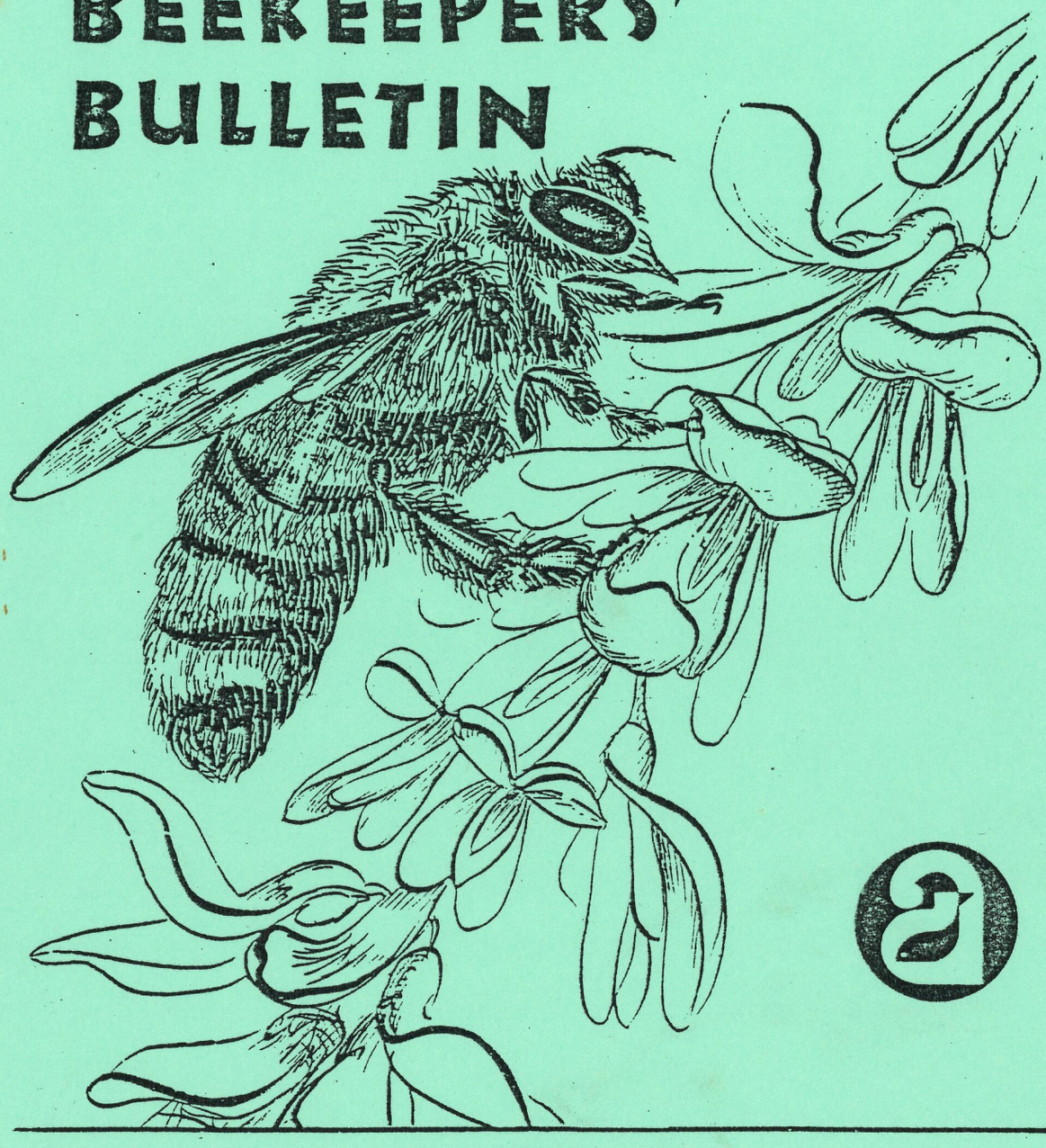
THE BEEKEEPERS' BULLETIN



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WHAT'S HAPPENING TO BEEKEEPING?

Beekeeping's certainly different today from what it was when you started. Lately that change has accelerated rapidly, and it seems that we're involved in a very different ball game now from the one we were in even five years ago.

One thing's for sure, it's no longer enough to be a good beekeeper- today you need much more to run a successful beekeeping business. If large and powerful corporations can go bankrupt, then so can you.

Many beekeepers are making the necessary adjustments. Cash books, cash flow forecasts, budget forecasts are as important as a hive tool and smoker. Get sound financial counsel from your professional advisers and use it. The financially prudent, not necessarily the least indebted, shall survive.

Budgetary errors are now critical. Make your decisions with all the financial facts, no matter how emotionally hard they are to face up to.

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IN THIS ISSUE

GST, ERP, minimum hive standards for kiwifruit pollination, the latest news from North America, Nosema levels in queens, going to the Rural Bank, and lots of other bits and pieces. Read on .....

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KIWIFRUIT POLLINATION HIVES

There's been quite a lot of talk about a "standard hive" for kiwifruit pollination, without any real consensus on what it really is. I've just finished investigating the question of what makes a good pollination hive, and have come up with the following recommendations for kiwifruit.

* Brood area At least 7 000 cm^2 of brood, which is four full-depth frames packed out with brood (wood-to-wood, as the Canadians say).

  Now it's very deceptive to talk in frames that are theoretically packed out, as these never occur in practice. A really full frame is usually no more than 85% full, because of corners and the top or bottom strip being missed. "Good" frames are usually about 60% full - a surprising figure, but one which can be verified by acutally measuring the brood area.

  This required amount of brood is equivalent to seven "good" (60% full) full-depth frames, or nine three-quarter depth ones.

* Age of brood At least a quarter of the brood should be unsealed. This young brood provides the most stimulus for bees to collect pollen.

* Position of brood Most of the brood should be in the lower box, as here it encourages foraging bees to collect more pollen.

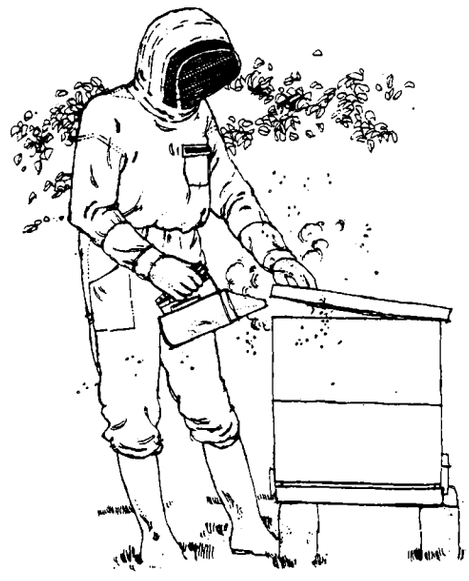
* Queen Colonies must have a young, prolific queen to reach the required brood area.

* Bee numbers At least 30 000 bees - that's about 12 full-depth frames, or 16 three-quarter depth ones. Obviously there's no place for single-deckers in a kiwifruit orchard.

* Empty combs Empty combs to encourage colony expansion.

* Honey stores At least three frames (or equivalent).

* No AFB



The brood area is the most important criteria, along with the need for 25% of it to be unsealed. What does this mean in egg-laying rates? This table gives the answer:-

Daily egg-laying rate	1 070	1 430	1 791
Cells with brood	22 500	30 030	37 620
Area of brood (cm^2)	5 250	7 000	8 770
Equivalent FD frames (packed out)	3.0	4.0	5.0
Equivalent 3/4-D frames (packed out)	4.1	5.5	6.9
Number of 60% full FD frames	5	7	8
Number of 60% full 3/4-depth frames	7	9	12
	Inadequate	Minimum standard	

It needs a young, well-reared queen to be laying close to 1 500 eggs per day. One of the most important ways of making hives for KF pollination is to ensure they have young, well-reared queens.

Nelson beekeepers recently had a very successful field day examining what these standards look like in practice. Those present looked through a selection of hives provided by Waitui Apiaries and Riwaka Apiaries. The hives will probably never be the same again, but it was a worthwhile exercise.

The main lessons?

- it's hard not to over-estimate brood area. As I said above, "good" brood frames are (surprisingly) only 60% covered on average. It's frames like that that we use as a guide for pollination hives (7 FD needed, or 9 3/4-depth).

- bee strength can be estimated fairly reliably, by counting the bee spaces between frames that are filled with bees.

For instance:

Number of bee spaces filled with bees:

Top box:	top 8;	bottom 10;	average 9
Bottom box:	top 8;	bottom 6;	average 7
		TOTAL	16 frames of bees

- often over-wintered hives need brood and honey taken out to make them good pollination units. Otherwise they become too crowded, the queen's laying rate declines, and there's not sufficient young brood to stimulate pollen-gathering.

- Africanized killer bees and EFB are easily recognised when suitably labelled, but chalkbrood takes a little more spotting.

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KIWIFRUIT POLLINATION

Once again, kiwifruit pollinators must supply MAF with a list of contracts, BEFORE hives go into the orchard. Forms for this were sent out at the end of October. If you didn't receive one, and you supply hives, contact MAF.

All kiwifruit pollination movements must be reported, even those for which no money changes hands.

Your co-operation will be invaluable in the event of a disease outbreak. It also helps us to predict demands for the future.

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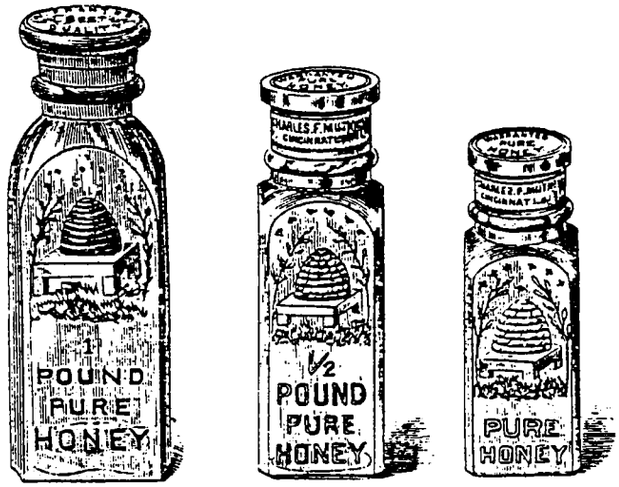
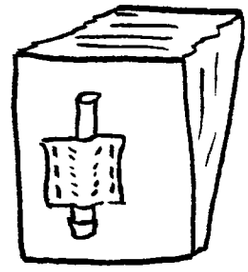


MARKING HIVES

An excellent marker for bee hives is the Alflex ear tag marker pen. This is a felt pen with a spring loaded tip, which you can push up and down and release the amount of ink you want. Marks will stay on hives for at least 2 years without fading.

How about stapling a piece of leather or vinyl to the back of your smoker - as in the diagram. Then you have the pen with you whenever you need it. One word of warning - don't carry these pens in your pocket. The caps can come off but the marks do not come off your clothes or overalls!



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The only good thing about being imperfect is the joy it brings to others.

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It is now possible to buy small, plastic vials which contain synthetic Nassanof pheromone. That's the one that bees use to attract bees (and swarms) into a hive. The product has applications where beekeeping relies on catching swarms.

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What are the worst four years of an Australian teenager's life?

The fifth form.

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ERP

In the last "Beekeeper's Bulletin" I promised to tell you more about ERP : MAF's emergency response procedures.

MAF's Animal Health Division already has a type of ERP to cover exotic animal diseases like foot and mouth disease. Now Advisory Services Division is setting up a similar system to cater for:-

- exotic plant pest or disease outbreaks (such as fruit fly),
- exotic honey bee pest or disease outbreaks,
- climatic emergency (such as flood or snowfall).

Each district (eg Nelson, Marlborough, West Coast), has an ERP committee formed. The committees consist of:-

- a controller and deputy controller, who are responsible for overall co-ordination of the team, and liaison with other organisations (eg Police, MWD, MOT, local bodies, industry groups).

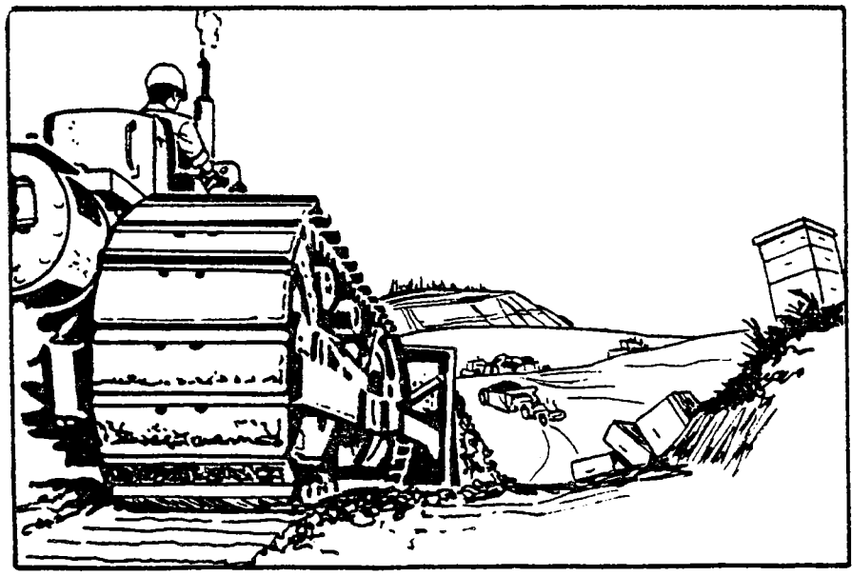
- a personnel manager, who has the job of arranging the large influx of extra staff that might be necessary, and caring for their welfare once they arrive.

- a media/public relations officer, with responsibility for releasing press statements and handling the inevitable hordes of media enquiries.

- a technical officer, with expertise in the relevant pest or disease (plant or honey bee). Their job is to guide the team on the best actions to take from a technical point of view.

Each team member has a "job card" written to cover vital actions for the first seven days of an emergency.

So you can see that the ERP teams are at a stage of readiness, so that crucial time is not wasted in the early stages of an emergency. In the event of a honey bee disease outbreak, many of MAF's resources outside the apicultural section will be used.



SPRAY WARNING

A recent report in the American Journal of Ophthalmology tells the story of a farm labourer who was using a Bacillus thuringiensis spray. Some of this splashed into an eye, where it caused a corneal ulcer. This preparation was previously thought to have been harmless to humans.

Bacillus thuringiensis is in the orchard spray Thuricide, which is used over flowering in kiwifruit and raspberry orchards to control leafroller. Be careful if you are in orchards during or just after this chemical is used.

B. thuringiensis is also used in the wax moth control spray Certan, which may be released on the New Zealand market soon.

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DISEASE REPORTING

The use of disease reporting forms has really helped our control programme. Beekeepers are generally being much more prompt with reporting B.L.

In one case already this spring, we were able to locate a major source of AFB (11 hives in two apiaries, some dead and robbed out). This was possible simply because two beekeepers, unknown to each other, found disease and reported it straight away.

Don't wait until your spring return is sent in before notifying AFB. Use the notification forms, and summarise the disease on your return. It won't be double-counted.

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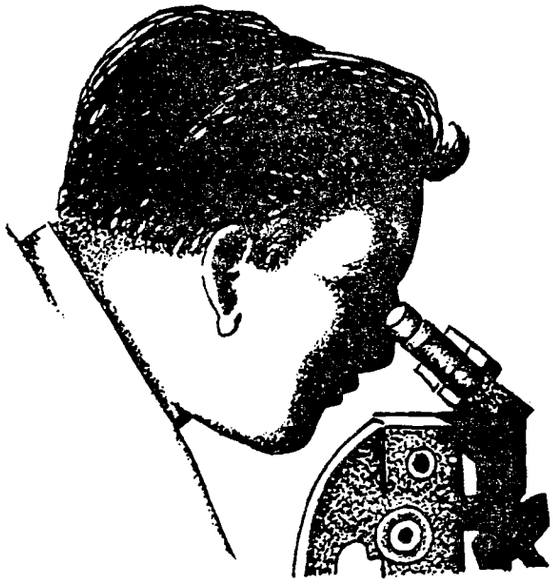
DISEASE DIAGNOSTIC SERVICE

The Nelson Polytechnic is now offering a microscope diagnostic service for AFB (Bacillus larvae). They will be able to check samples that you suspect are AFB, hopefully within three working days.



To send a sample for analysis, simply use a toothpick or matchstick to pull out the suspected larva or pupa. Place it, along with the stick, in a small plastic bag (sandwich size). If desiccated scale is present, break this away from the cell wall and include it as well.

Seal the bag in some way (either by taping, twisting, or simply tying off the end), and send it in a sealed envelope to:-

Julie Scoggins
Science Department
Nelson Polytechnic
Private Bag
NELSON

Don't forget to include details of where the sample was obtained as well as your name, address and phone number. Every effort will be made to give you a prompt reply.

This service costs you the princely sum of 50 cents. Please send this in the form of two, 25 cent stamps. One is needed for the return letter anyway.

Please do not send me any more samples for AFB confirmation. The Polytechnic are offering this service to relieve me of routine diagnosis.

Once the BL has been confirmed by the Polytech, you will still need to notify MAF. Please use the disease notification forms as usual.

Samples of possible exotic diseases, such as EFB, are best handled by sending me the entire comb. I will take samples and have them checked elsewhere.

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NOSEMA LEVELS IN QUEENS

Nosema infection of queens causes supersedure after introduction. That much we know, but how widespread is the problem in New Zealand?

We can't answer that question at the moment, but MAF has a "queen bee export advisory programme" which should help to fill the gap.

This is part of the AAO's co-ordinated objectives that I wrote about in the last issue.

Cliff van Eaton is getting five queens from each New Zealand producer, and testing them for:

- Nosema levels,
- weight,
- ovariole numbers,
- spermathaeca volume,
- quantity of sperm.

We do have some overseas results to look at. In Manitoba, Cam Jay (who was in New Zealand two years ago) and Don Dixon examined hundreds of queens and packages that were shipped from the U.S.A.

Up to 18% of the queens were infected with Nosema (a mean of 8%). This is lower than I would have expected, but remember that clean queens mixed with Nosema-infected workers become infected within a few days.

And here's the chilling part : up to 67% of workers in packages were infected (a mean of 48%).

To protect queens against Nosema-induced supersedure, fumagillin should be fed:

- in mating nucs,
- to colonies used for supplying attendants,
- to caged queens after mailing.

Fumagillin is the active ingredient in Fumidil-B or Nosem-X. Beware of other products such as Nosemack or Humatin, which are not effective against Nosema. Here is a list of dos and don'ts for using fumagillin products:

* Do use the dose as stated on the label. I know the product is expensive, but you're better off not feeding it at all rather than diluting the product down.

* Do keep the jars of powder in the fridge or a cool place, where it will last 2-3 years. Don't ever place it in the sun.

* Do feed fumagillin in sugar syrup. It is not effective in patties or with dry icing sugar.

* Fumagillin will last 3½ years in sugar syrup provided it is kept in a cool room (4°C). At room temperature (20-32°C) it will retain its activity for a month.

* Fumagillin will remain active in a hive for up to 8 months.

* Do feed medicated syrup both in the autumn and again in the spring for best control.

* Do have an active comb replacement programme as well.

Jay, S.C.; Dixon, D. 1984 Infertile and *Nosema*-infected honey bees shipped to Western Canada. *Journal of Apicultural Research* 23(1) : 40-44.

For more information on nosema disease read my article in the May 1984 *Beekeepers' Bulletin* (Vol 5. N°4).

Fumagillin: Ceracell Foundation Ltd are considering bringing in bulk supplies of fumagillin for members of the NZ Queen Bee Producers' Association. The more people that put orders in the cheaper the product should be. Contact Stephen Mahon P O Box 58114, Auckland (ph (09) 274 7236) if you think you might want any fumagillin this autumn.

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BEYOND THE GREAT WALL

China now has about 5 million colonies in hives, and producers over 100 000 tonnes of honey and 400 tonnes of royal jelly per year. Imagine what 400 tonnes of royal jelly must take to produce!

Average annual honey production is 5 kg for fixed comb *Apis cerana* colonies, 15-20 kg for *A. cerana* in movable-frame hives, and over 50 kg for *A. mellifera* in movable-frame hives.

The average beekeeper has about 30 hives, and manages them intensively. Pollen and propolis are harvested in addition to honey and royal honey.

Varroa and *Tropilaelaps* mites are both widespread in China. Their effects are reduced by control measures which include:

- removing capped brood, and keeping it separate until the brood has emerged;

- fumigating emerged bees and unsealed brood (capped brood can't be treated) with various chemicals or Chinese medicinal herbs;

- caging the queen for 21 days to break the brood cycle and allow fumigation to be effective.

THE LEARNER'S DILEMNA

There is something I don't know that I am supposed to know. I don't know what is it I don't know and yet am supposed to know and I feel I look stupid if I seem both not to know it and not to know what it is I don't know. Therefore I pretend I know it.

This is nerve-racking since I don't know what I must pretend to know.
Therefore I pretend to know everything.
I feel you know what I am supposed to know but you can't tell me what it is because you don't know that I don't know what it is.

You may know what I don't know, but not that I don't know it, and I can't tell you. So you will have to tell me everything.

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ANNUAL HIVE INSPECTION STATEMENTS

Here's an idea for beekeepers with a lot of apiaries, say more than 30 or 40. By the time you've added and deleted a few apiaries each year, your return looks a bit like a dog's dinner. The sites aren't in any logical order, which makes working through it a chore.

A new numbering system will let you:

- keep apiaries in particular areas or runs together,
- add or delete apiaries to a group without altering the numbering for all your other sites.

Here's an example of how it's done. A beekeeper might have:

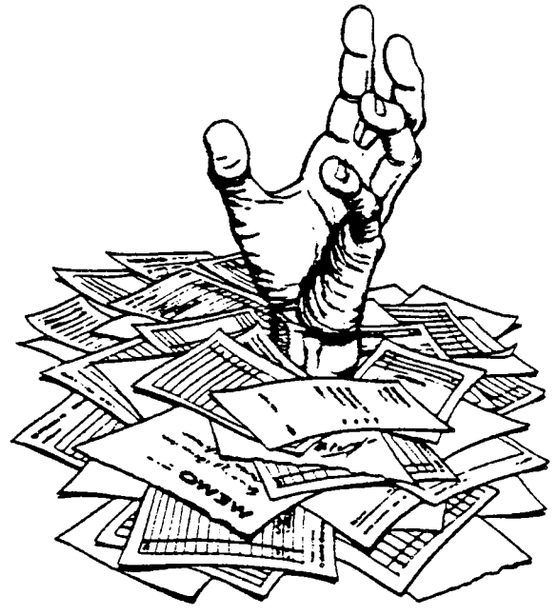
12 sites around Waiorongomai,
15 sites in the Kibwezi area,
3 yards at Upper Timbucktoo,
27 apiaries in Fortitude Valley, and
7 sites at Scott Base.

The sites for our peripatetic beekeeper would be numbered as follows:-

Waiorongomai:	101 - 112
Kibwezi:	201 - 215
Upper Timbucktoo:	301 - 303
Fortitude Valley:	401 - 427
Scott Base:	501 - 507

This means that groups are kept separate, and changing sites in one area doesn't mean the other sites have to be renumbered. It helps our computer operator, and it helps you to have your sites listed in a logical sequence.

You might like to try it this year - arrange your sites in groups, and either number them yourself or leave us to number them. Large businesses only please.



FROM THE PAST

Wednesday afternoon a swarm of bees, belonging to Mr. Tubb, farmer, of Denn-Court, near Oxford, having just taken flight, David Jones, his servant, who was moving in the adjoining meadow, followed them, tapping his scythe with his whet-stone, when his foot unfortunately slipping, he fell on his scythe, and cut open his belly in so shocking a manner, that his stomach and bowels rushed out; the latter of which were much wounded. All possible assistance, that his deplorable situation required, were afforded him, but in vain. He languished till the following night, and then expired in great agonies.

Bath Chronicle
15 July 1784

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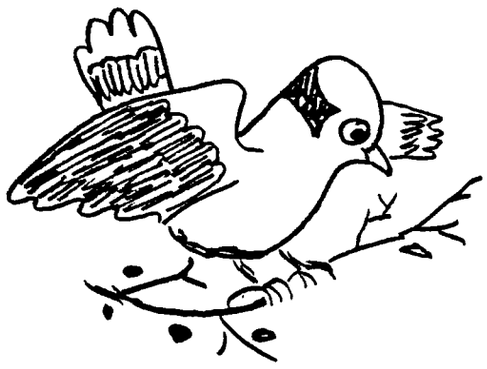
HOT FOOT

This is not a tribe of American Indians, but rather a new bird repellent.



Hot Foot is for use in buildings, trees, or wherever roosting birds are a nuisance. The product comes in 300 g tubes (for use with a caulking gun), or in 5 litre cans of liquid for large flat areas.

Hot Foot is approved by the Health Department, SPCA, Pesticides Board, and Wildlife Service. It is safe for humans and animals, and birds too for that matter. Despite the product's name it doesn't give birds hot feet - but they don't like landing on the stuff for all that. It will last for five years.

And the cost? A 300 g tube is $16.60 and a 5 litre container $164.00. Freight is $1.00 per tube or $1.25 for two or three tubes. Carton lots are freight free (20 x 300 g tubes or 4 x 5 litre cans).

For enquiries contact:

Director,
Western Farmers Ltd,
P O Box 188,
FIELDING

Phone: (063) 39 146

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GST

A Great Service to Taxpayers or a Gigantic Swindle Tax? Opinions might differ but like it or not, the countdown to GST-day has begun. In the next few months you'll have to start putting your house in order ready for 1 October next.

This article on GST outlines some of the tax's important features.

What is GST?

It's a comprehensive tax on goods and services. Comprehensive because it includes virtually everything, and on goods and services because it covers both tangible products (goods) and intangible ones (services).

It is not a retail sales tax, like that in the USA where a set percentage is added onto the bill at the final point of sale. Rather it is imposed at each sale or transaction, but effectively is levied only on the added value. The example I've given later will illustrate this principle.

Why a GST?

- New Zealand currently gets a huge proportion of tax (63%) from personal income tax. The introduction of GST will allow a reduction in average and marginal personal tax rates.

- An invoice-based GST system should stamp out a lot of tax evasion that occurs through the "underground economy".

- GST will replace most of the existing wholesale sales tax system - a hidden component of prices which has come about largely through historical accident and has no real logic to it.

How does GST work?

Let's look at a hypothetical example, to see how the 10% GST is calculated and paid at various steps in the life of a product:

Step	Cost of product	GST calculation	GST paid to IRD
1. Wholesaler imports a product which costs $100.	$100	$10	$10
2. Wholesaler adds $40 mark-up (to cover costs and profit margin) to the $110 total cost of the product.	$150		
3. Distributor buys product at $150 plus 10% GST.	$165		
4. Wholesaler collects $15 GST from the distributor, but has already paid $10 GST. Therefore pays the balance to the IRD.		$15-$10	$5

Step	Cost of product	GST calculation	GST paid to IRD
5. Distributor sells the product to a retailer for $200 (to cover overheads) plus $20 GST.	$220		
6. Distributor pays IRD the $20 GST collected from the retailer, less the $15 already paid.		$20-$15	$5
7. Retailer adds mark-up to the cost, and sells the product for $500 plus $50 GST.	$550		
8. Retailer has collected $50 GST from the consumer, but has paid $20 already. Therefore owes the IRD $30.		$50-$20	$30
	Total GST paid to IRD		$50

At each step, the article increases in price by the mark-up plus a 10% GST. Why not just charge the tax once at the step where the retailer sells to the consumer? The answer was provided by overseas systems and showed that when the intermediate steps are avoided, consumers by-passed the retailer (and GST) and purchased directly from the warehouse. This penalises smaller consumers without the ability to do that.

In New Zealand's GST system, the only expense incurred by the people in the middle of the system (wholesaler, distributor, retailer) is the administrative cost of handling the tax. They do not pay the GST, the end-user does. They merely pass it down the chain.

How do you claim GST back?

In the previous example, the distributor paid $15 GST to the wholesaler, yet received $20 GST from the retailer. How does the distributor prove payment of the $15 GST, so only a payment of $5 (not $20) is made to the IRD? There are two requirements:

1. the business must be registered
2. proof of payment of the GST is needed.

1. Registration

All businesses involved in taxable activities with turnovers exceeding $24 000 must be registered with the IRD. Registration begins on 1 August 1986 and businesses will have a month to register. The IRD will use a business's IRD tax number as the registration number.

If turnover is less than $24 000, registration is voluntary but could be beneficial if the business is in competition with other,registered,businesses. A registered buyer will prefer to buy from a registered seller, if the GST paid is to be claimed. Purchases from unregistered sellers prevent the refund of the GST paid.

2. Proof of payment - the invoice

If GST is to be claimed all transactions must be traceable, which generally means that an invoice is required. Invoice numbers scribbled on envelopes or inadequate invoicing will not be accepted. Very clear rules have been drafted on what the invoice must contain:-

(a) Invoice number
(b) Supplier's name and address
(c) Supplier's registration number
(d) Purchaser's name and address
(e) Date the invoice was issued
(f) Date of supply if different to (e)
(g) Description of goods or services sold
(h) Quantity of goods or services sold
(i) Price
(j) GST paid
(k) Total price

For sales exceeding $100, all of (a) - (k) are necessary, whereas only (b), (c), (g) and (k) are required for purchases of under $100. By placing the onus on the buyer to provide the information, the IRD has transferred the responsibility of providing accurate claims back to the business. Remember, invoices must now be kept for 10 years.

For purchases of less than $10, no invoice is required, just the price (plus GST). The IRD will be watching for excessive claims in this category.

A minor change on those yellow credit card receipt slips will bring them up to the acceptable invoice standard - the main point is that the transaction must be verifiable.

When must returns be submitted?

For turnovers of less than $250 000, the IRD offers you the choice of submitting returns once every 6 months or once every two months. Note: If an application is not lodged, returns will be expected bi-monthly. The two-monthly cycle is mandatory for businesses with turnovers exceeding $250 000.

Payment of GST is due on the first day of the second month following the end of the period. Although this sounds ridiculous, it is not complicated. For example, if the period ends on 30 April, the GST should be paid by the first day of June (ie the second month after the period ends). Severe penalties, not the attractive 10% penalty of the past, exist for late payment of GST (eg on 2nd June).

"I don't normally do this sort of thing, but I've just received my GST demand"

What tax categories are there?

The government has made this as straightforward as possible. Goods and services are either:-

(a) taxable

(b) exempt (this is not the same as zero-rated, see later)

Almost all goods and services will be taxable, but the notable exceptions are land sales, private dwelling rentals and financial services (ie those dealing in money, such as banks, stocks and shares). Because banks won't charge GST, but will still incur the extra costs for their goods and services, they will probably increase bank charges. This rise should be lower than the GST percentage (if they play fair), if not, you are welcome to take your overdraft elsewhere.

Any registered person buying a capital item which is used in a "taxable activity" (business) can claim from the IRD the GST content of the price paid when making his/her return.

For example, if a business bought a $25 000 truck (cost $25 000 + $2 500 GST), the GST portion is recoverable because the truck is used in the business. However, if the truck was later sold, whether by auction, through the newspaper or at a clearing sale, it would be subject to GST.

The zero rating is applied to all goods and services which are not subject to the tax, that is no GST is paid by the end-user. A good example is exports. Although exporters pay GST on their purchases, they will not recover it when selling their exports. Instead they have the pleasure of receiving cheques from the IRD for GST paid on the exporter's purchases.

If you are selling honey (or pollination services) to an exporter, you might like to suggest that this benefit be spread around a bit.

Another point - if the business is sold as a going concern, GST is not payable, but if it is sold piecemeal, then GST must be paid. This makes sense because it stops unnecessary GST transaction between the buyer, seller and IRD where the buyer would pay GST and then claim it back as a business expense.

When is GST due?

During submissions to the GST white paper, it was shown that the time of payment and the time of supply could be different. Market gardeners are unaware of their returns until their produce is auctioned. Dairy farmers on daily supply receive advances during the year and a settling payment once a year. This called for a change in the white paper and at present, GST is due at the earlier of either:

- the time an invoice is issued, or
- the time any payment is received by the supplier.

What other effects will GST have?

The impact on cash flow depends on the length of your return period, and the ratio of cash to credit sales.

- when selling packed honey, you hold the extra 10% of sale price for up to 6 months before paying it to the IRD.

- however, GST worsens your cash flow if you make significant credit sales on extended payment terms or have a lot of bad debts (poor payers).

One of the biggest advantages that I can see is that GST will force businesses to keep better records. Every transaction will have to be recorded in detail on a standard invoice

form, and beekeepers who aren't using some sort of cashbook and invoice/receipt folder, will have to come into the 19th century at last.

Further information

I prepared this article from a talk I wrote for a recent Telford course, and an address given by Russell Poole to an Otago beekeepers' field day.

No doubt there will be plenty of seminars run on GST by accountants, small business agencies, polytechnics and the like. Use them - even though they won't have a beekeeping bias, they will be helpful.

The IRD has some information available. One piece is the Public Information Bulletin N°139 (September 1985), a free, 51-page booklet on the tax. It's not very well written, but if you can wade through the woolly verbiage you'll find out the latest on GST.

Remember:-

- learn about GST.
- don't leave it to your accountant; you can't afford not to be able to manage it yourself.
- if you are going to register, do it by 31 August 1986.

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Said a beekeeper to their partner: "It's all down there in black and white - we're in the red".

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What's the difference between an Aussie and a pot of yoghurt?

The yoghurt has the culture.

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COSTS TO BUILD 100 4-BOX HIVES	$	(Change from 1983)
400 storeys @ $7.85 each	3,140.00	38%
100 lids with iron @ $11.94 each	1,194.00	21%
100 queen excluders @ $8.35 each	835.00	33%
100 bases $ $586.95 per 1000	692.00	27%
3 600 frames @ $586.95 per 1 000	2.,13.02	35%
206 kg foundation @ $11.04 per kg	2,274.24	35%
3.6 reels frame wire $ $20.65 per reel	74.34	38%
8.3 kg frame nails @ $4.05 per kg	33.61	35%
28.6 kg super nails @ $90.43 per 25 kg	103.45	35%
Preservative at 40¢ per unit (600 units)	240.00	31%
Waxing at 8¢ per unit (600 units)	48.00	--
Paint at 53¢ per unit (500 units)	265.00	51%
	11,012.66	31%
Labour		
8 hours per hive @ $6.25 per hour	5,000	25%
	16,012.66	30%
Sugar		
1 800 kg sugar to draw 3 600 full-depth sheets of foundation at 79¢ per kg	1,422	5%
	17,434.66	27%

(List compiled by Cliff van Eaton, AAO, Whangarei)

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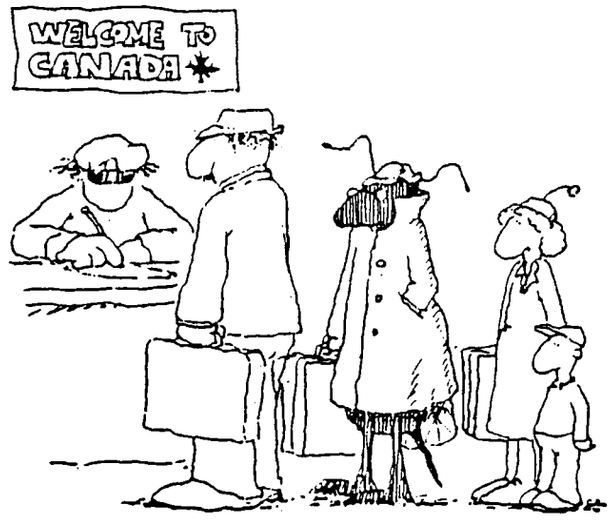
"ACARINE" IN NORTH AMERICA

For the 1986 season, Canada will still accept US packages and queens provided certain precautions are taken. Before bees can be shipped from a state, authorities there have to have an acarine inspection programme that looks at 10% or more of the apiaries and finds no mites.

If mites are found, the state must establish quarantine areas and a containment programme. Packages and queens will be accepted from outside the quarantine areas if every apiary of the producer is sampled.

But it looks like the mites will soon be in Canada anyway. One North Dakota beekeeper shifted 1 500 acarine-infested colonies back from Florida, and placed 500 of them in a site only two miles from the North Dakota/Manitoba border. There are large numbers of hives on the Canadian side of the frontier.



One way or the other, Canada is soon going to find it has the "acarine" mite. What is really worrying beekeepers there is the Africanized honey bee (now in California) and the *Varroa* mite.

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AFRICAN BEE UPDATE

Latest information from California is that:

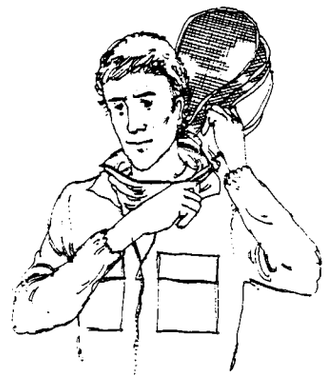
- 7 Africanized colonies have been found : three feral, four managed.
- some have been found outside the 1 000 km² quarantine zone.
- by the end of September, over 17 000 colonies had been sampled, and more than 14 000 of those cleared of Africanization.

The threat to California is not as serious as at first thought. One colony found was judged to be two or three generations away from the original introduction of Africanized bees. Genetic dilution is in progress, and Africanized traits will disappear as a result of colony destruction and natural processes.

Why hasn't this happened in South America? There many Africanized colonies invade an area together, and Africanized queens mate almost solely with Africanized drones. It's this reproductive isolation that has kept the strain relatively pure as it moved northwards.

In the Californian case, virgins produced by Africanized colonies are almost certain to mate with European drones, thus diluting the strain.

California might not get off so lightly next time, though. Eventually (in 1988 or 1989) the Africanized bee will arrive there overland, en masse, rather than through a single importation. Then the strain won't be diluted, and there's a high chance of Varroa being brought in at the same time.



Source: September and October 1985 "Speedy Bee".

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LEARNING SOME LESSONS

The editor of Speedy Bee, Troy Fore, has made some interesting observations on California's situation with the Africanized bee.

I'm sure that New Zealand beekeepers are well ahead of those in many countries, with their industry's strategic planning and goal-setting system. But we can still learn some lessons from others' experiences. Troy Fore says:

"Learning of the infestation of African bees in California led me to give our government's African bee research effort a harder look. From the perspective of a non-scientist, I see that the beekeeping industry must take action if we are to be any better prepared when the natural invasion arrives, than we now are to deal with an isolated infestation such as that in California.

The government - largely represented in this case by the US Department of Agriculture - is pursuing its own goals, which may or may not be identical to those of the industry. The time has come for the industry to develop its own goals and pursue them vigorously."

"I have gathered up all the articles we have run in the "Speedy Bee" pertaining to the Africans. Looking then over made for an interesting weekend. The most interesting part was the lack of letters from you readers responding to any of the articles we have run on the bees. We got more response when we ran an article in which someone said honey is no better for you than sugar, than we have in 14 years of articles about African bees. Why is this?

Do you feel the advent of the Africans is inevitable, so why fret over it? Or, at the opposite pole, do you still rest in the assurance that they are going to do something to stop the Africans and all this will be so much wasted effort?

Well, I'm here to tell you that neither stance is correct. In the first case, the worst case scenarios envisaged by the planners are not inevitable. We can take steps before the Africans come to blunt their effect. But we don't have much time, and there is a lot of work to be done.

In the second case, sitting back and waiting on *them* to take care of you (whoever *they* are), has never worked, and it won't this time. We must take a hand and guide our own destiny. Otherwise, it will be *us* not *them* who will suffer the consequences."

Remember what Don Gibbons had to say on this subject at the industry planning workshop at Greymouth:

" Constant vigil by us beekeepers is our protection for the future security of our industry. We can all have the boards, authorities and government departments we like, but without our own efforts the "theys" of this world are no more than innocuous expenses.

"If ever there's strife on the way,
Don't leave it to someone called 'they',
Work on it we must,
Before we go bust,
Relying on 'they' just won't pay."

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US BEEKEEPERS FACE A STICKY FUTURE

US beekeepers are in for a tough time, if a committee of the US Congress has its way. This committee has recommended that the honey price support scheme be abolished.

The honey price support scheme is a type of SMP for beekeepers, with the government effectively offering to buy honey at a certain price. Up until 1980 the scheme hadn't purchased any honey for a long time.

Since then, the strong US dollar has meant an increasing amount of foreign honey has flooded the US market. It's come principally from Mexico, China, Canada and Argentina, and by 1983 was running at 50 000 tonnes per year.

Beekeepers have been insulated from the effects of this cheap honey, by being able to "sell" at guaranteed prices. If the SMP scheme goes, then beekeepers will have to compete directly with cheap, imported honey.

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39-CENT HONEY HITS NEW YORK!

If you think the price-cutting here is bad, spare a thought for your US counterpart. There, of course, they're fighting cheap imports as well as their under-cutting colleagues.

In New York, you can now see pound jars of honey packed, labelled, and on the retailers' shelves at 39¢ (US). If you want to do the conversion, that's $NZ 0.80 per 500 g glass jar. Remember, though, that with their higher price structure it's really cheaper than that comparison indicates.

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US BEEKEEPERS FIGHT BACK

A honey promotion plan has been occupying the collective mind of the US beekeeping industry lately. They've proposed a "Honey Research, Promotion and Consumer Information Act", which became law some time ago. Now the act is with the US Department of Agriculture, who are deciding how to implement its proposals.

The new law sets up a Honey Board, which will administer a programme funded by levies on both domestic and imported honey. The levy is currently 1¢/lb, though it can go up to 4¢/lb. Sound familiar at all?

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BROOD DISEASES BOOK NOW IN STOCK

I have some more copies of the colour booklet "Honey bee brood diseases", by H. Hansen. This book is a must for all beekeepers, new and experienced. Use it for training your staff, helping you to recognise exotic diseases like EFB, and even refreshing your memory on the ones we have.

Thanks to our rising dollar, the price has dropped 10% to $13.50.

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KEEP UP TO DATE!

In the past I've mentioned the really comprehensive information services offered by the International Bee Research Association.

You can get some of the latest information from the magazine Bee World without having to be a subscriber. Reprints of the more important articles are available for sale.

Some of the interesting ones of the last year are:

- Acarapis woodi: a modern appraisal, by Dr L Bailey, (M116, $1.80). Is this mite a serious pest or of no economic consequence? Read the opinion of one of the world's foremost honey bee pathologists.

- Occurrance and distribution of chalkbrood disease, by L A F Heath (M115, $1.80). Documents the recent movements in CB around the world, and discusses its significance.

- Observations of honey bees on kiwifruit, by Cam and Doreen Jay (M114, $3.00). Results of work carried out in the Bay of Plenty in the 1982/83 season.

Prices given are approximate, and depend on the exchange rate at the time of delivery. Contact me if you would like to order any reprints.

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FIELD DAY

Don't forget the combined field day/weekend in January. It's at Rotoiti Lodge, 25 and 26 January 1986, and promises to be a good time for both beekeeping and non-beekeeping activities.

Beekeepers from the "Top of the South" will be there, and probably also some overseas visitors from the North Island.

For further information contact: John and Merle Moffitt, phone: Nelson 28 143

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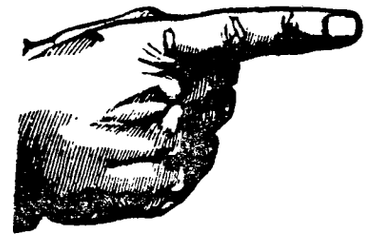

GOING TO THE RURAL BANK - A CHECKLIST

Don't be in a hurry to send off a loan application to the Rural Bank, or any other lending institution for that matter. Take time to prepare your case thoroughly, and you're much more likely to succeed.

I remember one beekeeper relating the story of his first visit to the Rural Bank: "I was out of their office so quickly, that I met myself on the way down when I was still going up in the lift."

Who do the Rural Bank (RBFC) lend to? Their main criteria are:-

- at least two years "serious involvement with bees, hopefully full-time and own say 100 hives" (their words);
- the person is credit-worthy;
- the proposition is economic;
- there is a genuine need to borrow;
- RBFC will lend to different types of beekeepers, and there is no distinction between pollinators, honey producers, etc;
- RBFC will lend for most development expenditure, but not usually for vehicles and not for working capital.

What's the procedure for applying for a loan?

1. Discuss the proposal with a MAF adviser or RBFC appraiser to get guidance.

2. Fill in an application form. As soon as you get to the sections on stock units per hectare you'll realise that this form was never meant for beekeepers. You'll need to make most of your case with supporting documents. The information required is:-

   - details of what the loan is required for (an itemised list, not just a total figure).

   - a budget for the proposal (income and expenditure), preferably covering the next 3 years.

   - copies of your last 3 years' trading accounts.

   - where land is used as security, a copy of the certificate of title.

   - where land is to be purchased, a copy of the sale and purchase agreement.

   - plans, specifications and quotes where a new building forms part of the application.

3. Once you have lodged the application, and if it fits normal criteria, an appraiser will contact you to arrange a visit to see you and your present set up. If you are going to show the appraiser your hives, make sure there's a spare set of gear - your chance of success is inversely proportional to the number of stings sustained.

   Be prepared to spend time with the appraiser, as s/he is trying to appraise you and your proposition for a loan - allow plenty of time and be well prepared mentally. You should read through a copy of the application the night before so you are familiar with everything.

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HONEY MARKETING AUTHORITY

Despite being "killed off" years ago, the HMA refused to lie down and die. Believe it or not, it still had a board, complete with a Government representative!

That was until 31 August 1985, when a Gazette notice administered the final coup de grace.

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HONEY EXPORT CERTIFICATES

People wishing to have their export honey certified should apply on the form Ag 0.2. Regular exporters should ask for a supply of these forms.

MAF is now beginning to recover the costs of issuing these certificates, based on an hourly rate and a vehicle usage fee. One-third of the costs is to be recovered this year, and two-thirds next year.

Ag.—0—2

APPLICATION FOR THE EXPORT CERTIFICATION OF HONEY

To:

Honey Certifying Officer

Ministry of Agriculture and Fisheries

.....

.....

Dear Sir,

I ....., of .....,
(Name of exporter) (Address of exporter)

hereby give notice that I apply for an export certificate in respect of the honey specified below:

Shipping Particulars

Country of destination:
Consignee:
Marks and brands:
Number of drums/seav-
·mber and w-

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NEED SOME HONEY ANALYSED?

Beekeepers used to deal with Sprotts Laboratories in Auckland. Sprotts have now been taken over by: Analab unit 4, 98 Carlton Gore Road, Auckland; Ph (09) 549 061 or 657 Great South Road, Penrose, Auckland, Ph (09) 597 265.

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WOODLIFE II

Beekeepers throughout New Zealand have been blitzed with fact sheets for Woodlife II. It's a water-based wood treatment that both repels water and preserves the timber against fungal attack.

How good is this product? Independent tests have been carried out by the Forest Research Institute in Rotorua. Blocks of wood were dipped in various concentrations of Woodlife II, exposed to five different wood rot fungi, and incubated.

The results? Woodlife II is an effective fungicide at dilutions of 1:6 (the manufacturer's recommendation). At 1:9 a trace of decay was recorded, and 1:12 was not effective.

In this test, Woodlife II at 1:6 dilution was as effective as Tanalith and Protek Q (alkylammonium preservative).

New Zealand distributors for Woodlife II are:

Eastern Agroforests Ltd
Private Bag 3
NAPIER

Phone: (070) 449 809

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TRADE TABLE

* "The Bee Farm" (John & Jenny Dobson) is now making a queen cell transporter. It's an insulated metal box, which holds 96 cells in safety and electronically maintains a temperature of 31-37°C. It looks well-made, weighs only 3.5 kg, and runs off a 12V cigarette lighter socket. Cost is $240 delivered.

  Contact The Bee Farm, Kereru, RD 1, Hastings (Phone: Hastings 789 449).

  The Bee Farm also stock the polystyrene top-bar mating nucs, queens, cells, and nucleus colonies.

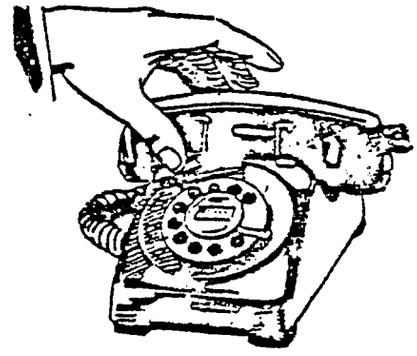
* Jim & Christina Bushby are selling 100 honey drums, two 48-frame radial extractors, and miscellaneous small items. Write to Rotomanu, RD Kumara or phone Rotomanu 504.

* Recycled drums. Auckland Drum Reconditioners, 591 Rosebank Road, Avondale, Auckland, have some recycled drums for sale at about $24. After the new year the price will be about $25.50, though that's still a lot cheaper than new.

  The drums are lined with a Taubmans two-pot epoxy laquer which is approved for food use. They are slightly smaller than new 200-litre drums and so hold less honey, and are also lighter : 20.75 kg compared with 21.50 kg. The drums are available as open mouth or with bungs.

* Hive brands. A brand head for only $52? Graham Cammell, 133 Walmsley Road, Mangere, Auckland (Phone: (09) 667 938) will make hive brands to order for that price. They're 25 mm in size, so can be used for top bars as well as boxes etc.

* Disclaimer: mention of any particular product or supplier in this publication does not imply MAF endorsement of it, nor criticism of other products or suppliers not mentioned.



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DEAD BEE SAMPLES FOR PESTICIDE ANALYSIS

Dr Elbert Jaycox of New Mexico, in his "Newsletter on Bee-keeping", makes some pertinent observations on collected dead bee samples for pesticide analysis.

"Beekeepers tend to be overly optimistic about the abilities of chemists to find pesticide residues in dead bee samples collected at their hives. Now we have a better idea of the relationship between the weight of bees in such samples and the chance of finding any residue. The information was provided by William Lewis, a California state chemist and published in the newsletter *From the U. C. Apiaries* of the University of California at Davis."

"One hundred freshly-killed bees weigh about 10 grams. In the wind and sun of an apiary, the dead bees quickly lose much of their weight, perhaps in hours. When samples weighing more than 7.5 grams per 100 bees were tested for residues, 88 percent were positive. Those between 5 and 7.5 grams in weight (100 bees) had residues in 67 percent of the samples. Samples weighing less than 5 grams were nearly a waste of time; only 13 percent showed residues."

"The same environmental factors that dry the bees also degrade and decompose any pesticide residues on the bees. If you must take bee samples, get them as fresh as possible, and preserve that condition while you get them to an analytical chemist as quickly as possible."

I set out conditions for pesticide analyses in the "Beekeepers' Bulletin" volume 5, number 1. In brief they were:-

- the bee death must be significant to warrant an analysis.
- you must be able to narrow the list of culprit chemicals down to two or maybe three possibilities.
- the samples must be collected promptly.
- the bees should be packed in paper, not plastic.
- they should <u>not</u> be frozen or refrigerated.

Research Division is now charging $50 per sample analysed. We're not yet exactly sure who this cost is passed onto - Advisory Services Division, the beekeeper, or the grower.

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BEWARE OF BEE-CALM?

Overseas magazines are promoting a smokeless device for controlling bees. It's an electronic buzzer, about the size of a cigarette lighter, which is said to allow the beekeeper to work bees without "lighting up".

But does it work? The manufacturers claim it is effective within a four-metre radius, and that this is backed up by scientific tests which prove it to be "100% successful in calming bees and eliminating stings".

However, the person who carried out the tests, Dr Tibor Szabo of Agriculture Canada, said recently in a letter "... my experience with the Bee Calm device was very limited, and therefore I do not recommend the purchase of this instrument."

A more detailed study at North Carolina State University concludes that: "the Bee Calm device does not appear to offer any protection to the beekeepers. The aggressiveness of the bees, when measured, was just as great when Bee Calm was used as when no measures were taken to reduce bee aggressiveness... it does not seem to offer any reduction in beekeeper's chances of being stung..."
It looks like your $US 28.50 would be better spent on a new smoker.

Ambrose, J. T. *et al.* 1985. Effect of Bee-Calm device on honey bee aggressiveness. *American Bee Journal* 125(4) 251-253.

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STOP PRESS!

More details of the Rotoiti weekend have come in. It's been described as a "laid-back learning weekend". Rotoiti Lodge is a great place for a family holiday, as it's on the doorstep of the Nelson Lakes National Park, with heaps of non-beekeeping things to do.

Beekeeping sessions will be as discussions/talks or small workshops, and will include the following topics: autumn requeening, beekeeper back injury prevention, GST, vehicles: to rent or buy?, processing and presenting honey for sale, cooking with honey. There will be a gadget competition for some priceless trophy, a chance for Nelson and Marlborough pollinators to swap notes, and a few beekeeping videos available.

Where? Rotoiti Lodge, St Arnaud.

When? Friday 24 January (evening start) to Sunday 26 January (finish after lunch).

How much? $25 adults, $10 kid. That's not the registration fee, but is the total cost for two nights accommodation, all meals, and the registration fee. Day visitors pay $15 for Saturday (includes lunch, tea, smokos, registration) or $10 for Sunday morning.

How do I get in on this? Send a $10 non-refundable deposit to M Syms, RD 2, Wakefield by 8th December. More information will be sent to you in reply. Places are allocated on a first-come, first-served basis, and the Lodge was full last time the beekeepers buzzed in.

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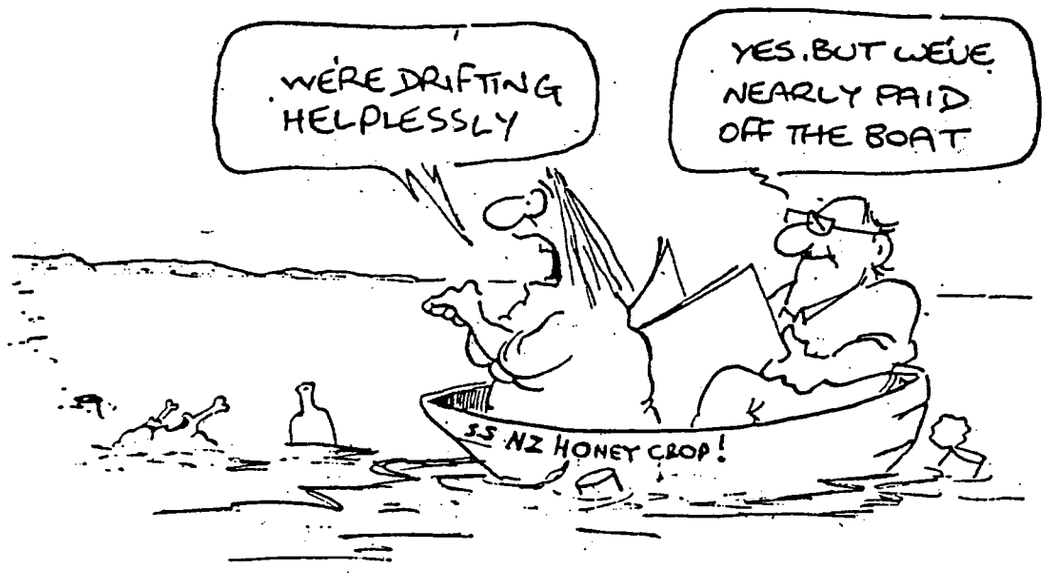
That's enough for now. Have a happy honey flow!

Andrew Matheson.

Andrew Matheson

PS Please make a greater effort to get your annual inspection statements away by the end of this month, to reach me by 7 December. That greatly cuts down our workload and costs. By the way, we have a new Registrar. Janice Ingham has replaced Robyn McFadgen, who is off getting some O.E.

PPS Don't forget to get your kiwifruit pollination form in promptly!



5/19/2

Inspector of Apiaries
Ministry of Agriculture & Fisheries
Private Bag
NELSON

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

Dear Sir

As required by the Apiaries Act 1969 (Sections 18, 19), I report the finding of American foulbrood at the following apiary.

Date detected .....

Land owner .....

Road .....

District .....

Number of hives found .....

Action taken .....

Yours faithfully

Registration No. K...

I require more of these forms YES/NO

5/19/2

Inspector of Apiaries
Ministry of Agriculture & Fisheries
Private Bag
NELSON

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

Dear Sir

As required by the Apiaries Act 1969 (Sections 18, 19), I report the finding of American foulbrood at the following apiary.

Date detected .....

Land owner .....

Road .....

District .....

Number of hives found .....

Action taken .....

Yours faithfully

Registration No. K...

I require more of these forms YES/NO