THE NEW ZEALAND BEEKEEPER

VOL. 7, No. 4 OCTOBER, 1945

OFFICIAL ORGAN of the
NATIONAL BEEKEEPERS' ASSOCIATION
OF NEW ZEALAND

(An Organisation for the advancement of the Beekeeping Industry in New Zealand)

Better Beekeeping | Better Marketing

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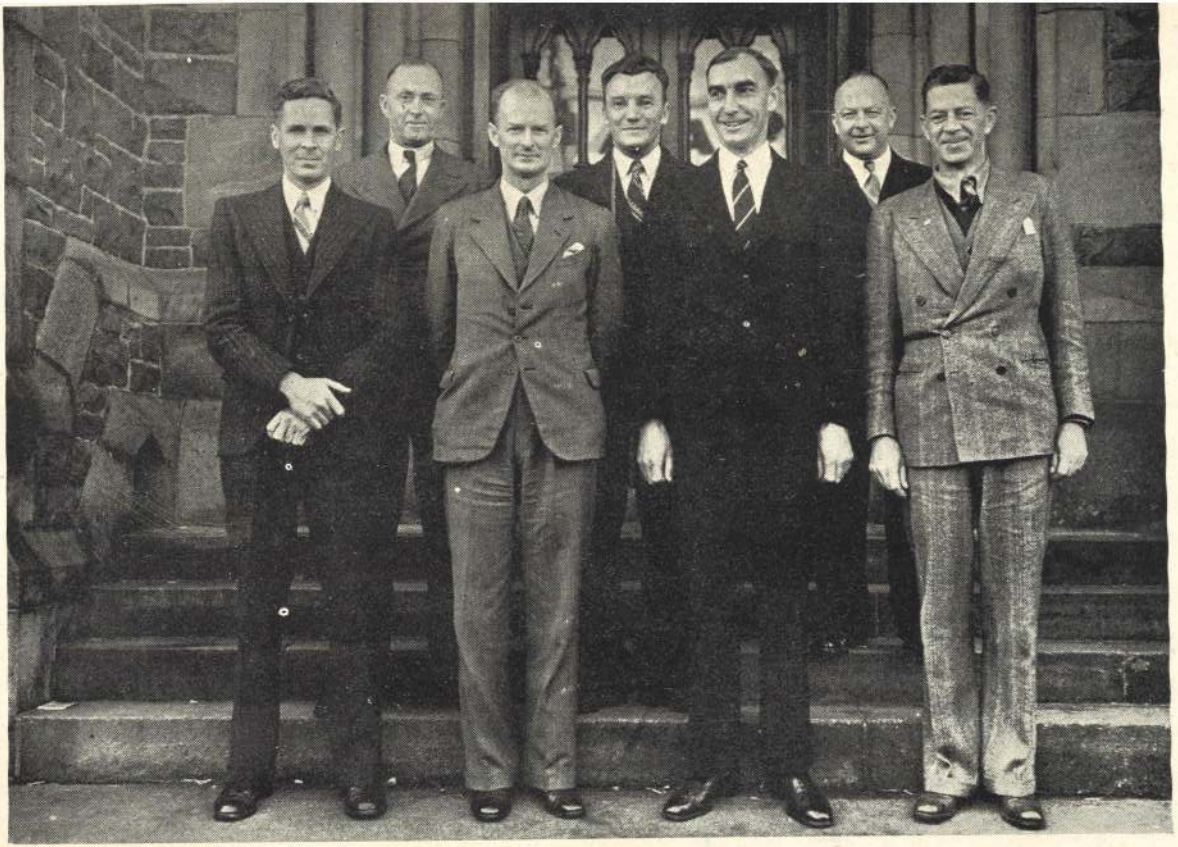

EXECUTIVE OF THE NATIONAL BEEKEEPERS' ASSOCIATION.
RE-ELECTED AT THE ANNUAL CONFERENCE IN CHRISTCHURCH, JULY, 1945.

Front Row (Left to Right)—J. McFadzien, Otago; W. J. Lennon, Otago (Vice-President and Editor); E. A. Field, Manawatu (President); E. D. Williams, Waikato.

The New Zealand BEEKEEPER

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EDITORIALS.

PROCRASTINATION IS THE THIEF OF TIME.

The Minister of Marketing has recently announced that the Honey Marketing Emergency Regulations will not be renewed. At the same time, the Minister has thanked the beekeeping industry for its support in providing honey for essential needs. The thanks of the Minister are greatly appreciated, as many producers supplied at some inconvenience and financial loss, in the face of defiance and corresponding financial gain by others. The Association has loyally supported the Government in its war effort. We believe the effort would have been more successful if our advice had been sought oftener and heeded when it was given. The period of Regulations has almost gone. No other decision could have been reached, because the war has ended and it is the wish of producers.

The Minister announces that the facilities of the Division are at the disposal of producers, on a voluntary basis. The Manager of the Honey Section appeals for support and issues some timely warnings of the dangers of an indiscriminate scramble for markets to the neglect of organised marketing. The Chairman of the Honey Control Board urges the maintenance of the Honey Section as an economic unit and admits that recommendations to this end, put forward before the war, no longer apply. To all of these sentiments we heartily agree. We have always urged the necessity of support to the Division and have offered practical suggestions for achieving it. The regrettable feature of the statements of the three Government representatives is the absence of a word on the all-important matter of the price to be paid the supplier for his product. There are other matters, equally important, on which decisions should have been given.

Eighteen months ago the Executive of the National presented a plan for meeting the change to conditions of peace. It provided for a reduction of the commandeer to approximately 30%; for the supply of approximately 1000 tons, or the equivalent of the commandeer, on a voluntary basis when peace came; for an increase in the price of bulk honey; for control of retail prices, and for the election of a producers' Marketing Council on the widest franchise. That the Government accepted the first two points of the plan is no indication that it appreciated the economic soundness of the plan; that partial acceptance was dictated by expediency, because of the force of circumstances. Unless the soundness of the plan is readily appreciated by the Government, it will risk securing that measure of support from the producers that is so essential to marketing stability. If the Government does not make its decisions on all the relevant issues known in reasonable time, it will fail in providing its full measure of co-operation that its responsibility entails.

The Executive has done all in its power to have the business of the producers conducted at the right time for decisions to be reported before the season commenced. This was the least that members can expect from their elected representatives. If there is any impatience that it is not possible for us to make full decisions known now, it is only fair that members should know that the fault lies with Government procrastination. There may be sufficient reason for delay but although we have delayed the publication of this issue to receive it, none has come to hand. Members

have a right to know why decisions are continually being left till the last moment or not made at all. A vast amount of conscientious effort is done voluntarily by all members of the Executive, as well as that of officers of branches, in order that the representations of members will receive proper attention. This is a large part of our contribution to co-operation so earnestly desired by the Government. On its part the Government should give proper attention at the right time to our affairs. Its officers are all paid and the producers have a right to expect better service.

The producers are in no mood to receive lists of their sins of omission as the only reason for the lack of co-operation. The producers could furnish a short but damning list of Governmental omissions that have contributed in no less degree to a lack of mutual confidence. Our desire is not to pick faults but to indicate that all virtue or all sin is not confined to one partner. The faults can be remedied. Some say that it is now "up to the producers." We say that, at the moment, it is "up to the Government." Failure by the Government to convince the producers of its ability to handle the situation will not result in the collapse of organised marketing. It will merely convince the producers that they will have to do the job themselves.

Our advice is to continue to support the marketing organisation as we have advised in the past. Continue your loyalty to the proved organisation that is persistently urging your case. United we prevail, divided we fail.

"By the faults of others, wise men correct their own."

THE WAR HAS ENDED.

Peace has been declared but peace has not yet come to our puzzled world. We may have won the war but we still have to win the peace. The Council of Foreign Ministers disbanded with more apparent difficulties than with which it began. If it is impossible to agree on the international plane, one wonders at the hopes of agreement within nations. Without agreement within our own groups, there will not be agreement in the nation and how much less between nations? "Man is born to trouble as the sparks fly upwards," is a saying we like to scoff at. Perhaps we take our goodness too much for granted. Goodness, or peace of mind, is not a common quantity born to every man. It is something achieved in spite of our badness. We will not presume to moralise for others, but an examination of the relationships in our own community of interests should give us cause for thought. Peace does not come by belabouring the importance of sectional interests, or of propagating truth as the virtue of a few: it is a matter of exercising goodwill and practising tolerance. The only dignity in life lies in our mastery of the things that belittle and divide. It is not enough to crush these in an enemy; we must defeat them within ourselves. The beekeeping community has the privilege of achieving unity as a family or of losing it like a remnant. We require to remember that we are a family. The ties that bind may appear to be slender, but strength is a matter more of unity than of size.

The Notice Board

The four issues of Volume 8 next year will appear on the months of February, May, August and November. In each case this is one month later than has been the practice heretofore. Will subscribers and members please note the change?

* * *

An invitation to the ladies. The Editor will be pleased to include a section for proved recipes which require the use of honey. Please send them in. Recipes for preserves and jams would be topical for next February.

ED.

N.Z. HONEY CONTROL BOARD

CHAIRMAN'S REPORT.

Beekeepers will have noticed the statement by the Minister to the effect that the wartime regulations will not be continued for another season as the need for them as a wartime measure no longer exists.

Whilst everyone will appreciate that necessity for such regulations as a wartime measure is now over, the whole question of organised marketing and the maintenance of the Honey Section of the I.M.D. as an economic unit now becomes an issue of paramount importance. Enough has been said on this subject for experienced beekeepers to appreciate the importance of the issues involved. The past experience of the industry, both in New Zealand and in other countries, has proved that the alternative to organised marketing is chaos and unpayable returns to the producers.

The question that confronts the industry is whether the Division can function satisfactorily on a basis of voluntary support from producers, or whether the Division will require some form of control over at least a portion of the production to ensure stabilised marketing and a fair price to the beekeeper. This matter was very fully dealt with by the industry some years ago, and before the war certain recommendations were made to the Government with the object of placing the Division in a position where it could have sufficient security of existence to enable it to provide the industry with that standard of service expected from it by suppliers. The wartime situation, however, intervened, and it is now apparent that the regulations originally favoured by the industry would not to acceptable to either the beekeepers or the Government in view of the altered conditions now prevailing. It is obvious from the expressed views of beekeepers at their meetings, that the industry feels vitally concerned in the future of the I.M.D., and it will not calmly allow the Division to either go out of existence or operate under conditions that virtually make it impossible to provide satisfactory service to the industry as a whole and to the supplier in particular.

The Board fully supports this attitude and will put forward its best efforts to see that the Division is maintained in existence as an efficient economic unit.

WALLACE NELSON, Chairman,
Honey Control Board.

DEPARTMENT OF AGRICULTURE
HORTICULTURE DIVISION

PART-TIME APIARY INSPECTION WORK.

An increase in the total amount available last year will be spent on part-time apiary inspection work this season. Seventy-four reliable beekeepers have been appointed to assist the Department's permanent Instructors, and work was begun in northern districts at the end of August.

APIARY REGISTRATION.

It is desired to remind beekeepers of their obligations in regard to the registration of their apiaries, and to point out that it is incumbent upon all beekeepers under the Apiary Registration Regulations, 1937, to furnish particulars to the Director of Horticulture of any increase or decrease made in the number of hives kept at each of their respective apiaries during December each year.

This information is not required before December unless in special circumstances such as removal of part apiary or sudden loss of stocks by floods, etc. Beekeepers will greatly assist the work of keeping the Apiary Register up to date if they attend to this matter promptly.

BEES AND ORCHARD SPRAYS.

The following short statement will enable beekeepers to understand and to discuss this subject with neighbouring orchardists to mutual advantage:

While most other species of pollinating insects are erratic in their visits, and usually make long flights from one type of flower to another, feeding only to satisfy their own appetites, the honey bee goes about her work in a systematic order, visiting the flowers of one kind of tree in rapid succession. This characteristic has tremendously popularised the use of bees in commercial orchards, as cross-pollination is essential in most fruits and desirable even with self-fertile varieties.

Though the service rendered to orchardists by bees is inestimable, complications arise with the necessity to control orchard pests, and orchardists who continue to spray with arsenate of lead when their trees are in full bloom threaten to poison the bee population in commercial orchard areas. Experiment work carried out by officers of the Department of Agriculture, in co-operation with leading orchardists, has shown conclusively that fully-efficient control of codling moth is obtained by the withholding of arsenate sprays until after petal fall.

Although the emergence of the codling moth coincides approximately with the latter part of the blossoming period, the early infection of moth is mainly through the calyx, which necessitates the application of an arsenate of lead spray before the calyx closes. The period of approximately 8 to 10 days between the falling of the petals and the closing of the calyx is long enough to enable a spray to be effectively applied against early infection by the moth. The grower can readily determine this period, and no benefit is obtained by applying sprays as a control of codling moth before the petal-fall stage, or when approximately 75 per cent. of the petals have fallen.

During full bloom bees have free access to the blossoms containing the flower parts essential for fertilisation. When those parts wither after having fulfilled their purpose and, with the falling of the petals and the end of nectar secretion, the attraction for bees ceases, spraying with arsenate of lead can be commenced in good time for effective control of codling moth, with the minimum of danger to bees.

Bees would be further safeguarded if all growth about the trees holding spray drops were turned in and plenty of fresh water made available in apiaries, so that bees would have no

necessity to take up poisoned dew drops resting on vegetation under trees to get the water need for brood-rearing.

BULLETINS.

Two free Bulletins, Nos. 242 and 247, "Bee Diseases" and "How and When to Establish a Domestic Apiary" respectively, are now ready for distribution as required. Beekeepers may obtain copies of these by making application to the Director of Horticulture or to the local Apiary Instructor.

W. K. DALLAS,

Director of the Horticulture Division.

QUEEN BEE DIVINER.

LOCATING THE QUEEN BEE.

The difficulty of quickly finding a queen bee on a comb in a thickly populated hive may give some trouble at times, especially when resentful bees are being handled. Some consider that a queen must always be seen when a hive is opened. Dark coloured queens are more difficult to locate quickly than those of a bright colour. A busy commercial man can not afford to spend much time looking through a hive to remove the queen if the job can be done by a quicker method. Mr. Gilbert A. R. Tomes of West Wickham, has invented a queen bee detector which has proved to be reliable. The detector may also be used to raise an alarm when a swarm is about to leave a hive. The device he uses is a small electrical instrument fitted with a loud speaker, which may be attached to a battery or a mains apparatus. The queen bee has a very small spot of sensitive material permanently attached to her thorax. When it is necessary to locate the queen a sensitised rod connected to the battery is passed over the top of the brood box containing the bees, or if required down between the combs. As the rod draws near to the queen, a crackling is heard on the loud speaker. The rod never touches the queen, but registers her exact position. To prevent the loss of swarms, the sensitised rod is placed along the entrance to the hive. As the queen is about to leave and approaches the entrance, contact is made with the rod and the alarm is given, at any distance from the hive by arrangement.

Demonstrations have been given to parties with the queen bee diviner, in which some of the visitors took part. Owing to the present unsettled state of prices for materials, a fixed sale price cannot be given at the present time.

—S. W. Gadge, England.

The late Dr. C. C. Miller said, "For best success get pure stock, keep tab on every pound of honey taken from each colony and breed from storers that are right in colour and temper."

—"Gleanings."

INTERNAL MARKETING DIVISION
(HONEY SECTION)

"It will not be necessary to continue the Honey Marketing Regulations next season"—this was announced recently by Mr. Roberts, the Minister of Marketing, and is in keeping with the promise which has always been given to the Industry during the period of the Emergency Regulations. Now, for the coming season we will revert to the pre-war system of voluntary supply, and we do so knowing full well that the majority of the beekeepers are desirous of the Honey Section operating as their marketing agent, also that many more producers, although they do not forward honey to the Department, admit that the Industry must have some form of an organised marketing pool to enable the local market to be regulated with supplies.

As most producers are aware, the months of February to April have always been difficult months as far as honey producers are concerned, because, even during poor seasons, these are the months when the bulk of the extracting is done, and in many cases a producer is anxious to turn his product into cash as soon as possible, with the result that a glut market for a short period is often the case. This is definitely against any orderly marketing system, and what is more, also against the producer obtaining a fair return. With the release of the regulations, some producers will be rushing around with their heads in the air, thinking that "all is gold that glitters," but we would point out that there is a danger from such short-sighted policy and from the experiences that many producers had after the last war.

It should not be necessary to reiterate the past again here, as you have already had that given to you at your last Conference in Mr. A. H. Honeyfield's address; but, it should be pointed out that while the market has not been over-supplied during the War, many producers have taken advantage of the public with some of their packs and many of these we have seen. The worst case that has come before us is the one where old brood combs were used for the sale of comb honey. Also, some of the so-called "clover' packs which were packed in cartons and therefore could not be seen by the public, were far from true to label. The public who received this type of pack will in the future, be a little doubtful, especially when other competing spreads which have been rationed during the War, are again on sale.

From the beekeeping journals of other countries, it has been very interesting to read the views and suggestions of various beekeepers. Australia and Canada of course, are both utilising a system of central pooling and distribution, but they are also both advocating a standardised pack, with a standardised quality. In the U.S.A., where it might be stated that the bulk of the sales have in the past been made by individual packers, it is rather surprising to read these beekeepers suggesting that to maintain the sales and prices which they have received during the War period, they should now concentrate on a standard pack and a standard brand, and using the pooling system for their sales. These views are very enlightening, especially when they come so many years after the use of this system by the New Zealand producers, and it only goes to show that if this system is followed by other countries, then New Zealand's position on the overseas markets will have to be watched very closely—particularly if we are to maintain our premium or a payable outlet on the English market.

In the Australian Beekeeper, dated 15th July, there is a report of the Victorian Apiarists' Association, 46th Annual Conference, and the President's address to this conference is one well worth reading by all producers. Evidently, the conditions existing in Victoria are similar to those being experienced by the local pro-

ducers, and the President in his report, has outlined a policy which he considers the producers should give their attention to—in fact, his suggestions if they had been read at a New Zealand conference would have been just as applicable. It must be admitted that to maintain any article for sale, there must be some stability and standard by which the public can buy on. With the voluntary system coming into operation next year, it will be necessary for producers if they wish their marketing organisation to stay in existence, to see that supplies are made available to the Honey Section, so that a standardised pack and quality can be marketed and thus retain the public support for a good quality foodstuff which they can buy with confidence. It is not suggested that all producer packers have taken advantage of the short supply of honey, but those few who have if allowed to continue will soon ruin the consumers' confidence.

It is also necessary for the overseas markets to be supplied and these are just as vital in years of short crops as in years of over-supply, because a continuity of supplies must be maintained year in and year out.

The Honey Section of the Marketing Department which is operated on a semi-co-operative basis, is basically and financially sound, and with proper support from the Honey Industry this section can continue to operate to the benefit of the Honey Industry, by stabilising local selling prices with its own packs and by providing a continuous export outlet of supplies over and above New Zealand requirements.

Producers are again reminded that supplies are on a voluntary basis and the success or failure of your marketing organisation is dependent on producers forwarding supplies. To operate successfully, the Honey Section must receive a minimum of 1,000 tons per annum.

F. STOUPE,
Manager, Honey Section.

APPLE PIE.

When sweetening the apples, use two tablespoonsful of honey instead of sugar. This amount is sufficient for five large apples.

CORRESPONDENCE.

Dear Sir,—With the end of the war and the return of the voluntary honey supply system to the I.M.D., many producers are asking themselves "what now"? Suppliers are feeling sore about the way compulsion was handled, the fixed price and the failure of all efforts for an increased payout. The Department has sold all these tons of honey and never once established, as far as I know, what was an economic price for one pound of it.

The I.M.D. handles the honey on an agency basis yet they hold substantial reserves. Reserves, one would say, an agent should not hold. These reserves have been created on honey supplied under compulsion at the bare cost of production, and we are all saying, "where do we go from here"? Personally, I think that all reserves created out of honey supplied under compulsion and honeys supplied as a patriotic effort under the voluntary system should be paid out to suppliers. I think that reserves created from seals, sold during the war, should be paid out to producers who supplied the I.M.D. during the war period.

How can these reserves be dealt with in any other way? The producers who failed to honour their obligations under the Regulations and who went on the local market, have had a handsome reward. Now if these reserves are kept as a future benefit in some form, then the producers who supplied under compulsion for so little monetary reward will again be supplying the wherewithal to increase the payout to some of the individuals who already have had their reward by direct selling and keeping their business connections.

The producers who have supplied their quotas have also contributed substantially to the seals' fund. Therefore the seals money collected during the war should be paid out to suppliers during that period. These reserves belong to the suppliers and should be paid out. So far as I can ascertain, all suppliers in this part of the country think that this is the proper course to pursue.

W. T. HERRON.
Waikaka.

Dear Sir,—In view of the fact that it is about six months since branches framed remits, and also because events are moving so rapidly, I am sending suggestions for future marketing (not an expedient like an extra ½d. when overdue), but something concrete and calculated to deal effectively with the economics of beekeeping or marketing or both.

It has been demonstrated time and again that the Central Store cannot be supported unless it gives a return approaching that obtainable by producers selling to retailers. In the Auckland province we consider that, if the I.M.D. payout came within one penny of the aforesaid return, most producers would prefer to supply most of their crops in preference to packing in retail containers. This result can easily be obtained in the near future if producers and particularly the Association will support a new step forward.

The fundamental weakness of the Central Store lies in the fact that it has the handicap of additional distribution charges, and this handicap can only be offset by means of a subsidy from both producers and the taxpayer. As the Government wishes to put Marketing on a stable basis, there can be no objection to using a small part of taxation to assist an industry. Our people are quite prepared to give the industry this protection to ensure supplies of honey at all times. In view of the fact that the difference between ordinary trading returns and the I.M.D. payout is responsible for the difficulty in maintaining supplies to the Central Store, the Association should approach the Minister of Marketing with a view to securing the services of the Auckland store and the staff of the Honey Section free of charge, and that any wasteful methods of distribution be eliminated.

ALEX MAWHINNEY.
Te Kawa.

Dear Sir,—Now that the regulations have been lifted, I wonder if you could spare me the space to put forward some suggestions that might help the Honey Section to approach the future with a more vigorous policy for obtaining supply.

(1) That the Honey Section pay a premium to all suppliers who will guarantee their whole output for the season, with an increased premium for a guarantee to cover several seasons. I have already put this forward at a Waikato meeting but it will bear repeating.

(2) Nominal shares might be issued to suppliers on a pro rata basis with their supply, entitling such suppliers to some share in the reserve fund if they gave up commercial beekeeping. These shares could be issued at the rate of one share for each 5cwt. of supply, and be "fully paid" at the end of say, five years.

(3) That shareholder-suppliers have the right to have a proportion of their supply packed for themselves, this to be in relation to their shares. Say 5cwt. of supply could be packed (at cost) for each complete parcel of four shares held. This service would be available only to shareholder-suppliers, and would help them meet outside competition.

(4) That shareholders be appointed agents for the Honey Section in their respective districts, and that such agents also be provided with stocks for private sale on a commission basis.

(5) That a committee of at least seven commercial beekeepers elected by suppliers to the Honey Section on the ward system, work in conjunction with the present management. I am of the opinion that the committee at present advocated is far too small to function in a really efficient manner.

(6) Last but by no means least I think that the National should urge the Farmers' Federation to press for a minimum price for all farm products. This might get rid of the bugbear of undercutting.

Yours faithfully,
Tuakau. E. A. CLAYTON.

BEEKEEPING IN AUSTRALIA

"The Australasian Beekeeper." Illustrated magazine, published monthly by Messrs. Pender Bros. Pty. Ltd. Subscription, 5/- per year, posted. Sample copy free on application to
The Editor, P.O. Box 20,
West Maitland, N.S.W., Australia

LITERATURE OF AUCKLAND CENTRAL BRANCH

We have pleasure in printing some of the literature issued by the Auckland Central Branch. It shows careful planning and the attempt to sustain the interest of members right through the year. Other branches might well learn something. Monthly meetings are not practicable in many country areas but where there are many beginners in a branch the best way to stimulate interest is by holding regular meetings.

Auckland are aiming for the 150 mark in membership this year. We wish them well. With good team work, Wellington passed their 150 mark last year. What Wellington can do, so can Auckland?—Ed.

AUCKLAND CENTRAL

DEAR FRIEND,

I have pleasure in enclosing herewith a programme for the year 1945-46, of our Meetings and Field Day.

The addresses will be given by experienced beekeepers and experts in bee culture.

As you know, there is much more in the production of honey than just keeping bees. There is the marvellous instinct of the honey bee to understand, and the skilled manipulation of the hive to learn.

We need then to be informed about the following:

(1) Bees and their habits
(2) Beekeeping equipment
(3) Manipulation of hives
(4) Producing brood
(5) Producing Queens
(6) Production of honey: (a) sections, (b) extracted
(7) Honey extracting equipment
(8) Honey house
(9) Marketing the crop
(10) Apiary sites
Etc.

The object of our branch is to offer beekeepers a supply of expert information supported by practical demonstrations and exhibits.

We intend that members shall enjoy the friendly personal and social contacts with other bee-keepers at our meetings, and I hope that you will accept the invitation of our President to become his guest at the next three of our meetings.

Yours faithfully,

E. J. PETRY, Hon. Secretary.

PROGRAMME 1945-46.

FRIDAY, JULY 27, 1945

1. ADDRESS—Seasonal Notes, The Hive
2. DISPLAY—Assembling a Frame
3. ADDRESS—The Marketing of Honey
4. ADDRESS—Highlights of Conference Decisions

FRIDAY, AUGUST 31, 1945
1. ADDRESS—Seasonal Notes, Prevention of Starvation
2. DISPLAY—Wiring Frame and Embedding Wax
3. ADDRESS—Diseases of Bees
4. ADDRESS—What is Swarming?

FRIDAY, SEPTEMBER 28, 1945
1. ADDRESS—Seasonal Notes, Swarm Cells
2. DISPLAY—Assembling Supers and Sections
3. DEBATE—Production and Marketing of Ti-tree Honey

FRIDAY, OCTOBER 26, 1945
1. ADDRESS—Seasonal Notes, Important Hive Manipulations
2. DISPLAY—Making Sola Wax Melter
3. ADDRESS—Queen Rearing and Increase

FRIDAY, NOVEMBER 30, 1945
1. ADDRESS—Seasonal Notes, Preparation for Flow
2. DISPLAY—Assembling Roof of Hive
3. ADDRESS—How your Honey is Graded; Practical Demonstration

FRIDAY, DECEMBER 21, 1945
1. ADDRESS—Seasonal Notes, Removal of Crop
2. DISPLAY—How to Uncap Honey
3. ADDRESS—Preparation for Marketing, Extracting, Packing and Granulation of Honey

FRIDAY, JANUARY 25, 1946
1. ADDRESS—Seasonal Notes, Precaution against Robbing
2. ADDRESS—Rendering of Wax and Cappings

FRIDAY, FEBRUARY 22, 1946
1. ADDRESS—Seasonal Notes, Wintering of Hives
2. DEBATE—Autumn versus Spring Queen Rearing

FIELD DAY

Members are reminded that a Field Day will again be held at Mr. Hillary's Apiary, Papakura. Full particulars at a later date.

FRIDAY, MARCH 29, 1946
1. ADDRESS—Seasonal Notes, Questions
2. ADDRESS—Profits from Apiary By-Products
3. LANTERN LECTURE

FRIDAY, APRIL 26, 1946
1. ADDRESS—Seasonal Notes, Stores and Autumn Feeding
2. HONEY SHOW
3. DEBATE—Honey Production with or without excluders

FRIDAY, MAY 31, 1946
ANNUAL MEETING
Presentation Balance Sheet
Election of Officers
Discussion of Remits

NATIONAL BEEKEEPERS' ASSOCIATION OF N.Z.

(An Organisation for the Advancement of the Beekeeping Industry of N.Z.)

AUCKLAND CENTRAL BRANCH

Dear Friend,

As President of the Auckland Central Branch of the National Beekeepers' Association of N.Z., I have great pleasure in inviting you to attend Three Meetings of our Branch as my Guest, without any obligation of becoming a member.

I hope that you will accept this invitation, and hear some of our typical programmes, as they will no doubt prove most interesting and helpful to you.

Yours sincerely,
F. CAMPBELL,
President.

Address:
1 Fitzroy Street,
Papatoetoe.

ASSOCIATION AFFAIRS

WHAKATANE BRANCH.

The monthly meeting of the Whakatane Branch of N.B.A. was held on August 28th. In the absence of Mr. I. B. Hubbard, Mr. McMahon took the chair.

We were privileged to have with us once again Mr. Paterson, Government Apiary Instructor, and after the usual business of the meeting had been dealt with, the meeting was handed over to Mr. Paterson, who dealt with a number of matters concerning the Apiarist. He spoke on the old method of Beekeeping versus the new. In the early days the conditions differed greatly from those in force to-day. Then, returns were judged by the number of swarms, whereas now, they are judged by the tons of honey produced. The aim of the modern beekeeper is to reduce swarming to a minimum. Since the introduction of standardised hives and the method of extraction by centrifugal force, beekeeping has made rapid strides.

Spring management was also dealt with, and Mr. Paterson stressed the importance of knowing just exactly what to look for when opening a hive at this time of the year, i.e., the presence of the queen and her condition, condition of brood, amount of stores, and any signs of disease. The ensuing crop of honey, he said, depended to a large extent on the spring management.

Also present was Mr. Tuck, a returned soldier, who gave his impressions of beekeeping in the various countries he had visited. Compared to Syria, Palestine, Greece, Egypt, N. Africa, Italy and England, N.Z. was a veritable beekeepers' paradise. The methods employed in this country, he said, were very much more up-to-date, and although he contacted apiarists wherever he went he was unable to learn anything new. He considered, in fact, that N.Z. "had it over" all the other places he had seen, and put this down mainly to the help that is given the beekeeper by the Government Instructors.

After a vote of thanks to the speakers and the answering of several questions, supper was served, and the meeting brought to a close.

D. C. PETTY.

NELSON.

Address by Apiary Instructor.

With the awakening of spring comes renewed interest in beekeeping, as evidenced by the large attendance at the monthly meeting of the Nelson Branch of the National Beekeepers' Association, held at the Waimea County Council Chambers.

Mr. Myers, Government Apiary Inspector, allowed himself to be bombarded with questions, and his answers proved instructive and enlightening to many of those present.

The possibility of introducing a successful substitute for natural pollen was discussed. It was stated that it had been proved that bees could not subsist on nectar alone as it did not provide a completely balanced diet and caused them to lose vitality. An instance was given where, owing to that cause, colonies dwindled in strength, causing serious loss and great anxiety to the owner. Any beekeeper who met with that difficulty should communicate with the apiary instructor for advice. During this time of the year heavy demands are made on the pollen stores for feeding young bees.

Mr. Myers later addressed the meeting with regard to regulations covering the sale and removal of bees and beekeeping appliances. It was pointed out that the regulations were not framed with the idea of imposing restrictions but for the protection of beekeepers and the industry against the possible spread of American "foul brood." It was therefore the duty of all beekeepers to help guard against that by notifying the Department of their intention of buying, selling or removing bees or appliances. The onus was on the seller of such goods.

The latter part of the evening was spent in the usual general discussion which gives members the opportunity of exchanging ideas and working methods.

This season's first field day was held at Mr. Greig's apiary, Richmond, where Mr. Myers carried out an inspection, at the same time showing numerous points of interest. After partaking of a delicious afternoon tea, provided by the ladies headed by Mrs. Greig, Snr., visits were made to Major McAllum's and Mr. Cross' apiaries. In spite of the somewhat uncertain weather the field day was a complete success.

R. WHITWELL.

HAWKES BAY BRANCH.

On August 17th members of the Hawkes Bay Branch met at "Sunnybank," Hastings, the home of Mr. and Mrs. Arch Lowe.

General discussion followed the report of the Annual Conference, which was given by the delegates Mrs. Mawhinney and Mr. G. F. R. Gordon.

After supper had been served by Mrs. Lowe and her daughter Mrs. Jackson Mr. D. S. Robinson, Apiary Instructor, on behalf of members of the Branch, asked the Branch Secretary, Mrs. Alexander Mawhinney, to accept a handsome wall mirror to mark the occasion of her recent wedding. Mrs. Mawhinney has been Secretary of the Hawkes Bay Branch for the past nine years. All present wished Mr. and Mrs. Mawhinney a happy and prosperous future.

GORE.

Branch meetings have been held in August and September.

Resolutions have been forwarded to the Executive as a result of discussions at these meetings. The suggestion is made that all remits on marketing should be dealt with during specified sessions. Members felt that as the Government policy was to be one of voluntary supply for the ensuing season, reserves built up during the period of commandeer should be paid out to those who had honoured their obligations in the war period.

J. GLASS.

CANTERBURY.

REPORT OF MEETING.

The Canterbury Branch held a meeting in Timaru on Saturday, September 15th, and there was an excellent attendance. The President, Mr. T. Penrose, was in the chair.

Delegates' Report of Conference were dealt with, together with other routine matters. A sub-committee was set up to consider the future marketing policy of the industry and asked to bring down suggestions for consideration at the next meeting.

Concern was expressed at the poor control exercised over the sale of D.D.T., and it was resolved to send a letter to the General Secretary asking him to remind the Minister of his promise to effect rigid control and so safeguard the beekeeping industry.

It was decided to hold a Field Day early in 1946, if petrol supplies were available.

J. FORSTER.

FAR NORTH BRANCH.

The monthly meeting was held on October 1st in the Kaitaia Library Room. The President, Mr. W. I. Haines, was in the chair, and welcomed three new members into the Association. The recent statement by the Minister that D.D.T. would not be approved for general orchard use until further investigations were made, was welcomed by members.

The Secretary reported that the Branch had now a roll of 22 members. It was agreed that special greetings should be conveyed to Mrs. Urwin, our first lady member, and to Mr. Tahi Tahi, the first Maori to become a member of the Branch.

Talks were given by the President, on swarm control, and by Mr. R. L. Davies, on nectar-producing flora. Both subjects were eagerly discussed by members. Arrangements were made for an out-of-doors meeting and demonstration during the visit to the district of the Auckland Apiary Instructor, Mr. Walsh.

J. GRAHAM.

P.S.—Far North members extend their sympathy to poor old "Skep." Hard lines having to wear his "woollies" day and night. We have been quite comfortable in "scanties" for the past month or so. How about coming North, Skep?

WORK OF THE EXECUTIVE.

Some replies received by the General Secretary, Mr. Fraser, to representations on Conference resolutions.

Dear Sir,

I have to acknowledge your letter of 6th August with reference to the Resolution hat was passed at the last meeting of the Dominion Conference of Beekeepers held in Christchurch.

It has now been decided to revoke the existing Paint Control Notice (excluding lacquers and thinners), and synthetic enamels will now be available on the open market, and you will be able to obtain your requirements without a permit.

Yours faithfully,
D. G. SULLIVAN,
Minister of Supply.

Dear Sir,

Your letter of the 28th ultimo addressed to the Hon. Minister of Agriculture in regard to the importation of queen bees has been referred to this office for attention.

It is noted that a number of beekeepers consider it desirable to introduce fresh stocks of Italian bees into New Zealand from time to time for the purpose of preventing deterioration of stocks in this country.

While our present stocks of Italian bees were bred from imported queens, it has taken many years of selection and breeding in New Zealand from various imported strains to obtain the present standard of quality kept in many apiaries, and some beekeepers are now of the opinion that it may be best to concentrate on those strains bred in this country to suit New Zealand climatic and beekeeping conditions generally, than to import fresh stocks bred to suit overseas conditions. Whether our present stocks of Italian bees can be kept pure and gradually established throughout the country is another matter, and the whole subject will be examined from all angles in the best interests of the beekeeping industry as a whole.

Yours faithfully,
W. K. DALLAS,
Director of the Horticulture Division.

Dear Sir,

I am in receipt of your letter of the 6th ultimo conveying copies of resolutions passed at the recent Conference of your Association held at Christchurch, and note that suitable representations have been made by you to the Hon. Minister of Agriculture and Internal Affairs respectively.

With regard to the resolution (No. 2) concerning orchardists and loss of bees from spray poisoning, a suitable short article has now been prepared on this subject for publication at the appropriate time, and officers of this Department will continue to stress to orchardists the necessity for judicious spraying of their fruit trees at times least likely to cause mortality among honey bees.

Thanking you for your letter.

Yours faithfull,
W. K. DALLAS,
Director of the Horticulture Division.

Dear Sir,

I am in receipt of your letter of the 4th inst. for which I thank you. It is gratifying to know that Beekeepers appreciated the action of Fruitgrowers in co-operating in the matter of spray poisoning of bees.

I shall read your letter to our next general meeting which will be held at an appropriate time to again bring this matter before Fruitgrowers.

I sincerely hope Beekeepers will have no cause for complaint in the future.

Yours faithfully,
A. D. MASTERS, Secretary,
Hawkes Bay Fruitgrowers' Association.

CIRCULAR TO BRANCHES.

On the 31st of August the General Secretary forwarded a circular to Branch Secretaries. We wish to remind members of some of the matters mentioned.

A conference report, abridged but reporting the main business and discussions, is available to branches at 5/- per copy. Headquarters funds are not sufficient to issue it free, but we recommend branches to obtain a copy for information and reference.

Secretaries are reminded of the request of the Executive to forward a copy of the balance sheet for their branch for last financial year. This is in accordance with Clause 15 of the Constitution. Some branches require certain assistance and the Executive can only decide on the best measures when this information is available.

FARMERS' FEDERATION.

The Executive will make a report on this matter when consultations which are proceeding with the representatives of other interested primary producing organisations, and with the headquarters of the Farmers' Federation have been concluded and considered. Divergent viewpoints are being expounded in different places and members are reminded that the organisation of this Federation is purely provisional. A great deal of organisational work still requires to be done and aims and methods are still subject to considerable change.

CONFERENCE DECISIONS.

The President has gone to Wellington to arrange for finality on outstanding matters. A meeting will be

called and an announcement made to producers at the earliest possible date.

REHABILITATION.

A number of inquiries are being received from returned servicemen who desire to be trained with established beekeepers. Any beekeepers who are able to train men will be doing a service by advising the Executive or the Rehabilitation Board. If members know of any beekeeping business being offered for sale, please advise as early as possible, in order that steps may be taken to inform servicemen.

A NEW BEEKEEPING ASSOCIATION.

BEEKEEPING IN A PRISONER OF WAR CAMP.

In an interview with Mr. J. I. Jay, who has just returned to N.Z., we learned some interesting things of life in one of the stalags in Germany, where beekeeping was one of the occupations. After being taken prisoner in Greece, Sgt. Jay was moved to Germany in the infamous cattle trucks.

During the last two and a-half years, Sgt. Jay was in Stalag 383, in Southern Germany. Under the Geneva Convention prisoners of the rank of Sgt. could not be compelled to work. There were, therefore, more opportunities to undergo studies and to develop recreations. In this camp, the farming class was particularly strong, but practically any language or profession could be studied. The beekeeping class began with about a dozen, under a Scotsman who proved to be an excellent instructor. Books were secured through the Red Cross, which later secured frames, foundation and other supplies for the class. After a short time, the prisoners were able to purchase from a neighbouring civilian, a hive of bees in the latest type of Zanda brood box (German standard). These cost about 50 cigarettes and 10 bars of soap; these articles being standard means of exchange in a P.O.W. camp. Later a swarm was collected and added to the stocks. Mr. Jay said that their hopes of a bumper crop were not realised, in spite of the fact that the bees were fed on some of the sugar from the precious Red Cross parcels. While the district was not a good honey producing area in any case, the general opinion was that the bees did not have much chance to gather honey because of the frequent interruptions to their work when enthusiastic P.O.W.'s would insist on opening the hives to see how things were going.

"The Captive Drones Beekeepers' Association" was formed and affiliated to The British Beekeepers' Association, which sent examination papers for the Junior and Craftsman's Certificates. Some of the boys sat these examinations and were successful in passing. One of the many interesting things recounted by Mr. Jay was a description of patent kettles, made from scrap, and designed to heat a certain amount of water with a minimum of fuel. A really successful one, with a blower attached, could boil a cupful of water from an empty cigarette packet!

In order to prepare herself to become a beekeeper's wife, Mrs. Jay became the owner of a hive in "windy" Wellington, and joined the Wellington Branch of the N.B.A.

Mr. Jay hopes to gain further experience with a commercial producer before embarking on commercial production. We thank him for this account and wish him a happy settlement.

L. E. Snelgrove, Bleadon, England, author of the book "Swarming—Its Control and Prevention," points out the fallacy of the notion that destroying queen cells once every seven days will prevent swarming. If bees select a young larva that has just hatched from an egg the resulting queen cell will be capped five days later, and, as Mr. Snelgrove says, the "every-seventh-day" beekeeper will lose his swarm. Therefore, destroying cells every five days would seem to be necessary to stop swarming. In some instances swarms will issue before queen cells are sealed over which shows that destroying queen cells is not an infallible measure for swarm prevention.

PERSONAL.

OBITUARY.

Beekeepers will learn with regret of the passing of two stalwarts in the industry.

Mr. R. J. H. Nicholas died at Hawera on July 21st. Mr. Nicholas was one of New Zealand's pioneer beekeepers. He had been a member of the local Association since 1909 and from 1924 to 1928 acted as secretary.

He was one of the original directors of the H/P.A. and with his brother, Mr. H. B. Nicholas, was one of the first beekeepers to make a really good foundation comb.

Mr. J. R. Nicholas is the present Branch Secretary, and to him and other members of the family we extend our sympathy.

* * * *

Mr. W. H. Ashcroft, of Havelock North, recently passed away at his home.

For several years, since 1928, Mr. Ashcroft was President and, until the year before his death, was on the executive of the Hawkes Bay Branch.

Although not a commercial beekeeper, Mr. Ashcroft was keenly interested in all phases of beekeeping. His son, Mr. W. J. C. Ashcroft, runs an extensive beekeeping business from Havelock North.

We extend to Mrs. Ashcroft and the members of the family our sincere sympathy.

MARRIAGE.

We are pleased to report the marriage of Miss D. M. Dalgliesh, of Hastings, to Mr. A. Mawhinney, of Te Kawa. Both are beekeeping enthusiasts. Miss Dalgliesh was for several years the capable secretary of the H.B. Branch. Mr. Mawhinney is a member of the South Auckland Branch. We understand that their home is to be at Te Kawa. (An aftermath of Conference. We shall have to ask our President, Mr. Field, to keep a tighter rein on members next year.)

BIRTH.

To Mr. and Mrs. W. J. Lennon, of Omakau, a daughter, Sally, on 28th June. (If the Journal is late, blame Sally.—Ed.)

A RADIO TALK.

THE HONEY BEE AS A POLLINATOR.

By Mr. I. Forster, Apiary Instructor, Invercargill.

Pollination means a transfer of the pollen from the male parts of the flower to the female. Sometimes the male part is on one plant and the female part on another plant of the same species, but more often both the male and the female parts are in the same flower. In a few cases the pollen of the same tree or plant can fertilize its own flowers. But in the great majority of cases the pollen must come from another tree or plant of the same kind before fertilization can take place.

Though wind and rain may in some cases achieve a little in the way of pollination it is generally agreed that insects are mainly responsible for this work. And, indeed, in all cases where experiments have been conducted by covering blossoms so as to exclude all insect life, such blossoms have in all cases almost totally failed to set seeds or fruit.

Although many species of insects besides bees are found in orchards, gardens and fields, and no doubt achieve a small amount of pollination, owing to their solitary habits of existence, they are unreliable and usually present only in small numbers, and it can, therefore, be accepted that the bulk of the work of plant fertilization is performed by honey bees and bumble bees.

In the past much credit has been given to bumble bees for pollination work, especially the pollination of red clover, and no doubt they have rendered valuable service in this field, but too much dependence cannot be placed on them in any locality from year to year, for the queen bumble bee has to start off by herself in the spring and though a small colony is formed by the summer it dies out in the autumn, and for its perpetuation of the species depend on the young queens raised in the autumn, which mate and hibernate for the winter and start new communities the following spring. It can easily be seen that these insects are vulnerable to severe winter conditions and the depredations of other insects, animals and birds, and because of this and the destruction of their natural cover they appear to be on the decrease, and less pollination service can be expected from this quarter in future years.

The honey bee then, living as it does in colonies throughout the entire year, housed, maintained and cared for by man, is the only insect which can possibly cope with the task of pollinating the large areas of pastures, seed crops and orchards, so essential if full benefit is to be obtained from our modern, intensive methods of cultivation.

For while the crops are dependant on the bees, the bees in turn are dependant on the honey and pollen gathered from those crops, and are always ready to visit the flowers whenever weather conditions will allow flight.

So with the wild insects on the decrease and the area of crops requiring pollinization on the increase, more and more reliance will be placed on the honey bee to provide the fertilization service which is so necessary if maximum returns are to be secured from fruit and seed crops and full benefit to be obtained from the process of natural reseeding.

Except by practical results, it is difficult to prove the amount of pollination achieved by any particular insect as to make trials of this sort. It is necessary to erect some sort of screen so as to exclude all other pollinating agents, which necessitates the confining of the insects under test, and this loss of freedom usually disorganises them to such an extent that a true sum up of their work under natural conditions is not possible.

However, despite this difficulty, the results of experiments carried out in Pennsylvania recently to check the value of the honey bee as a pollinator of red clover are interesting. Cages of galvanised window screen were placed over small areas of red clover about 3 feet by 4 feet. Insects were completely excluded from some cages, while others had colonies of bees confined in them. These colonies were supplied with water since they could not leave to gather it from the usual sources, and were kept in good strength by feeding pollen cakes and sugar syrup. Unfortunately, most of the bees kept wearing themselves out against the screen by trying to escape, while others gave up hope and clustered on the wire, but one to four bees were observed working the clover on each examination.

Seed counts were taken from clover heads out of each of the cages. The counts from heads of clover in the cages without bees and with all other insects excluded showed a set of less than one seed per head. In the cages where the bees were confined the number of seeds per head amounted to fixty-six, while counts in the open, where no interference was made in natural pollinating conditions, showed an average of thirty-seven seeds per head.

That was, with no insects, less than one seed per head; with bees confined, fifty-six seeds per head; and under natural conditions, thirty-seven seeds per head, which gave approximately 50% more seed where bees were confined than under natural conditions.

These figures then prove that insects are essential for the pollination of red clover and that honey bees will effectively pollinate this crop and that the set of seed is increased as the activity of the bees is increased.

All the credit for the set of seeds in the open could not, of course, be given the honey bee, since other insects such as bumble bees and butterflies were observed visiting the clover blossoms.

Field observations were also taken and showed that the activities of the honey bees varied considerably for different hours of days and this may be the reason why we at times see very few bees on the red clover paddocks, and conclude they are doing little

of the fertilization work, while, if we looked a few hours later, they may be found to be present in large numbers.

The amount of work accomplished by each bee as it worked the blossoms was also observed, and in order to learn more about the bees' ability in this respect the number of flowers visited per minute were noted and a count made of the number of florets worked in that length of time.

Now field bees perform several different types of work. There are nectar gatherers, pollen gatherers, water gatherers, and propolis gatherers, but, of course, we are only interested in the first two classes in this study of pollination.

When the count of the number of florets visited per minute was taken it showed that nectar gatherers visited thirty to forty florets a minute, while pollen gatherers visited about three times that number in the same time, and as in order to collect pollen they must spring the keels of the flowers and thus effect cross pollination. The amount of fertilization achieved by bees engaged in this class of field duties must be considerable.

Also, when it is realised that blossoms only secrete nectar during certain favourable climatic conditions, and therefore are only visited by nectar seeking insects during those periods, which are often of only brief duration, the value of the pollen seeker becomes more apparent, especially during broken weather.

And here again the honey bee and the bumble bee are the only two pollen gathering insects we have, and while the bumble bee only needs small amounts of pollen to keep its tiny community going during the summer, the honey bee requires large quantities for the feeding of its brood and because of the more or less permanent nature of the honey bee, colony surplus supplies can be stored, and, therefore, pollen is sought assiduously by the bees throughout the entire year, and a continuous pollination service is thereby provided.

New Zealand farmers have long been aware of the value of the bees' services to them and as long as bees were in the district have been able to rest content in the knowledge that their crops and pastures would be fertilised and generally speaking all flowers within flying range of an apiary receive an adequate service of this kind.

Many growers of clover seed and fruit crops, where the success of the yield entirely depends on an ample coverage by the bees during the relative short period that these crops are in bloom, have been prepared to go to considerable trouble and expense to ensure that this necessary concentration of bees was possible, by having them placed as near as possible to the areas where their services were required.

In the clover seed areas some glaring examples of the vastly increased yield from fields adjacent to bee hives, as compared with the yield from those further away, especially when inclement weather had restricted insect flight, has resulted in such a demand in some localities for colonies to be placed right on the seed paddocks that some apiarists are kept busy supplying this service.

At first when farmers began to contract with beekeepers to supply bees for clover pollination it was difficult to determine the number of bees required for a particular acreage. After many trials and much checking of results, it was found that an actual count of the number of bees working the clover was the best guide, and the conclusion was reached that a concentration of five or six bees per square yard gave good results, and to achieve this concentration it was necessary to place about **two full colonies on each three acres of clover.**

Because of the great value of honey as a health giving food it is hoped that an ample bee population will always be maintained in New Zealand, and we will never have an opportunity of observing the disastrous results to our agriculture and horticulture which a dearth of pollinating insects would surely have.

Germany, because she neglected to maintain her honey industry during the Great War, found her agriculture so handicapped for the lack of pollinating agents during the reconstruction period, that it was found necessary to heavily subsidise beekeeping in order to increase the bee population and restore the balance of nature.

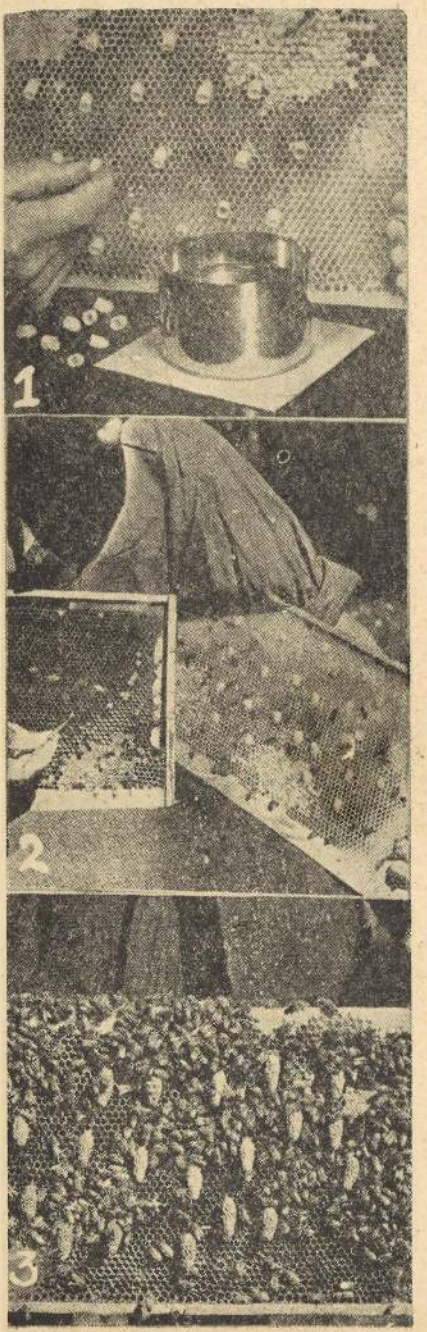
Russia, about the same period, came to the conclusion that something was radically wrong, as she was unable to secure sufficiently productive crops, and had the position investigated by experts and their findings resulted in a national scheme being instituted for the establishment of two million hives of bees, and Russia ever since has looked upon her apiaries as a vital part of her agriculture, and packs colonies into seed paddocks, gardens and orchards in large numbers, so that adequate pollination is assured, and considers honey production a secondary consideration to the work of plant fertilisation. The Russian experts are now working on a plan to guide bees to any particular species of plant, which they require fertilised, by feeding the hives on syrup infused with the flavour and aroma of that particular flower.

In America, where bees can be bought in packages by the pound, we hear that some farmers and orchardists who have difficulty in getting hives placed on their crops, buy sufficient package bees for their pollination requirements each spring, and destroy them or give them away when their crops have been fertilised.

In every country where the part of bees in agriculture and horticulture has been studied, it has been established that the value of the honey produced is only a fraction of the value of the pollination service performed.

And so, apart from the romantic side of the flower attracting the bee by gay colours and sweet scents to perform the work so vital for the perpetuation of plant life, and paying for that service with the nectar and pollen so necessary for the survival of the bee, we can see the practical side which demands that a healthy bee population must be maintained in any country whose fields, gardens and orchards are to remain in a state of fruitfulness.

Good-night everybody.



NEW METHOD OF REARING QUEEN BEES.

To effect a high average production of surplus honey it is sound practice to requeen annually with young queens, but if this is not possible it should be done every second season.

While some beekeepers prefer to induce the bees to raise queens under natural conditions, others, especially those requiring large numbers of queens, employ what may be described as artificial methods. Whichever method is used, one should always endeavour to keep as close to nature as possible. Best results in queen rearing are to be obtained during the period of a natural nectar flow.

Mr. C. A. Greig, Richmond, Nelson, has developed an entirely new method which appears to be closer to natural conditions than any other artificial methods. This method calls for the use of artificial cell cups, which are made in the usual way by dipping the rounded point of a smooth stick, just the size of the base of a natural queen cell, first into cold water and then into hot wax to a depth of approximately ⅜in. This process is repeated two or three times, taking care not to immerse the stick quite as deeply on each successive dip after the first, which will result in a very thin edge and heavy base to the wax cell cup. The wax should be kept just hot enough to keep the surface liquid.

The wax cell cups are then secured in position by dipping their bases in hot wax and placing them on the sides of a suitable comb (see Fig. 1). The most suitable comb for the purpose is one containing an abundance of fresh pollen and nectar. As some colonies are much better at cell building and caring for the young queens in their larval stage than others, it is very important to select a suitable hive, which should be one of at least two storeys well filled with a strong force of young worker bees.

The queen, together with one or two combs of brood and adhering bees and also two additional combs, one containing honey and one empty, may be placed in a nucleus hive for safe keeping until the queen cells have been raised, after which the nucleus

including the queen is reintroduced to the original hive. All other unsealed brood in the hive should be removed and placed on another hive in the apiary, thereby releasing a greater number of nurse bees to attend to the batch of young larvae to be given to them.

A space is left in the centre of the upper super in the prepared hive ready to receive a comb of grafted cell cups. On each side of this space are placed combs containing fresh pollen and nectar. The hive is then left for an hour or so, during which time the absence of the queen becomes fully apparent to the bees, thus creating in them a keen desire to raise queen cells.

Newly-hatched larvae 12 to 24 hours old from a selected breeding queen are transferred by the usual method, one into each of the artificial cell cups fixed direct on to the comb as illustrated (Fig. 2). A crochet needle with the hook removed and the tip slightly flattened makes an ideal transferring needle. This operation is best performed in a warm room to avoid chilling the larvae. On the other hand, care should be taken to avoid the direct rays of the sun. In approximately 10 days the cells are ready for introducing to nuclei hives.

Fig. 3 shows a fine batch of cells raised by this plan. Up to 85 good cells have been raised at a time on two combs in a single hive by this method.

—A. J. MYERS, Apiary Instructor, Greymouth.

(From N.Z. Journal of Agriculture.)

BOOK REVIEW.

AN EXAMINATION OF HONEY MARKETING PROBLEMS.

By W. B. Bray. Price 6d.

Mr. Bray begins in 1839 when bees were first introduced to N.Z. from England. He shows the first steps that led up to the formation of the Honey Producers' Association, and the export of honey to England. He narrates the later stages of the formation of N.Z. Honey Ltd. and leads up to the problems of to-day.

We think the real value of the book lies in the early part where Mr. Bray relates the history of the attempts to organise orderly marketing. Many readers to-day know it by hearsay. Mr. Bray lived through the period and the story has the freshness of one with a good memory.

HOW TO TELL IF A COLONY IS QUEENLESS.

Question: I have one colony in which I am unable to find a queen, eggs, larvae, or brood of any kind. The colony does not act queenless. How can I tell for sure whether or not it is queenless?—John L. Luft, Pennsylvania.

Answer: It is just possible your colony has a virgin queen about ready to lay. A virgin is sometimes difficult to find. When a virgin queen is getting ready to begin laying you will find the cells in the centre of the brood chamber polished and ready for eggs. To determine whether or not a colony is queenless, you should take a comb with eggs and larvae from a queen-right colony, shake the bees off in front of, or in the colony from which comb is taken, then place the comb in the centre of the brood chamber of the questionable colony. If queen cells are started the colony is queenless. If no queen cells appear the colony has either a laying queen or a virgin queen.

—"Gleanings."

NOTES FOR BEGINNERS.

By Skep.

You will already have noticed that some hives have wintered better than others. It is a good idea to check up on the reasons for this difference, and having checked up, to note the pros and cons, so that mistakes of this year's wintering will not be repeated next year. Whether you are keeping bees in Wellington or in Timbuctoo, the fundamental rules for good beekeeping are the same. Skep can tell you now that the hives which wintered well were those which had a good queen, good stores in the right place, and sufficient young bees—all three conditions provided for in the Autumn. Read, mark, learn and inwardly digest these three points for next Autumn. In fact they are so important to the whole work of the year that they can bear some further explanation.

A good queen is good not merely because of her youth, but chiefly because of her breeding. Some young queens are not worth a tin of fish, as the saying goes, because of poor breeding. The stock from which they are bred must be good. Their mother and grandmother must have been good honey-gatherers and non-swarmers, with several other minor characteristics that are good as well. Then provided they are brought up according to the accepted Plunket rules, they should be good queens. One of the other minor good points mentioned is the characteristic to supersede or requeen without swarming. Actually, more of this happens than many beekeepers realise. Some authorities are beginning to suggest that the characteristic should be considered a major one, and in all humility Skep thinks the same. Under the supersedure impulse—usually in the Spring or in the Autumn—the whole hive devotes itself to the rearing of about three cells, one of which will become the queen in the hive. Provided the stock is good, Skep will need a lot of convincing that the bees in their own way will not make a better job than the beekeeper with his every modern (in)convenience in re-queening. This is mentioned here because some beginners get pannicked and break down perfectly good cells in the belief that the hive is going to swarm. It is necessary to recognise this condition in the hive as distinct from the swarming condition, when a dozen or twenty cells are raised.

Good stores means sealed honey and pollen above the cluster. Try to work your hives so that the top brood nest becomes the food chamber at the end of the season, full of honey. The pollen will be placed where the bees need it, sealed over with honey. If you think you know more than the bees, then leave nice white combs without pollen and look for wintering troubles next year.

Sufficient young bees, on the average, means a good box of young bees bred in the Autumn. If there is only half a box of young bees, then it is not wise to winter them in a double brood chamber, but to thansfer them to a nucleus—two solid frames of honey and one frame of brood and one of pollen. Such a nucleus should winter anywhere in N.Z. and need no attention till early willow flow, but a quick quiet look earlier might do no harm.

These points have been mentioned so that you will bear them in mind during the season, and some of them have a bearing on later remarks to be made.

SWARMING.

At this stage we will bring up one question that has been asked.

Can Skep suggest a sure method of preventing swarming?

Sure, we can, but the remedy is worse than the ailment as the accompanying illustration suggests. You can try it if you wish and report progress. Only don't say that Skep really recommended it.

Actually, there is no sure method but swarming need not be the nightmare if beekeeping is well done. Various expedients are suggested, such as, switching of the top and bottom brood nests, using sheets of foundation in the brood nest, cutting out queen cells, and giving extra room well ahead of the time needed. In some districts special measures need

to be taken because swarming can be a problem, even with the best-bred bees. Such measures as Spring requeening and the Demaree method of swarm control have their place then.

Skep wishes to repeat again that the best measure is to have good queens, and this condition is not attained overnight. It is, however, an aim worth striving for, and this Spring is as good a time to start as any. More will be said on this matter at the beginning of the year, because the Autumn is also a good time.

"Oh, it'll stop 'em from swarming all right."
—From "*Gleanings.*"

BUILDING UP COLONIES FOR THE HONEY FLOW.

EXTRACTED HONEY.

All work between willow and clover flows is directed to getting the hives strong for the main clover flow. Usually two months elapse between the willow flow and the commencement of the main flow. During this period, at least three inspections of the hives should be made. The first, just about the middle or end of the willow flow, should be made to determine how well the queen is laying, that the stores are adequate, and whether any disease is present.

On this first inspection a thorough overhaul of the hive should be made. After breaking down the hive, make sure the bottom board is well up off the ground and that no mice have entered. A good queen will be laying on four or five combs with the brood solidly packed. There will be odd drone cells and some drones hatched. If you see much drone brood, especially between top and bottom bars or in between frames in a wide space, suspect the queen as a failing one. Her brood in this case will not be solidly packed. If you see her, you will likely find her somewhat smaller than most queens, a wing may be hanging a bit sideways, her wings will likely be frayed at the ends, and a foot may be missing. When you look at the eggs newly laid, you may see two to a cell, or one laying on the side of odd cells, and no eggs in odd cells. She has done her best work and should be replaced. If you have a nucleus handy, kill the old queen and unite the nucleus with paper. Otherwise mark her for replacement on the next visit. The good beekeeper judges a queen by the brood rather than by her appearance. Queens are like women. Some are easier to look at than others, but you can only judge them by their good work.

Stores will appear to be ample at this time, especially if the willow flow has been good, but do not easily be deceived. This new honey and pollen will boost the laying of the queen and inroads on the stores will be increasingly heavy.

At the same time as you examine the laying of the queen watch for foul brood. If you find it, close the hive, gather up your gear, and quietly steal away like the Arab. Report to the Apiary Instructor for advice.

In another three weeks repeat your inspection and this time—provided there is no disease—you can take a comb or two of brood from the strongest hives and give a frame to the weaker. Check carefully again on the laying of the queen. If you find one again not up to standard take steps to replace her. The careful examination of queens in these early stages will save most of the swarming trouble later. This is the critical period for stores—and in some districts for pollen as well. If stores are allowed to become short now your hive will have only half the bee population for the honey flow and you might be lucky to get half a crop.

The next visit to your hives will come just a week or so before the honey flow. Do all that was advised for the previous visit, with more equalising for strength, asd if special swarm prevention measures are required, they will need to be done now.

BUILDING COLONIES FOR A COMB HONEY FLOW.

The procedure is practically the same right up to the time of the flow. The idea is to have a good queen laying to capacity with a strong force of bees ready for work. If a queen requires to be replaced, a laying queen must be introduced so that there is no break in the amount of brood being reared.

Just when the flow starts the two brood supers are reduced to one and the queen then has only one super in which to lay. Two section supers are added over the excluder. When these are almost filled, a third section super is placed immediately over the excluder, and the other two replaced above to have the sections capped over. As each super is finished, it is removed and a new one replaced over the excluder, until the flow begins to taper off.

Read up what the A.B.C. and X.Y.Z. says on section honey for full information.

When working the hives remember a few "don'ts."

Do not open the hives more often than is necessary. If you want to be curious, keep one hive on which to vent your curiosity.

Do not shake a queen from a comb. Remember that she is a highly specialised piece of egg-laying mechanism that is very easily damaged. Let her crawl on to another comp, or shift her gently, if you wish to shake the comb.

Q. Could Skep give some idea of the usefulness in N.Z. of (Acacia Baileyana) Cootamundra Wattle, as a pollen supply in the early spring?

Cootamundra wattle (Acacia Baileyana) is a rapid-growing shrub or small tree, attains a height of about 15 feet, and usually blooms the third or fourth year after planting. It is planted in many places throughout New Zealand for ornamental purposes, blooms in July and early August, and

can be strongly recommended for an early supply of pollen for an apiary.

Q. Does he know of any place in N.Z. where Yellow Box (E. Melliodora) has been tried successfully as a nectar producer?

Yellow box (Eucalyptus melliodora) is widely distributed over Victoria, Australia, but is rarely found where the average annual rainfall is over 30 or under 15 inches, and rarely ascends to high elevations. It blossoms every second year, usually from November till February, and yields nectar heavily. The honey produced from it is a pale straw colour, very dense, has a strong pronounced flavour, and remains liquid almost indefinitely when free from other honey. So far as I am aware yellow box has not been grown in New Zealand for nectar supplies.

Another reader inquires—Are experiments to hand to prove bees deaf?

It is usually believed that bees can hear, and the general belief of a sense of hearing is based on the fact that bees make noises which are interpreted as purposeful.

R. E. Snodgrass, U.S. Bureau of Entomology, however, has the following to say on the subject—

"There is no direct evidence as to the function of the chordaronal organs in any insect, but as their name implies, they have been regarded as organs for perceiving sound. Where they are attached to membranes free to vibrate, as in the tympanal organs of the front legs of crickets, or of the abdomen of grasshoppers, or where they are held taut in the body cavity of suspensory ligaments, as in many insect larvae, they might reasonably be supposed to have an auditory function. But where they are attached solidly to the body wall, as in the leg of the bee, they do suggest the possibilities of vibration necessary in an organ designed to receive sound waves. From an anatomical standpoint, then, it would seem that bees must be deaf. Yet they make sounds other than buzzing of the wings such as that known as the 'piping' of the queen, and the high-pitched sound emitted by workers even when the wings are removed."

The Rt. Hon. Lord Avebury, P.C., F.R.S., D.C.L., L.L.D., in a record of his observations on the habits of the social hymenoptera, writes on the sense of hearing of bees as follows:

"The result of my experiments on the hearing of bees surprised me. It is generally considered that to a certain extent the emotions of bees are expressed by the sounds they make, which seems to imply that they possess the power of hearing; but I never found them take any notice of any noise, even when it was close to them."

The answers to these three questions have been kindly provided by the Director of the Horticulture Division, Mr. W. K. Dallas.

Wishing you a good season.

SKEP.

A FEW WORDS ON MAKING INCREASE.

When a beekeeper desires to increase in the spring, the first necessity is to have the hives well populated with young bees as early as is possible in the season. Any apiary will show a fair number of colonies further ahead than the balance, almost as soon as new pollen starts to come in.

See that these have plenty of stores to keep brood-rearing going, boosting a few up with extra feeding. As soon as these are showing a desire to rear a few drones, see that they have a half frame or so of drone comb to do so.

As soon as there is a fair bit of drone brood sealed, say about the end of September in Otago (a little earlier further north) prepare a few colonies for starting queen cells, according to whatever method you favour, transfer or natural. When these are far enough on to give you an idea how many you will have, and allowing for a few casualties in transferring them, you can proceed to divide up one strong colony for each cell you can count on having.

To divide a colony in the home apiary, put as near as possible, equal parts of near hatching and young brood in each part. After putting as many as possible of the young, newly hatched bees in the part the old queen is to be left in, shift this part to a new stand, some little distance from the old site. Place a cell, several days from hatching, in the queenless half on the old stand. By the time this cell is due to hatch, the bees will have realised that they are queenless and will accept a newly hatched queen, and she should destroy any later cells that the bees have started on their own brood.

A variation of this procedure is open to those with motor transport and out apiaries. In this case, half the colony is placed in each lot and the half with the old queen taken to a new location some distance away, and a cell given to the queenless half left in the home apiary. As in the former case, the reason for keeping the queenless half in the home apiary, is that there may be drones flying to get the young queens mated later on, as by this time drones should be flying from those colonies boosted up earlier, to

rear early drones. Their part is often forgotten and slow mating of young queens results in the early part of the season.

One of the advantages in the last procedure is that all the bees stay put and no shutting up or sorting out of young bees, to stay in the new location, is necessary.

One thing to warn you against here, is do not transport queen cells of newly-hatching queens by motor, as a proportion of any such cells will be damaged by the vibration in travelling.

When it all has to be done in the home apiary, another variation can be used to advantage, if you have wire screens and are safe from any robbing getting started.

First, have your bottom board entrance, deep side, closed by wire screen, and have a full width wire screen for the top. Place two frames of sealed brood from a strong colony and one frame with mostly young brood and eggs, between them, with all adhering bees. Place one frame with pollen, next to outside wall of super and, on the other side, a frame of honey (bruise side next to brood), next to this, a frame with one side, at least, half filled with clean water. A few extra bees can be shaken in if necessary, the balance of super to remain empty. Place screen on top and be sure all is bee tight. Place this division in a sheltered shed or even in the honey house if it is cool and airy. Don't disturb for about 8 days.

About the 8th or 9th day, late in the evening or very early in the morning, before the bees are stirring, open new hive up, and see if water is still there; if not place a little more in the comb, inspect for queen cells, and break down all but one or two of the best, close up again.

Next day or the day after, place on stand it is to occupy and give say two inches of entrance; if this last is done late in the evening, the bees will start next morning as if they had always been there.

Don't be alarmed if you find two or three hundred dead bees on the bottom board; these would mostly have died in any case by that time.

In all these methods, the new neuclei hives, with young queens, can be boosted along by giving one or more frames of hatching brood from strong colonies and, most important, see that they don't run short of stores.

Robert Stewart, Heriot.

(Delivered at Convention of Otago and Southland Beekeepers, in Dunedin.)

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