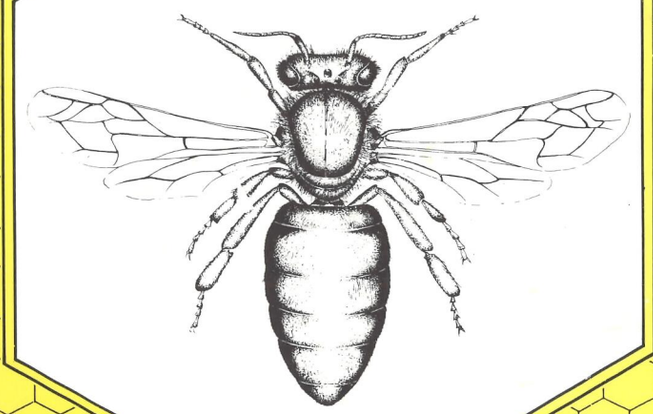


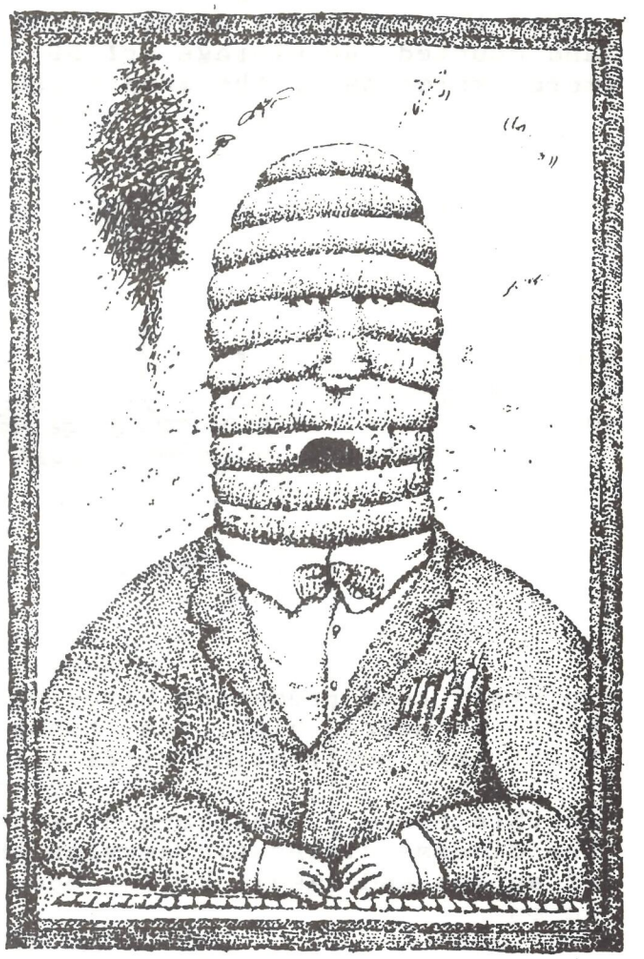
beelines

Number 29 December 1986

MAF Nelson Andrew Matheson Apicultural Advisory Officer

CONTENTS

Here's the next issue of *Beelines* - a little late maybe but just in time to read during the little break you're going to take over Christmas. Remember that idea? You promised yourself a week off after the first extracting round, or after shifting all those hives out of kiwifruit.



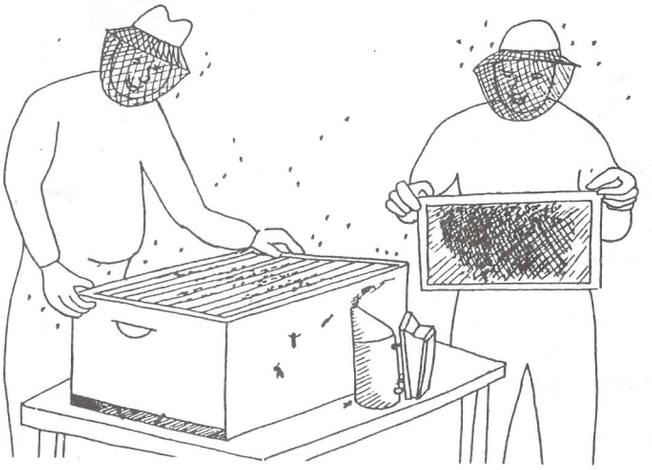
Kiwifruit pollination began by shaping up like last season - lots of cold rain and windy days. A timely change in the weather seemed to bring things right though, and bees got a chance to "do their thing". Perhaps there will have to be another scapegoat for small fruit this year.

I came back to the cold and rainy weather from three weeks in Fiji looking at the beekeeping industry there. I'd been commissioned by New Zealand's Ministry of Foreign Affairs to study the industry and report on prospects for development. I also worked with Denis Anderson of DSIR, who was surveying Fiji's bee disease status.

Some people muttered about tropical junkets when they heard where I was going, but have you ever inspected honey-bound hives all day with temperatures nearly 40 degrees? It's an interesting way of having a sauna.

One problem in Fiji I'm glad we don't have here is the cane toad. This poisonous animal was introduced from Central America to control pests in the cane fields, but has since found a liking for other insects.

They're big animals, up to 200 mm long in the body, and groups of them sit at hive entrances picking up bees with rapidly-moving tongues. Cam Jay once counted over 100 toads in an apiary in Jamaica, and they can make a significant impact on bee populations. Kerry Simpson has dissected cane toads in Tuvalu and counted an average of 60 - 70 bees per stomach, and there's more skeletons in the intestines and faecal pellets.



To avoid toad predation hives must be put up on stands at least half a metre high, as toads can jump to nearly that height. Might make pollination difficult, do you think?

In this issue : chalkbrood, what's going on?; an important new bee disease diagnostic service that MAF has launched; pollination of apples and nashi; killer bees and killer honey; equipment; and so on.

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THE NEW LOAD CODE AFFECTS YOU

No, the load code isn't a book of Chinese traffic regulations. It's a new set of rules about securing loads on heavy vehicles. This affects any beekeepers carrying loads over half a tonne.

At the recent pollination field day in Riwaka, Stuart Chalmers of the MOT gave us some useful advice on how the new code works. A few points from that day about how the code is used:

* The load code applies to any load of over 0.5 tonne.

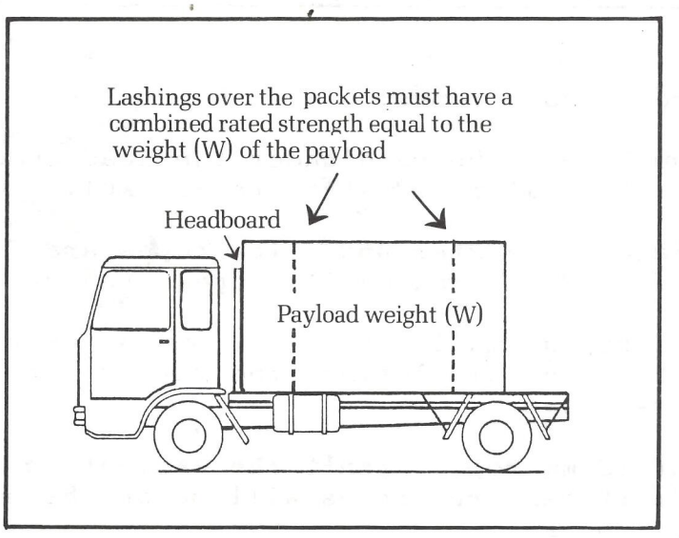
* A load constitutes anything on a vehicle (or trailer) that is not part of the vehicle, so it includes things like ropes.

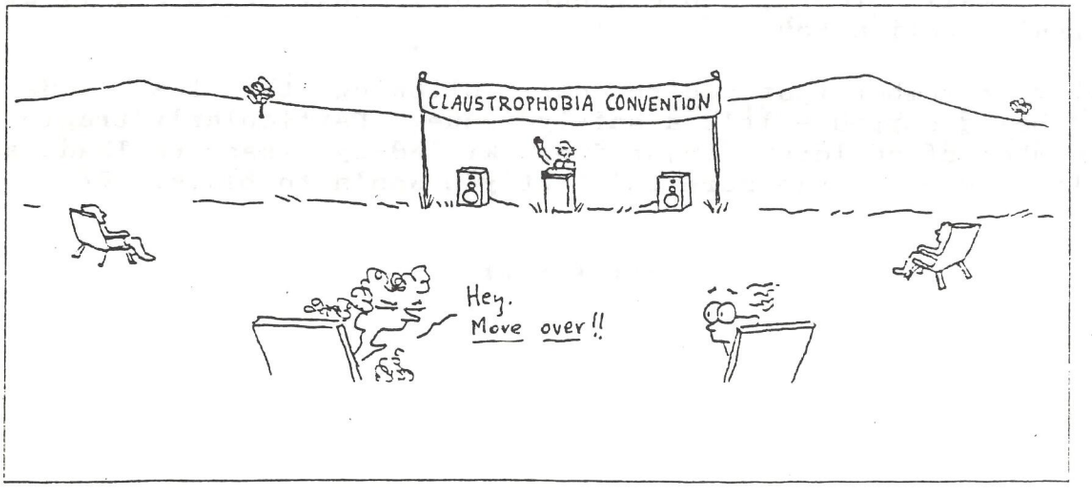
* The owner of a vehicle is responsible for providing safety gear and adequate training in its use for drivers. This provision means that you could be held legally responsible for an accident, even if you were sitting at home having a cuppa at the time (up to $2,000 fine and disqualification).

* The driver is responsible for correctly using the safety gear provided.

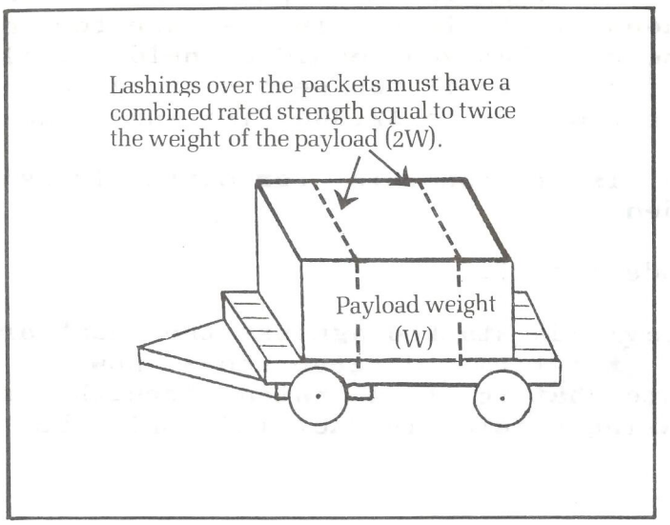
Now about the code itself:

* For rigid payloads stacked against the headboard of a truck or trailer, the first diagram shows how to keep the load secure. Note that the term "rated strength" is not the same as the breaking strain, in fact it's only about half.





* For rigid payloads that are <u>not</u> stacked against a headboard, different rules apply:



Any finally a word about ropes:

* The minimum rope to be used under the load code is 12 mm in diameter. (Typical rated strength 900 kg).

* Polypropylene, polyester and nylon ropes are fine if they're UV-resistant. Sisal and manila ropes are <u>out</u>.

* You can use ropes smaller than 12 mm as extras, but these don't count when calculating the rating of lashings as in the diagrams above.

* I know that 12 mm ropes aren't the easiest to tie knots in, but soon "soft texture" ropes will be on the market that are much easier to use.

To find out more get a copy of "The Truck Loading Code" - send $11 to Mail Orders, Government Publishing, P O Box 14-277, Kilbirnie, Wellington.

Finally, remember that you're not following the load code to avoid being copped - it's a safety issue. Particularly tragic is the number of children injured or killed by insecure loads and trailing ropes. Make sure it's not you who's to blame.

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TUVALUANS VISIT

Two young people from the Pacific nation of Tuvalu will be visiting New Zealand in a few months for beekeeping training. One will be coming to this region for general beekeeping training, while one will study queen bee rearing in Northland.

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HONEY

Honey may look innocent enough, and no doubt most of us have enjoyed the occasional taste of its sweetness, but beware: Honey is a deadly killer; honey has been directly associated with many major diseases of the body, and last but not least - there exists a positive relationship between crime waves and honey consumption.

For years beekeepers have hidden the deadly facts from the public. Of course it is hard to believe that this innocent, natural food is responsible for anything bad; especially when honey is recognised as one of the oldest foods in the world. However, facts cannot lie and next time you are about to enjoy that succulent bite of comb, just remember:

1. Research proves that nearly all sick people (from the common cold to the hospitalised cases) have at some time eaten honey.

2. 93.48% of criminals admitted eating honey within one month of committing the crime.

3. Of the people born prior to 1860 and who ate honey, there has been a 100% mortality rate.

4. All honey eaters born between 1890-1900 have been found to have failing eyesight, wrinkled skin, poor hearing and, significantly, most cases have lost their teeth.

5. Research has proved that candidates for examinations are especially nervous prior to their tests. Researchers found that nearly all candidates ate honey within one week prior to their examination and further to this, many failed.

6. 97.4% of juvenile delinquents come from homes where honey is frequently served.

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BEE LEGAL - BEE REGISTERED

Most of you will be aware by now of MAF's "Bee Legal, Bee Registered" campaign. Devised and co-ordinated by Mark Schrader of MAF Oamaru, this is a public awareness effort designed to help your industry.

The biggest immediate threat to apiculture in New Zealand is disease : an outbreak of AFB or of an exotic disease like EFB. MAF is ready to respond to such an outbreak, but our effectiveness depends on an accurate apiary register.

An accurate register is the aim of the "Bee Legal" campaign. There are three types of people we're trying to reach:

* New beekeepers, who don't know about the requirement to register.

* Existing beekeepers, who establish new sites but leave notifying MAF until the spring return. Disease doesn't wait for spring returns to come in! You've got 14 days to notify MAF of new sites (putting your ID number on, of course, has to be done straight away).

* Farmers who have unattended apiaries on their farms, which may not be registered.

We're relying on you, the beekeeper, to distribute posters and stickers to where they will be seen by the public. I'm sure everyone can put at least two posters up : in the local school, store, garage, library, police station, post office, pub ... Have you done your bit?

Stories about the campaign have gone in most newspapers in the country, general and farming magazines, radio and TV.

If you'd like more posters or stickers, see your NBA branch secretary or contact me.

HILDA HISLOP

Remember Hilda Hislop? You don't? She was the central character in the airline magazine advertisement on the dangers of honey importation. I printed the ad in the May 1986 *Beekeepers' Bulletin*. Your NBA executive has ordered extra copies of this for you to use in quarantine publicity.

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PLENTY OF PROBLEMS FOR POMS

I guess this item comes from the "So-you-think-you've-got-problems" department. Last winter was disastrous for beekeepers in Britain, with winter losses estimated at:

- 30% by the chairman of the beekeepers' association;
- 40-50% in England (by MAFF);
- 50-60% in Scotland (by MAFF).

Many of the surviving hives needed a lot of care, attention and sugar to get through. And there's the problem.

Within the EEC beekeepers are forced to pay over $NZ1,300 per tonne for sugar, which has been subsidised by the EEC to protect the incomes of sugar beet growers. The EEC sugar mountain now totals 1,700,000 tonnes (which would fill a few syrup feeders), and to cut down its size the EEC is selling sugar off to the Russians, Bulgarians, Libyans and all comers at ... around $NZ 235/tonne.

Free-market economics begins to make a bit of sense when you look at that little lot.

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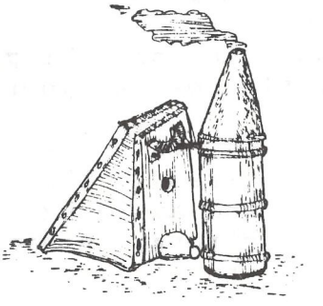
CHALKBROOD - WHAT'S GOING ON?



Chalkbrood is certainly a lot more apparent this spring than it was last year. In my district it has been reported from Golden Bay, Tasman Bay, Marlborough, Karamea, Reefton.

Quite a few beekeepers have expressed concern to me about its effects, and when it's very obvious in combs it is hard to believe that chalkbrood is not having an impact on the colony. Let's look at two issues - how prevalent does chalkbrood get in a colony, and how serious is its effect? I'm grateful to Cliff Van

Eaton for data from a 1985 survey of Northland hives and from the BC bee breeding programme.

First off, it's obvious that there's little agreement on the incidence of chalkbrood in colonies. People bandy about words like "light" and "heavy" infection, without agreeing on what they mean. Worse still, figures like 20% or 50% of brood affected get plucked out of the air. 20% infection would be 6,000 cells in a single colony, while 50% would be 15,000 cells.

A chalkbrood survey in Northland last spring (September-December) found 39% of colonies infected. Detailed brood counts were done of those colonies, and showed that of infected colonies:

46 % had 1 - 10 cells infected

33% had 11 - 50 cells infected

21% had more than 50 cells infected

So the actual percentage incidence might not be as bad as it first seems. What about the effect on the colony?

Once again, there's very little agreement on how serious chalkbrood is. It's hard to distinguish between the effects of the conditions leading to chalkbrood and the effects of the disease itself. In addition, many of the studies reported have not been carried out in a rigorous scientific way.

One author claims a reduction in honey yield of 1 - 5%, without giving any supporting evidence. However, the British Columbia bee breeding project was a detailed study over three years, on 25 - 41 hives, and showed no relationship between colony weight gain and chalkbrood infection.

You can do things to minimise chalkbrood infection, at very little cost to your business.

* Maintain strong colonies at all times to avoid colony stress. The recommendations about providing top ventilation and avoiding damp sites are useful in keeping colonies strong, rather than having any direct effect on chalkbrood itself.

* Avoid spore transfer between hives by minimising drift. Arrange hives in anti-drift patterns and use a variety of paint colours on your boxes.

* Requeen regularly with yellow (Italian) stock.

* Select breeder queens which show chalkbrood resistance.

* Have a regular comb replacement programme. Old brood combs act as a reservoir of chalkbrood spores.

* Reread Cliff Van Eaton's excellent article on chalkbrood in the Winter 1986 *New Zealand Beekeeper*.

Finally, what about fumigating boxes to control chalkbrood?

There isn't really much point, as spores are carried on the bees themselves. Elbert Jaycox reports in his newsletter that studies at Plymouth Polytechnic in England have shown *Ascosphaera apis* (chalkbrood) spores to be very resistant to heat, ultra violet light and many chemicals. They can, however, be killed by ethylene oxide and the acetic acid treatment which is used to kill *Nosema apis* spores on empty combs.

To carry out acetic acid fumigation make sealed stacks of hive boxes. Pour 150 ml of 80% acetic acid onto a cloth pad on top of each super, and seal the stack. After about a week in a warm environment, air the combs for about two days before use. If you can't buy 80% acetic acid, mix, (very carefully) four litres of pure ("glacial") acetic acid to one litre of water. Beware of splattering.

The combs must be empty before you apply this treatment. Acetic acid very rapidly burns skin and eye tissue, so wear full protective clothing, rubber gloves and eye protection. It also corrodes frame wire, frame nails and metal rabbets, so frankly I don't think it's worth the trouble.

Ethylene oxide (Fumigas 10) will kill *Ascosphaera apis* spores. Some research only just reported from Japan indicates that you need to apply three times the rate we use for wax moth control; 30,000 parts per million (3%) of EtO instead of 10,000 ppm or 10%. Exposure to this concentration for six hours is said to kill *A. apis* spores. This was reported by Martha Gilliam in the July 1986 *American Bee Journal*.

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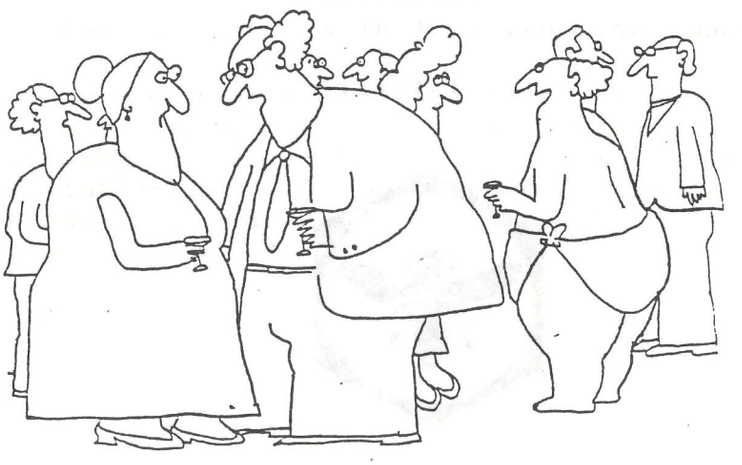

"Harold hasn't changed much over the years, has he?"

GOOD RESPONSE TO REMINDERS

MAF's advertising campaign about the importance of quarantine appears to be working. The advertisements on TV and in airline magazines are waking people up to the dangers of honey importation.

There has been a large rise in the number of travellers declaring honey. Some have even come back to the airport, after taking the in-flight magazines home and finding out later that honey should be declared.

MAF is to continue advertising, despite budget cuts. "People need to be constantly reminded", said a spokesman for MAF's information service. What is your branch doing to support this campaign?

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POLLINATION OF NASHI

Producing high-quality nashi (Asian pears) depends on good pollination. Without good pollination few seeds develop in the fruit, so they become small and misshapen. Because export fruit must be large and evenly shaped, pollination is important for the nashi grower.

To grow nashi commercially cross pollination with another variety is essential, so this means mixing pollinizer varieties in with the main fruiting varieties, like male vines in a kiwifruit orchard. No one yet knows the best mixture to use for nashi, but most people seem to be recommending a pollinizer every third tree of every third row - the standard 1:9 ratio. For trees grown on trellises, every sixth or seventh tree in each row should be a pollinizer.

The best general pollen sources seem to be Hosui, Nijisseiki and Shinseiki. More specific recommendations for each cultivar are available from MAF.

Hive stocking rates are best kept at 2 - 4 per hectare.

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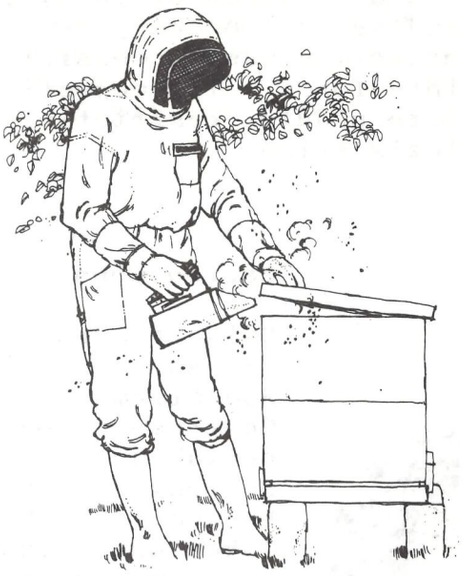
PROPOLIS PRESERVATION



I've been asked whether propolis can be used to preserve supers. It is, after all, the "natural" method employed by bees.

An article in the April 1986 *Australian Bee Journal* provides one answer. "When cleaning your supers and frames during winter save the propolis scrapings and dissolve in methylated spirits. Allow the mixture to sit for a few days, stirring occasionally, then strain off the debris using a coffee filter. Decant off the liquid and then wash the debris in fresh methylated spirits before discarding the old debris and adding fresh propolis. Use approximately one part propolis to two parts methylated spirits by weight. This can be an ongoing stock solution.

Use a shallow tray slightly wider than a super and fill it to a depth of about 50 mm with the propolis solution. Dip (soak), drain and dry. The top bars of frames also could be treated this way.

The antibiotic and antifungal properties of propolis make an effective preservative. No paint is required - but it won't adhere anyway."

I'm not sure if it's worth all the effort, but you could try it if you're keen.

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NO RESTRICTIVE BYLAWS

All good things come to those who wait. A couple of years ago the Waimea County Council revised its district scheme, and in doing so dreamt up some bylaws that would greatly hamper beekeeping in the county. One prevented beekeeping within 100 metres of a dwelling house, which could make pollination on some orchards rather interesting.

I wrote MAF's objection to these restrictions and the case was heard in March of 1985, along with those of the Nelson NBA branch and several beekeepers. I've just been notified that MAF's objection was successful, and that the proposed bylaws won't come into force. The objection was on the grounds that the ordinances were unduly restrictive and duplicated the provisions of other legislation.

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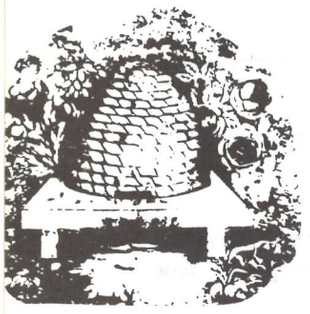
Sacred Cows



DOING the rounds at the moment is a revival of an old line of political definitions. Socialism: You can have two cows, and the Government makes you give one to your neighbour. Communism: You have two cows, the Government takes both and gives you the milk. Facism: You have two cows, the Government takes both and sells you the milk. Nazism: You have two cows, the Government takes both and shoots you. Bureaucracy: You have two cows, the Government takes both, shoots one of them, milks the other and pours the milk down the drain. Capitalism: You have two cows, you sell one and buy a bull.

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WHY BEES EAT POLLEN

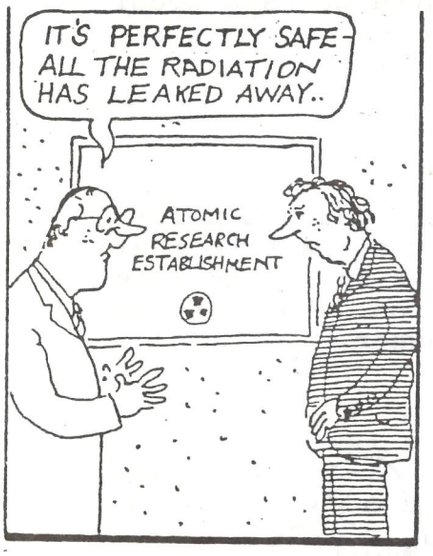
It's easy enough to make a very nutritious substitute for pollen, but much harder to find one the bees will actually eat. The simplest solution is to add 10 - 20% pollen to the substitute and, hey presto, the bees start lapping it up.

A number of people have tried to find out what chemicals make pollen attractive to bees. It's possible to extract a compound from pollen which, when mixed with sawdust, makes the sawdust attractive to bees. Dr Ralph Boch of Canada tried unsuccessfully some years ago to synthesize an attractant to use in substitutes.

Now someone else is looking at these chemical attractants (called "phagostimulants"). Dr Justin Schmidt of the US Department of Agriculture has identified a number of different compounds in pollen that stimulate bees to feed on it. I hope he carries on to the next stage of this work, to find a simple compound that could be synthesized and sold to beekeepers. It would be a great help to the industry.

Schmidt, J. O. 1985. Phagostimulants in pollen. *Journal of Apicultural Research* 24:104-114.

DON'T KILL YOUR CUSTOMERS



It's that time of year again, to warn about the dangers of toxic honey in Marlborough. If you keep bees within flying range (3 - 5 km) of large areas of tutu in Marlborough (or in Nelson), then take the following steps:

- harvest all surplus honey before the end of December;

- strip honey out of the brood nest if you expect a summer honey flow;

- don't put supers back on until the beginning of May.

An alternative is to move bees away for the danger period of 1 January - 1 May. The insect responsible for producing toxic honeydew from tutu is <u>not</u> found further south than Nelson and Marlborough.

Last year's warnings to beekeepers still didn't prevent a serious poisoning, so MAF and the Health Department will be issuing statements warning the public not to eat any honey taken from hives in the Sounds during the danger period, or from feral hives there at any time.

An interesting sidelight on the toxic honey question was provided by Elbert Jaycox of New Mexico when he was here earlier in the year. At one of his beekeeping courses for overseas students he discussed the problem of poisonous

Vine hopper distribution

honey produced in a number of different countries, including New Zealand. He told me that the notion upset the students from Yemen who being Muslim, follow the Koran. According to the Koran, "all honey is good". The students wanted to see proof that poisonous honeys do exist.

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IDENTIFICATION MARKS

Remember that ID marks in apiaries are for your benefit. Recently I had to track down the owner of a yard to advise that 28 hives had been burnt because of AFB, only 2 km up the road from his bees. Three different numbers were on show in the apiary, but unfortunately none belonged to the owner.

It took a lot of telephoning around to find the beekeeper concerned, and then it was only luck that someone remembered the name of the person who bought hives off them.

When you sell hives, please paint over painted ID numbers, and deface branded numbers on the outside of the hives by scoring or branding a line through them. The Apiaries Act will soon be changed to make this a legal requirement, but in the meantime please help our disease control programme to run more efficiently for you.

Finally, please put your own number in each yard you own.

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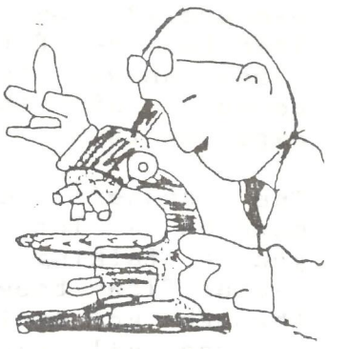
POLLINATION BEEKEEPERS LEARN MORE ABOUT ASSESSING HIVES

It was encouraging to see a good turnout of pollination beekeepers to the field day at Riwaka in October. Peter & Sharon Hobson's place was an ideal venue and the hospitality was tops (except for the poor weather put on).

After last season's pollination field day those present had a good idea of how to assess hives for pollination. This year we wanted to learn more about preparing hives in the period before kiwifruit starts.

Several local beekeepers kindly provided hives of varying strength and these were put under the microscope by groups of participants (BYO umbrellas). Later we talked about what state they were in now, and what should be done to prepare them for pollination.



The exercise was valuable for beekeepers prior to pollination. Thanks to all those who contributed.

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If you or your NBA branch wanted to make a Christmas donation, I'm sure the NBA technical library is always on the lookout for more books, or money to put toward purchases. Contact John Heinemann at P O Box 112, Milton, Otago.

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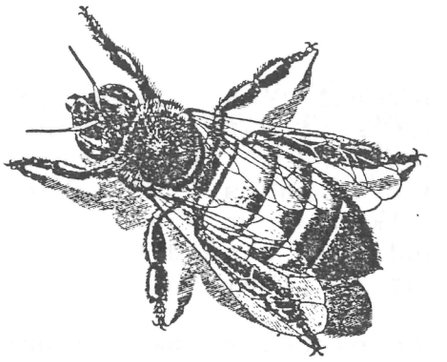
QUEEN EXCLUDER OR HONEY EXCLUDER?

Ask that question at a beekeepers' meeting and you're guaranteed an hour or more of lively discussion. It seems that every beekeeper has their own theories on whether or not to use queen excluders - what sort to use, when to put them on, and so on.

The first thing to say about this subject is that there have been no controlled experiments looking at the effect of excluders on honey yield. The arguments go a long way back, and everyone has "evidence" for their particular theory, but it seems a proper trial has never been done.

Most people, of whatever opinion on excluders, do concede that they have benefits. Extracting combs stay white, which results in lighter honey than using brood combs. Harvesting the honey is a lot easier, with no risk to the queen. Many manipulations are made easier, because you know where the queen is (or isn't).



But what about the cost of excluders? How much honey do you lose because of them? There isn't a clear answer to these questions, because of the lack of proper experiments.

The answer to those questions depends a lot on what conditions you're talking about. In light nectar flows bees don't readily come through an excluder - they can process all the incoming nectar without having to go up into supers. That's why in a light flow the bees will often plug out the brood boxes and put little honey in the supers - great for wintering but not so good for the crop figure.

When there is a strong nectar flow, or when the excluder is over a single brood box, the bees are forced more to carry nectar through the excluder early in the season and they may continue to do so later.

Some pointers on using queen excluders:

- don't expect bees to go through an excluder onto foundation only, except in an unusually good nectar flow.

- if you have brood above an excluder, provide a top entrance to prevent drones from blocking the excluder.

- recent research in the US suggests that a top entrance above the excluder encourages colonies to store more honey in the supers, and less in the brood nest.

- solar wax melters are ideal for cleaning burr comb off queen excluders. Be very careful when using a hive tool to scrape them, that you don't bend the wires even slightly.

- you can use an excluder during weak late-summer nectar flows to make sure the brood nests are heavy going into winter.

Queen excluders for under 5c each? I've had some success with a "pauper's queen excluder", which does the job fairly well and only costs a few cents. Cut a sheet of aluminium alloy (from the printing works) to about 410 x 325 mm. This can be used in place of a queen excluder, and relies on the principle that the queen rarely travels up the outside frames in a hive. Like all well-known "principles" in beekeeping it works most, but not all, of the time.

BEEKEEPING EXPORTS

In the year to the end of July 1986, exports of bee products were:

Product	Number of countries	Amount (tonnes)	f.o.b.value ($NZ)
Bulk honey	14	2,373	5.2 million
Packed honey	28	309	0.9 million
Comb honey	15	194	1.2 million
Honeydew honey	3	470	1.1 million
Wax	8	60	0.4 million
Total			8.8 million

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IRRADIATION PLANT

A gamma radiation plant is to be constructed in New Zealand for processing foodstuffs and other products. It will be built by Ancell International, the operators of the plant I saw in Sydney earlier this year.

Irradiation of foodstuffs has not yet been approved in New Zealand, but I have no doubt it will come soon. In the United States the Food and Drug Administration (FDA) has approved irradiation of food, saying that years of research have shown that the process is safe, doesn't make food radioactive, and doesn't make any deleterious changes in the food.

Irradiated food will be labelled with the term "picowaved" - this refers to the short-wave energy beams used and is less likely to cause consumer resistance than using the word "irradiated".

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BIOLOGICAL CONTROL OF GORSE

The gorse mite programme is still underway. Another field test has still to be conducted in the UK, but the DSIR hopes to release the mite here next year.

Opposition to the planned introduction is starting to come from a number of different groups. One of the strongest objections has been from DSIR's own Ecology Division, and other criticisms have been voiced by MAF's Research Division and a lecturer in plant science at Lincoln College. They point to gorse's value as goat fodder and in enriching low-fertility soils.

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AFRICANIZED BEES - THE THREAT IS REAL

Why does *Beelines* carry so many articles on Africanized bees? Because their progress northwards through the Americas will have a big impact on New Zealand beekeeping. Our exporting of queens and packages to Canada in the future is one example, not to mention the effect on the world honey market when Mexico gets hit. Besides, the Africanized bee or AHB is a pretty interesting beast.

Here's some snippets from the latest Western Apicultural Society meeting held in British Columbia in August (reported by Cliff Van Eaton):

* Dr Basil Furgala of the US predicts a world honey shortage in a few years, when the AHB depresses Mexico's annual honey exports from 47,000 tonnes to 14,000 tonnes. This could happen at the same time as the US honey promotion campaign increases consumption in the States by 52,000 tonnes per year (250 g per person).

* The US queen and package industry will produce 1 million <u>fewer</u> queens and 500,000 fewer packages annually by the early 1990's.

* A reverse flow will be set up, with queens, packages and even colonies coming into parts of the US from the northern states, Canada and overseas, to re-populate pollination colonies each year.

And the AHB "guru", Orley Taylor, related some more experiences from Central America:

* AHB has a detrimental affect on beekeeping there because of the large number of livestock deaths they cause. Restitution bankrupts most beekeepers.

* On the *Speedy Bee* tour, 2 US beekeepers (owning 8,000 and 2,000 hives) were found at one point hiding from the bees in a shed.

* Swarms can travel up to 150 km in 10 - 14 days. The swarms forage for 3 - 4 hours and then move to a new location.

* He believes that the AHB is always 300 km ahead of where continued sightings are made.

* We need to make a distinction between "tropical" AHB and hybrids. The tropical type will survive as feral stock in south Texas, Florida, and Louisiana, but hybrids will be able to successfully overwinter much further north.

* At this point it does not look like there will be any significant breakthrough which will allow for the control (genetic dilution) of the feral "tropical" AHB population once it is established in the US.

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TRADE TABLE

* Tecpak Plastics Ltd, P O Box 713, Dunedin (Phone (024) 30 691) have an improved version of their Safe-A-Pak honey containers which has overcome the static electricity problem.

  Steve Olds, the managing director, was at conference with a nifty little lidding machine for the 500 g and 1 kg pottles, that costs around $450. It is very simple to operate - you just pass the pottles under the machine and the lids are snapped on.

* Aglinks: The Aglink subscription service has been discontinued. Now you will be asked to pay $11.00 for the catalogue and 55c for each Aglink.

* Pollen wanted by Mitchell & Cole Fitness Centre, Phone Auckland (09) 836 4081. They require a 200 litre drum per month.

* Mervyn Elwood is interested in selling nucs on a large scale. If you're interested in nucs for autumn or spring, contact him at:

  48 Lord Rutherford Road
  Brightwater
  Phone (054) 23 603

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Do you know what a palindrome is? Read this backwards and you'll find out. It was written by Texas Swanjord, an American woman who has worked among beekeepers in Yemen.

"He is wise and happy keeping bees about him. Asking and answering people. People answering and asking him about bees. Keeping happy and wise is he."

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Q. What do you call it when a bug flies into a fan?

A. Pesticide.

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APPLE POLLINATION

With the number of newer apple varieties now going in, it's probably time to give some thought to apple pollination.

Gala and Royal Gala - Isolated blocks of this variety sometimes crop poorly, and there can be a marked decline in cropping further away from adjacent varieties. This variety clearly needs provision for cross pollination.

Braeburn - is cropping well in isolated blocks so does not look as if provision for cross pollination is necessary with this variety. It appears to be a good pollinizer for other varieties.

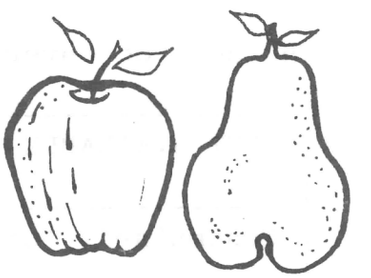
Jonagold - this is a triploid variety so it is likely to produce infertile pollen, which means that it will need provision for cross pollination. It also may not be a good source of pollen for other varieties.

Red Delicious types - this group of apples are all self-infertile so provision for good cross pollination is necessary.

Fuji - I have no information on its pollination requirements. In the absence of information I think it prudent to make provision for cross pollination.

Granny Smith - crops poorly on its own so some provision for cross pollination is desirable.

Layout of pollinizers



In recent years orchard planting practices have moved towards tight or continuous hedgerows. One of the side effects of this change in practice is that the ability of "cross row" pollination to take place will be reduced, because in tight hedgerow plantings bee movement is more up and down than across the rows. For varieties which require good provision for cross pollination it may be necessary to introduce pollinizers into each row. Situations where the move is necessary can be recognised by the presence of a rapid fall-off in fruit numbers between rows adjacent to other varieties and rows further into the block.

This problem is most likely to occur in planting systems which tend to produce tight "barrier to flight path" hedgerows such as tatura trellis.

(Source - Notes by John Wilton, MAF's national pipfruit specialist.)

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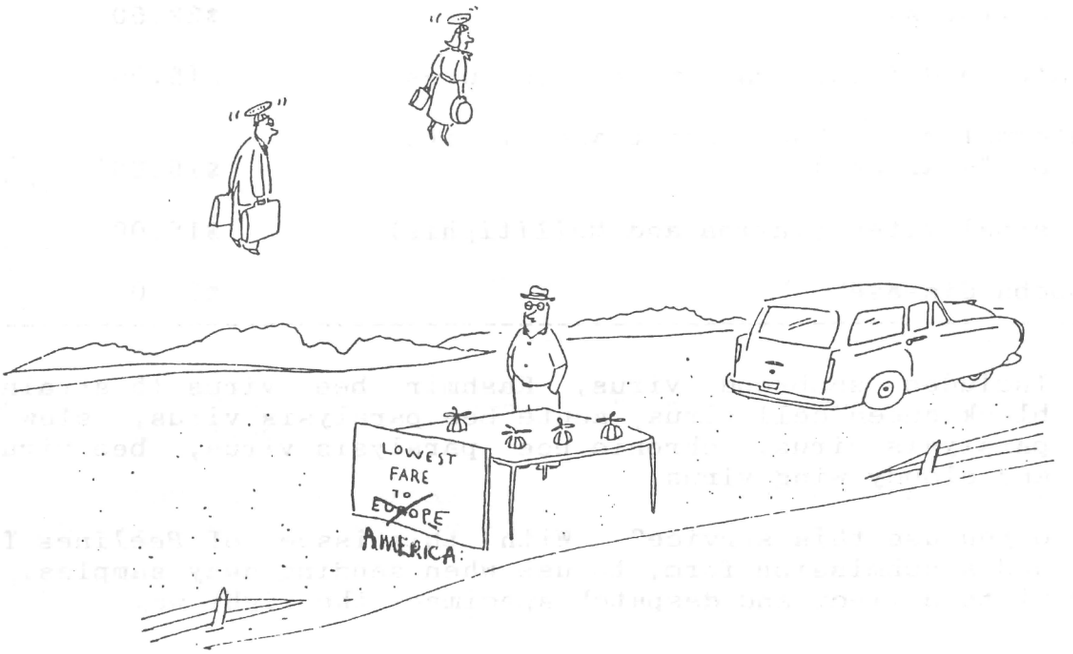

NEW SERVICE FOR DIAGNOSING BEE DISEASES

MAF is now offering a new service for beekeepers. Our plant protection centre in Auckland can examine specimens for most bee diseases.

The service covers the following diseases:

TEST AVAILABLE	COST PER SAMPLE (not including GST)
Nosema apis (organism present or absent)	$ 3.75
Nosema apis (spore count)	$11.25
Viruses in adult honey bees*	
a. First sample	$11.25
b. Each additional sample	$ 6.00
Viruses in bee larvae or pupae*	
a. First sample	$11.25
b. Each additional sample	$ 6.00
American foulbrood (microscopic confirmation)	$ 3.75
American foulbrood (confirmation from cultures)	$22.50
Chalkbrood (confirmation from cultures)	$15.00
Internal mite (honey bee tracheal mite or "acarine")	$15.00
External mites (*Varroa* and *Mellitiphis*)	$15.00
Amoeba disease	$15.00

* Includes sacbrood virus, Kashmir bee virus (5 strains), black queen cell virus, acute bee paralysis virus, slow bee paralysis virus, chronic bee paralysis virus, bee virus X and cloudy wing virus.

How do you use this service? With this issue of *Beelines* I've included a submission form, to use when sending away samples. Be careful to collect and despatch specimens the right way.

For brood samples:

* Cut out a portion of the suspect comb, free of adult bees.

* Carefully wrap the comb in several layers of clean newspaper, and for added protection enclose in stiff cardboard.

* Avoid sending comb containing honey, which may leak in transit.

* Complete the submission form, enclose payment for the service (add on 10% GST), and forward immediately to:

    Plant Protection Centre
    P O Box 41
    Auckland 1

For adult bee samples:

* Put 50 adult bees in a small bottle or jar (Nosema tests), or 100 for the general test for queen exports to the UK.

* Do NOT add meths, gin or anything else. It often comes out and annoys the Post Office.

* Complete the submission form, enclose payment, and send the sample immediately to:

    Plant Protection Centre
    P O Box 41
    Auckland 1

If you think you'll use this service more than occasionally, I suggest you buy a sampling kit for $3.50 from me or from the above address. It contains bottles of the correct sizes, instructions and address labels. The labels, instructions and submission forms are available free of charge.

If you suspect an exotic bee disease get in touch with me immediately.

That's it from me for now. Have a happy honey flow and extracting season.

Those of you in other areas who would like to receive *Beelines* regularly, send off your subscription form today.

Andrew Matheson
Apicultural Advisory Officer

Andrew.

Ministry of Agriculture and Fisheries
Private Bag, Nelson
New Zealand
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