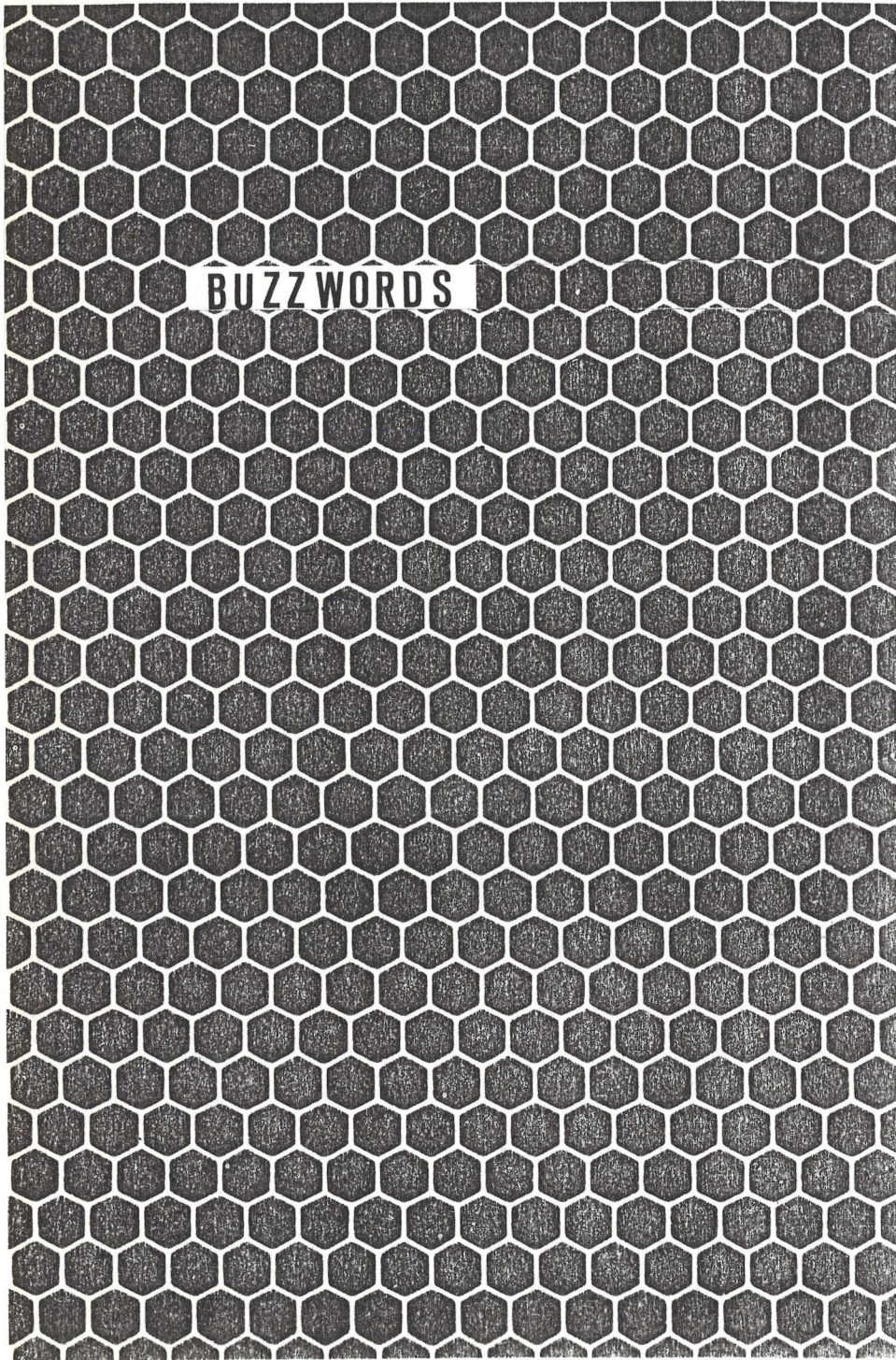


Ministry of Agriculture and Fisheries
2 Trent Street
P.O. Box 96
Oamaru, New Zealand
Telephone 49-990

Our Ref:

Your Ref:



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No. 2

December 1985

Mark Schrader

Apicultural Advisory Officer

Ministry of Agriculture and Fisheries

W H A T ' S U P W I T H M A F ?

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) was \$1 million, followed by \$5 million for 1986, and \$10 million in 1987. As well, MAF has been told to recover costs wherever possible.

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.

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, 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 work 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.

This issue contains two features. The first on Nosema, a disease Dr Shimanuki believes is our most serious bee disease, covers the life cycle, diagnosis and control of nosema. An extension to this is the work Cliff van Eaton is doing up in Northland where he's investigating nosema levels in our queenstock.

The second feature is an article on GST. There's no stopping it, so we might as well start getting ready for it. The article sets out the basic requirements but also encourages beekeepers to start keeping good cash records.

The unplanned delay in you receiving this newsletter was an unscheduled stay by myself in one of Dr Bassett's hospitals. Although I lost about 3 kilo you'll be pleased to hear I'm back to normal and looking forward to the new year.

(Ref - Northland Beekeeping Oct 1985 - Cliff van Eaton)

Questionnaire

Thank you to all those who sent back the questionnaire. I'll let you know the results in the next newsletter. If you've yet to send your back, it's still not too late.

While on the subject, congratulations to the beekeeper who suggested the name for the newsletter. Now all you need to do is claim the prize!

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.

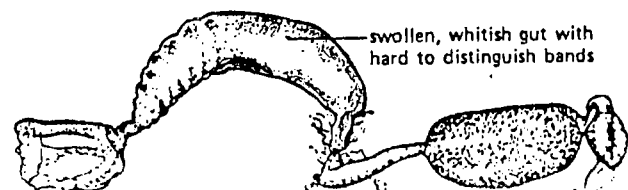
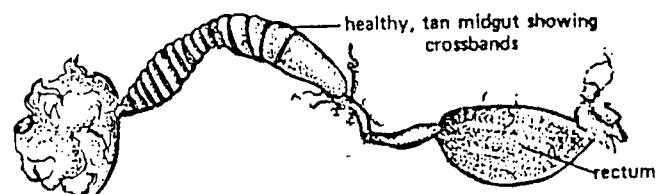
Spores may reinfect other epithelial cells or they may pass out of the bee with feces where they may be eaten during house cleaning by other bees. In this way the cycle can begin anew.

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.

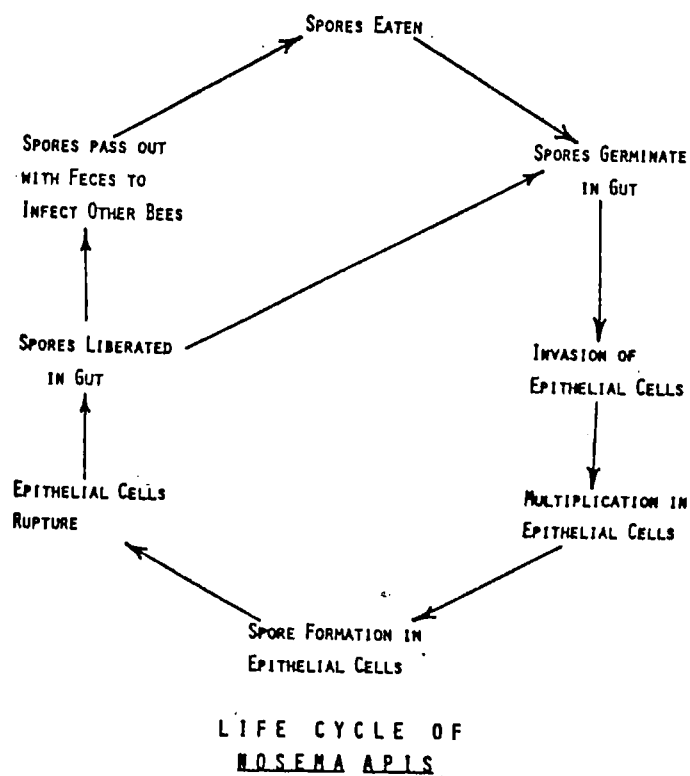
Visual symptoms of the disease can include:

Effects of Nosema Disease on Midgut



- * 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. 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 crossbanding.



Still, the most effective diagnosis is done with a microscope (I have yet to get the equipment, but should be able to do it in the near future) 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 25ml 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 defaecate 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.

4.

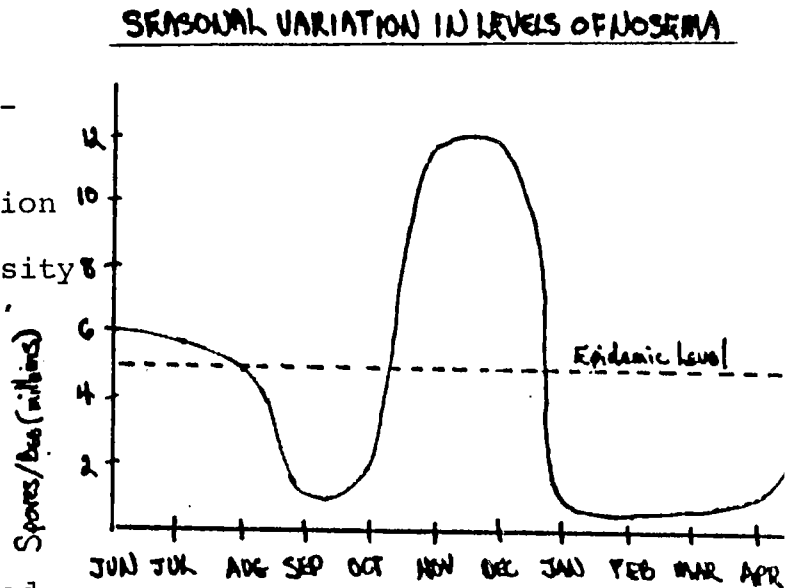
Unfortunately sufficient numbers of spores survive in the colony and a second peak is sometimes noticeable in older bees just prior to winter.

Although these bees do not over-winter, sufficient spores also remain on the combs to re-infect 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 120ml 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

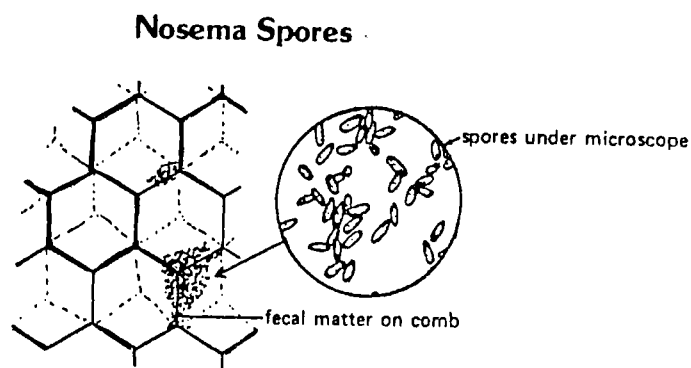
Fumagillin (Fumadil-B or Nosem-X) is like a "drench" for bees. It kills the vegetative stage of Nosema apis, but not the spores.

- 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 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.

(Northland Beekeeping Oct 85 - Cliff van Eaton)



A 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 ended 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 to 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

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.

6.

This is part of the AAO'S co-ordinated objectives that you were told about at a meeting earlier in 1985.

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.

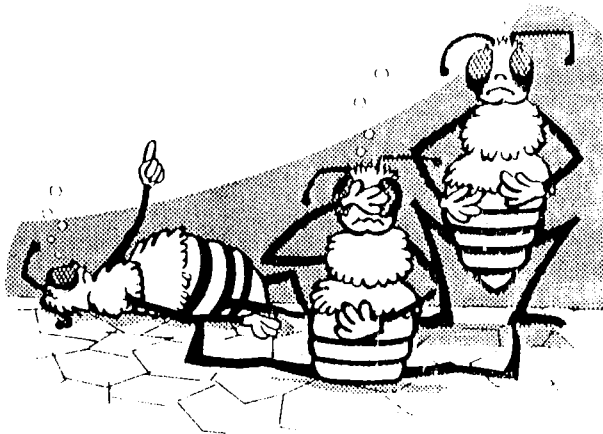
Up to 18% of the queens were infected with Nosema (a mean of 8%). This is lower than expected, but remember that clean queens mixed with Nosema - infected workers become infected within a few days.

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 do's 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.

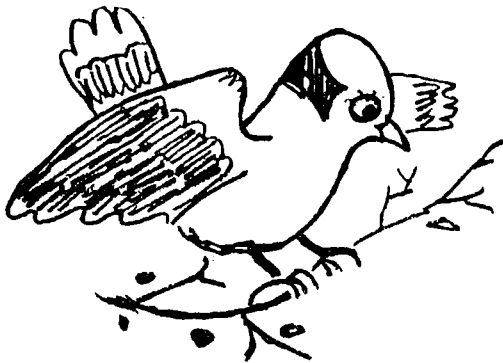
* Fumagillin will last 3½ years in sugar syrup provided it is kept in a cool room (4°C). At room temperature (20-32°C) it will retain its activity for a month.

- * 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 we 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.

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: (163) 39 146

** SOUTHLAND FIELD DAY **

Date: February 1, 1986
Venue: John MacDonald's
Five Rivers - 14 km from Lumsden

This field day is always good value.

G S T

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 product	\$150		

Step	Cost of product	GST calculation	GST paid to IRD
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
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	<u>\$50</u>

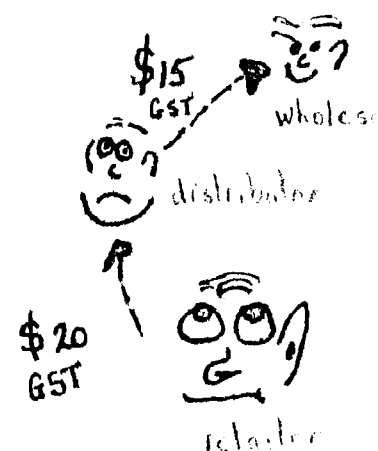
At each step, the article increases in price by the mark-up plus a 10% GST. Why not just charge the tax once at the step where the retailer sells to the consumer? The answer was provided by overseas systems and showed that when the intermediate steps are avoided, consumers by-passed the retailer (and 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.



10.

1. Registration

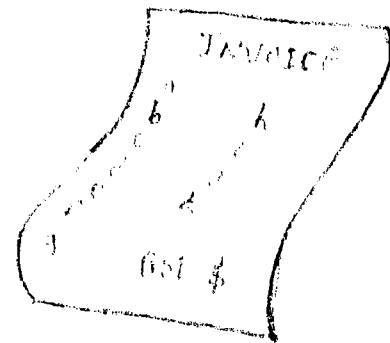
All businesses involved in taxable activities with turnovers exceeding \$24 000 must be registered with the IRS. Registration begins on 1 August 1986, and businesses will have a month to register. The IRD will use a business's IRD tax number as the registration number.

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



- Proof of
Payment

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.

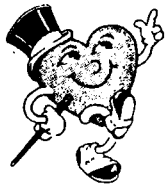
For purchases of less than \$10, no invoice is required, just for price (plus GST). The IRD will be watching for excessive claims in this category.

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 (i.e. the second month after the period ends). Severe penalties, not the attractive 10% penalty of the past, exist for late payment of GST (e.g. on 2nd June).



!! GOOD GOD!...IT'S WINNIE-THE-POOH...!!

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, i.e. those dealing in money, such as banks, stock 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

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 No. 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.

(Ref Nov. 1985 Beekeepers Bulletin - A Matheson)

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

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

The yoghurt has the culture.

BRIEF NOTES

Beekeeper training - Telford Farm Training Institute is looking for 3 beekeeping students for the 1986 year. If you know any youth who would be interested in getting a solid grounding in beekeeping and would like further information, contact:

Paul Marshall
 Beekeeping Manager
 Telford Farm Training Institute
 Private Bag
 Balclutha Telephone: (0299)81 550

All past students have found the course unforgettable.

14.

Brood Diseases Book

A quick flick reference book to keep in the truck 24 hours a day. It's colour illustrations of all the major brood diseases are pleasant on the eye and makes clear identification a lot easier. An exciting centrefold completes a useful field guide. Beekeepers and beekeeping staff have already bought quite a number but I still have a few left. If interested, call or write to:

A.A.O.
M.A.F.
P.O. Box 96
Oamaru (Price: \$13.50 approx.)

Honey Mountain

The US Government runs a price support programme for their beekeepers. Recent payments of NZ\$2.61 per kg are about twice the current world price and have caused the present stockpile of 90 900 T (9 times the NZ crop). The ropes holding this lot in place are beginning to fray and it won't be too long before that ever growing honey mountain will find it's way out onto the world market.

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.

Should I buy a computer?

Successful entry into 1986 doesn't compell you to buy a computer. Advertisers and quick talking salesmen make money by selling, so don't be fooled by their sales talk. Work out what you want the computer to do for you, and then ask around. Computers don't run themselves, so you'll need to allot normal work time in learning new skills - something the salespeople seem to forget to tell you.

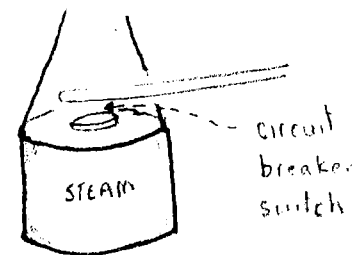
Tax Note

If you do over 2 000 km in your private car and want to avoid nousey inspectors, keep a log of business kilometres. Previously 50% of kilometres could be claimed as of right, but the new perks tax has put this under question. 100% truck/van/ute/ charges can still be claimed.

HANDY HINTS

Hands up all you beekeepers who have burnt out an element in your steam generators. Yes, I thought so, lots of you.

Well, here's a neat and simple idea to prevent that. Suspend your boiler from the ceiling or a shelf and mount a circuit breaker above. As the weight decreases the boiler rises and touches the circuit breaker, so turning off the power.

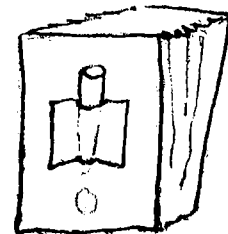
NEED SOME HONEY ANALYSED?

Beekeepers used to deal with Sprotts Laboratories in Auckland. Sprotts have now been taken over by Analab unit 4, 98 Carlton Gore Road, Auckland - phone 549061 or 657 Great South Road, Penrose phone 597 265.

MARKING HIVES-

The best marker I have found for bee hives is the Alflex ear tag marker pen. This is a felt tip pen with a spring loaded tip which you can push up and down to release the amount of ink you want. I've had marks on hives for two years now and they haven't faded.

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!

YOUR NEIGHBOUR PAYS LESS FOR HIS OVERDRAFT?

Farmers at some banks pay a lower overdraft interest rate than the general Joe Blow Public. This could be worth quite a few dollars, so cheque (ha ha) with your bank manager. Whilst on the subject of O.D.'s, it is worth telling your bank manager of unexpected (for the bank) changes (e.g. a large order for sugar in Autumn may increase your O.D. over the agreed limit.) By telling the bank before hand you can avoid penalty payments

DEREGULATION OF SUGAR INDUSTRY

The world price of sugar has been hovering around NZ\$150 per tonne. It costs you about 4 times that - but not for too much longer. The proposed deregulation of the sugar industry should give you a much lower price and make sugar feeding attractive. Unfortunately, it will also decrease costs of our competitors produce and may lower the shelf price of jams, spreads etc.

SUGAR PURCHASING OFFICERS

The NBA cheap industrial sugar is still available. Contact:

- North Otago Branch - George Winslade
51 Eden Street
Oamaru Ph: 45 270

- South Canterbury Branch - Noel Trezise
69 College Street
Timaru Ph: (056)44 624

- Otago Branch - Neil Walker
Milburn Apiaries
No. 2 R.D.
Milton Ph: (0299 7)4614

DISCLAIMER: Mention of any particular brand name does not infer MAF endorsement of this product nor is criticism intended of products or sources not mentioned in this publication.

DISEASE REPORT FORMS

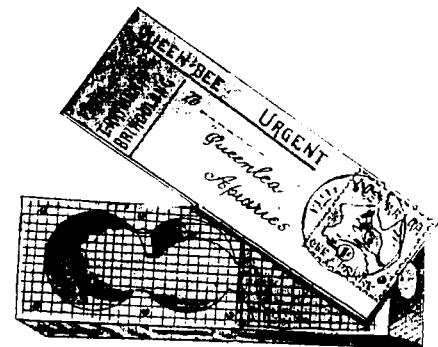
As you know under section 18 of the Apiaries Act, beekeepers finding AFB are required to immediately send written notice to MAF, as well as eradicating the disease. The Karitane yellow report forms I sent with the last issue are working well and I've supplied a couple more on the back page. Hopefully you won't need them!

NZQBPA

An exciting development for N.Z. queen bee producers is the New Zealand Queen Bee Producers Association. It has 12 listed objectives in the general areas of industry co-ordination, business ethics, stock improvement and market development. Its formation signifies a willingness by producers to work together, improve the standard of domestic queens and co-ordinate the development of export markets.



EXPORT



Membership or associate membership and information can be obtained by contacting:

Malcolm Harris
R.D. 2
Kaitaia (Ph: 1228)

NEW VOLUNTEER FIRE BRIGADE - Kakahu Road, Temuka

Locals in this district can now rest more peacefully at night with the arrival of Jack Parish's sugar syrup dispensing pump (SSDP). According to rumour his newly purchased pump gave everyone a shock when they first had it home. Apparently, it shot the trial water clear across the neighbouring paddock.

STUDENT JOB SCHEME

You might not be too late to pick up a subsidised worker for the rest of the season. Enquire at your Department of Labour.

HIVE BRANDS

Graham Cammell, 133 Walmsley Road, Mangere, Auckland - Phone 667938, will make hive brands to order. Brand size 25mm so they can be used on top bars as well as supers. Brand head only \$52.00.

YOUR APIARY REGISTRATION NUMBER is to be visible in all your apiaries.

HALF MOON DISORDER

This has been tentatively identified by Dr Shimanaki as Bacillus coagulans (Bacillus larvae is AFB). This bacterium is already found in many other countries.

CHALKBROOD

I would be interested in hearing from anyone who believes they have come across this in their apiaries.

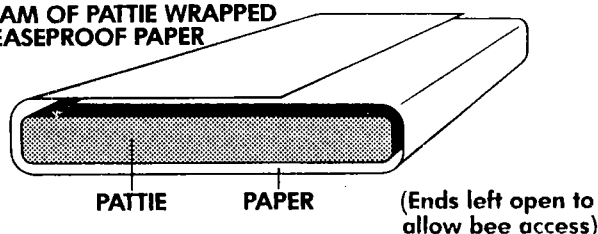
LACTALBUMIN POLLEN SUBSTITUTE

A new high protein (85%) milk product which is very effective as a bee feed, called Alatal 560 is available from:

Bill Nalins
Customer Services
Alaro
P.O. Box 417
Wellington Ph: (04) 723 630

The price is 2.80kg plus freight (freight free if you buy a tonne or more!) Minimum order 25kg.

**DIAGRAM OF PATTIE WRAPPED
IN GREASEPROOF PAPER**



18.

The recipe for pollen substitute is:

12kg Alatal 560 (lactalbumin),
24kg brewer's yeast
70kg sugar
water to mix

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.

BUY, SELL AND SWAP

Hives on or off site in Glenavy, Ikawai and Waimate region

Contact: Jim Morrison
Main Road
St Andrews Ph: 771 St Andrews

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 Hardbark Engineering, is stainless steel with a dual variable speed motor and two automatic timers. It sells for \$2 350. Contact:

Hardbark Engineering
'Cricklegrass'
Woodside Road
OXFORD Ph: 24 388 Oxford

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 Symes, 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.

COST TO BUILD 100 4-BOX

(Change from '83)

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 1000	2 113.02	(.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)
	<hr/>	
	11 012.66	(.31)
<u>Labour</u>		
8 hours per hive @ \$6.25 per hour	5 000.00	(.25)
	<hr/>	
	16 012.66	(.30)
<u>Sugar</u>		
1 800 kg sugar to draw 3 600 standard sheets of foundation at 79¢ per kg	1 422.00	(.06)
	<hr/>	
	17,434.66	(.27)

(List compiled by Cliff van Eaton AAO Whangarei)

HEARD AT CONFERENCE - July 1985

- * The Mayoress of Greymouth turned out to be a male dog called Morgan. So the Mayor had "great pleasure" in accepting the beekeepers' donation of a tree on Morgan's behalf!"
- * Don Gibbons claimed to be a "Kiwicized Pom". He wanted to know if he had to leave for Australia would he become an "Ostracized Pom". Nice double pun there Don.
- * Nick Wallingford was reporting on a meeting in Wellington where there were members of the "NBA, MAF, ASD, RNZIH, ATC, HTC, AAVA, BOPCC, Ed Dept, TCI, LGTB, NZTCB and Telford."
- * "Might a mite have other mites on it?"
- * Someone asked, "Why doesn't DSIR release the gorse mites on an isolated island?" "Yeah, the North Island," came the quick reply.
- * If biological control reduced gorse to a level that it was removed from the noxious weeds plant list - could we plant gorse?" Now that's a good question.

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."

The conditions for pesticide analysis are:

- 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 not 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.

RECIPEHONEY-BEER

Honey-beer was a popular drink at the court of Queen Elizabeth, and here is a recipe recommended by Mr I. Hopkins, late Government Apicultural Expert, of Auckland, New Zealand.

In five gallons of cold water mix half a pound of hops and two ounces of ginger, the latter well bruised with a hammer; add twelve pounds of good extracted honey already melted with as much boiling as is requisite for that purpose; stir well with a stick and put the boiler or boilers on a good fire, stirring occasionally till the liquor boils; let it boil briskly for about an hour or until the hops cease to swim on the surface; take the vessel off the fire and let it stand for about six hours until nearly cold, when the hops and sediment will have settled near the bottom. Strain the liquor through some good straining material (so-called "butter-muslin" folded in four thicknesses answers well) into glazed earthenware vessels, and let these stand near the kitchen fireplace during the process of fermentation which will commence within twenty-four to forty-eight hours, according to the ruling temperature, and continue for ten or twelve days, or longer, according to the season of the year. The vessels should be secured from dust by means of tin covers pierced with holes to admit free access of air. Skim off the frothy scum and stir the contents with a stock once a day, to promote the powers of active fermentation, and when this has nearly ceased, i.e. when the liquor, after being stirred, forms only a light froth on the surface which soon subsides of itself, it will be fit for bottling. Strain carefully into perfectly clean bottles, by means of a tin dish in which is placed a fresh straining cloth (four folds of butter-muslin); cork securely with sound corks well driven in and tied down with twine or bottling wire. Keep the bottles in a dry, cool place. The beer may be used three or four days after bottling, but is better if kept standing for a week or two, and, if the working has been properly attended to, will only improve by several weeks' keeping.

Ref: There's money in bees.

Wishing you all the best for 1986.

Mark

Ministry of Agriculture and Fisheries
2 Trent Street
P.O. Box 96
Oamaru, New Zealand
Telephone 49-990

(0297)

Our Ref:
Your Ref:

Inspector of Apiaries
Ministry of Agriculture & Fisheries
P.O. Box 96
OAMARU

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. N

I require more of these forms YES/NO

Ministry of Agriculture and Fisheries
2 Trent Street
P.O. Box 96
Oamaru, New Zealand
Telephone 49-990

(0297)

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