THE NEW ZEALAND BEEKEEPER

NOVEMBER, 1970

THE NATIONAL BEEKEEPERS' ASSOCIATION of N.Z. Incorporated

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A HOLLOW RING

REMITS PASSED at Conference often fail to achieve the objective of their sponsors through a variety of reasons. Some are impractical; others considered in detail by Executive are not deemed to be in the general interest of the industry to implement.

The industry made known in no uncertain terms the attitude it wished Executive to take in reference to the Honey Marketing Authority and following the meeting held in September, appropriate action was taken.

Drastic revisions in policy by the H.M.A. have been put into effect as a result.

Government of the people by the people acquires a hollow ring when a candidate receives the narrowest possible majority, particularly when factors affect an election which have never previously prevailed and might well never be encountered again.

Unfortunately, the election of producer members of the Honey Marketing Authority coincided with the "go-slow" postal strike, which may or may not have affected the ultimate result. Voting papers received after the advertised time could not be considered; quite rightly and correctly, the Returning Officer refused to allow them to be opened or inspected and votes contained therein may have been for one or any of the candidates.

The declared result is undoubtedly correct on the votes counted and no reflection is intended or implied on the conduct of the election witnessed by an independent scrutineer appointed by a candidate.

The simple fact remains that the result cannot with confidence be said to reflect the will of the industry due to the extraordinary factors prevailing at the time of the election, and neither candidates or voters can be conscienciously gratified that justice has been done and seen to be done.

EXECUTIVE DECISIONS AT WELLINGTON MEETING

EXECUTIVE MEETS

A full meeting of Executive met in Wellington from 15th-17th September inclusive and handled a full schedule of business under the chairmanship of the Association's President, Mr. Bruce Forsyth.

The Vice-President, Mr. Ivan Dickinson, together with the respective area members Messrs F. H. Bartrum, R. W. Blair, R. L. Jansen, D. Penrose with the Secretary E. A. Neal and Editor L. W. Goss attended. Following is a synopsis of some of the business considered.

DEPARTMENTAL

The suggestion was made that apiculturists should work on the incubating of queen cells and the Department of Agriculture be requested that this project be included.

Both officers of the Department attended and answered a number of questions raised by members.

A new apiary instructor had been appointed to the Auckland district and the department would not be opposed to a move to Whangarei if circumstances so justified. Executive suggested that there be two instructors at Waikato because of the vastness of the area to be covered. A specific request is to be made to the Department on these lines.

Incubation of queen cells and work on transferring cells in heated containers was suggested as projects for apiculturists for the benefit of queen breeders and beekeepers in general. Mr. Greig undertook to examine closely the suggestion and to liase with Mr. Bartrum of Pleasant Point.

Information would be provided to the Minister of Justice and the Director General of Agriculture on the availability of honey not otherwise marketed for the production of honey mead and its possible export.

A further assurance would be sought from the Health Department that the Association would be consulted before the new draft Regulations were finalised.

Mr. Smaellie had no further information on the Restricted Zone and as no meeting had been proposed for another six months, more frequent reports would be requested.

MR. GREIG AND MR. SMAELLIE

New legislation had been drafted to deal with the problem of illegal importations of queen bees. Executive willingly agreed to approach the Minister of Agriculture asking for legislation to be strengthened, particularly since the growing export of queens might be jeopardised.

Mr. Greig pointed out the implications of the Codex Alimentarius to which Britain was a signatory and emphasised that both the N.B.A. and the H.M.A. should be fully aware of the situation and the possible effect on New Zealand honey exports to Europe.

On the question of Nieue honey being a source of disease, Mr. Greig said the Department could only initiate action if facts were presented. At this stage, no facts had been presented.

RULES Quotations had been obtained and, subject to a possible eventuality requiring amendment to the Rules in the near future, copies would be printed in booklet form for distribution.

N.Z. YOUNG FARMERS An exchange arrangement for young bee farmers was in effect which would permit practical working experience in Canada at low cost. An extended scheme was also available to include work in Europe.

NECTAR AND POLLEN SOURCES The Auckland apiculturist Mr. R. S. Walsh is to be asked to prepare a short list of the best type of trees for each geographical area of both islands. Mr. Walsh's book is to be made available to the M.O.W. and State nurseries as a guide when new blocks are planted.

INSURANCE No satisfactory alternative scheme has yet been devised and member's automatic coverage under the existing scheme is to remain for a further year.

LINCOLN COLLEGE Efforts are to be made to establish a beekeeping course as part of the degree course in Agriculture and the advice of the Head of Lincoln sought.

SOLE AGENCY AND H.M.A. With a majority of five to one Executive decided to recommend to the H.M.A. that the sole agency agreement with Kimptons should be rescinded, but that their services as an overseas agent be retained.

Executive strongly supported remits 14, 15 and 16 dealing with the export of honey and the Chairman of the Authority was advised that direct approach would be made to the Minister concerning these remits requesting that the restrictive agreement with the sole agents be terminated.

INDUSTRY FUND COMMITTEE An independent Honey Industry Investigation Committee is recommended to sit in Wellington to receive submissions from all interested parties on the terms of reference supplied to it by Executive. The 1969/70 Executive Report on an Industry Fund financed by the Seals Levy, financing of the N.B.A. by a Hive Levy and financing the H.M.A. by a Marketing Levy would be submitted.

PACKERS' ASSOCIATION An invitation to the Packers' Association had been extended to attend with Executive and assist them in preparing a workable scheme to finance the industry. One delegate was invited, but the Packers' Association deemed that first, two delegates should attend and then submitted that there should be four delegates. In the event, no delegate arrived at all so that their views could not be considered. A similar invitation to the H.M.A. resulted in the attendance of their Chairman.

EXPORTER An exporter attended and presented his case for the export of a considerable quantity of honey to a country of the Eastern bloc at 13 cents per lb ex store plus the cost of containers. A letter of credit current for 28 days was available but permission for the export to be made had been declined by the H.M.A. Executive strongly supported the exporter's application for a licence on the grounds that it provided (A) a better return for producers, (b) it did not appear to infringe the Kimpton Agreement and (c) the honey was to be exported to a non-Common Market area and was a classical example of the Association's remits 14, 15 and 16 passed at the last Conference.

DROUGHT RELIEF	The Producers' Agricultural Council is to be asked for recognition of beekeepers as ordinary farmers in any future drought relief application.
INDUSTRY FUND	Executive unanimously supported in principle that all extracted honey sold should be subject to a levy payable at point of sale such levy to be collected by a Statutory Declaration every six months to the Honey Marketing Authority together with an appropriate cheque and that the levy applied to all honey sold within New Zealand or the Island Territories.
NEXT MEETING	Executive is to meet at Wellington on 2nd, 3rd and 4th March, 1971, emergencies excepted.

HONEY MARKETING AUTHORITY

The following statement was issue by the Manager of the Honey Marketing Authority in response to a request for information on action taken by the Board following their meeting in Wellington last month.

Not included in the statement was the fact that the Board also authorised an increase of 4 cents per lb. in the wholesale price of honey and that the newly elected Chairman is Russell Poole of Southland in place of Jack Fraser. Deputy Chairman is Harry Cloake of Timaru.

Remit 18
It is the intention of the Authority to institute a pilot scheme for an advertising programme to commence as soon as possible.

Remit 7
The basis of the N.Z.H.M.A. final payout has in fact been designed in relation to net realisation for each category.

Remit 9
The M.H.A. have considered its freight policy and has taken some steps to adjust some anomalies that previously existed.

Remit 13
The question of storage facilities are to be investigated, particularly at Napier.

Remit 14
The Authority have approved the export of up to 10 tons of packed lines to anywhere in the world under the same conditions as previously.
A further requirement is that a payment is to be made at the time of application of a contribution to the Authority's overhead of an amount equal to the domestic seals levy.

Remit 15 and 16
The question of exports of bulk honey has been considered by the Authority which has re-affirmed its policy that the Authority should be the sole exporter of bulk honey.

Kimpton's Agreement
Kimpton's have been given notice that the agreement is to be terminated 12 months from the end of the present quarter.
The official number of votes recorded in the recent election is detailed elsewhere in this issue by the Returning Officer.

HONEY MARKETING AUTHORITY

Price Guide to Producers, Wholesalers and Retailers

DESCRIPTION	PACKER TO WHOLESALER					
	Suggested Retail Price Per dozen	IMPERIAL BEE		Suggested Retail Price Per dozen	HONEYGOLD	
½ lb. Pots	21c	$2.50	$1.76	20c	$2.42	$1.70
1 lb Pots	38c	$4.53	$3.18	37c	$4.39	$3.08
1 lb Plastic Pots	40c	$4.78	$3.36	39c	$4.65	$3.26
1 lb Glass Jars	43c	$5.17	$3.63	42c	$5.03	$3.53 (Liqu.)
2 lb Pots	74c	$8.90	$6.25	72c	$8.62	$6.05
5 lb Tins	$1.86	$22.30	$15.65	$1.80	$21.59	$15.15
½ lb Minipac			—	23c	$2.81	$1.97
28 lb Tins	31c		22c lb	30c		21¼c lb
58 lb Tins	31c		21¾c lb	30c		20¼c lb

Selected Sources

½ lb Plastic Pots	$2.02 per dozen	$2.88	24c
1 lb Glass Jars	$3.68 per dozen	$5.24	44c
3 x ½ lb NZ Honeys	$7.57 per dozen	$10.78	90c
5 lb Tins Assorted	$15.90 per dozen	$22.66	$1.89

	HOLLANDS Per dozen			MEADCROFT THREE BEES Per dozen		
½ lb Pots	21c	$2.50	$1.76			—
1 lb Pots	38c	$4.53	$3.18	38c	$4.53	$3.18
2 lb Pots	40c	$4.78	$6.25	40c	$4.78	$6.25
5 lb Tins	$1.86	$22.30	$15.65	$1.86	$22.30	$15.65
10 lb Tins			—	32c		$28.00
28 lb Tins	31c		22¼c lb	31c		22¼c lb
58 lb Tins	31c		21¼c lb	31c		21¼c lb
1 lb Glass Jars			—	44c	$5.24	$3.68

Prices include freight to nearest railhead for 5 cartons and over, under 5 carton lots freight clients account.

Letters to the Editor

Papanui, Christchurch.
17 October, 1970.

Sir,

Through your columns I would like to thank the Producers who voted for me in the recent Honey Marketing Authority elections.

I appreciate the confidence shown in me by such a large majority of voters and will do everything possible to justify it.

KEVIN ECROYD.

★ ★ ★

Ngongotaha.
21 October, 1970.

Sir,

I am amazed at some of the statements being made by leading members of our industry with regard to the seals levy.

Such statements as "the consumer pays it" are untrue and misleading. The facts are:

1. Honey industry surveys have always shown that the producer does not receive the cost of production.
2. Under price control no allowance was made for the cost of seals in pricing honey.
3. Seals Levy is paid on only approximately 25% of honey sold.
4. If the public thought they paid levy there would be a case for price reduction under price control.

If the industry requires a fund then the matter is clear cut. All producers should pay towards this Producer Fund.

I believe that those maintaining continuation of the present method of collection require an avenue to continue to dodge payment.

If all producers pay the levy then it is spread equally and a minimum amount is paid by each producer.

It would be the same to pay ¼c. on half the crop as ⅛c. on the whole crop.

LLOYD HOLT.

★ ★ ★

Havelock North.
20 October, 1970

Sir,

I wish to thank those who supported me in the recent H.M.A. election. The "photo finish" and the question of irregularities is being investigated by the Minister of Agriculture. The industry has a great deal at stake and every effort is being made to see that its will is accurately defined.

PERCY BERRY.

Hadlow, No. 4 R.D., Timaru
21 September, 1970

Sir,

re INDUSTRY FUND

We have instructed our tin and carton manufacturers to remove the Authority number from containers made for us.

We take this step with reluctance, but successive Honey Marketing Authorities over the last 20 years have failed to enforce the Regulations, which clearly state that a Levy be paid on all contained honey, whether offered for sale at retail stores or beekeepers' premises.

At the present date the Honey Marketing Authority estimates two thousand tons of honey sold direct to consumers in New Zealand with no Seals Levy being paid. Why then should the small number of packers for the retail trade continue to pay this unjust levy?

Over recent years, successive National Beekeepers Association Executives have promised a scheme whereby all will contribute to an Industry Fund, but nothing definite ever eventuates for the simple reason that all concerned in the deliberations are financially involved.

Our firm is quite willing to pay an Industry Levy by declaration of our yearly honey crop, which, in our opinion, is the only equitable method of establishing an Industry Fund.

R. DAVIDSON,
Davidsons Apiaries Limited.

EDITOR'S NOTE: Mr. Davidson must surely realise that his intended course of action is illegal and that proceedings could be taken to enforce the Regulations.

It must also be pointed out that had the Packers' Association sent a representative to meet the Executive at their last meeting to which a delegate was invited, the Association's hand in promulgating an acceptable scheme to Government with united support would be nearer fruition.

★ ★ ★

Hadlow, No. 4 R.D., Timaru
19 October, 1970

Sir,

re INDUSTRY FUND

Further to our letter of 21st September, we have now instructed our carton manufacturers to with-hold our instructions to remove the Authority number from containers made for us.

We take this action of delaying removal of Authority numbers, because of the proposed action of the National Beekeepers Association in setting up an Investigating Committee to advise on the set up of the beekeeping industry.

R. DAVIDSON,
Davidsons Apiaries Limited.

Hadlow, No. 4 R.D., Timaru
18 September, 1970

Sir,

A fitting heading to this letter would be "How We Lost our Vote" or "How We Lost The Vote We Thought We Had."

As in other years we, being a registered company, duly notified the Returning Officer of the name of a nominee, and as in previous years the Main Roll of Electors contained the item, "Davidson Robert Jnr. Appointed by Davidsons Apiaries Ltd. 30 votes." All looked well to the layman easily satisfied by appearances, but alas to the more observant (I freely admit that I take things at face value and was once again deceived by first impressions) there was a Supplementary Roll No. 1 which had as an item classified as "Amendments to Master Roll," "Davidson Robert Jnr. 30 votes amended to 0 votes," and an apparent explanation added for the information of readers, *"Honey supplied to Robert Davidson in excess of aggregate of honey supplied by Robert Davidson to a packer and levy paid by Robert Davidson."*

I freely admit that, when my attention was finally drawn to this clear and concise statement of the reason for our votes being reduced from 30 to 0, I was, and still am, utterly confused by this sentence which apparently is, to the initiated, a straightforward and concise explanation of "How We Lost Our Votes."

R. DAVIDSON,
Davidsons Apiaries Limited.

★ ★ ★

Wellington, 1.
16 October, 1970.

Sir,

HONEY MARKETING AUTHORITY ELECTIONS 1970

Thank you for referring to me for the right of reply to Mr. Robert Davidson's letter to you of 18th September, 1970.

In some measure I can appreciate Mr. Davidson's concern about the intricacies of voting. In fact, in connection with the appeal by one of the candidates to have the Election set aside, I have already reported to the Director-General of the Department of Agriculture who is to report to the Minister of Agriculture on my assessment of the machinery of voting. I said to the Director-General that I thought the wheels of democracy should be well oiled and it was my considered opinion that voters in the Honey Marketing Authority Elections did not appear to be aware of not only their rights but also their obligations.

It would appear that Mr. Davidson is not fully aware of or alternatively, is unable to interpret correctly, the first schedule of the Honey Marketing Authority Regulations 1964, Clause 4a and 4b.

I find deplorable Mr. Davidson's attempts by various means to discredit me in my role as Returning Officer especially since according to my own lights everything in my power was done to assist him. However I am prepared to temper my anger with charity, since if I am to be perfectly frank and honest with myself, I must confess to encountering some difficulty in the administration of the election.

In spite of this, however, I still maintain and will continue to maintain that in my opinion no irregularities in the Election occurred. Should you have the results of the Ministerial appeal before you go to press I trust that you will publish them. I can sincerely state that my own conscience is clear and here my case must rest.

E. R. NEAL,
Returning Officer,

Wellington.

NEW ZEALAND HONEY MARKETING AUTHORITY ELECTIONS 1970

Following is the official notification of the Election Result for the two Producer representatives received from the Returning Officer: The valid votes cast for each candidate were:

BERRY, Percy	1,184
ECROYD, Arthur Kevin	2,232
FRASER, John William	1,186
LORIMER, John Dudley	1,118

I therefore declare the said Arthur Kevin Ecroyd and John William Fraser duly elected.

(Signed E. R. NEAL
Returning Officer

USING THE SUN TO MELT WAX

How to construct a Solar extractor in the home workshop described by

D. A. BRISCOE, Apiary Instructor, Tauranga

The use of solar wax extractors is once again becoming popular particularly with the beekeepers in the warmer parts of the North Island.

There is nothing new in this method of obtaining beeswax from cappings and/or old combs. Solar heat is used in many different ways and this form of heating is cheap and efficient.

Beeswax has a melting point of approximately 140°-150°F. The temperatures in a well-made solar extractor will reach over the 200°F mark in sheltered positions.

The advantages of a solar extractor is that no slumgum is present in the melted wax and discolouration is kept to a minimum because there is no water to be contaminated with residues and propolis from the combs and frames.

Another advantage is that old or damaged combs as well as scrapings of burr combs from the tops and sides of frames can be dealt with daily, and not kept for off-season handling. If old combs are kept for too long they become a breeding place for wax moth and eventually if left too long, will be reduced to a worthless mass.

Directions for making the extractor of which there are five parts are:

1, Body of extractor. 2, The lid. 3, A large pan in which the cappings or combs are placed. 4, Small pan to catch melted wax and honey. 5, Basket made of heavy gauge 2-3- or 4 mesh hardware cloth to use in the pan when cappings are melted.

The wire mesh basket is placed in the large pan with a sufficiently large piece of muslin for straining, and the cappings or combs in the wire basket.

As the wax melts it is strained through the muslin cloth into the large pan and then directed through an opening into the smaller pan or mould.

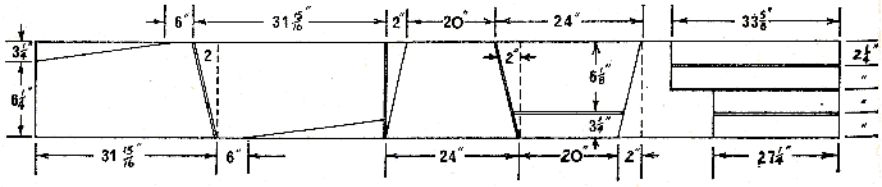


Fig. 1. Layout of the components used for making the wood frame of the solar extractor.

Fig. 3. Solar extractor with lid raised showing components in position.

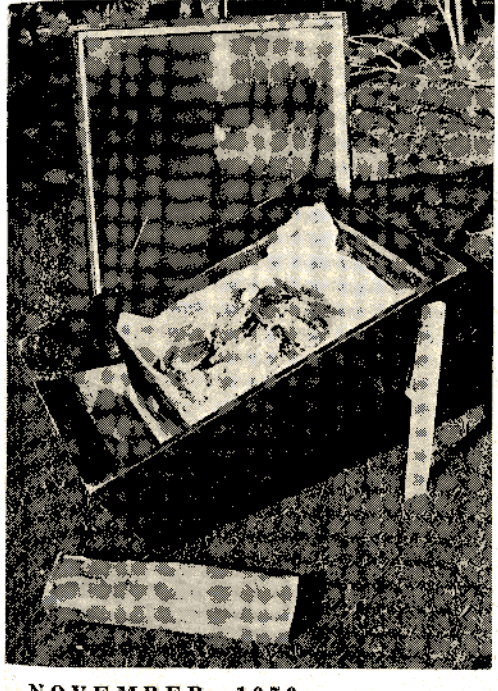


Fig. 2. Cappings can be seen on the muslin strainer in the wire mesh baskets. In the foreground is a cake of wax from a previous melting.

MATERIALS NEEDED TO MAKE EXTRACTOR

(a) One board (well seasoned) 13/16th" thick, 9½" wide and 12' long. (b) 6½' of tongue-and-groove. (c) 36' of timber ½" square. (d) Two pieces of timber 13/16th" x 2" x 15". (e) Two pieces of 24oz glass each approximately 32" x 25½".

(Glass should be cut to fit the frame for the lid after this has been nailed together and checked to make sure it is the correct size.)

(f) One piece of 24 gauge galvanised iron 26¾" x 28½." (g) One piece of 24 gauge galvanised iron 12¾" x 28½". (h) Wire cloth, 2-3 or 4 mesh 26½" x 27". (i) Approximately 3 dozen 2" No. 8 screws. (j) Black paint, nails, etc.

The body and most of the lid of the extractor are made from the 12" board, laid out and cut into pieces as indicated in the drawing in Fig. 1.

Double lines on the drawing indicate where a saw cut should be made since pieces on both sides of the cut are to be used.

Side pieces for the body of the extractor are fastened on the ends of the two pieces cut to form ends, fastened with screws. The four edges formed on the top and bottom of the box are not even because of the sloping side walls. These edges are planed until all four are level with the ends of the box.

The bottom of the extractor is made from tongue-and-groove timber. The body of the extractor must be carefully squared before any of the boards are nailed on the bottom and be kept square since the lid will not fit if the body is not square. The two long wedge-shaped pieces left over from cutting the side boards are cut off at their thin ends so they will be 21½" long. They are nailed inside the box on the bottom (see fig. 2). The piece left over in cutting the narrow end of the box fits on the bottom in the space at the end of the wedges (fig. 2) and is nailed to the ends of the two wedges. Three small wedge-shaped pieces, each 4" long are cut from the scraps. The wide end of each wedge should be 1¼" while the other end comes to a point. These pieces are also nailed to the bottom as indicated (fig. 2). They are intended to keep the small pan level.

The cover or lid is made from the two pieces of glass and the four 2¼" strips, shown in fig. 1. These four 2½" strips should be dovetailed at the corners then nailed together to form a frame for the glass. If dovetailing is not possible two of these four pieces should be cut 25 5/8th" long to compensate.

The corners could be strengthened by corner plates if necessary. After the frame is nailed together, one set of ½" square pieces is nailed around the inside of the frame at a distance of 9/16th" from the top of the frame. Two ¼" holes are then bored through the top and two through the bottom ends of the frame through the ½" strips. Each hole is bored 5" from the centre of the frame. The holes provide ventilation between the layers of glass and reduce the condensation of water in this space, and should be bored before the glass is placed in the frame. The glass is held in place with the ½" square strips, six of them cut 24 11/16th" long and six cut 32 1/16th". They are cut to fit snugly inside the frame for the lid in case a timber of a different thickness is used. One piece of glass is placed above the ½" strips (already nailed in the frame) and is held in place with a second set of strips. The second piece of glass is placed below the ½" strips and is held in place with a third set of ½" strips.

The extractor will last longer if the wood from which it is made is treated against rot before being assembled.

It would be desirable to also make sure that the lid fits over the body of the extractor before the glass has been placed in position. Putty may be used on the top of the cover, in the same manner as for a window sash to make it waterproof.

Legs are attached to the rear of the extractor to keep the rear end about 14" off the ground. The legs are made from the two 15" strips nailed to the body of the extractor after a wedge shaped piece 4" long is nailed to the top. The wedges keep the legs perpendicular.

The pan for the combs or cappings is made from the larger sheet of metal, and is 21¾" x 23½" and 2½" deep. The top is made ¾" wider and ½" longer than the bottom to provide slanting sides. The lower end is cut back on both

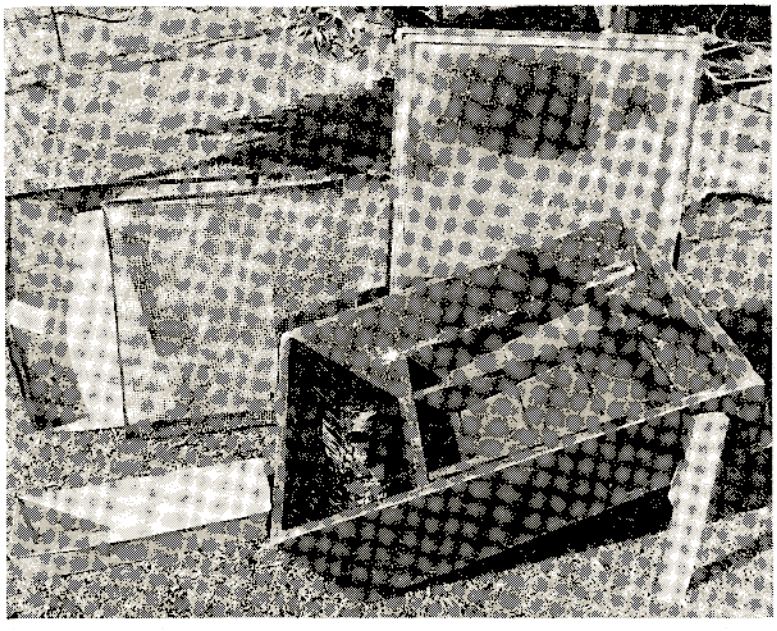


Fig. 4. Body, glass lid, metal tray, wire mesh and wax tray.

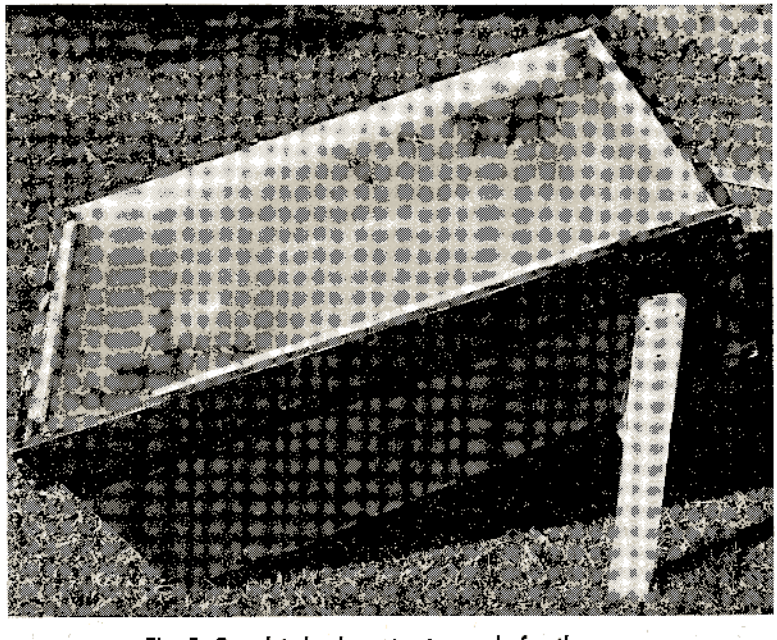


Fig. 5. Completed solar extractor ready for the sun.

sides so that the sides are 1½" shorter than the centre which makes the front of the pan slope from the sides to the centre (see in photograph). This arrangement permits the melted wax to run toward the centre of the pan, through an opening, which is cut 2½" wide, into a smaller pan placed below the larger.

The pan in which the wax and honey from cappings collects is made from the smaller sheet of galvanised iron. This pan measures 4¾" wide by 20" along the top and 3¾" deep.

It is made ½" narrower on the bottom than on the top. This allows the cakes of wax (when cooled) to come away freely from the pan. One ½" of the top edges of this pan is turned out, down and then hammered flat. This pan may be too large for small quantitites of wax so it would be advisable to make a second pan 4" wide by 10" long.

Cappings can be rendered more efficiently if placed on a basket made from the hardware cloth. The basket is placed on the large pan. It is made 21½" wide x 22" long x 2½" deep. A piece of fine cheesecloth placed in the basket strains the honey and wax before they flow into the smaller pan.

If a basket of this type is not used, the partly melted cappings have a tendency to flow down the pan and over the edges before they are entirely melted. Old combs, however, do not flow in this way so could be placed directly on the metal tray.

The solar wax extractor should be placed in a protected location—preferably facing north and should, if possible, be away from the prevailing winds.

Acknowledgement: Pennsylvania State University Bulletin No. 225.

NEW ZEALAND QUEENS 'THE GREATEST'

No doubt, like many New Zealanders, I arrived in North America with keen anticipation, expecting to witness the great things I had read about the different strains and hybrid stock available to commercial beekeepers here. Here are some of my observations and reflections.

I opened my first hive in Southern Alberta, May, 1967. It was the equivalent of a three-frame nuc. struggling to maintain its population; somewhat more aggressive in temperament than I had expected, which explained why gloves, etc., were paraded during preparation for work.

Closer inspection showed a queen of good shape, yet her brood pattern left "something to be desired," and as the day passed it became obvious that here were problems I had never faced in New Zealand, and I was thankful for it.

Hives were in various stages of re-queening themselves with many queens in the process of being superseded. We introduced new queens like they were 10 cnts a dozen and with the honey flow only six weeks away our tack of building the remaining 1,600 out of the original 2,000 packages brought, seemed impossible. Needless to say, a crop failure ensued.

The packages and queens that year were purchased from a producer in California whose breeding stock (I have since found out) was a hybrid strain acquired several years earlier, and contrary to principle laid out by the Apiculturists engaged in this hybrid queen programme, he had continued to breed large numbers of queens from both mother and daughter through several generations. Referring to Agricultural Handbook No. 335, *"Beekeeping in the U.S.A.—Hybrid Breeding,"* I quote the following paragraph:

"Segregation and random matings in the generations following hybridization are likely to result in only mediocre solonies. Hybrids are and end product and to make proper use of them it is necessary to requeen every year. For these reasons they have been unpopular with some beekeepers."

By the autumn of 1967 it became obvious to me that our problem was 10-fold; so many aspects to be considered and yet none could we put a finger on as the direct cause —

with queens in the spring disappearing (this being classified as "the disappearing disease" for the lack of knowing what else to call it) queens being superseded because of nosema infection

says Kiwi beekeeper SANDY RICHARDSON

working commercially with bees in Canada

queens being superseded because of poor viability (some cases so bad no eggs hatched)
drone layers common
brood diseases prevalent (AFB, EFB, sacbrood)
the use of staggering amounts of antibiotic drugs

And with other unaccounted for problems it seemed necessary that we had to look for the answer and overcome as many of these conditions as possible before next season.

These problems were not confined to my employer alone as they were prevalent throughout Western Canada, complaints being heard from beekeepers everywhere. If more proof was required, my visit to Venezuela in January, 1968 and my chance meeting with the President of the Venezuelan Beekeepers' Association (who also complained of a queen problem and who imports them from the U.S. each year), convinced me once and for all, that the problem was not all ours, but that there was truly a problem with the queen stock. By this time, however, moves were already afoot in Canada to investigate the possibility of importing queens from another country, namely New Zealand. My return from Venezuela enabled me to visit several Universities and Bee Research Institutions in the U.S. from where I gained considerable information which has since proven invaluable.

By next season we had overcome or were in a position to combat most of the aspects that were within our control. However, again we experienced considerable problems with queens, obtained from different sources than the year before. We bought 500 Caucasians and 500 supposedly Italians, plus extra queens from three other sources. No matter how we manipulated or treated the hives our queen losses were still somewhere in the order of 15%, which, when you are starting from literally nothing and endeavouring to build up a honey crop hive for that season, is far too great a loss. In the Caucasian strain we found considerable variations—some quiet, some flighty, big and small queens. Their honey production was below average in most cases. The propolis they gather is a beekeeper's nightmare. The Italian stock we tried that same year was very dark, flighty and quite aggressive. The bees they produced were anything from three bands to almost pure black. Of the few Midnite Hybrids we tried, all, bar one, were superseded by the start of the honey flow, and that remaining queen did not show any promise.

We tried also a few Anatolian and Buckfast queens purchased from a reliable source. Because of environmental similarities we hoped this stock would adapt to our prairie conditions. However, their performance was as equally disappointing.

Brood patterns in general were again borderline. Drone layers were common, and a report we received back from Ottowa on several queens we sent there for examination, indicated poor matings, which points to a shortage of drones in the colonies during the mating season.

Nosema still seemed to be a problem in packages, and an interesting report was published by Dr. Cameron Jay, University of Manitoba, which backs up THE CANADIAN BEEKEEPER's argument regarding the constant presence of this disease.

By autumn of 1968 a report was furnished by Dr. P. Pankiw, Research Station Beaverlodge, Alberta, on his evaluation of New Zealand queens. A trial shipment of 30 queens had been imported from New Zealand and was sent to Beaverlodge. In his report, Dr. Pankiw comments on the gentleness of the New Zealand queens in comparison to the test queens he had selected from California. Also, they out-laid and out-produced the Californian queens.

This report prompted my employer to start negotiations for the importation of New Zealand queens for commercial use. After considerable difficulty a permit was issued for the importation of 1,000 By this time we were endeavouring to winter our colonies 250 miles westward in British Columbia, which removed the necessity to buy packages, and with the importation of New Zealand queens meant we then had some control over the nosema problem which we had encountered in packages and queens up to this point. After the queens arrived, all the attendants were removed from the cages, placed in jars of formalin and airfreighted to Ottowa to be checked for mites. This regretfully necessitated the quarantining of the queens for a period of 10 days until we were advised by Ottowa that no mites were found. This quarantine period proved difficult and somewhat detrimental to the queens. Nevertheless, our acceptances were quite good under the circumstances. As the spring progressed our hives were inspected for disease before shifting back to the prairie for the main honey flow. One of the inspectors, Dr. J. E. Geiger, who had recently retired from the Canadian Research Station, Brandon, Manitoba, was, quite naturally, very interested to see this New Zealand stock, as he had, prior to his retirement, conducted over a period of two years (1967 and 1968) tests on hybrid strains of bees obtainable by the commercial beekeepers. I refer you to his report—AMERICAN BEE JOURNAL, May, 1969. Although at this time the hives headed by New Zealand queens still retained many of the old bees, he did however, remark on the colour and temperament of them.

If one refers to Dr. Pankiw's report on the queens he tested and considers the percentage by which they out-produced the American Italian stock, and then refers to Dr. Geiger's report on honey yields, one can appreciate that the difference in honey production of the best hybrid

strain and the New Zealand queens would be quite comparable.

The results of our importation were very encouraging. We had an average season overall (the average was 130 lbs. extracted, leaving 80 lbs. winter stores) some areas being exceptionally good while others were disappointing. Nevertheless, the New Zealand queens proved they could produce crops equal to the American stock—in the better areas up to 400 lbs. The third super was left on every hive for winter and it became quite evident, when loading the hives for trucking to the wintering area in British Columbia, that the New Zealand hives had prepared on the average, considerably heavier brood nests. In the vicinity of 20 to 30 lbs. could be added to the New Zealand hive production. This, again, was quite noticeable in the spring when most New Zealand hives were honey-bound. In comparison, the American hives had by this time practically consumed all their stores necessitating our having to remove honey from New Zealand hives giving queens room to lay, and feed the frames of honey to the American stock.

The American hives definitely started earlier (this being one of the prime considerations of the American queen breeder and package producer) but proved detrimental as we were unable in many cases to keep feed up to them. This characteristic in a warmer climate such as New Zealand could be quite disastrous and costly unless one was in an extremely early honey flow region. Some strains of New Zealand bees had considerable amounts of pollen stored, which is another point in their favour. Again the quiet temperament of the N.Z. stock was most evident during spring manipulation and was very beneficial especially in cool weather, as we were able to work two New Zealand hives in the time it took to work one of the more aggressive and flighty American hives.

The response of all our hives to manipulation, shifting or feeding frames of pollen etc. was very encouraging. All that is required to ensure that the New Zealand queen progress is not hindered is a slight change in hive management.

This spring considerably more queens were imported and supplied to beekeepers in both British Columbia and Alberta, and to date we have had quite favourable reports. Our acceptances were excellent and the supersedure rate was negligible. All in all, the hives built very well. For comparison, another beekeeper in the district, who again purchased American stock from two different sources, informed me that his loss through acceptance, be it one cause or another, was upwards of 15% again this year.

As one may realise, having read this article, all the American stock we tried in an effort to overcome our many problems proved unsuccessful and disappointing.

The reason for the problems encountered are not completely understood, although I feel sure that Dr. W. C. Rothenbuhler and his associates at Ohio State University have offered a fairly accurate diagnosis in their article in the June 1969 issue of *Gleanings in Bee Culture,* entitled "An Adult Honeybee Disease Usually Unrecognized." Many of these symptoms I have observed in our colonies from time to time and I was inter-

ested in his comments when visiting his research establishment early in 1968.

Although the first to admit that our New Zealand stock is not the ultimate, it has, I believe, qualities that should not be lost. Therefore, until such time as a bee is produced with superior characteristics in *all* respects, I consider our stock is as good an all-round bee as can be found in commercial bee-keeping.

Interest has grown in New Zealand queens and increased sales for next spring are anticipated. If this market is fostered it could well increase to the benefit of the New Zealand beekeeper, provided our product is in no way jeopardized but retains its original qualities meeting Canadian standards. In so doing we are also preserving the high quality of our stock for the betterment of our own industry.

N.Z. and ITALIAN QUEENS for BREEDING and HONEY

A contrary view by G. F. TOOGOOD, N.D.A.D.N.Z.

New Zealand Italian queens and bees for breeding and honey production are far behind good Californian queens and bees that I had charge of when I was in Canada from 1954 to 1957, and I am not surprised to read that New Zealand queen trials at Beaverlodge Research Station, Alberta, Canada, are a little disappointing according to Dr. Peter Pankiw, whom I know very well and have met many times.

New Zealand queens will have to improve 100 per cent to some of the Italian queens I have had from New Zealand breeders to compare favourably with queens and bees handled from some of the biggest breeders in California whom I met and knew well. I should know more about American Italian queen bees and honey production than any other beekeeper in New Zealand.

The average yield for the three years that I worked for the largest beekeeping business in British Columbia, Canada, was 180 tons of honey a year off 2,000 hives.

All of these package bees came from California, and one yard of 100 hives I helped in the cartage was 17½ tons of honey off lucerne clover.

Honey production off hives in New Zealand and with New Zealand queens in most cases cannot equal a quarter of that amount. In Canada, but mostly in the United States, queen breeders are all the time improving their strains of Italians by bringing in new blood and cross mating in new strains of bees for general honey production. New Zealand at the present time is lagging very much behind the times. America, England, Germany, Switzerland, Jugoslavia, some of the countries in Asia Minor and the countries of the Middle East, and the New State of Israel all have testing, breeding pure races of bees and cross-mating in full swing. All beekeepers in New Zealand should get a copy of Brother Adams' book "In Search of the Best Strains of Bees" and see what can be done in pure and cross-mating.

New Zealand queens and bees for production have gone back steadily for the last 25 years and more so, since the greatest queen breeder New Zealand ever had—the late Robert Stewart —died.

There is still plenty of clover about and the beekeepers need something done by the Agricultural Department in New Zealand — not big talk and nothing else — while other countries in the world are doing all they can in breeding and cross breeding bees for queens and for honey production.

HONEY PROCESSING AND STORAGE

D. F. Langridge of the Department of Agriculture, Victoria, writes in the *BEEKEEPERS' BULLETIN* that he recently spent some time at the Honey Research Institute in Bremen discussing the problems of honey processing and storage with Dr. H. Duisberg, director of the Institute. His report is of equal interest to New Zealand beekeepers.

Any heat treatment of honey can lead to a greater or lesser degree, to the deterioration of honey quality as determined by its enzyme and hydroxymethylfurfural (H.M.F.) content. In accordance with normal practice honey is first subjected to heat in the extractor, (for all practical purposes contact with the uncapper can be neglected). Most extractors are fitted with a coil carrying live steam at a slight pressure. In general, experience has shown that honey coming from the extractor does so at quite moderate temperatudes—from 90°F to 130°F (32 to 49°C). On the surface, therefore, it would appear that no loss of enzyme activity would be experienced and any rise in H.M.F. would be insignificant.

However, Dr. Duisberg states that this *not,* in fact, the case. The important factor is the temperature of the metal with which the honey comes into contact, not the ultimate temperature of the bulk of the honey. Using a temperature of 175°F or more (80°C+) in the steam coil could lead to the loss of 50 per cent. of the enzyme activity in the layer of honey in contact with the coil in a period of five to six seconds. At boiling temperature, 212°F (100°C). half the enzymes can be destroyed in one second. Enzyme loss by excessive heat can be worse in honeys of lower pH than in those of higher pH. It was suggested that the ideal would be a jacketed extractor with hot water circulating at a temperature not in excess of around 120°F (50°C). In other words it is suggested that a high temperature concentrated in a narrow coil should be substituted by a lower temperature distributed over the surface of the extractor drum.

All the experiments carried out at the Apiculture Research Unit in the original study referred to above were made on the diastase activity of honey. However, today there is a definite shift on emphasis in Germany. The "Kiermeyer quotient", involving the invertase (or saccharase) activity of the honey, is the chief test applied for enzyme activity. It should be noted that the enzyme invertase is more heat-sensitive than is diastase. The use of the invertase number, although not at present in the regulations, is recommended by the German authorities.

Excessive heating can also lead to an increase in H.M.F. content of honey although for the short time of contact in the extractor this is probably not significant during the process of honey extraction. However, from the point of view of storage of honey, the question of storage temperature becomes of major importance. One instance quoted by Dr. Duisberg was that of honey stored in Yucatan (Mexico) at a temperature of 85°F (29°C) which showed an increase in H.M.F. of 0.4 mg per cent. per month. Honey stored at 66°F (15°C) can gain up to 10 mg per kg per year.

Whilst the Codex Alimentarius standard requires a figure of not more than 40 mg per kg, the honey institute in Bremen recommends against purchase of any bulk honey showing a figure in excess of 25 mg per kg. The basis of this low figure is that bulk honey must first be stored temporarily then processed, packed and stored on shop shelves until sold. The margin of 15 mg per kg is given to allow for increase in H.M.F. during the above processes and storage period.

The implication of the storage gain of H.M.F. is of course that honey should always be stored in a cool place (never in the sun) and should be disposed of by beekeeper and packer alike as soon as possible.

The above remarks, relative to temperatures in both processing and storage, although made specifically in relation to the apiarist apply equally to the packer. In the latter field, the heating of honey in tins in boiling water vats appears to be a system which could lead to deterioration in both enzymes and H.M.F. status of the honey. Honey has a very poor heat conductivity and also convection in heated honey is almost non-existent from the practical point of view. Therefore the layers of honey near the wall of the tin are in relatively long contact with temperatures up to 212°F (100°C) which, on the figures quoted earlier, and also on figures obtained by Dr. T. M. Reynolds of CSIRO (Sydney) can lead to serious loss of enzyme activity and increases in H.M.F. content.

HONEY PACKERS ASSOCIATION

The N.Z. Honey Packers' Association held a meeting at Christchurch on Monday, 7th September, 1970 with seventeen members present.

Concern at the present state of the industry with particular regard to the low returns being received by the producer prompted the following motions to be carried.

1. That we urge the National Beekeepers' Association to set up the Investigating Committee requested by Conference with all possible haste and that an Agricultural Economist, approved by the Minister of Agriculture be included in this committee.
2. That our Association will be represented at any combined meeting only if our full Executive are invited and the Investigating Committee Meeting and Industry Fund proposal are on the Agenda paper.

(NOTE) The above resolution was carried in line with the request of the N.B.A. Conference and due to the N.B.A. Executive demand that only one of our members met their Executive.

3. That until the basis of the levy has been finalised by the industry, payment in its present form be suspended.

(NOTE) Factors influencing the above were H.M.A. price cutting and the fact that the majority of honey packed does not carry the levy. A survey by the N.Z. Glass Manufacturers' states that 34% of all honey sold is filled into 5 lb. tins (this does not include refills).

4. That in view of the proposed alterations due to the inequity of the Industry Fund, Association Members have the Seals Number removed from future orders for printed honey containers and labels. (A printed tin packed by a member of the H.M.A. was purchased from a store without seals prior to the meeting).

(NOTE) Following the N.B.A. decision to set up the Investigating Committee, action on the remit has been deferred.)

5. That this Association advise the Minister of Agriculture and the National Beekeepers' Association that the N.Z. Honey Packers' Association will support an Industry Fund levied on honey production defined by each producer's declaration of his yearly production of saleable honey and that "honey packers" take no part in collecting this fund.
6. That the Minister of Agriculture and the H.M.A. be requested to reduce the quantity of honey on the local market and immediate steps be taken to export surplus stocks by either the H.M.A. or packers.

Following discussion on honey prices it was decided to defer action until the Association's Annual Meeting on Saturday, 28th November next.

Later Mr. Jasper Bray resigned as President and Mr. Lloyd Holt was appointed Acting President until the Annual Meeting.

Our Association is united in its attempts to stabilise the industry providing a fair return for the honey producer, as this is the only way that the "honey packers" position can be stabilised.

Reported by LLOYD HOLT.

PHIL MUIR and NEAL BATES

DESCRIBE FOR YOU

A SIMPLIFIED POLLEN TRAP

THE BITS AND PIECES

2 Pieces Tin Plate 6¾" x 6½"	End pieces of frame.
1 Piece Timber 16" x 2¼" x ⅜"	To be nailed to end pieces at back of tray.
2 Pieces Timber 15⅞" x 2¼" x ⅜"	Pollen Tray Sides.
2 Pieces Timber 2½" x 2" x ⅜"	Pollen Tray Ends.
1 Piece Timber 15⅞" x 2¼" x 3 ply	Pollen Tray Bottom.
2 Pieces Timber 3½" x 1⅝" x 1"	To hold wire gauge.
2 Pieces Timber 16" x 1½" x 3 ply	Top of Pollen Tray.
1 Piece Timber 16" x 1½" x ⅜"	Top and Back of gauge.
1 Piece Wire Gauge 14½" x 2"	5 mesh to one inch — 13/64" holes through plastic Perspex.

ASSEMBLY

1. Make up Tray.
2. The two tin plate sides to be bent at right angles one inch deep on the 6¾" face to form slides under front of super and floor board.
3. Slot each 3½" x 1⅝" x 1", 1½" from end ¼" deep.
4. Bevel back ½" on one edge of each piece of the 16" x 1½" x 3 ply.
5. Now match these bevelled pieces facing in with a gap of about ⅛", just sufficient for the pollen to fall through into tray, to the two 3½" x 1⅝" x 1" Blocks. This has to be done in reverse as the blocks finish up on top of the bevelled pieces.
6. The front edge of the 3 ply bevelled pieces is to be flush with tray in position and level with the front of the end pieces.
7. The space underneath the tray will need to be blocked in on the floor board.
8. The whole trap will need some protection from the weather either by:-
   (a) A separate board say 18" x 5" with water-proof covering nailed to two pieces of 12" x 1", 16" apart so that this verandah fits snugly onto the sides of the super, preferably lightly nailed.
   (b) Fit wedge blocks at both front ends and nail say 18" x 5" board on to the wedges. Bevel the board at back for snug fitting against rains.

FINALLY. The assembly may take a little fitting but it is simple and easily constructed.
The special wire gauge is available from D. Mount Ltd. of Newmarket, Auckland. ⅜" timber is readily available from apple cases.

APIARY SECTIONS' WORK REVIEWED

Following is a summary of Field Investigation and Experimental work undertaken by the Apiary Section of the Department of Agriculture during the past 12 months as reported by the Superintendent, Beekeeping, to Conference, 1970.

Industrial Sugar

Trials with industrial sugar as a replacement for honey as winter stores or for feeding in the spring were carried out at Auckland and Oamaru.

Queens for Canada

Visits were made to the Auckland airport to examine queens and the conditions under which they were transported. A number of changes were recommended.

Bee Strains

Individual characteristics of various strains such as brood patterns, swarming propensities, working habits temper and ability to bring in nectar under changeable weather conditions have been recorded.

Overseas Shipment of Hives

Pacific Island peoples continue to purchase hives of bees from the Auckland district. Special knowledge of packing hives, loading and stowage aboard ship is necessary for the successful shipment of these hives. The most recent shipment was 50 hives for the Government of Tonga.

Bee Mortality on Rangitoto and Motutapu Islands

Bee mortality on these Islands at crucial periods of the year has been traced to a combination of circumstances i.e. Karaka nectar poisoning, the narcotic effects of Kowhai nectar, lack of pollen, inadequacy of Pohutukawa honey as winter stores, and lack of brood and young bees.

Measures recommended are:

Requeening with a fresh strain of bees

Adding combs of honey, pollen and brood from the mainland

Sugar syrup feeding to stimulate breeding and activity

Provision of pollen supplement

One supply of ample clean water

The elimination of wasps

Cappings Melter

Trials were undertaken at Auckland with a melter cabinet fitted with a basket to determine from which direction heat can be most effectively applied to the cappings. The heating unit used was a Tangray forced air electric heater.

Planting for Honey Production

Soya beans and Argentine rape are under observation for this purpose and sunflowers for pollination and honey production.

Surveys

Surveys have been carried out at Great Barrier and Kawau Islands to assess the beekeeping potential of the islands.

Evaluation of Different Colony Management Methods

A comprehensive evaluation and comparison was made of three colony management systems. These were (a) the basic single queen system using overwintering colonies; (b) single queen system using spring nucleus colonies and (c) the two queen system. 90 colonies were used in three apiaries of 30 colonies each in three districts:— Hawkes Bay, Manawatu and Taranaki.

Pollen Supplements

An extensive test of pollen supplement feeding was undertaken last season in conjunction with the above management experiments.

Pollen Trapping and Pollen Supplements

The Ontario Agricultural College (O.A.C.) pollen trap was tested under Manawatu and Hawkes Bay conditions.

The Economics of Trapping and Selling Pollen

This included the testing of various types of pollen traps, methods of cleaning pollen, removal of moisture and the storing of pollen.

Pollen Combs

Trials are under way with supers of combs held in a cooler, under polythene, coated with paraffin wax and glazed. The purpose of the trials is to preserve the pollen against mite and deterioration.

Pollination

Orchardists and apiarists were brought together for the purpose of setting up a pollination service, mainly for pollinating apples and plums. As a result of last year's experience a bulletin on the subject has been prepared and a standard service charge agreed upon. Some orchardists reported record crops after using bees for the first time. It is expected that 150 hives will be rented this coming season in the Henderson and Oratia areas alone.

Sunflower Pollination

During the past two years, observations have been conducted into the pollination of sunflowers.

The Sugar Concentration of Nectar

In order to obtain some idea of the amount of sugar in various nectars some 30 flower species were examined. The reasons for this were to determine:

1. **Competition from other sources during fruit blossom pollination**
2. **The siting of bees**
3. **The best time to move bees to a crop.**

Permanent Apiaries versus Temporary Apiaries

It is proposed to undertake an economic evaluation of shifting colonies of bees for spring build-up and honey flow purposes. This will be conducted in Hawkes Bay-Manawatu regions.

Wasp Attactants

Some materials found to be successful in attracting species of Vespula in Canada and U.S.A. when tested in N.Z. have proved entirely unsuccessful under N.Z. conditions. This year a number of other chemicals, as well as horsemeat extract and pet food mixes, have been tested without any success being achieved.

Beekeepers' Technical Library

The following books, presented by Foundation Life Members, have been added to the Library and a suitably embossed Book Plate is mounted on each book. A further nine presentations will be announced in the next Journal.

ANATOMY AND DISSECTION OF THE HONEYBEE *by H. A. Dade* – presented by Thomas Francis Penrose of Leeston, Canterbury.

THE HIVE AND THE HONEYBEE edited *by Roy A. Grout* – presented by Thomas E. Pearson of Darfield.

THE PHILOSOPHY AND PRACTICE OF BEEKEEPING *by A. L. Gregg* – presented by Jack Watson in memory of Walter Watson of Geraldine.

QUEEN REARING *by H. H. Laidlaw and J. E. Eckert* (Copy No. 2) – presented by William Bayley Bray of Leeston.

BEEKEEPING IN THE TROPICS *by Francis G. Smith* – presented by George Edward Winslade of Oamaru.

THE INTRODUCTION OF QUEEN BEES *by L. E. Snelgrove* – presented by Ralph Vaughan Glasson of Blackball.

THE WORLD OF BEES *by Murray Hoyt* – presented by Arthur Ecroyd of Christchurch.

IN SEARCH OF THE BEST STRAINS OF BEES *by Brother Adam* – presented by Tom Holland of Greymouth.

500 ANSWERS TO BEE QUESTIONS *by A. I. Root Co.* – also –

STARTING RIGHT WITH BEES *by J. A. Root* – both presented by Allan M. Ward of Southland.

BOOK DONATED —

THE LIVES OF BEES AND WASPS *by Christopher Andrewes* – donated by A. L. Hughes of St. Heliers, Auckland.

Catalogue of books and copy of rules available from Branch Secretaries or the Honorary Librarian, Chris Dawson, Box 423, TIMARU.

COMMENTARY from the Editor's Desk and Mail

OUR FRIENDS at the American Bee Journal are short of two copies of the NEW ZEALAND BEEKEEPER to make their bindings for the library complete. Please help in solving this problem by digging through your old file copies out in the shed and loking for Vol. 4, 1942, No. 2 and Vol. 19, 1957, No. 2. Our own library has been searched for spares without avail but there must be old copies laying about in corners no longer serving a useful purpose. If you can help, please send your find to the Editor, P.O. Box 3561, Auckland and it will be forwarded with your compliments to Hamilton, Illinois in the United States, by air.

★ ★ ★

EVERY BEEKEEPER should know which trees are sources of pollen and nectar, not only for his own information and knowledge but to be able to advise planters on farms for windbreaks and landscaping the varieties which will serve several purposes including the lining of beekeeper's pockets.

Auckland Apiculturist Bob Walsh was the author of "NECTAR AND POLLEN TREES" and it certainly deserves wider distribution and should be in the hands of every beekeeper for reference. Copies are readily available from the General Secretary at 50 cents each and most local branch secretaries can supply members.

★ ★ ★

THE FEDERATION OF YOUNG FARMERS has a commendable scheme to assist young beekeepers anxious to extend their experience and knowledge of practical beekeeping.

For a fare expenditure of $1,232.00 the trainee can work with a Canadian beekeeper for a period of seven months and be paid a remuneration of $175.00 per month with board, so that the experience will cost little on a cash basis.

The period away from New Zealand would be from April to November and it would be necessary for fifteen people to participate in the scheme. An alternative provides for experience in Europe for six

months in addition to Canada at a combined fare cost of $1,495.00. Payment to trainees whilst in Europe would be on a basis of the equivalent of $70.00-$90.00 per month.

Applicants wishing to participate are invited to direct their enquiry to Mr. R. J. Davidson, Assistant Organising Secretary, N.Z. Federation of Young Farmers' Clubs, P.O. Box 2298, WELLINGTON. It is conditional applicants become members of the Federation for a minimum period of six months.

★ ★ ★

POLYSTYERENE HIVES in soft shades of pastel blue plastic are being manufactured by a plastic manufacturer in Canada for Dr. G. A. Hobbs of the Canada Agriculture Research Station to house alfalfa leaf cutter bees. Advantages claimed for the hives are that they are easy to assemble, light in weight (13 lbs.) as compared with wooden hives (45 lbs.), easy to handle and to move. The bees settle in their plastic palaces without problem.

★ ★ ★

NEW ZEALAND BEEKEEPERS have at least one less problem than their counterparts in some parts of the States. A Bill has been introduced into the Assembly, State of New York, to compensate beekeepers for damage caused by bears to their hives to the extent of $20.00 per colony with a limit of $5,000.00 in any one year. Pennsylvania, New Hampshire and Wisconsin already compensate beekeepers for bear damage. Apparently bears are such honey fans they return to apiaries night after night, tearing as many as five hives apart each time. Shooting is extremely difficult since the animals detect human presences by smell (yet their best friend never told them) and keep well clear of apiaries when the beekeeper lays in wait. In isolated sites, the first the apiarist knows is when a scene of carnage is beheld on a routine visit.

★ ★ ★

BRITAIN IS NOW SAID to be the second largest honey-consuming country in the world, being excelled only by Germany. A record import figure is expected for the northern winter, and prices are continuing to rise for both home produced and exotic imports. However, the U.K. experiences the same problem as N.Z. in that there is the usual band of price cutters who sell at the back door or to the corner grocery store at low prices, enabling honey to be offered retail at 2s 0d. per lb. pot.

★ ★ ★

BRITISH BEE JOURNAL quotes an item from their July 1920 edition telling the story of the beekeeper of an English village who saw no logical reason why he should be called upon to pay the parson a tithe of one tenth of his production, and he did all he could to outwit the parson and his agent. He cunningly, somehow, kept his hives to the number of nine, and since 10 would not go into 9, his tithe, or tenths of bees, never turned up.

One year, however, he placed a brand new skep in his apiary, an incident which his vicar did not fail to note, and asked for his tithe of bees. "It's an empty skep, sir, wait till it's a-humming, then call." was the bee-man's reply. The parson had not long to wait . . . the whole village soon knew that Owd Tom, the bee-man, had a swarm which he had to chase.

The news reached the parson's ears, and consequently he strolled out next day to have a look at Owd Tom's bees, and, sure enough, there were ten skeps and bees busy entering and leaving each one.

"Now, Tom, let's have my tithe of bees, lad, and the blessing of the Lord be with thee and thine house."

"Right thee away, parson," said Tom Store, "afore dark o' the night I'll be along wif 'em, and may they bring thee luck."

True to his promise, Old Tom appeared at the vicarage door about one hour before sundown, and, with a violent shake, he cast the bees at the parson's feet with a "The bees be thine, but the skep be mine," and he walked away, leaving the vicar to collect his wits and his bees.

☆ ★ ☆

AMERICAN BEE JOURNAL reports an interesting market survey by the Mid U.S. Honey Producer's Marketing Association which sent out a questionnaire to membership on the cost per colony of operation. Thirty-six producers answered the questionnaire, representing a total of 90 thousand colonies of bees. Theresults were as follows:

The initial cost per colony without salary	$11.84
The cost per colony, when salary of $10,000.00 per year is included	$19.42
The cost per colony, including a salary of $10,000.00 plus 6% return on the money invested	$22.25

At a honey selling price of 15c f.o.b. with container furnished, this would require 158.8 pounds of honey per colony.

★ ★ ★

A FURTHER REMINDER has been made to the Post Office that a series of stamps on bees, with the related subjects of pollination and honey would be a welcome and interesting series for philatelic enthusiasts. Current subjects include moths of New Zealand.

★ ★ ★

EXPERIMENTS are being made at Rothamsted Experimental Station with the introduction of Bacillus thuringiensis as an additive to wax foundation to control wax moths by the use of bacterium. Harmless to man and bees, the bacteria are fatal to moths and might well be the solution to one of the industry's problems. As the larvae mine their way through the wax comb so would they become infected with bacteria fatal to their existence, so that damage would be negligible. It's a happy thought.

★ ★ ★

HONEY IS SCARCE in Australia and packers are finding it difficult to obtain stocks in Queensland. Late winter and early spring crops were a virtual failure and overseas markets have made unusually heavy pur-

chases with the result that premium prices obtain. Anyone selling at cut prices for a quick return must be a congenital idiot.

IT IS ENCOURAGING to see that the DAVIDSON uncapping machine is being promoted in the American market by Dadants, the equipment suppliers, and tribute is paid in the "copy" to this excellent New Zealand machine and its ability to uncap 12 frames per minute. Selling price in the States is shown as $1,750.00, and the agents are excited at the machine's performance.

★ ★ ★

DEPARTMENT OF AGRICULTURE has appointed a new recruit in Auckland to the staff of apiary instructors in the person of Brian Milne. Suggestion has been made by the N.B.A. that two instructors be appointed to the Waikato, since the extent of the area to be covered is virtually unmanageable by one man.

★ ★ ★

AUCKLAND BEEKEEPER'S' CLUB maintains regular meetings at the Club's apiary during the spring-summer season and courses and lectures of instruction during the winter. These amateurs demonstrate keeness for knowledge by their enthusiastic attendance and support, helped by Departmental officers at Auckland and the prodding of their President, Phil. Muir. They are independent and self supporting and applied an excess of income over expenditure last year to a free subscription to this journal for every member.

★ ★ ★

FOUR QUEEN COMPACT enthusiast Eugene E. Hinsdale died at his home in Seattle, Washington, U.S.A. on July 11 at the age of 88 years. Readers will recall the series of articles Eugene prepared for publication in this journal several years ago and his insistence that the recipe for bumper crops was to employ four queens in unison. He had great faith in his theory and produced records to prove it's efficiency, and never tired of demonstrating his methods for all to learn. His lively correspondence and flow of ideas will be missed.

★ ★ ★

ALLAN DICK, Parliamentary Under-Secretary to the Minister of Agriculture has turned down the N.B.A. request that the beekeepers be included in Government drought relief schemes. At the same time, beekeepers are eligible for guarantees for bank overdrafts in the same way as farmers if because of abnormal climatic conditions they need funds for financial rehabilitation and cannot get finance from normal sources of credit.

★ ★ ★

ANOTHER METHOD of introducing a young queen to a colony is to pierce a small sweet bag with a few holes and brush twenty workers from the colony to be re-queened into the neck. Close the bag and shake the contents vigorously for not less than two minutes, and it will be found that the gyrations and shaking renders the bees into a dazed condition although they are unhurt. Place the new queen in the bag and close the neck with a light string to ensure the bag stays closed. Fasten the bag by the string to the mid-frame by removing that immediately

adjacent and leave the hive undisturbed for three days. By then, the queen will have been released and should be laying normally. By removing the natural attendant bees and substituting workers from the new colony the risk of fighting is eliminated and the possibility of introducing disease. Never tried the idea, but it seems sound.

★ ★ ★

HAMILTON AERIAL TOP DRESSERS have decided to ban the use of the hormone 24D. A number of complaints have been received from pilots that they had splitting headaches, vomiting and blank spots in their vision when sowing the dust, used for the eradication of thistle. Complaints have also been received of damage to crops through drift, and beekeepers will certainly be glad to see less potent means of destruction employed. Weeds have to be destroyed, but at what cost? It will soon not be safe to breathe without a filter mask in the "country air."

★ ★ ★

A PROMINENT BEEKEEPER points out that a great deal of BL infection is spread not so much by carelessness on the part of the operator but by inability to see frames clearly at a close quarter distance of 12"-18". We don't all wear by-focals and those that do often wish it was not necessary. Good eyesight is a treasure for all, but to anyone working in close contact, it is essential. Had your eyes tested lately?

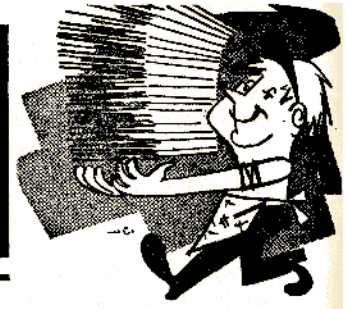
★ ★ ★

FOLLOWING REPRESENTATIONS by the N.B.A. assurances have been given by the Director of the Department of Health that the views of the Association will be fully considered in relation to Regulations affecting the standards of cleanliness in honey houses. The Association will be allowed to sight the Regulations in draft form so that before they become law, anomalies or suggested changes could be considered. Every assistance and co-operation was afforded to the Association by the Department of Agriculture prior to the introduction of the new Apiaries Act, and it is gratifying to know that similar circumstances will prevail before the enactment of this new legislation.

★ ★ ★

IT'S NICE TO BE CLEAN and hygienic but, as with all admirable intent, practice can go too far. A report tells how the Japanese anxiety to rid the country of flies has resulted in the whole country being saturated with insecticide spray in an elimination programme, with the result that the goodies have suffered with the baddies and flowers are having to be pollinated by hand. The same source states that the Japanese have a board of control for the control of flies similar in pattern to our Pest Control organisation, and if anyone sees a fly which he is unable to catch the board is notified and a man sent bent on destruction! The Japanese are a very serious and thorough race, but the story probably has to be taken with a grain of salt. There seems to be a good case for Rachel Carson's "SILENT SPRING" to be translated into Japanese and widely distributed.

BRANCH NOTES



MANAWATU and TARANAKI

The President of the N.B.A. attended a Seminar for Manawatu and Taranaki beekeepers on 21st November, held in Wanganui. Congratulations must go to Bill Brodie, apiary instructor at New Plymouth and Dick Hobbs, apiary instructor at Palmerston North, for a very successful function which was attended by about 40 beekeepers.

I received an attentive hearing and at the conclusion of the Seminar a Convener in the person of Mr. E. Whalley, and a Committee of three, were appointed to proceed with the formation of a Combined Branch. We wish them every success.

Reported by Bruce Forsyth.

OTAGO

The day was mild, the air filled with the hum of bees. Cars, men, everything was covered with a dusting of yellow pollen. Snow, gales and frosts were gone and the willow flow was on. The scene: Dal Jenkins' home apiary at Clinton, where 10 beekeepers plus the apiary instructor gathered to further their knowledge in beekeeping. Did we learn anything? Have you ever seen a beekeeper standing on a trailer behind his motorised barrow running round his yard? Dal did, and he uses it to transport sugar, syrup, and gear from truck to yards inaccessible in wet weather, and it can take a load too.

Many subjects were discussed including methods of mixing sugar syrup and feeding out. Whether it pays to buy a new truck, nuclii boxes and feeding, and collective buying of queens.

A further meeting is to be held in November at Owaka.

Reported by Roy Abernethy.

OTAGO

For beekeeping the weather conditions in this area have not been kind, and the position at present is not good. Hives are very strong in most places with the result that stores are getting very low. A generally mild winter followed by an early and pleasant spring has in turn been followed by very unsettled weather, with snow, hail, wind and frosts; not to mention periods of heavy rain. And, of course, not only beekeepers are affected; Central Otago orchardists have been severely hit by these conditions.

It is reported that most beekeepers have now exhausted what supplies of honey they had on hand for feed and are feeding sugar with the prospect of continuing for the next couple of months before the clover flow comes. Disease incidence is low at present but With weather conditions the way they have been, very little inspection work has been possible by the apiary instructor so this may not be a true indication.

Wet paddock conditions are hampering beekeepers with their work and tractors, four wheel drive vehicles, small garden tractors with trailers and the good old faithful gumboots have had to be resorted to where the situation demanded.

Dunedin hobbyist discussion group, mentioned in the last set of Branch Notes had its initial meeting in late September, and although well enough attended more participation would be welcome.

The group assembled at the John

McKlashan College and after a frank question and answer session in one of the classrooms travelled to an apiary of Mr. Doug Anderson's in the North East Valley area where hive manipulations, demonstrations of grafting of lavae and general discussion and observations all in turn were demonstrated to those attending. The value in knowledge to be gained by this facet of hobbyist beekeeping interest is very apparent. To the writer, for instance, and no doubt to others too, it was illuminating to say the least to observe truly dry mould free hive conditions even though the site was wet underfoot.

As previously reported Mr. McKenzie, the apiary instructor from Gore, is the guide and mentor in this activity, and the next discussion meeting should have been held between the writing and printing of these notes.

Latest information on the Branch Apiary is that a suitable site was available which should mean that practical use of this facility to widen Branch interest will be available this season. Encouragement to continue to press on with this Branch Apiary was given by the investigation into similar activities in the Auckland area, which the Branch President made whilst at the Annual Conference. In Auckland he reports the amateurs to run their section most successfully and financially and the details of the management of their apiary were most helpful to us here.

Arising from a recent Branch meeting, a small committee was set up to investigate the inclusion of a Beekeeping and Honey Demonstration and Display stand at the next Otago Agriculture and Pastoral Winter Show in June of next year. Initial investigation has revealed that this could be a good choice in timing, in that this show will be much more all-embracing than normally. As at the Land and Industry Exhibition held last year in Wanganui, a significant participation by the Australian Trade Commission, Producer Boards exhibiting and holding seminars and down to National Apple Pie Baking contests.

The A. and P. people were most interested in our interest and although these are initial investigations, approaches have also been made to the National Beekeepers' executive and the Honey Marketing Authority seeking their thoughts on participation in this next winter show.

The Annual Convention of Southland and Otago beekeepers will be held in Dunedin as usual on the Queen's Birthday weekend, which coincides with the show and if all develops as is hoped, it should be worthwhile visiting the show and attending the Convention.

It is hoped to gather more members to the Branch and at the time of the issue of the next Branch Meeting notice, an additional notice is being sent to persons known to have an interest in bees to ask them if they would like to join. However, there will no doubt be others not known who could well like to join and should they read these notes or be told of them the Otago Secretary or any other Branch Secretary would be only too pleased to provide information and assistance.

Reported by Bruce Norton.

NORTHLAND

One of the warmest winters has now passed and a good spring is following with not a great lot of the dreaded wind. The only thing is that we are always looking forward to the manuka to come into flower but thils year it does not seem to be producing the nectar as usual, a blow for the early build-up.

The bees came through the winter in good order so we can look forward to a few swarms. The first brought to my notice was on the last week in August.

Our next field day will be held at Malcolm Haines' new honey house on 7th November, where our new apiary instructor hopes to be in attendance to meet the local boys.

There is a meeting of the commercial producers shortly to discuss whether they could form a branch to be incorporated with the Northern and Far North branches, as they have different problems to the amateur beekeepers.

Reported by Arthur Tucker.

CANTERBURY

Canterbury Branch held their field day this year on the property of Mr. E. Elliott at Amberley on Saturday, 10th October.

The day opened with a talk by the apiary instructor on planning and thought needed for the use of apiary machinery.

During his practical "time and motion" demonstration of making toast, Robert Davidson Senior showed that age, experience and Kiwi cunning were more than a match for fancy English schooling!

Mervyn Cloake demonstrated anaethetising bees with smoke from the large puff balls; followed by Kevin Ecroyd passing out or "pushing" free samples of this fungus.

David Penrose's lively address on the N.B.A.'s Executive meeting left plenty for members to talk about during the dinner period, during which time an opportunity was made to inspect the honey house, meet old friends and pass the usual remarks to our visitors from the West Coast about the rain.

Robert Davidson senior's after-dinner talk on the employment of staff showed that the afore-mentioned seniority had done little to dim his wit, powers of oration or ability to lead with his chin when discussing a subject.

While the fitting of a large tank and pumps for feeding sugar syrup shown by J. Symes was not new, his idea of fitting 230v power to his truck to drive electric motors is new and worthy of more thought by larger commercial beekeepers.

The working side of the day finished with a dash to cover from not unwelcome rain, to hear Ian Hunt talking about his methods of queen raising. The social side of this event continued for several hours!

WEST COAST

Though it is much too early to guess what quantity or quality the coming crop will be, indications are that providing beekeepers have managed to get all the tedious routine work done, most folks' colonies will be of sufficient strength to gather a fair crop.

Greatest problem up to date has been pollen shortage; too moist for bees

liking and in some cases operators made the mistake of not sorting out feed honey. Rata-predominate honey granules much too hard. I have watched bees carry crystalised honey outside and try to recover a percentage of rain-moistened food.

Queen rearing has not been easy yet there have been some surprisingly satisfactory results. It certainly pays to be optimistic. Floral sources—what a year!

August native flora was fully a fortnight early but now, after a cold and dirty September and early October, most sources are a fornight late. Short vicious winds finished several stimulative sources for this year.

Lawyer vine, five finger, hybrid kamahi, rangiora and others are now showing.

We have arranged our field day for 7th November, a report of which will follow later. Congratulations to the organisers of Canterbury field day at Amberley. Arranging these outings is something of a cook's dilemma. How to ring the changes or what garnish to add to an old subject. Though the day was not tropical I enjoyed the talks and demonstrations.

Reported by Tom Holland.

SOUTHLAND

One meeting has been held since Conference to inform members of Conference proceedings. It was also decided that the field-day would be held at the apiary of Mr. R. N. Franklin, Ohai, Western Southland, on the 6th February. Southland branch members hope to see many visitors from the North.

A heavy fall of snow in September, followed by severe frosts resulted in the bees missing the willow flow.

The weather has not been suitable for queen rearing either and the hives have opened up very light and strong as the result of a mild winter before the snow.

Reported by K. M. Herron.

NORTH OTAGO

A mild winter in North Otago did not follow through to spring. One of the coldest Septembers we have experienced for a long time resulted in the willow flow not eventuating. However, we have had rain, the country is look-

ing good and we are hoping that the main flow will be worth waiting for.

Unfortunately there have been several cases of B.L. Vince Cook has said that B.L. has been more prevalent in North Otago this year than previously. It looks as though this will be a serious beekeeping problem for a long time yet. There can be no let-up. The last B.L. hive will be like the last rabbit. He will be hard to catch.

We held a small get together afternoon at one of Bob Mackies' apiaries on Saturday, 17th October. This was well attended by local beckeepers. Max Lory demonstrated his baby-nucs, George Winslade, sugar feeders, Vince Cook, hive management and Bob Mackie a motorised honey barrow.

Reported by R. B. Mackie.

WAIKATO

After several years of negotiation between M. E. A. Deadman's Apiaries and the Rongapai School Committee over the presence of beehives in the home apiary being a potential nuisance and a hazard to the school children, the case went to the Supreme Court Jurisdiction.

After some considerable expense, and some 40 affidavits and many proposals by counsed, Deadman's requested a maximum of secen hives to hold bees as required to make baby nucs. The school committee wanted to shut down the business, and have no bees within a mile of the school.

As the limitation of the court could only be that Deadmans were not to create a nuisance, and to save them being back again later, as to what constituted a nuisance, Deadmans were allowed one hive, and to be allowed daily to bring in such bees to make baby nucs as required.

Affidavits to support the school committee were given by Messrs. E. I. Pullin, F. D. White and R. Walsh, apiculturist. To support Deadmans by C. Bird and W. L. Holt.

This matter has cost Deadmans much time, worry and expense, but with many other beekeepers in similar situations if a precedent had been set in closing Deadmans it could have had wide repercussions.

Hives are in good order, although spring sources were poor due to bad weather. Boxberry is yielding reason-

ably well, although frosts damaged it in places. Queen raising was delayed due to no mating weather, but young ones are showing up now. All lush sources look good, and could be up to two weeks early. Prospects either for an early season, or continued wind till Christmas, who knows?

Reported by C. Bird.

HAWKES BAY

Despite the very inclement weather of Saturday, 26th September, some 50 enthusiastic beekeepers turned out to attend the Hawkes Bay Branch's Field Day at Arataki Apiaries Ltd., Havelock North.

A very interesting full day programme was opened by morning tea with an address of welcome from our President, Mrs. Gwen Dorward. This was followed by a tour of the premises of Arataki, somewhat curtailed by the weather out of doors, but with much of interest around the workshop and buildings. Of particular interest was the new stainless steel tanker, to be used for the transport of honey in bulk between the Arataki Apiaries and the processing plant. This bulk container looks like a modern milk tanker and is most impressive.

The afternoon started off with an address by Percy Berry on the prospects for beginners entitled "To Bee or Not to Bee." "Queen Raising" by Dudley Ward of Dannevirke provided an interesting half hour and some useful hints were gathered from this evergreen subject.

An address by Bruce Forsyth, President of the National Beekeepers' Association, was welcomed as was the opportunity to meet our new president.

One of the highlights of a very interesting day was the address by Mr. E. Roberts, B.Sc., a lecturer in Agronomy at Massey University, Palmerston North, on "The Beekeeping Industry in Central Africa." His easy and humorous manner of address kept the audience enthralled, and we all learnt that the African bee is anything but pleasant to handle.

Afternoon tea was followed by a short address by our local apiary instructor, Paul Marshall, and the field day was brought to a close with a vote of thanks to the Berry family for the use of Arataki Ltd.

Reported by F. D. Maultsaid (Mrs.)

BEESWAX:

EFFICIENT SALVAGING AND HANDLING

During the last two or three years beeswax values have been at an all-time high with the result that a beekeepers' receipts from the sale of beeswax has risen to 10 per cent gross receipts. In viewof this relatively high proportion of gross income, he should ensure that he salvages the maximum possible quantity. On the assumption that your business is operating at a profit, any improvement in gross income becomes net profit after allowing for any direct costs in obtaining such improvement.

Accountants, businessmen, and other advisers, stress that all aspects of a business must carry its own share of overheads., it must be recognised that marginal costing has a place in any business.

Marginal costing assumes that no fixed charges have already been met, by spreading them over existing sales, and in increasing production to meet special extra sales — such as an export market — only additional variable charges, including labour, need be taken into account.

Most beekeepers — those self employed, who do not take off-season employment, and those who employ labour on an annual basis and who have difficulty in keeping them fully and usefully employed in the winter months — have a decided advantage over this example. By usefully employing available labour — and to do this costs no extra cash — you can not only improve your outfit and its future productivity, but can also increase gross receipts with a resultant increase in net profit.

Traditionally, the largest beeswax income is derived from the honey crop — from cappings wax, — but we will leave this meantime.

The biggest opportunity for increased income lies in the field of scrapings and old combs. Most of us have seen waste in this form lying around apiaries and beekeepers' yards.

Save all possible sources of beeswax. Having arranged your basic organisation it will take little additional time to collect and save all available quantities. Basically, you require an adequate container or containers to hold these bits and pieces, both for use at the apiary site and the honey house. Never leave for the bees without one or more suitable containers— say, an old 60lb. tin with the top cut out and a wire handle fitted, — into which scrapings from bars, from hive mats, etc. or pieces of brace comb can be placed. Containers must have tight fitting lids and be leakproof to avoid any possibility of the spread of disease.

It is well-nigh impossible to completely avoid any propolis getting into your wax scrapings, but where possible avoid it. Often frames requiring scraping will be covered with almost pure propolis. Scrape this to waste into a separate tin for later destruction and avoid mixing with your wax scrapings as this adulterates the wax and is an undesirable feature.

Back at the honey house have a relatively large suitable container, leakproof and with a lid. An old honey tank or drum is suitable. On returning from your rounds tins of scrapings can quickly be emptied and returned to the truck. Old broken combs can also be added, but complete combs are probably more conveniently stored in frames and supers.

Over a period, these savings will add up to a suprisingly large quantity. When wax prices first rose sub-

By A. K. ECROYD

An abridged version of the author's talk to the seminar in Hamilton

stantially two or three years ago, a relatively small South Island beekeeper delivered to us some 700lbs. of beeswax — all recovered from scrapings — over $400 worth accumulated over a period from source neglected by many.

Hardboard or tin hive mats and queen excluders are a source of large quantities of scrapings and some beekeepers claim that their entire cost can be met over a short period by scraping or otherwise removing wax regularly. The wax on these items is produced by the bees and, if not placed there, will drop to the floorboard and be wasted.

Having accumulated the beeswax the next question is what to do with it — how to recover wax and dollars.

Either you render it down yourself or send it to a recognised and reputable beeswax processor. Unless you have efficient equipment — and many beekeepers have — you are probably wasting a lot of time and some money by doing the job yourself. Take this hypothetical example of wax rendered by the beekeeper who does not have good equipment:

100 Boxes of 9 combs would probably recover 250lbs. of wax with a selling price of 61 cents per pound, less freight to the buyer of 1 cent = 250 at 60 cents = $150.00

Against this must be set fuel costs, labour costs — such as they are — cost of expendable pressing equipment such as bags, and the inconvenience of doing one of the unpleasant tasks in beekeeping.

The same combs sent to a beeswax processor who knew his job, would have probably recovered 4lbs per box or 400lbs of wax and the results would have been as follows:

400lbs wax purchased at 61c		244.00
Less costs:		
Railage or freight to processor, 900lbs at 1c	9.00	
Rendering charges 900lbs at 8c	72.00	81.00
		$163.00

By this example you have:

increased your income by $13.00, Given a reasonable profit to the wax processor. Increased the exportable surplus of beeswax by 150lbs. Saved unnecessary capital expenditure on inefficient plant. Eliminated unpleasant task. Saved fuel involved in rendering your own combs. Replaced the labour of rendering your combs by substantially less labour in packing them for transport to the processor.

Don't deduce that the answer is to purchase efficient equipment. If you already have good equipment then you may be stuck with it and the resultant — sometimes forgotten — interest on capital and depreciation, and providing you don't have to pay wages to do the job it is probably economic for you to continue. If you have particularly large quantities and good equipment then no doubt it will be quite economical.

Consider a beekeeper running a 1000 hives with an annual comb replacement at 3 combs per hive. To send his combs to a processor, if he recovered at the rate of 4lbs per box of 9 combs, the following would result:

Wax recovered and purchased, 1332lbs at 61c		812.52
Less costs:		
Railage or freight to processor—3000lbs at 1c	30.00	
Rendering charges, 3000lbs at 8c	240.00	270.00
Net Return		$542.52

A beekeeper with relatively efficient plant at a capital cost of $500.00 recovering at the rate of 3½lbs per box of 9 combs:

Wax recovered, 1166lbs at 61c	711.26	
Less freight to purchaser at 1c	11.66	699.60
Less depreciation on plant— 15% of $500.00	75.00	
Interest on Capital — 10% of $500.00	50.00	125.00
		$574.60

He has $32.08 available to cover labour, fuel and other costs.

If you propose to continue to render your own combs, then a few words of advice.

Melt combs and scrapings in a drum of clean water prior to pressing — do not boil, particularly if you have a hard or limey water supply, for there is an almost certain risk of emulsifying water with the wax. This in itself does not permanently harm wax, but the person to whom you sell your wax or for processing to foundation, will have to allow for this water content by deducting a percentage from your net weights. This is no real loss to you as it never was wax — just water. The real loss to you is the wax content of the spongy material scraped from the blocks prior to despatch. It is not practical to entirely avoid emulsification, but it is not hard to keep it to a minimum. An average good line of combs wax contains about 2½% of dirt and water — probably 1½%-2% water and ½%-1% dirt.. Tests on some lines of otherwise clean-looking wax have revealed up to 7% and 8% of moisture.

To avoid boiling, stir regularly; get the mass as hot as possible without boiling. Load your press and fill with hot water and raise the temperature as high as possible, without boiling, before applying pressure. After pressing is complete pour in hot water slowly to "run off" the floating liquid wax. Flow wax from press through a separator and into moulds. Not only will the separator divide the wax from the water, but it will also hold back much of the foreign matter that has got through the press, with the result that your final blocks, with a little scraping, will be ready for the market.

The more frequently you replace the water in the drum with clean water, the lighter will be the colour of the wax, although it is likely — unless you are carefully unrendering a batch of virgin combs — that the resultant wax will ever grade as light.

Avoid using a fire to melt combs— excessive heat will burn, darken and damage the quality of the besswax. Live steam into water is probably the best form of heating. Live steam on the combs themselves can cause excessive emulsification.

For melting down combs use stainless steel, tinned steel, galvanised iron or black iron, provided they are not subjected to excessive heat. Copper containers are readily attacked by acids in beeswax and verdigris — a green copper salt, is formed. This can stain and adulterate your beeswax.

Wax Moulds. Tinned steel moulds are porbably the most practical in view of their low price, relative to stainless steel, which of course is the ultimate. An economic and practical wax mould can be prepared by using two open-topped 60lb tins, or 3 open-topped egg pulp tins inside a honey case. If the tins are clean and the wax passed through a separator and run in at medium temperature, then left for 48 hours, the blocks will usually just fall out. The case prevents the tins from bulging, which in turn allows the blocks to come out easily. The blocks are easy to stack and pack very well into chapman or striped bags. Do not use galvanised wax moulds as the wax tends to stick to them.

Earlier, I mentioned utilisation of available labour which would not cost extra cash — that is your own spare time, and the time available of permanent staff who are sometimes difficult to keep fully employed. They can best be employed by culling out defective combs and bringing the general standard of gear and combs to a high level. One old dilapidated comb may hold as much honey as a brand new perfect virgin comb, but this is only part of the story. The second

rate comb can be a time waster — in that it is not manoeuvreable to all parts of the hive as is the case with a first-class comb. It is difficult to lay down a hard and fast rule but an average replacement of three combs per double brood nest could be regarded as a reasonable programme by a beekeeper interested in maintaining a high standard. This is not as expensive in terms of cash as one may think and the rewards are great in that you will maintain an outfit that can easily and efficiently operated and in which you will be able to take pride.

Here is the cost of replacing 1 box of 9 combs if utilising available labour on a basis of sending combs to a commercial beewax processor:

Wax recovered by Processor-say	4lbs
Less wax required for foundation	1⅛lbs
Wax available for sale	2⅞lbs
2⅞lbs at 61c per pound	$1.75
Costs:	
Freight on combs to wax processor at 1c	.09c
Rendering charges 9lbs at 8c	.72c
Comb foundation converted from your own wax 1⅛lbs at 15c	.17c
Wire to re-wire 9 frames	.02¼c
Replace, say, 4½ frames at 8.16c each	.36¾c
	$1.37

Cash surplus on replacing 9 combs = 38 cents or just over 4c per comb.

If utilising labour that is already available then the above example shows that:

You have increased your income; improved your outfit; made future working and hive manipulation easier.

SOLAR WAX MELTERS. Not very much is seen of these efficient, effective and economical units these days, although a few commercial men still use them. These melters can find a very useful place in a commercial man's operations. During warm spring and summer months they operate well and during the day can render all of the previous day's scrapings. The quality of wax recovered is usually very good and is usually much lighter in colour than would have bee obtained had the material been rendered by pressing, as it has not been stained by water and foreign matters, etc. Don't overlook the possibilities of a solar wax melter.

CAPPINGS WAX. This is an area where a beekeeper **must** have an effective method of rendering. A beekeepers' prime function is to produce honey and the value of the honey coming off with the knife may represent 25% of the total crop, plus the beeswax and so, if for no other reason, a beekeeper must render his cappings effectively to recover the honey.

You will be conversant with the many types of capping reducers — some better than others — but most have features that suit the owner. My own opinion is that the best cappings wax produced is from an efficient oven, correctly operated. Even though this wax may produce a cent or two more per pound than wax produced with a hot tip type of reducer incorrectly operated, it may, in certain circumstances, be more convenient to accept the poorer quality wax for the sake of faster extracting. A hot top type reducer operated correctly can produce excellent samples of beeswax.

Regardless of the type of reducer the following rules should assist to produce good cappings wax and secure top prices:

Do not use excessive heat — use only the amount required to do the job in hand — no more.

Do not force your plant beyond its rated capacity — this involves using too much heat with consequential darkening.

Either have a system where the wax runs away from the slum gum or if this not possible remove slum gum frequently — e.g. hot top reducer

Do not store molten wax over long periods unless in contact with clean water. Impurities will impart colour to and darken the wax. If held liquid in contact with clean water, the water will tend to dissolve stain from the impurities and so produce lighter wax.

On no account boil with water. This will not only emulsify water with the wax, but will also allow dissolved stains to darken the wax.

Run wax from your reducer through a heated separator to the mould. The separator will hold back any honey that has come through with the wax and most of the slum gum.

Avoid having to remelt wax after production and before sending to the processor. Don't remelt and blend waxes of different shades of colour. This only cost you time and money and usually degrades the wax—even if only slightly. A processor would rather receive wax with a little dirt or honey content for which he can allow, than wax melted more than once by the producer. The processor can select waxes of different colours for different purposes. The processor has the knowledge and the equipment to handle this wax and remove impurities without further damage to the value of the wax.

Do not add scrapings or other than virgin combs wax to cappings wax It doesn't take much dark wax to degrade marginally light wax to a lower grade. Instead of gaining a cent or two on the few pounds of dark you may lose the same amount on a large amount of light wax.

NEW N.B.A. SECRETARY

Pictured here is Eric Neal, a chartered accountant of Wellington, appointed Secretary of the N.Z. Beekeepers' Association. By his will to work and dynamic approach to industry problems Mr. Neal has already shown that he will implement Executive decisions without delay, and the industry and the Association will undoubtedly benefit from his efficiency.

ONE SUPPORTER

IS IT FAIR to write that beekeepers' wives are a dead loss, or do their husbands keep them with their nose so close to the grindstone that they have no spare time to read or write? Whatever the true answer, the fact remains that the response to the appeal in the last issue for favourite recipes using honey has been embarrassing.

ONLY ONE WIFE found the time to send in her favourite recipe, and the sender was Mrs. F. Barton, Pomborneit North, Victoria 3257, AUSTRALIA.

Thank you Mrs. Barton for your co-operation. If housewives in general were educated to realise the uses for honey in the culinary arts, the consumption of honey would be vastly increased, and surplus supplies on the home market made to vanish overnight —a fact which those most closely connected with the industry should be quick to appreciate.

Whether any book is ever published along the lines originally planned to boost the use of honey must depend on a large number of circumstances, but judging from the present response it is never likely to be other than a good idea.

In recognition and appreciation of our Australian reader's co-operation, here is Mrs. Barton's favourite recipe.

zealand Insurance Company Ltd and th mium met by the Association from consc funds.

THE N.Z. BEEKEEPER

This Journal is issued to all members National Beekeepers' Association and dire scribers.
Literary contributions and advertisements be in the hands of the Editor, Mr L. W. P.O. Box 3561, Auckland, not later tha 25th of the month preceding publication. Nome-de-plume letters must be signed l writer and address given, not necessari publication, but as proof of good faith. I accepted for publication do not neces express the views of the Editor.

LATE JOTTINGS . . .

HAVE YOU EVER driven through a swarm of bees? The impact on the windscreen is like being pelted with daubs of mud and is just as messy. Driving through the main highway in Christchurch on Labour Day resulted in this unpleasant experience, and the carnage inside the radiator cover was a sad sight to see. . .

A READER IN HAWKES BAY area points to the lack of material available to interest amateurs in this journal. Regretfully, it must be agreed that the criticism is justified but the problem can only be solved with practical help. Any commercial boys prepared to put pen to paper to help the new-comers?

TALKING ABOUT SMOKERS

When you run out of smoker fuel, try a roll of corrugated cardboard or a piece of old rope.

The next time you buy a new smoker, solder all the seams and solder into the smoke outlet hole a ring made from pipe or wire. This will prolong the smokers' life.

A good idea is to make a hook and attach it to the back of the smoker so that it will hook on the side of a super. If you wish to carry the smoker while you have your hands full hook it into your hip pocket.

While you are attaching things to the back of your smoker staple on two pouches; one for the hive tool and one for a pencil. When you have finished, make a box to keep your smoker in.

FOR SALE

Italian Queens bred from disease free, quiet and hardy stock by cut comb stystem. Bookings February onward. Price list from
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Offers are invited for the following bee publications:

Australasian Bee Manual 1911 (Hopkins). Practical Queen Rearing 1918 (Pellett). A.B.C.X.Y.Z. Bagster on Bees (1834). Gleanings 1935-1947 (16 missing) N.Z. Beekeeper 1915-1922. My Honey Bee My Honey Producer.
A. J. SMITH
Gregg Street, Dannevirke.
Phone 6332.

PLATFORM SCALES, 200 lbs.
TRANSPORTER & PALLETS (½ Ton Lift)
ROLLER CONVEYOR 3 Straight, 1 ¼-Round
TWO 1 TON TANKS (Tinned Steel), one with heating cable fixed. Bates Honey

The National Beekeepers' Association

(For the advancement of the Beekeeping Industry in New Zealand)

'Better Beekeeping—Better Marketing'

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301	to	400	hives $8.00	1301	to	1400	hives $28.00
401	to	500	hives $10.00	1401	to	1500	hives $30.00
501	to	600	hives $12.00	1501	to	1600	hives $32.00
601	to	700	hives $14.00	1601	to	1700	hives $34.00
701	to	800	hives $16.00	1701	to	1800	hives $36.00
801	to	900	hives $18.00	1801	to	1900	hives $38.00
901	to	1000	hives $20.00	1901	to	2000	hives $40.00

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ADVERTISEMENT RATES

Quarter Page	$4.50	Per Inch	$1.25
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Full Page	$15.00	for each insertion.	

Front Page Story

Imagine for a moment waking in the night to hear the crackle of burning boxes and to see the reflections of the all consuming flames on the walls and ceiling of your bedroom . . . .

It can happen and it does happen not only to the statistic in the newspaper report but to careful and thinking people and it could be YOU.

Care should be taken at any time of the year, but with the onset of the hot weather and tinder dry conditions every possible precaution should be considered to prevent and preclude your life's work from destruction in an orgy of fire.

Did you repair that thermostat yourself after the breakdown a few weeks ago? Better by far to call in a competent electrician to ensure that it is no fire hazard by permitting overheating. Did you replace that fuse wire with the correct loading the last time it blew? Have you an adequate supply of water ready at hand for immediate use and hoses connected to the supply as an emergency measure until fire fighting help can be summoned?

You have nightmares at the thought of a fire? Good. Better a nightmare which will prompt you into action than an inferno of a honey-house like the picture on this month's front cover. And make sure your Fire Cover with the insurance company is in line with today's replacement costs—just in case.

BOUGHTWOOD PRINTING HOUSE, North Shore