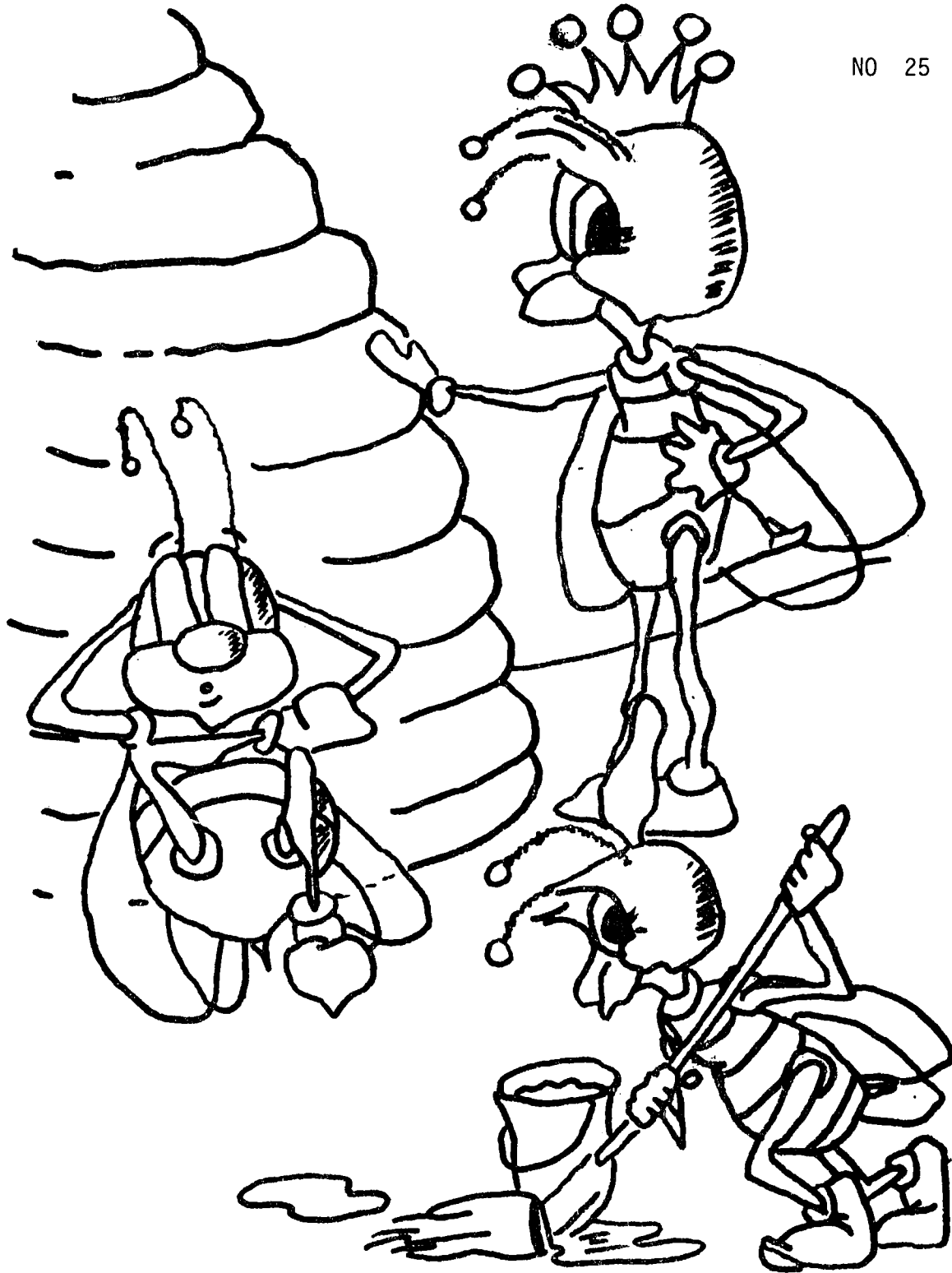


# YOUR NEWSLETTER

20/8/82,

JULY 1982

NO 25



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As a small group of people beekeepers present a good target for all sorts of comments, some good, some bad. Often this criticism is made by people who are very ignorant of beekeeping/bees and the very essential role the foraging honey bee plays in keeping our nation and its people the best fed in the world.

The process of educating 'the knockers' is a long hard job, yet a very essential one, often neglected by beekeepers, or ignored as they have learnt to turn the other cheek.

Prime examples of 'knocking' come from the very industry honey bees provide an essential service to, horticulture. All beekeepers who provide bees have been tongue lashed with "you're ripping us off!", "You can afford to lose bees from sprays, you charge enough!" and so on. Other more damaging remarks are when beekeeping is blamed for any drop in predicted production targets. Only the other night "Poor pollination and storm damage", were quoted on Agreport as being responsible for export losses of 1.5 million trays. This is contrary to all reports I have seen emanating from M A F which in fact state pollination was good, reason for the low crop being, poor flowering, bud rot, storm damage.

If pollination was poor it was an individual orchard problem, usually excessive shade too few males or poor layout, too few bees/ha, poor vine management (pruning).

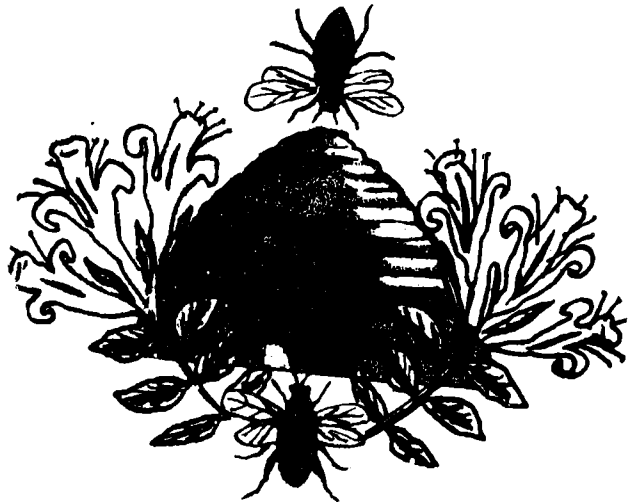
There are no easy answers when it comes to stemming the tide except to answer in the positive, provide the best possible service to growers, become involved with grower organisations at all levels to ensure our interests and concerns are voiced collectively and individually.

As the scapegoat of a burgeoning monolith for too long, it is time beekeepers started putting things into perspective by standing up and making themselves heard.



TANALISED TIMBER - YES, AGAIN!

Despite repeated warnings, some beekeepers will persist in using tanalised timber for hive parts, supers, lids, floors. No! No! Regardless of how long it is weathered/waxed, even painted, the arsenic will leach out. Arsenic kills bees, it may not always be apparent, i.e. large numbers of dead bees, rather slowly and insidiously. Just don't use it. There are numerous other products



around that will do exactly the same job of protecting timber from the ravages of rots and the weather. For cold soaking, use :

Tricunal - copper based, dilute with diesel oil, turps.  
Don't use kerosene. Pat Clinch indicates when mixed the product is toxic to bees.

Pentachlorophenol (PCB) - dilute with turps or diesel

Metalex - - copper naphenate

Woodlife II - - water based water repellent preservative.  
(available from Odlins)

Creosote - - use only for floor boards, runners, it  
will cause tainting of honey.

DISCLAIMER

Mention of any proprietary product does not imply endorsement by M A F or recommendation over similar products not mentioned.

FOUNDATION MILLS

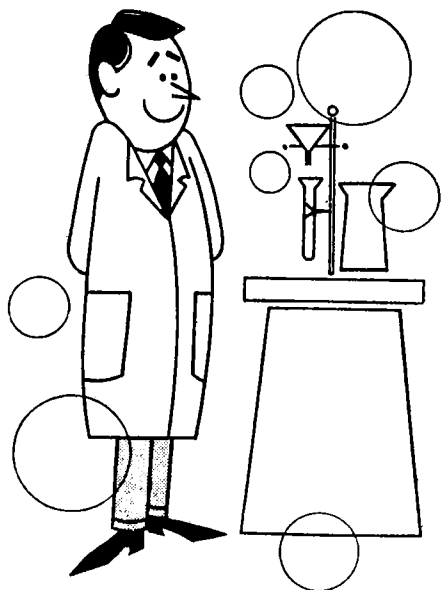
Two foundation mills are now operating in the North Island.

Ceracell Foundation Ltd, P O Box 204 Warkworth

Bee Industires R D 2, Taupiri, Waikato

Both will convert your own wax to medium brood foundation in carton lots.

FROM THE SCIENTIFIC FRONT -



Strength of Beeswax Foundation in relation to cell orientation. H R Hepburn & J R Rigby 198 Jan 1 of Api Res 24 (4) : 234 - 238

SUMMARY

Rolled beeswax foundation of varying mass and number of cells per  $\text{dm}^2$  was cut in 3 cell orientations and tested mechanically in tensile and bending modes. The relative strength of the foundation was positively correlated in  $\text{mass}/\text{dm}^2$ . The relative tensile strength, tensile stiffness, bending strength and bending stiffness were significantly greater in foundation oriented with cell walls

horizontal instead of vertical. Comb in frame strength could therefore be enhanced considerably simply by changing the orientation of beeswax foundation sheets in conventional frames from the customary vertical orientation of a horizontal one.

N.B. Combs with horizontal orientation could be extracted at greater speeds, there was a reduction in gearing time to high speed for greater extractor efficiency. Also less wax could be used to produce foundation and with less breakage beekeepers would have more saleable wax. And what a boon this could be to producers of manuka and other thixotropic /heavy bodied honeys.

EQUIPMENT -

Most beekeepers are faced with the problem of ever increasing costs and development within their operations to meet the demands of those whom they service, orchardists, et al.

One of the problems when planning ahead is which way to go, it is also a headache for advisors as there are a host of options available, many



become obsolete very quickly or there may be cheaper versions about or there may be a good idea in a beekeeper's yard which requires building, which requires a plan, and that requires someone with technical drawing skills. It can be all brought together, that's part of our job but with everchanging designs and specifications and individual requirements of a client it is difficult to bring it all together in one paper.

The available cash of a client will have considerable impact on any development and is the most important component in any scheme.

## LOADERS -

Moving bees is a nasty job but it can be made easy with good equipment.

But do you :

Install boom loaders, three different designs and numerous home-made variations available.

Go to pallets and forklifts or hiab type booms.

Install a tail gate loader or use a motorised barrow or the traditional armstrong method.

The choice is an individual one and must be tailored to suit your needs and pocket but please do your homework and forward planning, what may apply now, may not be suitable in the future, and be sure what you eventually decide can be used for plllination. It is no good installing equipment which cannot be used in the rather close confines of the orchard.

## HONEY HOUSES -

An awful lot of capital is tied up in honey houses and processing equipment, it does not generate income, all too often honey houses are designed for a specific use which makes them a doubtful capital asset, e.g. how many beekeeping enterprises today are sold as a going concern, be sure therefore to design a building that can be multi purpose. Check with local authorities re building by-laws, hygiene etc. It is also



advisable to visit a number of operational honey houses to see first hand the good and bad points and see your advisor, he can help tailor premises to fit.

Mistakes are costly and can be avoided if you do your homework thoroughly.

#### EXTRACTION/PROCESSING EQUIPMENT (SEE NZ BEEKEEPER 1978 39 (4);18-19) -

Any changes, modifications, to existing plant can be expensive as inevitably that change will lead to bottlenecks in the system somewhere else, e.g. replacing a hand knife with an automatic uncapper leads to problems in clarifying honey and more sophisticated wax rendering facilities. These machines in the first two years will also increase considerably the number of cull combs you will have to render down and replace.

#### Options available -

- |            |   |
|------------|---|
| Uncappers  | - 3 models. Price range \$1300-1400 plus<br>- various heated knives, planes.  |
| Extractors | - 2-4-8-21-42-72 frame<br>tangential, semi-radial, radial<br>from \$900 upwards.                                    |
| Cappings   | - centrifuge, deep tanks, hot tops,<br>ovens, spinners, presses, solar.   |
| Heating    | - electric, fossil fuels, organic,<br>steam or hot water, cable etc.  |
| Clarifying | - cloth, nylon, metal strainers, in-line<br>systems, centrifuge, in-line tanks,<br>baffle systems, deep tanks, etc. |

Any one option can be married to another to suit your pocket, but once again forward planning is essential, know what you require ultimately from your system and work towards it. Labour saving devices can be good but all too often poor design will not increase throughput per labour unit. I recall seeing a plant capable of 850 supers per day but it took 12 people to operate it;

by comparison I worked with a plant capable of 450 supers/day with just 2 labour units.

Cost of any one option relates directly with the throughput required, what you already have or how simple/complex your system is and whether or not you intend to produce bulk or packed lines. Overall the final figure could be as low as \$5-6000 or in excess of \$25,000.

N.B. Old galvanised extractors and tanks can be rejuvenated by thoroughly cleaning and then painted with 2 pots epoxy resins. The finish is very hard, easily cleaned and is acceptable to health inspectors.

### FIRE

All too frequently, honey houses burn down, one of the prime causes is poor thermostats. Honey crystals floating about in the air (that's right and it is why everything gets gummed up), inevitably thermostats fail, and all too often fail when the beekeeper is away. The result is just as inevitable and the loss is not just confined to the building and equipment. Drawn comb lost in a fire has to be drawn out, and production losses are incurred for several years after.

It is a good idea when insuring your business, to have included a profit and loss clause which will help in the event of fire. Please check thermostats, particularly if they are old models or not fully enclosed where honey crystals cannot get at them.

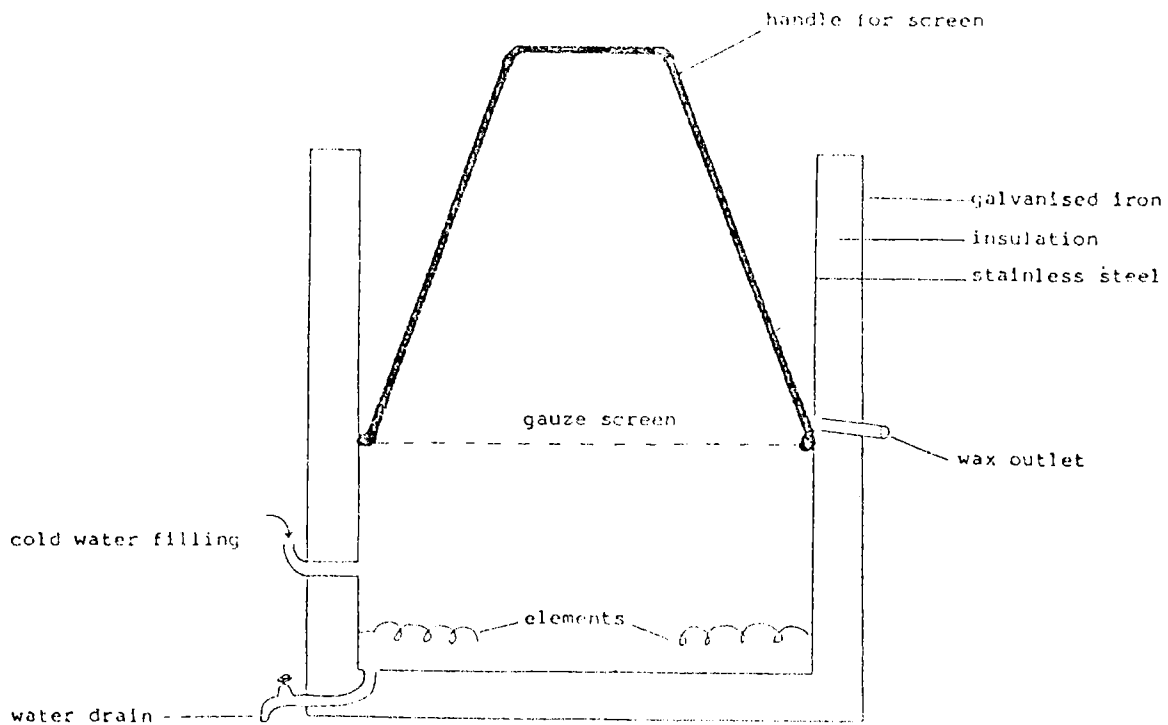
### MELTING CAPPINGS/RENDERING DOWN OLD COMBS

A unit built by Allan Ward of Gore is very effective in reducing wax to a marketable commodity if you are not worried about recovering honey (the Wards have a honey/wax spin float centrifuge). The inner container is a stainless steel milk tank insulated and an outer cover of galvanised iron goes round the whole thing.

Four x 4 kw elements for rapid heating are fitted and these are covered with water to melt the wax which overflows through outlets into moulds.

The water level can be raised or lowered depending on how much slum gum is in the tank.

The wax is of very good quality as impurities are filtered out by a screen which is lowered into the vessel. The screen consists of a circular pipe frame with wire gauge and a big handle for lifting in and out. Essentially when all the wax is molten, the screen is inserted and all impurities forced down into the water, allowed to settle, then water level is raised to run off the molten wax.



A Ward & Sons cappings reducer  
(not to scale)

- DON'T
- boil wax without water or for too long
  - heat wax in tanks of monel metal, iron (unless galvanised), zinc, brass or copper.
  - store combs or wax in the same rooms as pesticides. Beeswax readily absorbs many volatile chemicals. In particular the insecticide dichlorvos. When in doubt, contact your adviser.
  - mix propolis with beeswax as it lowers the melting point of the end product.



- apply direct steam against beeswax as this results in partial saponification.

### AGLINKS

Aglinks are M A F publications available free of charge from all M A F offices. They are designed to eventually replace the old Bulletin 267 Beekeeping in N Z.

For beekeepers there are :

FPP 124	American Brood Disease
FPP 428	Honey bees Overseas Diseases and Pests
FPP 196	German Wasp Nest Eradication
FPP 534	Beekeeping/beeswax/production and processing
FPP 536	Beekeeping/wax moths/Life history and control
FPP 372	Establishment and Management, an introduction.
FPP 392	Swarms and Feral Colonies, Eradication
HPP 233	Kiwifruit Pollination
HPP 97	Subtropical Fruit Pollination



There are more in the pipe line and will be out shortly. Others will appear periodically over the years ahead. The M A F also has good AgLinks on such diverse topics as Business Administration, Taxation, Horticulture, Agriculture and all its topics and disciplines. Check with the counter next time you call in and see for yourself. Of particular interest is the series on shelter, principles and species.

I hold in the Tauranga Office a number of publications from the International Bee Research Assn which are available for purchase. These include publications on pollination, management of bees, honey, pollen, bee sting allergy, behaviour of bees, wall charts, bee disease (in colour) queen raising.

If you require any reference material not in stock it can be ordered and in addition to the above, numerous other pamphlets are available on request, e.g. Metrics for the Beekeeper.

BEEKEEPING STATISTICS : TAURANGA APIARY DISTRICT AS AT MAY 31 1982

	<u>Beekeepers</u>	<u>No Hives</u>
1 - 50 hives	529	3527
50 plus hives	<u>70</u>	<u>27530</u>
TOTAL:	<u>599</u>	<u>31057</u>

This represents a 12.4% increase in the number of registered beekeepers and 19.53% increase in number of registered hives. There is very good reason to believe that the growth rate in the number of hives will continue at this level for the next 3 - 5 years. A result of this growth and the encroachment of horticulture into what were traditionally good beekeeping pasturage areas, is enormous pressure on available pasturage for apiary sites.

A great deal of co-operation between beekeepers is therefore essential if harmony and goodwill is to be maintained, and if present growth is maintained (I'm confident it will be) then pollination requirements of the horticulture industry should be met.

COOK BOOKS

Gordon & Gotch (NZ) Ltd, P O Box 3207 Auckland, are the New Zealand agents for Ideal Publishing which produced an excellent honey cook book called From Mamas Honey Jar, retail price approx. \$5.25. A worthy addition to the kitchen library. They are also looking for people to sell the book, any takers?!



BEEKEEPING EQUIPMENT

Stronghold Engineering, P O Box 522, Whakatane (H'Way 2) Phone 6438, manufacture extractor/spinner combinations with variable speed drive reversible. Present price is \$2300 (one only left) and with stainless steel prices rising continuously, next models will be dearer.

Stronghold are looking at ways of improving their current model (a new variable speed drive) and are also looking at fibre glass units which will be less expensive. They also make baffle tanks to order and honey pumps. With loaders featuring in this newsletter, it is also appropriate to mention they will make loaders to your specifications. One interesting device I saw was an electric hydraulic pump tank motor unit. Works off a 12-24 volt system and will lift loads from 1 - 10 tonnes. Very suitable for fork lifts which could be fitted to any small truck or 4 x 4. Other items made include truck trays, trailers, hoists etc.

### HIVE EQUIPMENT

Hive parts are now available from N Z Beehive Components Ltd, P O Box 460, Taupo. This is the hive lock range developed by R Jansen.

### WASP BAIT

MIREX - ant and wasp concentrate, is now available in Tauranga from Hughes & Cossar, No 1 The Strand.

### BEE DISEASES

Recently on a news broadcast (Radio/TV) reference was made to the potentially dangerous situation which exists in the B O P regarding American Brood Disease. A figure of 2% was quoted.

Now, I don't mind people rushing to print and putting bees/beekeeping before the public via media, BUT please get your facts right. The incidence of disease (B.L.) in the Tauranga district is 0.42% and Nationally in 1981 0.65%. There is no danger of any potentially disastrous outbreak unless you, the beekeepers, fail to observe an essential part of your operation, that of disease control. It is your job, not M A F's, but if necessary we will do it for you, at a cost to you. I would contend that diseases/pests of much greater significance economically to the industry, are wasps and Nosema disease, but don't rest on your laurels, because I also contend that B L can be eradicated.

DIED ON 16.6.82, KARL VON FRISCH, NOBEL PRIZE WINNER for research on language of Honey Bee.

COMING EVENTS - - -

February 1983 - Queen Raising at Flock House, designed for beekeepers wishing to raise their replacement queens and improve their stock.

To be held at Telford (South Otago) as well in March/April, and expanding into Commercial Beekeeping, at Telford only.

THAT NEW BUILDING

If considering a new building for extracting, processing, worker accommodation etc, then check out the modular units by Abernethy Pringle Insulation Co Ltd, Tauranga, constructed from prefabricated steel, sheathed panels of insulating material; they could be just the answer to the more conventional construction which, if you have to meet health regulation requirements, is very expensive.

T G Bryant  
Apicultural Advisory Officer

