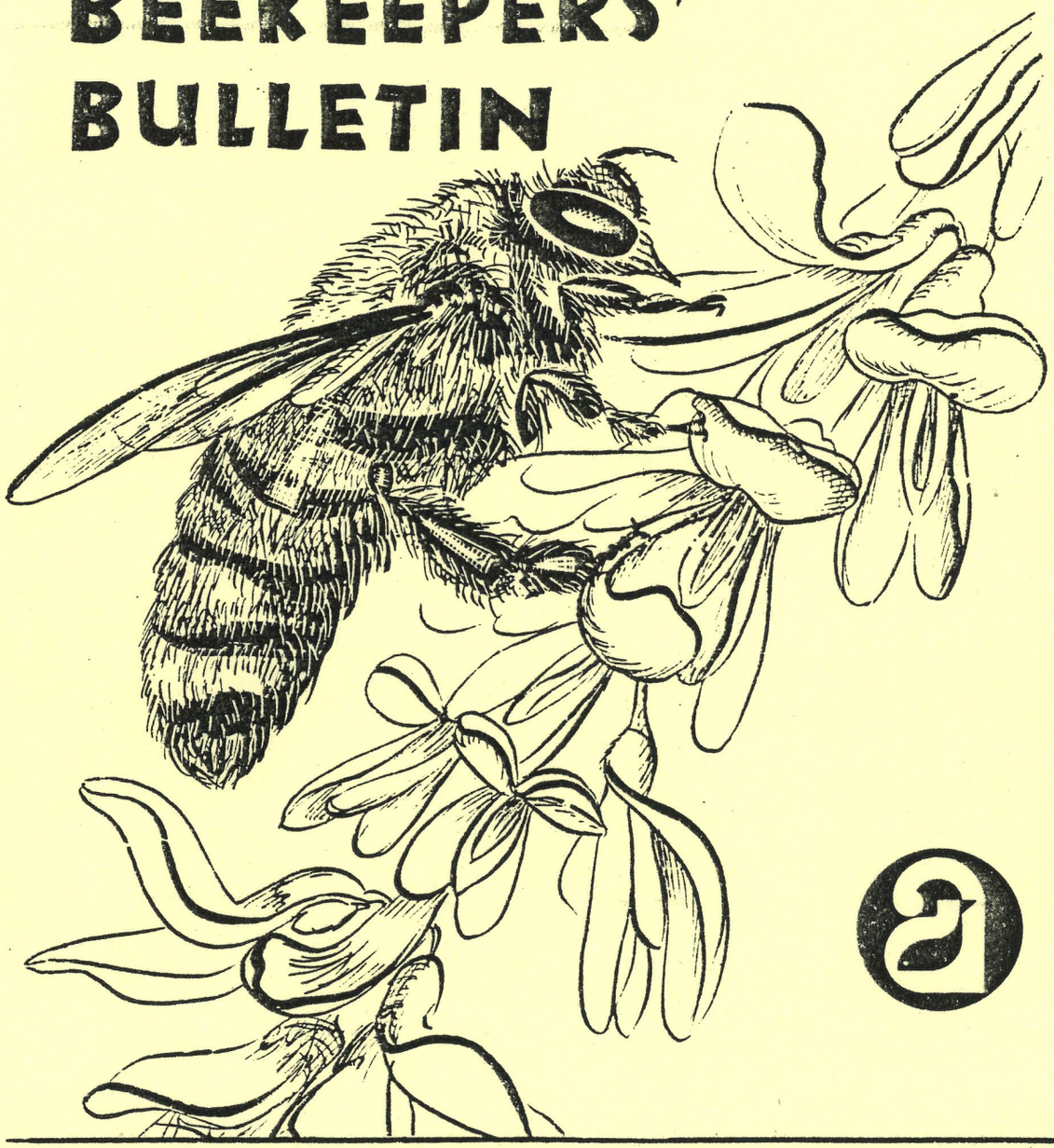
THE BEEKEEPERS' BULLETIN



A.G. Matheson
Apicultural Advisory Officer
Ministry of Agriculture and Fisheries
Private Bag
NELSON

Telephone: 81 069 (Work)

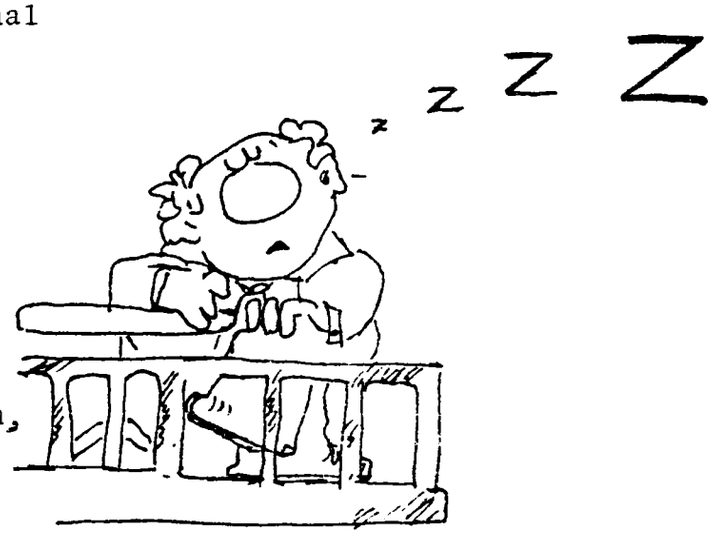
Volume 5 number 1

August 1983

I survived my recent time away, and apart from having my dreadlocks cut off by the immigration people at Auckland airport, it was a very enjoyable experience too.

Several of the NBA branches and beekeeping associations in the region have asked me to speak on my trip to Jamaica - I'm quite happy to do this, and we can arrange a date for the next time I'm in your area. There'll also be an article in next month's "N.Z. Beekeeper" on some of my impressions.

It was a rude shock to my personal thermostat to go straight from southern California (where, according to the song, it never rains) to a week of 8° frosts, and then into the July floods.



The floods had quite serious effects on parts of Nelson and Marlborough, but surprisingly there wasn't much rain. Totals for the weekend at Meteorological Service Network stations were 346 mm for Bainham, 240 mm at Takaka, 288 mm at the Cobb, 116 mm at Nelson and 230 mm at Wairau Valley.

Most non-standard rain gauges in the hills were either washed away or had overflowed, but some read up to 700 mm or so.

What made the floods so severe was the widespread nature of the storm, and the amount of snow that was melted by the relatively warm rain.

It looks like about 120 hives were washed away in Nelson/ Golden Bay, and about the same in Marlborough. Many others were also affected by ponding, and though much of the gear can be salvaged there'll be little production off many this year.

I think that a couple of dry years up this way have made us quite complacent about where we put our yards, and if nothing else the flood was a good warning to be careful.

Another thing to brush up on is your cover by the Earthquake and War Damage Commission. To get any reimbursement for loss you need:

- fire insurance on the affected items,
- and to have suffered loss by flood or slip of an extraordinary and unforeseen nature.

The area does not have to have been declared a disaster area for you to qualify. But please, please make sure that the basic fire cover on your hives does insure them "anywhere in New Zealand", and not just at the "situation of risk" (i.e. your address). Otherwise you'll miss out.

Claims must be made within 30 days to:

Secretary
Earthquake and War Damage Commission
P O Box 5038
Lambton Quay
Wellington

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IS OUR INDUSTRY GROWING OR NOT?

There's a lot of talk these days of "growth industries", and how the government (e.g. MAF) must put its resources where there is, or is likely to be, growth. In agriculture this applies especially to export areas.

We all know that there are "lies, damned lies, and statistics" (and economics is somewhere beneath that again), but it is still interesting to look at patterns in beekeeping over the past few years.

The trend in registration figures should be clear by now - the number of hives (stock units) just keeps on growing, and this year the national figure is up another 6%. Read elsewhere in this issue for a more detailed look at the Nelson district figures.

But people still think that beekeeping is a stagnant industry. Perhaps they think that bees only produce honey, so let's look at honey production figures.

People with a farming background probably don't realise how much honey production is at the mercy of weather, and to what extent seasons can vary. So perhaps they look at a season like the last one and think beekeeping is on the way down.

Last year certainly was the worst honey production year for decades. But prior to that, taking 5 year averages to try and even out fluctuations, it is clear that beekeeping is on the increase.

Between 1975 and 1982, <u>average</u> honey production in New Zealand increased by 21%.

That of course doesn't take into account the greater value of the honey because more comb honey is being produced, or the increased production of pollen, or the fact that more hives are being used for pollination and so don't produce as much (or even any) honey. Nor does it recognise the value of crops pollinated by managed honey bees, nor the amount of nitrogen fixed by bee-pollinated clover.

I wonder how many other farming industries have increased their output by 21% in less than a decade?

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CONFERENCE AND SEMINAR

The annual NBA conference went off really well this year, thanks to the efforts of a local organising committee headed by Gavin White. With the numbers back up again it seems that the trend of declining attendance has been reversed, at least for the time being.

Unfortunately the NBA executive has still not grappled with the issue of the conference format. The same old programme is used year after year, simply because it worked before. I would have thought that the fall-off in numbers at the previous few conferences might have provoked some soul-searching.

I personally like the format used at the North American conferences, where the tedium of remits and reports is lightened by interspersing provacative addresses and technical subjects throughout the programme.

The MAF organised a one day seminar this year for the day preceding conference. I'm sure that after some of the comments made at it, we in MAF will have to grapple with the issue of whether MAF should run these unless there is a clear need and a request from the industry to do so.

However, this year 140 people turned up to hear about the latest developments in pollination research, pollen production and processing, and the DSIR's biological control programmes. The papers will be published together in a conference proceedings, and I'll let you know when these are available.

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QUOTABLE QUOTES FROM CONFERENCE

"I've never met a problem that can't be solved." (National M.P.)

"I think the whole theory of what you're trying to do is very practical."

And in a debate on whether to brand hives with names, numbers or initials, came this beauty from Fred Bartrum:

"My initials are FB and I've branded all my hives with them. I don't think anyone will want to steal them."

MORE STATISTICS

The 31 May 1983 registration figures for Nelson show:

575 beekeepers 2694 apiaries 20 046 hives

This is yet another increase (14% more stock units than last year), and brings the increase over the last 5 years to 64% more hives.

Hive numbers in New Zealand as a whole went up by 28% in the same period.

NEW ZEALAND HONEY EXPORTS : YEAR ENDING MAY 1982

Packaging	Quantity (kg)	Average value ($NZ/kg)
Bulk	206 585	$1.65
Retail packs	205 400	$2.23
Comb	346 287	$4.46
Honeydew	190 881	$1.46

Total value $NZ 2 622 033

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PACKING LIQUID HONEY

In my last newsletter (vol 4 no 3) I printed an article by Murray Reid on frosting of honey. For this issue I have some notes on liquid honey from the same source.

Well, what do we know about honey? We know that honey consists mainly of two sugars; glucose, which granulates very readily, and fructose, which stays in solution. Most of our honeys tend to granulate fairly readily, but some with a higher percentage of fructose tend to stay liquid. These honeys include nodding thistle, viper's bugloss, and beech honeydew. Manuka and heather honeys are also slow to granulate.

The best way to retard honey from granulating is to select a slow-granulating source such as thistle or borage. The lighter the colour the better, as even a light amber honey in glass can look quite dark. This usually rules out manuka.

"Hmmm", I hear you say. "No borage and no pure thistle either; What now?" I guess you've just got to use what you have, but always select your lightest honey.

Now comes the part that the purists object to. You have to adjust the moisture content to at least 18% and up to 19.5%. Anything over 19.5% and your honey is too watery. To do this properly you must have a refractometer (which you can buy from Alliance Bee Supplies), and you should add hot water to hot honey. I have a table telling you how much water to add to a given honey to bring it to the desired level. Rather than publish these figures perhaps you could contact me if you require such a table.

OK, you've selected a light coloured honey, you've adjusted the moisture, now what? You could bottle your honey just like that, but don't be surprised if it starts fermenting. Any honey over 18% moisture is likely to ferment, and to stop this you will need to heat the honey to 73-75°C for several minutes. This will require a heat exchanger, as any prolonged heating will darken your honey and may burn it.

Plate heat exchangers are very good for this, as you can use one half of the plates to heat the honey and the other half to cool it to around 50-54°C. At this temperature the honey should be bottled.

Liquid honey is bottled hot into clean jars to dissolve any glucose crystals in the jars. These will act as 'seed', as will dust or small fragments of broken glass. In other countries the jars are usually cleaned with an air blast before bottling.

After filling, the cartons of jars need to be loosely stacked or put in a cool room to bring the temperature down and avoid stack heat.

In summary, the process goes like this; select your lightest coloured honey, strain with a very fine strainer, adjust the moisture (by adding water or blending), pasteurize at 73-75°C and cool to 50-54°C, bottle in clean bottles and continue cooling while avoiding stack heat.

You could expect 3-6 months shelf life if you did all these things.

To get 9-12 months you really need to filter honey. This involves all the above steps but it also involves adding a filter aid to the honey. All the pollen, dust, wax specks etc stick onto the filter material and are removed from the honey by pumping through a filter press.

The resulting product really sparkles and looks great on the shelf. Unfortunately it also tastes rather bland and won't meet EEC requirements because you've removed the pollen.

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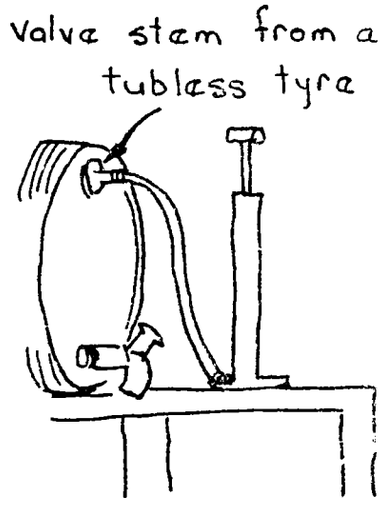
MORE ON LIQUID HONEY

From the May 1982 N.Z. Farmer, via Murray's newsletter.
Air pressure was being used to pump oil out of a drum but the idea should work equally well for liquid honey (door sales) or even with sugar syrup drums.



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POLLINATION WORKSHOP

The Bay of Plenty Community College is organising a two-day seminar for beekeepers on pollination. Needless to say, emphasis will be on kiwifruit pollination.

Dates: 7-8 September 1983

Further information:

Beekeeping Tutor.
Bay of Plenty Community College
Private Bag
R D 3 Tauranga

Phone: 440 920

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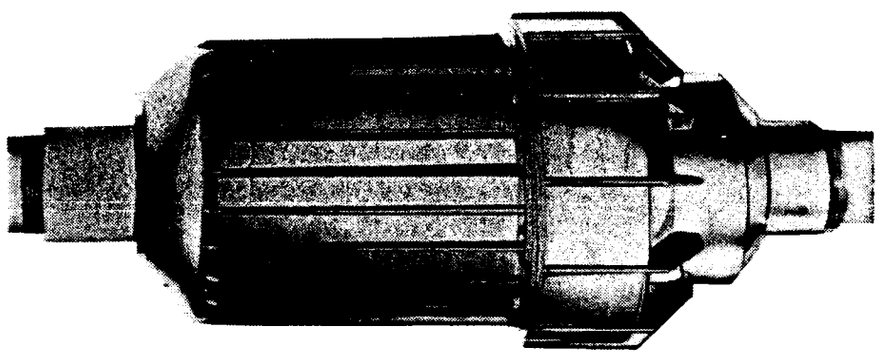
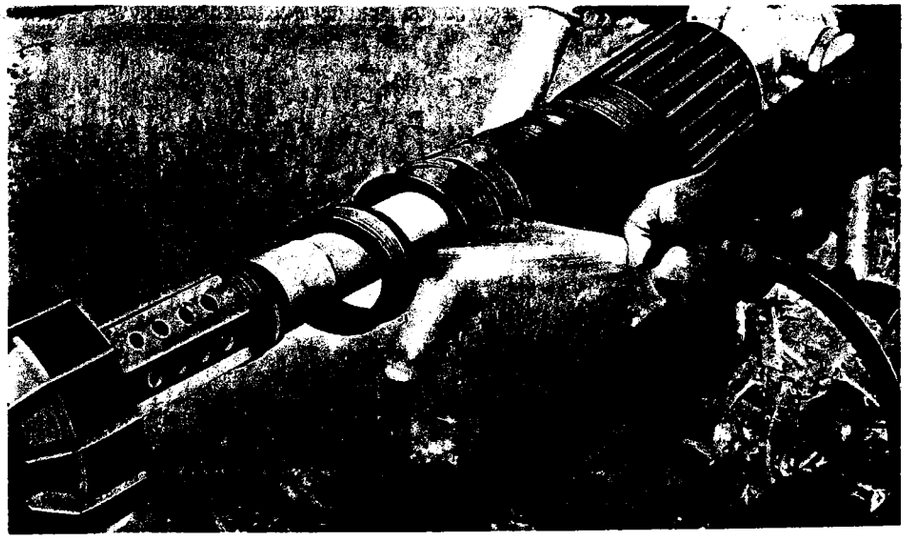
INEXPENSIVE AND EASILY-CLEANED HONEY FILTER

Anyone interested in a stainless steel in-line strainer for their honey is probably put off by the cost. Now a cheaper alternative is being used by beekeepers in this country, and while equally effective it is only about a quarter the cost.

The strainer is actually an Israeli water filter, made by Arkal. It consists of a series of plastic rings which, when packed together, act as a filter to the honey as it is forced through.



Cleaning is made simple as the filter cover can be removed, which exposes the rings and allows them to be separated and washed down with a hose. They do not need to be removed from the filter for cleaning.



The filter is distributed in New Zealand by

Dominion Construction Co Ltd
P O Box 11 077
Wellington

It is stocked by all branches of the N.Z. Fruitgrowers Federation.

The most popular model seems to be the 2" model 4900 with blue or yellow rings (equivalent to 40 mesh and 80 mesh respectively). Price is $274.

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ATTENTION

MORE DETAILS, PLEASE

Very soon now the clerks will be sending out your annual disease inspection statements. You know that things are much easier for you now, with a typed list that you just have to update. But please, please, make sure that all the information on it is accurate.

- check for spelling mistakes in names and addresses
- make sure that you've noted any changes in farm ownership

- each entry should contain enough information for a stranger to be able to find the apiary. You have enough room for three lines of type, so instead of

  J Bloggs
  Mangateparu

  why not put in

  J Bloggs
  Piako Rd
  Mangateparu

It certainly saves a lot of time when looking for the yard. And don't relax if you're sure that I know where the yard is - it could well be a part time inspector that's wasting his time out there, or in an exotic disease outbreak it could be someone who doesn't even know where Greymouth is, let alone Mangateparu!

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BEWARE THE YELLOW PERIL

A small article in the Daily Telegraph (yes, the Daily Telegraph) gives new meaning to the phrase "yellow peril":

Daily Telegraph 2/1/83

YELLOW RAIN

'MADE BY BEES'

By Our New York Staff

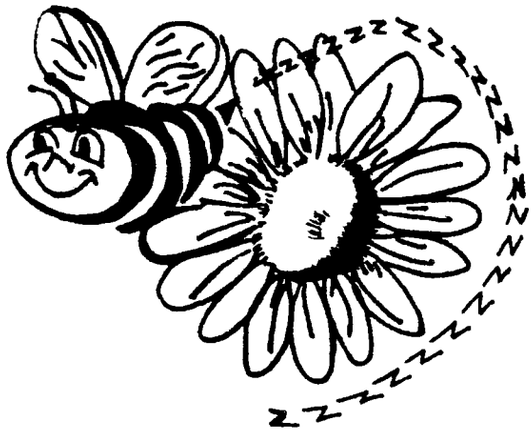
The "yellow rain" said by the United States Government to be spread in South-East Asia by Communists using chemical warfare might be no more than bees' excrement, five scientists told the American Association for the Advancement of Science

But Dr Thomas Seeley, a Yale expert on Asian bees, stated: "We are not saying that chemical warfare is not going on"; and a State Department official said he was sceptical of the theory since refugees had reported deaths and illnesses connected with yellow rain.

WATCH OUT FOR WILLOWS

Some of the unsung heroes of New Zealand beekeeping are the team at the Ministry of Works National Plant Materials Centre, at Aokautere near Palmerston North. Headed by scientist Mr Chris van Kraayenoord, this group has been studying over 150 willow clones for several years, recording the time of flowering and other features.

They have a list of willows which will give you a continuous flowering from mid July to late November. This list was printed in the N.Z. Tree Crops Association journal in 1979, and I have copies if anyone is interested.



Now from Tashkent in Russia comes a new willow that extends that range even further. It's Salix triandara "Semper florens" - the name means "always flowering" - and it flowers first in October, then later from December until early April.

It could be just what the doctor ordered; helping with spring build up and then providing a nectar source for when all the pastures have burnt off.

The new willow was released from quarantine in 1981 and since then has been with Mr van Kraayenoord for further evaluation and propagation. It is now available for purchase. Cuttings (25 cm long) are available in bundles of 25. Price is $30 per 100 cuttings, postage and packaging included. Orders to:

Scientist in Charge
National Plant Materials Centre
Aokautere Science Centre
Ministry of Works and Development
Private Bag
Palmerston North

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MARKETS FOR BEE PRODUCTS

Stephen Mahon of Ceracell Foundation Ltd is wanting to set up collective exporting schemes for pollen, propolis and royal jelly. These would work in the same way as the present cut comb arrangements, where the produce of several producers (large or small) is exported as one lot.

For further information contact Stephen at

Ceracell Foundation Ltd
P O Box 204
Warkworth
Northland Phone Warkworth 7032

RUNNY NOSES BROUGHT TO A HALT

Relief for runny noses is in sight. Runny noses, known as watery rhinorrhoea, is a condition commonly linked with rhinitis, a term covering all irritations affecting sensitive noses. It occurs in complaints ranging from hay fever to a constantly blocked nose and is triggered by factors such as cold air, exercise, cooking fumes, smoke, red wine and almost any airborne irritant.

Treatment in the form of Atroven nasal aerosol spray has been developed by Boehringer Ingelheim and is now available on prescription in New Zealand.

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BEE POISONING ANALYSIS

MAF's Research Division carries out a pesticide analysis service in cases of serious bee mortality. The main things for you to remember about this are:

- there is no point in carrying out a costly analysis just to satisfy your curiosity about a minor bee poisoning; the problem must be significant to make the analysis worthwhile.

- it is important that you can narrow down the killer to two or maybe three possibilities, as it's almost impossible to handle a request like "please find out what killed my bees".

- accurate results can only be achieved if the samples are received quickly and in good condition.

This last point is especially important, so:

1. Collect a sample of dead or dying bees as soon as possible after you discover bee deaths.

2. For analysis purposes the sample need not exceed fifty bees.

3. Do <u>not</u> freeze or refrigerate the sample.

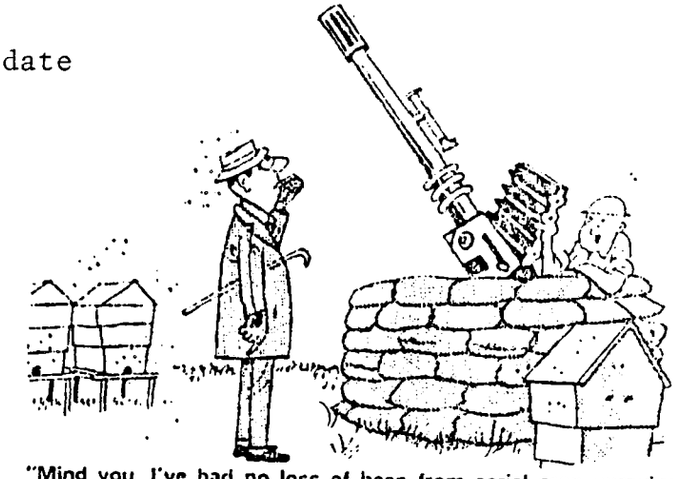
4. Instead, wrap the sample in tissue paper or place it in a ventilated container for shipment. The sample should not be sealed in plastic or glass (particularly if the sample is wet) as decomposition is very rapid under these circumstances.

5. In preparation for mailing, wrap the sample to avoid it being crushed. A stout cardboard box or hollowed styrofoam should work well.

6. Include your name, address, date of mortality (if known), and suspected pesticides.

7. Contact me immediately or, in my absence, a Field Officer at the Nelson office.

8. If that is not possible, send the sample by Jet-X or air mail to



"Mind you, I've had no loss of bees from aerial crop spraying since."

Mr D A White or Mr M H Clear
Technical Officer
Research Division
Wallaceville Animal Research Centre
Private Bag
Upper Hutt

but remember to let me know as soon as possible!

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PESTICIDES ACT

While on the subject of pesticides, it's worth reminding you that the Pesticides Act 1979 and Pesticides Regulations 1983 came into force in March of this year. The part of the Apiaries Act that controlled some chemical usage (section 35) has been repealled, and so enforcement of the laws preventing bee poisoning has passed from apicultural officers to Field Officers.

The new laws state that any label directions must be obeyed, and these label directions vary with the toxicity of the product. They range from

"TOXIC TO BEES. Do not allow spray to contact plants in flower if they are attractive to bees"

down to

"TOXIC TO BEES. May be applied to plants in flower if they are attractive to bees, only in the evening when bees are not working."

The only problem is that manufacturers don't need to put the labels on until another piece of legislation is passed, this time by the Health Department. Indications are that this will happen sometime this month, but then chemical firms will have 12 months' grace before the label requirement is fully in force.

So for this season we are in a rather uncertain situation, which won't really come clear until next year.

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MAKING HONEY WITHOUT BEES

The problem of artificial and adulterated honeys is going to get worse, rather than better, with the French discovery of a new honey-making process.

Sucrose (cane sugar) can be converted to "honey" by using an acid process, but the resulting product is discoloured and needs further refining. The new process produces honey that doesn't need further processing.

Solid sugar is mixed with invertase (the enzyme that honey bees use to ripen nectar) and then passed down a tall column filled with small particles. These particles provide a large surface area for the reaction to take place.

Once the "honey" has been approved by the French Government for human consumption, it is proposed to build a large plant which will supply the several thousand tonnes needed for the whole of the French market.

(New Scientist 94 (1307) : 575, May 1982)

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Sign seen in an Australian lion safari park.

Do not open your car windows
Do not get out of your vehicles
Entrance fee $5 per carload
Poms on bicycles admitted free of charge.

BEEKEEPING COURSES

* "Expanding into commercial beekeeping" is booked out (again), and will be held in the first week of September.

* Beginners' courses are being held at Nelson, Massey University, and Telford Farm Training Institute this spring.

- Nelson Polytechnic:

  Saturday 15 & Sunday 16 October, 9 am - 5 pm. Enrol at the Polytech office.

- Massey University:

  usually a three-day course in November (16-18th). Contact:

  Mr E Roberts
  Agronomy Department
  Massey University
  Palmerston North

- Telford: Monday 14 November (1 pm) -
  Thursday 17 November (12 noon)
  Enrol with The Registrar
  Telford Farm Training Institute
  Private Bag
  Balclutha.

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NEW AGLINKS FOR BEEKEEPERS

Three new titles have been added to the list of beekeeping Aglinks.

FPP 535 Beekeeping, apiary sites, how to prevent drifting.

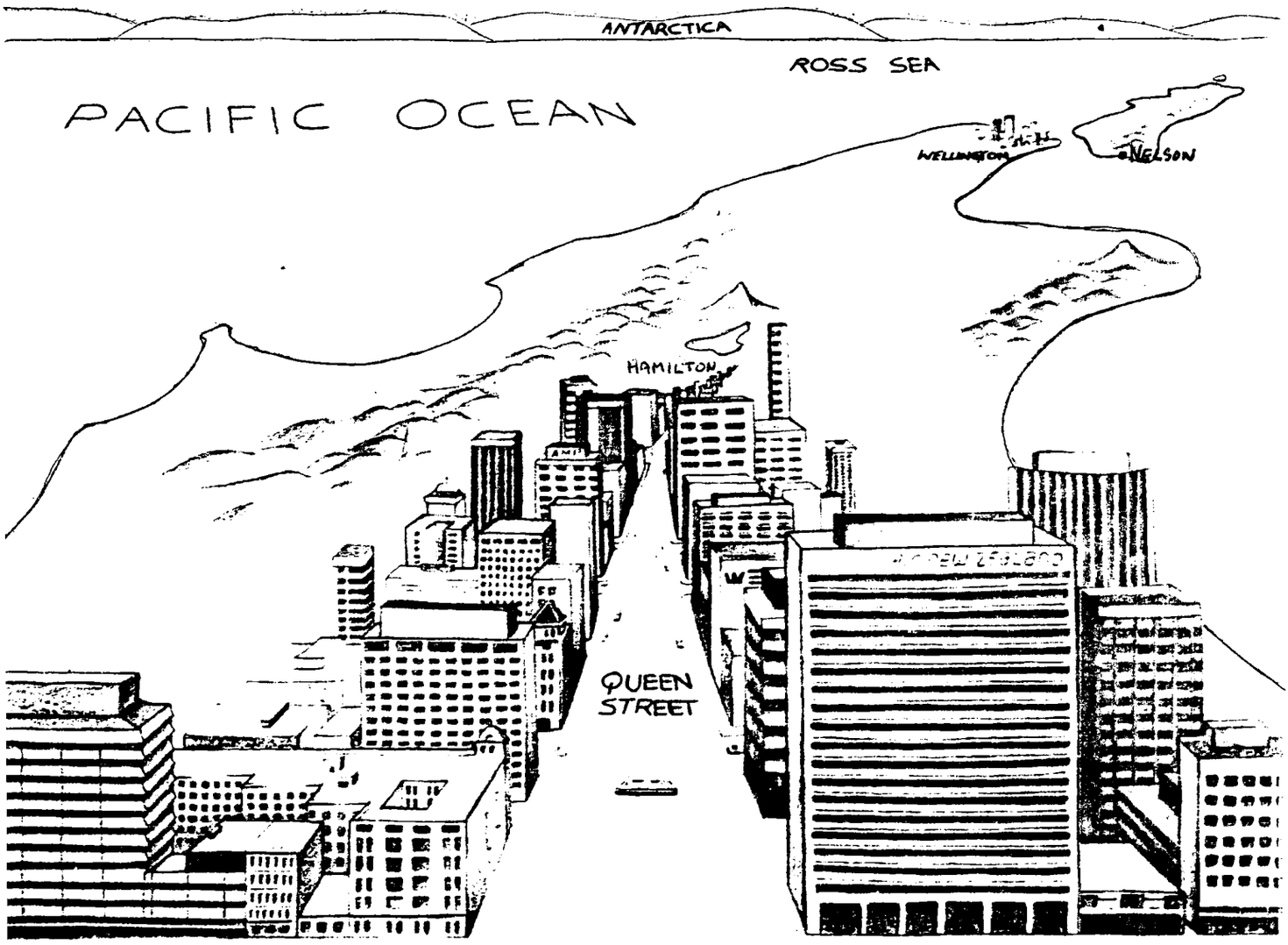
FPP 537 Beekeeping, apiary sites, selecting and planning.

FPP 538 Beekeeping, urban areas, management to prevent nuisance.

As usual, these Aglinks are available from

- me
- any MAF office
- Media Services, MAF, Private Bag, Wellington.

By the way, have you ever seen the map of New Zealand that they use in Auckland schools?



A G Matheson

A G Matheson

APICULTURAL ADVISORY OFFICER

INDEX TO VOLUME 4

A popular request in the readership survey I carried out last year was for an index to this Bulletin. I had already done one for volumes 1-3, and from now on will do one for each volume.

The numbers in the index refer to the three issues of volume 4. There was no May issue because of my absence overseas.

1 August 1982

2 November 1982

3 February 1983

"WHY. YES. I AM AN ECONOMIC FORECASTER. HOW DID YOU GUESS?"