THE NEW ZEALAND BEEKEEPER

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

THE NATIONAL BEEKEEPERS' ASSOCIATION.

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The New Zealand BEEKEEPER

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TAKING ADVANTAGE OF THE RAPE HONEY FLOW.

R. S. Walsh, Apiary Instructor, Christchurch.

Canterbury during the past three seasons has witnessed the advent of a new and valuable contribution to the nectar source of the province. Rape has been grown for seed in small, isolated areas for many years, and like wild turnip and mustard has been regarded as a supply of late spring nectar which greatly assisted colonies to build up for the main honey flow, without thought, however, of any extractable surplus being gathered.

In the autumn of 1940, 1000 acres of rape was sown in South Canterbury for the purpose of seed production. Results the following spring proved to beekeepers the importance to the honey industry of this fine plant when sown in large areas. Apiarists who had not previously experienced a flow of nectar from the rape, or were unprepared for it, were confronted with a series of problems, not the least of which was swarming. Beekeepers in the rape areas will have to pay particular attention to their colonies if full advantage is to be taken of this splendid new source of nectar, as the sowing of rape for seed will continue and a greater acreage will probably be put down each year.

1500 to 2000 acres were sown during February-March and April. Sowing takes place from late February until the middle of April, thus ensuring a flowering period of a month or more in the spring. A strong colony is capable of storing up to two supers of surplus honey from the rape if the weather is reasonably settled.

The honey is of the finest quality, water white in colour, with a mild flavour and fine grain. Very little variation in quality has been noticed in South Canterbury, but samples taken from rape honies gathered from heavier land farther North indicate that the quality of the honey is subject to soil conditions, as variations in colour were apparent. A characteristic of this honey is the remarkable rapidity with which granulation occurs. It is therefore imperative that the supers be removed as soon as the honey is capped. The honey granulates about seven days after extraction and if subjected to even slight agitation, will crystallise in four days. Frames of honey not removed from the hives will granulate within a month of being stored. This factor of rapid granulation, combined with fine grain, makes rape honey ideal for use as a starter if it is desired to process part of the main crop later in the season.

Half a ton of honey from clover and mixed sources seeded with 5% of rape honey resulted in crystallisation occurring in a few days. Conditions favouring granulation were, however, ideal at the time, as the atmosphere was exceptionally dry and the nights cool.

The heaviest crops have been taken on the plains where the soil is light and the bees are not so exposed to the cold winds which blow on the higher country at this time of the year. The higher and heavier country, which has a clay subsoil, experiences the flow approximately two weeks later than the lighter land. The flow is not as heavy on this type of country, but on the other hand, beekeepers operating here are not faced with the swarming problem that beset apiarists located on the lower and lighter land. Cold north-east winds accompanied by fine days that encourage the bees to work the rape are particularly severe on the field bees, as large numbers are

chilled and fail to return to the hives.

It is no uncommon sight to see bees lying dead on the flowers of the plant. To guard against this mortality is is advisable to place the hives as close as possible to the rape fields, which allows the bees the opportunity of gathering the nectar and making a safe return to their hives. Maximum crops cannot in fact be expected unless colonies are located reasonably close to the source of nectar, as bees will not make long flights so early in the season.

Observations made in 1939 and 1940 indicate that, given favourable weather, the rape begins yielding on the low country on or about 15th October, and continues for about four weeks up to 15th November. In seasons when weather conditions are right, it would be possible to have an almost continuous honey flow commencing with the willow about the third week in September and following on with the rape from the middle of October until the middle of November, at which time in a normal season, the clover will be yielding lightly, and increasing gradually during the following month until it reaches its maximum production.

PREPARATION OF COLONIES.

Preparing bees for the rape flow must, in common with all successful colony preparation, have its foundations laid the previous autumn. The first essential is young queens, which means requeening in the autumn. A large force of bees is required by the middle of October if the maximum crop is to be obtained. Swarm control measures will have to be taken and the importance of young queens in combating this tendency which is likely to assert itself about seven days after the rape begins to yield, cannot be overstressed.

The bees should be wintered down with ample stores of not less than 60lbs. of honey. Results cannot be expected in the spring unless the bees are well supplied with honey and pollen. No attempt should be made to carry weak colonies through the winter. Weak colonies consume as much, if not more stores than strong ones. This is explained by the larger cluster of the strong colony losing heat less rapidly and thus consuming less honey to keep up the temperature. Attempts by the smaller cluster to maintain the necessary temperature, force the bees to live at a higher rate, consequently they open up in poor condition in the spring.

Equipment should be well made to ensure the comfort of the bees and to guard against spring dwindling which is the direct result of defective equipment which allows dampness and cold winds to penetrate the hives, thus forcing the bees to overwork and consume unnecessary stores in order to maintain hive temperatures when they should be more or less dormant.

The hives should not be disturbed until the end of August when a brief examination may be made to check up on the amount of stores available. The minimum at this examination should be 30lbs. of honey, as heavy consumption of stores takes place between August and the main honey flow. If adverse weather conditions were met during the period in which the willow and rape flow is to be expected, heavy losses from starvation may result where there is insufficient stores. A further inspection should be made in September and any weak or queenless colonies united. Hives requiring additional stores should be supplied with frames of honey which should have been kept for the purpose. Liquid honey or sugar syrup feeding is not advisable when hives are being prepared for an early and possibly heavy flow. Colony heat must be maintained if uninterrupted brood rearing is to continue. Therefore, supplementing stores in this way necessitates considerable activity on the part of the bees, with resultant loss of vitality and fall in colony temperature. Hives should receive the minimum of handling as the best returns can be obtained from the bees if the necessary work is carried out at the right time without needless manipulation. No further attention should be required until swarm control measures become necessary at the commencement of the rape flow.

SHELTER.

A factor which calls for consideration is that of shelter. Excessive shelter is not desirable, particularly in exposed localities. I am of the opinion that what would be considered an ideal sheltered location in the North Island would, in the main, prove to be

to the ultimate disadvantage of bees located in open country in Canterbury. Some shelter is of course necessary, but not to the extent of inducing the bees to leave their hives to find cold or high winds blowing beyond the environs of the apiary. An over sheltered site will also encourage brood rearing with consequent consumption of stores and undesirable activity of the queen.

SWARM CONTROL.

The problem of swarming is of the utmost importance if the early flow from the rape is to prove an advantage to beekeepers. Unless appropriate measures are taken at the commencement of the flow in conjunction with autumn and winter preparation, a proportion of colonies will swarm. A review of various methods that can be applied to discourage this tendency is, therefore, necessary. Queen excluders, in my opinion, can be used with very definite advantage. The Demaree system of swarm control is an excellent one and modifications of this system can be applied with success during the flow from the rape.

One method requires that the queen be placed in the lower brood chamber below an excluder with three frames of hatching brood and seven drawn combs. The remaining frames of brood are placed in the upper brood chamber directly above the excluder and a super of empty combs or frames of foundation put on top of the second brood chamber. Placing the remaining brood immediately above the excluder instead of having a super of empty combs between the two sets of brood is a very necessary precaution to avoid a division of the bees and a possible chilling of the brood owing to the extremes in temperature experienced at this season of the year in Canterbury.

An alternative method is to place on the bottom board a super of drawn comb, and on top of this a second super containing the queen, four frames of hatching brood and five drawn combs. The excluder is then put on and a super containing the remaining brood placed above it. Both these methods necessitates a further examination of the hives six days after manipulation in order to remove any queen cells that may have been started above the excluder.

Under ordinary conditions swarming can be checked without the use of excluders by placing a super of foundation between the two brood chambers. This requires a division of the brood and because of the likelihood of a sudden change taking place in the weather so early in the season, may have harmful results. The same effect can be obtained without dividing the brood by putting all the available brood in the lower brood chamber and placing a super of foundation above. If the number of frames of brood exceed ten, the additional brood should be placed against the warm side of the super above and the space filled with frames of foundation. Any frames of honey are put in a third super which goes above the two brood chambers. This method has been successfully applied on both rape and heavy bush flows, and it is under these conditions only that this practice is advocated.

QUEEN REARING AND REQUEENING.

The rape honey flow offers an excellent opportunity of securing early queens. Cells grafted during the first week in October have resulted in mated queens before the end of the month.

If it is necessary to undertake any requeening at this time, it should be carried out with care as it has proved very difficult to persuade colonies to accept introduced queens when the flow from rape begins to taper off.

HONEY FOR THE EYES.

A WARTIME DISCOVERY.

H. Airlie, of Coventry, found that liquid honey dropped into the eyes causes a copious flow of tears and will wash out the grit blown into eyes by explosions of encendiary bombs, also of course soothing the surrounding scorched flesh. The honey should not be diluted as its "density" keeps the eyelid off the eye and so relieves the pain. Any clean utensil will serve as a dropper. An oculist approved the treatment. ("The Scottish Beekeeper.")

BRANCH ACTIVITIES

WEST COAST.

At a recent meeting of the branch a motion of sympathy with the President, Mr. E. Airey, in the loss of his wife who, in years past, had given great service to the Association. Mrs. Airey's passing is recorded with regret. Mr. W. Baty, a member of the branch, is a brother of the late Mrs. Airey.

The first Field Day of the new season is being held on December 6 at Mr. W. Baty's apiary, situated at Barrytown. The second Field Day is set down for January 3, 1942, at Mr. Airey's apiary, situated at Mitchell's.

Last month, Mr. E. Smellie, Apiary Instructor, gave a lantern lecture on beekeeping in other parts of the Dominion. This aroused a great deal of interest among the twenty-four persons present, and there were many questions asked and answered. Mr. Smellie was accorded a hearty vote of thanks.

The spring weather in this part of the country has been very good, and bees have come out of the winter rest in good condition. They are working on spring flowers and shrubs and bringing in large quantities of pollen, so should be building up well.

MILTON-TAIERI.

There was a good attendance at the August meeting. After business had been disposed of, Mr. D. S. Robinson, Apiary Instructor, gave a most interesting lecture on "Package Bees," a subject which is receiving a good deal of attention in the South. The speaker illustrated this subject, and other beekeeping topics, with a large number of outstanding natural colour lantern slides and, at the conclusion of the address, a vote of thanks was carried with enthusiasm.

The Branch President, in referring to Mr. Robinson's transfer to the Hawke's Bay district, expressed appreciation for the assistance and advice he had given beekeepers during his term of office here in the South, and extended to him the good wishes of branch members.

Mr. I. L. Box, who succeeds Mr. Robinson in the Otago-Southland district, was present at the meeting, and was introduced to members, who gave him a cordial welcome from the branch.

A very enjoyable supper brought the proceedings to a close.

HAWKE'S BAY.

The event of this quarter has been the appointment of Mr. D. S. Robinson as Apiary Instructor for Hawke's Bay, Wairarapa and East Coast. Mr. Robinson, formerly stationed at Dunedin, took up duties here on September 1. A welcome was extended by the Hawke's Bay Branch on September 2.

"We welcome you as a guide, philosopher and friend," said the Branch President, Mr. A. Lowe, in speaking to Mr. Robinson.

Returning thanks, Mr. Robinson expressed pleasure at being transferred to his new district. He did not feel himself a stranger as he had been one of the founders of the Hawke's Bay Branch of the Association. At that time, his district had included Hawke's Bay, Taranaki, Wellington, Wairarapa and part of the South Island.

Mr. Robinson spoke of an experiment made in the sending of package bees from the North Island to the South—Otago—where it is harder to winter bees successfully than in the North, and he described mid-winter conditions in some districts of Central Otago and Southland.

Serious losses suffered by beekeepers in the orchard areas of Hawke's Bay due to some fruitgrowers applying petal-fall sprays when the trees were in full bloom instead of at time of petal-fall, were the subject of discussion. A committee was set up to arrange for experiments to be made with a suitable bee-repellent.

Mr. Robinson spoke of the Honey Section at A. & P. Shows, and urged members to show their honey.

A pleasant evening was brought to a close with supper which had been provided by the committee.

Typical Hawke's Bay spring

weather is now being enjoyed by bees and beekeepers alike. Fruit blossoms are yielding freely and, if the present conditions continue, strong colonies should produce a surplus in October.

The Branch meeting at Hastings on July 19 was devoted to receiving delegate's report of the 1941 Conference, and to discussion of the arsenical spray problem.

Experimental Apiary.

An effort to combat the usual spring losses from arsenical spray poisoning has been made by the Hastings beekeepers who have enlisted the co-operation of the Fruitgrowers' Association.

Many orchardists have agreed to use a repellent in their petal-fall spray this season, and arrangements have been made for an experimental apiary to be established at the Fruitgrowers' Experimental Orchard, Havelock North.

The aim is to find a repellent suitable for addition to arsenical sprays. Experiments will be made with various repellents which are reported to have been successful in America, and records will be kept of their effect on the bees, and of their effect upon pollination. Mr. D. S. Robinson, Apiary Instructor, will be in charge of the apiary.

NORTHLAND.

At time of going to press a programme has come to hand detailing the schedule of talks and demonstrations arranged for the Field Day at the apiary of the Branch Secretary (Mr. H. R. Holdaway) on October 18. Visitors will include the Branch Patron, Hon. J. G. Barclay, Minister of Agriculture, Mr. Boswell, M.P., Bay of Islands, Mr. W. Nelson, Chairman of the Honey Control Board, Mr. J. Rentoul, Manager, Honey Section, I.M.D., and Mr. L. Riesterer, Apiary Instructor, Auckland.

MEMBERS ON SERVICE.

Mr. D. A. Barron, Waiohika, Gisborne (Hawke's Bay Branch), has recently joined the R.N.Z.A.F.

The following members of Northland Branch are on Active Service:

Mr. Cliff McLean is serving with the Air Force, now in Canada.

Mr. Roy Paton, 3rd Echelon, is now in Egypt.

Mr. Alf. G. Hancox, is a member of the 2nd Echelon, overseas.

Mr. G. Tuckey is in camp at Papakura.

Mr. S. Christie is stationed at Waiouru on temporary staff.

Mr. S. C. S. Ford, of Kirker & Ford Ltd., Pungarehu, a member of the North Taranaki Branch, is now serving with the N.Z.M.C., overseas.

Mr. E. Airey, son of the Branch President, West Coast Branch, is serving overseas—reported missing after the action in Greece.

Having both been graded medically unfit for overseas service, the Dominion President, Mr. E. A. Field, is serving as a Platoon Sergeant in the Home Guard, and the General Secretary, Mr. G. S. Kirker, is now Company Commander of the Pungarehu-Warea Unit of the Home Guard.

OBITUARY.

MR. J. G. JARRETT.

It is with regret that we record the death of an old member of the Manawatu Branch, Mr. John Goodhall Jarrett, on August 27, 1941, at his residence, "Almadale," Feilding, following a lengthy illness.

The late Mr. Jarrett is survived by his widow, Mrs. Gertrude Jarrett, to whom members will extend sympathy. Mr. Jarrett was a returned soldier of the 1914-1918 war and had been farming at Cheltenham for a number of years. He was a breeder of stud sheep and much of his stock has been sold at ram fairs at Feilding. In addition, Mr. Jarrett took an active interest in beekeeping and had been a member of the Association for a number of years.

MR. D. McCULLOCH.

Another departure from the ranks of beekeepers must be recorded in the passing of Mr. Douglas McCulloch, of Te Mata Road, Havelock North, who was a foundation member of the Hawke's Bay Branch, and who died at the Napier Hospital on September 23.

Mr. McCulloch had been in ill-health for many years. He was a veteran of the South African War and also saw service in the war of 1914-18.

ESSAY COMPETITION.

We have pleasure in publishing the only entry in our Essay Competition, a very creditable effort from the pen of Mr. A. C. Harding, who has been awarded a first prize of 10/-, although he modestly comments that he looks forward to reading numerous essays from more competent entrants than himself. Congratulations, Mr. Harding; your prize has been mailed.

The Milton-Taieri Branch undertook to find the prizes for the first quarter's competition, and the spirit of the branch members is very much appreciated, as it indicates their interest in helping to make the Journal a success. Which branch offers January prizes?

Considering that this is the only beekeeping journal in the Dominion and also considering the number of members of the Association, who would be more than capable of contributing interesting and instructive articles, it is surprising that there is very little coming to hand from members. Can it be that everyone is completely satisfied with what we give them? We know the Journal is read, of course, as we have been pleased to receive a number of congratulatory messages following recent numbers, but we are out to make the paper interesting to all, and contributions would be welcome, despite the fact that space is limited sometimes.

And now, here is the prize-winning Essay:—

WHAT TO DO WITH OLD COMBS AND CAPPINGS.

What to do with old combs and cappings is somewhat of a problem for the spare time beekeeper, but it has been solved in my case by the building of a solar wax extractor. This has proved a great time and labour saver and has done away with the messy business of rendering wax down in the household washing boiler, besides giving a cleaner and better looking result. It might interest others similarly situated to know how this was made without any great outlay.

I looked about for suitable pieces of glass and managed to procure two panes from a dismantled partition, which, though a little wider than I needed, measuring 33ins. x 24ins., were admirable for my purpose. Next, the local mill provided 10 ft. of dressed 3 x 2 for the sash and the obliging operator of a circular saw cut two ½in. rebates along one edge. It was not difficult now to make this into a frame to fit the glass, and putty the sheets into the recesses left by the rebating. The completed sash now consisted of two sheets of glass spaced 1in. apart.

A box having the same outside dimensions to fit the sash was next made; sides were 6ins. by 1in. and the bottom was made from short ends of match lining, with the sash hinged at one end to make a lid, the other end being secured by hasp and staple.

I found a piece of galvanized iron and cut it two inches wider and four inches shorter than the inside of the box; folded three sides up an inch so that it pressed tightly into the box, having previously provided stops to prevent it going down more than two inches. The fourth side was shaped to guide the melted wax to a dish placed in the box below the iron.

After painting the iron and the inside of the box black, the contrivance was placed in the sun in a sloping position and loaded with old combs. The experiment worked. After a short time, wax, and some honey, flowed into the dish, leaving behind a mass of residue.

A. C. Harding,
Khandallah, Wellington.

ESSAY COMPETITION.

FIRST PRIZE, 10/-; SECOND PRIZE, 7/6; THIRD PRIZE, 5/-.

We invite entries for our Essay Competition. Entries should be addressed to the Editor, endorsed "Competition," and should be to hand not later than December 15. The successful entries will be published in the January number of the Journal. Essays must be on a beekeeping topic.

PRICE CUTTING—HONEYCO BRAND.

Reports have been received that Honeyco honey Red Seal was being sold for 11½d., and Blue Seal for 10½d. in Hastings on August 1. The Honey Section of the Internal Marketing Division was communicated with, but the position was unchanged on September 1. The matter has been referred to both the Honey Section and the Honey Control Board (Honey Marketing Advisory Committee) by the General Executive. It is understood that only one shop is involved, but it is a pity that Honeyco should be the brand connected with such an occurrence, particularly in Hastings, where there has been no trouble of this kind in relation to first class grades for some years.

The Honey Section is taking the matter up with the management of the organization concerned, and has given the Association an assurance that it is not the intention of the Section to allow Honeyco Honey to be used as a cut line.

NEW APIARY INSTRUCTOR.

The vacancy in the service caused by the retirement of Mr. G. V. Westbrooke has been filled by the appointment of Mr. I. L. Box, of Matamata, who has been appointed to the Otago-Southland apiary inspection district, with headquarters at Invercargill.

Mr. D. S. Robinson has been transferred from Dunedin to Hastings, vice Mr. G. V. Westbrooke.

It has been considered by the Horticulture Division of the Department of Agriculture advisable to change the headquarters for the Otago-Southland district to enable the Apiary Instructor to give closer attention to the requirements of the majority of commercial beekeepers situated in the district.

ASSOCIATION MATTERS

ASSOCIATION FINANCES

GOVERNMENT ASSISTANCE?

Following the last Conference, copies of remits were referred to the Government with requests for appropriate action. Under date September 29, the Minister of Marketing has replied to a number of points as under:

"You are aware that a special grant was made to your Association for the main purpose of continuing the Beekeepers' Journal, to disseminate useful information to producers, but it appears from your present letter that a direct grant is requested for travelling and out-of-pocket expenses to members of the executive. This is in rather a different category, and would have the undesirable effect of making your Association dependent upon Government sources for its funds.

I suggest that such a position would scarcely be satisfactory in your position as representatives of the beekeepers, and that it is highly desirable that the Association, to represent producers' interests, should stand on its own feet.

I do, however, appreciate the fact that the Beekeepers' Journal is a useful medium for information, and will give further consideration to the possibility of making a similar grant to last year."

Seal Money.

"It has already been stated and I reiterate that this fund will be used for the benefit of the industry, and in view of the possibility of upset to market conditions, due to the present war, it is very advisable to have a sum of this nature available for use in whatever manner may be desirable for the benefit of the beekeeping industry."

Zoned Marketing Areas.

"It is pleasing to have this position re-affirmed. I can assure you that every necessary step will be taken to ensure that the Division's marketing procedure is protected to the point where it will continue to perform its useful function."

Election of Honey Control Board.

"As mentioned to you through the Chairman, Mr. W. Nelson, arrangements will be made when the present emergency period is over to revert to election of producer representatives. The question of the number of representatives and basis of election will be matters for further discussion, and I note the views of your Association on these points."

MEMBERSHIP

Branch Secretaries have recently had mailed to them old duplicate receipts covering beekeepers whose subscriptions have not been renewed, and whose names have therefore been removed from the Journal Mailing List and the Association's Membership Roll. It is hoped that it will be possible to induce the greater number of these ex-members to rejoin the Association.

APIARY CONTROL

The Dominion President and the General Secretary recently had a full-day meeting with the Director of the Horticulture Division and the Senior Apiary Instructor with the object of formulating a scheme which would implement the resolutions carried at the past three Annual Conferences of the Association calling for a method of control of apiary registrations which would obviate encroachment on existing sites when new apiaries were established.

It is believed that a simple formula has been found which will serve this purpose and will meet with the approval of all producers—even those who expressed some doubt as to the practicability of the application of the principle when the subject has been discussed at conferences.

The scheme is in the course of being drawn up in typed form and will very soon be circulated to all members of the General Executive for considera-

tion. The plan will then be referred back to the Director of Horticulture, together with any suggestions for its improvement. It is expected that it will then be available for the consideration of all branches of the Association early in the new year so that the very fullest consideration may be given the matter before the date of the next Annual Conference, when final approval of the industry will be sought.

The circumstances leading up to the decision of many beekeepers that the time had come for some measure of control over registrations to be introduced are well-known. Briefly, it can be stated that there are, in some districts, beekeepers of life-long standing and with considerable capital invested in their businesses who have found that, in recent years, newcomers into the industry have tended to ignore the unwritten law among beekeepers of the old school that new apiaries should not be established within two miles of an existing commercial apiary.

The result has been that, in those areas, there has developed a concentration of hives almost to the point of overstocking, and the position is not one which will correct itself. Instead, improved marketing arrangements have stabilized the industry so that the scramble for positions in good producing areas seems likely to increase. This simply aggravates encroachment on areas already occupied by established beekeepers, or, in some instances, the improved prospects seem to tempt established beekeepers to increase their holdings and to expand, unfortunately to the detriment of their neighbours.

Competition is a good thing, but it should not be allowed to become unbridled. There seems to be no good reason why a man who is more financial than his neighbour should be enabled, merely by the process of expansion, to force that neighbour out of business without compensation. Controlled registrations could be used to prevent such encroachment.

Similarly, newcomers to the industry should not be permitted to establish in territories already adequately covered by hives, as this tends to reduce honey production per hive to an uneconomic level. This is disadvantageous to the established beekeeper and also to the newcomer. On the other hand, if an established beekeeper fails adequately to cover territory with full-sized commercial apiaries, he can have no legitimate complaint if a younger man sets out to do so, but a newcomer may reasonably be expected to set up only in territories not adequately covered, even though such areas may be further removed from sources of apiarian supplies and from markets.

There is still a considerable amount of territory in the Dominion which is capable of supporting commercial beekeeping and it is that territory to which new beekeepers should be directed.

Generally speaking, beekeepers are agreed that, even though some encroachment already exists, there is no urgent necessity to attempt re-adjustment of the present situation. This provides a starting point, provided control measures are introduced immediately, before the position gets out of hand. It may be expected that, with the introduction of a reasonable measure of control, time will bring about, automatically, a gradual correction of the position even in those localities where there is congestion at the present time.

New areas of congestion can, and should, be prevented. It is on this basis that the proposed control measures are being framed.

It has been indicated as a result of experiment that about 160 bees die for every pound of suger fed to a hive. This is not an argument against feeding, but it is one against unnecessary feeding.

Sugar robs the body of its lime and produces soft bones and teeth. Solomon said, "Eat honey, it is good for the bones." Honey produces pink cheeks and dimples. Sugar produces pink noses and pimples. So eat honey.

SOUTH AFRICAN HONEY FOR N.Z.?

A few years ago, Dominion beekeepers were concerned about imports of Australian honey. The following extract from the "South African Bee Journal" for June of this year indicates that urgent representations were made to South Africa for supplies of honey at the same time, and apparently samples were received. Maybe it is just as well that New Zealand beekeepers were not aware of these facts at that time, or there would have been even more trenchant comments on the policy being followed at that date. The extract reads:—

"The price of honey is once more raised by a correspondent, who deplores the lack of upward trend from 1/- and 1/3d. per jar for ..... (the answer on a silver platter), "a not very attractive article ..... with rather a lot of scum." Are we not tackling the problem from the wrong end in our concern about export prices for an article we have still—as a body —to produce? Should the cry not rather be for honey, honey, honey, and still more honey, plus skilful blending, processing, clean and attractive, uniform packing, to ensure a constant supply of unvarying quality? Some of us to-day are apt to bristle at the mention of co-operation and control boards, but team-work, community methods, may with advantage be resorted to; we hear no howl from the direction of Letaba, for instance! Lastly, as a tail-piece, is there no verdict from New Zealand on the honey we sent there in answer to their clarion-call, how long —— two years ago, was it?"

LONDON AGENTS CARRY ON.

In line with a resolution carried at the last Annual Conference, the Dominion President cabled Messrs. Morton Ltd., London:—

"Twenty-eighth Conference National Beekeepers' Association of New Zealand just concluded unanimously conveys sincere appreciation your service to Dominion producers in unprecedentedly adverse conditions. We fully recognize difficulties facing you in these times and are grateful. Best wishes to you and staff."

The following reply has been received to the above message:—

"Your cable greatly appreciated. Encourages continuance our endeavours to give 100% service to New Zealand beekeepers despite all difficulties. Kia Ora."

It was stated at the Conference that Messrs. Mortons Ltd. had had their London premises bombed a number of times, but had continued to carry on and give excellent service as agents of the Internal Marketing Division in selling New Zealand honey in the United Kingdom.

N.Z. HONEY CONTROL BOARD

The Industry will be glad to learn that the building under construction for the Internal Marketing Division at Auckland is now almost complete. The Honey Section of the Division is now established in the new premises. The packing plant and general facilities which are being provided for the Section fully measure up to all that beekeepers have been led to expect, and the Section will, in future, operate under conditions that will permit a standard of efficiency in the general handling of the business which has never been possible in the past.

To achieve the best possible results from the Honey Section, it is essential that the plant be operated at full capacity. This can only be accomplished if the Internal Marketing Division is provided with adequate supplies of honey and a certain volume of business. This aspect was very fully discussed at the last beekeepers' Conference and the measures favoured by the Conference to deal with the problem are now receiving the attention of the Government.

In the meantime, there are many beekeepers who might well consider whether it would not be more profitable for them to discontinue packing honey and send in the whole of their crops to the Internal Marketing Division's Honey Section, and concentrate solely on production. Beekeepers with inadequate packing facilities should study carefully the address submitted to the Conference by Mr. W. Honeyfield, Auckland Manager of the Internal Marketing Division.

It should here be noted that the payout to suppliers to the Division was 7d. per lb. pro rata on the 1939-1940 season, and the Division is in an excellent position to at least maintain this payout.

From enquiries that come to hand from time to time, it is plain that a number of beekeepers are not aware that, while the Price Tribunal fixes the maximum price to be charged for honey, there is no regulation under which retailers can be compelled to fix a minimum price for any particular brand.

The general policy of the Government under existing wartime conditions is to make commodities (particularly foodstuffs) as cheap to the consumer as possible, and it is hardly likely that official approval could be obtained to insist on a retailer accepting a higher margin of profit than he himself considers satisfactory. The fact that certain cash stores offer the Division's brands occasionally at lower prices than do other stores in a certain locality does not mean that the cash store organization is receiving favoured treatment from the Division.

The past efforts of the Industry in the matter of price fixation have always been confined to fixing the price for specified grades to the merchants. That policy is strictly observed by the Internal Marketing Division in the distribution of its own brands, and the Board is not, at this stage, prepared to recommend any change of policy.

W. NELSON, Chairman,
N.Z. Honey Control Board.

Carl Teasley, of Tennessee, reports that his bees were carrying sawdust to the hives in an effort to supply a pollen shortage. Bees will accept almost anything which in the least resembles pollen in their anxiety to meet this need, even coal dust has been reported as attracting them when no pollen is available. Sawdust, of course, is useless as a source of larval food but it indicates how great is the need for pollen with which to start brood rearing in early spring.

The London "Spectator" in an issue recently to hand has an interesting paragraph describing the use made of bee battalions by the Abyssinians during the conquest of their country by the Italians. Poorly armed as they then were, impeded by fortifications strongly held by the enemy, they turned to one of the country's large resources, collected every bee-hive in the vicinity and threw them into the fort at night. Next morning it was found to be abandoned!

INTERNAL MARKETING DIVISION
(HONEY SECTION)

I wish to again remind Honey Producers that the new building for housing and packing honey is nearing completion. It will be in use when the new season opens in December, and ample supplies of honey will be urgently required.

An export quota of 460 tons for the current year has been provided by the Imperial Food Controller, and subject to shipping being available, it is essential that we ship to the full amount of this quota. An initial advance of 5d. per lb. pro rata will be made on honey supplied and prospects for progress and final payments are for results similar to last year.

The Honey Section wants honey both in quantity and quality. Even if there is no other reason for supplying the Honey Section, there is the saving in work and worry by getting the honey promptly off your premises.

I am sure earnest consideration of this will make you a full supplier.

A. H. Honeyfield.

BUYING HONEY STAMPS.

In ordering Honey Stamps it is necesary that cash accompany the order. Credit is not given against future payments on honey supplied. Credit can only be given in cases where honey is in store and on which no advance has been made.

STAMPING HONEY PACKAGES.

There appears to be still some doubt as to the application of the Honey Marketing Regulations providing for the stamping of all packages of honey sold to the consumer or for manufacturing purposes. A copy of these Regulations are contained in Circular No. 15, issued by the Honey Section, and any producer who has not a copy can obtain one by applying to the Internal Marketing Division, Box 1293, Auckland.

BRANDING CASES.

Suppliers' attention is again drawn to the specifications for branding cases as set out in Circular No. 15. Cases will be sufficiently branded if they have the producer's number, net weight and extraction mark on one end, but they must be stencilled on. A stencil can be cut out of cardboard and black boot polish put on lightly instead of stencil ink. Brands or marks in pencil necessitate re-branding at a cost to the supplier of 3d. per case.

EARLY HONEY.

We ask the assistance of suppliers in helping us with new season's honey as early in the season as possible. At the same time, we would stress the necessity for the honey being of the required Specific Gravity, 1.420. Last year an exceptionally large amount of honey was in a watery condition. This in the main can be avoided by extracting only ripe honey and exposing it to the atmosphere in the tanks as little as possible. In humid atmospheric conditions honey will absorb up to 30% moisture.

NAILING CASES.

Honey, on account of its heavy weight comparative to bulk, requires special care in packaging. Cases should be strongly nailed—not less than four two inch nails at all ends, sides, tops and bottoms.

ADVICE NOTES.

Send two copies of advice notes when making a consignment.

ZONED MARKETING AREAS.

NOT INTENDED THIS SUMMER.

The Internal Marketing Division is reported to have given an assurance that it is not intended to operate a zoning system over any markets or to interfere in any way with the marketing of honey for the coming season to any greater extent than already existing. After this season, if it is intended at any time to decide to regulate the market in any certain district, the Division has indicated that considerable notice will be given of such intention.

HONEY SECTION CONFERENCE.

SUPPLIERS ONLY.

The Honey Section of the Internal Marketing Division has advised that consideration is being given to a proposal to hold each year, about the time of the Annual Conference of the Association—possibly the day before—a meeting of the suppliers to the Honey Section. At this meeting, matters particularly affecting suppliers could be more intimately discussed than at open conferences of the Association, it is suggested.

It has also been suggested in another quarter that two delegates from each district should be invited to attend this conference and, further, that the expenses of these delegates might be met out of the Seal Levy funds.

A DEMOCRATIC SUGGESTION.

POOLING OF RAIL FREIGHTS.

The Honey Section has expressed the view that the payment of rail freights affects suppliers only and that any change altering the present incidence of payments to suppliers would therefore require their approval.

Further, while the Internal Marketing Division would be interested in the views of the Association's General Executive on this matter, their decision could only have a bearing in so far as they represented suppliers. This would also apply to any decision of a Conference.

IF ZONING COMES.

PACKERS BECOME SUPPLIERS.

If the zoning system is introduced by the Marketing Division, many of the packers of to-day who, at present, are merely purchasers of seals so far as the Division is concerned, will become suppliers to the Division. The Association represents present-day suppliers; but also potential suppliers to the Division.

CONTROLLED REGISTRATIONS OF APIARIES.

TWO SCHOOLS OF THOUGHT.

There appear to be two schools of thought in the matter of controlling apiaries so that encroachment may be curtailed or eliminated. One school seeks merely to have registrations so controlled that encroachment on existing sites will be prevented without imposing any restrictions on the numbers of hives or apiaries operated by a beekeeper. This school appeared to be in the majority, judging by comments at the time of the last annual Conference of the Association.

There is another section of the community, however, which appears to have the opinion that some limit on the size of the hive holding of a beekeeper must be a corollary of controlled registrations, but such a measure would seem to tend to bring the industry within the scope of Licensed Industry regulations with all the concomitant disadvantages.

HONEY SOLD WITHOUT SEALS.

Reports have been received that the honey sold by a well-known Taranaki packer has been offered by retail shops without the packages having honey seals attached.

In one case, at least, the retailer has confirmed that the packages did not bear seals when the honey was left with him by the packer, who delivered the goods personally.

The matter has been referred to the Honey Section which advises that there is a liability on the person who sells the honey to the consumer to see that seals are on all packages at the time of sale over the counter. There can be no possible arrangement for exempting from bearing stamps honey so sold.

It is understood that the grocer in question was rendered liable for breach of the regulations and, upon conviction, to a fine of £200.

It would assist the Honey Section and be in their own interests if beekeepers generally could advise the Section of any cases of honey being sold without stamps.

The inspectors of the Labour Department and of the Internal Marketing Division are checking up on this, but it is not likely that it is possible for them to visit all shops and the visits they make are probably at long intervals.

The packer in this particular case is perfectly aware of the regulations as he has had personal contact with the Head Office of Internal Marketing Division in Wellington regarding the affixing of seals to his pack. Yet he has flouted the regulations to the detriment of others packers and of suppliers to the Honey Section.

The Internal Marketing Division has given an assurance that action as may be necessary to deal with the matter will be taken immediately on receipt of reports of further breaches.

In order that retailers generally may be fully aware of the legal position regarding the affixation of honey seals, the Grocers' Federation has been communicated with by the Association.

SONNY AND HONEY.

"I'll buy some powder, ram it down."
Said little Sonny.
"Apply a match, blow up the bees,
And take their honey."

A flash! The air is dark with bees
And bits of Sonny;
You could not bring the laddie back
For love or money.

Ask of the breeze from foreign seas
Where Sonny lingers;
North tells of "nose," east speaks of "toes,"

West whispers "fingers."
A piece of string, a shilling knife,
Well steeped in honey;
A button from his little vest
Is all of Sonny.

CORRESPONDENCE.

E. A. Field, Esq.,
Dominion President,
National Beekeepers' Association of N.Z.

Dear Mr. Field,—We were delighted to receive the cable which you sent to us on the 3rd July on behalf of the Conference of the National Beekeepers' Association, and we hope you received safely the cable which we sent to you in reply.

Normally appreciation of services rendered in business is neither sought nor expected, but when it comes unsolicited it is none the less welcome, particularly at a time when the carrying on of business is hampered by so many unusual problems and difficulties.

We have always felt proud of our association with the New Zealand honey industry, and the good wishes which you have sent to us from the Conference cannot but have the effect of strengthening the bonds between ourselves and the beekeepers in New Zealand, and of making us more determined than ever to ensure that the marketing of New Zealand honey in the United Kingdom shall be as successful as it is possible to make it.

Yours truly,

(Sgd.) E. G. TAYLOR,
Managing Director.
C. & E. MORTON LTD.

London,
18th July, 1941.

HONEY AND ASTHMA.

While asthma is not usually called a "deficiency" disease, there is no doubt that it is much aggravated by high acidosis. Shortage of vitamins and certain minerals is present in nearly all asthma attacks.

Honey not only adds friendly vitamins and minerals to the diet, but it is a wonderful anti-acid, especially when used to replace half or more of the common sugar in the daily diet. —Dr. Wm. C. Wilson, St. Charles, Missouri.

METAL CONTENT OF HONEY

Dr. H. A. Schuette and his colleague Paul L. Zimmerman, Department of Chemistry, University of Wisconsin, have just published another paper on honey and its chemistry. This article reviews the handling of honey from the time that it is taken from the comb until it is put on the market, emphasising the fact that uncapping knives, the extractor, galvanised iron containers, and even the cans in which some honey is placed on the market form a source from which honey, because of its acid content might take up some of the zinc content in the coating of the various metals which have come in contact with the honey. The problem outlined was to ascertain if zinc occurred in liquid honey and if so its probable source and the exact amount contained in certain samples together with comparisons of amounts contained in honey derived from various plants treated in various ways and of honey which had not come into contact with any metal.

The results are briefly as follows: Nearly every sample of honey does contain very small amounts of zinc, some so small as not to be measurable. In no case was zinc in sufficient amount to indicate that it might be detrimental to honey. It was found that the amounts of zinc found in honey varied with the plant source, the source of contamination being the same. It was found that honey contained traces of zinc even though it had not come into contact with that metal.

The findings of Schuette and Zimmerman are in accord with the results obtained by other chemists who have shown the presence of many of the metals in small quantities in large numbers of plants and plant products. The source of these metals is small amount of these elements which occur in the soils. These chemists state definitely that the amount of zinc which is taken up in the process of preparation for market is not necessarily cause for concern because of the smallness.—("Beekeepers' Item.")

SOLAR EXTRACTORS.

It would not seem like good advice to recommend something known to be very inefficient, yet strangely enough, it would pay most beekeepers very good returns to use a device known for its inefficiency. This of course refers to the solar wax extractor. There are very few of these used in this part of the country and an inquiry among beekeepers as to why they do not have one discloses some interesting answers. There is a general feeling, however, that these extract but such a small portion of the wax from old combs as not to be worthwhile in practice. It is surprising to learn how many beekeepers there are who have had bees for years and yet have never seen a solar wax extractor in use, or the finished product from one. As the subject is so little considered it is well to review here some of its merits and demerits.

Basically a solar wax extractor is but a sloping surface on which old combs and pieces of wax and scrapings are placed. Where this is exposed to sunlight the wax melts and runs down leaving the dirt, cocoons and other refuse above. In actual construction this inclined plane is built with enclosed sides and covered with a sheet of glass and provided with a pan to catch and hold the liquid wax as it drops down. There is no exact angle or critical demension and a very wide latitude of construction is allowable. They can be made small or large to suit the maker's choice.

The temperature within these devices easily reaches the vicinity of 200 degrees F. and if the construction is good can exceed this figure. While the thickness of the glass, the angle of incline, and the amount of bottom and side insulation used (if any) are factors determining the heat produced by far the greatest factor controlling the temperature within the device is a clear sky. For example it is easier to exceed the 200 degree temperature on a clear cool day in April or October than on a hot day in midsummer, when the sky is full of haze. It will be readily seen, therefore, that even the most crude construction can attain temperatures far in excess of the melting point of beeswax.

Perhaps the one big feature of a solar extractor is the quality of the finished wax it produces. Because the process is carried on without pressure or agitation of any kind the liquid wax escaping from the mass is remarkably free of foreign matter. The cakes of wax as they harden in the receiving container after each day's run certainly present a beautiful uniform appearance that amazes anyone who has rendered wax at home. The quality of the sun rendered wax is so much superior and is obtained without any labour, mess, or expense for heat or utensils that beekeepers should give this method more consideration. In addition the solar extractor is always ready for even the smallest amount of old combs while material must be accumulated to make rendering a batch worth while by the conventional water method.

The absence of pressure or agitation is also responsible for the fact that much wax still remains in the refuse. This need not be lost as it can be saved until enough accumulates to ship away to a commercial wax rendering establishment. This product is practically dehydrated and the wax content is not enough to support the wax moth so if stored in a dry place it remains unchanged. Of course the small beekeeper will not consider saving this as the quantities involved are too small The inefficiency of the solar extractor is, I believe, over stressed as it compares very favourably with the average home rendering in efficiency and in addition posesses the feature of handiness and ease of operation which, combined, results in the production of many pounds of fine wax which otherwise would never normally have reached the extracting process. Judged in this very practical manner the solar extractor can be considered a very efficient and practical tool for the use of any size apiary.

The one, and possibly only, drawback to the wider use of solar extractors might be the spreading of bee diseases through ignorance or careless operation. This is a condition which any good beekeeper would never cause and a poor beekeeper might cause even without a solar extractor. While this point is very important and must

always be kept in mind it is not in all fairness a basic fault associated with the solar extractor per se. ("The Beekeepers' Item."

QUEEN-FINDING.

By P. W. MacNeill, in "Gleanings" September, 1941.

I have long ago forgotten where I picked up my particular quirks and my notions may be more plausible than profitable. They have seemed to work for me, however; and here is how I go at it: —

1. When I plan to look for a queen I work down to the first story as quickly, though of course as quietly, as is consistent with good beekeeping, and no fooling around in the supers en route. I realise that the less the disturbance I create while getting to the brood nest the less confusion and congestion I shall have to deal with when I arrive.

2. When I come to the excluder I handle it slowly and solemnly, and precisely as if it were a super, taking care to keep it in the pile in its correct place, and taking particular care not to reverse it. Once I found the queen wandering about on the excluder. Also once I was unable to locate the queen in the brood nest on one visit, but came on her newly established in the supers a few days later; and I charged my trouble to carelessness with the excluder.

3. Having reached a brood-body and having examined and set aside the first comb or two, I split out the remaining combs into pairs as they rest in the hive and I separate the pairs about as far as is convenient. As often as not I have found the queen seeking quiet in the centre of one of the said pairs. I suspect that if the brood nest is left closely spaced it helps the queen to keep just one frame ahead of a perspiring beekeeper.

4. When examining a comb for a queen I try to take my first look at from a foot or two above it and at rather a sharp angle. I have often found this slanting glance to bring the queen's position into instant focus, especially when she is in motion.

"PLEASE PASS THE HONEY"

"Honey for health," says modern medical science. Yet this is not new, for since ancient times honey has been an important sweet; but, with improved methods of sugar refining and the consequent lowering of the price, the modern and highly refined sweet—sugar—has almost completely displaced honey in the human dietary. Statisticians say the annual per capita consumption of sugar has jumped from about 8 pounds in 1850 to 112 pounds to-day, while the annual per capita consumption of honey is only 1½ pounds.

Honey is gathered in the sunshine by the bees from the nectaries of flowers. It undergoes modification in the hive by the workers; it is also thought that the bees add some enzymes to it. Honey is to be found on the market both in the comb and in the extracted form, and bears much of the flavour and other characteristics of the flowers from which it was gathered; therefore, flavours for almost every variety of taste are available. Modern methods of extraction by centrifugal force eliminate all handling, and do not alter the flavour as was the case with strained honey, which was obtained by melting the honeycombs and straining the heated mass through a cloth.

Some distinguishing features of honey are: It is composed chiefly of invert sugar (levulose and dextrose). It is readily assimilated. It is so highly hygroscopic that no form of bacteria can live in it, which is a very important factor when it is remembered how easily milk, butter, and many other foods are contaminated.

Honey will keep at room temperature indefinitely; and keeping it in a warm place delays granulation. Nearly all types of honey will granulate; but they can be restored to liquid form by setting the container in hot water. Too much heat evaporates the delicate oils that give honey its distinctive flavour. Some persons prefer granulated honey, and it can be obtained in that form.

The almost universal craving for sweets, especially in children, best

proves that there is a true need for them in the human system. The two invert sugars that honey contains (75 per cent. in most grades) have many advantages as food substances. Ordinary sugar, also starch, must undergo digestion, a process that changes them into simple sugars the same as, or similar to, those found in honey. The sugars of honey, therefore, may be considered as predigested; hence the use of honey takes a load of work off the stomach and pancreas.

Dr. G. N. W. Thomas of Edinburgh, Scotland, says: "In heart weakness I have found honey to have a marked effect in reviving the heart action and keeping patients alive. I had further evidence of this in a recent case of pneumonia. The patient consumed two pounds of honey during the illness; there was an early crisis, with no subsequent rise of temperature and an exceptionally good pulse. I suggest that honey should be given for general physical repair and, above all, for heart failure."

Dr. B. F. Beck of New York City declares that during his nearly half century of medical practice he has met many surprisingly energetic folks of advanced age with remarkably healthy complexions. In taking their histories, the report of a liberal daily dose of honey was often a part of the story.

Many nervous states can be attributed to excessive sugar consumption. Our swift modern life requires rapid metabolism to create and to replace the much-needed physical and mental energy. Simple sugar can supply this need much better than can the ordinary refined products, which are not only hard to digest but tend to cause such ills as gastric ulcer, renal diseases, and diabetes. Dr. Beck states that "sugar is just as habit-forming as narcotics, and its use, misuse, and abuse a modern nutritional disaster." Viewing the many channels through which we find refined sugar getting into the alimentary canal, such as candy, ice cream, soft drinks, syrups, pastry, jams, and jellies, besides the sugar bowl, it is not hard to believe.

As a cosmetic honey has a nourishing, bleaching, astringent, and antiseptic effect on the skin; and its beneficial effects were widely acclaimed in past centuries. Many face creams and lotions heralded to-day contain honey, which undoubtedly is the most valuable and effective ingredient in them, and, used alone, would give as good or better results. It seems justifiable to suggest that this plebian commodity should be the object of more intensive and unbiased modern research, and its dethroned virtues restored to general public knowledge.—(Reprint of article appearing in the July, 1940, issue of Health.)

HONEY FROM NECTAR.

In a lengthy article in the March 1940 Schweizerische Bienen-Zeitung the late Dr. K. Bruennich of Nidau, Switzerland, described his observations and experiments on the conversion of nectar into honey. The conclusions of the author are summarised as follows:—

1. The concentration of nectar takes place almost exclusively in the honey-sac of the bee.

2. In flying back to the hive the bee removes the greater part of the water in the nectar so that the nectar entering the hive is considerably concentrated. Before entering the hive the bee sprays from its body the water removed from the nectar.

3. The remainder of the excess water is removed in the hive during the ripening process. Ripening takes place rapidly and in three days the nectar has attained the concentration of honey.

4. The fanning of the bees at the entrance of the hive produces a weak current of air and does not aid in the concentration of the nectar but only serves to remove carbon dioxide.

A colony of good size in early summer brings in about 8,000 loads of pollen in a day. This probably represents visits to 80 or more blossoms per load. One large colony with a pollen trap brought in nearly 29,000 loads a day. This shows the value of bees for pollenisation as never before. It also gives a very definite check on just what flowers the bees work on and they often do not check with what the local beekeeper looks upon as his best sources.

THE GOLDEN THRONG.

(A Book About Bees, Reviewed by H. E. Coffey in "The Beekeepers' Item."

To us of the beekeeping fraternity the life of the honey bee is familiar and commonplace. The dramatization of bee life, therefore, so skillfully done by Edwin Way Teale in his recent book, "The Golden Throng," came to me as an unusual and pleasing surprise. Not in words alone does Mr. Teale tell his story, for the book is illustrated by more than seventy full page photographs made by the author himself.

The book is not the work of a mere bee fancier, but every page betrays the author as a clever scientist of rare inquisitiveness and artistic imagery. I venture the assertion that many of the facts he tells so dramatically are unknown and imperfectly understood by the average beekeeper. He, for example, explains the bee's method of locomotion. "One hundred and ninety times a second, 11,400 times a minute, the honey beats its wing in flight." Then he explains the four-directioned stroke and how the bee lifts loads greater than her own weight.

Mr. Teale's is a new, rare, distinctive approach. Briefly he traces the bee's prehistoric history. Then he lets us see him tend his own bee hive through a whole year. The mystery of the swarm, the entire life history of the insect, and many other facts are told most intriguingly. An entire chapter is devoted to explaining the author's technique in securing the unusual and true-to-life photographs with which the work abounds.

I was much impressed with the author's correct understanding of bee life. I have always contended that bees are creatures of instinct. On this point the author says: "It is well to remember that in all of these varied habits, and in the changes that lead to increasingly complex forms of co-operation, the bee is guided largely by instinct. The short life of the individual insect permits scant time for learning. Like the chick that can stand on its feet as soon as it breaks from the shell, the honeybee is equipped with abilities and instincts that make instruction or trial-and-error learning unnecessary. It performs a sequence of actions just as a phonograph record produces a sequence of sounds . . . . " Again the author says, " . . . . virtually all of the actions of the bees are instinctive and unpremeditated. The laws of the hive are written in protoplasm. They are the heritage of millions of years."

Of especial interest to beekeepers should be the complete discussion and listing of bee enemies. Every enemy, from the tiny mite to the man-size bear, is included. Another chapter is devoted to "The Bee in Lore and Legend." The only thing lacking in the chapter on "Books and Bees" is mention of beekeeping magazines.

Although not all beekeepers favour the golden bee, "The Golden Throng," is a book which will delight even the most practical and prosaic beekeeper. It is published by Dodd, Mead and Company, New York, and well worth the published price of $3.

SUPERING.

My experience is that it is always best to add each super as required by setting on the top of the pile. You will get more honey in all forms and much better sections every time. In any case ALWAYS add supers of foundation at the top; NEVER place them under drawn comb. There are plenty of arguments on this subject; but the only argument that I take much notice of is the fact that stocks give more honey so treated—just as they give more honey when the queen is restricted to one part of the hive by means of a queen-excluder. This, too, is often contradicted; but, as the famous Mrs. Gamp remarks, " Facts is stubborn things, not easy drove."

—R. O. B. Manley.

Virgin queens will mate and begin to lay sooner in a weak nucleus.

SOME WHATS, WHYS AND WHEREFORES

By a South African Doctor.

What is Honey?

It is the nectar of flowers distilled by bees and changed into a concentrated solution of dextrose (grape sugar) and levulose (fruit sugar) in water. These two special sugars are sometimes classed together under the name frustose. Honey also contains glucose and sucrose. The first is that sugar which is made from starch (of potatoes and mealie meal) by the saliva. The second is found in sugar-cane and sugar-beets.

Certain minerals, calcium, iron, and phosphorus are also found, in small but useful quantities; the presence of these helps to retard granulation.

There are two enzymes: invertase and diastase; these render food substances more soluble and diffusible.

Vitamin "A" is present, and some honeys contain Vitamin "B." This interesting list of contents indicates at once something of the high food value of honey.

Why is Honey so good for Health?

Here are several cogent reasons.

1. It has a pleasant flavour, this varies according to the flowers used by the bees. Pleasing odour and taste promote appetite and stimulate digestion.

2. In itself it is easily digested and rapidly absorbed by the blood.

3. It increases the palatability, and so the digestion, of other foods.

4. It is a naturally produced sugar food of high calorie value: 1 lb. of honey contains 1,480 to 1,500 calories; that equals 30 eggs, or 6 pints of milk, or 20 lbs. of carrots. Dates are the only food with a higher calorie value than honey.

Here comes in the question of cost. Admittedly, honey is more expensive than sugar, and costs more than jam. But—if you take into consideration all the points just made, food value, palatability, calories, etc., honey comes out top—at its ordinary price in this land of ours. Another point worth making is that honey goes much further than jam, you don't put so much on your bread!

5. It supplies energy quickly to the blood.

6. It needs no cooking.

7. It does not spoil by keeping.

8. It is always ready for use, nor does it degenerate in hot weather; it is, of course, not meant to be kept indefinitely, but is intended for eating!

For Whom is it Useful?

Convalescents after serious sickness or operations rapidly benefit by its systematic use; it can be safely and wisely given to babies and children; invalids appreciate and profit by its use.

All people undergoing any special strain such as business and war worries, over-work, examinations, can get great good from the regular use of honey.

Athletes find it a useful form of concentrated energy. It should be a regular ration for all hospital patients, and finally, ordinary people can use it with pleasure and profit.

For what Purposes can it be used in Sickness?

Here are some suggestions which have been found to be of value.

Honey is of service as a nutrient enema in various wasting diseases.

It is also a preventive of constipation. In such a case not too much should be taken at the start; but the dose can be safely increased.

It can be combined with baby foods, and used with milk in the baby's bottle.

For cases of heart weakness its rapid absorbability is of particular value.

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These accumulated points serve to stress the argument that it is a sound policy from the point of view of economy and health to use honey—more! —(Dr. L. E. Hertslet, Mapumulu.)

SWARMING.

G. M. Chenoweth.

Discussing swarming this writer, in "The Beekeepers' Item" for August, makes some interesting comments:—

There are many causes for swarming. Lack of room to store honey, lack of room for the queen to expand the brood nest, ventilation, etc., are some of them. But the main cause is what I am pleased to call an unbalanced hive or working force.

Bees in a hive are of two classes. All bees under 12 days old I call "house bees." They do all the work in the hive. The other class is what I call "control bees" or field bees. These bees do all the work of carrying nectar and pollen to feed the house bees and brood and for the storing of surplus honey. The young house bees seldom leave the hive. It is seldom that they can be forced to do field work, but the older bees, when needed quickly, adapt themselves to any work.

In the spring the bees are practically all control bees; but as nectar and pollen become more plentiful and the weather warmer, the queen lays more and more eggs each day. It takes no instinct to see that the time will arrive when the control bees are no longer able to feed the house bees and brood with what they get in the field, as their number is too few. Seeing this, they start swarm cells. A few times they become so desperate they swarm without making any preparation at all.

All swarm control methods, if any good, are based on breaking the cycle of brood so as to lessen the number of house bees and give the control bees a chance to increase their per cent. It is useless to cut out queen cells without doing something to break the cycle of brood.

To remove all open brood breaks the cycle 8 days; requeening breaks it in 5 days; Demareeing breaks it in 6 days; a five-pound package of queenless bees will break it for the season.

I can make any hive start cells almost at once by giving open brood. I can stop any hive from swarming by giving package bees at the right time. I doubt very much if a hive, given room and mostly filled with control bees, can be forced to swarm with a handful of virgins. I have hived many a swarm on one frame of open brood and removed the queen at once and seen 14 to 16 queen cells built on that comb, but never knew one to swarm. Young queens produced in these hives do not swarm because, at the time the first queen is out, the hive is made up largely of control or field bees. Most of the brood has emerged. All other brood is capped. Control bees let the virgins fight it out.

THE MATING FLIGHT.

Here is a description of a "bees' wedding," and Captain Crocker is describing it.

"Many years ago, while I was standing with a friend on the top of Rochester Castle, my friend said to me, Look, watch those bees.

"Six feeet in front of me and at eye level two bees were flying to and fro, passing one another in a swinging manner.

"In less than a minute they met, one above the other, and at the instant they met the upper bee appeared to burst and the contents fell on the lower of the two bees.

"Portions of the upper bee fell away to the ground, while the lower bee flew away.

"My friend then said to me, 'You have just seen the pairing of the bees.'."

Note—Captain Crocker is a keen entomologist specialising in Lepidoptera, a very accurate observer, and he lives at 55 Townley road, Bexley Heath.—Bee Craft.

BEEKEEPING IN AUSTRALIA

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LET US TALK HONEY.

Not only to improve the home market, but to increase the consumption of honey in the interests of the people's health, apiarists should talk honey whenever an opportunity is presented. Apart from the actual sale of a product, a phrase much used lately refers to the selling of an idea. Thus, by getting hold of good honey points, and using them, you may sell honey without actually offering it for sale.

The "South African Bee Journal" recently published an article by Dr. L. E. Hertslet containing a number of Whys and Wherefores on Honey so simply stated that they may be commended to all who desire that Australians should use more honey. Here is the article, only very slightly abridged.

HONEY FOR HEALTH IN HOME AND HOSPITAL

What is Honey?

Honey is the nectar of flowers distilled by bees and changed into a concentrated solution of dextrose (grape sugar and levulose (fruit sugar) in water. These two special sugars are sometimes classed together under the name fructose. Honey also contains glucose and sucrose. The first is that sugar which is made from starch (of potatoes and mealie meal) by the action of the saliva. The second is found in sugar-cane and sugar-beets.

Certain minerals, calcium, iron and phosphorus are also found in small but useful quantities; the presence of these helps to retard granulation.

There are two enzymes: invertase and diastase; these render food substances more soluble and diffusible.

Vitamin "A" is present, and some honeys contain Vitamin "B." This interesting list of contents indicates at once something of the high food value of honey.

Why Honey is Good for Health.

Here are several cogent reasons:

1. It has a pleasant flavour; this varies according to the flowers used by the bees. Pleasant odour and taste promote appetite and stimulate digestion.

2. In itself it is easily digested and rapidly absorbed by the blood.

3. It increases the palatability, and so the digestion, of other foods.

4. It is a naturally produced sugar food of high calorie value; 1 lb. of honey contains 1,480 to 1,500 calories; that equals 30 eggs, or 6 pints of milk, or 20 lbs. of carrots. Dates are the only food with a higher calorie value than honey.

5. It supplies energy quickly to the blood.

6. It needs no cooking.

7. It does not spoil by keeping.

8. It is always ready for use, nor does it degenerate in hot weather; it is, of course, not meant to be kept indefinitely, but is intended for eating!

For Whom is Honey Useful?

Convalescents after serious sickness or operations rapidly benefit by its systematic use. It can be safely and wisely given to babies and children. Invalids appreciate and profit by its use.

All people undergoing any special strain such as business and war worries, over-work, examinations, can get great good from the regular use of honey.

Athletes find it a useful form of concentrated energy. It should be a regular ration for all hospital patients, and finally, ordinary people can use it with pleasure and profit.

Use of Honey in Sickness.

Here are some suggestions which have been found to be of value:

Honey is of service as a nutrient enema in various wasting diseases.

It is also a preventive of constipation. In such a case not too much should be taken at the start; but the dose can be safely increased.

It can be combined with baby foods, and used with milk in the baby's bottle.

For cases of heart weakness its rapid absorbability is of particular value.

As a preventive of shock, and in the treatment of this condition it can be used instead of glucose.

In typhoid (enteric) it is found that it stimulates the bowel muscle more effectively than cane sugar.

As a substitute for sugar and sweets in cases of diabetes, it is recommended by many doctors.

Everybody knows the value of honey as a home remedy for coughs, colds and sore throats.

Honey in Ordinary Life.

Here are just a few ideas; there are countless recipes available in the cookery books.

Honey is useful in the making of brown bread and ginger bread.

It improves the taste of breakfast foods (post toasties and the like), and provides an excellent substitute for sugar with tart fruits, cooked or raw, also with rhubarb.

Granulated honey on biscuits or inside sandwiches supplies a delicious variant for the lunch package.

Honey and cream mixed together in equal quantities and frozen slowly form a delicious ice-cream.

Honey in hot milk is an excellent tonic on a cold morning.

Fruits can be bottled in honey; they look and taste delicious.

It can replace vinegar in the making of mayonnaise.

Crystallised Honey is quite as good as the liquid form and is easier to serve.

"Drizzled" Honey is prepared thus: Place the jar in warm water (not hot); it then runs in small streams rather than large ones and prevents the spilling of unpleasant stickiness.

These accumulated points serve to stress the argument that it is a sound policy from the point of view of economy and health to use honey—more!

The disease spreader, the location thief, and the price cutter would have been a nuisance in any other field of activity.

DEPARTMENT OF AGRICULTURE.

NOTICE TO BEEKEEPERS.

Will beekeepers please note that the headquarters of the Apiary Instructor for the Otago-Southland district has been changed from Dunedin to Invercargill, and all enquiries and correspondence should now be addressed in the first instance to:—The Apiary Instructor, Department of Agriculture, P.O. Box 825, Invercargill.

W. K. DALLAS,
Director, Horticulture Division.

HONEY SPONGE CAKE.

Take 3 eggs, ¾ cup strained honey, ¾ cup of sifted flour, ½ teaspoon baking powder, pinch of salt. Cream egg-yolks and honey together thoroughly. Beat egg-white stiffly, add the salt, sift in flour and baking powder, and bake at once in two sandwich tins for half an hour in a moderate oven. Join together with mock cream.

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Literary contributions and advertisements must be in the hands of the General Secretary, National Beekeepers' Association of N.Z., Pungarehu, Taranaki, N.Z., not later than the first of month of publication.

Nom-de-plume letters must be signed by the writer and address given, not necessarily for publication, but as proof of good faith. Letters accepted for publication do not necessarily express the views of the Editor.

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