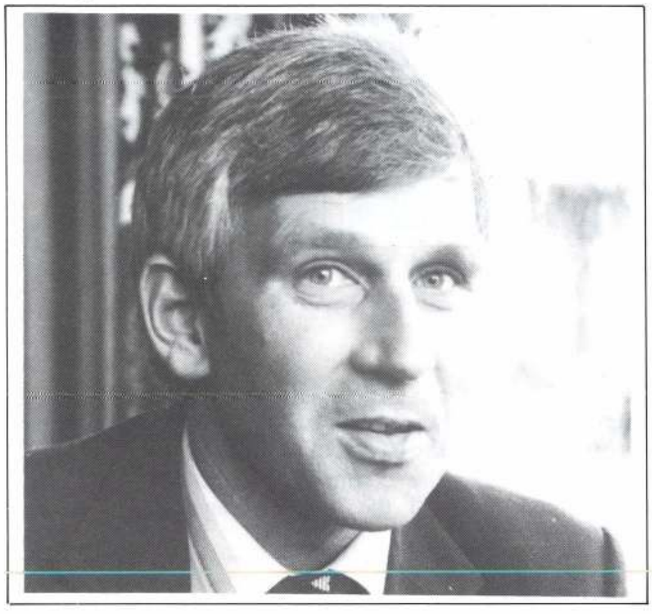
Having made your decisions as to how many hives and at what price, you will then need to look at ways of obtaining orders from the growers.

There are various ways of doing this such as visiting the growers, contacting the growers organisation to see if they have knowledge of members needing hives, advertise in the newspaper or send out a circular to growers.

When the orders come in be careful if the numbers of orders exceed your expectations. Do not put your future business in jeopardy by accepting more orders than you can efficiently handle. Do not however, just turn them down flat. Try and help them out by arranging for an alternative supply of hives from your fellow beekeepers. This will not only make for good relations with the growers but also with your neighbouring beekeepers.

Remember good public relations is a very valuable asset to any beekeeping business.

Retiring NBA president, Tony Clissold



IT GIVES me pleasure to report on the activities of the National Beekeepers' Association for the 1982–83 year. Some interesting points to be noted this year are:

- The industry has been sandwiched between the finishing of the honey marketing authority and the setting up of the trust deeds.
- Two educational beekeeping programmes were started, one in each island.
- This is the 100th year since the original Beekeepers' Association was formed.
- On July 1, 1883 the first issue of "The New Zealand and Australian Bee Journal" was printed – a monthly issue at a cost of six shillings per annum, paid in advance.

KIWIFRUIT POLLINATION

In the spring of last year, the industry was fortunate to have Professor Cam Jay in New Zealand to do a study and research with Pat Clinch on the pollination of kiwifruit by the honey bee. Our thanks must go to Cam Jay for all the work he did on the pollination programme, and for passing on some of his valuable knowledge to us when he toured the country meeting and talking to many beekeepers. It is of great benefit to our industry to have people such as Professor Jay over here working and speaking to us.

The problems of kiwifruit pollination with bees are many and varied, and pesticide spraying when bees are in and around orchards is the main issue – when these are overcome I am sure the hive numbers required for pollination will be met, and the two industries, the kiwifruit grower and the beekeeper, will work together and prosper.

The Agricultural Chemicals Board this year became the Pesticides Board. It is most important that we, the beekeeping industry, have a voice on the Pesticides Board, and our industry has been well served by our representatives in the past. I assure you that Ian Berry is carrying on the good work in keeping bees and toxic chemicals well aired at Pesticides Board meetings.

PRICE FREEZE

It is now 13 months since the freeze began – it has made budgeting easier for some, but for those beekeepers who were not selling their honey at the top or best price, it has been a costly experience. We have a product we are proud of and there is no need for short selling.

For the kiwifruit boys who have not been able to increase their charges for the last two years as the freeze came on between seasons, I believe you have a true case for an increase. The old motto is "If at first you don't succeed try, try again".

Bulk producers of honey, i.e. those that sell to a packer or the honey co-operative, should make sure they receive at least the same price as last year for their honey.

In the last 12 months, the beekeeping industry has taken a major step forward with first the Bay of Plenty Community College educational beekeeping programme with Nick Wallingford as tutor, and then the Telford Farm Training Institute at Balclutha starting a beekeeping programme at their establishment with Paul Marshall in charge.

Both these men need no introduction to our organisation and shortly they will be given time to explain what is happening in their respective colleges. It is over to us, the beekeepers of New Zealand, to give them the support they deserve to make sure their new ventures are successful.

It has been a long struggle to make known to New Zealand agricultural and horticultural industries the pollination value of bees and we have only just begun. With these two colleges assisting us the value of bees to New Zealand should be better known.

TRUST DEEDS

At our last conference, I was sure that the Honey Marketing Authority would not still be in existence at this annual meeting, but government red tape was true to form and the HMA is still with us. Hopefully not for long, as the trust deeds are now finalised and should be operative soon. I am sure the moneys from the charitable trust will be used wisely so that all beekeepers can benefit.

To Ivan Dickinson and Russell Berry, our two industry trustees, your work may only be just beginning.

MINISTRY OF AGRICULTURE & FISHERIES

The MAF advisory service continues to give our industry good advice and assistance. The industry is lucky to have men of such high calibre as advisers to our industry. But it is most important that the advisory service is not depleted any further as happened last year. Beekeeping is in a growth situation.

With Otago and Southland's extremely poor crop this year, our thanks must go to the advisory service for all the work and moral support they gave us.

The Rural Bank also came to the party when a lot of beekeepers were faced with no income and big sugar bills with more bills to come before the next honey crop. The minister of agriculture instructed the Rural Bank where necessary to accept hives as collateral security, thus extending the security margins and loans offered. The industry has been wanting this for years. Let's hope it will become normal practice in the future.

BEAUTIFUL NEW ZEALAND

It is pleasing to note that from August 1, some roadsides ▶

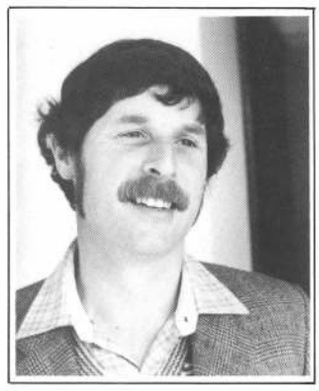
▶ throughout New Zealand will be planted with ornamental trees and shrubs which we hope will be another pollen source for our bees. It is over to all beekeepers to promote the planting of pollen and nectar bearing trees when talking to farmers, catchment board, nurserymen, or anyone who may be planting trees.

Beekeeping has become one of the biggest growth industries in New Zealand with an over eight per cent increase in beekeepers, and the likelihood of numbers increasing at a greater rate over the next few years.

It is essential that we all maintain a high standard of hive management and disease control so that we continue our record of being one of the few countries in the world that does not have the major bee diseases or a ban on exporting honey, bees and bee related products.

I welcome the Auckland branch of the NBA back with us and hope that with new life they will become one of the most active branches.

This year we have had two executive members stand down from the committee. I thank Mike and Steve for the work they did and hope they will keep up the good work from their own district. To the new members of the executive – Allan McCaw of Milton and Dudley Ward of Dannevirke – we look forward to working with you and benefiting from your expertise.



Allen McCaw, newly-elected NBA vice-president

Tony Lorimer, NBA executive member

To Mrs James of our office staff who unfortunately was taken ill recently we wish a speedy recovery and thank her for all the help she has given us in the past.

I thank the executive committee, Mr Steuart Goodman, our secretary, for all the support they have given me throughout the year.

MAF ADVISORY REPORT

Presented by Murray Reid, MAF national apicultural advisory officer

ORGANISATION AND STAFFING

A display panel at the conference illustrated some of the functions of the apiary section within Advisory Services Division (ASD) and the work at Wallaceville.

The Advisory Services Division's responsibilities to the beekeeping industry includes providing an effective advisory service, certifying export shipments of bee products, maintaining a quarantine service to prevent the introduction of harmful diseases, pests and undesirable genetic characteristics, and ensuring that beekeepers meet their obligations in controlling bee diseases. The Division sees its principle function as assisting and encouraging primary producers to achieve increased economic returns, particularly from export.

During the past year, Mr Cliff van Eaton took up the position of apicultural advisory officer in Gore. This position had been left vacant following the transfer of Mr Trevor Bryant to Tauranga. Mr van Eaton had been employed for a number of years as an inspector and on a bee breeding project with the Department of Agriculture in British Columbia. Mr van Eaton has been putting these skills to good use since his arrival in Gore.

With the transfer of Mr G.M. Walton, formerly chief advisory officer apiculture, to other duties, national responsibility for apiculture was assumed by G.M. Reid, apicultural advisory officer, Hamilton.

Mr John Smith, apicultural advisory officer, Christchurch has been responsible for developing a computer programme for apiary registration. The programme is completed and some regions with access to micro computers have converted their apiary records to the computer. Beekeepers in these regions will receive their annual statement of inspection forms and list of apiaries on computer printout.

Field officers of ASD continued to support apicultural advisers with disease check inspections, export certifications, apiary registrations and general advisory programmes. Livestock officers and beekeepers also assisted with disease control measures. Their co-operation is gratefully acknowledged.

Apiary staff continued to liaise with other government departments. A number of beekeepers have been assisted in making loan applications to the Rural Bank or to the Department of Trade and Industry for regional development finance.

BEEKEEPING STATISTICS

Beekeepers, apiaries and hives: As at May 31 1983 there were 6445 NZ beekeepers maintaining 23644 registered apiaries and owning 269043 hives.

The number of beekeepers and beehives continues to grow. Hive numbers traditionally increase in times of economic downturn but in areas like the Bay of Plenty, increases in hive numbers have been over 19 per cent in the past year. This increase has been primarily to meet the demands of kiwifruit pollination. Other high growth regions include Auckland, Waikato, Poverty Bay and Oamaru.

Honey crop: The surplus honey crop for the 1982-83 season was assessed at 5053 tonnes. This is the smallest honey crop since 1976 when 4915 tonnes was produced and the smallest production per colony ever recorded. Production was down in both islands but hardest hit was Southland where only 150 tonnes was produced; 0.5 t/100 hives, eight year average 3.6 t/100. The six year average in Southland is 995 tonnes and 975 tonnes was produced in the previous season.

A survey carried out by Mr van Eaton, apicultural advisory officer, Gore involved 28 of Southland's commercial beekeepers (78 per cent of the hives). This showed that 50 per cent of the beekeepers surveyed had no crop, 20 per cent of the colonies needed extensive autumn feeding and 53 per cent of the beekeepers had consulted the Rural Bank for disaster relief.

Mr van Eaton assisted the beekeepers in making a successful application to the Rural Bank to accept hives as collateral.

American Brood Disease (ABD): Responsibility for disease control belongs with the owners of the beehives. It is of continual concern to the Ministry that a significant number of beekeepers are not carrying out a sufficiently rigorous check of their own colonies or reporting ABD disease when

they do find it. Some hobbyist beekeepers are not destroying diseased hives properly or attempting to salvage diseased equipment contrary to the Apiaries Act.

The Ministry continued to maintain a part-time disease inspection service using field officers, livestock officers and beekeepers. Inspection efforts were concentrated on the hobbyist and semi-commercial beekeeper group.

A minor disorder of brood, which has been termed "Half-moon disorder", still defies diagnosis. Only about 40 cases were reported last year and hives "infected" usually responded to requeening.

American Brood Disease levels in apiary districts 1982/83

Apiary district	Diseased apiaries Number	%	Diseased hives Number	%
Auckland (Region)	154	4.2	407	1.5
Hamilton	152	5.7	257	0.63
Tauranga	51	2.21	117	0.37
Palmerston North	144	4.3	182	0.50
Nelson	68	3.9	104	0.59
Christchurch	34	0.99	111	0.30
Oamaru	80	2.9	105	0.27
Gore	75	3.9	192	0.30
Total	**758**	**3.5**	**1475**	**0.56**

Advisory activities

Advisory Services Division continued to focus its main activities towards agricultural and horticultural industries that are actively exporting or have a potential to do so.

Workshops, seminars and discussion groups at district level and courses at Flock House and Telford Farm Training Institutes concentrated on queen production, expanding into commercial beekeeping, financial management and pollination.

The demand for hives for pollination of high country pastures and kiwifruit is placing a strain on established beekeepers to meet this demand. It is now obvious that hives for kiwifruit pollination require different management than for honey production. If sufficient pollinating colonies are to be produced in areas like the Bay of Plenty, Poverty Bay and South Auckland, then some new beekeepers will be forced to rely on pollination fees as their main source of income.

A visit to New Zealand by Dr Cam Jay from Manitoba was initiated and co-ordinated by apiary staff. Dr Jay carried out research work on kiwifruit pollination and spoke to over 26 groups of growers and beekeepers while in New Zealand.

Kerry Simpson, apicultural advisory officer, Oamaru has been involved with a bilateral aid programme to Tuvalu (formerly the Allice Islands) while apicultural advisory officer, Matheson, Nelson has acted as a consultant to FAO on a beekeeping project in Jamaica.

Beekeeping on the Chatham Islands continues to develop under the watchful eye of John Smith, apicultural advisory officer, Christchurch. There are now 38 beekeepers owning 130 hives on the islands. This year 150 kg of honey was "exported" to New Zealand. Some of this honey was the purest sample of white clover ever obtained in New Zealand based on pollen analyses.

Export certification: MAF continued to issue export certificates on demand although some beekeepers are still not giving the required two weeks advance notice of intention to export. MAF will only certify to the standards or conditions demanded by the government of the importing country. Importers may have their own requirements over and above those of their government but meeting these standards is the responsibility of the exporter alone.

MAF RESEARCH REPORT

Report from the Apiculture Section, Wallaceville Animal Research Centre to the 1983 Conference of the National Beekeepers' Association of New Zealand

STAFF

The Apiculture Section now consists of Mr Pat Clinch (scientist, section leader) and Mr Mark Schrader (technician). 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

Effect of male:female vine ratios: It has been observed that kiwifruit formed from female flowers close to male vines are often visibly larger than fruit formed from flowers distant from males. It is possible that if male vines are too far apart, honey bees may be unable to effectively pollinate all female flowers. In 1981, studies were started in kiwifruit plantations near Tauranga and at Te Puke to determine whether the ratio of male vines to female vines, and the distribution of male vines among females, can affect pollination.

In the 1981–82 season, honey bee visitation to kiwifruit flowers was satisfactory in the plantations studied. In six of the nine plantations, regardless of male to female ratios, fruit formed from flowers close to males was significantly heavier and contained significantly greater weights of seed than that formed from flowers distant from males. Fruit in plantations with more males than the 1:8 male:female ratio tended to be heavier and contain more seeds than that in plantations with a 1:8 ratio.

In the 1982–83 season, honey bee visitation to kiwifruit flowers was satisfactory. Compared with the previous season, female vines had 50 per cent more flowers, and at harvest, fruit was about 14 per cent lighter. In six of the 11 plantations studied, fruit formed from flowers close to males was significantly heavier than that formed from flowers distant from males. Fruit in plantations with more males than the 1:8 ratio tended to be heavier than that in plantations with a 1:8 ratio. Seed content of this fruit has still to be determined.

Weight of seed as an indicator of pollination: Weight or size of fruit has often been used as an indicator of the level of kiwifruit pollination. However it appears that weight of seed per fruit is a much better indicator. Although the two are correlated (heavier fruit usually have more seeds), seed content is less affected by post-blossom weather conditions. In one plantation where a hailstorm retarded the growth of fruit, it was possible to estimate that at harvest fruit were about 20 per cent lighter than would be expected from their seed weight.

Microclimate in kiwifruit plantations (1) wind: Measurements of air flow in the centre of a kiwifruit block and ▶

at an exposed site outside the plantation were made in both the morning and afternoon in four Te Puna (Bay of Plenty) plantations using a vane anemometer. Comparisons were made of air speed and total bee counts on a total of 88 female and 32 male vines. Analysis of pooled data (from all plantations) showed mean air speed inside the plantation to be 0.35 ± 0.32 metres per second (m/s) compared with a mean of 1.39 ± 1.04 m/s outside the plantations. This represents an average reduction of wind flow of about 75 per cent. Mean bee numbers were 38.3 ±36.5 per observation period. Regression analysis showed that there were no significant correlations between bee numbers and wind speed, either inside or outside the plantation.

Microclimate in kiwifruit plantations (2) temperature (a): Honey bee activity in kiwifruit plantations appears to be influenced by temperature to some extent and, as a result, flowers in cool shaded areas are less likely to be visited by bees than are flowers in warm sunny areas. Measurements of temperatures within the foliage of a T-bar supported female vine were made in one plantation over a seven day period in November 1982 at Te Puna, Bay of Plenty. Thermistor probes linked to a four channel data logger were fixed at four positions in the vine. Two were placed high in the foliage in the east and west sides of the vine. Two others were set 45 cm above the ground on the east and west sides of the vine.

The foliage on the eastern side was always warmer than the foliage on the western side (up to 4.7 deg C higher) during the bee activity period (0800 to 2000 hr). However, the temperature 45 cm above the ground on the eastern side was always lower than at the corresponding site on the western side (up to 3.7 deg C less). These differences could be explained in terms of leaf area and density (foliage temperature differences) or orchard bearing (compass) and shelter belt height (ground termperature differences). The effects measured here could be used to explain differences in fruit size often observed in different parts of plantations and in different parts of the same vine.

Microclimate in kiwifruit plantations (2) temperature (b): A thermohygrograph was set up in each of two kiwifruit plantations; one at Te Puna and the other at Te Puke, Bay of Plenty, as part of a long-term study on seasonal temperature fluctuations. For the first four months of recording (December 1982 to April 1983) the mean temperature at Te Puna was 18.2 deg C (range 4 to 33 deg C) compared with 16.7 deg C (range 2 to 34 deg C) at Te Puke. The latter area is 150 to 180 metres above sea level and about 16 km from the coast. The Te Puna site is 30 to 60 metres above sea level and about 8 km from the coast.

Extraction of kiwifruit seeds: As part of research into kiwifruit pollination, it is necessary that all seeds be extracted from fruit for counting. As more than 5000 fruit must be processed each year, a rapid seed extraction method is required. Ripened fruit are cut in half, longitudinally, and the fibrous core removed with a sharp-edged tool. Seeds and a minimum of pulp are scraped from the fruit and agitated for one minute in a food processor fitted with a steel cutting blade. This separates the flesh from the seeds but does not damage them.

The seed/pulp mixture is placed in a kitchen sieve and the bulk of the pulp forced through with a jet of water. An excess of water is added to the seeds in a plastic tray and after the seeds have settled (< 1 minute), the fluid is decanted and the seeds turned out onto filter paper to dry. A sample of six kiwifruit takes about 10 minutes to process by this method, an improvement of over 35 minutes on less mechanised, previous techniques.

Seed counter: Because kiwifruit each contain a large number of seeds, in experiments in which thousands of fruit are being examined, it is too time-consuming to manually count the seeds. As a consequence, weight of seed per fruit is often used as the measure of seed content. As it is preferable to know the number of seeds in fruit, an electronic seed counter is being developed at Wallaceville.

DIAGNOSIS OF BROOD DISEASES

Samples of brood from colonies showing signs of unusual brood conditions have been examined microscopically at Wallaceville. Except for samples found to be infected with American brood disease *(Bacillus larvae)*, sub-samples were sent overseas for further examination. So far neither European Brood disease nor any other disease has been found.

If there is to be a chance of eradicating a disease before it becomes widespread, a fast diagnostic service is essential. Because the Apiculture Section is away from Wallaceville for long periods in the summer, it cannot be relied upon to give a rapid service. In 1981 I requested that a search be made for an alternative group able to undertake the work, and it is expected that we will be handing over the diagnostic service this year.

Questions

Q: Ian Berry asked whether the present recommendation of eight hives per acre for kiwifruit pollination was under review.

A: There probably will be a reduction. Originally one hive per acre was recommended but proved insufficient. "So what we recommended was a high level to cope with weather variations, competition from other crops etc. In a monoculture there is less competition so fewer hives are needed."

Q: Nick Wallingford acknowledged the debt of the industry to research and asked what were the research priorities.

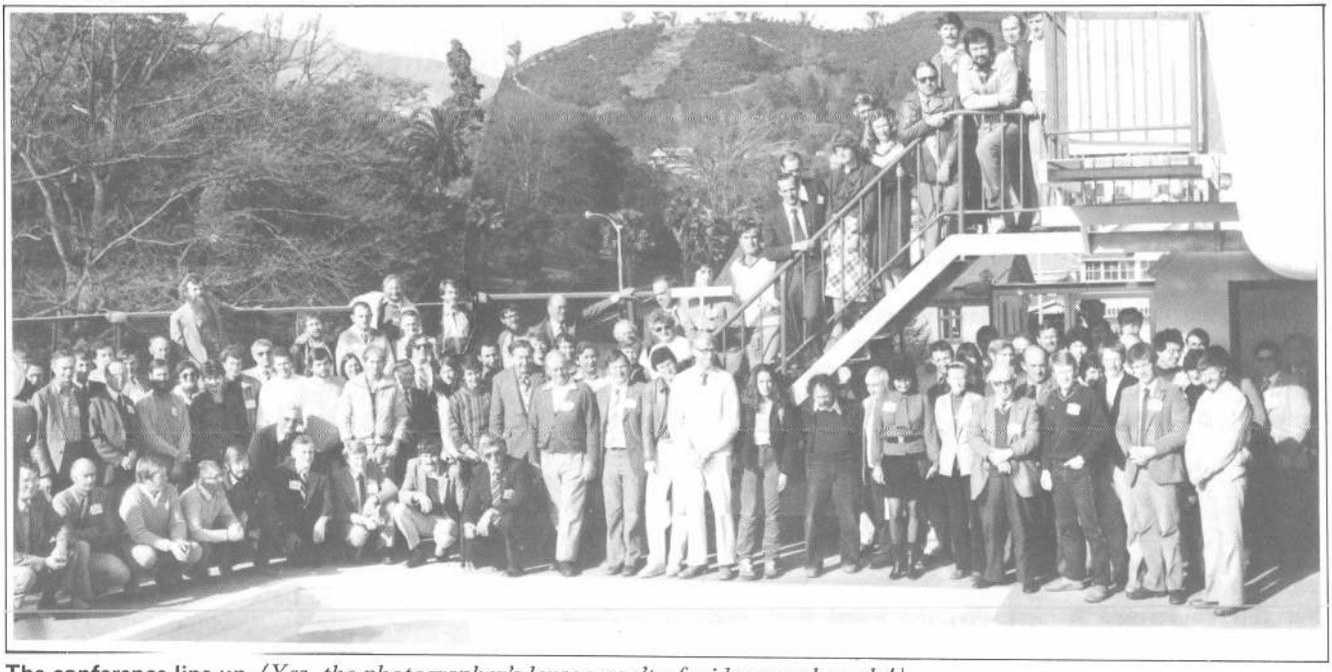
A: "That is a hard one: All I can think about now is kiwifruit. One area is certainly trying to find horticultural sprays and compounds which are less toxic to bees. Another vital area is the export of queen bees: An export which will have greater value than honey."

Q: Is the controlled grafting of male onto female kiwifruit vines succeeding.

A: It does seem to be working, but the male grows very vigorously and will smother the female. The 'H' planting of males is extremely successful.

Q: Is it advantageous to move hives into kiwifruit sites piecemeal rather than all at once.

A: Yes. It is better to build hive numbers up according to the strength of the flowering.



The conference line-up. *(Yes, the photographer's lense wasn't of wide enough angle!)*

MAF RESEARCH

Remit No. 1 **Waikato**

That following the indications and tentative conclusion resulting from Professor Cameron Jay's work in 1982–83, the executive approach the DSIR, the Kiwifruit Council, and other concerned bodies with a view to extending research being done on pollination by honey bees.

This remit had the wholehearted support of delegates and was carried unanimously after little discussion.

Remit No. 2 **West Coast**

That the industry consider supporting research into a chemical analysis of New Zealand pollens to determine their nutritional value for beekeeping.

Andrew Matheson said he was unaware of any research being done on the protein content of native pollens. Jasper Bray suggested this could be a good subject for a research student thesis.

It was suggested that on a national basis greater areas of priority for allocation of time and resources existed.

The remit was amended to delete the word 'beekeeping' and replace it with 'honey bees'.

The amended remit was carried unanimously.

Remit No. 3 **Canterbury**

That the NBA offer their support to the Ministry of Agriculture & Fisheries in their efforts to get Dr Shimanuki to spend his study sabbatical in New Zealand.

Note: To assist beekeepers and bee research workers in New Zealand with his knowledge and expertise in the behaviour and breeding of bees. This may have much significance in the export of queens from New Zealand.

Murray Reid (MAF) said that Mr Shimanuki's expertise was in two areas – bee diseases and bee nutrition. The importance of his visit lay in the fact that he could be a key factor in United States acceptance of queen bee exports from New Zealand.

The US has not directly imported queen bees since the 1920s, and every recent approach has come up against USDA policies and their questions about NZ diseases and genetic stock. The fact that NZ queens are exported to Canada and that some are then sent on to the US is not the point – NZ has to be able to answer the USDA questions if we are to export direct.

Mr Reid said that having a well-respected scientist like Dr Shimanuki here would be a great help in approaching the USDA. While in NZ, Dr Shimanuki would also look at the Half Moon disorder of bees and would aid in setting up a bee disease diagnostic unit.

"The good news," said Mr Reid, "is that MAF is trying to fund Dr Shimanuki's visit, and the only snag so far is that we need some help with air fares. He'll be here for three months from January to March."

Ian Berry told the conference that his brother Russell had recently reported back from the United States where he had met Dr Shimanuki with the comment that, "he was really good value".

Mervyn Cloake said that it was vital that Dr Shimanuki visited New Zealand as soon as possible. He said that one of New Zealand's biggest potential exports was package bees – especially units which had just done their job pollinating kiwifruit orchards.

Carried 13:0 ▶

HIVE BRANDING

Remit No. 4 **Southland**

That this conference request the NBA executive to investigate the feasibility of branding hives on a national basis to establish clear ownership and to discourage theft.

Mr Lee said there was considerable difficulty involved in tying up hives for collateral on loans and that this was a way to help.

However, the concept would have its problems with Mr Clements pointing out that it would be necessary to firebrand every part of a hive to establish ownership and with Mr Cloake pointing out that there would be a problem when hives were sold.

Carried 12:1

HIVES AS SECURITY

Remit No. 5 **Southland**

That this conference request that the Rural Bank continue to accept beehives as security as a matter of course, rather than exception.

Ian Berry told the conference that Southland had had an extremely poor season, and after a meeting had approached the Rural Bank for loans on hive-only security. This approach was successful. He felt the step from accepting beehives as security in exceptional circumstances to accepting them as the norm was a small one and was not far away.

Paul Marshall made a plea for beekeepers to attempt to meet present Rural Bank requirements as much as possible.

Allen McCaw observed that the Rural Bank had shown it was not inflexible. He proposed to amend the remit:

> **That this conference request the executive to take whatever steps are necessary to ensure that the Rural Bank accept beehives as security as a matter of course, rather than exception.**

The amendment was carried unanimously, became the motion, and was carried unanimously.

BURN DISEASED HIVES

Remit No. 6 **Auckland**

That the National Beekeeper's Association supports the destruction, by the Apiary Inspector, of hives owned by negligent beekeepers.

Note: It is feared that diseased hives owned by hobbyists in and around the suburbs of Auckland, could be shifted to honey producing areas and kiwifruit farms, with the possible consequence of a further spread of the disease.

Mr Rawnsley understood that an inspector had been reprimanded by a senior MAF official for destroying diseased hives. The Auckland branch felt the inspectors should be reassured so that they could proceed with this vital work.

Murray Reid, MAF, advised the conference it was not quite true that an inspector had been reprimanded and he would not like the matter to go further. He said that a problem had arisen when a hive was destroyed without sufficient notice being given to the owner. There was reluctance by some hobbyists to destroy $100 hives. Attempts had been made to salvage equipment from condemned hives – washing frames before reusing.

Carried 12:0

BE PREPARED WHEN MIGRATING

Remit No. 7 **Waikato**

That all beekeepers be encouraged to adequately cover their hives when shifting them in the daylight, as well as ensuring that they have adequate equipment (spare tyre, jacks etc) to cover breakdowns and other such problems.

Note: This relates to a public relations exercise that beekeepers should initiate, and not the public, after an incident.

Tony Lorimer told of considerable panic overseas when trucks carrying hives have tipped over. If there was a problem here, there would be a public outcry and the industry should undertake a public relations campaign before the event.

Trucks servicing pollination could clog roads. MOT could bind hive-trucks in red tape.

Ian Berry suggested emergency services should have contact numbers.

Bruce Stanley advised truck nets are used efficiently overseas.

Carried 10:1

SAVE THE PRIVET

Remit No. 8 **Waikato**

That the beekeeping industry oppose the announced intention to include the privet varieties of flowering shrubs/trees in the national noxious weeds classification.

Note: In the Auckland district moves by the councils (Auckland City) supporting/advocating this, plus their programme of eradication from parks and bush areas now in operation, will for many beekeepers remove one more early feed supply in hive build-up.

European privets on farmlands will be affected. In the Onewhero district of the Franklin County this is coming with the removal of many privet hedge rows. This movement has the apparent support of a prominent professor from Auckland University (introducer of Sunday night 'Our World' TV programmes) who claims privet is running wild and if not removed will take control.

Noxious weed classification will eliminate. It is recognised that in urban areas privet could well be regarded as noxious, however in many rural areas it is beneficial especially to beekeepers. Bearing this in mind it is recommended that it be done in local areas.

Bryon Clements explained in the Auckland–Hauraki Plains area another valuable early season crop was threatened. He conceded privet "does have an effect on the hayfever sufferer and tends to take over."

Conference was advised it would be Schedule B classification, not a national declaration.

Carried 12:0

JOIN THE IBRA

Remit No. 9 **Otago**

That executive consider membership of our Association with the International Bee Research Association (IBRA).

Note: A certain moral obligation exists as IBRA works for and makes available much valuable information to the beekeeping fraternity throughout the world in general. Certain advantages in the way of discounts and preference are adherent to membership.

John Heineman advised the conference that Dr Crane of ▶

IBRA will value the NBA library and "We get a lot of information, either directly or indirectly, from them." Individuals here are members.

Estimates of membership costs varied from $31.25 to $US108. Nick Wallingford said "Their information is of the highest calibre. We should support this agency."

Carried 12:0

HELP FROM PEST BOARDS

Remit No. 10 **Canterbury**

That the NBA press government for regulations requiring that any pest destruction officer, when out in the field, discovering the location of a wasp nest, take necessary steps to destroy the nest or to report the site to a local beekeeper.

Note: It has been drawn to the notice of the Canterbury branch that 12 gauge shotgun shells reloaded with a suitable insecticide is an effective and safe way of dealing with a nest from a distance.

Wasps are a considerable nuisance in honey dew areas following rain. With the honey dew washed away, wasps seek out beehives as alternative food source. It was to beekeepers advantage to have nests removed and good public relations to be seen doing it.

Nick Wallingford confessed he had made a profitable business of eradicating wasp nests: "We should not feel obliged to do it as a free service to mankind."

Bruce Stanley proposed that the remit be amended:

> **That the NBA requests that any pest destruction officer, when out in the field, discovering the location of a wasps nest, take necessary steps to destroy the nest or to report the site to a local beekeeper.**

Jasper Bray told conference he would like the remit worded to declare wasps a pest. It may be that pest destruction officers can only destroy pests.

Trevor Walton advised the chairman that under the relevant Act wasps are not pests. Neither are rats or mice.

The amendment was put and carried 11:0. The motion passed unanimously.

A BETTER WASP BAIT

Remit No. 11 **South Western Districts**

That conference urge the Ministry of Agriculture and Fisheries to investigate a wasp bait attractive all year round to the wasps but completely unattractive to bees.

Stanley Young said their branch area contained much broken ground providing admirable cover for wasp nests. "They are difficult to locate. A suitable bait could be laid out and left to kill them off."

Mr Bartrum said Mirex was a step in the right direction, but had to be combined with a bait which was more durable than either mince or fish.

Carried unanimously.

CATCH THE DODGERS

Remit No. 12 **Canterbury**

That the NBA strenuously oppose any increase in the hive levy until such time as the levy is collected on all hives owned by beekeepers with 50 or more colonies.

Note: It is apparent that many beekeepers are evading the levy by under-declaring their hive numbers.

Mr B.R. McCusker told the conference he believed there was evasion but it was difficult to collect adequate proof and do anything about it.

His research showed that in:

1980	425	beekeepers declared more than 50 hives to MAF.
and	377	beekeepers registered as commercial members of NBA.
1981	454	
	390	
1982	474	
	405	

It was apparent the differential was increasing to the disadvantage of NBA.

From the chair, Mr Clissold advised that NBA could question any beekeepers who may not be paying the levy and require them to sign a declaration, which, once signed by a JP carried a $1000 penalty for the provision of false information.

Michael Stuckey observed if all those required to pay did so then the hive levy would not increase.

John Wright asked if hives kept specifically for pollination services were required to pay hive levy and was advised from the chair that only those hives which were capable of producing honey were levied.

Murray Reid, MAF, explained that the definitions of what constituted a registered hive were different under MAF and NBA legislation. NBA legislation did not require the registration of nucleus hives for instance.

Nick Wallingford then proposed an amendment:

> **That the NBA strenuously attempt to collect hive levy from beekeepers with 50 hives or more.**

Adopted unanimously.

Bruce Stanley felt the executive should approach the matter as an education programme rather than wield a big stick.

Murray Reid, MAF, advised the conference that hive number groupings, along with names and addresses, were always included in apiary division report.

Mervyn Cloake said: "Most people are honest but we believe that some are not. We have to assume they are honest until it is proven otherwise." The area between 50 and 200 hives was the problem one. Once local areas see that MAF list they must feed their local knowledge back to executive. "We do not want to see the levy go up and this is a good way to ensure it holds."

Carried 12:1

STOP PRICE CUTTING

Remit No. 13 **Otago**

That conference strongly disapprove of any price cutting which apparently still occurs, even during a year such as we have just experienced.

McCaw/Heineman

Statements of solidarity were made.

The remit was carried 11:2

BETTER FLORAL SOURCE ANALYSIS

Remit No. 14 **West Coast**

That a more accurate method of determining the floral source of honey by analysis be investigated. ▶

Note: At present, floral source is determined by a percentage pollen analysis but because all honies do not contain the same percentage of pollen grains this method is inaccurate.

Note: Some honies are not receiving their true market price overseas because of this – e.g. thyme and kamahi. It is considered this project could be undertaken with industry assistance by a student completing a thesis.

Mr Glasson, proposing, explained the remit was an attempt to halt the selling of 'kamahi' honey containing predominantly clover pollen overseas.

John Smith, MAF, advised the remit was inaccurate because the process of pollen analysis was extremely accurate. "But here we do not have background data which locates pollen spectrum to specific areas. Overseas placement is extremely accurate after 50 years of analysis.

Ian Berry said the method may be accurate, but results certainly are not. He had sent Rewarewa, with 5 per cent clover starter on request to Germany and they classified it as clover honey.

Jasper Bray warned of using pollen analysis as a marketing tool to depress price in this situation: "But then the Germans until recently identified flax pollen as coconut in New Zealand honey."

Canterbury then proposed amendment of the motion:

That a more adequate method of determining the floral source of honey by analysis be investigated.

Nick Wallingford observed that the pollen analysis test is required in Germany by law. It was their test and their law: "How we feel about it here makes little difference to them. We have to meet their requirements if we want to sell honey to them."

The amendment was accepted 11:0. The motion was carried unanimously.

EXPORT ADVISORY SERVICE

Remit No. 15 **Southland**

That this conference request the executive to investigate the need for an export advisory service to assist in the orderly exporting of all honey – packed, bulk and comb – as well as other bee-related products. We suggest that the latest market developments be published in "The NZ Beekeeper" to assist in stabilising markets and prices.

Mr Lee said classic unco-ordinated selling by some beekeepers was eagerly exploited by overseas buyers. "Some beekeepers are cutting their own throats."

Ian Berry declared Hawkes Bay branch unanimously for this remit. "But information on crops and prices is valuable for our offshore competitors. We must be careful where and what we publish. And achievement of the best possible current price should be our intent rather than stable prices."

Tony Lorimer declared Waikato against publishing of information in The NZ Beekeeper. He proposed an amendment:

That this conference request the executive to investigate the need for an export advisory service to assist in the orderly exporting of all honey – packed, bulk and comb – as well as other bee-related products.

Carried unanimously.

The conference was asked how this information was to be circulated. Perhaps a Marketing Newsletter covering both home and abroad could be prepared for distribution on a user pays basis.

Ian Berry advised executive had requested information on market prices from 70 packers. It was a possibility that users of this service would provide the information.

The remit was carried unanimously.

PROMOTE CONSUMPTION

Remit No. 16 **Nelson**

That this conference recommends the executive use a portion of the industry fund in the promotion of increased honey and pollen consumption within New Zealand.

Note: A position created to co-ordinate a national promotion programme – possibly a paid person or an executive member. Promotion in the form of a NZ honey recipe book or slogans, car transfers etc.

Ray Clarke saw the benefits of the Bigger Block and Trim Pork campaigns could be repeated for New Zealand consumption of honey using ex-HMA funds to benefit the whole industry.

Mr Rawnsley proposed an amendment:

That this conference requests the trustees use a portion of the fund income in the promotion of increased honey and pollen consumption within New Zealand.

Ian Berry advised that Hawkes Bay felt the remit "a bit premature. We have not got a surplus this season. Doug Kidd told us to be aware that if you spend peanuts you get monkeys, well, you can spend megabucks and still get monkeys. Promotion is not necessarily a matter of money. There is also the question of how much honey to put in."

John Wright warned there could be a massive increase in honey from pollination hives: "They have to do something the rest of the time."

Mike Stuckey said it would be possible to sell the entire New Zealand production locally. But "Are we right in trying to persuade New Zealanders to eat more when they already consume way above the world average? We should be preparing for an oversupply, not committing ourselves yet."

Ray Clarke said marketing impetus must come from a national push not individual sellers. "Better yields will come. We should be planning the machinery to exert marketing effort when the quantities become available. And this should be an up-market effort to increase our return from the same quantity."

A 'Honey Marketing Week' involving beekeepers in promotions and demonstrations at supermarkets and schools on their local level was suggested from the floor by Frank Lindsay.

The amendment was put and rejected 3:10

Mike Stuckey proposed an amendment:

That this conference recommends that the executive set up contingency plans for the promotion of New Zealand honey and pollen.

Speaking to his amendment, Mr Stuckey thought it sensible forward planning. "If we have a surplus of honey it would be very wise to have some idea of what to do with it."

Mervyn Cloake, seconding, said that given a big crop and a good market overseas, promotion here was not necessary. "And given a big crop and no market overseas then we would have to sell it here."

The amendment was carried 12:1. The remit was carried unanimously.

▶ **Remit No. 17** was withdrawn.

SHRINK THE EXECUTIVE

Remit No. 18 **South Canterbury**

That the NBA executive be reduced from six to four members, two from each island.

Steve Lyttle explained this had been proposed mainly as a cost saving measure.

Nick Wallingford called for an opinion from the executive and Mike Stuckey responded. He said that as a retiring executive member he would hate to charge the incoming executive with the same workload and two less members.

"My experience tells me it would be a very foolish move when we are continuing to ask our executive to do more and more."

Mervyn Cloake thought that over the last few years four members might have done the work of the six. But the workload was sure to increase and committee commitments with it. This was where numbers were important.

The motion was lost 11:0

PAY EXECUTIVES ON BUSINESS

Remit No. 19 **Waikato**

That where members of the executive are required to attend meetings in the interests of the NBA an attendance fee equal to that of the Apiary Advisory Committee be paid.

Note: It is not advocated that executive members be paid for attending conference. It is also suggested that if the remit is passed the president's honorarium could be adjusted accordingly.

Mike Stuckey, proposing, felt it should come from a retiring executive member. "It is noticeable that executive members with large company backing do better. I believe my company to be about $4000 out of pocket. The industry should at least meet costs of attending meetings and loss of production."

Robin Jansen asked why pay when there are always people prepared to do the job. And what would it cost.

Steve Lyttle: "About $3000 a year".

Mike Stuckey said that if some current NBA activities, like travel funding for overseas exports, came from tax free trust funds, then the hive levy might not have to be increased to cover this cost.

Mervyn Cloake advised conference he knew nothing of this matter before he saw it on the order paper. "I believe executive members do not claim all they are entitled to. This work is an extension of my business and I am convinced I reap back what I put in."

Ian Berry was more than happy to do the work for nothing. "I can afford it, but I can see that younger beekeepers may find it hard to commit the time and effort where there is no compensation. It is right to pay expenses."

Bruce Stanley said "Conference discharges tremendous work and responsibility to executive. In the Bay of Plenty we are in a pioneer situation and are aware of the cost in time, energy and real money. We are right for this remit."

Mike Stuckey, replying, said the whole industry reaps the benefit of individual commitment and this remit would acknowledge that.

Carried 11:1

CYANOGAS, PLEASE

Remit No. 20 **Otago**

That conference request executive to make another serious endeavour to arrange for the importation of Cyanogas in granulated form for use by the beekeeping industry.

Note: There is a real need for it, as no satisfactory substitute has been produced for our needs. Perhaps arrangements could be made with Pest Destruction Boards for storage and distribution.

John Heineman said there was a danger this would become a 'hardy annual'. But his branch felt there was no better alternative to Cyanogas available yet. Or in sight.

Ian Berry advised the former importers have cancelled their registration of Cyanogas with the Pesticides Board. It was probably possible to import but a Certificate of Competence to handle Cyanogas will be required of users by the Health Department.

Pat Clinch, MAF, advised that the United States outlawed cyanide in 1968. Because of its extreme toxicity he was reluctant to promote its manufacture or use. He hoped to have latest results on non-toxic (to humans) sprays from the U.S. within the month.

Carried 8:3

WHERE IS CHEAPER SUGAR

Remit No. 21 **South Western Districts**

That executive investigate cheaper and/or alternative avenues of sugar supplies.

Pat Clinch advised that work was done on toxicity of sugars and he could analyse a one pound sample within three weeks.

Tests with South Island beet sugar showed it to be very toxic. Generally speaking brown sugars can be fed as a supplementary diet.

"We have had no problems with Chelsea unrefined raw sugar ex Fiji. Again generally the further along the refining chain the sugar proceeds, the greater the possibility of toxicity."

Murray Reid, MAF, advised that fine liquid sugar was available from the Sugar Refining Company, minimum order eight tonnes. It is cheaper and they require the signing of waiver regarding quality.

Carried 12:0

TARANAKI CONFERENCE

Remit No. 22 **South Western Districts**

That next year's conference be held in New Plymouth.

The hospitality and charm of Taranaki in mid-winter were extolled. Mervyn Cloake enquired as to where this "Ta-ra-nak-i" was. He was advised to follow the power cable north on to the mainland.

Carried unanimously.

Remits under Rule 17c.

A BETTER CLASS OF REMIT

Remit A **Northland**

That the executive of the NBA exercise its responsibility in accepting remits for publication on future conference order papers.

Haines/Gavin ▶

▶ Malcolm Haines said that with judicious selection and processing of remits "Conference could become a two day seminar rather than a two day sit around."

Bruce Stanley proposed this amendment:

That NBA branches exercise responsibility in submitting remits for public action on future conference order papers.

Ian Berry seconded; shifting responsibility to the branches. "Executive is very reluctant to remove remits from the order paper," he said.

Mervyn Cloake suggested that executive might publish progress reports on remits which they have in hand for action.

Carried 12:0. The remit was carried unanimously.

MORE $ FOR BEE RESEARCH

Remit C **Southland**

In view of the amount of government funds being spent on research into bumble bees, leafcutter bees and wasps, this conference requests that at least equal amounts be spent on honey bee research.

Keith Herron entertained conference at great length with a dissertation on seeking the needs of the country in terms of beekeeping. He also made a plea for research to establish the importance of the bee to the economy.

John Wright told conference he was totally convinced kiwifruit was a simple crop for honey bees to pollinate.

"Using my methods bees achieve a three to four hundred per cent increase in work rate. I outlined this at one of Cam Jay's meetings and he was impressed and hoped the DSIR would follow it up. Since then I have had no contact from DSIR or MAF."

Carried unanimously.

DON'T BUG OUR GORSE

Remit B

That this association deplores the action of the DSIR in introducing a parasite to control nodding thistle, without first liaising with the association or instituting an economic survey, and further, urges the minister to halt any release of parasites for gorse control until all relevant factors have been considered.

Jasper Bray felt it very brave of people to stand up at a seminar and tell beekeepers they would effectively control gorse and so destroy part of beekeepers' livelihoods.

"We are concerned in Canterbury that gorse may disappear entirely – we don't know how effective the parasite may be. The value of bees to the overall economy must be taken into account." He asked that the ministry halt any release of further parasites until beekeepers had made submissions.

Ian Berry counted the value of nodding thistle honey at $750000 for 500 tonnes. "We should have heard about this before it happened and we must make sure it does not happen again."

An amendment was proposed:

That this association deplores the action of the DSIR in introducing a parasite to control nodding thistle, without first liaising with the association or instituting an economic survey.

Keith Herron wondered whether a honey-dew type parasite could be found for gorse. "Some of our forestry type situations could also be available as hosts."

Mr McCusker assessed an acre of gorse to be worth $1000 in Otago.

"There is so little of it left in South Canterbury it is off the noxious weeds list," he said.

Dr Barry Donovan, DSIR, advised conference there are scale insects in the northern hemisphere which host on pine trees. "I can imagine there might be resistance from forestry companies to their introduction here. But I will look in to it," he said.

The amendment was carried 10:3.

Dr Richard Hill, DSIR, said the remit was asking that nodding thistle and gorse be removed from the noxious weeds act. "My director has said any weed within the Act is a legitimate target for our work." He assured the conference beekeepers would be kept abreast of parasite research.

Bruce Stanley said: "We are going to be the biggest losers and must use our opportunities to make effective contribution to planning, both in eradication and replacement species. We are in a no-win situation at the moment."

Jasper Bray said beekeepers must stimulate discussion before they were faced with a fait accompli: "We must achieve more liaison and involvement in affairs which affect us."

Carried 12:1

BUMPER STICKERS

Remit D **Waikato**

That the NBA executive with Mr Trevor Walton help design and have made bumper stickers promoting honey, and sell stickers to members at cost.

Note: That a full sized public relations and advertising campaign would cost too much for the industry but that a small start should be made.

Carried 10:0

START PLANNING THE FUTURE

Remit F **Otago**

That this conference requests the national executive to convene an industry planning forum. Such a forum to include a broad spectrum of industry membership to consider, and outline, the future direction and requirements of the industry in all its facets.

Allen McCaw saw considerable impetus to diversify and specialise within the industry. "All these interests are partly pulling toward their own ends. The result appears to be some confusion and perhaps waste of the resources we have."

He suggested that advisory services and researchers be invited to make submissions in a planning forum on industry directions and requirements.

Carried 13:0

The third article in a series by David Williams on the bee today, yesterday and the day before yesterday.

The bee today and yesterday

THERE ARE about forty species of native bee in New Zealand and seven exotic species have been introduced (Donovan 1974, 1980) out of a world total of about 20000 bee species. It has been tentatively concluded that the introduced bees present little threat to native bees and that their effect was minimal compared with that of man.

Of these bee species the vast majority are solitary, the social honeybees being a rare, recent development. Of the seven introduced species, two are solitary, four (the bumble bees) imperfectly social, and only one, the honeybee, truly social.

The origin of species

In the first article in this series, we talked of the ancestors of our present honeybees being recognisable in Baltic amber some millions of years ago, but this is not to imply that the ancestry is direct.

Even considering the geological record and the biological timespan, we can begin to see the complications of evolution. Land masses rose and fell, the ice came and went and came again, temperatures went up and down, continents formed, whole phyla disappeared. The history of earth is a turbulent and threatening one.

All the evidence points to our honeybee having arisen in South East Asia along with the other species of honeybees, *Apis cerana, A. florea* and *A. dorsata,* these last still having restricted distribution. Presumably our *Apis mellifera,* when it took final form, proved more adaptable than its entomological siblings and it is certainly a more efficient nest builder and honey gatherer today.

For animals *per se* we have three general rules that relate physical characteristics to climate (Pearson, 1978): Bergman's Rule states that for animals of related species, those found in warmer climates will be smaller than those in cold; Allen's Rule says that extremities tend to be smaller in cold climates to reduce heat loss, and Gloger's Rule states that dark colour due to melanin pigmentation is more strongly developed in warm and humid environments, is clear in man but needs qualification elsewhere. Clearly the needs of crypsis in a dark coloured environment will lead to its selection.

There is the true story of early aeronauts who went aloft dressed in white and were miserably cold, only to drape themselves in black for the next ascent and be miserably hot. So, from the original golden bees in the mysterious Golden East to the dark bees of the dark forests of Europe, the colour change was logical – they were not only more difficult to spot by predators, they also used what sunlight there was more efficiently. Thermal efficiency must imply survival efficiency. For that, black was best.

The honeybee and defence

If we consider the bee's means of defence we must once again see them in historical perspective. Any organism depends upon one or all of three defence strategies:

- Sanctuary,
- Camouflage,
- Resistance.

These are in the broadest sense – there are infinite variations on each even in the insect kingdom.

Sanctuary: In nature a swarm attempts to colonise some enclosed space, sheltered and with a restricted entrance. The text books talk of rock crevices, hollow trees and similar locations, and this continued for millions of years until man came along and offered a small proportion of them something better. These sites gave protection from enemies and the elements and are still used today; see Howard Veatch's experiences in locating bee trees in America in the 1920s as he recalls that "Bees were plentiful there due to the barrel-sized oak trees . . ." and "... watching the bees roar in and out of a knothole". (Veatch, 1982)

Camouflage: For bees, this meant maintaining a low profile and genetically adapting colour to the environment.

Resistance: In the broadest sense one authority has it that resistance consists of a simple reaction to being approached, moved, or consumed.

That certainly covers most occasions, but the honeybee is most concerned about threats to the colony, not to the individual.

Resistance covers the full range of attack or defence mechanisms available in nature. For the honeybee, this is the sting. Each worker is equipped with a barbed sting which, with perhaps 10 – 80000 workers per normal colony, makes a formidable mass armoury. The sting evolved for use against other insects. Only later did it prove equally effective against mammals.

A colony must always have enough workers available for defence and be able to withstand the loss of a significant proportion of these should it be necessary.

We must admire the resilience of the species. It has withstood climatological changes, a range of new enemies, crossed rivers, skirted lakes, infested forests and adopted new ways as reluctantly as possible but as far as necessary. The changes were slight but vital.

In winter regions where temperatures may drop below zero on a significant number of winter days, it learnt to overwinter on a minimum of stores, to build up rapidly in spring, to tolerate higher levels of carbon dioxide in the winter cluster, to gather stores quickly and competently. That is merely one example of its adaptability as a colony and as a species.

It may also have lost something along the way, it may have now reduced disease resistance for example, but the honeybee is still a versatile and persistent insect and there is still ample scope for research into the best bee strain for the various parts of New Zealand, an Eden-like paradise whose climate ranges from tropical to antarctic – sometimes in one location in one day.

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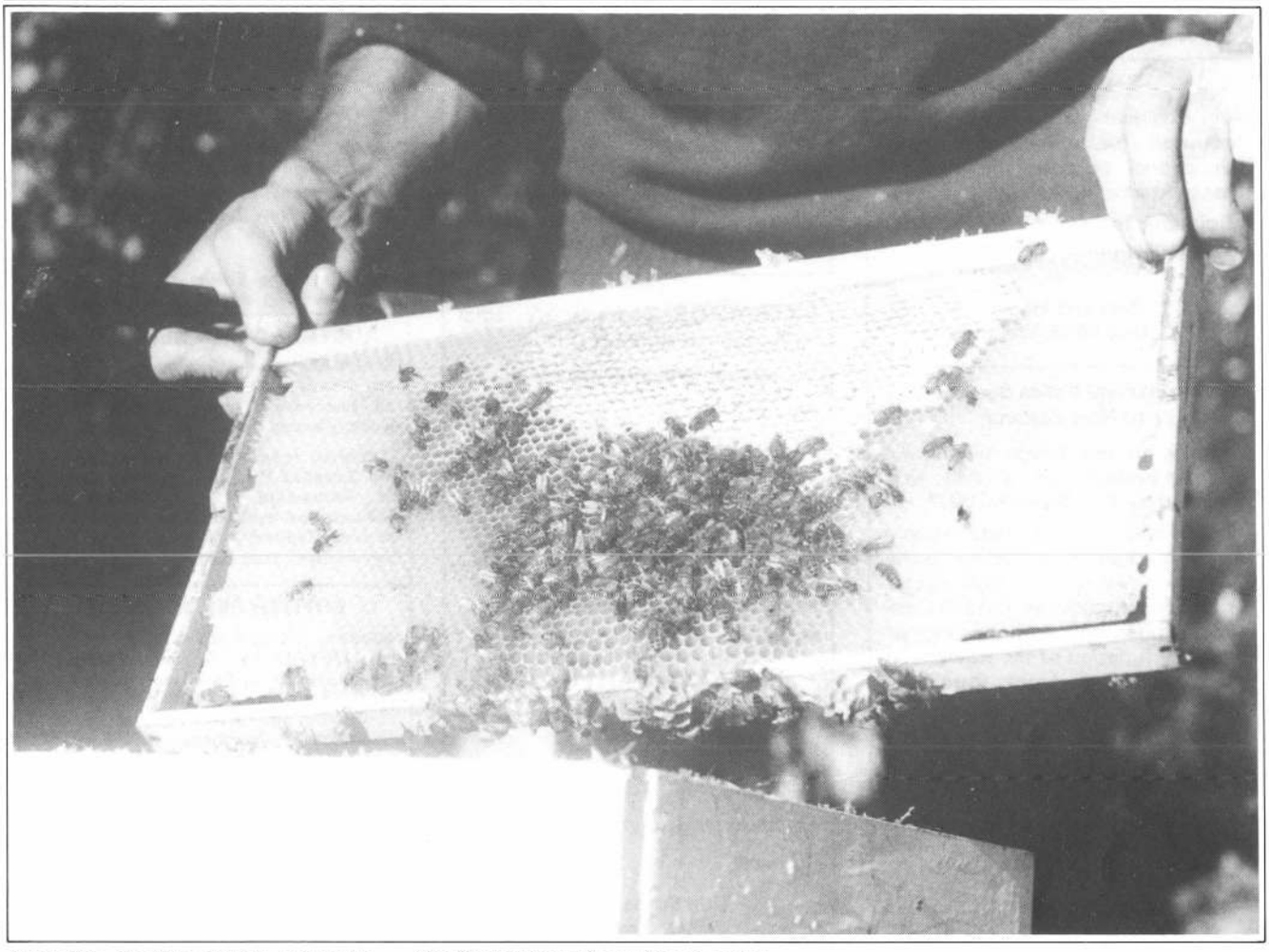

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Getting down to the foundations

Don't alternate drawn comb and foundation

IT USED to be one of the great ceremonies of our time, the laying of the foundation stone of some new building or other by some civic dignitary or minor nobility. As with buildings, foundation is the foundation of good beekeeping.

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Now, with a new season almost upon us, let us consider the putting of foundation-fitted frames on hives.

Foundation-fitted frames should only be put on strong colonies – putting foundation frames on a weak colony may inhibit that colony from building up at all. The colonies should have ample stores and have, preferably, a minor nectar flow under way. If not they should be fed every three days, otherwise the bees may ignore the frames, draw them out unevenly and incompletely, or even tear portions of the foundation down. Do not expect too much unless climate conditions are favourable to working in or out of the hive.

Put foundation frames directly above the two brood chambers of the colony in supers with 10 frames in two drawn as outer combs, eight foundation-fitted in the centre – do *not* alternate drawn and foundation; the bees like to get in there and concentrate and cluster and work away; drawn combs merely confuse them and reduce effectiveness.

Never put two supers on at a time unless in the height of the honey flow; for best drawn comb should always be one box only.

Do not interfere except to feed as necessary and gradually move frames to outer as drawn, bringing outer in; but do not do this until the frames are drawn to top and to bottom. Do *not* then space frames out; leave as thin sealed, ten to a box through extraction and on to next season. Do *not* put on too early in season.

Just to reinforce what has to be said: As with all beekeeping operations the two basics for success are strong colonies and more than ample available stores, and you will have no problems at all.

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