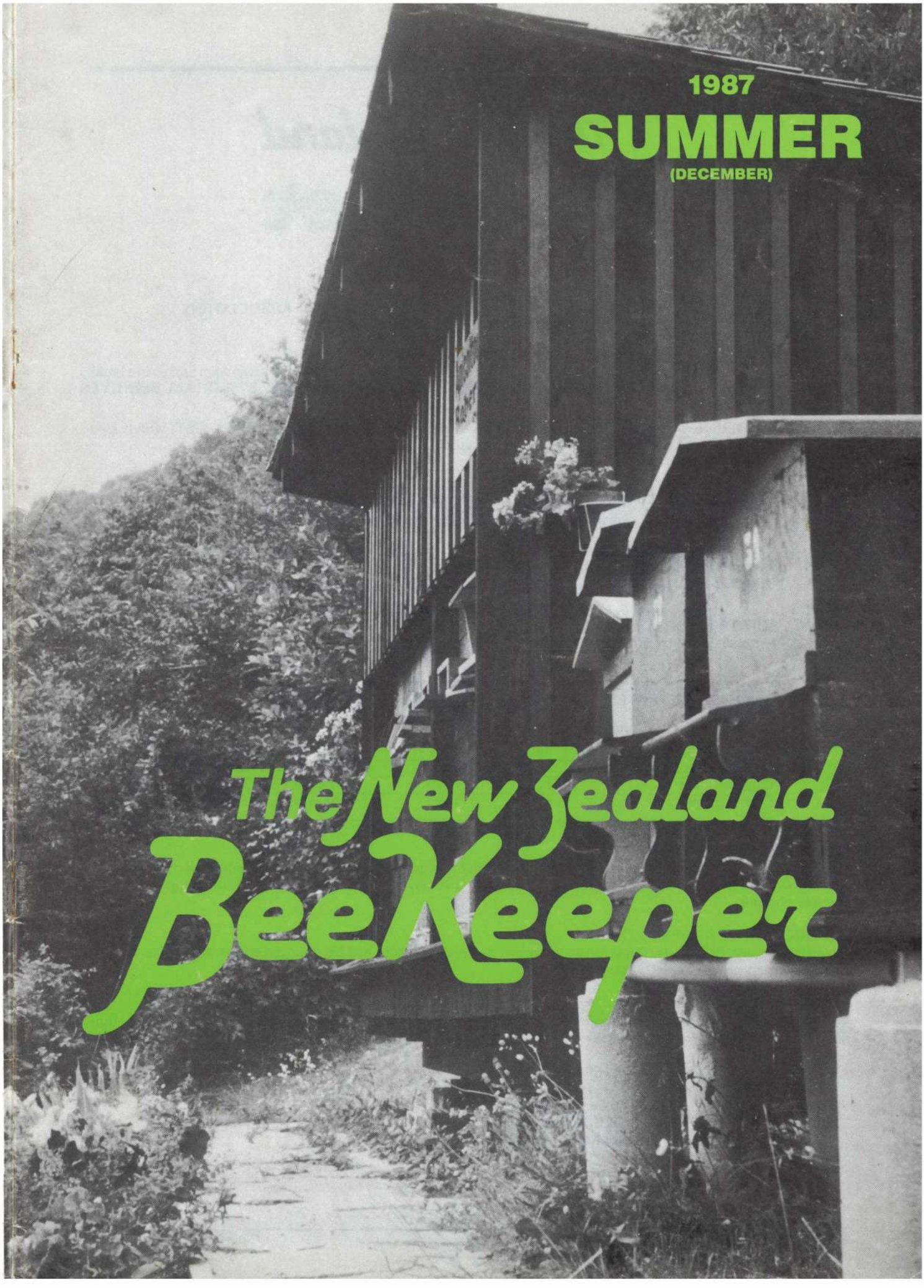

1987

SUMMER

(DECEMBER)

The New Zealand BeeKeeper

The New Zealand BeeKeeper

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

CIRCULATION, 1,450 . . .
To Members of The National Beekeepers' Association of NZ Inc. who own more than 50 hives each and so are legally subject to the annual hive levy. **THESE HIVE-LEVY PAYERS OWN APPROXIMATELY 87% OF ALL BEEHIVES IN NEW ZEALAND.**

To Beekeepers with less than 50 hives who subscribe to the journal at $22.00 a year (incl. GST) which also includes membership of the National Beekeepers' Association of NZ Inc.

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FRONT COVER: A Swiss beehive near Soglio, South Switzerland. Photo courtesy Peter and Margot Syms, Taupo.

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The Carriage Trade

The word is 'diversify'. We must find fresh products for world markets glutted with our traditional exports. Possibly not too difficult. We have soil, climate, know-how as good as the next. But a trap looms. Should we put too many eggs in one basket, we may find ourselves back to square one, that the markets for our new product, or products, become as over-supplied as those for lamb and dairy products.

Kiwifruit, for example, provides an income for many beekeepers. Some, in fact, rely almost entirely on its pollination for a living, and any honey left over at the end of the season rates merely as a bonus. Fine, provided our exports of kiwifruit continue at least at their present level. But kiwifruit has proved a valuable crop, able to be grown on a relatively small area-dollar base, so what happens when the foreigners get into the act?

Northern hemisphere growers are not competition. What they produce stimulates the market during our off season, maintaining demand for our shipments during the northern winter. However, Southern hemisphere countries share our seasons. Chile, for example, has a similar climate to New Zealand over much of its length, and Uruguay and Argentina might be tempted to compete: all with lower labour costs and closer to many of the main markets! That is to say nothing of Australia and South Africa who can probably compete on an equal footing.

There can be no question of restricting or banning the export of seedlings or whatever. That never worked as the Brazilians discovered when, after banning the exporting of rubber plants, some entrepreneur smuggled out seedlings in a stuffed alligator to found the vast Malayan plantations and kill the embryo Brazilian industry dead. What we should do is cast around for something that we can do better than anyone else. For example, Denmark, able to import grain from North America cheaper than it could grow it itself, developed an intensive dairy industry, closely allied to bacon production, and offered the world superior products. Switzerland, with limited arable land and few minerals specialised in banking and the manufacture of small precision machinery such as watches.

At present New Zealand produces little if anything that cannot be duplicated successfully elsewhere. Most temperate countries raise beef and our sheepmeats are not particularly popular outside the poor countries and, perhaps, Britain, which anyway can draw fresh rather than frozen from its own and Common Market sources. With our lack of minerals it's unlikely that we can ever become a manufacturing country and distance alone prevents us from pulling the Swiss trick, however much Mr Douglas may talk of attracting business by reducing company tax.

However, for the beekeeper there is one avenue worthy of exploration: the luxury market, what used to be known as the 'carriage trade'. Much of the flora of New Zealand is peculiar, enabling us to offer a variety of honeys that cannot be produced naturally elsewhere. As George Nichols says in his letter to the Editor in the Spring issue of the New Zealand Beekeeper: "After all, if we cannot sell a large number of Morris Minors we might as well sell a few Rolls-Royces". **Michael Burgess**

OBITUARY

John McFadzien, a life member of the National Beekeepers' Association, died suddenly on 10 November 1987. His funeral service was held at St Columba's Church, Havelock North, on 14 November 1987. John moved to Havelock North from the Taieri Plains 25 years ago and became a highly respected member of our community. He was a man of the highest integrity and his kind gentle manner won him many friends. He was the honorary auditor for the Hawkes Bay Branch for many years and his earlier association with the beekeeping industry included commercial beekeeping until he sold out to John Heineman. John was Editor of the New Zealand Beekeeper for 15 years, retiring on 31 August 1963. Our condolances to John's wife, Mary, who lives at 6 Crosby Road, Havelock North.

IMPORTANT

We have changed the publication dates of the New Zealand Beekeeper to assist some of our regular advertisers.

Next year this magazine will be published a month earlier: that is, on February 14 for Autumn, May 14 for Winter, August 14 for Spring, and November 14 for Summer.

Will advertisers and contributors please consult the new deadlines published on page 2.

Many thanks for your cooperation.

Michael Burgess
Editor

LETTERS

Dear Sir,

As many readers will already know, following changes in the structure of the Ministry of Agriculture, I have been offered and have accepted retraining in another division of the Ministry.

After over 40 years working honeybees, collecting my first swarm as a school boy, and spending the last 20 years as the Christchurch apicultural advisor, the time was right for a change for I was losing my enthusiasm in beekeeping.

More than ever I feel there is a need for all beekeepers to become active in the National Beekeepers' Association, for much of the work I have done in the last 20 years will have to be undertaken by that body. There is, in that Association, the skills and knowledge which will be needed in the hard times facing beekeepers. Support and use them.

In accepting retraining I asked the Ministry that I be taken away from all direct contact with the beekeeping industry. They have agreed, and so it comes time to say my good-byes.

To the many friends and contacts I have among you, I'd like to thank you for allowing me to share the good seasons, and the bad, together with your moments of joy and sadness. For in the last twenty years I have watched many children grow up, and have been present at a few final farewells.

To those I have been able to help a special "thank you" for that was the enjoyable part of my work; to those I failed I hope you still think I tried. To everybody my best wishes for the future.

John Smith
Christchurch

Dear Sir,

For a number of years I have been investigating the therapeutic uses of honey. Recently some of my findings have been published in a book entitled "Honey and Health" (Thorsons, U.K.).

I am continuing this research and have now initiated clinical trials within the University. Apart from these trials I am also compiling information from beekeepers who are personally familiar with the therapeutic properties of honey. So far I have gathered most of this information from within the UK. However, I feel that my case would be further strengthened if I could obtain information from beekeepers in other parts of the world.

Beekeepers who are personally familiar with the beneficial therapeutic properties of honey may assist the present inquiry by providing relevant details. All anecdotal information, no matter how trivial, will help. Please send any information to:—

Dr L.R. Croft,
University of Salford
Salford,
M5 4WT.
UK

L. R. Crott

Bee-keeper stole hives from farm

A self-employed beekeeper was fined $200 for stealing eight hives from a farm in Middle Rd, Havelock North, by Judge R. M. Elliott in the Hastings District Court yesterday.

Judge Elliott said he was puzzled why someone with access to bees would steal hives.

"You must have had bees in your bonnet," he said.

Special Marketing Meeting

A special meeting of the NBA Marketing Committee was held in Wellington on Friday Nov. 13 to discuss the current honey market situation. A number of industry representatives with particular interests in marketing were invited to attend, including Executive Marketing Committee members, and a representative from Arataki Honey Ltd, NZ Honey Packers' Association, Hororata/Wilson Neill Ltd, NZ Honey Producers' Co-operative, and Crown International Ltd.

The agenda included discussion on the local and export markets, results from the Market Research Surveys recently completed for the NBA by a number of Universities, membership for the NZ industry in the International Honey Exporters' Organisation, and the possible establishment of a NZ Honey Council.

It was generally agreed that present selling conditions on world markets were very difficult, with prices falling as supply of honey into traditional markets exceeded demands. The depressing effects of the policy of the USA government in releasing their stockpile of honey at greatly subsidised rates, rather than adopting a policy of promoting honey in their domestic markets, was recognised as a major factor in the current world honey price downturn. It was expected that difficulties would prevail for some time in exporting honey, with little demand for product other than some specialised lines. The need to maintain our usual high quality standards was also emphasised in order that exporters can offer product according to the requirements of importing countries.

While opinions varied on the likely price for bulk honey paid to producers this season, it was agreed this would be considerably reduced from last year's high levels. Domestic prices are also declining as some of the major honey packers compete for the available markets. This, despite indications from the research results that price is not a major factor in the consumer's decision to purchase honey, or that price-cutting does little to increase consumption. It was also recognised that the present prices were being more influenced by the demands of supermarket buyers than the realities of beekeeper production costs and true product value.

The concept of establishing a "Honey Council" to provide information and advice on local and export markets for NZ exporters and producers was not adopted by the meeting. However, it was recognised that the lack of accurate and up-to-date information on honey supplies, available markets, and current prices was one of the main problems yet to be overcome in the development of an orderly honey marketing system in our industry.

Funding for MAF Advisory and Inspection Services:

The question of providing a system of funding to meet the requirements of Government for support for Apiary Advisory Services within MAFQual remains unanswered at this stage. Negotiations are continuing with MAF,

including personal visits by the NBA President to each of the four newly-established area managers of MAFQual to state our industry's case for continued support. At this stage, all have agreed to provide for a disease inspection service at a level of 10% of apiaries nationally, and maintenance of the apiary register for this season. However, it is expected that some provision for funding will be made by the beekeeping industry for next season, but the exact form this funding system will take still has to be finalised. The Executive is very conscious of the financial difficulties presently facing commercial beekeepers, and we have been encouraged by the willingness of most to take part in voluntary disease inspection programmes. Doubtless such co-operation will be necessary part of future inspection services, and we will be seeking continued acknowledgement of this contribution from beekeepers in our negotiations with MAF.

The question of maintaining the Apicultural Adviser positions at Christchurch and Nelson also remains unanswered. At present we have the totally unacceptable situation of only one AAO in the South Island, and MAFQual management for the south Central region have expressed their intention *not* to fill the vacancies created by the transfer of AAO's from Nelson and Christchurch. A recent combined meeting of the Canterbury and South Canterbury NBA Branches established an Action Committee to continue to press for these appointments to be made.

Due to increasing administration costs, and activities undertaken by the Association, the Executive has been compelled to apply to the Minister of Agriculture for an increase in next year's hive levy of 12.5 cents per hive, to a total of 37.5 cents. In addition, we are seeking legal advice on appropriate amendments to the hive Levy Act to broaden the definition of hive ownership to incorporate pollination and queen production hives presently exempted from levy under the Act.

Again, the Executive acknowledges this increase comes at a time of financial difficulty for many beekeepers, but the issues already outlined require more, rather than less, activity from your Executive in efforts to secure an improved situation for our industry in the future. It is ironic that at a time when costs in all areas of our beekeeping activities are rising, there are market forces at work which are driving returns for our products downwards.

Following a call from 1987 Conference to look into the genetic content of our bee stocks, with a view to improving our prospects for beestock exports, the Industry Trustees have approved funding to bring a noted Australian Bee Scientist, Dr Ben Oldroyd, to NZ for a brief study and advisory visit early next year.

Dr Oldroyd has an impressive record in bee research in Australia, and should provide valuable advice regarding future moves in the question of possible quarantined importation of beestocks to New Zealand. It is planned he will be given opportunities to discuss this subject with beekeepers, and share some of the experiences of the Australian beekeeping industry in importing beestocks.

Being the final issue of the "NZ Beekeeper" for 1987, the Executive wishes all beekeepers the Compliments of the Season, and best wishes for the coming year. The year 1988 will undoubtedly bring its share of difficulties for us all, but with co-operation and care for one another, most of these can be overcome, and an improved future assured.

A housewife's thoughts

By Desiree Lorand

On a recent trip to America, I was overwhelmed at the array of food spreads available in the supermarkets which I visited. Row upon row of such specialised substances as cheese spread with chilli flavouring, cheese spread with jam, and cheese spread with ham and pineapple flavouring were offered to the consumer in mountains of brightly coloured containers, designed to attract the shopper into buying. Literally hundreds of different spreads were available and this phenomenon extended to the sweeter spreads as well: such delicacies as peanut butter mixed with jelly, peanut butter mixed with jam, and chocolate and nut spread — to name but a very few to lure the unsuspecting shopper. With such a wide range available, choice was difficult, and I noticed that the average shopper bought several different versions of such spreads rather than just one.

For the budget-conscious household, this represents a significant additional item on the weekly shopping list and it made me realise just how useful honey is, and not only in terms of its beneficial effect on the housekeeping budget. Honey is still relatively inexpensive, particularly when bought in bulk, and when you consider how very versatile honey is.

Honey has traditionally been used for many things, in addition to its usage as a sweet spread with bread and butter. This versatility is still a feature of honey today in these modern and synthetic-substance filled times. Honey retains its flavour and lasts for a long time without drying out: honey found in a jar in an Egyptian tomb still retained its flavour and scent after 3,000 years! One of the more famous, and possibly frivilous uses to which honey has been put, is in the art of eating garden peas very quickly and easily with a knife. However, there is a serious side to honey as well.

Through the many years of history, honey has been put to such diverse uses as an ingredient in perfumes, alcoholic beverages, medicines as well as in ancient burial rites. In fact, in many cultures throughout the ages honey has been an important ingredient in those most fundamental of human activities: birth, marriage and burial. The acquiring of honey by man has been recorded in cave drawings as early as 7,000BC and over the centuries has provided an important sweetening ingredient in the foods of many civilisations.

Today honey is used extensively in some of the most unexpected places during cooking. Meat roasted with a mixture of honey, butter, and stock develops a beautiful flavour with a glazing to match: ham lovers have known this for many years but it is only comparatively recently that New Zealanders have discovered how delicious roast lamb, chops, and even fish can taste with the addition of honey during cooking. A particularly lovely marinade can be made with lots of chopped garlic, chopped fresh ginger, and equal quantities of honey and soya sauce thoroughly mixed. A dash of sherry works wonders and the end result, when used to marinade and then bake chicken, pork, or fish, is an exotic oriental flavouring which tastes as nice cold as hot.

Honey can be used as a substitute for sugar in baking and desserts. This is also better for the waistline, whilst not sacrificing sweetness for those of us who "suffer" from a sweet tooth. A steaming bowl of porridge on a cold winter's day is made even more appealing by honey drizzled over its surface. Even vegetables can benefit from the addition of honey during the cooking process: baby carrots taste wonderful when cooked with a honey glaze, as do small pickling onions served whole in a honey and wine sauce.

Mention of pickling reminds me of the wonderful flavour which honey can impart to pickled foods: onions, gherkins, and other such delicacies all taste better with the addition of a substantial amount of honey. This is particularly so when the pickled food has been stored for a while; honey takes away that eye-watering sourness which can affect pickled foods, pickled for a long time.

Millions of sore throats have been soothed by the addition of honey in a lemon drink, and honey is one of the ingredients of a homemade face mask, designed to leave your skin feeling softer, fresher, and smoother. As one friend commented: "It helps to stick the oats on". My mind boggles at that one!

The manufacturers of honey-bees also serve as an excellent example to man of what a colony of creatures can achieve by working harmoniously together and by allocating tasks to those best suited to carry them out. The industrious nature of the beehive may have something to do with the fact that the entire colony is led by a female . . . .!

I am sure that it is no coincidence that our Parliament has been named the Beehive — a term which conjures up images of venerable MPs taking their responsibilities seriously and rushing busily, aware that they are being funded by you and I as taxpayers. Unhappily, it is a general belief that many of the inhabitants of the Beehive can more aptly be classed as drones rather than workers.

Honey has also contributed to romance in more than one way. It is used as an endearment, as in "honey", "honey bun" or "honey cake", particulary in America, and by both men and women indiscriminately. Another romantic "Americanism" is the American breakfast . . . a roll in bed with honey. (I'll leave you to work that one out!)

So all in all, honey is not only useful to, and enjoyed by, the human body, both internally and externally, but it's usage is limited only by your imagination. Honey has survived the trends of history and is eaten by many different people around the world. It is a product which has no synthetic additives, no preservatives, and is basically bought by the consumer in much the same state in which it left the beehive. In these health conscious days, that has to be a big plus.

Guadalcanal Diary

By Eileen Brindle

Although the name Guadalcanal will be familiar to those associated with New Zealand ex-servicemen from WWII, most New Zealanders probably know little about the Solomon Islands.

It is a scattered archipelago of several hundred islands in the south-west Pacific. It lies about 1,796 kms north-east of Australia and stretches 1,400 kms from near Bougainville, Papua New Guinea, in the north-west, to near Vanuatu in the south-east. It has six main islands with Honiara, the capital, located on the largest: Guadalcanal. The population is about 280,000 of which the majority are Melanesian (93%), 4% Polynesian, 1.4% Micronesian, while Europeans, Chinese, and others make up the rest. It is not the kind of country where many tourists take holidays or honeymoons such as they do in the Cook Islands or Fiji.

Beekeeping is in its infancy and largely confined to sparse pockets and one or two hive owners. The 50 members of the Beekeepers' Association are hoping to establish a small scale commercial enterprise — perhaps to eventually supply all honey consumed in the country. At present, honey is imported from Australia. The members however, are adamant that they do not want a large-scale industry which would swamp amateur beekeepers, who find it a fascinating hobby.

It is perhaps because honey is not a traditional food, that the concentration of small groups of hives and people tend to be at mission stations where one finds the guiding spirit behind the enterprise is often a non-indigenous Catholic nun or priest. Since honey is not a traditional food, appropriate publicity and marketing will be required if the country is to save overseas funds by producing all its own honey. In favour of finding a receptive local market is the fact that, for better or for worse, there is a growing enthusiasm for sweet foods, especially among the urbanized Solomon Islanders.

But anyone who has visited Solomon Islands and ventured out of the urban environment of the capital at night will have encountered the hideous warty-skinned toad. Repulsive they are, but perhaps not as stupid as first appears because they have discovered bees!

They were introduced by the Americans shortly after WWII in the belief that they would destroy the mosquitos and thus be an effective weapon against malaria. Unfortunately, as so often happens as a result of human interference with the delicately balanced ecosystem, mosquitoes, malaria, and toads are *all* flourishing. The toad's horny skin is impervious to bee-stings so it is able to sit at the hive entrances and feast. The solution is to place hives on one foot stands out of the toads' reach.

The Solomon Island Beekeepers Association is keen for as much professional advice as it can get and, earlier this year, were fortunate in having the services of an Australian apiary advisor for a month. His input was so appreciated that a full-time beekeeper from overseas is now sought for a two-year term.

Can we control American foulbrood?

"I believe the AFB situation is very serious in the Auckland district" — said Mr Murray Reid, National Apicultural Advisory Officer in Hamilton — "and it will take a long time and dedicated effort by MAF and the beekeeping industry to remedy the situation. We've burnt over 1,000 hives so far and at least one business has been wiped out, but we can clean up the mess if we're given the resources.

"Disease levels round the rest of the country, outside Auckland, are about normal. All the other district or area managers have agreed to fund MAF inspection services for this season, in the hope that the industry will be able to start paying for some of these by next year.

"Unfortunately the Christchurch region has not made any decisions, at this time, to fill the two AAO vacancies at Christchurch and Nelson and this is concerning beekeepers in those areas."

"The Oamaru vacancy will not be filled, so at the moment there is only one AAO in the South Island. This is not very satisfactory", Mr Reid continued, "but we do have a number of trained field officers and livestock officers who are carrying out export-certification and disease-inspection work. We are also trying to co-ordinate beekeepers as part-time inspectors and keep the registers up to-date. We have held several disease inspection days in Marlborough and Hawkes Bay, which have worked very well and more of these are planned.

BEEKEEPERS' RESPONSIBILITIES

"Yes, it's true that reporting and control of AFB is a beekeeper responsibility, and rightly so, but we also have to accept that a significant number of semi-commercial and commercial beekeepers do not live up to their legal and moral obligations," Mr Reid said. "And it is these people primarily, plus the huge hobbyist sector, that MAF has a moral responsibility to look after.

"You wouldn't believe some of the things commercial beekeepers do. We've had two large outfits go into liquidation recently with hives and equipment all mixed up, sold at auction, and redistributed all over the place; we've had beekeepers splitting AFB hives and failing to report AFB until after kiwifruit pollination, we get large numbers of apiaries deliberately not registered because of receivership or asset-splitting under divorce proceedings, and any number of hives sold without permits.

"We are investigating a case right now where there is a strong suspicion of deliberate foul play, if you'll excuse the pun. We suspect that someone has been deliberately introducing foulbrood into a very large number of hives. Now that's really nasty but it happens occasionally. We've also had an increasing number of thefts of hives and some of these hives have been infected with AFB. It's almost a certainty that these hives will end up not registered. And we expect the number of unregistered apiaries and beekeepers to increase once a fee structure is implemented to pay for MAF's services to the beekeeping industry.

BEEKEEPER FUNDING

"We are now in a user-pay environment" Mr Reid stressed. "We need to recover a little over $200,000 from the industry to pay for maintaining the nine apiary registers and to pay for disease inspection. I have had endless discussions with the NBA Executive, with senior MAF management, and the Under-Secretary for Agriculture on how best to recover these funds.

"There are a number of ways to recover funds", he said, "but the only way that has any chance of succeeding is by regulation. At the moment we are considering how best to spread a levy across all beekeepers but as you would expect a number of beekeepers both hobbyist and commercial, are already asking: why me, why should I pay for a service I don't need? Some of these groups have actively lobbied their MP's or various ministers.

"On the other hand we are getting a lot of support from individuals and from branches who recognise the need for, and value from, a MAF inspection and certification system. We are also getting support from various horticultural associations, and this is really appreciated.

"Maintaining a service with ever decreasing MAF resources is getting more difficult" Mr Reid noted. "All AAO's are now expected to be 'multi-skilled' and work in more than one discipline. For example I have national responsibilities for apiculture as well as my own district, and recently have taken on a new role as emergency response co-ordinator for the northern region, which is basically half the north island. This new role covers not just beekeeping but the exotic animal diseases, such as foot and mouth, and fruitfly outbreaks in the horticultural industries, and natural disasters such as floods or drought. Other AAOs also have staff control and administration responsibilities.

BEEKEEPER CHALLENGE

"If ever there was a time for the beekeeping industry to work together this is it. I offer a challenge to all beekeepers to accept the user-pays policies whether they like them or not. Accept the true levies you may be asked to pay and regard them as another insurance policy.

"Take on a job as an unpaid part-time inspector if asked. Register all your apiaries and don't sell hives without a permit. Keep MAF informed of other beekeepers' apiaries that you suspect may be diseased or unregistered. Report all Americal foulbrood disease when you find it and deal with it promptly and responsibly. And lastly, use the excellent bee disease diagnostic facility at Lynfield if you are in doubt about any bee health problems.

"I believe we are at a cross-roads in terms of user-pays and MAF services", he said. "If you don't support and pay for the services you get then our senior MAF management will have no option but to withdraw those services and put the resources into other areas.

BEEKEEPER COSTS

"American foulbrood cost the beekeeping industry over $360,000 last year! It has cost us that already this year and the year is only half gone. Foulbrood nearly wiped out our industry at the turn of the century, and only the appointment of Isaac Hopkins as our first government inspector and the advent of the Apiaries Act, prevented this happening. We have the means to prevent this occurring again. As one of my colleagues pleaded recently: 'Give us the resources and we will do the job!"

GREETINGS from our two Cook Island friends who attended last year's Rotorua Conference. Charlie and Koekoe are still talking about the welcome and hospitality they experienced during their look-around after Conference. Both are working hard at their bees and really trying to give it a go.

The hurricane early this year did little harm to their hives, but Koekoe and family had to evacuate their house as waves pounded up to their back door and played havoc with the foundations.

HONEY BUTTER

½ cup butter
½ to 1 cup honey

• Cream butter well. Add honey gradually. Beat thoroughly. Place in refrigerator. Delicious on toast, hot breads, waffles, and for sandwich filling.

Can we control American foulbrood? Beekeepers face a real threat from American foulbrood disease changes in government policies

By Colin Rope

1. **In 1957** Government did a great job by accepting full responsibility for AFB disease control. This incurable disease was quickly reduced to a minimum but the cost was more than taxpayers could be expected to meet indefinitely.

IT IS HARD TO UNDERSTAND HOW ONE THOUSAND HIVES IN COMMERCIAL APIARIES SPREAD FROM ONE END OF THE DISTRICT TO THE OTHER COULD BECOME DISEASED WITHOUT ANY OF THE OWNERS FINDING IT FIRST. WHY WAS THIS NOT FOUND BY OWNERS? WHY DID THEY NOT REPORT IT? THE FACTS ARE UNDENIABLE AND SELF-EVIDENT.

Burning hives.

2. **In 1969** The onus of responsibility for AFB control was shifted from the government to the owners themselves. MAF reduced its activities to a cross-section monitoring role designed to improve beekeepers self-reliance.

3. **In 1986** The "User-Pays" principle was introduced by Government. Taxpayers could not afford to subsidise bee-health any longer.

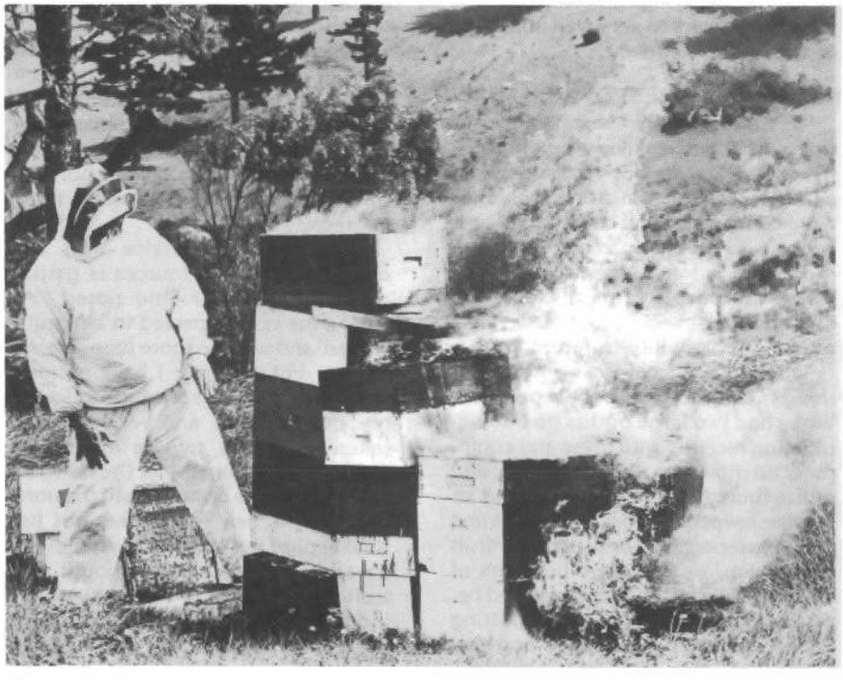
4. **In 1987** Auckland Branch, NZ Beekeeper's Association, elected to take the matter into their own hands and negotiate funding for continued MAFQual inspection services within Auckland apiary district boundaries. They contributed $3,000 toward MAFQual operations.

Within 4½ months to mid-November 1987 over 1,000 commercial beehives were found to be infected with AFB disease and were burnt by MAFQual. No inspections of hobbyists hives were carried out during that time. Four reports of findings by owners were received.

All available Auckland Branch funds have now been exhausted and AFB still remains within bee-flight of almost every beekeeper for 200 kilometres. What is happening in other districts? Are other districts similarly effected?

There can be only one winner in the battle with AFB. Either every beekeeper will beat AFB by burning it, or AFB will wipe out beekeeping.

5. **In 1988** The future of all beekeeping businesses in New Zealand will be sealed at the New Zealand Beekeepers' Association Conference in Auckland. The Auckland Branch, NZ Beekeepers' Association, has shown the rest of New Zealand the way by its wisdom and its effective voluntary efforts of self-preservation. Its members are to be congratulated for their foresight and prompt direct action to save what remains of their businesses. Had those 1,000 AFB hives not been burnt in the nick of time, the losses next year would have amounted to about 10,000 hives and the industry here would have been doomed within two years.



Burning hives. Photo courtesy Auckland Star.

Bay of Plenty

Most beekeepers in the area have experienced a good spring with the main problem being too many bees in the hives for kiwifruit pollination. The Rewarewa is flowing reasonably well but late, which makes it difficult for pollination beekeepers to avoid their hives packing down with honey.

Disease is a major worry for local beekeepers. Outbreaks occured in outfits that have previously had very few problems. The source of infection seems to be some part-timers and hives brought in from outside the district for pollination. Some irresponsible beekeepers have been feeding sugar in open drums during pollination, a sure way of encouraging robbing and spreading disease. Bay of Plenty beekeepers are very angry at the cavalier attitude of some of their colleagues from outside of the district, and there have even been demands for roadblocks to keep the cowboys out.

Another sore point is the activities of price cutters in kiwifruit pollination. Most (though not all) local beekeepers are aware of the costs of preparing hives for pollination and the need for a price structure that will allow beekeepers from outside the area to bring in hives economically, thereby ensuring a sufficient supply of beehives for the kiwifruit industry. This year leading beekeepers are charging $90 to $95 for kiwifruit pollination. Instead of seeing this as a move to help their progression into pollination work some people (usually the same ones mentioned above) have seen it as a golden opportunity to pirate contracts at cut price rates. Almost invariably these cheap hives are of inferior quality. Past experience has shown that these people don't last long in the business but cause immense harm to other beekeepers, the kiwifruit industry, and the reputation of bee pollination.

The BOP Branch and the Kiwifruit Pollination Association shared a stand at the National Horticultural field days at Te Puke at the beginning of November. There was honey tasting, an observation hive with a 'guess the number of bees' competition, promotion of the KPA, and some general beekeeping information. Also featured was the map used to safeguard hives against spray damage so that orchardists could update it where orchards have changed hands.

The young beekeeper of the year competition is under way again so good luck to the six contestants.

We are pleased to welcome Andrew Matheson, our new AAO, to the district. Nelson's loss is definitely our gain and we are looking forward to a long and fruitful association with Andrew.

Peter Townsend

Southland

Southland's spring started very wet and windy. Just like the farmers, beekeepers were working in the wet and mud. Surprisingly things have changed to the opposite with some very good weather: a brighter light on an otherwise depressing outlook. All indications are pointing to a good season honeywise, despite the nil demand for honey.

Southland's field day this year is on February 6 at Saunder's Apiary, Milford Road, Te Anau. A good programme is organised in the heart of tourist country.

Alister Lee

Hastings

A spring field day, combined meeting between beekeepers, orchardists

and berry fruit growers, a hive inspection day, busy branch meetings and a forthcoming fancy dress Christmas party; the branch notebook almost has a page full.

Our spring field day on September 5 was an outstanding success, both educationally and socially — about 80 people came along; we were pleased to have some visitors from the Gisborne Branch. Our host Keith Fulford welcomed us to his orchard, took us on a tour and explained his extensive frost-protection and irrigation system.

We enjoyed some interesting and very efficient hive-loading and unloading demonstrations, a very helpful talk on costings by Ian Berry and our local MAF officer, Martin Taylor, demonstrated how he inspected hives. He had however forgotten to don his gloves, a point that Keith's bees seemed to note very early in proceedings. Mrs Taylor was heard to comment that Martin's hands would be far too sore to do the dinner dishes for a few days, so she would let him off.

Our hive inspection day, (what now must surely be an annual event) was held on November 7. When MAF officer Ted Roberts called the meeting to order at 8.40 am. there were 24 keen and willing "inspectors" all dressed up and rearing to go. We would have had probably three more but we excused them as they were doing a grand job helping with the kiwifruit pollination service in the Bay of Plenty.

During the day almost 400 hives between Taradale and Whirinaki were inspected and no more than eight diseased hives were discovered during the day — still a great day's work. The day was finished off in grand style by an after-match Bar-B-Q party at our vice president Saul and wife Jacky Ashcroft's home at Havelock North. Paul will not know until he reads this that the committee have appointed him our chief cook for next year's function.

Members are now looking forward to an exciting fancy dress Christmas party on December 19 and then to cap off a great year a bumper honey crop; but what do they say — "count your kilos when they are in the drums!"

Gordon Sutton

Marlborough

MAF organised a Disease Inspection Day in September assisted by 15 members of our local branch. It was a very successful day, inspecting hives in and around the populated and horticultural areas. Mainly we inspected hives that would not have otherwise received a disease inspection. Some 1.99% of the hives inspected were diseased. But since then we have had a person dump diseased equipment at the local borough tip. The equipment was not covered and naturally a robbing frenzy developed. Several people have sites close by and are hoping that their bees did not get involved. Potentially this is a very dangerous situation.

Several beekeepers in the area between Blenheim and Nelson have had hives inspected by MAF. Two beekeepers have had 80% of their hives destroyed. Several other beekeepers have also had hives destroyed with AFB. In this area, this season, the disease outbreaks have been a beekeeper's problem. We are fortunate to have an enthusiastic, competent MAF disease person based here in Blenheim.

More hives went into orchards this year. It appears that the trees have had a good pollination. Kiwifruit should be about November 20.

In some areas, a Matagouri flow has been reported with the high temperatures and windless days. The clover is out in flower and bees have been seen

buzzing from flower to flower, but how much nectar??? I hope we do not get the cold easterlies we did last year.

MAF has a policy to cover 10% of hives. To do this in the Marlborough-Nelson-West-Coast areas, five people have been allocated time and vehicle resources. Our Blenheim person has been given 1,000km and 100 hours. Both well over spent this season. I just wonder if it would be possible to physically check 10% hives in that amount of time and travel. With these inspectors belonging to MAF Tech, MAF Qual, MAF Livestock, communication will not be made easier.

We feel that MAF is making a GRAVE MISTAKE in not replacing our AAO. Just because they cannot show signs. It is *everyone* who benefits from the indirect benefits of bees.

Club Events: a smallish turnout to a spring management day in mid-October. We are having a Steptoe Day in November which will give people a chance to sell their unwanted gear and those buying will be able to wax-dip it, as the venue will have a dipper operating. At the end of January — Friday 29 evening till Sunday 31 afternoon — we will hold a combined Marlborough-Nelson-Wellington-West Coast-invited bee weekend at Lake Rotoiti school Lodge, St Arnaud. Dr Denis Anderson is our guest for much of the weekend. Other exciting speakers and programmes are also being organised. Visitors are welcome. For more information contact our Secretary.

James Jenkins

Otago

We missed reporting in the previous issue, so can tell you now that winter was less cold throughout our province than is usual, while rainfall was below average for the winter months.

However, September brought a big change: damper, little sunshine, and much more wind. The first two weeks of October offered more of the same, plus some snow to fairly low levels, a bad gale, and very wet paddocks. But all in all we are probably not suffering as much as some of our brother beekeepers north of the Waitaki. El Nino must have returned. Let's hope he takes his leave again soon.

Hives have wintered reasonably well but there are not enough good days left to get out and stock up on fresh pollen. The willow — at least here in South Otago — was a non-event.

The Branch made an endeavour at the Dunedin A & P Winter Show by putting up a little display which was manned most of the time. We attracted a good bit of interest from the public. Hand-outs such as stickers and The Story of NZ Honey were popular with the kids.

Those of us who attended the Christchurch Conference and Seminar enjoyed it and are full of praise for what was offered and the way it was run. The odd item however made some of us wriggle in our chairs.

Plans for a field day were discussed at our last committee meeting and notices should be out soon.

Those of us who make a living from beekeeping are very perturbed by the bad market news. There is little one can do about the international situation but we feel pretty disgusted about the extent of price-cutting which is taking place internally. We could well do without that. Especially when it comes on top of other difficulties and changes the industry has to cope with and adapt to.

John Heineman

Northland

Spring arrived early in August. "Good!" said the bees, "now we can

start a family." September and October were wet and windy so we had to go round feeding tonnes of raw sugar. Plenty of manuka and some buttercup out now but the bees are on strike.

Terry and Pat Gavin's 75th birthday party was a great success. Terry gave us the history of the firm, how they built their first honey house big enough to last them forever. Then they built another which was to be the last, then number three, then number four, each one to be the last. Brian Milnes gave a talk on bee diseases.

At the branch meeting ways of financing our advisory officer were discussed. A levy of $10 for hobbyists, rising to $250 for more than 1000 hives was suggested.

Derek Bettesworth, our A.O., has been lent temporarily to Samoa.

George Nichols

Nelson

The season of activity is upon us. Already various pip fruit and berry fruit blossoms have received the required numbers of bees to do their thing and, in two weeks — more or less — the kiwifruit will be paid their annual visit.

Spring has been a mixed bag. While some hives have had the benefit of an early start, others have had to struggle through, and we've had to feed sugar liberally to some colonies.

Hopefully our annual wasp problem should show the results of the "seeds of destruction" sowed in the worst infected areas. It will be a bit much to expect a clear cut result, but all (they seem to be about earlier each year) killed before they establish a colony is a victory far greater than that of destroying an established nest along with the parasites within it. Perhaps the trapping of worker wasps will help hinder the severe impact of the mid-season build-up and will help the parasites to invade the established colonies.

I have wondered about the feasibility of using wasp traps along the lines of the blowfly traps used successfully years ago. Those traps seemed to have had a bruising effect on the blowfly population. Perhaps that thought might inspire some genius. Maybe there's a fortune in store for an efficient manufacturer.

I note from the Spring "Beekeeper" that the Marlborough Club's Field Day will be held January 30-February 1 at Lake Rotoiti. I can't think of a nicer place. Well done, Marlborough!

Ron Stratford

Auckland

By the time this is read kiwifruit pollination will be past and the night work with it.

After a mild winter with continual brood-rearing by the bees, the weather just had to change for queen rearing. We had no trouble hatching the queens — they just did not turn up in the hives as layers. Heavy sugar feeding was needed to keep the bees going after they'd used their stores for brood rearing.

As most beekeepers will have seen on Tv, things are not good around Auckland. I understand that between the beginning of June and the end of October some 700 hives were burned. A further 190 were burned in the first week of November.

Dave Young

South-Western Districts

The four-season cycle has quickly taken us through another year and a further summer harvest is around the corner. Only a beekeeper is fully aware of the planning, preparation, and hard work that goes into achieving a pot of honey (let alone all the effort from the bees).

Ideal weather has helped us through winter and spring. Hives are generally in good shape, pastures too, with clover flowers starting to appear. So far prospects are excellent for at least a good start to the honey crop beginning in December.

Another week and it's time to shift hives into the kiwifruit: a stress time for beekeepers and bees alike, as more hives are required in local orchards. Extra hives are also going north to the Bay of Plenty from the Manawatu for at least $70.00 net return per hive, delivered to a depot.

Trevor Bryant, now with Kiwifruit International, was the key speaker at our Feilding Field Day in October. At least 70 people came. Excellent! The main topics were the preparation of hives for kiwifruit pollination, the particular uses of queen excluders, coping with chalk brood disease (more prevalent this year) and export market prospects. The day finished with a visit to Arthur Hodson's honey house.

Our branch is planning a promotional stand at the Levin Horticultural field days next February.

John Brandon

"With butter, egg and good honey
Your cake will moist and flaky be."

Honey is Suitable for Infant Feeding

Honey is recognized as a satisfactory supplement to milk in infant feeding. Ask your physician to recommend a formula in which honey is included. "Honey appears to have a special advantage in infant feeding. Since it is easily obtained, is very palatable, and digestible, honey would seem to be a form of carbohydrate which should have wider use in infant feeding. "Bobs Roberts Memorial Hospital for Children is continually using honey in the clinic and finds it very successful." Recent research has shown that "honey would seem to have a definite beneficial influence upon the retention of calcium by young infants."

Planning

By John Heineman

This column has been running for many years. It has been looked after by a number of "Skeps", and others, who have introduced and covered a great number of topics.

Succeeding our last "Skep" creates a problem. Where to find different topics to talk about? When does one become boring? How to avoid repeating the same thing year after year?

Still, beginners keep arriving all the time. Some grow into enthusiastic apiarists, gaining knowledge and experience while they have their "bee interest", perhaps for as long as they live, others will give it up through circumstances. A few will endeavour to make it their part or full-time occupation, and a number will fall by the wayside. That is the way it goes but we will always have beginners. So there must also be always a place and time for basics.

Now this fellow is very much aware that he does not know it all. Not by a long chalk. The longer one is involved with bees the clearer it becomes how much more there is to be learned about the little buzzers and how best to handle them and manage them with their, and one's own interest, in mind. I hope to pass on a few hints and also tell you about my mistakes.

It will be close to Christmas when this issue of the Beekeeper arrives in your mailbox so herewith my Best Wishes to you all.

In the following issue a summary of what has to be done won't go amiss. **PLANNING AHEAD IS AN ESSENTIAL REQUIREMENT FOR GOOD BEEKEEPING.**

With all the variations in climate, soil, and flora, we face in our country, your honey crop may be on the hives, the honey flow may be in full swing, or you may be biting your nails and hoping the weather will change for the better soon.

The strong hive will gather the best crop: 60,000 bees or better. Two weak colonies gather less than one which is up to scratch. So if you want honey be ruthless and unite. Double a sheet of newspaper. If you want to keep that extra queen put her into a nuc box with a frame of brood, some bees, and a comb of honey. she may come in handy at a later date.

Honey rolling in. Put on your extracting boxes. Don't wait till the first one has been crammed full before giving more room. Freshly-gathered nectar has to be stored and takes up many more cells than ripened honey.

I like the first extracting super to go on to a hive to have drawn-out combs. You may have put this one on well before the flow starts just to give the colony more room and keep it from becoming too congested. Did you drop two or three sheets of foundation into the broodnest? A good way to renew combs, it also gives the bees something to do and may help to avoid swarming. I prefer to place the foundation to the sides of the broodnest. Not in the iddle of it, that splits up the broodnest which does not seem very natural; besides a cold snap can come at any time. The combs taken from the broodnest can go into the centre of the super you

are putting on. This will draw up the bees in no time at all, especially if they have brood in them. If you have raised poor combs they can be culled when the super comes in for extracting.

When you think the time is ripe for a second super, do it the easy way: top-super (a), it saves energy. However, if you are short of drawn comb and have to work with foundation I do think that under-supering (b) is warranted. Drawn combs preferably eight to the extracting super, foundation nine or 10. Try to swap three drawn combs for frames with foundation. This helps to get things quickly under way. One comb in the centre and one on each of the outsides. It is the sheets of foundation at the outsides of a super which are tackled last by the bees and are often not very well finished. A strong hive and a good season can do wonders. Then you will be looking for more boxes and perhaps have nine. Only one way out: get some emptied.

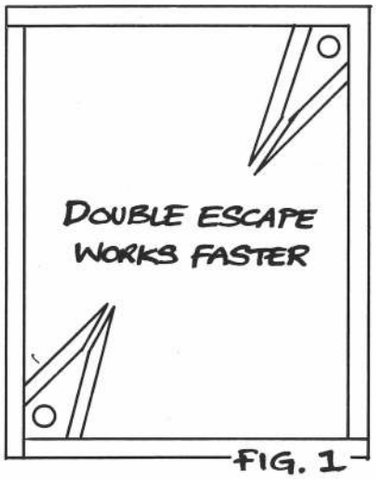


FIG. 1

Hope you have your act together, either by being the proud owner of an extractor, by using some one elses, or by having a timely arrangement to have your extracting done for you. Again **PLAN AHEAD.**

This brings us to the problem of removing full boxes (90% of the honey should be sealed over) off the hive. Skep spelled it out in last year's Beekeeper (Autumn 1986). Working with a limited number of colonies the escape board is, in my opinion, the most desirable method. It is the least upsetting to the bees and therefore preferable, especially if you have close neighbours. The supers will not drip honey all over the place as, in most cases, the bees will have lapped up the honey coming from broken burr-comb before they are clear from the super. Escape boards work very well if you can give them, say, 24 hours. There are a few points to remember:

a. There must be no holes or cracks in the super to be taken off.
b. No gaps between inner cover and super top or between escape board and bottom edge of the super.
c. You must be certain that the queen is not in the super to be taken, nor must there be any combs with patches of brood.

Poor fitting gear or boxes in bad repair open the door wide for those cursed robbers. At least block gaps with strips of newspaper. If brood is present the bees will not clear from the supers. In case of very hot weather the bees may be slow to move. That does not happen that often, because our nights are generally cool enough.

The Porter Escape ranks second to the one with no moving parts (Fig. 3 p. 16 NZ Bkr. Autumn (1986). It is the non-moving part which does it. Nothing can go wrong. Now I should not say that for I have seen the escape tunnel blocked by a couple of dead bees. We can easily get around that. Put two escapes into the board instead of one. It also speeds up the process. We were also a little lazy and made a minor alteration to the little sticks forming the sides of the escape tunnel. "Skep's" diagram shows these nicely shaped near the tunnel end. We cut ours on an angle where they meet the board rim and automatically the tunnel will become a little longer as the cut at the other end of the stick is more acute. That way we save a saw cut (and perhaps a finger). See Fig. 1.

When you put the escape board on to the hive you need not lift that heavy box down and up again. Break it away from the next super, slide it a little forward and hinge it up. Then scrape any burr-comb away from where the escapes will be, corners for ours, centre for Porter. This will save escapes becoming blocked with wax. Put in the escape board, lower super, and straighten everything. Simple as that.

But **PLEASE DON'T TAKE HONEY FROM ANY UNINSPECTED COLONY!!!** Be positive about Bacillus larvae (B.L., American foulbrood or American Brood disease). Also avoid any spillage of honey and of wax scrapings. This causes robbing and could also spread disease. The same goes for honey combs, supers, etc, left exposed to the bees for any length of time.

It is possible that you have decided to try your hand raising some comb honey: that nicest product of all. It may be sections or cut-comb. There is no space now to go deeper into the technique of this, leave it for some other time. But just this: once a box with sections or cut-comb is finished by the bees don't delay taking it off for the cappings are apt to become travel-stained if the box stays on the hive for a prolonged period. It would thoroughly spoil the appearance of an otherwise perfect product.

O.K., so now you have your first supers extracted and back on the hives. The question arises when to stop supering. You have to decide this yourself. There is no hard and fast rule. So many variables and no one is more dictated to by the weather than us beekeepers. It happens so often that one thinks it worth while to put out that extra box as the going is still good, but home it comes again as a "rattler".

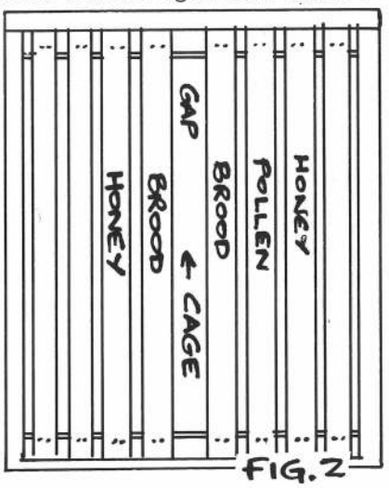


FIG. 2

Once the honey flow is finished you might as well get the job of harvesting done and over with and get on with the next one.

But watch it — don't be greedy! You are supposed to take the **SURPLUS.** There is the autumn with perhaps little coming in and queens still breeding, a whole winter, and then a spring when a colony needs a lot to build up again. So watch it! Better leave too much than not enough.

And now is the time to think about next year. Your management during the next three or four months can, and will, make a lot of difference to next season's results.

First an analysis of your efforts (or lack of them). What has gone right, what has gone wrong? Why has hive No. One been a real boomer and No. Three a passenger? Try to work that out. Did you keep good hive records?

Late summer and autumn is a good time for requeening. Make up your mind which hives need a young queen, how many spare wheels you need to carry, and if you want to make some increase. **ORDER YOUR QUEENS NOW,** not next month. Larger orders are cheaper than just one or two. Perhaps you can combine with others in the same situation. Page 20 N.Z. Bkr. Summer 1986 shows the very attractive way of requeening without having to look for the old queen. It works very well indeed. If the top has been made a few days before you receive the queen

The importance of good queens

By Don Gibbons

What constitutes a good queen? Is it a sign of a good queen when a hive starts work early in the morning, or works until last light, or in the rain or in the coldest of weather when other hives are inactive? Is it the sign of a good queen when you can look into a hive at any time without fear of reprisal or when it stoutly defends itself against any threat to its well-being?

What about its having a perfect brood pattern, a rapid spring buildup, a sudden cessation of brood rearing in the autumn, good cleaning habits, resistance to chalkbrood, or that it doesn't gum everything up with propolis or gather excess pollen?

Must she be so big that she cannot fit between 10 frames in a broodnest, or must she live to a ripe old age? Must her progeny be good wax producers, store their honey around the broodnest (down stackers) or take it to the extremities of the hive (up stackers)? Should colour be a consideration?

Would we have the perfect queen if we blended all these qualities into one queen? What then would be our order of preference? How would we go about it? I am no scientist, but I bet no scientist can tell you how because so many genes are dominant and so many are recessive. All these genes, and many more, are available in New Zealand (though not necessarily internationally recognized) but some we must eliminate because they are linked with undesirable qualities.

However, why am I asking questions instead of delivering answers?

A question I *can* answer. I wish to make you think and continue thinking.

I want to help you to run your business better, understand more, and be better informed before you make decisions that affect your future or the future of the industry.

Let's define a good queen. A good queen must have a bottom line which reads "maximum profitability": either the same return for a lesser input or a greater return for the same input. I have spent 30 years trying to achieve this end so it was, I guess, inevitable that I should become a queen breeder.

Ironically my continuing efforts to improve our queens have affected the profitability of my business because I put quality ahead of quantity.

I think it was Colin Rope who gave a talk on operating your business on something like three or four visits a year. If that is possible then to work efficiently I would say that good queens are essential.

The qualities which make a good queen are these:

1) The progeny must be manageable
2) The queen must be prolific
3) Her brood and bees must be healthy
4) They must keep a clean house
5) They must perform their production duties well
6) They must winter well
7) The queen must be young.

Let's discuss these points:

1. **The progeny must be manageable**

This speaks for itself. If the hive is difficult to handle then you manage less hives a day. You suffer more discomfort in hot weather through wearing protective clothing. You might have to site your hives in less accessible places to keep them away from the farmer and the public, thus losing time and travelling more. You might also find that apiary sites are less available to you because of people's inherent fear of being stung. (Most people are allergic to pain if not the sting). And it's not much fun having a crop on a hive if the bees won't let you take it off.

2. **The queen must be prolific**

I would like to produce a queen capable of laying 4,000 eggs a day because that is really the basis of production, be it for honey, pollen, wax, propolis, bee venom, pollination, or bulk bees. And it would to a large extent cut down the swarming impulse. Judicious use of a queen excluder will reduce the egg-laying rate of a queen but no amount of stimulation by feeding thin syrup, pollen, and brood-spreading can make a queen lay 2,000 eggs a day if she is physically capable of laying 1,200 only. It's a bit like driving a Jag. The gas is there when needed but you can still park it. Maximum bee strength at the start of the flow is needed for maximum honey production of pollen, wax, or propolis.

Obviously the more bees the more bee venom you can extract but why a prolific queen for pollination when at pollination time you require about six frames only of brood? Apart from other factors, the more unsealed brood in your hive at pollination time the greater the need for pollen and bees sure to respond to need whenever possible. Of course, if a queen is prolific then we can assume that she is healthy.

3. **The brood and bees must be healthy**

No matter how prolific the queen, if the resultant brood is unhealthy then the hive can never reach its full potential. A bad infection of sac or chalkbrood not only affects the number of bees reaching maturity, it also takes up

Beginners' Notes concluded

better check for cells and remove them before inserting the cage.

Plugging up the entrance of the split board can be done with green grass. Put it in pretty tight: it will wilt and then the bees will remove it. Weather can be very hot in February, so don't put too many bees in the tops. Over-heating can happen. Some ventilation can be provided by placing matchsticks between board and super for the duration of plugging up. Some beekeepers prefer to staple four layers of newspaper over the top's entrance. I have seen it gnawed away after a short time.

We have found that we get the best acceptance when we place the cage (wood or plastic) between two brood combs just under the top bars, with the escape hole of the cage upward so no dead escort bee will obstruct the exit of the queen. In this position the gauze of the wooden — or the bars of the plastic — cage will be fully exposed and not obstructed in any way. It leaves a wide gap between the combs but that does not matter for a short period. If you place eight combs in your top you will have enough space to spare to insert a feeder once the cage is removed. The combs can be squeezed together.

This is a good thing in case you want to keep the top over the winter. If wanted for requeening before winter just unite with a double sheet of newspaper. Tops winter very well above a parent colony. Central heating below. (See fig. 2).

May you derive much satisfaction from your beekeeping endeavours.

Note: the above mentioned manipulations work for hives made up from the same size supers, either full depth or three-quarters.

(a) Top-supering: placing an empty extracting super above a full one.

(b) Under-supering: take the full super off, place an empty one on the hive and replace the full one.

brood comb space. Mild infections of either seem to make no significant difference. Bees suffering badly from nosema or paralysis own a very short forage life at best; at worst they never reach the forage stage. They just add a greater work load to the nurse and cleaning members of the hive.

4. **They must keep a clean house**

Why do I rate this as important? I believe that bees which clean their base boards and eliminate wax moth are clean in other ways and are less likely to suffer infection from serious bee diseases as well as nosema and chalkbrood.

5. **They must perform their production duties well**

This is why we are commercial beekeepers. We need maximum returns. This is especially true in these difficult times of ever-increasing costs. A few years ago some Canadian propounded a theory that if bees could be bred to produce less wax then they should produce more honey. He published an article, using figures to prove his theory. However, I am interested in two kinds of figures only: those I see on the beach — or elsewhere — and those I see at the end of my financial year, so I gave thought to the idea. For the following reasons, I decided he wrote either for money or recognition. Beeswax does have a value. Maybe it varies somewhat in demand and price on the world market, and maybe its price does not equal 10 times that of honey, but that equation is only a guess anyway.

I firmly believe that bees of a certain age automatically produce wax when conditions are favourable (rather like us chewing when there is food in our mouths) and that is during the early to middle stages of a honey flow. Further, if there is no place to use it in the hive, then those good house cleaners we discussed earlier will pick up the wax scales and topdress the surrounding countryside: hardly profitable for a beekeeper.

A commercial beekeeper for whom I have a lot of respect and with two generations of experience to draw from, set about a breeding programme based on the Sheeplan idea of breeding along the lines of honey/wax ratio. I suggested it was the wrong basis on which to start an increased honey production programme and my mind has not changed. Why not (if you wish to produce more honey per hive) use hives with the best production figures as a base? Why make an already complicated exercise even more complicated? Why use someone else's complicated theories while at best produce the same result anyway? In fact, I could envisage a situation where the honey-to-wax ratio was improved, but the honey/hive ratio was reduced and I couldn't see those queens as being good ones — could you?

I do not attach importance to whether a hive works early or late, or in the cold. When I look for production I look for how much is produced, though I do agree that the two usually go together. I want hives to work when there is something to work for, but it is not beyond the realm of possibility that if I went for a hive that started early and worked late that I could finish up with the biggest honey gobbler of all time.

6. **They must winter well**

By this I mean that apart from coming out of the winter in good condition a hive should not come out with heaps of brood and no honey. The hives that I find usually winter best are the ones where the queen shuts down egg laying a cycle or two before the others and restarts a cycle or two later. It is brood rearing or over-activity during the winter that uses up stores.

I measure production by what is left of the year's crop after the winter. A crop of 5 tonnes/100 hives is not much use if it takes the equivalent of 5 tonnes/100 to keep the hives alive until the next season.

7. **The queen must be young**

What has a young queen going for her? A young queen is at her most prolific, controls the morale of the hive, is less likely to "blow up" under pressure, is less likely to swarm because of an inability to maintain her egg laying rate. She can recover more easily from a setback like a pollen shortage, or hunger, or stock damage, or loss of field bees for whatever reason.

What do I mean by young? Two things affect age in bees more than time. One is temperature, the other is effort. Low temperatures, cool enough for bees to move around and take in food, extend bee life while high temperatures cause high activity and more rapid ageing.

Effort is the major cause of queen ageing. For instance, I ask my support hives to supply bees from the end of July until the end of May. Their queen is laying at peak rate for an abnormally long time. As a consequence she is burned out at the end of her second year at the latest.

Hives in cooler places with short summers, where the bees either build up slowly or in a short time, have a shorter maximum egg-laying-rate period before they cease for winter. In this case queens can be expected to perform well into their third year.

In New Zealand, especially in the North, I think that a queen still going after her third year was either never very prolific or was never allowed to lay eggs at her maximum rate. (It is also possible that she is a supersedure)

One final point I must stress. The importance of good queens is a part only of your business. If you have the best quality queen in the world yet let your hive starve, the queen will simply be another dead bee on the bottom board.

In other words a queen is never better than your management. Conversely a poor quality queen will never give top results no matter what the quality of your management.

Either voluntarily or involuntarily the queen is the deciding factor in the hive. This has been known for centuries and much has been written on the subject of the queen-influence on the hive by romanticists, students, beekeepers, and scientists.

Would you consider a vehicle, a saw bench, any piece of equipment not suited to your particular purpose. What if your truck broke down at the most important time and could not be repaired portant time and could not be repaired for weeks? You would be seriously financially handicapped.

Yet many of you neglect to give the same quality-importance to your queens. A good queen is worth many times her price, and you pay many times her price if you do not have a good queen in each hive.

Quality queens coupled with quality management give best quality returns. Good queens *are* important.

Sugar Price Drops

CHEAPER SUGAR is available after the Government lifted the restrictions. The container we participated in was about 60 ct. p.KG. The price of the next lot should be less. Source is the EEC so there is shipping from Europe, handling, and profit included in the price.

The most recent Dutch Beekeeper's Association magazine contains an order form for A1 table sugar, in 25 KG. bags (same as we get) bought in bulk, special price for beekeepers, at *f.* 2.15 p. KG. which converts to approx. $NZ1.35. Talk about dumping!

John Heineman

"With butter, egg and good honey
Your cake will moist and flaky be."

Thoughts on queen bees

By Gary Jeffery

Every year queen breeders like ourselves raise thousands of queens to be introduced into hives throughout New Zealand. Ideally all should be accepted safely, but many, spring queens in particular, seem to die on introduction or are superseded soon after. We shudder to hear that some beekeepers accept losses of up to 10% as normal. Of course, some losses are due to human error, but what causes the rest?

Once it was fashionable to blame nosema infection or the poor mating of queens for the losses. However, with fumigillin treatment of the nuclei and the saturation of areas with drones it seems unlikely that the bulk of the losses can be so caused. Consequently I thought some of my experiences with queen introduction might be helpful.

Amateurs in particular often ask for a new queen because their hive has swarmed and there is no brood. Usually when a new queen is introduced to such a hive she is killed immediately after she is released from the cage because a virgin is already present. Often the virgin, when mated, produces bad-tempered bees for which the queen breeder is blamed. If a hive has swarmed I recommend that you insert a queen excluder under the bottom box, shake out the bees then, in the late afternoon, check to see if a queen is trapped below. If so, kill the virgin before the new queen is introduced.

If a hive with a virgin has swarmed you will lose less honey if the virgin is killed and replaced by a laying queen, because there is less break in the brood cycle and the new queen's satisfactory introduction is almost certain.

Often when queens are expected, and particularly when bad weather is forecast, beekeepers save time by finding the old queens in advance and killing them. The next day they introduce the new, caged queen. Under these circumstances bees often start queen cells and a percentage is allowed to mature especially early in the spring when there is no honeyflow. About the time the virgin hatches, or even later, the introduced queen disappears, often when the first brood is ready to hatch.

Even without de-queening first, some hives start cells while the queen is still in the cage and supersedure may result.

How can we eradicate this problem? When we introduce the new, caged queen we get almost total acceptance if we add her to a queenless hive without exposing the candy for about four days. After the expiry of that time we shake all the bees out of the front so we can ensure that no queen cells are tucked away out of sight. All started cells should be destroyed, then open the candy end of the cage so the bees can release the queen. If there is no flow at that time we often give a syrup feed as well.

This method means a return trip, so more beekeeping time, and it may not be practical for larger beekeepers, but nevertheless the loss of queens can have a considerable effect on the crop.

However, for those who find that way difficult although desirable, we often use another fairly reliable method. When we requeen two hives, side by side, and there is neither the risk of disease nor or robbing, we often exchange the top boxes, bees, brood, honey, the lot, and the resulting confusion seems to give the new queen a good chance of being accepted.

If the bees start to rob stop requeening immediately because many queens will be killed. Delay work until the late afternoon. Robbing is then less prevalent.

Finally, we often divide a hive in half for requeening and introduce the young queen to a top above a division board (two sheets of paper under the top box to slow down the bee drift). After the young queen is hatching young bees the old queen below can be killed and the two halves united. It takes more feed but gives a very strong colony for the flow.

I hope some of these ideas help.

To liquefy honey that has granulated or solidified

Place the container in a bowl of warm water — not warmer than the hand can bear — until all crystals are melted. See that the honey container does not rest on the bottom of the water container.

Do we want new bee stocks?

By Harry Cloake

In addressing the question "Do We Want New Beestocks?", and so you may appreciate our point of view, I offer a brief history of Cloake's Honey Company's efforts to breed better bees.

In 1922 my late father bought his first hives. The bees were savage, swarmed a lot, and were difficult to manage. In order to improve them he bought Italian queens from the late Bob Stewart of South Otago. These queens laid the foundation of our present bee stocks.

During the 1930's he considerably improved the quality of his bees. In 1940, hoping to further improve them, he bought a queen from California. That proved a disaster. He spent the next twenty years attempting to eliminate the undesirable characteristics introduced by that queen.

In 1965 I bought a breeder queen from a well-known beekeeper reputed to have good bee stocks. Again, this proved a mistake, and again it took many years to eliminate two undesirable characteristics: slow mating and low resistance to nosema from our stock.

When I retired from beekeeping in 1976 my two sons, Mervyn and Russell, took over the business. Mervyn intensified the bee-breeding programme. He made progress especially in overcoming overwintering problems in our Southland branch at Mossburn. Then by chance we had a stroke of luck.

The geneticist associated with the Sheep and Cattle Gene Pool Breeding Plan came to live at Fairview. He learned of our bee breeding and became interested. With his assistance and advice our present bee breeding plan was established based on the Gene Pool Plan.

Here I must emphasise two very important principles to be remembered when developing a stock breeding programme. They are:

You must know what you want.

You must be able to recognize it when you see it.

You must know what to do with it when you have it.

And:

You can introduce new genetic material to your stock, you can maximize or minimize existing genetic characteristics, but you cannot remove these characteristics.

So you fully understand the importance of this breeding plan and what is involved I offer a few brief details.

In order to establish what we were to breed for, the main characteristics required in the beestock were determined.

One hundred and sixty elite hives of bees were set up in nine apiaries in an area of varying climatic and soil conditions.

Scoring and weighing methods were devised.

A criteria was established to determine selection of breeder queens.

Hives of bees were overwintered in snow high on the Ben Ohau Range to select for cold tolerance.

Hives of bees were left in stressful circumstances to select for nosema tolerance.

After several years of breeding under this Gene Pool Plan what have we achieved?

Hives can now be wintered satisfactorily in adverse weather , especially in the high country. There is less burr and brace comb in the hives making working the hives much easier. Nosema is almost non-existant and, in fact, all visible characteristics show some improvement towards what we have planned for.

At present Mervyn is the only person in this country breeding bees using the sound stock breeding principles based on the Gene Pool Plan.

That is where our bee breeding programme is after 65 years of effort, and I can say quite definitely that we do not wish all our efforts spoilt by the introduction of another race of bees or by new genetic material. We have already had the experience of undesirable characteristics in our beestocks and the difficulty of eliminating these characteristics. We firmly believe that we have the genetic characteristics in our beestocks which can, by selective breeding, be further improved to a level acceptable to the Canadian beekeeper.

Dr Don Peer, who spent many years at Guelph University working on bee breeding, has expressed the opinion that we do not need new genetic material. What is needed we already have present. He warned against importing new genetic material, or another race of bees, because they might present problems difficult to resolve.

Other honey producers, like us, have bred bees suitable for their local environment and, I am sure, they do not wish to have their strains contaminated with genetic material from other races.

I am sure then that you will understand why my answer to the question "Do we want new beestocks?" is a definite "NO". It is far more important for us to concentrate on improving the existing beestocks already in this country rather than for us to introduce genetic material of an unknown quality.

Two seasons ago Mervyn took 200 queens to Canada. He carried them in his cabin bag to ensure they arrived in good condition and they were introduced into hives as soon as possible after arrival. He is at present in Canada for the purpose of evaluating the performance of those queens. Has any other queen bee breeder who has sent queen bees to Canada followed up those queens and personally checked on their performance? I doubt it! It is my understanding that the Canadian beekeeper is not concerned with the race or colour of the bee but wants a top-quality bee which will perform well in his environment.

I now refer to the booklet produced by the Queen Breeders' Association in support of their case for the importation of Carniolan beestock. Let me quote from page four.

"There is a long history of Carniolan introduction to most beekeeping countries of the world (including Australia). In no case has the bee forced out established bee races, including native feral stocks.

"And even if the Carniolan does become established as a feral bee, the problem for queen producers would be no different than they are at present. Many beekeepers don't realize that New Zealand's commercial queen breeders maintain pure-bred Italian stock in areas where the European Black bee (Apis Mellifera Mellifera) is the predominate feral stock. The queen producers are well practiced in the techniques required to keep the two races separate" End of quote.

I must question this statement. There is not, nor ever has there been, two races of bees bred side by side in New Zealand. In fact I doubt if two races of pure bees ever existed here during the same period. When or how did these queen producers learn the techniques required to breed two pure races side by side in the same locality?

The feral bees claimed to be European black bees cannot be so. My experience has been that where Italian-type queens are produced on a commercial scale or, these bees kept for honey production, the feral bees quickly acquire Italian characteristics. These

"Let honey add that flavour rare
To sandwiches that you prepare."

feral bees may be darker but certainly are of a predominately Italian character rather than European Black because of the number of Italian-type drones in the locality.

I agree that regular imports of pure Carniolan bees under quarantine and with the use of artificial insemination could be kept pure at the breeder level. However there is no way the bees could be kept pure at the commercial level. If two races of bees are bred side by side in the same locality crossmating by free flying drones must occur. That means queen bees supplied by these queen producers must have the characteristics of both races. It must also follow that these queen bees will breed drones of mixed race so crossbred bees would soon become common throughout the industry. Queen breeders like ourselves would find it impossible to keep our bee stocks pure and I doubt if we could continue with our present breeding plan. I am at a loss to know how we could cope with this and hope to retain our present quality and type of beestock.

Prior to 1982 Australia had an open door to bees. Several races and strains of bees were introduced including the genetically-developed Starlines from the United States. So many different races and strains of bee gave the Australian beekeeper a very mixed type with a varying performance, especially in colour, temperament, and in many instances' excessive tantrums to swarm. Some queen breeders managed by isolated mating (for example out in the desert, or by using artificial insemination) to keep their breeding stock relatively pure. But honey producers who raise their own queens have difficulty in keeping their stock pure and so have a very mixed type of bee.

Since 1982 bees introduced through quarantine only have been allowed. A good quarantine facility has been established near Sydney which, in theory, has a sound practical application. However, it has been found by those who import bees not to be so. It is seldom used now and few bees are imported.

Because of this many queen breeders are turning their efforts towards developing a bee suitable for Australia. I visited several of these queen breeders, saw the beestocks, and am sure what they are doing will be to the benefit of Australian beekeeping.

I must mention the work being done in West Australia relative to the development of a bee suitable for their conditions. In order to stop the spread of European Foul Brood into West Australia the borders were closed to bees and used equipment. The Government made a substantial monetary grant towards establishing a queen breeding programme using beestocks in West Australia only at that time. Rotnest Island was cleared of all feral bees and used for isolated mating and a breeding plan based on the Merino Sheep Gene Pool system.

Last year I discussed this queen-breeding plan with Lee Allen, responsible for the operation. The progress made is quite remarkable and indicates what can be achieved by using sound bee breeding principals on existing bee stocks.

To introduce Carniolan bees of unknown quality and performance into New Zealand would be a disaster. Those queen bee breeders who support the introduction of Carniolan bees have failed to provide evidence that this race would be superior to those we already have. They have given no evidence that it would perform as well here. A lot more must be known before we can consider making a decision. We must first consider our own industry before importing Carniolan bees just because the Canadians might want them.

Biological control of broom

By Pauline Syrett

INTRODUCTION

Broom is gazetted as a class B noxious plant in New Zealand. It has been declared a 'target' plant by 13 District Noxious Plants' Authorities and classified as 'widespread' by 41 others under the latest re-classification (Noxious Plants Council 1985). Its weedy properties are widely recognised, as in many situations it is aggressive and invasive, having the potential to occupy a much larger area of land than at present. It can grow in a wide range of habitats and to much higher altitudes (at least 1400 m) than gorse. Some aspects of its ecology in New Zealand have been studied by Williams (1981). It is actively controlled in a range of situations by both chemical and mechanical means, as well as by grazing management where this is practicable.

BIOLOGICAL CONTROL

The aim of a biological control programme is to reduce the growth rate and reproduction of broom so that it is less aggressive and less weedy than at present. Eradication, even locally, is not an achievable, or desirable, outcome of a successful biological control programme. Biological control agents, to be successful, must also preserve their food source, or they themselves will be eliminated. Under successful biological control, broom would still be a common flowering shrub. Its rate of spread into new areas would be reduced, and the need for its control by other means would also be reduced. Over a period of time, existing stands should become more broken with other plants gaining space. Thus what is presently a monoculture of broom bushes might become a stand of smaller bushes with native shrubs, grasses, and clovers growing in between. So broom would continue to be a very common plant, but not so aggressive as to invite local attempts to remove it by mechanical and chemical methods.

INITIATION OF THE PROGRAMME

The Entomology Division of the DSIR identified broom as a priority target for biological control in 1980 following extensive consultation throughout New Zealand with weed scientists and noxious plants officers. Our work is now partially supported financially by the Noxious Plants Council, Electricity Corporation, Railways Corporation, and most District Noxious Plants Authorities in New Zealand.

Work was initiated in the UK to carry out host specificity testing on broom-feeding insect species which showed promise of confining their attentions to a single host plant species. At the same time the current insect fauna on broom in New Zealand was investigated and a twig mining moth was found to be widely established. This small white moth, *Leucoptera spartifoliella,* was identified as a European species whose only known host plant was broom. The broom twigminer was first recorded in New Zealand in 1950 and is presumed to have been introduced with ornamental varieties of broom. The small caterpillars mine young twigs which can result in the browning off and death of extensive areas of bushes when infestation levels are high.

THE FIRST INTRODUCTION

The first species to be available from the UK, and to be introduced into quarantine in New Zealand for further testing, were the two seed-feeding beetles *Apion fuscirostre* and *Bruchidius villosus* (formerly know as *B. ater*). Difficulties in rearing *A. fuscirostre* resulted in further work with this species being abandoned temporarily. Host-specificity testing was completed satisfactorily with *B. villosus* showing that it was able to develop only on *Cytisus scoparius.* Other closely related plants including *Chamaecytisus palmensis* (tagasaste) and the native Carmichaelia spp. were shown not to be suitable (Syrett & O'Donnell in press). Adult beetles lay their eggs on young green broom pods and hatching larvae burrow through the pod into the seeds. Each larva develops within a single seed, consuming the contents in the process. Pupation occurs within the seed capsule from which the emerging adult bites its way out. Adult beetles are liberated when the pods dehisce.

In November 1986 the Ministry of Agriculture and Fisheries (MAF) gave permission for *B. villosus* to be released from quarantine and liberated in the field. Because of the probable attack on seed of cultivated varieties of *Cytisus scoparius,* the New Zealand Nurserymen's Association was consulted, and made no objection to the proposal. Approval was also obtained from the Commission for the Environment. The New Zealand Beekeeper's Association was informed of the proposed action. While seed-feeding insects may be expected to have long-term effects on plant populations and may reduce rates of invasion into new areas, they pose no threat to existing stands of broom. Thus no further consultation was undertaken at this stage.

THE CONSULTATIVE PROCESS

Before application is made to release species in New Zealand which attack parts of the plant other than seeds (Table 1) a wider consultative process is being carried out. In March 1987 a letter was sent out to 58 organisations requesting their views on the proposed project. Thirty seven submissions were received, and an Environment Impact Assessment is being written to be presented to the MAF, with copies of all the submissions. Nineteen of the submissions favoured the proposal, five were against it, and 13 expressed no opinion. We understand that an independent committee is to be set up by MAF to make a decision on whether this project is to proceed. If approval is given for broom to be a target plant for biological control, then each insect species will be considered separately, and the decision whether or not to release it will be based on results of host-specificity testing.

CONCLUSIONS

Provided conflicts of interest regarding the desirability of controlling broom can be resolved, biological control offers a safe, economical, and environmentally desirable means of reducing the harmful impact of this plant. It is permanent but takes a number of years to take effect. Even when biological control is successfully achieved, the target plant remains a common species.

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Williams, P.A. (1981). Aspects of the ecology of broom *(Cytisus scoparius)* in Canterbury, New Zealand. *New Zealand Journal of Botany 19:* 31-43.

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Table 1: Possible insects for biological control for broom

Apion fuscirostre — Seed weevil to complement *Bruchidius villosus*

Apion immune — Mines stems, and can form galls

Arytainilla spartiophila — Psyllid — small sucking insect

Agonopterix scopariella — Foliage feeding caterpillar

Chesias legatella — Foliage feeding caterpillar

Dictyonota fuliginosa — Sucking bug

Sitona regensteinensis — Feeds on root nodules.

Honey filtration unit

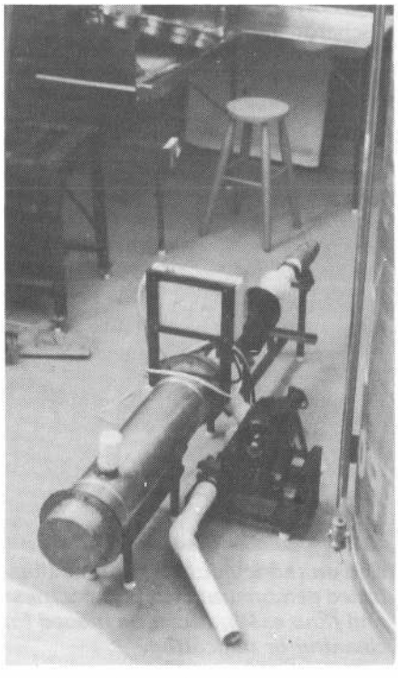
By Trevor Bryant

(with thanks to John Thorpe, and to Ian Howartson for the technical details)

INTRODUCTION

Beekeepers are highly adaptive creatures with considerable ability to assess a good idea and adapt it to meet their needs. John Thorpe of Gisborne is no exception.

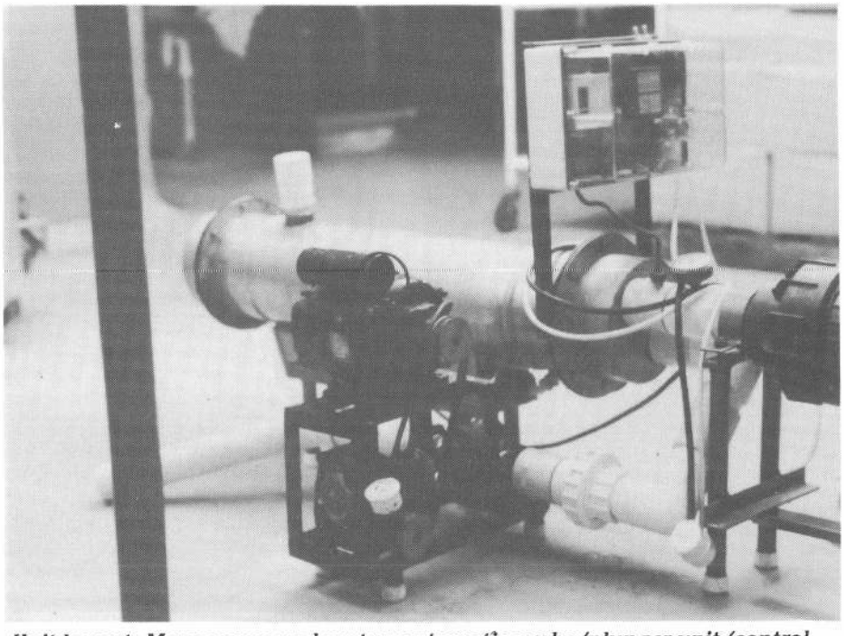
John's old honey house was ideally suited for a small operation but, with the increase in beehives, space was at a premium and his equipment could not handle the increasing volume of honey put through his plant. Not only was he processing his own, but other beekeepers also wanting him to extract their crop.



The filtration unit: size perspective

The typical Catch 22 situation that many a budding commercial beekeeper finds himself in. John's solution to the space problem was simply to "up stakes" and move into a large coolstore. To improve honey quality in the drum he took an old idea and built his own heat exchange-filtration unit.

A few small modifications here and there to the rest of the plant and, for a minimal additional capital outlay, he has a plant with the potential to handle large quantities of honey which, in the drum, is clear enough for direct placement on retail shelves. One advantage not mentioned by the author is that the unit can be added to, to give a greater heating area if required.



Unit layout; Meno pump and motor, automatic probe/plunger unit (control box)

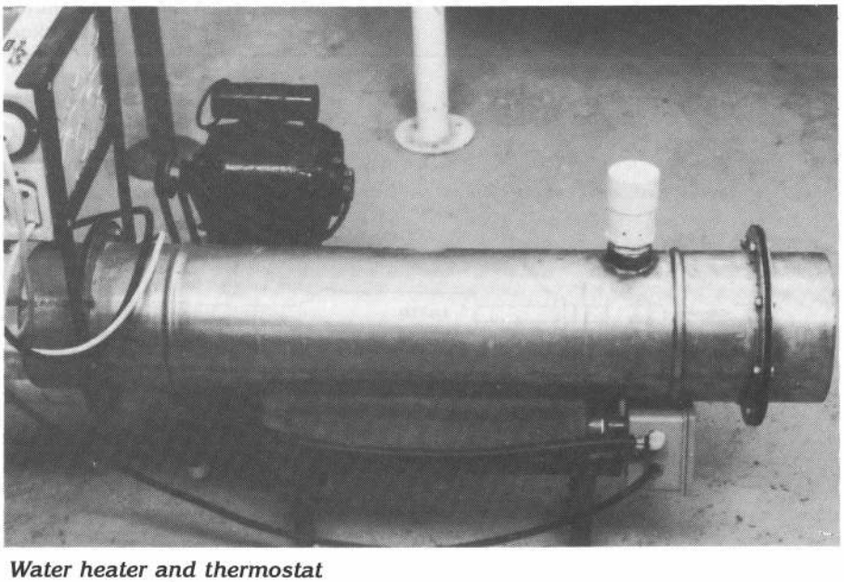
My thanks to John Thorpe for allowing the MAF to write-up his idea and to Ian Howatson for the technical details.

ADVANTAGES

- The system is fully automated, thus it can be left unattended while operating. The old cloth system needed constant attention (cloth blockage and replacement)
- The honey can be pressurised, that is, passed through filters under pressure
- The Arkal 4900 filter with blue rings can easily be cleaned in water
- It is simple.

OPERATION

Honey is drawn from holding containers using a Mono CP 1600 pump.



Water heater and thermostat

This pump is possibly too large for the job, therefore a Mono CP 800 could be used. These pumps comply with health regulation requirements for the pumping of food stuffs.

The honey passes through the heat exchange unit by travelling down 15 of the stainless steel tubes, then back up the other 15 tubes.

The filtration component consists of an Arkal 4900 with blue rings (40 mesh) which removes foreign bodies such as pollen, wax, and propalis. Once the filter becomes blocked it is easily dismantled and the rings cleaned with water.

The system can either be manually or automatically controlled. Automation enables the system to be turned off by a probe/plunger system (or a float switch) once the vat, drum, or vessel is full.

A pressure switch will turn the pump off once the filter becomes blocked because of the increase in upstream pressure. This prevents excessive filter clogging and pressure build-up and therefore helps increase filtration efficiency.

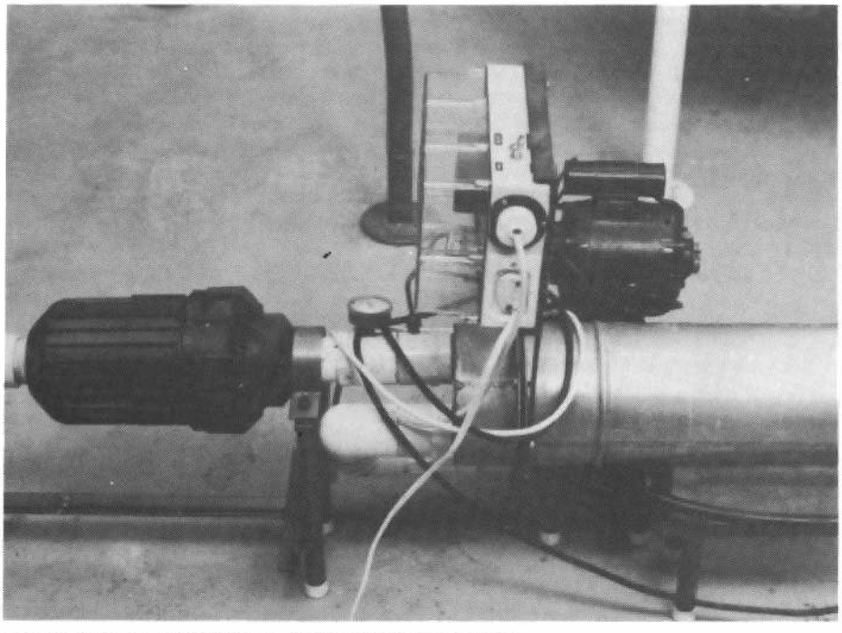
Presently John's system (filtration) with the large mono pump (CP1600) has a throughput of about 43 kg a minute or 28.6 litres a minute. The approximate total construction cost is:

• Filter (4900 Arkal)	$ 395
• Pump/Motor	$1,500
• Components/Construction	$ 500
Total Cost approximately	$2,395

The system consists mainly of stainless steel and PVC (Poly Vinyl Chloride) components, excluding the pump and the steel support frame.

The heat exchange unit is made of stainless steel while all pipe work is PVC. Polythene (50mm) is used for the discharge into storage vessels.

Both ends of the heat exchange unit are bolted together with a nylon seal to prevent leakage. The heat exchange unit can be dismantled for maintenance and cleaning purposes.



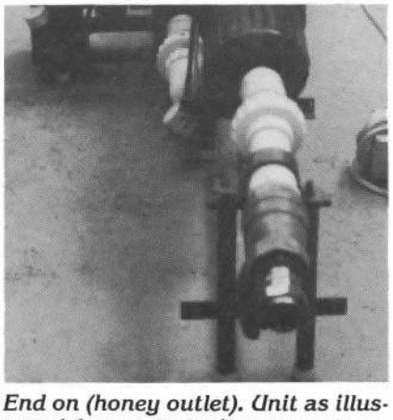
Control box, Arkal filter. Note pressure gauge

The Mono pump is driven by a 1½ hp electric motor with a 30:1 gear-ratio reduction box.

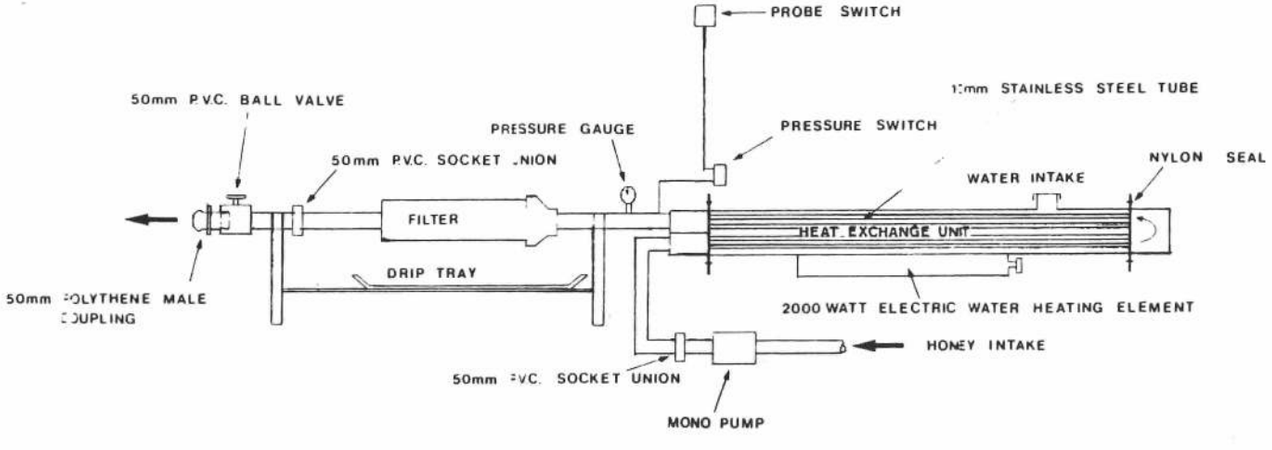
The honey is pressurised so it passes through a heat exchange unit, thereby improving viscosity.

The heat exchange unit consists of a stainless steel body with 30 10mm stainless-steel tubes.

The water is heated in the heat-exchange unit by a 2000 watt electric water-heating element. A thermostat enables the water temperature to be held at 45°C.



End on (honey outlet). Unit as illustrated demonstrates its compactness and how easily it can be moved for cleaning or relocating.



Cost savings

By Ian Berry

Keeping costs down has always been a necessary part of beekeeping for profit in New Zealand. In these days of user pays, high inflation, and high interest rates a dollar saved is more than ever a dollar earned.

In recent years new opportunities, wuch as a big increase in the number of hives used for orchard pollination and the removal of controls on the export of honey, have led to a rapid expansion of the New Zealand beekeeping industry. This expansion has increased the need for forward planning which is now an increasing part of the regular workload of the National Executive of the NBA. Also many individual members have learnt new planning and management skills. In the constant drive to maintain and improve profits, beekeepers have become more skilled in many things far removed from working bees. Cash flows, credit control, more efficient use of resources, better presentation and marketing of their products, even dealing in foreign exchange are now a regular part of many beekeepers' work.

This article has been written as part of the Executive's forward planning process to highlight some of the opportunities which may be available to members to increase profits by reducing costs. The following are some specific examples of cost savings at our Havelock North Division of Arataki Honey Ltd.

TIMBER. For many years we have bought "shorts" from our local mill. These are "off-cuts" and rough timber, discarded when the mill is preparing timber for pallets and bins. The price is low and even though we cut a fair amount for firewood we make virtually all our beekeeping woodware much cheaper than if we bought normal-length timber. Our machinery for handling the timber consists of a rise and fall cross-cut saw bench with multiple stops to ensure the timber is cut to the right lengths, a rip saw capable of taking six tungsten-tipped blades at a time, a thicknesser, some pneumatic staple guns, and an air compressor. With this equipment we convert what is virtually waste material into good-quality beekeeping woodware.

CORRUGATED CARDBOARD OUTERS. By co-operating with Kintail Honey, Dannevirke, we provide orders of suficient size to enable us to shop around for the lowest prices. Even though several large box-making firms are closer we currently buy most of our outers from Wellington, where we get the best deal. Anyone interested in joining us in ordering outers for 24x500g taller lily cartons or 12x1kg lily cartons is welcome to contact us. The bigger the order the lower the price for all of us.

DRUMS. Although the supply has now dried up we saved a mint by buying used apple-juice drums. They were good quality drums with the best of lacquer inside and once washed and dried were excellent for either storing or exporting bulk honey. Other beekeepers have discovered other sources of used 200 litre drums, and the savings compared with the cost of new or reconditioned drums are such that they can afford to spend considerable time seeking out suitable supplies.

DISCOUNTS. When buying goods or services ask for a discount, especially if you can pay cash. If the first supplier refuses then shop around. We recently needed a piece of equipment which cost some $4,000. The first supplier stated there was not enough mark-up to allow discount, but the next offered us 10% for exactly the same item. That meant about $400 saved for 30 minutes work. Other examples of discounts we receive at present are 20% on paint and 5% on new trucks.

FREIGHT. We have considerable freight to move around the country so we shop for prices. Savings of 20-30% are easy to find and sometimes much more is possible.

The Executive hopes other members will share their experiences of cost-saving by writing to the 'Beekeeper', either in the form of an article, or as a letter to "The Editor" or by including something in "From the Colonies".

Library News

Donated by Mr E. New, Invercargill, the following two books:

OILSEED RAPE and **BEES** by Allan Calder, 1986, 48p, UK. Illustrated with a number of colour photos and diagrams. Rape seed is now an important crop in the UK. and on the continent. It is potentially a huge source of nectar and therefore of great importance to beekeepers. This attractive little book discusses the opportunities and problems which this crop presents to the beekeeper.

PLANTS and **BEEKEEPING** by F. N. Howes, 1979, 236p, UK. A very welcome addition. We already had Dr Howes well-known book in the library but this is a copy of the most recent reprint, updated and revised.

Many thanks to Mr New for his generosity and continued interest in the Beekeepers' Library.

THE VALUE OF HONEY BEES TO NEW ZEALAND'S PRIMARY PRODUCTION by Andrew Matheson and Mark Schrader. A paper which sets out the value of the honey bee to the country's economy. Not just the value of bee products, but also the much greater value of pollination and contribution to export quantity and quality and the saving in nitrogenous fertilisers through maintenance of the clover content of our pastures. Not an easy problem to work out. Andrew's and Mark's effort will serve the industry very well, especially when priorities have to be discussed. It is good to have these figures ready to hand.

NOTES N.B.A. SEMINAR — CHRISTCHURCH JULY 1987. These notes were taken by Nick Wallingford during the seminar and cover the material offered by all the speakers of that day. Well worth having another look at.

SPICED HONEY NUTS

3 cups sifted confectioners' sugar
3 teaspoons ground cinnamon
1½ teaspoons ground nutmeg
1½ teaspoons ground allspice
1 egg white, unbeaten
2 tablespoons honey
⅛ teaspoon salt
¾ pound almond, pecan, or walnut meats

• Sift sugar and spices together 3 times. Spread one half of the mixture, ¼ inch thick, on baking sheet or shallow pan. Place egg white, honey, and salt in bowl, and beat until mixed but not foamy. Add nuts and stir until coated. Place nuts on sugar, one at a time, top side up, ¼ inch apart. Cover evenly with remaining sugar mixture. Set pan inside another baking sheet, or pan, and bake in very slow oven (250° F.) 1½ hours*. Remove nuts immediately and brush off excess sugar. Cool. Store in airtight glass jar. Approximate yield: 1 pound.

* A very slow oven is necessary to make nuts crisp and to prevent them from becoming too brown.

The Department of Conservation

By Sandy Richardson

With much of Westland comprising bush-covered mountains and hills it is understandable that beekeeping on the West Coast is almost entirely dependent upon the high-yielding plants found in abundance in our forests. With the bulk of this aforested area controlled by the Crown through the former Lands & Survey and Forest Service, it was necessary for beekeepers to maintain a close liaison with those departments for registering apiary sites, access to back country via logging roads, etc.

Typical Summer apiary with mountain backdrop.

With the Government restructuring of these departments and the formation of the Department of Conservation (DOC), the West Coast Branch invited a representative of the Department to address a Branch meeting and outline the role of this new Department. In ticular we needed to know how it might affect us as beekeepers. The meeting was on Wednesday, July 29, at Hokitika.

The DOC representative, an amiable individual, gave us an outline of the Department's brief. He explained its wide and varied ramifications, its responsibility for alpine huts and the conservation of alpine regions, through to the administration of whitebait licences in the lower reaches of rivers and streams. Indeed, the Department seems all-encompassing. He stressed that it is still early days for the Department and so consequently for formulating policy. He said a mountain of work, needing perhaps years, lay ahead. He emphasised that because of his Department's lack of a set policy and its experience in some fields, its immediate approach was to gain the confidence of the public. He felt it must not rock the proverbial boat by making sudden or drastic changes to the policies of previous administrations.

So from a beekeeping viewpoint it appears the status quo remains for now. However, he pointed out that on the Department's small budget of $7 million it was clear that many of the back-country roads it has inherited will not be maintained. To learn that is of prime importance to beekeepers.

He also noted that apiary-site registration required clarification on some points. For example, the size of an apiary site and its licence fee compared with, say, a grazing licence, could be out of proportion. Much more so when the sites attract county rates on top of the licence fee. All payable by the beekeeper!

Another point of discussion was the life of an apiary licence. In the past, short-term one-year licences were common, and although longer-term licences up to five years, were beginning to be adopted, Branch members felt that some assurance of tenure was desirable. Our guest therefore suggested that while his Department was still in the policy-formulating stage, and is looking to the public for suggestions, that the Branch should make a written representation outlining our ideas, concerns, and views.

The Branch will do that and suggests that other branches in DOC areas, might consider a similar course. While it is not realistic to expect every request to be accepted, nonetheless the ball is in our court. We must remember that the DOC can't help us if it doesn't know we have a problem.

Below: Old winch banks make good apiary sites.

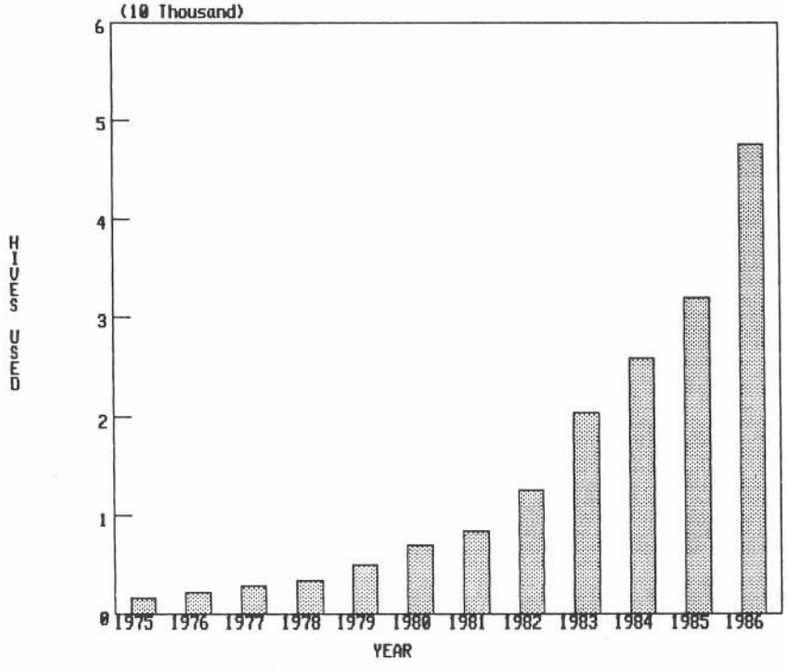
Beekeeping in the Bay of Plenty

By Nick Wallingford

The Past

Historically, commercial beekeeping in the Tauranga/Bay of Plenty area did not get underway until the late 1930s. Rapid expansion came after WWII. The number of beekeepers and hives doubled in six years.

Without doubt the kiwifruit boom has had the greatest impact on Bay of Plenty beekeeping in recent history. From small beginnings (only 1,660 hives placed back in 1975), the industry grew rapidly. Last season 47,589 hives were placed in over 2,000 orchards for kiwifruit pollination.



HIVES USED IN POLLINATION - B.O.P.

DIAGRAM I

In part this was due to returning servicemen and resettlement schemes. Another factor was the discovery of the cause of toxic honey which plagued the area all through the 1920s.

This problem became so bad that in 1929 three of the four main honey producers in the BOP sold out because there was an embargo on the export of their honey and because they had been poisoned themselves. Not until 1946 was the link made between the poison vine hopper and the honeydew it produces from the tutu plant. Now, with the setting up of restricted zones in high risk areas, the danger to public health has virtually been eliminated.

The Present

Today 790 beekeepers are registered in the Tauranga Apiary District which includes Poverty Bay. They own 58,423 hives. Of these beekeepers 102 own 50 or more hives and 90% of all the hives in the district.

The response to the challenge to provide the number of hives alone has been phenomenal. More amazing still has been the attitudes and hive management changes necessary to produce the type of hive most suitable for the job. The change from a producing industry to that of a servicing industry is a major feat.

As more and more research has been carried out over the years the BOP beekeepers have responded with ability and enthusiasm. They have learned how to manage their hives on economic and scientific principles. Scientists like our own Pat Clinch, recently retired, and before him Trevor Palmer-Jones, have laboured long and hard on behalf of beekeepers, helping them not only with stocking rates for hives in orchards but also with the problems of pesticide poisonings of bees. Overseas researchers such as Cameron Jay have always received a warm welcome from the Bay of Plenty beekeepers, keen to know the 'whys' of their pollination beekeeping as well as the 'hows'.

Since the influx of new beekeepers into the area a few years ago, the increase in *beekeeper* numbers has slowed somewhat. The last few seasons have seen considerable expansion and consolidation among existing beekeepers.

Another feature of the Bay of Plenty's pollination beekeeping has been the recognition of financial realities. Led by our former MAF Apicultural Advisory Officer, Trevor Bryant, a financial monitoring progamme has been operated over four seasons. This has allowed our beekeepers to compare their businesses with a typical model.

Though initially sceptical, and feeling that variations in individual businesses and seasons would make comparisons invalid, many beekeepers now use the information collected with good effect. For instance, beekeepers can now present to orchardists sound financial arguments for increases in fees charged for pollination. Rather than seeing their beekeeping simply as 'a lifestyle', Bay of Plenty beekeepers now speak authoritatively about selected indices and internal rates of return. You need not remain poor to enjoy the lifestyle of a beekeeper!

The Future

If the Bay of Plenty beekeeper can be catagorised in one word, that word should be 'co-operative'. That is not to say there are no disputes over sites and the like, but at least beekeepers have managed to co-operate to the extent where they plan how to resolve such inevitable problems when they arise.

A good example of the approach taken by local beekeepers to a situation is with the purchase of sugar. Several years ago, before the NBA arrangements allowed for cheaper sugar purchases, Bay of Plenty beekeepers looked into the possibility of buying tanker-loads of sugar syrup direct from the refinery.

Obviously, the quantity of syrup involved (about 10,000 litres) and the cost (several thousand dollars at a time) presented a problem. Compounding the difficulty was the fact that the entire load would have to be unloaded immediately upon arrival.

The answer was to share the tanker loads between a number of beekeepers. At the appointed time beekeepers from

the district arrived with empty drums. The payments were 'cash and carry'. One beekeeper paid the account and collected cheques from the other co-operating beekeepers on the spot.

Sugar purchases, though probably the best, are not the only example of this spirit of co-operation. Bulk deals for paint, preservatives, and even insurance have been considered by branch members.

Co-operation has extended even into production and marketing. About a year ago one group formed a company (Apicorp) to produce and market round comb-honey sections. By pooling their resources and expertise, they filled orders for 4,000 dozen sections during their first season. They now plan to contract other beekeepers to produce these specialised comb honey sections for them. No one beekeeper could do this on his own. Only by showing the work, the expense, the commitment can they share the eventual reward.

Conclusion

Before writing this, I re-read an article that appeared in the NZ Journal of Agriculture back in 1952. It made interesting reading to compare the situation then with now.

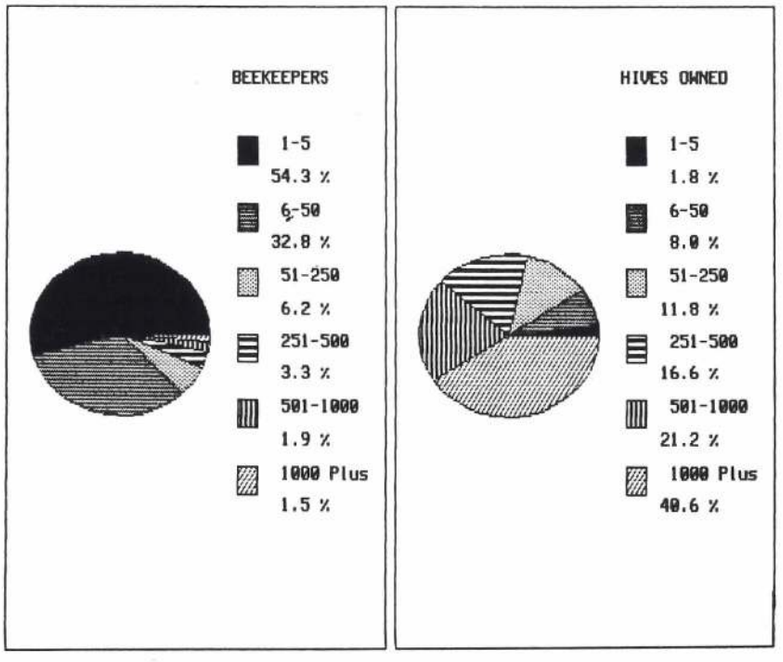
"The number of beekeepers and hive holdings has doubled over the last six years.

" . . . due to the rapid growth of commercial beekeeping, overlapping of apiaries has taken place and established beekeepers are now finding it extremely difficult to find new apiary sites without further encroachment.

"Orchardists are fully aware of the bees' value for pollinating and beekeepers are frequently requested to place hives in or near orchards."

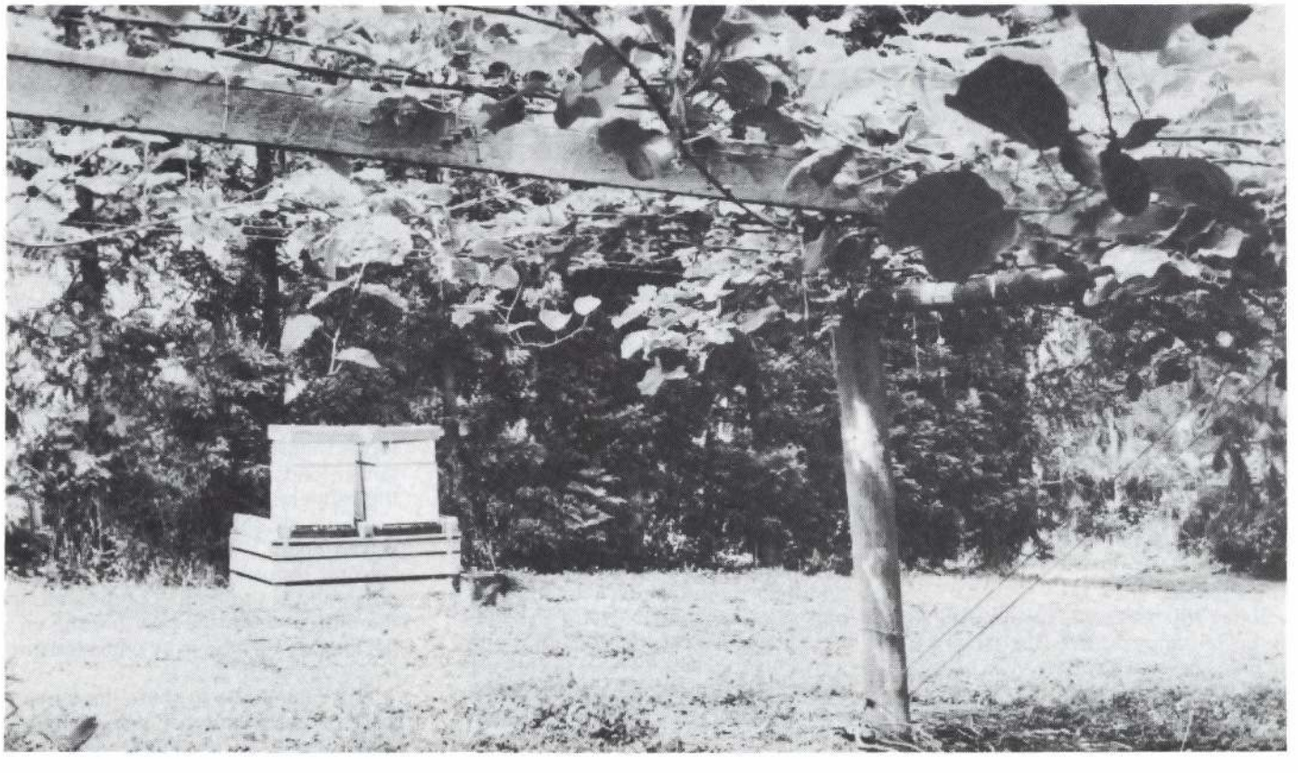
With all of the changes so apparent in the Bay of Plenty and with beekeeping in the area, it's surprising how much seems the same.

DIAGRAM II



BEEKEEPER NUMBERS AND HIVE NUMBERS COMPARED

Beehives placed in kiwifruit orchard for pollination service, Tauranga.



Classified Advertisements

Available only to registered beekeepers selling used hives, used plant, and other apiary equipment, and those seeking work in the industry. $16.50 for 20 words (inclusive of GST) payable in advance. No discounts apply. No production charges. Maximum size: 1/6 page.

FOR SALE

1000 Hives Southland 2 full depth, 3 ¾ supers $100 each, house and shed optional. The Beekeeper, Box 2131, Wellington.

For Sale: 100 hives situated in the Avon Valley, Marlborough. All new equipment (¾ supers). Prime Apiary sites. Write to Craig Deans, RD6, Blenheim or phone Blenheim 24825.

800 four or five box hives, with feeders. Plus enough gear for 1,000 hives. All gear in good condition. The lot for $48,000. Phone 93 Lawrence.

Well-established localised expanding pollination service. 180 sound jumbo hives plus pollen traps; 45 D.Rs L300 Flat Deck — Ph. Richmond 7180.

Extracting Plant including 2 eight-frame extractors, honey sump, pump and pipes. 1½ ton tank. Davidson uncapping machine with cappings pump. Electric boiler. Maxent spinner all stainless steel. Penrose wax oven near new. Drum barrow. Toyota Dyna Diesel truck, 3 ton, 40,000 kms. Write R.W. Bruce, PO Box 19, Mt. Somers. Phone (053) 39-850.

Hives, 2 and 3 boxes high. Very good condition. $85.00 and $100.00 each. Contact Claus Breckner, Telephone 440-K Kawakawa.

SITUATIONS AVAILABLE

Work in Canada for beekeeping students 19-28 years. Leaving NZ April 1988 for 7 mths. Further information write to International Agricultural Exchange Association, PO Box 328, Whakatane.

Help Wanted in Canada — Pollen and Honey Operation. Must be single, between 18 to 26 years old. Apply through IAEA in Auckland (phone 09 796 074) or write Ernie Fuhr, c/o North Peace Apiaries Ltd, R.R.#1, Fort St. John, B.C.V1J 4M6.

FAMILY BEETS

Slice cooked beets. Keep warm. Cover with the following sauce:
1 tablespoon cornstarch
½ cup vinegar
A few whole cloves
¾ cup honey
1 tablespoon butter

• Add cornstarch, vinegar, and a few whole cloves (mixed together) to honey. Bring to a slow boil and boil 5 minutes. Add butter. Pour over beets and let stand 20 minutes. Serve hot.

OTHER PUBLICATIONS

INTERNATIONAL BEE RESEARCH ASSOCIATION (IBRA)

IBRA is a charitable trust providing scientific and practical information on bees and beekeeping worldwide. All members receive BEE WORLD. For full details of IBRA services and Membership contact: International Bee Research Association, 18, North Road, Cardiff CF 1 3DY, UK, Tel: (0222) 372409 or (0222) 372450 (ansaphone), Telex: 23152 monref G 8390.

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SOUTH AFRICAN BEE JOURNAL

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