

NO. 16

SEPTEMBER 1982

* Pyrotenax and Auto-Trace Heating Cables : Condec Coating

* American Honey Crop

* Packing Liquid Honey

* Auto Arc Power Convertor and Welding Unit

**waikato
bee
notes**

* Salvation Jane Case in New South Wales

* Bee Hive Thefts

* Car Running Costs, May 1982

* Kiwifruit Pollination Seminars

* Watson Electric for Electric Motors

* Hamilton Apiary Statistics



Ministry of
Agriculture
& Fisheries



I'm always amazed at how efficient the beekeepers grapevine is, but just in case you haven't heard about my new job let me tell you. In my last newsletter I told you about being given staff responsibilities for the horticultural and poultry advisory officers in the Hamilton office.

Well, now I have national responsibility for the beekeeping section as well. This work is taking a lot of time even though I have been delegating some of it to other apiary staff, so I can't see myself doing much inspection work anymore.

I will be looking to employ extra part-time inspectors to help and there is a possibility of reducing the size of my district.

There was a lot of criticism of certain apiary staff at the Waitangi conference. I can only suggest that if you, or any other beekeeper, is not satisfied with the service you are getting, then you should take your complaints to the regional advisory officer in the district concerned. It is not enough to say "But I never see the adviser", or "I haven't had a visit in three years". Have you requested a visit?

I can appreciate the chicken and egg situation some of you may find yourselves in, however. You don't request a visit because you don't have much faith in the abilities of the local adviser. That is a difficult problem, but again it is one you should take to the regional advisory officer concerned. If you have any constructive recommendations to offer as well, I'm sure they would be appreciated.

You can't expect to get folks to correct their faults when they think their faults are correct

PUTTING THE HEAT ON

Do you want to heat a honey tank, a length of pipe, a concrete floor, or whatever? Well, here are some suggestions:

* *Pyrotenax* copper sheathed cable is the one most used and known by beekeepers. The local agents are now: National Electrical Engineering Co Ltd, 26-28 Sommerset Street, Hamilton, Phone 79 079. Brian Milnes is the Manager and Allan Phillips the Sales Rep.

If you want to heat a honey tank for example you will need to go to National Electric armed with some information. They will then work out the length and wattage cable you need and the type of termination best suited.

They use the following formula

VOLUME OF TANK X SPECIFIC GRAVITY X SPECIFIC HEAT X TEMPERATURE CHANGE IN °C

3415

The answer is in kilowatt hours. The specific heat of honey varies according to the moisture content, but if you gave them a value of 0.60 (17.6% moisture) that should do. Likewise give them a specific gravity of 1.4239 which represents a honey of 17% moisture.

Prices for the cable vary according to the wattage but should be around 90¢ per metre. Termination units will be required at each end of the cable and these range from \$45 - \$93.

* *Auto-Trace Self Limiting Heating Cable*

This is an interesting cable that Andrew Matheson discovered. It is distributed in the South Island by Insapipe Industries, PO Box 22-432, Christchurch, Phone 67 671.

This cable doesn't need thermostats as such as it regulates itself to predetermined levels. It consists of two heating cables bounded together in a strip of graphite and looks very much like TV aerial flex.

When the graphite core is cold heat is generated, but when the core heats up the graphite expands so reducing the electrical flow.

This cable would be ideal for temperature maintenance, rather than heating up cold substances. There are three grades 13, 26 and 33 watts per metre, which cost around \$15, \$19 and \$24 per metre respectively. This doesn't include sales tax.

* *Condec - Electrically Conductive Coatings*

This is an intriguing new principle which was still under NZ evaluation when I last contacted the NZ agents P H Rothschild and Co Limited, PO Box 30170, Lower Hutt, back in 1980.

Condec coatings are applied like paints and when they dry out they conduct an electric current. Any voltage from 6-240 volts can be used by varying the circuit and by altering resistance by thickness and number of coats.

Overseas, Condec is used for heating airport runways and roads prone to icing, pipe lines, aircraft windows, houses and hospitals (walls can be papered over), electrical installations where static electricity can build up and hulls of oil tankers etc. to prevent corrosion.

I like the sound of this product for heating hot rooms, comb honey rooms or even houses. There are no heaters projecting into the room to get in your way. Unfortunately I don't have any prices.

SEPTEMBER 7 WILL HAVE BEEN AND GONE BY THE TIME YOU GET THIS NEWSLETTER. I HOPE YOU DIDN'T FORGET!



"I CAN SEE ONLY ONE WAY OUT. CALL DIAI-A-PRAYER."

BUY OR LEASE

I was going to do an exercise for you on the advantages or disadvantages of buying a vehicle, leasing one, or getting one on hire purchase.

The budget messed that up somewhat and until I see the fine print I'm not sure what is the best. However, my "pre-budget" investigations on lease deals showed quite clearly it pays to shop around. Finance rates and terms varied widely.

-- oo O oo --

A SAGE ONCE SAID "NOTHING TESTS MY LOVE FOR MY FELLOW MAN MORE SEVERELY THAN THE THIRD DAY OF A THREE DAY CONFERENCE".

And speaking of conferences here's a few quotable quotes from the NBA conference at Waitangi last July.

- * *I'm going to give this one a couple of barrels.*
- * *I thought this was the winterless north!*
- * *It wouldn't surprise me to see us voting to have an HMA again in a few years time!*
- * *I agree with everything you've said, but I'm not going to vote for your remit.*

WORLD HONEY CROP

It seems the US crop will come out at around 98 214 tonnes compared with 83 030 t for last year. At the moment the producers are smiling, but a lot of this honey will go to the Government as their crop support prices are above what much of the free market will pay.

Meanwhile packers are continuing to import cheaper foreign honeys. So what does this mean? Well, if the US market is oversupplied then the packers will become aggressive exporters themselves, or the beekeepers will intensify their political pressure to have foreign imports subjected to a hefty tariff.

Either way it's not going to help our export efforts.

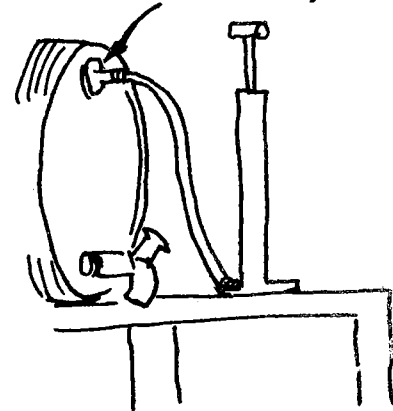
Canada seems to be sitting on an average crop.

Argentina has sold most of her crop and in Mexico devaluation has increased beekeepers incomes by 70% over last year, while costs have gone up by 20%. However, inflation has been over 100% for the past four years!

SOURCE : AMERICAN BEE JOURNAL SEPTEMBER 1982

THIS IS THE TIME OF YEAR WHEN MOST OF US FEEL LIKE THE TAXPAYER WHO LAMENTED "I OWE THE GOVERNMENT SO MUCH MONEY THAT IT DOESN'T KNOW WHETHER TO THROW ME IN JAIL OR RECOGNISE ME AS A FOREIGN POWER".

Valve stem from a
tubless tyre



LIQUID HONEY

I saw this idea in the May 1982 issue of the NZ Farmer. Air pressure was being used to pump oil out of a drum but the idea should work equally well for liquid honey (door sales) or even with sugar syrup drums.

-- oo O oo --

PACKING LIQUID HONEY

In my last newsletter (No. 15) I talked about frosting of honey and promised to discuss liquid honey in my next issue.

Well, what do we know about honey? We know that honey consists mainly of two sugars; dextrose, which granulates very readily and laevulose which stays in solution. Most of our honeys tend to granulate fairly readily, but some with a higher percentage of laevulose tend to stay liquid. These honeys include nodding thistle, blue borage (Vipers bugloss) and honeydew. Manuka and heather honey are also slow to granulate.

The best way to retard honey from granulating is to select a slow granulating source such as thistle or borage. The lighter the colour the better as even a light amber honey in glass can look quite dark. This usually rules out manuka.

"Hmmm", I hear you say. "No borage and no pure thistle either; What now?" I guess, you've just got to use what you have but always select your lightest honey.

Now comes the part that the purists object to. You have to adjust the moisture content to at least 18% up to 19.5%. Anything over 19.5% and your honey is too watery. To do this properly you must have a refractometer which you can buy from Alliance Bee Supplies and you should add hot water to hot honey. I have a table telling you how much water to add to a given honey to bring it to the desired level. Rather than publish these figures perhaps you could contact me if you require such a table.

OK, you've selected a light coloured honey, you've adjusted the moisture, now what? You could bottle your honey just like that, but don't be surprised if it starts fermenting. Any honey over 18% moisture is likely to ferment and to stop this you will need to heat the honey to 73-75°C for several minutes. This will require a heat exchanger as any prolonged heating will darken your honey and may burn it.

Plate heat exchangers are very good for this as you can use one half of the plates to heat the honey and the other half to cool it to around 50-54°C at which temperature the honey should be bottled.

Liquid honey is bottled hot into clean jars to dissolve any dextrose crystals in the jars. These will act as 'seed' as will dust or small fragments of broken glass. In other countries the jars are usually cleaned with an air blast before bottling.

After filling the cartons need to be loosely stacked or put in a cool room to bring the temperature down so avoiding stack heat.

In summary, the process goes like this; select your lightest coloured honey, strain with a very fine strainer, adjust the moisture (by adding water or blending), pasteurize at 73-75°C and cool to 50-54°C, bottle in clean bottles and continue cooling while avoiding stack heat.

You could expect 3-6 months shelf life if you did all these things.

To get 9-12 months you really need to filter honey. This involves all the above steps but it also involves adding a filter aid to the honey. All the pollen, dust, wax specks etc. stick onto the filter material and are removed from the honey by pumping through a filter press.

The resulting product really sparkles and looks great on the shelf. Unfortunately it also tastes rather bland and won't meet EEC country requirements because you've removed the pollen.

If all this sounds too complicated and you still want to market liquid honey, how about seeing Des Hansen of Happy Bee, Phone Orini 700. Des is installing a filtration plant and is going to pack liquid, as well as creamed, honey under contract.



-- oo 0 oo --

There was this Irish passenger on a plane who had been bugging the captain with foolish questions on how to fly the plane and how to navigate. Finally the captain grew tired of trying to explain things and said "See the left wing out the window; it's got a red light on it", "Yes", said the Irishman, "I can see that", "Good", said the captain, "Now on the right wing is a green light. Well, we're going to try and fly between them".

~~~~~

#### AUTO ARC SYSTEM

I've told you about the Rediline power generator (Bee Notes No. 12) and the Epcon Power Converter (No. 13). Now we have a new model on the market from Australia called the Auto Arc.

This heavy duty unit replaces the vehicle's alternator. It can put out 3 kW at 240 V dc in bursts or 1 kW continuous and can be fitted in about one hour.

The kit contains the replacement alternator, power supply box, control unit, cables, electrode holder and earth clamps, a throttle control and a dc volt meter.

As a dc welder the unit has full 12 gauge electrode capacity and can even weld the vehicle it's fitted to. On the power supply mode it handles most brush type motors such as blowers, drills, disc grinders, plus soldering irons, electric kettles, and flood lamps. It can also charge 6 V, 12 V and 24 V batteries.

Cory-Wright and Salmon, 157 Ward Street, Hamilton, Ph 82 049 are the local agents. Ask for Mr MacDonald.

The price is pretty steep though at \$750 plus \$70 sales tax.

DISCLAIMER: The mention of any particular brand name or source of supply in this publication does not infer MAF endorsement nor is criticism inferred of products or sources not mentioned.



MORE QUOTABLE QUOTES FROM WAITANGI

- \* *People think I'm strange because I come from Southland*
- \* *"I'd like to see the Seals Levy brought back." "If you did that you'd almost be welcome in the South Island"*
- \* *On presenting Tony Lorimer's apology "He has the barely adequate excuse that he's getting married next week."*
- \* *You've only been here 5 minutes yet you've been talking for 10!*

#####

THE SALVATION JANE LITIGATION : AUSTRALIA

The saga of this litigation still continues and is beginning to look rather like the never ending Sullivans. Briefly CSIRO scientists released some leaf mining moths to control the Salvation Jane plant in NSW.

The beekeepers objected and when no-one took any notice they raised some money and took the CSIRO to court. The court ruled that all work on the leaf mining moths should cease, all released moths were to be recaptured and a Supreme Court trial was set for May 31 1982. Well, the trial has now been adjourned pending an independent inquiry into the whole affair, rights, wrongs and economics etc. Meanwhile no more moths are to be released.

I doubt that there will be any real winners when all the dust has settled; except for the legal eagles that is.



#### BEE HIVE THEFTS

I've had one or two minor thefts reported to me. You know the remedy, brand every box and lid, or at least paint your registration number on as many boxes as possible. I'm still finding apiaries with no identification at all.

A story from the June 1982 issue of the "California Bee Times" tells of another theft that failed to result in a prosecution. In this case a beekeeper and friend staked out an apiary that had suffered theft.

When a couple of crims came by and started loading hives they received a round or two from a shotgun. However, things got a bit muddled after that. The wounded men claimed they weren't stealing the hives but were checking the field for hives of their own they believed stolen!

The equipment (hives) were given back to the owners by the Police as they didn't have anywhere to store the "evidence"! No positive identifications had been made and also the little matter of the shotgun complicated things. They called it "possible excessive force"!

Anyway no charges were laid against the shotgun beekeeper or the victims, but a circular was sent around the county police stations outlining the "procedures" to be followed in any future cases of hive theft.

I THINK THIS CARTOON  
"SPEAKS" FOR ITSELF!





CAR RUNNING COSTS

We had an interesting discussion on truck running costs at the last discussion group meeting. It soon became apparent that many beekeepers didn't know how far it was around all their apiaries (or even how many apiaries they had!), and how many kilometres they travelled per year, in the course of servicing their hives.

The figures presented in the table are for operating a car as at the end of May. While petrol has increased since then, they are very useful for all that. Note: the figures represent a one year average of 5 years' running from new, at an estimated 15 000 km per year.

|                                                                           | New Car<br>Value \$10,150<br>Up to 1300 cm <sup>3</sup> | New Car<br>Value \$12,450<br>1300-1600 cm <sup>3</sup> | New Car<br>Value \$14,800<br>1600-2000 cm <sup>3</sup> | New Car<br>Value \$22,000<br>Over 2000 cm <sup>3</sup> |
|---------------------------------------------------------------------------|---------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------|
| <u>FIXED OWNERSHIP COSTS</u>                                              |                                                         |                                                        |                                                        |                                                        |
| Average depreciation of car midway through 5 yr period at 12% annual rate | \$943.22                                                | \$1,156.96                                             | \$1,375.34                                             | \$2,044.42                                             |
| Annual Licence Fee                                                        | 53.40                                                   | 53.40                                                  | 53.40                                                  | 53.40                                                  |
| Comprehensive Insurance (No Claim Rate)                                   | 162.00                                                  | 180.00                                                 | 200.00                                                 | 243.00                                                 |
| WOF, twice at \$5                                                         | 10.00                                                   | 10.00                                                  | 10.00                                                  | 10.00                                                  |
| Driving licence, per year                                                 | 2.50                                                    | 2.50                                                   | 2.50                                                   | 2.50                                                   |
| Loss of interest, at 7%, not earned on this outlay                        | 566.16                                                  | 692.10                                                 | 820.89                                                 | 1,214.19                                               |
|                                                                           | <u>\$1,737.28</u>                                       | <u>\$2,094.86</u>                                      | <u>\$2,462.13</u>                                      | <u>\$3,567.51</u>                                      |
| FIXED OWNERSHIP COST PER DAY                                              | \$4.75                                                  | \$5.73                                                 | \$6.74                                                 | \$9.77                                                 |
| <u>RUNNING COSTS</u>                                                      |                                                         |                                                        |                                                        |                                                        |
| Petrol, at 68¢ per litre (1/100 km in brackets)                           | (7.5) 765.00                                            | (9) 918.00                                             | (9.5) 969.00                                           | (13.5) 1,377.00                                        |
| Oil changes, at \$3 per litre                                             | 22.50                                                   | 24.00                                                  | 25.20                                                  | 25.50                                                  |
| Oil consumption between changes                                           | 18.00                                                   | 18.00                                                  | 18.00                                                  | 18.00                                                  |
| Tyre replacement, average cost per year                                   | 135.00                                                  | 156.25                                                 | 162.50                                                 | 245.00                                                 |
| Repairs and maintenance - avge cost to maintain car in reliable condition | 500.00                                                  | 500.00                                                 | 500.00                                                 | 500.00                                                 |
|                                                                           | <u>\$1,440.50</u>                                       | <u>\$1,616.25</u>                                      | <u>\$1,675.00</u>                                      | <u>\$2,165.50</u>                                      |
| RUNNING COST PER KM                                                       | 9.6¢                                                    | 10.7¢                                                  | 11.1¢                                                  | 14.4¢                                                  |
| TOTAL (FIXED + RUNNING) COST PER KM                                       | 21.18¢                                                  | 24.74¢                                                 | 27.58¢                                                 | 38.22¢                                                 |

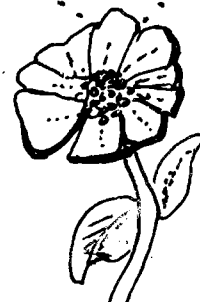
SOURCE: AUTO AGE JULY-AUGUST 1982

*JONES' RULE OF THE ROAD: The easiest way to refold a road map is differently.*

FRANKLIN JONES



KIWIFRUIT POLLINATION  
SEMINARS



In case you missed the seminar we held at Ruakura on August 20, then we will be holding two more on the same subject in Tauranga September 28 (Racecourse) and Gisborne October 1 (Sundown Lodge). The content will be the same but some of the speakers will be different from the Ruakura seminar.

\*\*\*\*\*

ELECTRIC MOTORS

Are you after a new, second-hand, or reconditioned motor or a special motor difficult to obtain in New Zealand; then how about contacting R G Watson Electrical, Pomona Road, R D 1, Kumeu, Phone 412 9923 Auckland, 24 hours.

They have dc motors 110-220-460 volts, flameproof motors 1-1250 hp speeds 2-4-6-8-10 poles and many more.

APIARY STATISTICS

For the Hamilton region (to May 31 1982) they look something like this:

| Group (Hives) | Beekeepers  | Apiaries | Hives           |
|---------------|-------------|----------|-----------------|
| 1-50          | 563 (4)*    | 723      | 3 378 (9)       |
| 51-250        | 21 (16 dec) | 199      | 2 565 (24 dec)  |
| 251-500       | 14 (8)      | 355      | 6 184 (27)      |
| 501-1000      | 14 (12 dec) | 488      | 10 460 (13 dec) |
| 1000+         | 8 (33)      | 877      | 18 265 (10)     |
| TOTALS        | 620         | 2 642    | 40 852          |

\* Figures in brackets are % increase over 1981 unless noted otherwise.

Overall, the number of beekeepers has increased by 16 (3%), apiaries decreased by 63 (2%) and hives increased by 946 (2%).

+++++

"INSANITY IS HEREDITARY - YOU GET IT FROM YOUR KIDS!"



APIARY RETURNS

You should have these by now. I expect a better rate of return by the due date than I had last year, and as always, I expect to be notified straightaway of any cases of Bacillus larvae.

A bit of snappy detective work by one beekeeper has probably found the "source" of an outbreak that has been bothering us for 2-3 years and infected hives belonging to at least 6 commercial beekeepers. Good work.

-----//-----

SPRING HAS SPRUNG

My sun spot graph (remember that?) predicts a shift to a series of dry, or drier, summers. I won't comment further, but spring seems to be a bit early or at least the bees are.

I hope you have good stocks of sugar on hand for feed and your swarm box at the ready!

I'll leave you with this ditty from Nell Bester called -

"THROUGH WITH BEES?"

*The prices are low and the sales are slow  
My extractor's worn out and my truck won't go  
I'd sell the whole thing, for what it will bring  
I'm finished with bees, I'm through  
I'm sick of the lifting, the extracting and shifting,  
And the seasons just don't run to form  
It's too hard to toss, it's just a dead loss  
Hey! quick, get a box - there goes a swarm!*

CHEERS.

*Murray Reid.*