

**NO.2**

**OCT. 1985**



# **NORTHLAND BEEKEEPING**

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& Fisheries**

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## WHAT'S UP WITH MAF?

In recent months the Ministry of Agriculture and Fisheries has begun to undergo a series of significant changes. They affect the way government services will likely be provided in the future and how much money will be available to carry them out. And since Advisory Services are so important to beekeepers, I think you, the reader, should know.

Several years ago MAF embarked on a system of planning called Management by Objectives (MbO). The idea was to more effectively work towards common purposes and be more responsive to change. (The beekeeping industry, through the NBA, also adopted this planning process, hoping to deal with industry problems on a level more effective than the mere passing of remits).

It's probably just as well that MAF now has this planning because MAF, along with other government departments is having its budget trimmed. The cut this year (for all MAF divisions) is \$1 million, followed by \$5 million in 1986, and \$10 million in 1987. As well, MAF has been told to recover costs wherever possible.

In Advisory Services Division (ASD), we haven't had a "budget cut" this year as such, but we are expected to pay for a lot more things out of our allocation, so the end result is the same. For instance, we now have to pay for government printing, we've had to absorb salary increases, and general inflation in transport and accommodation has led to an effective 25% cut in travelling expenses.

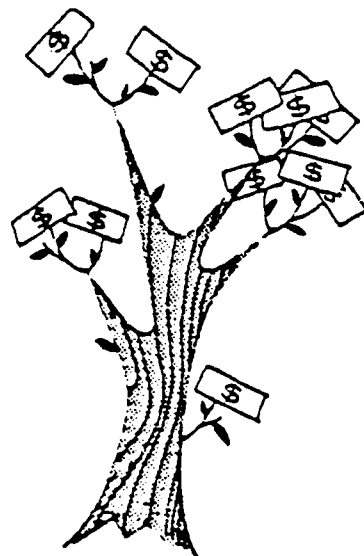
My personal yearly allocation is now \$4,600 which covers travelling allowance for hotels and meals (\$46 per day), vehicle running (35¢ per km), air fares, and incidentals. To stay within budget I can't go over \$383 per month.

So far I'm doing pretty well, but expect my mileage to increase during inspection time and pollination. I hope to be able to complete my full work plan (as I outlined in my introductory talks) except for introductory advisory visits. Don't hold off if you want to see me though. Remember - "the squeaky wheel gets the grease."

I've also been lucky enough to have a \$2,000 allocation for apiary inspection. I've appointed seven part-time beekeeper inspectors (see following) with allocations of 30 hours and 330 kms each. Our district is fortunate to have this funding, as some other Apiary Districts this year are having to rely solely on MAF inspectors.

Rumours are also current concerning charges for Advisory Services. At this stage I can reassure you that ASD will not be charging for advisory visits, field days and the like, but we have been directed to charge for export certification honey inspections - the charge will be 1/3 of costs this year, and 2/3's in 1986/87. The charge-out rate for this work will probably be in the order of \$35/hour which includes travel.

We haven't received any word regarding queen export certification yet and there are no plans currently to charge for apiary disease inspections. I'll also be able to continue producing this newsletter for you at no charge, even though many other districts have had to institute a subscription fee. The last two issues have been photocopied on our own MAF photocopier. The quality is lower than the Government Printer, but the price is right!



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## REGISTRATION OF POLLINATION SITES

With the projected increase in hive demand for pollination this decade (to 15,500 by 1994) it's obviously essential that MAF maintain an up-to-date listing of pollination sites. Most of you will have received a form from me for site registration, but if you haven't please contact this office as soon as possible. Important points to note :

- \* Registration is for this year's contracts only. That's the only way to keep the list current and produce useful pollination statistics
- \* If you have pollination sites already registered as Seasonal sites, don't forget to include these as well on the registration form
- \* Make sure to include the road name as well as land owner's name and postal address
- \* Forms must be returned prior to the beginning of pollination



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### APIARY LIST PRINTOUTS

By the way, if you would like an up-to-date computer list of your apiaries just include a note with your completed Statement of Hive Inspection. Many beekeepers find these lists helpful for log books, insurance purposes, and the like. One beekeeper I know uses the list to keep track of his rental honey!

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## STATISTICS

### a) Beekeeper, Apiary and Hive Statistics as of May 1985

District	Beekeepers	Apiaries	Hives
Whangarei	657	1 878	18 265
Auckland	1 467	2 715	18 594
Hamilton	739	3 013	45 466
Tauranga	801	3 332	48 143
Palmerston North	1 395	3 793	36 274
Nelson	582	2 133	22 775
Christchurch	780	3 528	45 169
Oamaru	353	3 455	46 006
Gore	351	2 171	28 736
<b>Total</b>	<b>7 125</b>	<b>26 018</b>	<b>309 428</b>

Nationwide, that's an increase of over 32,000 hives, or nearly 12%.

### b) Honey Crop (Tonnes)

	1985	1984	10 yr ave.
Whangarei	572	-	-
Auckland	930	300*	600*
Hamilton	1 697	731	1 191
Tauranga	1 550	682	736
Palmerston North	1 088	495	839
Nelson	685	800	459
CHCH	1 650	1 150	1 138
Oamaru	1 352	1 100	1 020
Gore	790	560	798
<b>TOTAL</b>	<b>10 314</b>	<b>5 818</b>	<b>6 784</b>
<b>Kg/hive</b>	<b>33.0</b>	<b>21.0</b>	<b>28.0</b>

\* includes Whangarei

The 1985 national honey crop set a new record and is the first time New Zealand production has topped 10,000 tonnes. However, our hive numbers reached a new record as well so on a per hive basis of 33 kg this is our third best crop ever.

### c) American Foul Brood 1984/85

Apiary District	Diseased Apiaries		Diseased Colonies	
	No.	%	No.	%
Whangarei	48	0.2	107	0.5
Auckland	63	2.3	152	0.8
Hamilton	165	5.4	220	0.5
Tauranga	268	8.0	676	1.4
Palmerston North	64	2.0	152	0.5
Nelson	153	7.2	340	1.5
Christchurch	40	1.1	303	0.7
Oamaru	88	2.6	188	0.4
Gore	129	6.2	296	1.0
<b>TOTAL</b>	<b>1 018</b>	<b>3.9</b>	<b>2 434</b>	<b>0.8</b>

Total diseased colonies increased from 0.5 to 0.8%. This reflects a serious outbreak in the Bay of Plenty as well as the fact that statistics are now kept June to May. This year's figures thus represent 16 months.

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### DISEASE REPORT FORMS

Attached as the back page of this newsletter is a pink form you can use for disease notification. As you know, under Section 18 of the Apiaries Act beekeepers who find disease are required to immediately send a written notice to MAF as well as eradicating the disease. Waiting until you send in your Inspection Return is not playing by the rules.

Extra copies of this form (if you need them!) are available free of charge from me in Whangarei. By the way, folded in thirds, these forms fit neatly (with the MAF address showing) into a window envelope. What could be easier!

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### THE U.S. HONEY MARKET

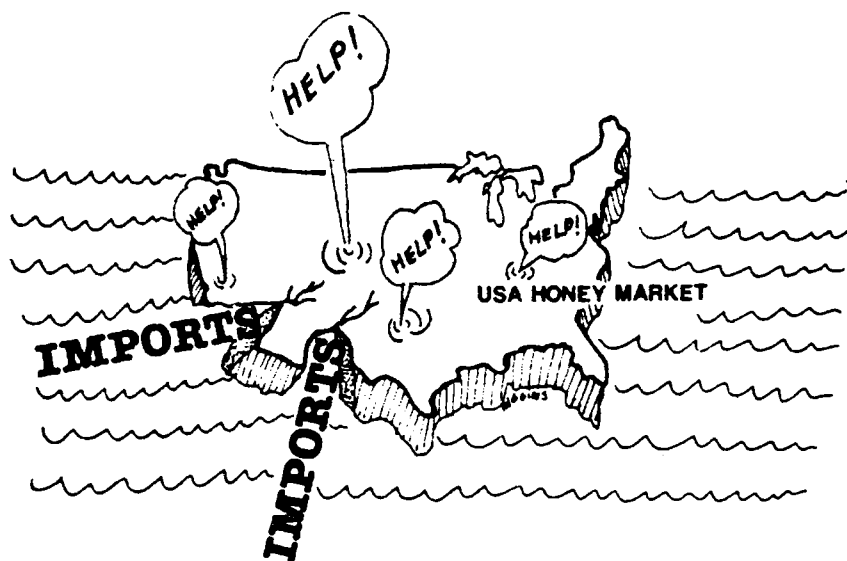
With our large honey crop it's very important to be aware of market developments overseas. The major development (and problem) currently is the U.S. market. According to how things go it could have a drastic effect on the international scene.

The problem lies in a subsidy program for U.S. beekeepers run through the U.S.D.A.'s Commodity Credit Corporation. The program was set up originally to even out the "bumps and hollows" caused by beekeepers all trying to sell their crop after harvest.

Beekeepers could sell their honey to the government on a loan basis and then buy it back later in the year once the market stabilised and prices were higher.

Not a bad idea and the logic worked until in 1981 inflation and the strong U.S. dollar pushed the Government loan price above world honey prices for the first time. Beekeepers started to forfeit their honey to the government while packers imported foreign honey at a price below the loan rate. The result - a honey mountain in government warehouses which has grown to over 200 million pounds (90,900 t). That's equivalent to one year's average production in the U.S. This year's support price is currently 69¢ US/lb (NZ\$2.61/kg) while the world market price is 38¢ US/lb (NZ\$1.43/kg).

With that much honey around the U.S. government is in a predicament. They're



giving some of it away in their school lunch program. And a one cent levy is proposed on all honey (produced and imported) to create a promotion fund to increase domestic consumption. The only problem is that it will increase consumption of the foreign honey as well.

So it was just a matter of time before something much more drastic was proposed. That something takes the form of a 1986 budget proposal to do away with the program entirely. Obviously U.S. beekeepers are lobbying their congressman hard for a compromise of the plan. No fewer than ten separate bills are proposed at the moment and since the budget process is much less direct than ours (the President doesn't have a complete say) there is hope the loan program will continue for a while at least.

Still the U.S. honey mountain is looming ever larger and when it tumbles, beekeepers everywhere will have to cope with the tidal wave.

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### WORLD HONEY MARKETS

MAF has compiled a comprehensive summary of honey marketing information. It's based on reports provided by trade commissioners from around the world and contains details of trading patterns for 28 different countries. Importers names and addresses are also included.

Contact the NBA Executive Secretary, WELLINGTON, if you wish to purchase a copy.

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### NOSEMA DISEASE

Nosema disease is one of the most widely discussed but least often recognised diseases of adult bees. It costs world beekeeping millions of dollars in lost income every year but it's called the "pick pocket" disease because it's most often unseen. It reduces the vigour of infected colonies, resulting in decreased bee lifespans, supersedure and reduced brood rearing, and lower honey crops.

#### CAUSTIVE ORGANISM

Nosema disease is caused by Nosema apis, a one-celled animal (protozoan) which also produces spores.

The life cycle begins when spores are swallowed by a bee and pass into the stomach. The spores germinate and produce the vegetative or reproductive stage of the organism in stomach lining (epithelial) cells.

The vegetative stages grow and multiply and in six to ten days the host cells become filled with newly formed spores. The epithelial cells finally rupture and release the spores back into the stomach itself.

Unfortunately for the bees, these epithelial cells play an important role in digestion, releasing digestive enzymes into the stomach. Infected cells do not perform this function and the bee literally begins to starve to death as available nutrients are reduced.

Spores may reinfect other epithelial cells or they may pass out of the bee

with feces where they may be eaten during house cleaning by other bees. In this way the cycle can begin anew.

### DIAGNOSIS

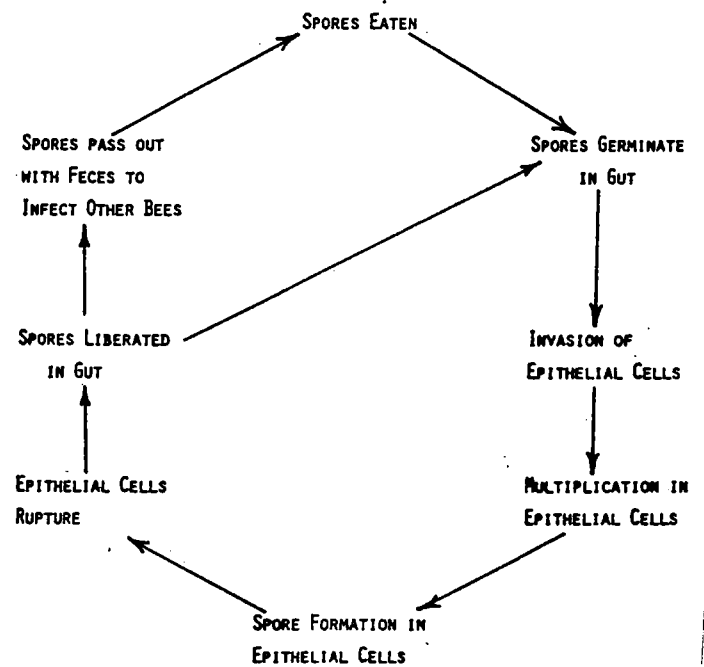
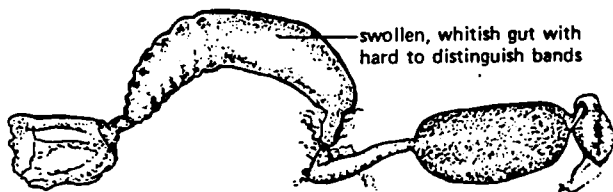
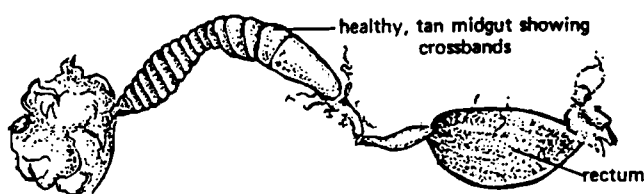
Although the disease is present in nearly all honey bee colonies, infestations may be so light that there are no obvious symptoms. Where symptoms do occur they can easily be confused with other causes, so microscopic examination of the bees themselves is the ONLY SURE METHOD of confirming the level of nosema infection.

Visual symptoms of the disease can include :

- \* failure of the colony to prosper
- \* bees with disjointed wings and swollen abdomens
- \* crawling bees in front of colonies
- \* inability to fly and loss of sting reflex

A good field examination is to observe bee midguts. Holding the thorax of the (dead!) bee in one hand, gently pull out the last segment of the abdomen.

### **Effects of Nosema Disease on Midgut**



LIFE CYCLE OF  
*NOSEMA APIS*

the (dead!) bee in one hand, gently pull out the last segment of the abdomen. This will expose the intestine, stomach and honey sac. Healthy stomachs are straw brown in colour with obvious segmentation apparent. Infected stomachs are white, swollen and without such cross-banding.

Still, the most effective diagnosis is done with a microscope (I have all the equipment here in Whangarei and can do it for you if you wish). Start by collecting at least 25 returning bees (i.e. older workers) from the colony front entrance. Place them in a small jar with some Meths or alcohol.

In the laboratory the bees are removed and crushed in 25 ml of water. A sample of the solution is then put in a blood cell counter and observed under the microscope. Nosema spores are counted to determine the disease level in millions of spores per bee.

Spore levels are interpreted as :

up to 1 million spores/bee	light infection
1-5 million/bee	medium
over 5 million/bee	epidemic

### DISEASE LEVELS OVER TIME

Infected worker bees suffer premature reductions in brood food glands and their life span is significantly shortened. The number of bees infected

strongly affects the ability of the colony to both rear brood and produce a honey crop.

Nosema levels follow a recognised seasonal pattern. Overwintering bees provide the reservoir of spores in early spring. Their prolonged lives result in heavy nosema infections and they eventually defecate within the hive. New bees clean up the faecal matter and in turn become infected. The level of infection within the brood nest rises rapidly and continues as cleaning activities are extended.

The spore levels reach their highest point in late spring, but quickly decline as infected foragers die prematurely, usually just as the honey flow begins. This rapid die off is often noticed by beekeepers and has a serious affect on potential honey production.

Unfortunately sufficient numbers of spores survive in the colony and a second peak is sometimes noticeable in older bees just prior to winter. Although these bees do not over-winter, sufficient spores also remain on the combs to reinfect wintering bees.

While the peak level of infection occurs at nearly the same time each season, the overall intensity varies. High levels one year, however, tend to produce high relative levels the next.

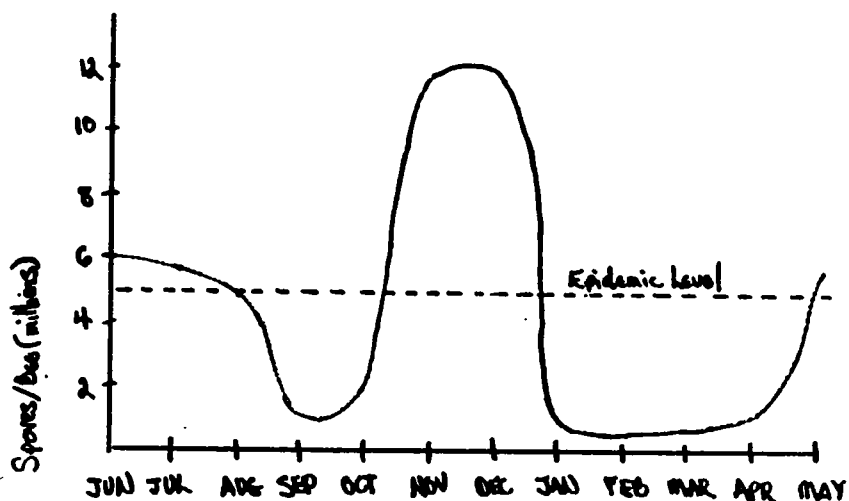
#### CONTROL

Several types of control are available to beekeepers including the only drug registered in New Zealand for use in bees. Significantly, however, the drug does not destroy the ever-present infectious spores. Proper control requires a several pronged approach :

- A) Management practices to lessen the effects of the disease. These include :
  1. Young, vigorous queens and strong autumn populations of young bees
  2. Good apiary sites with air drainage, wind protection, and maximum sunlight in winter
  3. Adequate quantities of capped honey and pollen. Not sugar syrup and fermented combs!
  4. Routine replacement of old combs
- B) Fumigation of stored combs to destroy the "reservoir" of spores present. This would definitely be worthwhile in queen rearing where old combs could be fumigated and recycled. I would recommend using an 80% acetic acid on absorbent pads at 120 ml per pad. Pads should be placed on topbars of each stored hive body. Stack the hive bodies for one week and then air thoroughly for at least two days. (remember to use gloves, goggles and respirator when using this product).
- C) Drug Feeding
 

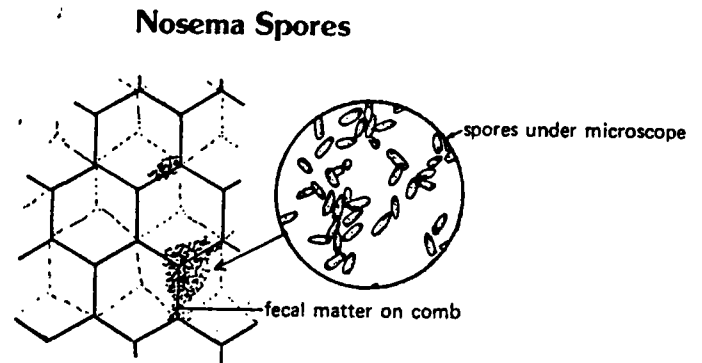
Fumagillin (Fumadil-B or Nosem-X) is like a "drench" for bees. It kills the vegetative stage of Nosema apis, but not the spores.

#### SEASONAL VARIATION IN LEVELS OF NOSEMA





- From the Spore/Time graph it should be obvious that fumagillin must be fed in the autumn to reduce spore levels the next spring/summer.
- Fumagillin must be fed in syrup and fed at the proper dose. Half-strength doses don't give half protection, they give no protection at all!
- At commercial rates of \$116.82 per 9.5g bottle, each feed costs \$2.16, drug only. Sugar, feeders, and vehicle running costs should also be considered when working out the economics of use.



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##### BEEKEEPERS LAMENT #####

It all started in 1967 when they changed from pounds to dollars, and overnight the overdraft doubled.

I was just gettin' used to this when they brought in kilograms or somethin', and the honey crop dropped in half. Then they started playing around with the weather and brought in Celsius, and we haven't had a decent fall of rain since.

This wasn't enough - they had to change over to hectares, and I end up with all my bee sites just half this size. Then to cap it all off they changed over to kilometres, and I find I'm travelling twice the distance.

Then they brings on them litre things so I'm buying four times as much petrol.

And now believe it or not, daylight saving. Well I've saved up enough daylight to see me through, so I'm getting out, before they halve that.

- The Australian Bee Journal  
January 1985

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QUEEN BEE PRODUCERS ASSOCIATION

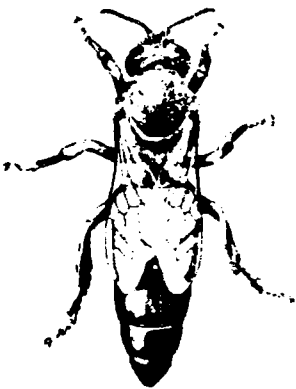
There's been an exciting development in the queen bee industry in New Zealand with the formation of a professional association for queen producers.

The New Zealand Queen Bee Producers' Association was formed at this year's Greymouth conference, after preliminary rules had been drawn up at meetings here in Northland.

The N.Z.Q.B.P.A. has 12 objectives listed in the general areas of industry co-ordination, business ethics, stock improvement and market development. Membership is open to NBA members who sell at least 500 queens per year. Others may become associate members.

Formation of this association is important because it signifies a new willingness on the part of producers to work together, improve the standard of domestic queens, and co-ordinate the development of export markets.

Terry Gavin was elected president at the Greymouth meeting with Malcolm Haines



secretary. Further information is available from Malcolm, R. D. 2, KAITAIA (ph. 1228).

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### EXPORT CERTIFICATION MANUALS

MAF's procedures for certification of beekeeping exports have been brought together in two manuals - the Queen Honey Bee Export Manual and the Honey Export Manual.

The manuals set out procedures that exporters should follow and contain sample forms for different countries. I keep up-to-date copies here in Whangarei, but personal copies can also be purchased from the NBA Secretary, WELLINGTON.

By the way countries are forever changing import procedures. You can help us by passing on any such changes as soon as they come to your attention.

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### HEARD AT CONFERENCE

- \* Someone asked "Why doesn't DSIR release gorse mites on an isolated island?"

From the audience - "Yeah, the North Island!"

- \* "The real threat to our industry is rising costs, interest rates, etc.; the real opponent is jams and spreads and sugar. The industry can't afford to spend time fighting amongst itself."

- Allan McCaw  
NBA Vice-President

- \* "We've got people coming from overseas through the airport who say they don't have any plant materials and they've got a bouquet in their hand!"

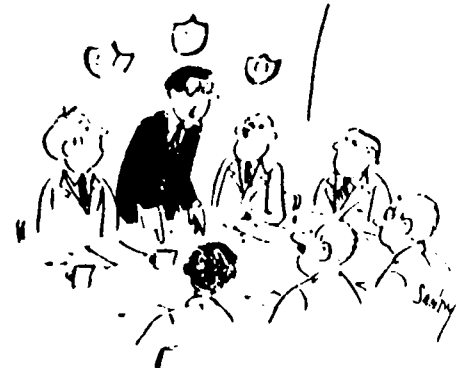
- John Burton  
Supervising Agriculture Quarantine Officer, MAF

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### T.V. HONEY

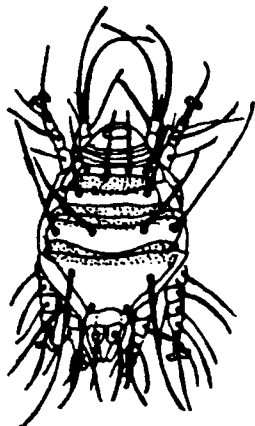
Every time television advertising of honey is discussed by New Zealand beekeepers, two arguments are put forward against it. First, it's said such advertising is too expensive, not only for individual beekeepers, but for the industry as a whole. Second, many beekeepers argue they receive lots of free advertising in supermarket ads, so why should they shell out any money themselves.

While anyone who has thought about it will realise that continuous "specialing"



"As the workhorse of the beekeepers' association, I say 'noy!'"

is no way to increase honey prices, the Greymouth conference was shown a video which should put to rest the first argument as well. Airborne Honey of Leeston (near Christchurch) has financed a 30 second T.V. spot promoting their product which is now showing throughout the South Island. It's a wonderful advertisement for our major product and especially the many ways it can be used. Congratulations to Peter and Jasper Bray for showing the nay-sayers it can be done.



Acarapis woodi (female)  
(500x)

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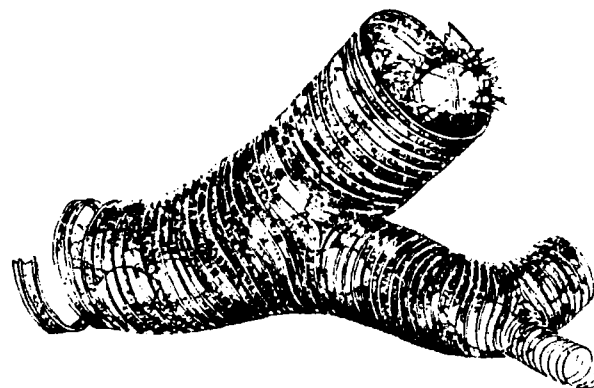
## THE SPREAD OF ACARINE DISEASE

It's been over a year now since the discovery of the tracheal mite Acarapis woodi in Texas, but many readers may not have been aware of the problem and the developments which have taken place since then.

### CAUSE

Acarapis woodi is a microscopic parasite which infests the tracheae, or breathing tubes, of honey bees. The mites spend most of their lives inside these tracheae with the females only venturing outside the bee following mating. The mites spread to other bees by climbing out to the ends of bee hairs and waiting for another bee to come by. The mite then enters the new bee's tracheae and continues the infection by laying 2-4 eggs.

There is much controversy about the supposed effects of these mites. Blockage of the tracheae no doubt restricts the oxygen flow to important bee tissues such as flight muscles. And spring dwindling is said to occur in bees confined over winter with the mites. Some even believe that the mite was the cause of the Isle of Wight disease which so devastated British beekeeping at the turn of the century.



sketch of the trachea containing acarine mites.

### DISCOVERY

While Acarine disease had been present for years in Europe, the Americas were felt to be free of the disease until a chance discovery was made in Mexico in 1980, 150 miles south of the U.S. border. Routine samples were taken for the next several years in the States and the mite was finally found in Texas in July, 1984.

### CONTROL

Initially, US officials tried to control the mite by undertaking a 2,500 colony depopulation program in Texas. Because the mite cannot live outside a live host, colonies could be killed with cyanide and then restocked with mite-free bees. There was a major problem, however, in detecting the mites. Because symptoms of the disease are so difficult to observe, 50 bee samples from each colony had to be dissected under a microscope.

### SPREAD

The destruction program soon lost its importance as new discoveries of the

mite were made in states throughout the US. To date the mite has been recorded in at least 15 different states from Maine to Florida and close to the Canadian border in North Dakota. While package bees are one source of the spread, more important is the extensive migratory beekeeping practiced by commercial beekeepers in the US. Some hives travel as far as 10,000 miles each year from southern overwintering sites to pollination contracts and finally to northern honey flows.

#### FUTURE

While individual states are using various quarantine procedures to control the mites' spread, the federal government has lifted its quarantines. The Canadians have insisted on strict certification procedures for queens and packages they import and are obviously quite concerned about the future. Recent findings of mites in supposedly mite-free hives in New Jersey highlight the Canadian concern. Many US beekeepers are now resigned to the problem and it will be interesting to see how seriously the mite actually affects colonies in the US.

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### WOOD PRESERVATION

We all know that wood preservation is a must under New Zealand conditions and Kiwis have led the beekeeping world, particularly with paraffin dipping. Many people don't realise, however, that the best wood preservation requires a two step process - "envelope" protection (such as paraffin) to prevent the wood from becoming wet and a fungicide to prevent rotting - fungi from taking advantage of the condition if it occurs.

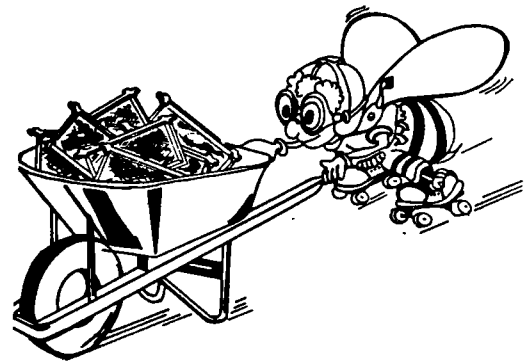
Paint is used overseas to provide "envelope" water-barrier protection. If done properly with both primer and top coats it's expensive and if chipped can lose its protective function.

Paraffin is a better alternative and the heat applied probably does have a sterilizing affect on fungi. So long as the protective zone (it doesn't penetrate straight through) isn't breached it should prevent rot. It doesn't, however, have a fungal toxicity of its own.

Beekeepers who really want to protect their woodenware investment use a fungicide as well. Metalex or Tricunal are common trade names but a good alternative can be home-made using copper sulphate, the "Blue Stone" commonly used for treating foot rot in sheep. The material should be dissolved at 5-10% in water and as with all these treatments the wood should be soaked (after all cuts have been made but before assembly) and allowed to dry. The solution should be stored in a plastic container as the copper sulphate will react with galvanized metal, copper or steel.

Even these fungicides don't penetrate fully into the wood, though. Pressure treatment is the only way to achieve that. Every beekeeper should be aware now of the consequences of using tanalised timber treated in such a way. The arsenic salt which leaches out is very toxic to bees. Boron treated timber can be used, but the boron salts leach out very quickly unless the wood is also well painted and maintained.

A new product on the market has impressed me as a compound which provides a water barrier as well as a fungicide. It's Woodlife II, produced by Roberts



NZ, Ltd, AUCKLAND. The product is water-soluble and can be brushed or dipped (dipped would no doubt be better for hives). It can also be painted over and the paint goes further. While it's available pre-mixed, beekeepers should use the concentrate form. Using the concentrate the cost per super is around 27¢, about half the cost of normal preservative plus wax dipping.

My only misgiving was regards its prolonged effectiveness. It just hadn't been out long enough. Recent tests conducted by the Forest Research Institute, however, have shown it to have an equivalent fungicidal effectiveness to that of tanned timber (without any bee toxicity).

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### PUBLICATIONS OF NOTE

- \* Pollen Analysis of New Zealand Honey -  
Dr Neville Moary, DSIR, Lincoln, has recently published this definitive article based on a three year study of New Zealand honeys. Manuka samples from this district were found to contain over 70% manuka pollen, but also included a whole list of other pollens including lotus, clover, willow, and even grasses. Copies available from -

New Zealand Journal of Agricultural Research  
P.O. Box 9741  
WELLINGTON  
price : \$2.50



- \* Honey and Pollen Flora - an Australian book, written by Alen Clemson, this looks to be an excellent identification guide, especially regarding wattles and eucalypts. The 658 colour photographs must be a record for a bee-keeping book. Available from :

Pender Beekeeping Supplies  
P.M.B. 19  
MAITLAND, N.S.W. 2320  
AUSTRALIA  
price : AUS \$45.00

- \* Pollination of World Honey Crops - edited by Eva Crane and Penelope Walker of the International Bee Research Association, this guide contains information on pollen requirements for over 400 plants grown in different parts of the world. Published with the financial support of the N.Z. Ministry of Foreign Affairs. Available from :

I.B.R.A. Representatives  
Andrew Matheson, MAF, Nelson  
Trevor Bryant, MAF, Tauranga  
price : NZ \$36.00

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### ALSO HEARD AT CONFERENCE

- \* "Definition of an expert :  
- X is the unknown quantity  
- spurt is a drip under pressure"

\* "If land-based industry is production-led, rather than market-led, we will not be able to retain our current standard of living in this country."

- David Butcher  
Parliamentary Under-Secretary for  
Agriculture

\* "Some people even seem to think there's some spare honey around at the moment."

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### MELLITIPHIS

Has anyone out there seen any tiny orange-brown mites running around on the top bars? If so, you've seen Mellitiphis alvearius, a common mite which caused quite a stir when it turned up in recent package bee shipments to eastern Canada.

The mite has a superficial resemblance to Varroa mite, the much-feared pest now present in Europe and South Africa. But Mellitiphis is quite harmless; it's just that there's not much known about the beast.

MAF has plans to help queen producers reduce the incidence of Mellitiphis in next year's export shipments but before we proceed we need to study the mite's biology.

Both Dave Manson, a MAF scientist at Lynfield and Dennis Anderson, our Bee Pathologist, are currently looking into the mite. They'd be grateful for any samples you might find. I'd suggest using a moist grafting brush (or similar) to pick the mites up. You can send the samples to me here in Whangarei and I'll forward them on.

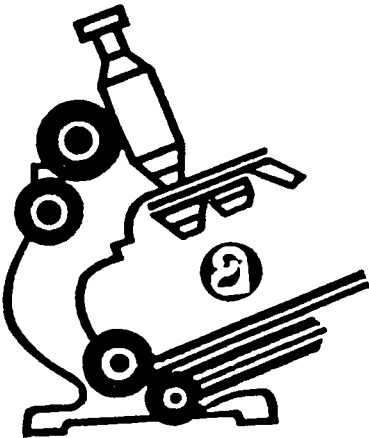
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### AFRICANISED BEES IN CALIFORNIA

Many of you may have seen a t.v. report a while ago about the discovery of Africanised bees in California. As usual the report was sensationalised but there's no doubt the bees were actually the infamous "Killer Bee."

A single colony was found in an oilfield in the southern San Joaquin valley near Bakersfield, California on 14 June. It seems a heavy-duty equipment operator noticed several small animal carcasses and then a rabbit being chased out of its burrow by bees. The worker scooped up a load of oil-soaked dirt, plugged the hole, and contacted local authorities.

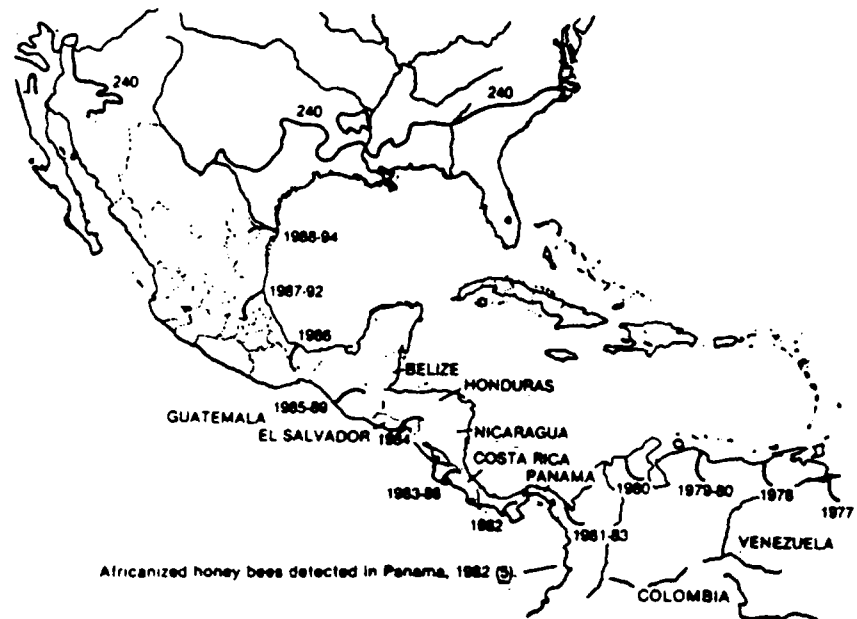
Samples of the bees were identified by the USDA's Baton Rouge Bee lab as "highly Africanised" and then the fun began. Over a hundred apiaries in a 400 sq. mile area were sampled and "challenged" by aggression tests, but no further bees of the strain were found. The burrow was excavated as well. The nest turned out to be very large, even by Italian standards - 20 combs in a space 5½ ft long by 1 foot wide. Officials said that the size indicated the colony had been in



the burrow for over a year.

It is now believed that the hive was a chance introduction, probably coming in with oil rig equipment from South America. Nevertheless, it focused attention on what will be a major problem in the U.S. by the end of the decade. The Africanised bees are right on schedule in their migration through Central America and are due in the southern U.S. by 1988-94. A recent study conducted by the U.S.D.A. predicts losses to American beekeepers of US \$26-58 million per year once the bee arrives.

### Predicted Spread of the Africanized Honey Bee



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### FOOD LABELS AND HONEY CERTIFICATION - QUEENSLAND

- \* Queensland now requires food labels to bear the full name and address of the manufacturer as well as the name and address of the Australian importer. This may mean having different labels for New Zealand and Australia as well as causing further congestion on small labels. The new regulation is based on a model prepared by the Australian federal government. Queensland is the first state to adopt it and others can be expected to follow shortly.
- \* Queensland requires an import permit for all shipments of honey - even personally accompanied gift packs. Other states (with the possible exception of Western Australia) don't require certificates at this stage.

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Recent newspaper reports have noted that as from 1 July 1985 import licensing will be removed from honey and beeswax. However, honey and wax from any country other than Niue Island cannot enter New Zealand without a permit from MAF, so the status quo remains.

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### LACTALBUMIN POLLEN SUBSTITUTE

The Dairy Board has recently come out with a product bulletin on Lactalbumin, the high protein (85%) milk product which has proven so effective as a bee feed. The product, now called ALATAL 560, can only be obtained by placing

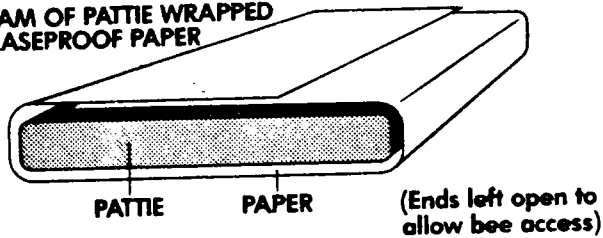
your order through :

Bill Nalins  
Customer Services  
Alaco (a Dairy Board Co.)  
Box 417  
WELLINGTON  
ph. Wellington 723630 (collect)

The price is \$3.04/kg delivered anywhere in the North Island or \$2.80/kg from the Reporoa or Opotiki factories.

The recipe for pollen substitute is : 12 kg ALATAL 560 (lactalbumin), 24 kg brewer's yeast, 70 kg sugar, water to mix.

DIAGRAM OF PATTIE WRAPPED  
IN GREASEPROOF PAPER



At this quantity it's most convenient to mix the materials in a dough mixer (bakery). Shape into 500 g patties (12 mm thick), wrap in wax paper as shown and freeze until needed.

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## GADGETS AND GISMOS

- \* New Zealand-Made Radial Extractor - With devaluations having pushed overseas honey processing machinery right through the roof, here's a Kiwi product at much lower cost. The R20 Radial Extractor, manufactured by Hardback Engineering, is stainless steel with a dual variable speed motor and two automatic timers. It sells for \$2,350. Contact :

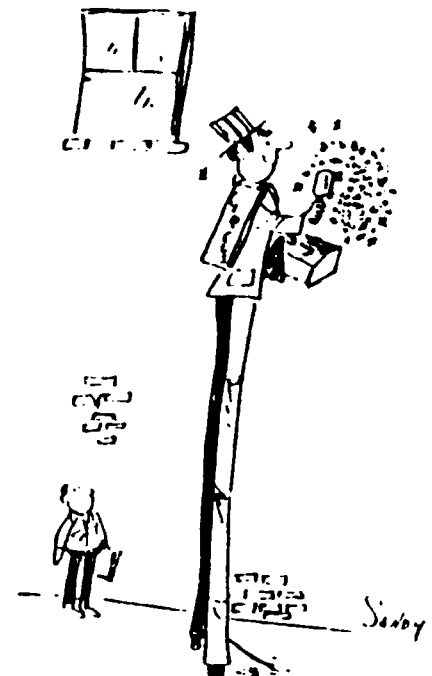
Hardback Engineering  
'Cricklegrass'  
Woodside Road  
OXFORD  
ph. Oxford 24 388

- \* Norwegian Honey Loosener - Dudley Ward is importing these machines which look to be just the thing for thixotropic Manuka. The machine is hand-driven (optional air drive) and uncaps as well as stirs the honey in each individual cell. Contact :

Dudley Ward  
97 Guy Street  
DANNEVIRKE  
ph. Dannevirke 8301

- \* Hydraulic Crane Remote Control Unit - This one's been around for several years in Canterbury, but now John Syme, the inventor, is marketing it nationwide. John almost dumped a load of bees on himself one day using the normal "jerky" controls on his Hiab. So he designed micro-pneumatic controls with the added feature of control from the load itself. It really does the trick and can be adapted to Palfinger loaders as well. Contact :

John Syme  
Staveley  
1 R. D.  
ASHBURTON



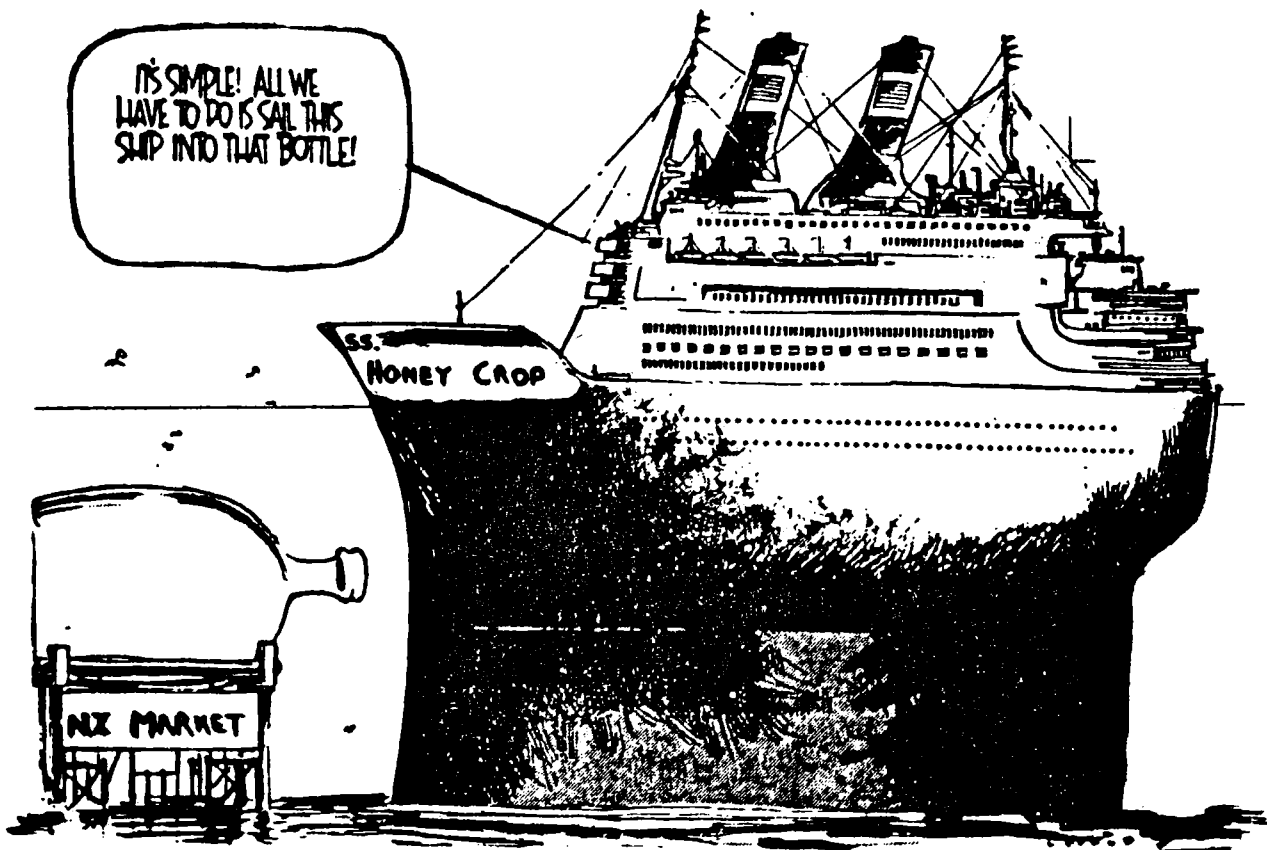


Honey Extractor and Cappings Spinner - Another John Syme invention, this time a 100 frame radial extractor which doubles as a cappings spinner. The idea is that you can extract all morning and then pump your cappings back into the machine at lunch time to be spun. The cappings appear to be very dry - one test showed only 2.2 kg of honey remained in processed cappings from 1 tonne of clover honey. Contact : (see above).

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DISCLAIMER : Mention of any product or supplier in this newsletter does not imply endorsement by MAF, nor recommendation over similar products or suppliers not included.

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Ministry of  
Agriculture & Fisheries  
New Zealand

Inspector of Apiaries,  
Ministry of Agriculture and Fisheries  
Private Bag, WHANGAREI

Date .... / .... / ....

Dear Sir,

As requested by the Apiaries Act, 1969 (Sec. 18, 19), we report the finding of American Brood at the following apiary:

Date Detected .....  
Site Number .....  
Land Owner .....  
Road and District .....  
Number of Hives Found .....  
Action Taken .....

Yours faithfully

Registration No. A .....

I require more of these forms YES/NO



Ministry of  
Agriculture & Fisheries  
New Zealand

Inspector of Apiaries,  
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