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The New Zealand Beekeepers' Journal.

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THE NATIONAL BEE-KEEPERS' ASSOCIATION OF N.Z.

PER ANNUM: **3/6** IN ADVANCE.

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The New Zealand Beekeepers' Journal

The Official Organ of the National Beekeepers' Association of N.Z.

No. 19 DUNEDIN. 3/6 Per Annum.

OUR ASSOCIATION.

Briefly stated, the objects of our Association are to make beekeeping a better paying industry, and to make beekeepers into better beekeepers. As an industry, beekeeping is struggling to take its place alongside the older industries of the land. Methods of keeping bees have made such strides during the last ten years that the general public hardly yet realise that the beekeeper of to-day is a specialist, and has a right to be recognised as such. Again, the average keeper of bees hardly realises yet what a lot there is to learn about bees, and that to keep them properly he must master this knowledge. Thus we have to educate the public and educate the beekeeper, and we must organise if we want to do it. This is an age of education, and people look for it, though, perhaps, they don't always realise they are looking for it. The general public are our customers, and we must teach them to know good honey and to like it. We must induce them to overcome their prejudices against the bee itself; to learn that, even if an occasional bee uses its sting, the bees are necessary for purposes of fertilisation, and for the means of our livelihood. Then we must teach the indolent beekeeper that bees have a right to be kept properly, and, if worth keeping at all, are well worth proper attention. We need to raise the standard of beekeeping so that there will be no dirty, untidy yards or honey houses in the country, or unwholesome honey put on the market. It is these things which keep the industry back. We want all beekeepers to take a pride in producing the best honey in the cleanest surroundings, so that the public will learn to have confidence in all honey.

Such, then, are the objects of our organisation, but they are a long way from being accomplished. We must have the support, moral and financial, of every beekeeper who is worthy of his bees. It is no use thinking the other fellow will see to it: he might be thinking the same of you. Everyone should give financial help at least if he cannot give active help. What is to everybody's advantage is to yours also, so do not withhold your support till the enthusiasts lose their enthusiasm. It will be too late then, and you dare not risk the chance of things slipping back into the old rut again just when we are beginning to feel the advantage of the work that has already been accomplished by organisation.

The Association has started a bee journal for New Zealand, something which private enterprise would never have attempted, simply because it would not be a success financially. It may not pay directly, but indirectly it will pay, because it will be as it were the life-blood of the organisation, carrying its message to every beekeeper, and keeping him in touch with the world of bees.

HOW TO INCREASE OUR MEMBERSHIP.

This is a question more easily asked than answered. Owing to the naturally scattered nature of our occupation, it is difficult to make the individual members realise that unity is strength, even if it be at the cost of considerable self-sacrifice to themselves. For instance, I lately attended the annual meeting of one of our branches, having to drive 13 miles on a cold night, only to find an attendance of three others, and the President absent. After a little business was transacted, such as reading the minutes of the last meeting and an impromptu speech by the acting chairman, and a general growl at the industry and the wicked "other fellows," who have foulbrood, we wended our weary way home again, minus our annual sub. to the branch. Naturally one is led to argue, "Where do I come in?" This, I think most of my readers will agree with me is no isolated instance. But how can it be obviated? for to my mind every man who owns a box of bees should be a member of the National, and keep in touch with his fellow beekeepers. To this end I would recommend small branches holding meetings not oftener than quarterly, and electing a good live enthusiastic President and Secretary, whose duty it should be to think out a good programme beforehand that will attract the members to attend, and to circularise them personally on the matter, and to have one well-advertised field day, when the objects of the National and its branches may be explained, and new members solicited, and the great need of unity in the industry impressed upon them. I believe also the time has come for the National to assist by holding its meetings each year in a different centre, so that it can become a known and recognised body, and members should be urged to strain a point and make their annual holiday whereon the National meets. I know the cry, "What about the expense?" Well, I don't think I have ever attended any Conference without feeling that I have more than covered my expenses in the tips gathered by picking the brains of my fellows, or the advertisement I have got from being in evidence as a honey producer, to say nothing of the pleasant and congenial friendships made. If we popularise the National, and get the beekeepers to look forward to its arrival "in convention" to their district, we have accomplished much, and if we can get fellow-beekeepers in such districts to offer hospitality to visiting delegates, we shall as branches be accomplishing more. I once attended a Socialist meeting, and when the bag was taken round the bearer said, "In giving to me you are giving to yourself." At the time I did not agree with him, but now I say that's it in a nutshell.

Try to get beekeepers into the habit of attending Conference wherever held.

W. E. BARKER.

The N.Z. Co-operative Honey Producers' Association offers the solution of the honey marketing problem. Beekeepers will be studying their present and future interests by taking up shares now. The secretary's address is Mr. F. C. Baines, Hawera.

SCUM AND EFFLORESCENCE.

Confusion in regard to this question seems to be growing apace. What Major Norton terms scum is not the same stuff that our graders are calling scum, and which we have decided to call efflorescence. Major Norton has got the correct name for the stuff he is dealing with, but even then it is not true scum entirely. There may be traces of pollen grains and fine particles of wax in the very cleanest lines, but the stuff itself is still honey. I believe he will find the quantity is fairly constant, no matter how little or how much efflorescence was in the original.

What is the cause of the scum at the other end? Honey contains minute quantities of dextrine, which is a kind of gum. Major Norton uses dry heat to liquify the honey. Then while the honey is hot he strains it. This causes thousands of air bubbles to be formed. As the honey is warm, they rise to the surface, but the dextrine has caused a faint skin to be formed on each bubble. It is this which causes the scum. Probably if this scum were heated again in a water jacket it would resolve itself again into clear honey, and be worth more than 16/- a cwt.

If I am right in the above, then the producer has nothing to do with the matter. Efflorescence is another mare's nest which the producer need not lose his sleep over. Analysis by a Government expert has proved that the efflorescent layer is pure normal honey. Then why worry about how to prevent it? I have never tried to yet, and have never had more than the slightest trace on a few tins. I think I know, though, what is the cause of it. Small taps cause the falling honey to wobble so that air bubbles are carried down, and if the honey is cold they never rise to the top and burst, but stop beneath the surface and give the graders a fright. The last few tins will have a column of these air bubbles right to the bottom, and the efflorescence extends to the bottom also. I use all large honey gates, and generally run the honey off before it gets stone cold; sometimes it is not in the tank even a whole day. Sometimes I stir in a small quantity of granulated honey to hasten the granulation. I do not skim the tank till the level of the honey is nearly down to the gate again, and then I can get all the froth in a heap at the gate.

Can anyone tell me what is the use of the producer paddling and stirring his honey to get a very fine grain, when the honey is going to be liquified by the buyer, and the grain next time will depend on its treatment after being liquified? And in view of this, why should the graders be so mighty particular over the grain when they have only six points to come and go on in a grade? Grain, like efflorescence, is not an inherent quality in a honey.

Wainui. W. B. BRAY.

The honey crop of Canterbury bids fair to be the lowest on record, and with a reasonable amount of sunshine Southland will easily beat its previous best record.

THE PROCESS OF PREPARING HONEY FOR THE MARKET.

By C. A. JACOBSEN, Little River.

Quite an extensive discussion has taken place in the Journal in general on this important question, and has ended in nothing definite for the average beekeeper to master. Being a confectioner by trade, I am well acquainted with the chemical changes of sugar in the various processes of manufacturing, and this has helped me in my experiments. After trying a number of different processes, I have adopted the following as a standard process, and beekeepers can adopt it with absolute certainty that their honey will be marketed free from scum or foam. The process is as follows:—

I have a jacketed tank holding half a ton, this being big enough to handle a fairly large bulk of honey. The outside jacket is made with 1-inch space for the water at the bottom and sides, tapering to nothing at the top. This holds only a small small amount of water, and is heated with a No. 4 Primus stove. Just before commencing to extract, I light up the stove, and the honey passes from the extractor through the strainer into this tank. The lamp is kept going until about 9 o'clock in the evening. It is then turned off and covered up. My tanks are fitted with a 6-inch rim on top, with a fine strainer, and a close-fitting lid of wood. This I find quite sufficient to keep the honey warm till next morning. In the morning the honey is skimmed and run off into a second large wooden tank through a 2-inch honey tap. I have an eight-foot drop from my heating tank to the storing tank, and this gives the honey a good stirring up. When the tank is full it is again covered up to keep warm till next day. It is then run off into tins through a 2½-inch tap, leaving about 3 inches of honey in the bottom, and the process is repeated through the extracting season. It is not necessary to skim off the little froth on the top of the bottom tank until the season is over. I should mention that the large storing tank is lined with tinned steel, and holds about a ton.

It will be seen that the heating tank holds only half the quantity of the bottom one, which may be filled and allowed a few hours for settling before being tapped off. Care must be taken that the honey is not left on the heat too long. The time mentioned in the article is sufficient. If longer on the heat the granulation will be partially destroyed, and the grain will be coarse and gritty. If the granulation of the honey is not interfered with, no granulated honey is required for stirring in. Honey should never be stirred after partly granulated, as this causes froth. I do not appreciate Mr. Millar's remarks on clean scum and dirty scum, as what "H. B. M." calls dirty scum is not dirty if skimmed off the honey which has been handled clean, as it only contains pollen grains and small particles of wax. What Mr. M. calls clean scum is not scum at all, but simply froth.

Correspondence.

(TO THE EDITOR.)

Sir,—I have read with interest the letters which have appeared in the Journal on "Scum." I think this may be divided under three heads—(1) That containing dirt, particles of wax, and also air bubbles; (2) that consisting solely of air bubbles; (3) the white streaks which are formed in the honey itself and on its surface and sides in the containers, and which certainly do "grow." No. 3, I contend, is due to the honey having crystalised, and therefore taken on a different character. I would like to draw the distinction between granulation and crystalisation, the latter being identical with a small sample I enclose herewith. This was forced into the joints of a honey tank which I took to pieces two years ago, and the boards have been exposed to the atmosphere ever since. If it were ordinary granulation it would long since have absorbed moisture and become a liquid, no doubt vinegar. I understand in the boiling of sugar this changes its character eight times, until a certain amount finally crystalises. Why should not honey, therefore, under certain conditions undergo a similar change? I don't think it is a matter for the analyst to determine how we should get rid of or prevent this crystalisation. We would probably be better assisted by a sugar expert in trying to overcome what may be called an objectionable feature in our product.—I am, &c.,

VINDEX.

(TO THE EDITOR.)

Sir,—I am glad to have this opportunity of replying to a number of your correspondents on the matter of froth. It is evident that very few of these gentlemen have quite gone into the matter as recommended on page 108, volume VI., and I contend that no method in apiculture could be termed successful or otherwise unless the method has been tested thoroughly. I would like to say again that the method is superior to any other I have seen, and that it does entirely eliminate froth or scum or efflorescence, and that it improves the honey to a very marked degree.

Test it thoroughly during the coming season on the lines indicated in Volume VI., and you will be repaid.

A note of warning has been struck by Major Norton (page 284), when he says he does not require frothy honey which sells at 16/- per cwt. It is evident from his remarks that the matter must be investigated, and might I suggest, Mr. Editor, the appointment of a Honey Producers' Committee to experiment and report on the best and most economical method of eliminating this disagreeable froth. If expenses are incurred, the Association would, I feel sure, treat the cases as they deserve.—I am, &c.,

F. A. JACOBSEN,
Apiary Instructor.

November 19, 1915.

(TO THE EDITOR.)

Sir,—Would you kindly answer in the columns of your Journal the following questions:—

1. Can beeswax carry the germs of foul-brood?

2. If so, how do they get into the wax, as the cocoon separates them in the cell, and in rendering the diseased cells stay with the slumgum?

3. If wax carries the germs, how can suppliers guarantee their foundation clean?

Several of my beekeeper friends want a reply to this question, as they are hesitating over having their own wax made into foundation.—I am, &c.,

HARRY PENNY, Junr.

[(1) Yes; beeswax can and does carry the germs of foul-brood. (2) Cannot say. (3) Supply dealers can guarantee their foundation free from foul-brood for the very simple reason that they take steps to kill the germs by subjecting the wax before manufacture to a temperature of from 185 to 212 deg. of heat for a period of not less than twenty minutes. If your friends treat wax in this way they can make up foundation and use it with perfect confidence.—Ed.]

(TO THE EDITOR.)

Sir,—After reading the correspondence on scum, I am tempted to give my experience with it, trusting it may be of use to those who are troubled with it. I have never raised honey that did not have scum if allowed to stand, and I have no doubt all honey will do the same, more or less. When I was actively engaged in the raising of honey I had four tanks, each holding about 900 lbs. They were covered with lids, except the space at the end taken up with strainers, and when these were removed that space was also covered, so that nothing could get into the tank. When the first tank was full, I let it stand until there were signs of granulating, generally about ten to fourteen days, according to weather. By that time there was a good thickness of scum and small particles of wax, etc., which have passed through the strainer. I skimmed it thoroughly. You cannot avoid taking a good bit of honey along with the skimming, but if put into a suitable dish the honey will fall to the bottom and scum can be removed or honey drawn from bottom and scum left. The honey is then run into tins through a 2-inch gate as pure as it is possible to have it. If tins are closed up as soon as filled there will be no scum. Now, if you tin honey straight from the strainer and close up, you will have scum on every tin.

One of your correspondents said some of his tins had little and others had three-quarters of an inch. That is explained in his having allowed the honey to stand for some time, and running it off from the bottom—the first tins would be almost free of it, and the last would have most of it.

In all my experience scum was scum to the last. I never could make honey of it; but it never occurred to me to heat it, as Mr. Barker did, and, according to his statement, it partly reverted to scum. Whatever it is, it is better out of the honey. It is akin to the scum that rises on jam or jelly, and no woman would think of stirring it back again.

Those who practise stirring or paddling honey do not get the best results—pure honey—as by doing so all impurities that pass the strainer are kept in it; also every time it is stirred a certain amount of moisture from the atmosphere is taken up, and if persisted in would induce fermentation. The only time that it would be permissible would be when the tank is quickly filled and stirred to equalise the grain of the whole tank. On the other hand, if coming in quickly there would be little need to stir, as it would be almost all from the same source.—I am, etc.,

Oamaru. JOHN ALLAN.

(TO THE EDITOR.)

Sir,—Friend Cotterel (page 286) must surely have a bit of fun all to himself re swarm control. "J. S. C." considers a queen keeps on laying right up to the time the swarm issues, and then she turns round and away she goes out with the swarm. I wonder if she lays eggs all the time she flies about with the swarm before it settles. If Mr. C. has taken particular notice of this, it would be valuable information to some of our beekeepers who have never known this to occur. "J. S. C." has queens which lay 4,500 eggs per day. If he only uses single brood nests, this would practically be laid full in five days, allowing for little honey and pollen. I wonder what the bees do with the eggs to make room for the queen to continue. Surely they do not pile them in pyramids on the bottom boards, or remove them from the comb and scatter them about in the apiary. What do they do with the eggs anyhow? I consider my queens lay from 2,000 to 3,000 eggs per day, and I give my bees two brood nests, ten frames in the bottom, and nine in the top. This makes it 19 combs, and the queen and the bees keep this pretty well filled with honey, pollen, and brood during their busiest breeding season and boiling over with bees. Keeping a prolific queen busy is the secret of preventing the bees from swarming absolutely. What makes the bees swarm? This is necessary to know to work out a plan of preventive. Could "Critic" or somebody else tell us this. If not, I should be inclined to launch out on this subject myself, even at the risk of being severely criticised.—I am, &c.,

C. A. JACOBSEN.

[Sufficient has now been said on the scum question to enable beekeepers generally to attack the trouble intelligently. After the season is over we shall be glad of reports on actual working.—Ed.]

The Director of the Horticulture Division has received enquiries from a firm of merchants and wholesale grocers in Adelaide asking if New Zealand producers will quote them for New Zealand honey, giving full particulars as to size of packages, &c. They would like to see samples. Particulars may be obtained either from Mr. T. W. Kirk, Director of the Horticulture Division, Wellington, or from the secretary National Beekeepers' Association, Box 572, Dunedin.

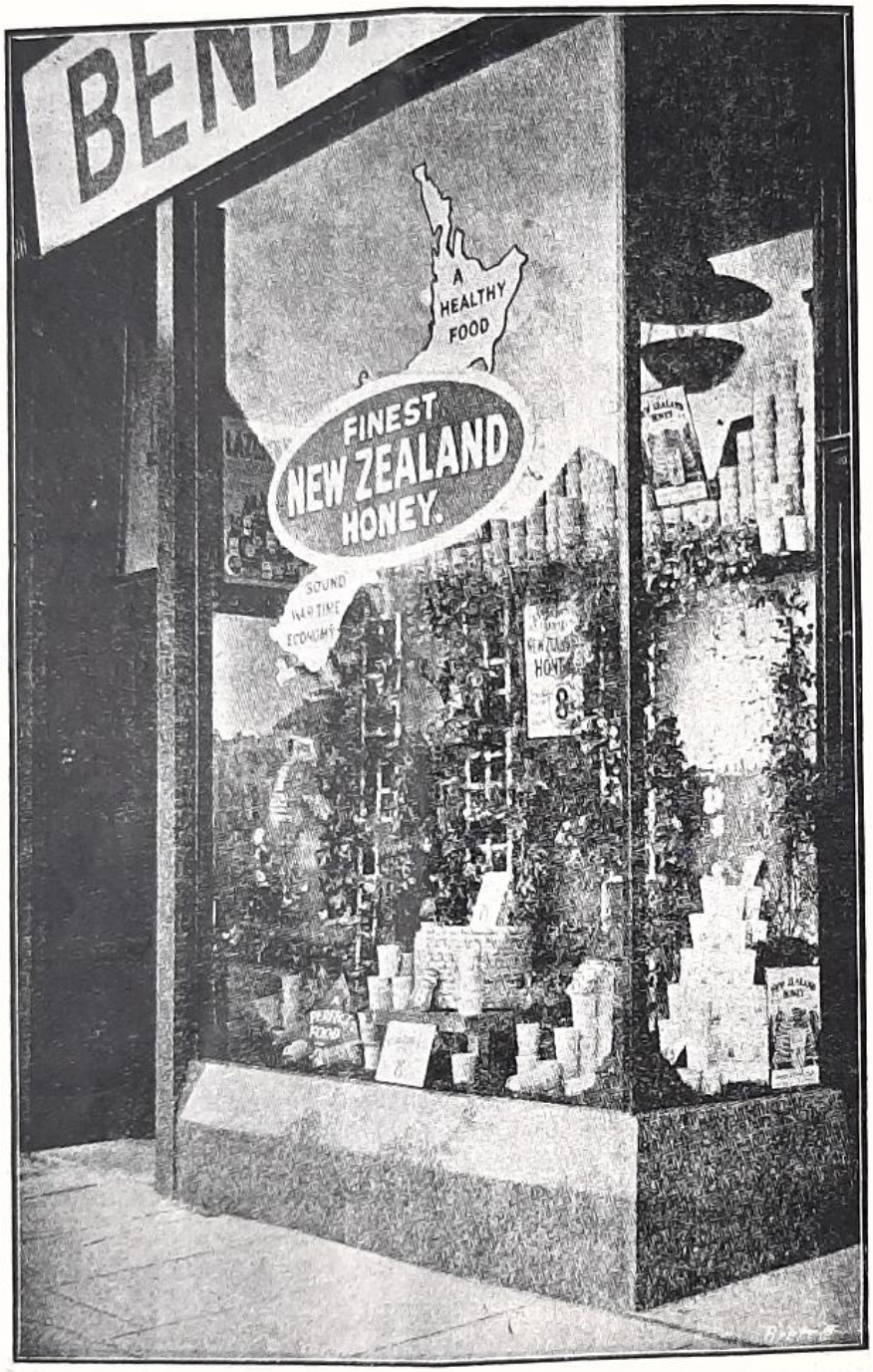


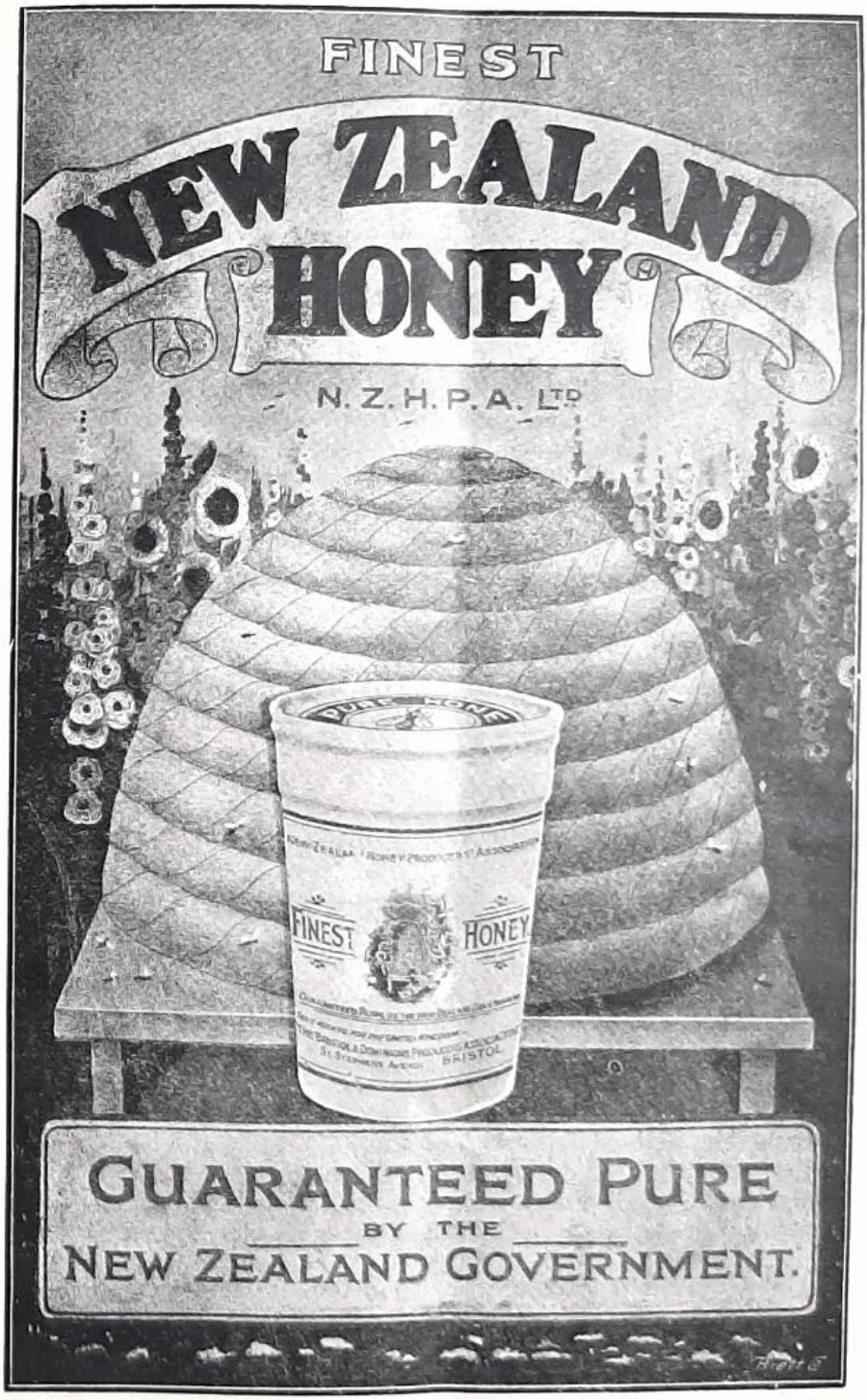
Illustration showing one of the very attractive window displays which are being arranged all over England advertising New Zealand honey as packed by the Bristol & Dominions Producers' Association, the British agents of the New Zealand Co-operative Honey Producers' Association, Hawera. Applications for shares and full particulars of the objects of the Company may be had from Mr. F. C. Baines, secretary.

AN OLD ONE BY MARK TWAIN.

When Mark Twain in his early days was Editor of a Missouri paper, a superstitious subscriber wrote him saying that he had found a spider in his paper, and asking him whether that was a sign of good or bad luck. The humorist wrote him this

answer and printed it:

"Old Subscriber: Finding a spider in your paper was neither good luck nor bad luck for you. The spider was merely looking over our paper to see which merchant is not advertising, so that he can go to that store, spin his web across the door, and lead a life of undisturbed peace ever afterwards."



This illustration shows one of the many striking advertisements which are appearing in the English daily papers in conjunction with the window displays of New Zealand honey.

HONEY AS A FOOD.

(Extract from article read before the Beekeepers' Conference, 1915.)

By B. C. ASTON.

Honey is one of the oldest of foods. When the hairy savage of the stone age licked his sticky fingers after robbing a bees' nest, his delight must have been equalled only by that of the occasion when he tasted a pot of the previous syrup diluted, perhaps accidentally, by the rain, and fermented—his first alcoholic drink, mead.

A love of sweet-tasting things is usually natural to healthy, muscular persons whose dietary and habits are normal. The Eastern races delight in sweetmeats and sweet drinks. The traveller crossing the desert is quite contented if he can get a handful of sweet, dried fruits, figs or dates for his daily bread. The manna showered on the Israelites in their wanderings in the wilderness was another form of sugar eagerly welcomed by the tired and hungry travellers. One of the first riddles, with a strong Oriental flavour, is about honey: "Out of the eater came forth meat, and out of the strong came forth sweetness."

Honey has a decided advantage over cane or beet sugar, which only contains the merest trace of ash, while honey contains from 0.1 per cent. to 0.26 per cent of mineral matter.

Honey compares favourably with other pure carbohydrate foods, such as butter and sugar, in mineral content, or even with the "staff of life" itself in iron content.

As to the absolute food value of honey, compared with sugar and other non-starchy carbohydrates, it comes a good second to cane sugar, which of course includes beet sugar. That honey should come so near sugar in spite of the huge development of the cane and beet sugar industries and of the dairy industry within the last century is surprising, and is a remarkable testimony to the work of the bee.

In addition to the food constituents dextrose and lævulose (two sugars which result when cane sugar is acted upon by acids, a process called inversion, and the product inverted sugar), honey contains certain flavours and aromas, as well as small quantities of acids and certain other bodies of subtle composition derived from the bee and flowers, which defy the ordinary analyst to determine in the course of a commercial analysis. It is, therefore, no easy matter to produce a factitious honey which shall please the palate like the genuine substance. It is, however, a very easy matter to produce from cheap materials an artificial honey which shall give the same general analytical figures. Hence honey is one of the most frequently imitated foods, owing to the low cost of the sugars (one of which may be made from sawdust) employed. The manufacture of artificial honey has indeed become a fine art in America, where pollen and dead bees are skilfully added to give versimilitude to an otherwise bald and unconvincing article.

Comments on Passing Bee Events.

By CRITIC.

November number (opening page).—It is pleasing to note that the N.Z. Honey Producers' Association intend to include the marketing of section honey in its operations. Although the market for comb honey is limited compared with that of the extracted article, there should be a larger demand at a better price than obtains at present. The cost in extra labour, comb foundation, and extra colonies to raise a given quantity of comb honey over that of the same quantity of extracted honey makes the expense quite double in the former case, or, in other words, one can raise twice as much of the latter in the same time as the former at about the same expense. In which case comb honey at the apiary should be worth double the price of extracted.

I am afraid all the "educational campaign" Mr. Morley Pettit can put into the business will not make each individual beekeeper a conscientious inspector of his own apiary. In this respect Mr. Pettit makes no allowance for average human nature, which is to hide our faults where possible. Official inspection and compulsory compliance with the provisions of an Act dealing with disease is the best method for controlling it.

Page 300.—The reason I am so certain that growing—well, "scum," as "Citizen" calls the growing substance in well-ripened honey, will not cause fermentation is because I have been watching its growth in different samples for a long time without their showing the slightest signs of change, either in taste or appearance, except such growth. One sample I have before me in which the growth is going on was extracted early in February, 1912 (nearly four years ago), yet there is no sign of fermentation. This, I consider, a good enough test to make my declaration on.

Page 301.—Mr. Bartlett-Miller quotes the Professor of Chemistry late at Sydney University as saying that "until honey is sufficiently diluted with water to ferment, no growth of any kind can by any possibility develop within or upon it." The remarks in the foregoing paragraph form a sufficient reply from me, which, of course, is open to criticism.

Page 303.—The N.Z. Co-operative Honey Producers' Association has done the correct thing in setting a minimum standard of density for marketing honey. There is no reason why such a trading Association should not accept liquid or partially granulated honey of good quality, providing the moisture content is well below the fermenting point. It is practically impossible to say without some reliable test, such as a hydrometer would indicate, whether a given sample of liquid honey is of sufficient density to be past risk of fermentation. The fact of such an Association adopting a minimum standard of density will further convince both beekeepers and dealers in honey that its methods of trading can be relied upon.

Page 304.—I am afraid the recipes for making mead and vinegar from honey are rather crude. There are, I should judge, numbers of beekeepers in New Zealand who can, if they will, give the Editor better methods for publication.

Page 308-9.—I cannot dispute Mr. Barker's contention that bees can puncture the corolla of a foxglove after his declaration that he has seen them do so. All I can say is that it seems to me most extraordinary, and I ask him if it is not possible he has made a mistake. I have watched bees scores of times among the blossoms of broad beans, and in every case seen them make for the base of the corolla to the puncture already there, but never seen them make a puncture. I haven't a foxglove flower to make a comparison of the corolla with that of the broad bean flower, but I imagine the former to be much more difficult to pierce than the latter, which is very soft. I am watching some bean flowers, and so far I firmly believe that many—perhaps the majority— of the punctures are not even made by humble bees, and certainly not by hive bees. More about this later. Now, listen to what A. J. Cook, Professor of Entomology, and, I should say, one of if not the greatest living authorities on this matter, says (page 395 in his "Manual of the Apiary," and he emphasises the statement by printing it in italics):—"Bees never bore for nectar, but seek, or even know only, of that which is fully exposed."

Page 310.—Mr. Barrett, or in fact anyone else, should be certain there is no disease in his apiary before transferring combs of brood from one hive to another, as this is a sure way of spreading the germs.

Mr. Askew will please accept my reply to "Citizen" re growing "scum" in this issue.

Page 311.—To Mr. P. M. McKay: As the Editor intimates that the Director of the H.P.A. is going to take up this question, I will not encroach at present.

Honey Crop Prospects.

The Director of the Horticulture Division has received from the apiary instructors the following reports concerning honey crop prospects:—

Auckland.—During this month the bees have been very busy, and the nectar has been coming in freely. The pastures are now becoming somewhat dried up, and a good soaking rain would do a great amount of good. There is but little section honey now sold on the Auckland market, as the poor prices in the past have driven beekeepers to produce extracted honey. Beeswax is somewhat lower in price, a large quantity having arrived from the Islands, which formerly was sent to Germany. —G. V. Westbrooke. 31/12/15.

Wellington.—The season is not sufficiently advanced for this year's honey to be offering, and last year's supply is practically depleted. Under favourable conditions the crop should surpass last year's, but a considerable amount of feeding had to be done during the spring, especially in Taranaki. The stocks, on the whole, are in good condition for the flow, and fine weather with occasional showers from now on should result in an average crop being gathered.—E. A. Jacobsen. 5/1/16.

Christchurch.—What few slight showers have fallen on the plains were immediately dried up by the hot winds which have been so prevalent this season; consequently very little honey has been stored in the supers. In many instances I have suggested putting on feeders to save bees dying of starvation in December. In many parts the prospects are not encouraging. Those beekeepers who are situated in close proximity to the hills and bush country are in rather a more fortunate position. Some severe frosts at the beginning of December destroyed the early clover bloom, flax coming into bloom, and many other sources of nectar suffered badly. Even hardy plants like the ivy appeared as if scorched with fire. Unless more favourable conditions prevail very soon honey will be scarce.—L. Bowman. 4/1/16.

Dunedin.—There is little fresh to report. Already beekeepers anticipate a light crop in South Canterbury and North Otago. In Southland the prospects of a good crop are excellent. At this time last year the beekeepers were busy feeding, but this season the bees have steadily increased the store of nectar. Given a spell of fine weather a heavy crop will be secured.—E. A. Earp. 4/1/16.

Good Things from Everywhere.

"In the Multitude of Councillors there is Wisdom."

"I have five colonies with five supers on top, eight with four supers, twenty with three supers, and the balance of the apiary with two supers in each. I must commence to extract soon." So writes a beekeeper in the Bay of Plenty district.

"Recently I visited the Bay of Plenty. It was fine to see the bees at work in ideal conditions, and heart-breaking to be compelled to return to my own wet and windy district."—Thus another correspondent writes.

A fire broke out in the apiary of Mr. F. C. Baines a few weeks ago, and destroyed his honey house, extractor, engine, and a quantity of sundries. The loss is estimated at £150. We sympathise with Mr. Baines in his loss, and trust that he will have a specially large crop to compensate him.

It is reported that a well-known beekeeper in South Canterbury district recently peddled his honey in one of the prominent towns in that locality from door to door, and sold it in 10-lb. tins at 5d. per lb., with the vessel given in. After all that has been written and stated within the last two or three years on the commercial value of honey, it is difficult to imagine that a beekeeper can be so short-sighted. Honey in 10-lb. tins is worth retail 5/6 to 6/-; 2-lb. tins are worth 1/4 each to the consumer, certainly not less than 13/6 per dozen to the storekeeper.

New Publication.—Bulletin No. 55, on "Bee Culture," by the Apiary Instructors, Messrs. Jacobsen, Westbrooke, Earp, and Bowman. We extend our hearty congratulations to Mr. Kirk and his officers for the excellent bulletin which has just been issued by authority of the Hon. Minister of Agriculture. Commencing on page 1 with interesting advice to beginners, the bulletin takes one step by step through all the various stages of bee culture, and gives sound and practical advice on almost every department of the industry. There is sure to be a very wide application for the bulletin, which may be had free on application to the Agricultural Department, Wellington.

There is an interesting exhibit in the office of the apiary instructor in Dunedin, consisting of samples of honey gathered in all parts of the Otago and Southland district extending over the last three or four years. These samples show practically no scum, yet the older ones all show the various sugars separating, indicating that certain chemical changes are slowly taking place in all the honeys. Some jars, while remaining perfectly liquid and clear, have a few grains or crystals on the bottom of the tube. Others appear cloudy, and some have only partially granulated. One sample taken from the Island Block district has a curious growth like froth, which is gradually spreading over the whole of the outside of a 2-lb. glass jar. One of the samples, taken from the apiary of a prominent Southland beekeeper, has not apparently changed in its nature for three years. After a careful examination one is forced to the conclusion that honey, when thoroughly ripened and manipulated intelligently, will not change or deteriorate, even though kept for considerable periods, whilst honey which is not treated intelligently will slowly and surely decrease in value.

DONKEY AND THE BEES.

Exciting episodes occurred at Ripley, near Woking, after the escape of a swarm of bees which the village schoolmaster was conveying to a neighbouring parish.

The hive was placed on a donkey cart, but a few of the bees escaped and promptly signalised their liberty by stinging the donkey.

Naturally the donkey kicked, and soon a wheel of the cart got on to the pavement, and over went the hive.

The schoolmaster's predicament was such that the landlord of the Anchor Inn went to his assistance, but the bees turned their attention to him and chased him down the village street. He and the schoolmaster were badly stung all over the head, neck, and face.

Subsequently the swarm attacked another man, who in trying to get away climbed over a fence and ran down a garden, where he knelt down and rolled his head in the grass for protection, ultimately climbing into a tree.

Others were also stung, including a passing cyclist, who fell from his machine in driving the bees away.

GRADING RULES FOR SECTION HONEY.

Considerable advance in the value of sections will follow a systematic and careful grading, and we suggest that beekeepers should obesrve the following rules:—

Sections should be removed from the super just as soon as they are capped over, in order to get them nice, clean and bright. When ready for shipment, sort them out into three different grades.

Special Sections.—To be well filled, combs firmly attached to all sides, and evenly capped, except the outside row next to the wood. The comb and cappings should be white, and should not project beyond the wood. The sections to be well scraped, and should weigh not less than 14 ozs. gross.

Prime Sections.—To be well filled, combs firmly attached, not projecting beyond the wood, and to be good sections, although not so well finished as those in special grade.

Good Sections.—To be composed of sections picked out from the two other grades.

The front row in each case to be a true representative of the contents of the case.

Most growers in the past have packed all grades of sections in the same case, consequently the price obtained has been governed by the lowest grade of sections in the consignment.

The wholesale prices should not be less than:—Special sections, 8/6 per dozen; prime sections, 8/- per dozen; good sections, 7/- per dozen.

WAIKATO BEEKEEPERS' ASSOCIATION.

At the invitation of the Director of Horticulture, the members of this Association will hold a "field day" at the Ruakura Apiary on Wednesday, 2nd February. All beekeepers outside the Association are also invited to attend. It is proposed to assemble at the apiary at 11 a.m. Those attending are requested to bring their own refreshments. Hot water, however, will be procurable at the apiary.

A general meeting of the members will take place in a room at the Public Baths the previous day at 10.30 a.m., when several matters of importance will be brought forward. Outside beekeepers are invited to attend.

W. H. TEED. Hon. Secretary.

We regret to hear that the indefatigable secretary of the Waikato Association has tendered his resignation to that body prior to his projected departure for England. In Mr. Teed the Association has had a secretary of few equals, and his loss to the Waikato Association and beekeepers' organisations generally will be keenly felt.

SUBSCRIPTIONS.

The following subscriptions have been received during the month:—Messrs. J. Bayne, A. M. Cave, J. L. Camplin, A. V. Dennis, C. F. Frederikson, C. E. Grainger, L. Gardiner, J. Keast, A. M. Meyenberg, Mrs. M. Nathan, Messrs. R. H. Nelson (7/-), A. W. Page, Thos. Pearson, Geo. Saville, C. G. Surrey, Mrs. M. Steel, Mr. W. D. White.

Right through the American States the beekeepers and supply dealers are engaged in an extensive honey advertising campaign. One of the cheapest and most successful of their methods is the use of stickers on all letters, papers, and parcels sent through the post. The National Beekeepers Association has imported thousands of these "Eat Honey" stickers, and invites every beekeeper to use them freely. Grocers would use a few hundred if they were asked. Will you help? The stickers are just like the heading, gummed ready for use, and printed in bright red on white. A parcel of 500 sent post free on receipt of twelve penny stamps. How many shall we send you?

EDITOR, Box 572, Dunedin.

ITALIAN QUEEN BEES.

BEEKEEPERS! Your attention a moment, please!

SIX TONS OF HONEY per 100 COLONIES.

How does that average strike you? That was the actual result obtained in this district last season. The season was nothing exceptional, but the Bees that produced that splendid result were not too slow: they were what we call hustlers; no "Beg pardon" about them.

THE STRAIN WAS GOOD—THAT'S THE SECRET.

It will pay you to have Queens from this strain.

I can supply you. Let me know your requirements.

PRICES:

Untested ..	**4/- each** ..	**10 for 35/-** ..	**20 for 60/-**
Tested ..	**7/6 each** ..	**three for 20/-**	
Select Tested ..	**12/6 each**		

A. J. D'ARCY,
20 Linton Street,
PALMERSTON NORTH.

ITALIAN QUEENS

From Root's Famous Long Tongued Red Clover Strain.

THESE ARE THE BEES THAT FILL THE SUPERS AND THE POCKETS.

SAFE ARRIVAL GUARANTEED.

PRICES. Cash with order.		1.	2.
	Untested -	10/-	15/-
	Tested - -	20/-	35/-

M. SHEPHERD,

10 WILMER STREET - - - CHRISTCHURCH.

W. A. DAWSON, FORTROSE.

PRICE LIST OF QUEENS.

	1	2	3	5
Untested ...	5s.	9s.	13s.	20s.
Tested ...	10s.	18s.	25s.	42s.
Select Tested ...	14s.	26s.		

COLONIES OF BEES (without Queens).

2 Frame (Nucleus Colony) ... ... **Each—10s.**
3 ,, ,, ,, ... ,, **12/6.**
4 ,, ,, ,, ... ,, **15s.**
Full Colony on 10 Frames ... ... **£1 12s.**

To the above prices must be added the price of the Queen required.

BEES Free from Disease, and bred from good stock. All care taken to ensure safe transit, but no responsibility taken with the colonies. I will, however replace a dead queen, from the mail, if the box is returned intact.

TERMS—CASH WITH ORDER. W. A. DAWSON, FORTROSE, SOUTHLAND.

TO BEEKEEPERS!

We are the Largest Manufacturers in New Zealand of HONEY TINS of all sizes for Local and Export Trade. We supply Tins plain or decorated.

Send us particulars of your requirements, when we will be pleased to quote you prices that we know will be favourable.

We have no agents, and all enquiries must be made direct to us.

ALEXANDER HARVEY & SONS, Ltd.

ALBERT STREET, AUCKLAND.

ROBERT STEWART'S PRICE LIST.

PURE ITALIAN QUEENS, GOLDEN & THREE-BANDED.

	1	2	3	4	5
Untested	5/-	9/6	14/-	18/-	22/-
Select Untested—1/- extra per Queen.					
Tested	10/-	18/-	25/-	33/-	40/
Select Tested ..	12/6	22/6			
Breeders	20/-				

Queens supplied at above prices from a new strain procured from the A. I. Root Company, and tested during last season, at customer's option.

TERMS: Nett cash with order. Cheques to have exchange added.

All Queens guaranteed free from Foul Brood, Bee Paralysis, and all other diseases. Bred from pure stock, which have been selected for hardiness, disease resisting, good working, and non-swarming qualities.

P.O. Order Office, Tapanui. Address: R. STEWART, Crookston, Otago.

Modern Equipment for the Progressive Beekeeper.

On every hand we are finding that Up-to-date Apiarists are recognising that success is most rapidly and economically secured by the employment of the latest forms of equipment. We make it our business to keep in touch with the leading Manufacturers in different parts of the Globe, and receive from time to time the **most approved and reliable devices** that have proved themselves by practical results. Amongst these are the following, which will be found of distinct service to Beekeepers, not only from the standpoint of saving time and trouble, but also in securing economy in time and expenditure.

POWER EXTRACTORS.

We issue a special pamphlet on this subject, and will be glad to mail a copy free on application. The plant consists of a four, six, or eight-comb Extractor, with a Honey Pump geared to the side, and the whole outfit driven by a one or a one and a-half horse-power motor. At a mere fraction of the cost of the wages of an extra man, and the saving of heavy, laborious work, an Apiarist with this plant can extract honey all day long.

THE BAINES' CAPPING REDUCER.

This device enables the Beekeeper to overcome all difficulties in dealing with uncappings. A high-grade wax is produced immediately the extracting is finished, and the honey is not deteriorated in the slightest degree. Particulars on application. PRICE, 55/-.

NEW QUEEN EXCLUDER.

This Queen and Drone Excluder is far superior to the perforated metal. It has met with the greatest approval from experienced Beekeepers, who consider it a most valuable invention. PRICE, 2/6. Per Dozen, 27/-. When ordering, please state whether for use on dovetailed or on old-style Hive.

ALEXANDER HONEY STRAINER.

This very useful article is made on the plan of a tin pail with handle, the bottom and sides between the braces being closed with fine brass wire cloth, fifty meshes to the inch. It provides a large amount of straining surface, will not clog up, and runs for hours at a time, catching all the sediment. PRICE, 18/6.

COMB FOUNDATION.

We keep large stocks of **Dadant's, Faulkner's and Root's Foundation,** brands of the highest grade, which can be used with complete confidence.

THE "DANDY" HONEY SPOON.

This is a wonderfully simple but very useful invention for those who use honey on their dining-table. It does away with sticky fingers, and is much cleaner and more desirable than the ordinary spoon. The "**Dandy**" is specially shaped, and has a little hook or catch in the handle, which enables it to be hooked on to the side of the honey jar, always ready for use, and always clean. PRICES: Nickel-plated, 1/6; Electro-plated, 2/- Post free.

A BOOK EVERY BEEKEEPER SHOULD HAVE!

"BEEKEEPING." (By Dr. PHILIPS.)

This is a new book which has just appeared, by one of the most eminent authorities on Beekeeping in the United States. It deals with the "how" and "why" of Beekeeping, and differs entirely from other standard works on Bees.

Orders are now being booked for delivery on arrival of Supplies.

SEND YOUR ORDER TO-DAY.

ALLIANCE BOX CO., LTD.,

HEADQUARTERS FOR BEEKEEPERS' SUPPLIES.

MANUFACTURERS OF THE FAMOUS "ALLIANCE" WATER-PROOF DOVETAILED HIVE.

CASTLE STREET - DUNEDIN.

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