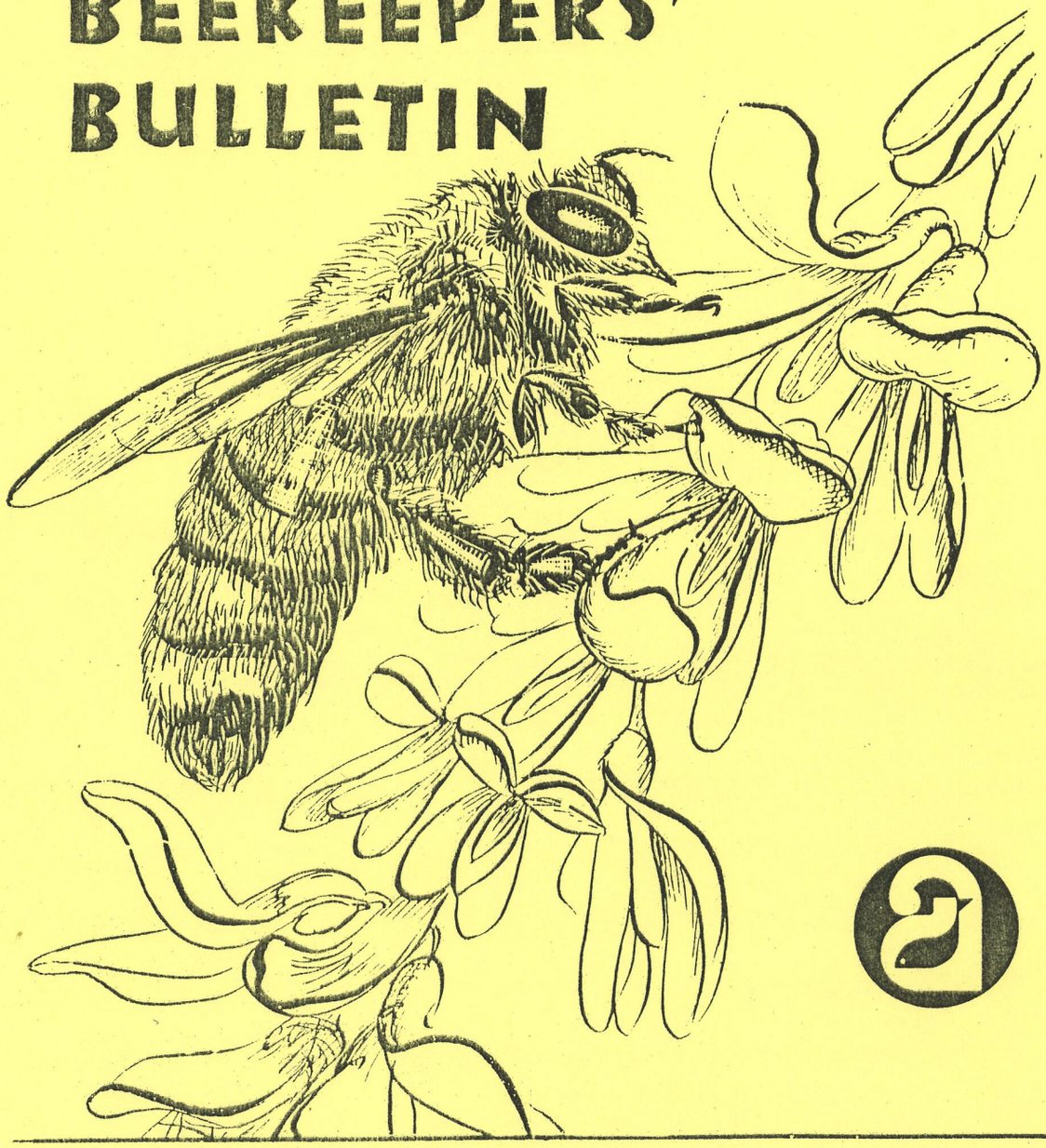
THE BEEKEEPERS' BULLETIN



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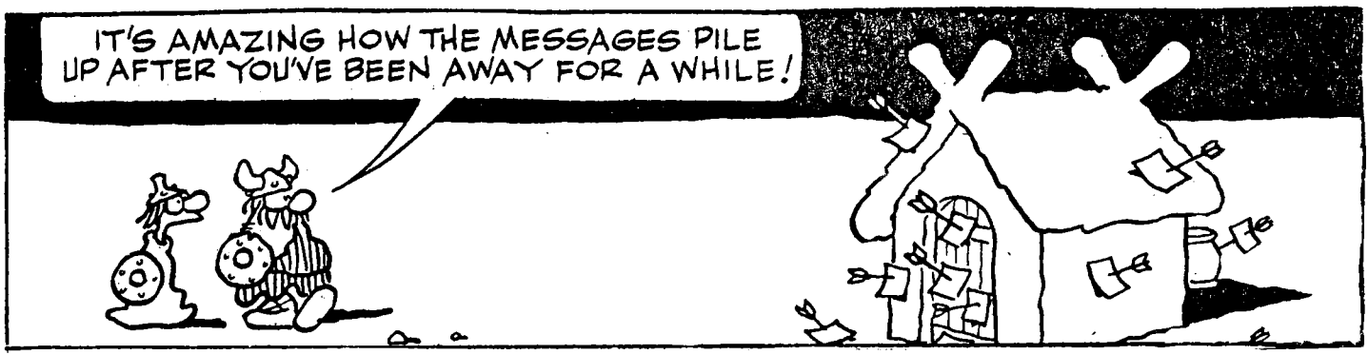
Number 3

Volume 6

February 1985

I did survive the African bee, and returned relatively intact to tell the tale. I've written an article on my experiences for the March *New Zealand Beekeeper,* and have been speaking to some meetings on my experiences.



With the honey season drawing to a close, many beekeepers are reflecting on a pretty disappointing year. Crops on the Coast were reported to be about 2-2 1/2 tonnes per 100 hives, with about the same for Nelson, or perhaps a bit less.

Over in Marlborough it was quite a different story. Crops were at least twice that, with honey still coming in. As one beekeeper said : "we haven't worried about tonnes per hundred, we're just going out and bringing in honey."

The most common problem (apart from having to work too hard) seems to be lack of boxes. Solutions? The most obvious is to get the first round off early and the empties back on, so you're ahead of things when the flow really starts in earnest. If you delay the first round until things are moving fast, then you'll always have a backlog of extraction.

Another solution might be to get all your boxes into action. It's too late once the problem becomes obvious, but perhaps you should think ahead to the next bumper season (it could be in 9 months time!). Have you ever counted up the number of good (often new) boxes being used around the place for seats, shelves, filing cabinets, or step ladders? And what about the dozens of rummies out the back? Either fix them up and use them or throw them out.

One startling thing about the last 12 months has been the incidence of AFB : the highest number of diseased hives for at least 8 years, and nearly the highest percentage incidence.

The figures are:

125 apiaries (6.21%)
313 hives (1.51%)

The average for the previous five years was 6.35% and 1.11% respectively.

MAF's disease control programme is there for <u>your</u> benefit, not ours. It's not made easy when beekeepers:

- don't report disease promptly (or at all);
- don't return their annual hive inspection statements on time (or at all).

It's been made as easy as possible - supplies of the small, yellow disease notification forms have been sent out and are available on request. The computerised hive returns make it as easy as possible for you to make changes and return on time. They're even larger so they <u>should</u> be harder to lose.

It's your disease, and your industry that stands to suffer from sloppy disease control.

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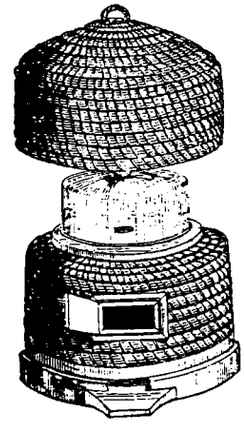

On a more pleasant note, in this issue is: tax and interest rate changes, sugar feeding, bees from Africa, easy requeening, some important new books, and more. Read on ...

Kiwifruit tribe 'alive and well'

Nelson Evening Mail 30/1/85 1985

TAURANGA, Jan. 30.

Kiwifruit is the almost exclusive diet of a tribe in the interior of New Zealand whose members reach the age of 120 and even more...

That's the astounding claim made in an American Sunday newspaper. A Tauranga man has brought home a clipping after an overseas visit.

The unnamed newspaper says some American farmers have labelled the fruit as "the new fountain of youth".

The heading above the story proclaims: "Miracle fruit can help you live to age 120."

The paper says: "It's new nickname stems from the fact that members of a tribe in the interior of New Zealand who live almost exclusively on a diet of the oversized berry have lived extraordinarily long lives — many up to 120 years and more.

"Researchers have discovered there's good cause. About twice the size of an egg, the small hairy brown fruit with emerald green pulp is loaded with vitamins.

"Some researchers indicate, however, that the kiwifruit's secret is a mysterious enzyme which retards the ageing process in humans if taken regularly.

"That is why such extensive testing and study is going on with the tribe that uses it daily, says one scientist, Franklin Hermsley, working with the tribe.

"It's not only that this tribe's people are living such long lives, but they are in such healthy condition. Both men and women use the meat of the fruit as a facial treatment and have amazingly wrinkle-free complexions." — NZPA.

RURAL BANK LOANS

Those of you with Rural Bank loans should have received a letter from them setting out the new interest scales. For new loan applications it works like this:

- new loans offered in respect of applications received from 9 November 1984 until 31 March 1986 will be at 12.5%.
- new loans offered from 1 April 1986 to 31 March 1987 will be at 13.5%.
- new loans offered from 1 April 1987 will be at 14.5%.

Interest rates on all these loans will be increased by 1% per year until the "indicator rate" is reached. This is currently 15%, but can be moved up or down as a result of changes in the market place.

If you have an existing loan or loans and the new rates will cause financial embarrassment, then contact the RBFC as soon as possible. They can change the repayments needed by a variety of means, subject to money being available.

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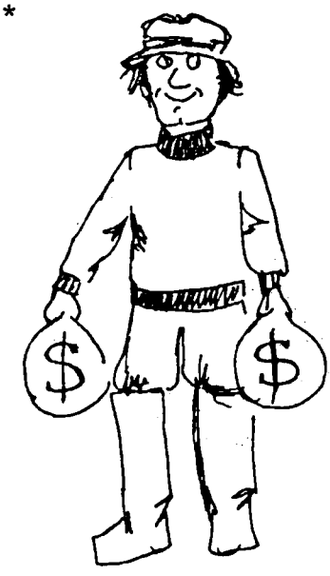

TAX CHANGES

You might not give your workers company cars and expense accounts, but the new fringe benefit tax could still affect you. It will be payable on any non-cash benefit enjoyed by your employees directly or indirectly in relation to their employment. It includes such things as : gifts; sale, rental or lease of goods and services to employees at below fair market value ; low interest loans to employees.

It will be payable quarterly at 45c in the dollar on the estimated difference between fair market value and the price paid.

Fringe benefit tax does <u>not</u> include (despite some ridiculous newspaper stories to the contray) things provided as part of normal working conditions, such as cafeterias, cafeteria meals, morning and afternoon teas, etc.

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FAMILY CARE AND BEEKEEPERS

The income used to calculate family care eligibility is NOT the same as the income used to calculate tax liability. Sorry about that. The income used for social welfare purposes includes:

- the money received by a person

- the value of other receipts available to meet the commitments of a beekeeper and his/her family.

As a self employed person, a beekeeper's income for social security purposes would be the gross turnover from his/her operations less only the items of business expenditure which were incurred in earning that gross turnover. If the drawings from the business exceeded this figure, then the drawings would be the amount taken into account. In this context, 'drawings' would include the value of goods and services received.

For further information contact the Department of Social Welfare or your accountant.

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SUGAR FEEDING

Calculating the ratio of sugar, to sugar syrup, to stores put on by a colony is not the easiest of jobs. Three tables I've printed below will help this.

A. Weight of sugar used to produce a particular volume of syrup, and the weight of stored food produced.

(Note: W = water added (kg); Sy = syrup volume (litres); St = stored food (kg)).

Sugar used (kg)	Sugar/water ratio								
	1:1			1.5:1			2:1		
	W	Sy	St	W	Sy	St	W	Sy	St
1.0	1.0	1.6	1.0	0.67	1.27	1.12	0.5	1.1	1.2

B. Volume of syrup resulting from various proportions of sugar and water, and the weight of stored food produced.

(Note: S = weight of sugar used (kg); W = water added (litres); St = stored food (kg)).

Volume of syrup (l)	Sugar/water ratio								
	1:1			1.5:1			2:1		
	S	W	St	S	W	St	S	W	St
1.0	0.62	0.62	0.62	0.79	0.53	0.90	0.91	0.45	1.09

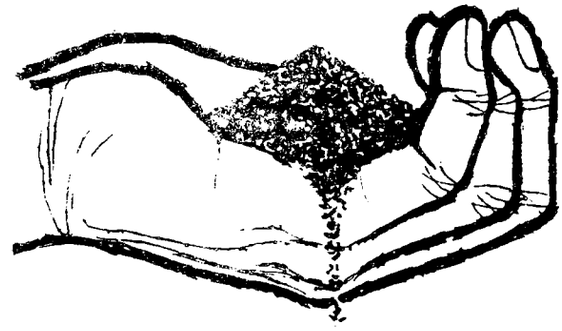
C. Amount of stored food obtained by feeding syrup containing various proportions of sugar and water.

(Note: S = weight of sugar used (kg); W = water added (litres); Sy = syrup volume (l)).

Stored food (kg)	Sugar/water ratio								
	1:1			1.5:1			2:1		
	S	W	Sy	S	W	Sy	S	W	Sy
1	1.0	1.0	1.6	0.89	0.59	1.13	0.84	0.42	0.92

Examples of how to use the tables:

1. A colony has only 3 kg of stores, and it should be brought up 10 kg. Table C shows you that you need about 6.5 litres of 2:1 syrup (7 x 0.92 litres = 6.4). To make that up you need roughly 6 kg of sugar and 3 litres of water. (Multiply the sugar and water figures by 7).



2. You feed 4 litres of syrup to a colony, how much stores will it put on? Answer (from table B):

   2.5 kg if the syrup is 1:1 (4 x 0.62)
   3.6 kg for 1.5:1 syrup (4 x 0.90)
   4.4 kg for 2:1 syrup (4 x 1.09)

- If you feed out a tonne of sugar in 2 : 1 syrup, how much honey do you get?

  Answer, from table A, 1 200 kg (1 000 x 1.2)

These tables indicate that feeding concentrated sugar results in 20% more stores than feeding weak, which is close to the 30% more I suggested in the February 1984 issue.

Source: *Imkerliche Fachkunde*, 3rd edition, 1975. Translated by Elbert Jaycox, New Mexico.

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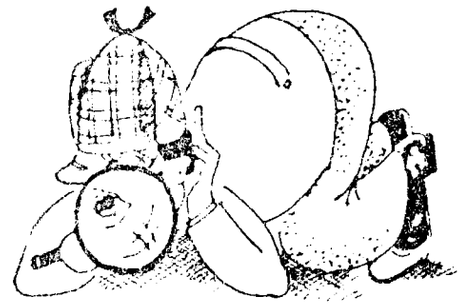
* Marketing the Oz is a real headache with reduced export opportunities. Bulk prices of NZ 70c - $1.17 kg are common. Western Australia with 55 000 hives has 42 packers, and you can buy a 3 kg container for NZ$2.90!

SUGAR BUYING

Those purchasing sugar for feeding should contact their local NBA branch purchasing officer. Using industrial sugar will save you around $140 per tonne over other sorts.



The new sugar is extremely palatable to bees, in fact it seems to induce robbing more quickly than white sugar. It doesn't seem to cause any bee mortality when used in the hive (it did when fed in cage trials), probably because bees are free to fly and defaecate.

Syrup made with the sugar must be made as concentrated as possible, as it ferments very rapidly. Once made up it should all be fed out, rather than stored for the next round.

One problem with it can be tainting of surplus honey in a light-honey area. Bees move stores around the hive a lot, and the dark honey produced from the syrup can find its way into individual cells of extraction combs, even if the supers go on several weeks after feeding.

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Sugar price fall discounted

Nelson Evening Mail 5/1/85

WELLINGTON, Jan. 5.

World sugar prices have dropped almost by half in the past year but the domestic sugar price was unlikely to come down, the New Zealand Sugar Company's financial controller, Mr Jack Withington, said from Auckland yesterday.

The spot market price for world sugar had fallen from US 7 cents a pound 12 months ago to 3 to 4 US cents a pound (14-18 NZ cents a kilogram), he said.

New Zealand sugar consumers had benefited from the lower world sugar price in recent years because the company, the country's sole sugar refiner and marketer, held prices steady for 4½ years.

This was in spite of the recent 20 per cent devaluation, the steady fall in the dollar and inflationary cost increases. Sugar currently retails at 87 cents a kilo unless it is discounted.

The company would buy more from the open market at the lower prices but offsetting that would be the expected continuing decline in the dollar's value and rampant inflation, Mr Withington said.

Prices could not be held indefinitely. He believed world sugar prices would ultimately rise, leading to higher prices in New Zealand.

A five-year fixed price contract to buy sugar from Australia ended last week.

Negotiated by the Government with the Queensland Government, the contract had not been renewed because in the present lower price market it was not favourable for New Zealand to renew.

Though the agreement had expired, deliveries under the contract would continue till the middle of the year, he said. — NZPA

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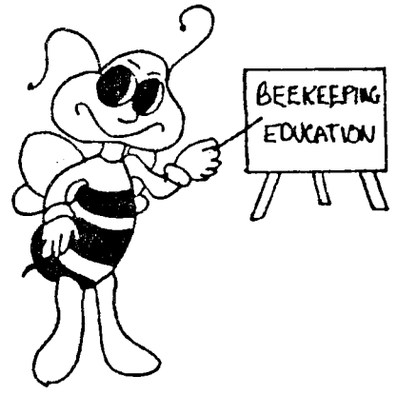
ARE YOU A NEW OR INTENDING COMMERCIAL BEEKEEPER?

If so, a course designed especially for you will be held at Telford later this year. Called 'Expanding into Commercial Beekeeping',

it looks at most aspects of commercial beekeeping, including planning, decision making, hive equipment, business management.

Dates are 1 pm Tuesday 25 June to 12 noon Friday 28 June.

Telford is near Balclutha in South Otago, but the organisers send out a list of participants in advance to help with transport arrangements. Costs are reasonable : about $25 for the tuition fees, and accommodation on campus for $19 per day including meals. Those staying off campus can score hearty Telford meals for $3.20 per day.



Enquiries to:

The Registrar
Telford Farm Training Institute
Otanomomo
Private Bag
Balclutha

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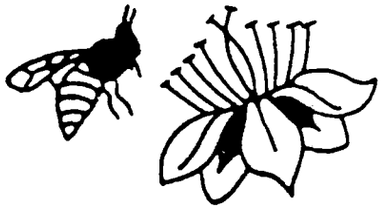
AFRICANIZED HONEY BEES

The Africanized bee continues to spread through Central America at about 500 km per year. They are predicted to reach south east Mexico by late 1985 or early 1986, and the Texan border by late 1988 or early 1989.



How "agressive" (or defensive) are these bees? Anita Collins of the USDA in Baton Rouge, Louisiana, has been working on quantifying the defensive behaviour of Africanized bees. She uses standard techniques for determining the response of different bees such as:

- spraying alarm pheromone into the hive and timing how quickly the guard bees respond;

- knocking the hive (with a stone shot from a catapult!) and counting stings in a moving leather ball outside the entrance;

- photographing the hives 30 seconds after each stimulus.

By using these standard techniques she can compare the behaviour of Africanized bees in Venezuela with Italian-type bees in Louisiana. I think I'd want three pairs of overalls and double pay before trying it in South America!

Africanized bees react three times as fast to the alarm pheromone, 20 times as fast to moving targets, they sting 10 times as much,

and twice the number of bees react to a given target. No scientific comparisons have been made between Africanized bees in South America and pure-bred African in Africa, but the general feeling among those people I've spoken to who have experience in both continents, is that the South American hybrids are more highly defensive.

A number of changes have occurred in bee management in South America because of Africanized of the bee population. For example, more protective clothing is used, colonies are heavily smoked, apiaries are located further from people and animals, and fewer colonies are kept per apiary. Beekeepers regularly have to pay to replace animals killed by bees, and a number of precautionary measures are taken to reduce the chances of disturbed bees encountering neighbours.

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Battle lines drawn against 'killer bee'

NZPA-Reuter

MEXICO CITY, Dec. 26.

Mexico, the world's biggest honey exporter, is preparing defences against the African "killer bee", which could wipe out a key foreign exchange earner for five years.

The menace, which set back Brazil's honey industry 20 years, has already swarmed through Colombia, Nicaragua and Guatemala. It is expected in Mexico next summer and could reach the United States by 1988, experts say.

the Government hopes to neutralise the threat to the honey industry by crossbreeding with a fat, friendly strain of Italian bee. It plans to kill the African queen bees and replace them with Italian ones, creating a more manageable hybrid.

Mexico's plan may not prevent the raiders reaching the United States in the next three years. "No method exists to stop them. All we can do is delay their advance," Jose Antonio Zozaya, head of the agricultural ministry's honey section, told Reuters.

Mexico has asked the Inter-American Development Bank (IDB) for a $US75 million ($NZ154.5 million) loan to help finance a six-year plan to defend its honey export industry, which earns $NZ103 million a year. There has been no reply so far from the bank but Mexico has gone ahead anyway.

The invasion of Latin America by the African bee, smaller but more ferocious than Mexico's more domesticated insect of Italian origin, began in 1957 when it escaped from a research station near the Brazilian city of Sao Paolo.

A fast breeder, it quickly overcame the more placid European strain and after its exploits elsewhere now threatens to descend on Mexico's southern states of yucatan, Campeche and Chiapas, home of most of the country's 2.6 million beehives.

The agricultural ministry, fearing the industry will collapse under the onslaught, has set up a special anti-African bee office to give technical help to keepers, inform the public and handle crossbreeding.

It believes that while total protection is nearly impossible, its plan could at least enable Mexico's honey industry to recover within five years.

The public information campaign aims to avoid a repetition of incidents in which the bees, which readily attack if provoked, killed people and cattle in Colombia and Nicaragua.

Zozaya believes that once the African bees arrive they will stay. But he said that among the Latin American countries "we are the first to try what you could call a programme" to combat the menace.

He thought it should succeed but warned, "No matter what we do, production will fall. But if we don't do anything production could fall by as much as 80 per cent."

Mexico's economic crisis has caused a 35 per cent drop in production this year and, with the coming of the African bees, exports are expected to fall by 50 per cent.

Mexico is the world's fourth largest producer of honey and the biggest exporter.

Nelson Evening Mail 27/12/84

REQUEENING WITHOUT DEQUEENING

Speeding up the requeening process is what most beekeepers would like to do. The technique of introducing a queen cell to a colony without any attempt to isolate it from the existing queen has been tried by various people. Often claims are made for its success or failure, without any real analysis of results.

The success rate of this technique varies with : age of existing queen; introduction technique; conditions at time of introduction and emergence. A trial by Tibor Szabo in Alberta was carried out with unprotected cells put in the 4th or 5th box late in the honey flow. Examination of the cells 5 days after placement showed:

70% successful emergence
11% cells destroyed
6% cells contained dead queen
13% cells couldn't be found

The old queens had been marked, and a later check of the queens showed:

13% queen from introduced cell
24% queen reared by colony
53% old queen retained
7% queenless
3% origin of queen unknown

What's the reason for such a poor success rate? For one thing, the cells were put out five days after grafting when queen larvae are very delicate. Although beekeepers sometimes put out immature cells, it is not recommended.

The success rate would also have been increased if the cells had been protected, either with hose pipe or sticky tape. Kerry Simpson carried out a small trial in the Maniatoto introducing protected cells to the brood nest. His results:

57% original queen only found
40% successful supersedure
3% both queens present

It's probable that a more careful search of the 57% of hives with apparently only the original queen in would have found some more two-queeners.

I'm not advocating this technique for everyone to try, but it could be useful in seasons where money is tight, or for people taking over an outfit which hasn't had a regular requeening programme. (I phrased it like that because, of course, it would only be someone else's, not yours).

Simpson, K.W. 1983. Requeening without dequeening in Boondocks. New Zealand Beekeeper 177:17-18.

Szabo, T.I. 1982. Requeening honeybee colonies with queen cells. Journal of Apicultural Research 21(4):208-211.

APRIL FOOLS JOKE OR SPRING FEVER?

I've had this clipping for a while and still don't know what to make of it.

BEE RACES 1984

WELL IT'S the beginning of April again and time to plan for this year's bee races. Incidently, we were very pleased to see so many observers arrive from fellow associations to witness our revival of this medieval sport.

'Tis written that even Henry VIII, when corpulence and sore leggies got the better of him, became a regular and avid spectator of the sport.

Two members of the association will act as judges, one at the releasing point two miles from the competitor's hive. The other by the hive, stop watch at the ready, and for those of you who have not competed before a reminder of the rules.

The Bee Races are conducted by the West Cornwall BKA.

Each racing bee is checked for fitness, is then marked and released at a pre-determined time by the first judge. The Runner will then follow the bee and award a small number of penalty points every time it stops for pollen or nectar. And a large number of points when it flies over open water. Finally, the second judge will clock the marked bee into the hive.

As usual the event will take place during the month of June and obviously anyone living outside the area would find it impossible to compete, but if you would like to watch with a view to introducing bee racing to your own association, please contact the WCBKA secretary. Incidently, a new rule recently introduced by the BBKA reads as follows; Any competing bee thought to be even attempting to sting the runner or the two judges, will be deemed to be automatically disqualified.

ANDREW REEVE

British Bee Journal April 1984

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LACTALBUMIN AS A POLLEN SUBSTITUTE

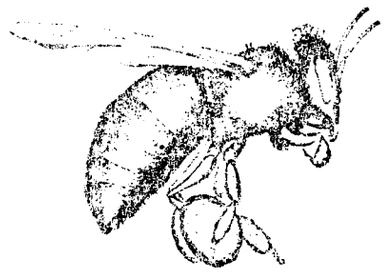
Beekeepers in different parts of the country are getting good results with lactalbumin patties. They report increased honey production, evenness of spring build-up, and resistance to spring pollen dearths.

Better results seem to be achieved by adding water to all the dry ingredients, instead of adding syrup to the brewer's yeast/ lactalbumin mix.

Remember, the recipe I gave in the May 1984 issue was:

12.5 kg lactalbumin	(1/2 x 25 kg bag)
25 kg brewer's yeast	(2 1/2 x 10 kg bags)
70 kg sugar	(2 x 35 kg bags)

Some beekeepers have rented or borrowed large dough machines at bakeries. The "dough" stores and travels well in large plastic bags. Patties that are too hard, too soft, or too far from the brood nest aren't any use.



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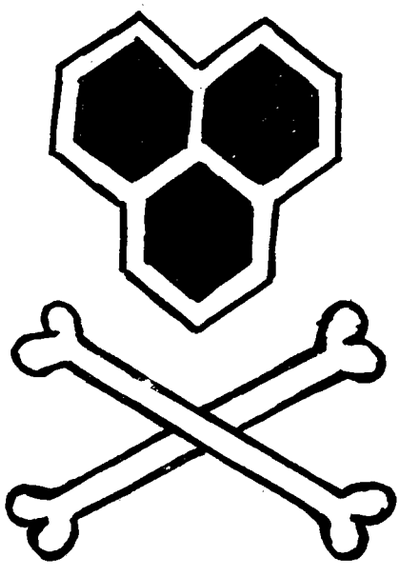
THE EFFECT OF PARADICHLOROBENZENE (PDB) ON HONEY BEES

Paradichlorobenzene (PDB) is often used for controlling wax moths in stored combs. It is effective in killing and repelling moths attracted to honey bee comb, clothing and other items. About 85 g or four tablespoons-full are used for a stack of five full-depth supers of empty comb. Don't use it on combs containing honey for human consumption.



Damage to bees by PDB has been reported in Germany, so we should know how damage occurs and how to avoid it. G. Vorwohl found that bees exposed directly to crystals of the chemical became restless, fell into a stupor, and died after several hours. When removed from fumes before death, the bees recovered. A solution of PDB, honey and water did not cause any abnormal losses, apparently because the chemical was not soluble in the solution and the crystals were filtered out before the test.

Bees caged on a comb which had been gassed for 20 hours with PDB were badly paralysed in 45 minutes. About one quarter of a group of new bees put on the comb an hour later were also paralysed or killed. Bees put on the comb 3 1/2 hours from the start of the experiment remained healthy but tended to move away from the comb.

Paradichlorobenzene residue in combs stored at room temperature (20°C) or above is nearly all dissipated in three hours, completely in 24 hours. At lower storage temperatures, gas residues in comb may be sufficiently strong to kill bees after 24 hours of airing.

To be safe when using PDB for comb fumigation, air all combs in a warm environment for 3 to 48 hours. The longer period is best for combs gassed and stored at temperatures below freezing. In general, combs are safe for bees when you can no longer smell any odour of PDB in them.

Source: Jaycox, E.R. 1984. The Newsletter on Beekeeping. 1(3):3

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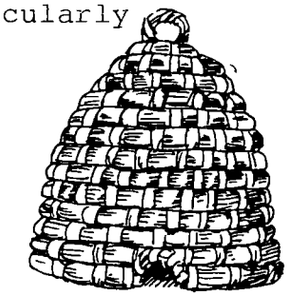
AN IMPORTANT MESSAGE ON BEE DISEASES

I have reprinted below an excellent article on hygiene in the apiary which was written by Dr Elbert Jaycox of New Mexico. Read and inwardly digest, because we all need to have a healthy attitude to what should be a minor problem of beekeeping.

OVERREACTIONS TO DISEASES OF BEES

An old problem that keeps recurring in beekeeping is the exaggerated concern for the danger of spreading bee diseases, particularly American foulbrood (AFB), our most serious brood disease. The problem shows itself in two ways: 1) Attacks on bee inspectors, who are accused of not being careful enough in handling diseased colonies, and 2) Suggestions to beekeepers that they must sterilize themselves and the environment around them after any contact with an AFB-infected colony of bees.



Let's consider some of the unrealistic proposals we hear from people who create the problem, and then look at a few reasons why a careful, but moderate, approach to handling bee diseases is adequate to keep from spreading them.

Not long ago I read an article in which the author listed all the things you must do after having any contact with a colony infected with American foulbrood. There were so many precautions I don't remember them all, but I was impressed by the recommendation that you give the bellows of your smoker several coats of varnish. Also, if you leaned a comb, any comb, against your trouser leg, you must treat your clothes with a strong bleach such as Clorox.

Complaints against inspectors are based on similar thinking. Some beekeepers believe that the inspector should change clothing, take a lye or alcohol bath, and perform other rituals after encountering a colony with AFB while inspecting. Anything less is sure to spread disease, according to those experts.

If American foulbrood were as infectious and contagious as some people would have you believe, it would take our bees as the plague took people in the old days in Europe. Fortunately, there are natural constraints on the spread of AFB and, without human interference,

the disease does not spread easily in a population of honey bee colonies. Perhaps the greatest constraint is the need for disease spores to reach the food of young, susceptible larvae, not just the hive or just any bee in the hive, to cause infection. Good housecleaning by infected colonies, and other mechanisms of resistance in individual adult and larval bees, further reduce the spread of AFB.

Scientists doing research with bee diseases have found that colonies do not become readily infected with American foulbrood, even when they have been given sugar syrup containing large numbers of disease spores. They also have reported that routine examination of diseased and healthy colonies in the same apiary did not spread the infection.

Disease is spread most commonly by lack of inspection by individual beekeepers and their failure to recognise the disease or its presence. These errors and omissions lead beekeepers to transfer combs containing disease, to divide diseased colonies, and to extract honey from diseased colonies. These are the primary means of spreading infection, not the smoker, clothing, gloves, etc., of the beekeeper or bee inspector.

✳ (Read that last paragraph again!) ✳

Beekeepers and inspectors should always take a few simple precautions after handling a colony infected with American foulbrood:

1. Scour and flame the hive tool,

2. wash your hands,

3. wash or change gloves if you are wearing them,

4. scrape and rinse off the bellows of the smoker, and

5. make sure that any spilt honey is cleaned up or well-covered with soil.

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FIRST AID TREATMENT FOR BEE/WASP STINGS

You may not need this, but do you know how to treat a bystander or passer-by who gets stung and reacts badly? You may be the only person for kilometres around who is able to help.

1. Minor reaction - swelling around the sting site and pain:

   Apply Disprin or other aspirin tablet - moisten and rub over the sting site and surrounding skin. This may help to reduce pain and prevent further swelling.

   Apply cold packs (cold water, ice blocks in plastic bag or cloth) over the sting site for as long as necessary to relieve pain and prevent further swelling.

2. Moderate reaction - or person with known previous bee sting reaction:

Oral antihistamine preparation if available taken immediately and repeated in 1/2 hour. This together with above measures for local treatment to the sting bite.

Antihistamine preparations: (trade names)
- Zadine
- Fabahistin
- Polaramine
- Phenergan
- Avil
- Chlortrimeton
- plus others

All are equally effective when used in recommended doses, but vary in extent of their sedative side effects. Zadine and Fabahistin are possibly less sedating than others.

A "Medi-Haler EPI" inhaler may be used if available or carried. This provides adrenalin by inhalation which can be effective for those having a moderate reaction and where there is some swelling of tongue and/or throat.

3. Severe reaction - may follow sting to face or neck, or occur in a person with a known severe bee-sting sensitivity.

Signs: severe, rapid swelling around the sting site, but extending to other areas (e.g. around eyes, lips and general puffiness of face).

Breathing difficulty, wheezing may be audible.

Collapse and loss of consciousness.

Generalised rash.

If possible administer oral antihistamine and use local measures around sting site. Summon medical help (Doctor or Ambulance - stress urgency).

If person collapses turn on to side with head down and nurse in "semi-prone" first aid position until help arrives.

Restez là bien tranquillement, je vais aller chercher une ruche!...
(Dessin de Bergstrom).

A possible translation of the French might be: "Take it easy, friend, while I go and look for a beehive."—From "Gazette Apicole" (France)

Medical treatment for a severe reaction may include: injection of adrenalin, antihistamine, steroid (cortisone type drug), intravenous fluids and oxygen, depending on the severity of the reaction.

Minor reactions are common, moderate and severe reactions are rare, and fatal reactions very rare.

PREVENTIVE TREATMENT

Persons with a known severe sting sensitivity can have preventive, desensitisation injections, the aim being to reduce the severity of a sting reaction.

A preliminary test (RAST test) is carried out to determine the likelihood of a future reaction and whether or not desensitisation would be worthwhile : a series of injections (usually at weekly intervals) with a purified bee venom extract is then given. A booster does at regular intervals is required.

If you have had a previous bee sting reaction consult your doctor for advice regarding first aid treatment, supplies of antihistamine preparations (these may be purchased from a chemist), or a discussion regarding the pros and cons of carrying a "Medi-Haler" or undergoing desensitisation.

These notes were prepared by Dr B A Foggo, Otumoetai Health Centre, Tauranga, for the National Beekeeper's Association.

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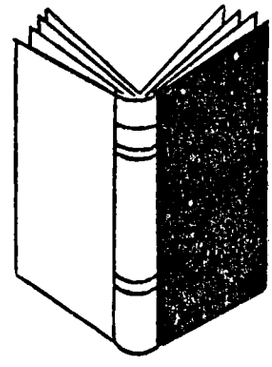
FOR YOUR "MUST READ" LIST



- AgLink FPP 827 on toxic honey from tutu honeydew. Available free from MAF offices.

- "Trees for the New Zealand countryside - a planter's guide "by John & Bunny Mortimer. Contains 272 pages, and descriptions of over 300 native and exotic species. Topics covered include nectar and pollen sources, planting design, shelter, shade, handling and planting trees. Hard cover, $37 including postage, from your bookseller or from Taitua Books, RD 9, Frankton, Hamilton.

- Hot off the press is a new directory from the International Bee Research Association - "Pollination directory from world crops", edited by Eva Crane and Penelope Walker.

  This guide contains information on more than 400 plants, grown in different parts of the world, and a bibligraphy of over 200 references. Of course many of the crops grown in this country

will be listed. This publication has another connection with New Zealand - it was published with financial support from the New Zealand Ministry of Foreign Affairs.

Cost is £14.00, or about NZ$36.00. To order contact me at MAF, Private Bag, Nelson.

SPECIMEN ENTRIES

clover, crimson Trifolium incarnatum L. Leguminosae

This annual or biennial herb, also called carnation clover or Italian clover, is grown as a fodder crop in temperate zones and in subtropical North America, and often as a catch crop after cereals.

It has a typical clover flower head with 65-125 florets, which can set some seed by self-pollination; however, only a limited amount of automatic self-pollination occurs, and insect pollination is necessary to achieve maximum seed yields (Free, 1970). Honeybees collect nectar and pollen, and the plant is an important honey source (WHOS Directory entry 429)*. The need for honeybees as pollinators in seed production has been firmly established, although the number of honeybees required is less firm. Bumble bees and some solitary bees also visit the flowers. Colonies of honeybees at 2.5/ha have been recommended, and also up to 12/ha. The extent of pollination can be assessed, because pollinated flowers wither within a day, whereas unpollinated flowers remain open for about 2 weeks (McGregor, 1976).

* ["Directory of important world honey sources" IBRA, 1984]

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- Also from IBRA : "Directory of important world honey sources", by Eva Crane, Penelope Walker, and Rosemary Day. This directory is a first : it identifies 467 plants (from a preliminary selection list of 2 569) that are reported, somewhere in the world, to be a major source of honey. This is supported by a bibliography of 820 references and three indexes.

SPECIMEN ENTRY

296 Melilotus alba Desr.; Leguminosae

sweet clover, white melilot, white sweet clover; biennial Bokhara clover (En/AUS); bee clover, Bokara clover, melilot (En/USA); sweet white clover (En/ZIM); meliloto, trébol de olor (Es/ARG); melilot blanc, trèfle hubam (Fr/ALG); melilot (Fr/MAY); meliloto-branco, trevo-branco (Pt/BRA)
Herb, 30-150 cm, biennial (cv Hubam is annual); fls white, fragrant
Distribution temperate Europe, S America, N America, Asia, Oceania, (Med) Africa; subtropical S America; tropical Africa. **Habitat** cultivated crop plant; waste places, persists in fields turned to other crops
Soil neutral to alkaline soil; lime preferred; rhizobia (bacteria) must be added to some soils. **Rainfall** >500 mm per season or irrigation needed; some drought tolerance

Economic and other uses
Fodder - hay, pasture, seed; hay/silage (but toxic to livestock if poorly harvested or if fermented) (Why/53). **Land use** amenity. **Soil benefit** erosion control; N-fixation

Warning
Persists in fields turned to other crops; seed often harvested with alfalfa seed; stalks can cause problems when harvesting wheat (Van/49); hay/silage toxic to livestock if poorly harvested or if fermented (Why/53)

Nectar rating; nectar composition

Honey flow
Honey potential (kg/ha) [high] 26-678 (POL, Dem/63a); [moderate] 211.8 (BUL, Pek/77); 218, 180 (1st, 2nd crops, BUL, AA560/65); 200-500 (ROM, Cir/80); 174 (ROM, Jua/64)

Pollen
P2 FRA; USA/CA; USA/UT. **P3** USA/CO. **P** ALG; BRA; CAF/QUE. **Yield** good (Cir/80); abundant (Van/49); load size small-medium (Nye/71).
Colour of load yellow (Cir/80); load green-brown (Han/80). **Pollen grain** illustrated and described (Sao/61). **Reference slide**

Recommended for planting to increase honey production
USA (Pel/76). Propagate by seed. Recommended for roadsides and railways to prevent soil erosion and for eradicating obnoxious weeds by crowding

Honey: chemical composition
Water [medium] 18.8% (1 sample, 5 mths, Whi/62)
Glucose [medium] 33.72%. **Fructose** [medium] 36.77%. **Sucrose** [medium] 1.00%. **Maltose** 5.51%. **Higher sugars** 0.79%.
Ash [low] 0.041% (Whi/62)
Free acid [medium] 15.62 meq/kg. 19.37 meq/kg.

Honey: physical and other properties
Colour slightly green (Con/81); light (Pel/76). **Pfund** water white or white (Lov/56); 4-8 mm, water white (Whi/62)
Viscosity "heavy body" (Lov/56). **Electrical conductivity** 0.000174/ohm cm
Granulation rapid (How/79; Pel/76); within a week of removing from hive
Flavour of cinnamon (Con/81); mild (Lov/56); mild, peppery (Pel/76)

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Contact me also if you wish to order this (individually or for your branch library). Cost is £27.50 or about $NZ72.00.

- And finally, from IBRA, Cam and Doreen Jay's work on honey bees in kiwifruit has now been published in *Bee World*. It covers : kiwifruit flowers and fruit set; bee behaviour on flowers; behaviour of bees within blocks and on vines; dispersal studies; and pollen trap analyses.

The twelve-page reprint costs $NZ2.60, and can also be ordered from me.

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WHILE OVER THE TASMAN

This is not designed to make us feel smug, as we have no cause for that, but Western Australia's recent experience should be a salutary lesson to us all. From the annual report of the Beekeeper's Association's President there : "Disease in W.A. is perhaps the most discussed topic with beekeepers. AFB has reached a level no-one would have imagined. Compensation costs (for their bee disease insurance scheme) per hive per year that were 4c, are now 35c and could be $1.75 from January 1985" (Aussie dollars, of course).

The incidence of diseased apiaries has exploded since 1979, was

was 10.8% in 1983 and was expected to be higher for 1984. (In 1983, 763 hives were destroyed because of AFB, and 568 in the first few months of 1984). There are 55 000 hives in the state.

Source - Australian Bee Journal, September 1984

And from the same source, the annual report of the president of the Tasmanian Beekeepers' Association.

"EFB has been discovered for the first time in Tasmania. This will involve a tremendous amount of work for the apiary inspectors and cost to the Agriculture Department in providing inspection services." (Thinks : I wonder if the beekeepers realise it will affect them too?)

"Chalk Brood in New Zealand, practically on our doorstep, perhaps the second worst disease in the beekeeping world. I would request that any beekeeper visiting New Zealand not to visit apiaries whatsoever until more is known how this disease is transmitted."

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FOR THE BEEKEEPER WHO HAS EVERYTHING?

A glossy colour insert in this month's "Gleanings in Bee Culture" advertises what might be that hard-to-find gift you've been looking for. A firm call 'Porcelain by Patricia' advises us of the latest edition in their beekeeper's collector series. It's a porcelain figure of a person working a hive, about 225 x 225 x 175 mm.

As only 1 500 are to be made, "Patricia" advises us that these are sure to increase in value. The price - a mere $NZ 714 each!

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Andrew Matheson

(A G Matheson)
APICULTURAL ADVISORY OFFICER