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NORTHLAND BEEKEEPING

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A LETTER FROM THE EDITOR

Those of you who attended my introductory talks during May will recall my plans to publish a beekeeping newsletter for the district. While its been a difficult birth, this first issue of NORTHLAND BEEKEEPING will hopefully be the start of good things to come.

It is hoped that NORTHLAND BEEKEEPING will appear on a regular basis quarterly and be distributed to all Northland Apiary District registered beekeepers owning 50 hives or more. That's about all the budget will allow, but I'll also be sending a copy to each Hobbyist Bee Club in the district. Maybe that will be an incentive for more clubs to form!

I've also tried to save money by having the newsletter photo-copied here in the Whangarei MAF office rather than at the Government Printer. The GP has a user-pays policy now so we can do it on our own machine for quarter the cost. I just hope no one objects to the lessening in print quality.

NORTHLAND BEEKEEPING will follow the same format as other MAF Beekeeping Newsletters throughout the country. It will include technical and trade information, summaries of research work, and reports on beekeeping current events. I'll also try to include one longer article each issue on important management topics (see "Sugar Feeding" in this issue).

In publishing this newsletter, it is in no way my intention to compete with the NBA's NEW ZEALAND BEEKEEPER magazine. Instead I hope NORTHLAND BEEKEEPING will complement the Beekeeper by offering local information and news. I'd be grateful for your comments and suggestions as we go along.

"The Editor"

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SUGAR FEEDING

Since arriving on the job in May I think I've been asked more questions about sugar feeding than any other beekeeping subject. And that's not surprising. For while sugar feeding may not have been essential in management for honey production only, the move to pollination is requiring a more intensified approach.

You could probably write a book about the subject, but what follows are answers (hopefully) to many of the questions you have recently posed:

SUGAR TYPES

A-1 - the normal refined white sugar. Available through most wholesale and retail outlets.

Industrial Grade - a semi-refined sugar bagged straight from the boat and available at concession rates through local NBA branches and the Honey Producers Co-op. Not for human consumption!

Fine Liquid Sugar (FLS) - the thick liquid syrup just prior to evaporation into A-1. FLS is 65% dry sugar equivalent and is available from Chelsea Sugar Refinery in tanker loads of 12t (liquid). Joint-purchase loads available by rail car, but must be decanted into beekeeper's barrels within 48 hours. Single, full tanker orders delivered by tanker truck.

SUGAR COSTS

Up until yesterday (1 July) I could have boasted that sugar was one of the only beekeeping expense items that hadn't increased in the last two years. Now everything has gone up by 6.5%.

A-1 - $791.43/tonne
$27.70/35 kg bag
freight paid to nearest railhead.

Industrial Grade - $685.72/tonne
$24.00/35 kg bag
or $23.34/bag from NBA (5 pallets of 30 bags each per order. See Don Hoole, PAPAROA about group orders in Northland).

FLS - $5,890/tanker
$727.16/dry tonne equivalent plus a transport charge of around $30 per dry tonne.

DRY vs SYRUP

Feeding sugar dry is a very common practice in the north, while in Southland it is used much less extensively. While

dry sugar is easier to feed, the big question is how much food actually gets into the hives. Forster reported in a 1976 edition of the N.Z. BEEKEEPER that significantly more feed was stored by hives fed syrup than by those fed dry white sugar. The difference was not so marked with dry raw (or industrial grade). Part of the reason may be that bees have to add water to dry sugar before it can be inverted and stored. Moisture in the hive can provide part of the requirement, but bees must also make extra foraging flights to collect the remainder. This isn't to say that dry sugar shouldn't be fed and it would be interesting to repeat Forster's work in the warm north. The best rule of thumb, though, is to only feed dry sugar to colonies which already have some stores. It just doesn't work as an emergency feed.

THIN SYRUP vs THICK

If you want the largest amount of food stored per amount of syrup fed, then always feed thick syrup. Ribbands found in England in 1948 that thick syrup (67% sugar) produced 30% more stores than the same weight of sugar fed in thin syrup (38% sugar). The reason is that a portion of the sugar fed must be consumed by the bees in an effort to evaporate off excess water from the syrup. They actually use .3 kg of sugar for every litre of water eliminated.

In practical terms what this means is that compared to thin syrup, for every 10 litres of thick syrup fed, an additional 2.7 kg of sugar will actually be put into the comb as stores. At 80c/kg (for A1) that's a swing, of $216 per feeding per hive.

PROPER CONCENTRATION

Thick syrup is generally mixed at 2 parts sugar: 1 part water (weight/weight). At that concentration (67% sugar) the solution is fully saturated at 17°C and at lower temperatures is likely to begin to granulate out. A better concentration is probably 9:5 (64% sugar). The temperature of this solution can be lowered to 0°C without granulation.

TANK LOAD MIXING

2:1 or 9:5 doesn't really answer the question, though, that Cris Moss, OKAIHAU asked. What he (and most commercial beekeepers) want to know is how much sugar and water need to be mixed to get a given volume of syrup.

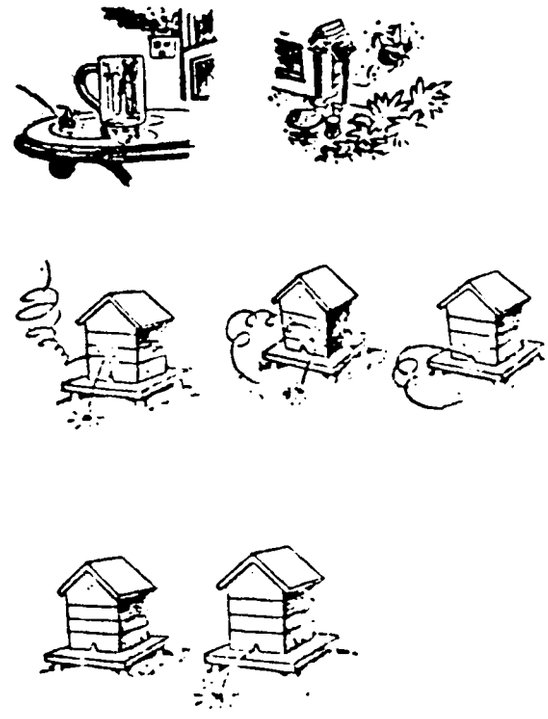
A German publication gives the formula for 2:1 syrup:
10 kg sugar : 5 litres water → 11 litres syrup
My bush chemistry gave me the following for 9:5:
9 kg sugar : 5 litres water → 10.8 litres syrup.

So, for a 44 gal. (200 litre) drum, divide 200 by the syrup figures above and then multiply the sugar and water figures by your result:
2:1.

181.8 kg sugar : 90.9 litres water → 200 litres syrup
9:5.

166.6 kg sugar : 92.6 litres water → 200 litres syrup.

By the way, the FLS is already 65% sugar, so its just perfect for optimum feed results.



HOT WATER vs COLD

Obviously hot water speeds the mixing process considerably at high concentrations, but cold water can be used. In either case let the mixture sit overnight and then stir the sediment off the bottom with a large wooden paddle.

There are as many mixing methods as there are beekeepers but a simple method is to use a circulating pump with the outlet hose feeding back into the tank. If you use a motorised pump for feeding out this does the job very well.

HOW LONG WILL A FEED LAST?

Well, this depends on a lot of things including weather, available sources, time of year, etc. However 5 litres of 9:5 syrup will result in about 5 kg of stores or just over 2 frames of honey.

CAN INDUSTRIAL GRADE BE FEED AS SYRUP?

The old Fiji Raw was known to cause some problems for bees if fed as syrup. The problem was probably the high amount of unrefined material in the sugar which affected the bees physically. Cage tests done by Wallaceville on Industrial Grade also showed bee mortality but two year's experience in Southland has shown good results. The reason may be that since bees can defecate out the residue it doesn't

pose the same problem as it would when fed to caged bees. Inclement weather wouldn't seem to be an issue, either, since bees don't have to fly far from the hive to defecate.

One problem to watch out for is tainting of stores. If the very brown syrup (it smells like beer!) is fed within 3-4 weeks of the honey flow it can show up in your extraction combs. This wouldn't be such a problem with bush honeys but definitely could affect clover blends, especially in comb honey.

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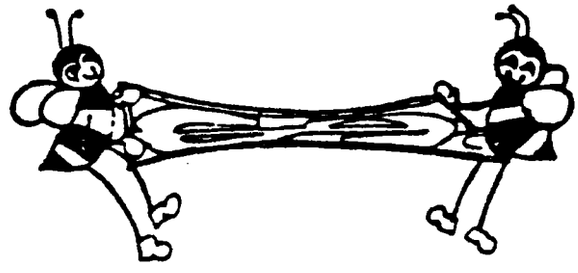
6/85

COSTS TO BUILD 100 4-BOX HIVES

		(Change from '83)
400 storeys @ $7.85 ea	3,140.00	*(.38)*
100 lids with iron @ $11.94 ea	1,194.00	*(.21)*
100 queen excluders @ $8.35 ea	835.00	*(.33)*
100 bases @ $6.92 ea	692.00	*(.27)*
3,600 frames @ $586.95 per 1,000	2,113.02	*(.35)*
206 kg foundation @ $11.04 per kg	2,274.24	*(.35)*
3.6 reels frame wire @ $20.65 per reel	74.27	*(.38)*
8.3 kgs frame nails @ $4.05 per kg	33.61	*(.35)*
28.6 kgs super nails @ $90.43 per 25 kg	103.45	*(.35)*
Preservative @ 0.40 per unit (600 units)	240.00	*(.31)*
Waxing at 0.08 per unit (600 units)	48.00	*(-)*
Paint @ 0.53 per unit (500 units)	265.00	*(.51)*
	11,012.66	*(.31)*
Labour 8 hours/hive @ $6.25 per hour	5,000.00	*(.25)*
	16,012.66	*(.30)*
1,800 kg sugar to draw 3,600 standard sheets of foundation at 79c/kg	1,422.00	*(.06)*
	17,434.66	*(.27)*



BEE MAGS

With Acarine affecting the Canadian queen market and the growing U.S. honey mountain threatening world honey trade, its obvious that even New Zealand beekeepers live in a proverbial "small world".

Keeping up with that small world can be a problem, however, especially since New Zealand beekeepers don't quite have the variety of periodicals which other members of the farming community enjoy. The quarterly NEW ZEALAND BEEKEEPER and the bi-monthly THE APIARIST provide essential information on domestic matters but often don't quite keep up with events occurring overseas.

For that perspective, beekeepers need to subscribe to journals from abroad. The question, though, is what periodicals to buy. Many of the magazines are expensive and some provide a lot more information than others. So to help you get best value for money here's my pick of the best three bee-keeping publications from overseas.

1. The American Bee Journal
   Hamilton, Illinois
   62341 U.S.A.
   monthly
   $NZ38/year.

   The oldest and most established of American beekeeping publications. Excellent scientific articles written in an easily understandable style as well as practical articles on beekeeping management and equipment. My only quibble with ABJ is that they tend to be too guarded in their reporting of important issues facing the U.S. industry. The fact that Dandant & Sons, the publisher, is a major equipment manufacturer may have something to do with it.

2. The Speedy Bee
   P.O. Box 998
   Jessup, Georgia
   31545 U.S.A.
   monthly
   $NZ34/year.

   While it might have a funny sounding name, The Speedy Bee is actually an excellent beekeepers' newspaper which has become, in the past few years, a leader in reporting news that the commercial producer needs to know. Well researched and reported, the paper always seems first to report the most important stories in the bee world, with an in-depth coverage not always found in the other two American journals. As a newcomer to the scene, The Speedy Bee also seems to be able to tackle head-on the more controversial issues of the day without fear of offending long-established commercial relationships.

3. Bee World
International Bee Research
Association (I.B.R.A.)
Hill House,
Gerrards Cross
Bucks SL9ONR
U.K.
quarterly
$NZ52.00/year

International Bee Research Association
Hill House, Gerrards Cross,
Bucks. SL9 ONR, England

The best of the British bee journals and really more of an international publication. They specialise in printing definitive articles on beekeeping subjects which summarize current scientific knowledge around the world.
Devaluations have increased the subscription almost beyond the range of most beekeepers but this is offset by the fact that part of the money goes to support the I.B.R.A., the world's major clearing house for scientific and technical knowledge on beekeeping. The I.B.R.A. publishes Apicultural Abstracts, the only review of current beekeeping information, as well as the Journal of Apicultural Research. They also offer the world's largest collection of books and pamphlets on apiculture and have been instrumental in development of beekeeping projects in the Third World. Associate membership in the I.B.R.A. (no journals) is $NZ11.50 and definitely a very worthy cause. Payment can be made to the I.B.R.A. directly or to the New Zealand representative (see next article).

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CAM JAY'S REPORT

Many will remember the visit by Professor and Mrs Cameron ("Cam") Jay to New Zealand in 1982 to study kiwifruit pollination. In the short time they were here the Jays' were able to significantly increase our knowledge of honey bee pollination behaviour and their research results are now forming the basis for new recommendations on such matters as hive placement and palliatising.

Recently an article on their work appeared in Bee World (see above). The article, entitled "Observations of Honey bees on Chinese Gooseberries ('Kiwifruit') in New Zealand" not only discusses their experiments but also provides a good summary of the New Zealand kiwifruit industry. I think its a must for beekeepers in this district.

Reprints of the article can be obtained at a cost of $2.90 from the New Zealand I.B.R.A. representative :

Trevor Bryant
Ministry of Agriculture & Fisheries
Private Bag
TAURANGA

While you're at it ask Trevor to send along details of other publications I.B.R.A. offers. Through a special arrangement they can all be obtained through Trevor (no need to apply for overseas funds!)

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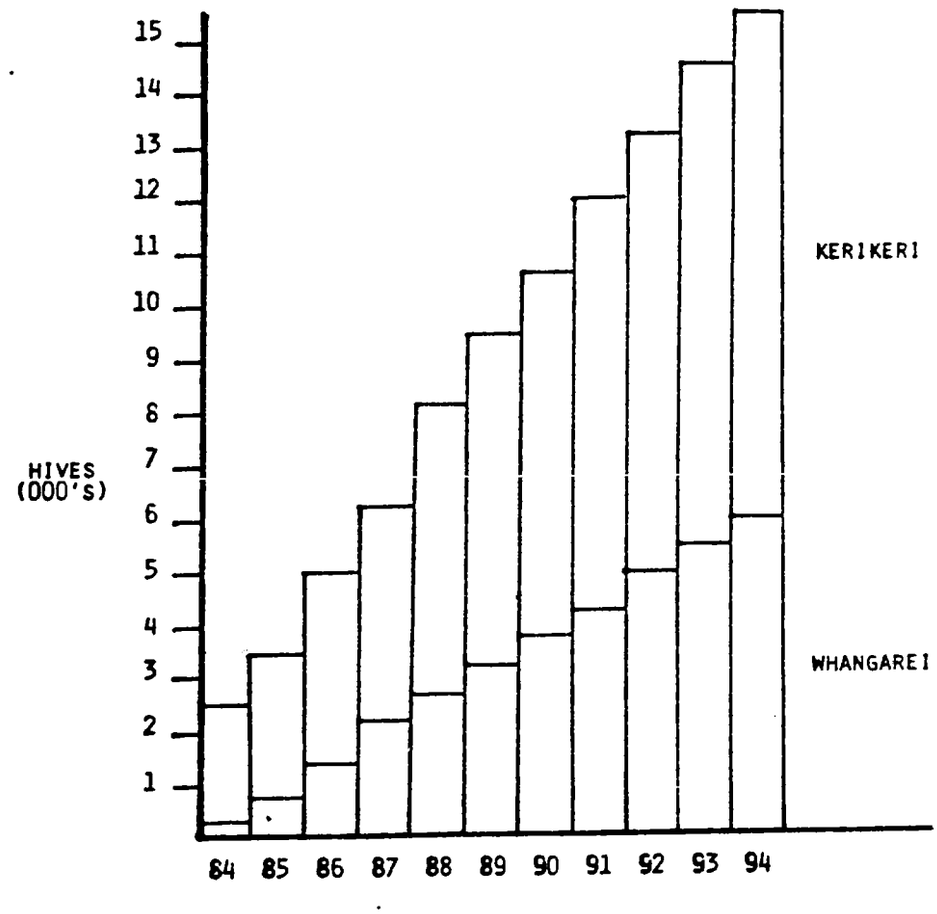

NORTHLAND APIARY DISTRICT

HIVES REQUIRED FOR KIWIFRUIT POLLINATION

(8/HA)

OPTIONAL ACCIDENT COMPENSATION SCHEME

One added advantage of conducting a Financial Monitoring survey is that its a good way of finding out if beekeepers are getting all the benefits and exemptions to which they are entitled. A case in point is ACC. Every beekeeper knows what ACC is because they all pay a levy to the corporation each year. But how many realise that there is a scheme which can guarantee a satisfactory benefit in the case of injury, regardless of your business's net return.

In the past self-employed people have felt "short-changed" by ACC because the corporation always took business book profit (and not personal drawings) as your relevant earnings for the scheme. This could be extremely serious, especially for beekeepers, because such profits can both fluctuate widely and be set artificially low for tax purposes. The problem is that when you minimise taxable income you minimise compensation, too.

The ACC has come up with two schemes designed to solve this problem for the self-employed. The first scheme is the *Minimum Relevant Earnings Scheme,* a scheme which sets a wage of $100 per week for the full time self-employed (over 30 hours per week). In the event of temporary total incapacity, 80% (or $80) of that wage is paid weekly. That's not much and certainly wouldn't compensate a family man with his own business to run.

Recognising this the ACC have set up a second *Optional Scheme.* This gives full-time self-employed the option of choosing to join a scheme where compensation is paid at a figure determined each year by the ACC. This figure is based on the average weekly wage, set presently at $14,768/year or $284/week.

If you elect to join this scheme you are levied on the basis of this amount ($113.98/year), but if you are incapacitated compensation will be based on $284/week not your taxable income.

If you want to opt for this scheme, points to remember include:

* you must apply *annually* to stay in the scheme no later than 7 March.

* the application is incorporated in your IR 3 tax return form which your accountant should complete for you.

* the scheme is *not* open to those of you who trade through a company - you're deemed to be an employee of that company as far as ACC is concerned and the company should be paying the normal levy rate on your earnings.

For further information on the Optional Scheme ask for the booklet "Compensation for the Self-Employed" at your local ACC office.

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AGLINKS AVAILABLE

AgLink, the fact sheet system which the Ministry of Agriculture and Fisheries uses to provide up-to-date information to the agricultural community, has a series of titles of direct interest to beekeepers.

Current offerings include:

MANAGEMENT

FPP 372 Establishment and Management/An Introduction.

FPP 535 Apiary Sites/How to Reduce Drifting.

FPP 537 Apiary Sites/Selection and Planning.

FPP 538 Urban Areas/Management to Prevent Nuisance.

CROP SOURCES

FPP 529 Nectar and Pollen Sources/Summer, Autumn, Early Winter.

FPP 530 Nectar and Pollen Sources/Winter, Spring, Early Summer.

FPP 827 Toxic Honey/from Tutu Honeydew.

HIVE PRODUCTS

FPP 532 Pollen Production/Collecting and Processing.

FPP 533 Pollen Production/Pollen Trap Design.

FPP 534 Beeswax/Production and Processing.

DISEASED PESTS

FPP 124 Brood Diseases in Honey Bees/Significance and Control (colour).

FPP 196 Wasps/Life History and Control.

FPP 392 Swarms and Feral Colonies/Eradication

FPP 428 Overseas Diseases and Pests/Features and Potential Damage.

FPP 536 Wax Moths/Life History and Control.

As well there are AgLinks on many other subjects which can be of importance to beekeepers, such as Financial Management, Taxation, Vegetation Control, and even Plant Propagation. Each MAF office retain an AgLink catalogue which lists all current listings available from this excellent information service.

Single copies of MAF AgLinks are available free of charge from any MAF district office or by contacting me here in Whangarei.

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CURRENT PRICES ON SELECTED HONEY HOUSE PLANT

These prices are for information purposes only and are continually subject to change.

ITEM	SOURCE	COST
Penrose Chain Drive Uncapper	David Penrose 55 Fendalton Road CHRISTCHURCH	$5,275
Pender 8 Frame Extractor w/motor	Alliance Bee Supplies P.O. Box 5056 CHRISTCHURCH	$5,500
Herzog 6 Frame Extractor w/motor and variable speed program	Ceracell Foundation Ltd P.O. Box 5814 AUCKLAND	$4550
Thomas 10 Frame Extractor w/motor and programming unit.	Ceracell Foundation Ltd	$8098
Pender 36" Cappings Spinner	Alliance Bee Supplies	$5,300
Maxant 36" Cappings Spinner	Alliance Bee Supplies	$3,100
Thomas Cappings Spinner	Ceracell Foundation Ltd	$5,500
Cappings Centrafuge	Hitchcock & Lawson Box 271 TIMARU	$9,000

Pender 2" Vane Pump	Alliance Bee Supplies	$2,000
1½" Flexible Impeller Pump	Ceracell Foundation Ltd	$555
1¼" Gear Pump	Ceracell Foundation Ltd	$240
Honey Pump Unit 2 speed, 1¼" Gear Pump, gear box, ½ HP motor	Alliance Bee Supplies	$958
Stainless Steel In-Line Honey Filter	Hitchcock & Lawson	$5500 (price 2 years old)
Bates Packing Machine with Revolving Table	Hitchcock & Lawson	$10,500 (price 3 years old)
Apielectronic Packer	Ceracell Foundation Ltd	$2,755
Italian Pneumatic Packer with Table and Tank	Alliance Bee Supplies	$3,533

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HIVE CONSTRUCTION -- RULES OF THUMB

If you're intending to increase hive numbers or just carrying out routine maintenance, here's a handy reckoner to avoid ordering more materials than necessary -

Frame Wire

1 x 2 kg spool per 1000 frames (3 wire)

Frame Nails

Size	*Nails/kg*	*Frames/kg*
30 x 1.4 mm	2,600	433
40 x 1.6	1,500	250

Super Nails

		Supers/kg		
Size	*Nails/kg*	*36 nails*	*32 nails*	*28 nails*
50 x 2.5 mm galv	450	12.5	14.0	16.0
60 x 2.8 mm galv	270	7.5	8.4	9.6

Paint (two coats)

66 full-depth boxes per 4 litres.

Paraffin Wax

Used - 6 boxes per kg
New - 20-30% more.

Assembly Time

Wiring frames only (3 hole)	6 boxes/hour
Composite time for assembling and painting super, wiring and waxing 9 frames	45-55 minutes
Composite time for one four box hive (as above)	8 hours

Sources : *Tauranga District Newsletter,* August 1984
The Beekeepers' Bulletin, August 1984

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DR SHIMANUKI REPORTS

Many of you will remember Dr H. Shimanuki's visit to Northland in 1984 as part of his sabbatical studying New Zealand bee diseases. Dr Shimanuki is head of the federal Department of Agriculture's Bioenvironmental Bee Lab, the main bee disease diagnostic centre in the United States.

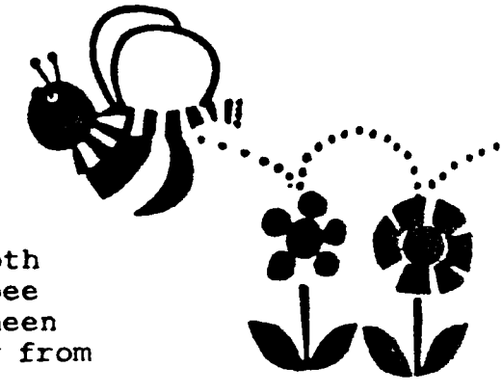
While Dr Shimanuki has no doubt had his hands full with other matters (ie Acarine disease) since his return, he has found time to issue a series of reports on New Zealand beekeeping. They make interesting reading, not only because it's always good to get overseas opinions about our industry, but also because he makes some important recommendations for future change.

Highlights of his reports include :

* High praise for New Zealand beekeeping and the MAF advisor system. According to Dr Shimanuki, "the beekeepers that I have seen in New Zealand can be ranked among the world's best".

* Support for both the Inspection Return system and the prohibition of drug treatment as a means of American foulbrood control. He mentions, however, that it is important not to reduce the level of MAF inspections because the level of AFB will go up.

* Comment that chalkbrood disease is not of economic consequence and that much progress can be made in controlling it by breeding for hygienic behaviour in our honey bee stocks.



* The fairly high incidence of both sacbrood and paralysis in our bee stocks. Again he feels that queen breeders can easily select away from

susceptibility to these types of viral disease.

* Continued mystery about half-moon disorder. While cross-infection tests have been negative, Dr Shimanuki feels that it still might be bacterial in origin. Tests are continuing back in the U.S. to see if this is so.

* That undoubtedly the disease of most economic importance to New Zealand beekeeping is nosema. However, beekeepers must be convinced of the value of feeding fumagillin to control its affects.

* The need for a qualified bee pathologist to survey existing bee diseases, research for controls, and certify honey bee shipments for export. Following negotiations with DSIR and the NBA, Denis Anderson was appointed to such a post in April.

* A "tremendous growth potential" for queen exports from New Zealand as a result of major disease developments in North America. However, the market won't "break" over night, but instead will build gradually as reputation and reliability are established. While he was highly impressed with both our stocks' queen fecundity and progeny gentleness, he feels that further queen selection is essential, particularly in the areas of wintering, rapid spring buildup and autumn shutdown.

* As well, Dr Shimanuki was able to report on tests conducted to determine the origin of our black, bush bees. Bees collected from the East Cape were measured for a number of physical characteristics. The information was fed into a special computer programme and compared with other data from around the world. The result - a high probability that it is of European origin, probably *Apis mellifera mellifera,* the Dark (or German Black) Bee. *The Hive and the Honey Bee* gives the following description of this race - generally nervous, running from the comb, frequently but not always aggressive, tardy spring development. With the advancement of modern agriculture, the honey production of these bees proved inferior to other races. On the plus side, Brother Adam mentions that there always seems to be enough honey in the brood combs and the danger of starvation is small.

The chapter concludes - "if crossed with other races, its hybrid offspring show unusual vitality and performance, but at the same time its strong tendency to sting remains a significantly bad habit". (We knew that already, thanks-very-much!)

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The vet told me to stay away from bee hives.

GADGETS AND GISMOS

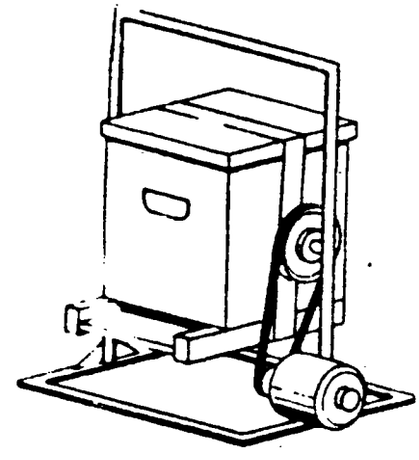
NEW EXTRACTOR TIMING UNIT

Murray Bennie, RANFURLY, one of this country's best Beekeeper-Engineers, has come up with a new timing device for semi-radial extractors. The device uses a one horse self-braking electronic motor (no need for a compressor) and circuit board electronics to produce a programmed system for extractor control. The timing unit, which is enclosed in a clear plastic box, has 5 mode operation, with adjustable timing within each setting. Forward and reverse modes can be set anywhere between 0 and 2½ minutes, while braking can be set between 0 and 15 seconds. Using the timer, runs can be set for different lengths depending on the honey to be extracted. For example, a light clover honey could bypass the first two modes and run a short forward mode. With manuka honey all 5 modes could be used.

The unit can be wired (by an electrician) for 1 or 3 phase operation and is self-diagnosing (ie it will brake automatically if things go wrong). It comes complete with motor, timing unit, mounting gear, two pulleys and a belt and is priced at approx-mately $1,250.00

For more information contact :

M.R. Bennie
24 Northland Street
RANFURLY
ph RNF 59



"World's First Motorized Beehive?"

NEW HONEY CONTAINER

TecPak, the Dunedin firm that produce the now-famous 500g mussel (and honey) container, have just come up with a new pottle that jumps the apparent volume gap between their product and the normal 500g wax honey pottle. Too many beekeepers complained to TecPak that the squat "mussel container" looked smaller than other honey pottles when placed on the supermarket shelf. So on went their thinking caps.

What they came up with is an identical twin - a plastic counterpart of the 500g wax pottle. Same height, same width, but different base and material. The pottle not only closes the "volume gap" but also allows beekeepers to use existing packing machines. Best of all, the same excellent TecPak lid system is used. The lids are almost guaranteed not to come off accidently.

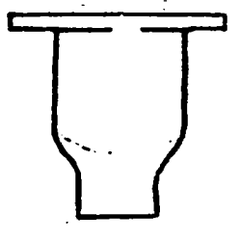
Cost (per 1000)	100 to 900	1000 to 9900	10,000 to 49,900
container (500g)	$117.00	$112.00	$107.00
lid	45.20	40.50	35.20

Minimum 3,000 containers. Art work $15 (once only) plus $10 for a plate.

Contact : Steve Olds
TecPak Platics
Box 713
DUNEDIN
ph. 30-691

BOZI CELL CUPS

The Apiarist "scooped" me on this one but there's nothing wrong with mentioning again a New Zealand-made product which is better than its overseas counterpart. I'm talking, of course, about Bozi Cell Cup system, manufactured by Steve Bozi at Rangiora. Steve is an engineering wizard whose latest idea is a plastic cell cup complete with tabs which neatly fits into a grooved metal cell bar. The tabs also rest on the top bars when two frames are pushed together - no more queen cells falling out of sight into the colony when you go to cell-up a hive.



Bozi Cell Cup

According to Steve the cell cups are also manufactured from a higher quality plastic than similar models and are washable in boiling water.

The cell cups and bars are available from Steve direct or Alliance Bee Supplies. Steve's address is :

Steve Bozi
Kowhai Apiaries
11 River Road
RANGIORA

RE-USEABLE HIVE STRAPS

A Motueka firm is now manufacturing two new models of re-useable hive straps, both of which use 24 mm wide black nylon webbing. The webbing is resistant to u-v light and should have a long field life.

One model has now been in production for quite some time and uses a plastic clip similar to those used in life jackets. While they may look fragile they're strong enough for use on hives and have a neat quick-release system incorporated in the buckle.

The other model uses the more common tensioner/fastener lever made out of a length of 6 mm high-tensile aluminium. The aluminium has the advantage of not rusting on the hive lid.

The plastic clip model is $3.60 while the aluminium lever is $3.92. Both models include a 3 m length of the nylon webbing.

Available from : W.A. Coppins & Sons
255 High Street
MOTUEKA

FRAME REPAIR LUGS

Alliance Bee Supplies is now carrying metal replacement lugs for repairing broken frames. The lugs, used for years by North American beekeepers, are just the thing for saving those otherwise good brood combs which are forever snapping an end. They sure beat dropping a frame of bees down your legs when you lift up that brood box!

The lugs are 15c each or $12.00 per 100.

ELECTRIC STEAM BOILER

For anyone whose oil-fed or coal boiler is nearing the end of its natural life (or are they eternal?) here's an excellent electric boiler which is now being used in several honey houses in Southland. It's the Kinglsey Electrode Steam Boiler, an 18 kw generator fabricated from stainless steel and aluminium and standing only .6 m high. This boiler does away with the need for a boiler room, is clean to operate, and obviously is very efficient. There's no need to stoke the boiler an hour ahead of time. It develops full pressure in just ten minutes at the flick of a switch. The generator lists ex Christchurch at $3,960.00

For more information write :

A.R. Wakefield, Ltd
83 Kingsley Street
Sydenham
CHRISTCHURCH

LOCAL WOODENWARE MANUFACTURER

Did you know that there's a hive woodenware manufacturer right in our apiary district?

Ken & Lynn Perkinson, WARKWORTH are now producing a complete line of high quality hive ware, including self-locking top and end bars. Ken was a successful dairy farmer who got the beekeeping bug and has now turned his dairy shed into one of the best carpentry shops I've ever seen. Well worth a visit, just for the end bar machine!

For prices and availability contact :

Ken and Lynn Perkinson
Pukapuka Road
R.D. 3
WARKWORTH
ph. Puhoi 890

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