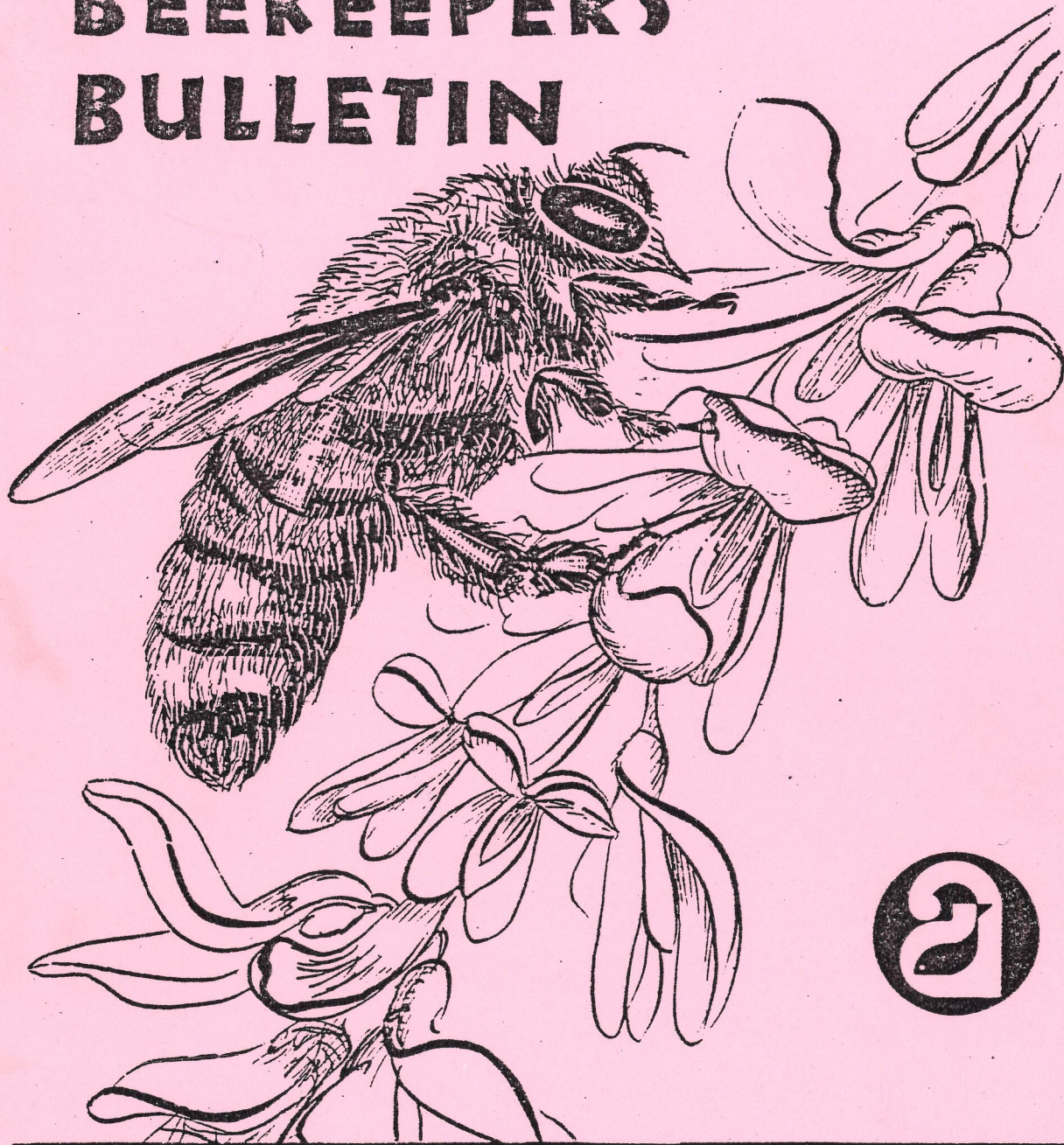


THE BEEKEEPERS' BULLETIN



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Volume 7

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Telephone: 81 069 (Work)

As some of you know I spent a week in March visiting New South Wales with most of the other MAF apicultural advisers. We were based in Sydney and from there made scheduled visits to:-

- * the honey bee importation and quarantine facility at Wallgrove.
- * a gamma radiation plant where equipment infected with AFB and EFB can be sterilised.
- * an apiary with EFB in.
- * the Honey Corporation of Australia's packing plant at St Mary's.
- * Hawkesbury Agricultural College to see their queen breeding and stock maintenance projects.
- * Gretchen Wheen's queen breeding operation at Richmond.
- * Pender Beekeeping Supplies factory at Maitland.
- * Michael Hornitsky's lab at the Veterinary Research Station at Glenfield.



We also met with some of the local beekeepers at an evening function and spent an afternoon with the apicultural advisers from the NSW Department of Agriculture.

We're preparing a full report on the study tour, all or parts of which will be made available through the NBA to interested beekeepers. I will be talking about what we learned to NBA branch meetings over the next couple of months, showing slides of the places visited.

Some of the highlights for me were:-

- * spending a day with Michael Hornitsky looking at EFB, making slides of EFB and AFB in his lab and having a general discussion on the disease and how they treat it. I'll say a bit more about EFB and half moon disorder later on.

2.

* seeing the gamma radiation plant in operation and being allowed into the heart of the radiation chamber to view the cobalt radiation source. Naturally the source was "deactivated", by being lowered into a deep pool of water where it glowed with a most attractive and somewhat eerie blue colour. Beekeepers with a lot of foulbrood hives can bring the equipment to the plant in covered trucks and get them sterilised. It costs about \$7.00 for a three-decker hive including the empty frames. One side benefit has been increased production from irradiated hives. The gamma rays kill all other lurking bacteria and *Nosema* at the same time.

* the Honey Corporation's packing plant was a most efficient operation with eight filling lines, for liquid honey only. I saw two operations there that caught my eye. One was the way they stacked cartons on pallets. They used to pack the cartons tightly together on a pallet and cover with shrink wrapping, but this was expensive at around \$4-\$5 a pallet and involved another operation. Now the cartons receive a squirt of hot non-tacky glue on their tops and are open-stacked on the pallet. The glue provides a non-slip surface so the cartons stay put and the gaps allow circulating air to cool the honey down much more quickly. The price is right too at about 50¢ a pallet.



The other feature that intrigued me was "bag-in-the-box honey". Yes, it was just like an overgrown wine cask. They had a collapsible wooden and steel case built on a pallet. The honey was put into a thick plastic bag liner and a honey gate was supplied that when screwed into place pierced the bag. These containers were sold mostly to the bakery trade.

It was a very productive week, though the schedule was fairly punishing at times. However, we did get the odd moment to sample some of Australia's "culture" : pokies, Kings Cross and Bondi beach!

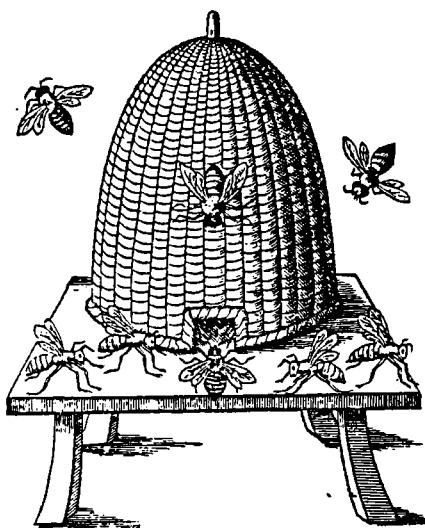
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BEEKEEPING RELICS

Have you got any really antiquated beekeeping gear? No, I'm not being rude about the plant in your honey shed, but am talking about all the junk stored out the back.

MAF and the NBA have been given space for a small beekeeping museum at the Mystery Creek Field Days site near Hamilton. A new complex called "Farm World" is going up which will include a beekeeping section.



A 16th-century hive and bees.

Part of this section will be a museum of early beekeeping, which is particularly appropriate because of the Waikato's early association with commercial apiculture through Issac Hopkins. The other part will be devoted to the need to register apiaries, the seriousness of bee diseases and the dangers of bee product imports.

MAF and the NBA would be grateful for any contributions of old photos, magazines, hive equipment, smokers, honey containers, and so on.

Perhaps this can be discussed at branch level, and any donations forwarded to the Waikato NBA branch.

* * * * *

EFB AND HALF-MOON DISORDER

Having been introduced to EFB while in Australia, I now feel more competent to tell the difference between the two in the field. However, it's still not easy. Michael Hornitsky, the bee pathologist from Sydney, visited Denis Anderson's lab at Mt Albert in March. When he saw our HMD he was so certain it was EFB that wagers were made. I understand that Denis is still drinking the "proceeds". Anyway, I'll summarise my impressions of the field symptoms for these two problems.

4.

Description	EFB	HMD
Appearance of brood	Patchy, shot-gun pattern.	
Age larvae die	Die at four days when coiled in base of cell.	
Colour of larvae	Yellow-brown colour turning brown as they dry into loose scales. Scales can be removed.	
Air tubes or tracheae	Tracheae stand out as network of white threads.	
Position of scale	In base of cell or twisted up cell wall, may be around lip of cell.	In base of cell, also forms flattened half-moon scale round cell wall and especially lip of cell.
Smell	Pungent and sour.	No particularly offensive odour.
Other symptoms	Rest of brood normal.	Queens often become drone layers and queen cells are produced. Can be cured by requeening.

As you can see EFB and HMD share many of the same symptoms. In HMD more flattened scales lie around the cell wall and especially near the lip of the cell. The colony's queen eventually becomes a drone layer. In EFB there is often a very distinctive pungent smell given off by young larvae affected by the disease. This smell is like sour milk, though I think the best description is to say it's like wet nappies that should have been changed some hours (or days) before.

If you're in doubt about any sample please give me a call.

Denis Anderson is making some interesting discoveries about how HMD behaves. To continue this he needs live queens from hives showing symptoms of HMD. If you find any please send the queen and some escorts in a queen cage (with candy) to Dr D Anderson, DSIR, Entomology Division, Private Bag, Auckland.

* * * * *



AFB IN AUSTRALIA

Australian apicultural advisers are really concerned at increases in AFB incidence. One said recently that "current practices by some commercial beekeepers are creating a virtual American foulbrood time bomb."

The most serious practice is the careless use of antibiotics to control EFB (which is legal over there). It seems that many beekeepers are throwing drugs at disease symptoms without first checking carefully what disease is involved. Using antibiotics on AFB by mistake simply masks the symptoms while the *Bacillus larvae* spores are being spread.

Another common (and also illegal) practice is stacking boxes of empty combs in the open to control wax moth. Two recent AFB outbreaks in the south of NSW were recently traced to this habit.

A disturbing trend is for whole outfits to be infected rather than AFB being in isolated occurrences - 300 hives in one outbreak and 200 in another.

* * * * *



PRICES IN OZ

All prices have been changed to \$NZ.

- * Petrol was 60-66¢ per litre, diesel almost the same as here when road user charges are added and LPG was 51¢ per litre.
- * Wholesale honey prices in drums 90¢-\$1.40, mostly at the lower end of that range.
- * Export prices (f.o.b.) white honey \$1650 - \$1770 per tonne, extra light amber \$1550 - \$1670 and light amber \$1530.
- * Second hand car prices - you don't really want to know.
- * Mortgage interest rates around 13-15% when you can get them. Second mortgage 18-21% and OD about 18% I think.

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6.

MAF's QUARANTINE MESSAGE GOES HIGH-PROFILE

I was really pleased recently to see MAF's quarantine message reach new heights. When coming home from Aussie I saw a two-page, full colour spread in Air New Zealand's in-flight magazine - on the dangers of importing honey.

The advert was so impressive I've included it in this *Bulletin*. The original is in colour, and occupies a prime spread in the April/May issue of *Pacific Way* - the magazine carried on all domestic and international Air New Zealand flights.

MAF's agricultural quarantine service (AQS) is now very aware of the seriousness of bee disease imports. The effort they are putting in is largely a result of "industry planning" - that phrase you've been hearing so much of lately.

Your NBA executive, MAF's apiculture section and MAF's quarantine service have been working closely together over the last 18 months to devise better ways of preventing bee diseases coming into New Zealand. The results?

- more publicity at airports specifically on beekeeping.
- a colourful publicity brochure to give to people whose honey has been confiscated.
- a senior quarantine officer speaking to the Greymouth conference.
- a list of things that branches can do to help the quarantine campaign (has your branch done anything yet?).
- advertising in the Air New Zealand and Qantas in-flight magazines.

CAMPAIGN MAY HAVE YOU LAUGHING INTO QUARANTINE

That heading was used for an article in the "National Business Review", that gives high praise to MAF's new quarantine campaign.

Here are parts of it:-

"It was only a very small pot of honey for your gran. And the corn dolly was just a little something for the neighbour who fed the cat. You really did not see the point of going to all that bother of filling out the form. And then standing in line for ages. You just wanted to go home ..."

That is precisely the attitude that MAF is trying to overcome with its first television advertising campaign.

MAF is going to the small screen to promote the importance of quarantine requirements to the health of New Zealand's primary industries. Taking quarantine to the living rooms of New Zealand was the brainchild of MAF's corporate policy group on protection, a group comprising people from Advisory Services Division and the Agricultural Quarantine Service.

And as far as its advertising agency Saatchi and Saatchi Compton is concerned, MAF has shot the *Gliding On* image down in flames.

"You might expect a government department to be difficult to deal with, but it was a breeze", said account services director Ian McDougall. Saatchi found that MAF was good at providing information the agency needed and had a very good understanding of its consumer.

"It had a clear view of its customers, a good understanding of its role and how it's seen. You often find a client is quite introverted, that it's organisationally oriented rather than consumer oriented," McDougall said.

"We were surprised" said McDougall. "We all had preconceptions about government departments and we've all changed our view. Another government department has proved it's doing a good job."



McDougall puts it down to the new brooms in the Beehive.

"As a government department under this Labour administration MAF has had to become more accountable. It's the same with the Railways Corporation and the post office. They're more like free enterprise organisations. And they're employing very good people - especially in marketing. They'd be just as capable of working in private enterprise and their quality is starting to show through" he said.

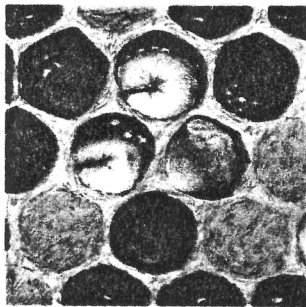
The case of that nearly spread disaster

Honey was Mrs Hilda Hislop's favourite food. She was so crazy about it the rumour went that she'd actually married her bee keeping husband Bill for his honey.

After 40 happy years of marriage Bill and Hilda were returning home from their once in a lifetime trip overseas.

They'd had a ball. Bill had clinched deals all over Europe to sell his prized queen bees. Hilda had religiously collected pots of honey.

She hadn't bothered to tell Bill about this. She would surprise him when they got



European Brood Disease initially infects the honey bee larvae.

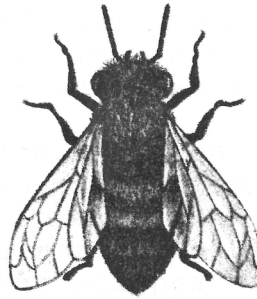
home. Anyway he'd probably just drone on and on about taking coals to Newcastle.

What had not occurred to her was that Bill would have been absolutely aghast.

You see Hilda had never taken any notice of his night-time mutterings about European Brood Disease. The bacteria that affects honey bee larvae and is carried in products such as honey, royal jelly and pollen extracts.

The disease that's common in most parts of the world . . . except New Zealand.

Hilda had no idea that she carried within her bags bacteria that could wipe their bees right out.



Honey bee's pollination of fruit trees and clover is worth millions of dollars to our economy.

Bacteria that could quickly spread through the beehives of New Zealand. A disease that would significantly reduce our annual honey output of up to 10,000 tonnes.

And would affect virtually all our other agricultural production.

Because, as we all know, when it comes to pollinating flowers bees are the best. They also "set" kiwi fruit, and apples and pears and peaches, so the fruit grows luscious and big.

Hilda of course should have known about all these things. The things everyone should know about, but don't.

It never occurred to her that the dear MAF man would worry about a little old lady and a few pots of honey. No way did she think of all those vital bees busily pollinating our clover. Clover that produces nitrogen so essential to grass crops.

New Zealand honey is exported overseas, yet to avoid the bringing in of diseases, we don't import any honey.



the honey pot through our kiwi fruit crops.

Nitrogen that, in fact, has been estimated to be worth over 3,000 million dollars annually.

Because if any of these things had occurred to her she would have ticked a very firm 'yes' to the question on the MAF form about importing food products.

Fortunately, in this case, Bill spotted his wife's booty the minute they got home.

Appalled by the implications of what could happen, he sent the honey straight off to the MAF people.

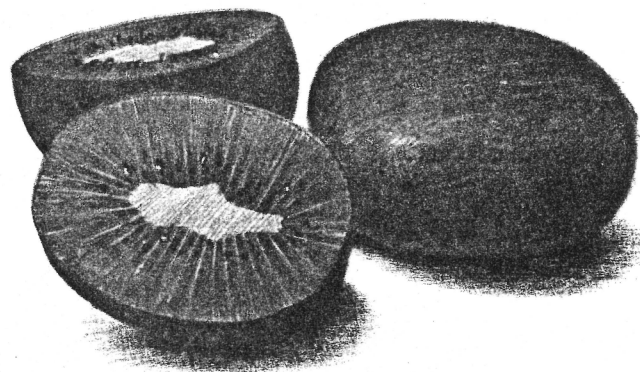
But what if Hilda hadn't married a beekeeper? What if she had enthusiastically eaten all her honey, or had given some of it away?

Likely as not the discarded pots would have been systematically scavenged by roaming bees.

Because no-one, not even Hilda, loves honey more than bees.

Those bees, now infected with European Brood Disease, would in turn infect their newly emerged larvae during feeding and cleaning.

The bees in that hive would be killed



An outbreak of European Brood Disease would jeopardise New Zealand's lucrative kiwifruit exports – worth over \$126,000,000 last year.

by the bacteria en masse. Then the infected hive would be raided by other bees who in turn would infect their own hives. Thousands of hives would have to be burnt to the ground.

And if the disease wasn't halted immediately, it would quickly spread throughout the country.

Right now our honey bees are healthier than any others in the world.

And like many of our vital agricultural industries we've an excellent record for low incidence of disease. It's vital for all of us that it stays that way.

So when you return from overseas, please read your declaration form carefully. And if you're in any way unsure about it, do declare it.



MAF

If you're not
sure about it



DECLARE IT.

SAATCHI MAF '03

10.

The campaign aims to alert the travelling public to the risks of importing plant and animal diseases. The television campaign starts in March and runs throughout April. It will be backed up by full-page colour advertisements in Qantas's and Air New Zealand's flight magazines.

A spokesman said MAF had chosen this new path because the usual publicity methods did not reach the target audience.

"We're trying to improve public awareness and attitude towards quarantine. And we're trying to reach a particular target, the travelling public. The usual avenues, such as press releases, don't reach that person very well."

"This is new ground for MAF. If it's considered successful we'll continue using this sort of campaign - at this stage focusing mainly on quarantine."

The advertising agency was keen to avoid the forest fire, death and destruction-type image:

"That's too horrifying. People don't relate to it. They don't see the connection between little me and the jar of honey in the suitcase. This is light but the serious message is there."

And the message has to last. "The ad has to last a long time in someone's head - from when they see it and leave the country to go on holiday, to when they return - before they actually have to do what the ad asks them to do."

So they have made it funny. "With an idea like quarantine you can play it straight, without any levity or humour and it might work. We decided to be a little more ambitious."

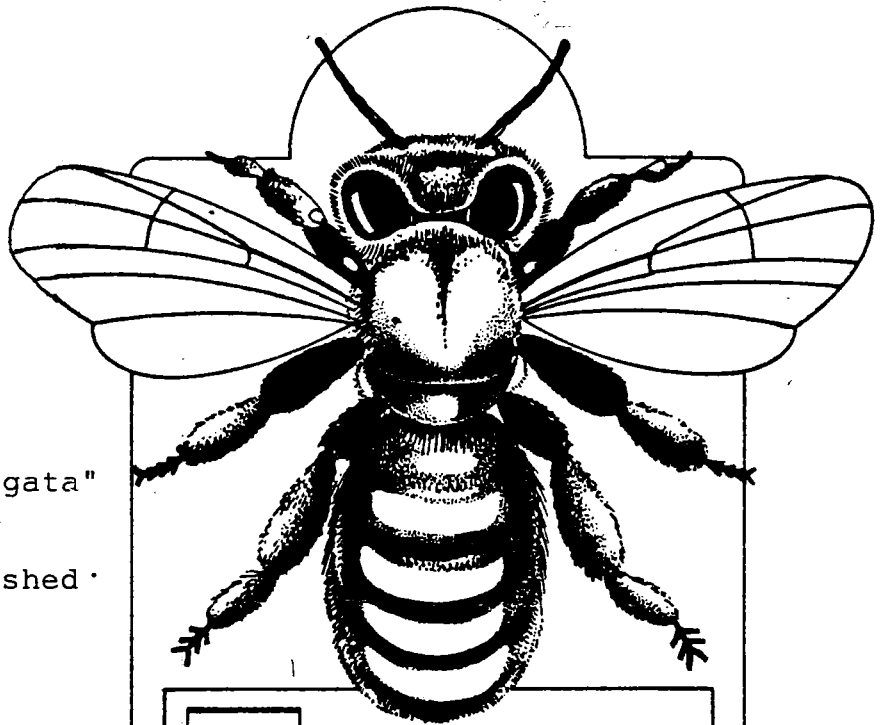
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Definition: a jersey is a garment worn by a child when its mother is cold.

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SNIPPETS FROM NBA EXECUTIVE

- * Massey and Victoria Universities and Lincoln College are undertaking some market research on honey for our industry.
- * Executive and the honey packers are trying to establish a market reporting scheme that would be made available to branches.
- * Promotional material is being retailed in the South Island by Jan Chisnall, "Maungata" RD Greta Valley. A full list of what's available was published in the autumn NZ Beekeeper.
- * A goodwill handout card has been prepared by MAF and the NBA executive to give to passengers who have had honey or bee products taken from them at the airports. Unfortunately my newsletter can't show the card in colour but we'll have examples at NBA meetings. Exec has ordered 3000 for a trial run.
- * MAF and Exec are meeting at Flock House for 19 to 21 May to update your industry plan. If you have any suggestions for objectives or action plans please give them to Gavin White.
- * Being on executive, and especially being President, is a rather thankless task and



Dear Traveller,
Honey bee
products and
used bee keeping
equipment from
outside New
Zealand are
potential
carriers of bee
diseases. We
must restrict
their entry into
New Zealand to
protect our bee
keeping industry.
Thank you for
your help.

MAF

AQS

NBA

12.

one involving a lot of sacrifice. Ian Berry is not standing for President again. Please give some thought to your industry and see if you can assist by standing for exec or taking an active role at branch levels.

- * Conference is in the Sulphur City this year - 23-24 July with a MAF/NBA seminar or workshop on the 22nd. The venue will be the Travel Lodge at Rotorua.

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Fuch's warning: *If you actually look like your passport photo, you aren't well enough to travel.*

Sir Vivian Fuchs

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VISITORS SAY THANK YOU

Elbert & Barbara Jaycox, who visited the region in March, have written to say how much they enjoyed their short stay. Thanks to the beekeepers who hosted visits, and to the Nelson branch for arranging the meeting at which Dr Jaycox spoke.

Elbert Jaycox has been a commercial beekeeper, apiary inspector and researcher, so he knows the industry from most angles. He's currently on the staff at New Mexico State University, and continues to write the very down-to-earth newsletters for which he's well known.

Some of his recent newsletter articles have been brought together in a book : *Beekeeping Tips and Topics*. The chapters cover a big range of subjects on bees, beekeeping and related topics, and draw on Dr Jaycox's wide reading of overseas journals.

The next article is a short excerpt from the book. It's 155 pages in all, and costs \$US7.95 (plus \$US1.20 p&p). Contact me if you'd like to order a copy, or write to the author at 5775 Jornada Road North, Las Cruces, New Mexico 88001, USA.

REACTIONS BETWEEN HONEY AND ITS CONTAINER

Honey has 3 characteristics that are important in terms of handling and storage: (1) A tendency to take up moisture from the air, (2) The ease with which it picks up strange odours, and (3) The ability, because of its acid content, to react with metals such as tin and zinc.

U. Siegenthaler of the Federal Beekeeping Laboratory in Liebefeld, Switzerland, studied the abilities of different retail honey containers to protect honey from absorbing moisture when stored in damp locations, such as cellars. He looked at several plastic containers with push-on lids, a metal container with a push-on lid, a glass container with a screw-on lid, and a waxed carton with a push-on, plastic lid.

Siegenthaler found that all the containers except the waxed one kept the honey from losing or absorbing moisture from the air at relative humidities of 35, 66, and 92 percent. The waxed container was totally unacceptable at the highest humidity. Honey in the waxed cartons gained 2.5% in moisture content per month when stored at 92% humidity. In some cases, the honey leaked out of the containers because of its greater volume. At the lowest relative humidity, the honey lost as much as 0.3% of its weight per month in the waxed cartons. After 3 months of storage, the net-weight statement on the label was incorrect.

Herr Siegenthaler was also interested in the effect of honey on tinplated containers. Using a new and accurate method of measuring the tin content in honey, he found that honey can dissolve a fair quantity of tin over storage periods of 6 months to a year. Honeydew has a higher acid content than flower honey, and reacts more strongly with the tin coating. Also, the greater the surface of the storage container in relation to the quantity of honey stored, the higher the amount of tin that can be detected in the honey. Siegenthaler found as much as 2.8 milligrams of tin per kilogram of honey after a year's storage. There was more tin (2.8 mg/kg) in honey near the wall of the container than at the center (2.2 mg/kg).

The tin content determined by Siegenthaler is not dangerous to human health. It may, however, contribute a metallic taste, which we do not want in our honey.

These studies show that waxed cartons may be unsuitable as honey containers, including those used for creamed honey, because they do not prevent losses or gains in moisture by the packaged honey. The studies also show that the honey residue must be removed from storage tanks, cans, and metal utensils to keep them from being damaged by the acids in the honey. It is false economy to use 5-gallon cans more than once because they rust so easily after having being attacked by the honey the first time.

14.

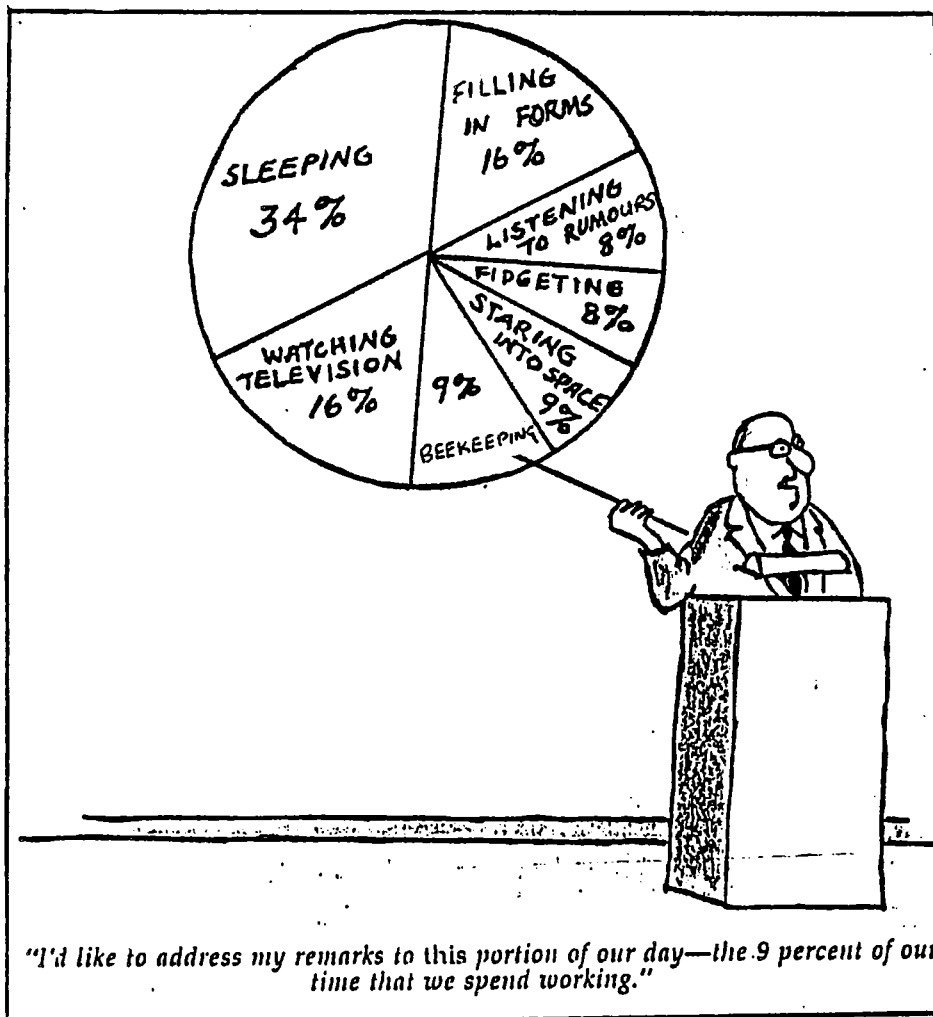
The experiments were reported in the April, 1978, and June, 1979, issue of *Schweizerische Bienen-Zeitung*.

- From *Beekeeping tips and topics*, by Eibert Jaycox (\$US7.95 plus \$US1.20 p&p).

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To estimate the time it takes to do a task: estimate the time you think it should take, multiply by two, and change the unit of measure to the next highest unit. Thus we allocate two days for a one hour task.

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IMPROVED DISEASE DIAGNOSTIC SERVICE

MAF will soon be providing a centralised diagnostic service for honey bee pests and diseases. Testing export samples for *Nosema* and mites has already begun at MAF's plant protection centre in Auckland. This is the work that was formerly done at Levin.

From 1 September a general diagnostic service will be offered, to cover all other pests and diseases. That's the good news, but the bad news is that this work will be charged for.

I'll let you know how to make use of this service when full details are worked out.

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EAT THAT ROYAL JELLY

Maybe it's true. Perhaps royal jelly can claim to promote youthfulness and virility after all. Two researchers from the New York Medical College report finding the male sex hormone testosterone in royal jelly - the first evidence of a vertebrate steroidhormone being found in the honey bee.

It's not all good news though, because you'd have to eat a fair quantity of royal jelly to get significant quantities of the hormone. It's present at a concentration of 12 nanograms per gram - that's 0.0000012%!

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"When a habit begins to cost money it's called a hobby"

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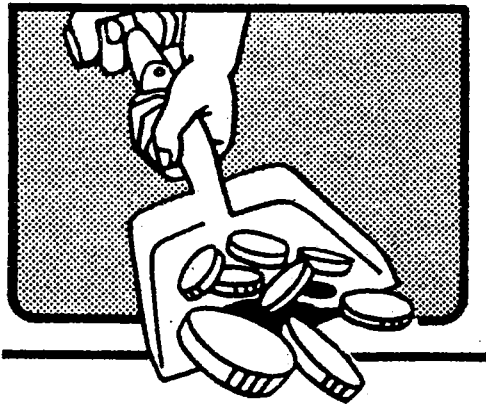


GST REGISTRATION - 31 AUGUST

The deadline for GST registration is approaching fast. I wrote a fairly detailed article on this for the November 1985 issue, and since then you've had the IRD people talk at the Rotoiti weekend.

You should all have these free booklets from the IRD:

- Farmers and GST
- Understanding GST : a guide to the legislation
- Working with GST
- GST : a fairer deal

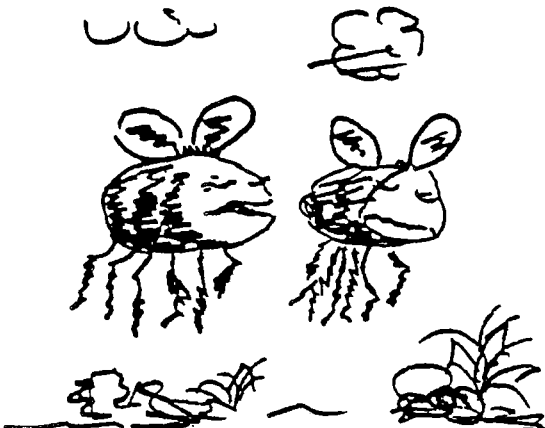


Think carefully about the GST payment period that you select, and discuss it with your accountant first. Long (eg, six month) periods are best for:

- those who will be paying the IRD at the end of each period.
- those for whom two-monthly reports are too complex.

Six-month periods are bad for those who:

- are regularly getting refunds (eg, exporters)
- find it hard to find enough cash to pay the IRD after six months, because by that time the money is well-absorbed into the business.



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"Actually, I'm no longer a worker. I'm a pollination consultant."

KIWIFRUIT POLLINATION

Kiwifruit pollination statistics for 1985 are as follows:

District	Number of hives
Northland	3,510
Auckland	3,728
Tauranga	30,999
Gisborne	3,620
Hamilton	1,053
Southern North Island	3,355
Nelson	4,300
TOTAL	50,565

* * * * *

"To err is human - to find someone else to blame is genius"

* * * * *

CANADIANS RAISE THE DRAWBRIDGE

In March the Canadians closed the US/Canadian border to bee movements, for eastern Canada only. The order signed by the federal minister of agriculture prevents the importation of US bees to eastern Canada, that is east of the Ontario/Manitoba border.

18.

This had been done at the request of the beekeeping industries in Ontario, Quebec and the Maritimes, which predominantly winter their bees and are prepared to become completely self-sufficient.

It is likely that packages and queens from New Zealand will be sold in eastern Canada. However, it is not yet clear whether Canadian produced queens in western Canada will be allowed to enter into eastern Canada, since packages and queens will be allowed entry from the U.S.A. to western Canada for 1986 under certification from the U.S.D.A.

- Saskatchewan Beelines, April 1986.

Other reports for Canada indicate more concern about the honey bee tracheal mite ("Acarine"). The feeling is that present US sampling techniques would not detect low levels of mite infestation.



"Hey! I can feel it — we're turning around."

Package bee imports to Canada from the US declined 22% in one year - from 318 000 in 1984 to 249 000 in 1985. A further drop in 1986 is expected, with more wintering of colonies.

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TRADE TABLE

- * Pollination hives with sites and controls for sale. Chris Budgen still has about 110-120 of these - contact him on (0524) 88 453.
- * Creosote is back in a product called Preservit. It's being marketed in five colourfast colours by Carr Pountney & Co Ltd, P O Box 232, Auckland 1, phone (09) 30 276 or 390 276. Dalgetys also stock it. However, it's not advisable to use it on bee boxes as the smell can taint honey. If using creosote for floor boards leave them to weather for three to six weeks. Preservit comes in 10 litre tins only at \$61.95 per tin.

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HOW ABOUT YOU?

Here are some interesting observations from a farm accountant that have been changed a little to bring them closer to home.

My clients who keep bees profitably all have the following characteristics:-

- a) Wife is invariably close to the action although not necessarily physically involved.
- b) Doing simple things well.
- c) Has very good grip of own financial affairs.
- d) Tends to look forward, at least as much as looks back.
- e) Has a high production per hive, whether from honey or pollination or both.
- f) Attends field days, seminars and the like and is often prepared to listen to a new idea or approach. Often is only having his or her own actions confirmed from attending these types of events but keeps an open mind.



20.

- g) Is the sort of individual to whom hard work and planning are more important than luck.
- h) Tends to have a positive point of view on decision-making and in general attitude.
- i) Is usually a good communicator with advisers, and would not move on any major capital decision without first discussing it.
- j) Appreciates good advice even though he's not always moving in the advice direction.
- k) Invariably has as few vehicles as possible but what vehicles he does have are in very good order.
- l) Takes a very active interest in his annual financial statements regardless of whether the figures are good or bad.
- m) Doesn't like overdrafts and debt even though he can cope with it much better than his neighbour.
- n) Is usually not content to remain in status quo situation; is always trying to improve on some area of his beekeeping operation.
- o) Usually doesn't realise, appreciate, or acknowledge that he is in the top 10% of farmers for profitability.

From the "Small Farmer" magazine, adapted by Cliff van Eaton.

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THE NOSE KNOWS

Sometimes some of the old research turns out to be the most interesting. I recently came across some work by Forel, von Frisch, and their students which answered a seemingly simple question : How do bees smell? The antennae were thought to be the noses of bees, but this was not confirmed until the early 1900s, when von Frisch showed that workers could be trained to visit dishes which contained odours of natural flowers.

When the last eight segments of the antennae were surgically removed, this sense of smell was eliminated. Subsequent experiments showed that the olfactory activity of bees is approximately equal to man, although workers are more sensitive to odours of wax, flowers and other biologically significant smells.

However, bees have one aspect of their sense of smell which is even more sensitive; the ability to localize where an odour came from. Bees can use their paired antennae to accurately detect the location of an odour by comparing the intensity of smells perceived by each antenna. This sense was demonstrated by experiments in which food rewards were used to train worker bees to odours in a Y-shaped tube. When the antennae of trained bees were glued in a crossed position, the workers would choose the wrong direction at the fork, indicating that the antennae were providing information concerning the location of the odour's source.



The antennae are also involved in numerous other functions, such as perceiving temperature, carbon dioxide, and humidity. The sense organs on the antennae which are involved in these functions are still not known, but differences of 1% in carbon dioxide concentration and 1°C temperature can easily be detected by worker antennae. Such acute sensitivity is important for maintaining the brood nest within the precise and narrow range optimal for brood rearing. Without their antennal "noses", bees would have little idea about what goes on around them!

Source: Dr Mark Winston, British Columbia Honey Producers' Newsletter.

READ THIS MAGAZINE!

In this last issue I gave a warning about toxic honey. I reminded beekeepers with hives in the Sounds or in Golden Bay to take precautions over the danger period.

Despite the warning, there was a serious case of honey poisoning this autumn. The person concerned ate comb honey that was harvested in March from a risk area.

You should take the following precautions in risk areas:

- Register all apiaries with MAF.
- Take all surplus honey off the hives before 31 December each year.
- Don't put supers back on the hive for a winter honey flow until after 1 May.
- When taking surplus honey off in December, take most of the honey out of the brood nest too. Leave no more than three frames, so that the honey gathered during the danger period will be stored in the brood nest. In some areas, and in some years, hives may need feeding to survive the winter if there is no nectar flow after December.
 - Never lift frames up from the brood boxes to the honey supers.
 - Never eat honey taken from feral ("wild") bee colonies in the Marlborough Sounds.
- Don't remove and store surplus feed honey that is produced after 31 December. Several poisonings have resulted from unneeded feed honey being extracted later and eaten.



VINE HOPPER DISTRIBUTION

How do you know if you're in a risk area? The vine hopper is common throughout the Marlborough Sounds and in Golden Bay. In all areas where tutu and the vine hopper are abundant, beekeepers should take the precautions listed to minimise the possibility of toxic honey being stored in the hive.

Bees will forage up to 10 km from their hives, and toxic honeydew may be present in an area even if it is not obvious in the immediate vicinity of an apiary.

Tutu plants should be monitored for the presence of vine hoppers. Honeydew can be seen clearly on the leaves and stems of plants as a wet, sticky area, and where vine hopper numbers are high a black sooty mould can be found growing on the honeydew. Wasps also gather the honeydew, so their activity around the tutu plants can indicate a potential hazard.

MAF can declare a "restricted area" where toxic honey is or may be produced. We would prefer to avoid this if possible, and I know that you as beekeepers would find it easier that way too. But we need your cooperation to keep things the way they are.

Get hold of
Aglink FPP 827.
Read, inwardly
digest, and
take action.



TUTU

* * * * *

"If he said what he thought he'd be speechless."

* * * * *

24.

This is your last copy of *The Beekeepers' Bulletin* for this subscription year. If you want to keep receiving it, you will need to send away the subscription form and a cheque by 20 th July. Do it now, so you don't forget!

There are a couple of changes in this subscription form from last year's : a price increase and the inclusion of GST.

We started to charge for this magazine a year ago, to recover some of its publication costs. The subscription didn't cover all the costs, and now MAF is being asked to make a lot more expenditure cuts.

I'm sure you'll still get enough benefits and ideas from the "Bulletin" to more than recover your subscription fee. For my part, I'll ensure that the next four issues:

- contain news and practical beekeeping information relevant to this region,
- have "meaty" technical articles in them,
- provide you with a very inexpensive advisory service,
- come in an even more attractive and readable format.

Remember I still want your ideas for the magazine. Let me know what sort of articles you want, and anything new that can be included.

GST is with us. As two issues in this subscription year will come after 10 th October, 5% GST is added to the annual subscription.

That's all from me for now. Have a relaxing winter.

Andrew

(Andrew Matheson)

PS Don't forget to send away your subscription form in time!

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