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*S.A. Day*

# The New Zealand Beekeepers' Journal.

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APRIL 1st, 1919

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ISSUED MONTHLY  
FOR  
THE NATIONAL BEE-KEEPERS'  
ASSOCIATION OF N.Z.



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# The New Zealand Beekeepers' Journal

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

No. 4

VOL. 3

5/- PER ANNUM.

## National Beekeepers' Association of New Zealand.

The object of the Association is the improvement of the Beekeeping Industry and furthering the interests and prosperity of the Beekeepers throughout the Dominion. Membership is extended to any Beekeeper who is in accord with the aims and objects of the Association, on payment of fees as follows:—  
1 to 15 Hives, 5/-; 15 to 50 Hives, 10/-; 51 to 100 Hives, 15/-; 100 to 200 Hives, 20/-; every additional 100, 5/- extra.

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All communications respecting the Association and Journal to be sent to  
**FRED. C. BAINES, Kati Kati.**

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## EDITORIAL.

In our remarks last month relative to the Queen-rearing Apiary that is being established at Tauranga, the statement was made that only 3 per cent. of the queens could be classed as purely mated. The Editor apologises for a mis-statement: "Three of a particular batch" and "3 per cent." are very different matters. The percentage is considerably higher. (Irresponsible beggar, that Editor!)

We also learn that since those remarks were written the district has been

thoroughly inspected, and all disease eradicated; also the Italianising of all the black bees in the district is being carried out, so that next season, when the queens from the apiary will be on sale for the first time, the percentage of mis-mated queens should be very small. Good business!

The Secretary will be very glad of offers to read papers at Conference on matters affecting the industry, particularly if they are of a helpful nature to the younger members of the fraternity. It has been suggested that a great number come down to learn more about the industry, and are as a rule rather disappointed. The usual remark is: "I've enjoyed myself immen-

sely, but I should have liked to have learned a little more from the experienced men."

Whilst not advocating that the Conference become a sort of beginners' class on a large scale, we do think that part of the programme should be devoted to helping those who are just feeling their way. To this end the Secretary will be very pleased to receive offers of help.

Will the Branch Secretaries please note to hold their annual meetings in good time, so that all subscriptions can be sent to the General Secretary before 31st May, that the Government subsidy can be collected on them?

Will all the members not attached to local Branches please send their subscriptions direct to the General Secretary on reading this? We want to collect the full subsidy (£100), and are a very long way off it at present.

We shall be very pleased to enrol new members, and cordially invite all those interested in the industry to assist us by swelling our membership, so that when we go to the Government for anything we can say we speak for the whole of the beekeepers of the Dominion.

Readers will notice we have had inserted in this issue an addressed post-card asking for particulars of crops. We appealed last year for crop reports, and the response was disappointing, although we learned afterwards that many intended to send, but forgot until it was too late. Therefore we shall be very glad if you will fill in the particulars and post by return. All communications are confidential, and will be put to no other purpose than being published in the Journal without identification.

We commented last month on the fact that Mr. Hopkins had been favoured with a copy of certain information bearing upon the new contract between the Bristol and Dominions and the H.P.A., whilst we had not. On the 21st of last month—too late for inclusion or comment in the March issue—we received the copy. Comment is made elsewhere.

Congratulations to our friend Mr. H. R. Penny, who writes us that "he is on the 'moon,' and has left the bees to take care of the honey." We wish him all the good luck possible.

We commend to the particular notice of our readers the article taken from the "Domestic Beekeeper" on "Honey v. Sugar Syrup for Bees," as it is about the time of year when winter stores engage our attention. The Editor has had rather more experience in compulsory feeding than he desired, and is convinced that it is absolutely foolish to take honey that should be left for winter stores and replace with sugar syrup. As the writer of the article states, the sugar remains sugar,

and does not contain the necessary constituents for the well-being of the bees. The Editor's experience is that they winter only poorly, and do not build up in the spring, and the inference to be drawn is that the bees recognise they have not the proper food for brood-raising, and consequently do not attempt it.

Last year we found the hall we usually hold our Conference in was too small to accommodate the visitors comfortably, so a new place of meeting has been found in the Dominion Farmers' Institute, Featherston Street. This has a very fine hall, built for the purpose of holding conferences, and, we expect, will be found a great improvement.

We are favoured with an advertisement from the American Bee Journal, and we have every confidence in recommending both that publication and any or all of the books advertised by them.

The Editor has had rather a "rough passage" of late: has been getting some strong letters of one sort and another; but the receipt of one from England from a stranger contains the following:—"Last season I made (through correspondence) the acquaintance of Mr. M. Atkinson, who very kindly loaned me several copies of the N.Z. Beekeepers' Journal. Apart from the article which my friend Atkinson contributed, I was more than pleased with the Journal itself, and I desire to tender you my hearty congratulations on the production of such a bright, go-ahead Journal, which reflects on you the highest possible credit. The position of Editor is not always the happiest, but it is evident to everyone who reads your Journal that your heart and soul are in your work, and in its success you find the highest happiness. However, I think you do. Please forward me copies of the Journal," &c., &c. Thanks very much, distant friend; your remarks seem to give a little more power to the elbow.

We are asked by the widow of our late friend, Mr. G. Flaanagan, of Dannevirke, who appealed for assistance in selling the apiary, to state that the whole of the plant and bees have been sold at a satisfactory figure. Mrs. Flaanagan also desires us to tender her thanks to all who generously offered assistance.

While sniping in "No Man's Land," in a skilful and fearless manner, 40724 Lance-corporal J. Silbfont, N.Z.R.F., worked his way to within twenty yards of the hostile trenches, where he killed ten of the enemy. Later, during the attack, he did excellent work in sniping the enemy as they showed themselves in throwing bombs.

What is the difference between a honey comb, a honey moon, and a young lady? Come to the Conference and hear.

## Market Reports.

Extracted Honey value, spot 1/8 per lb.; forward, 1/3 per lb. The market is naturally in a distracted state in consequence of the altered conditions brought about by the armistice and the relaxation of Government regulations here and in America. Any small lots on the spot realised very fair prices, but consumers will only buy for absolute requirements, and will not buy ahead except at nominal prices. It is, therefore, useless giving a record of what has been done in the past month, for it would serve no useful purpose. Spot lots of Californian honey latterly realised 197/6, and other varieties on about the same parity. Sales of Australian honey for shipment from there in December have been made at 120/., and there are further sellers at 125/.. This, of course, cannot arrive here until about March. The only bids forward for Chibias have been in the neighbourhood of 80/.. There are plenty of offers of American honey for shipment, which will now become available, as the American Government have removed the embargo against export, so we look for our prospect in our last report to be fulfilled. Another month should clear the air, and we hope in our next report to be able to give a more settled review. There seems to be no lack of supplies of honey from the world over, and as we expect reasonable shipping facilities in the near future, we think we must look for prices to be in the neighbourhood of 90/- to 120/-.

Beeswax.—Value is 1/8 to 1/10 per lb. There is no appreciable difference in the price of this article. Stocks are plentiful, and the demand is slow. Here again we must look for a slow market, but there is not the same room for a decline as there is in honey, the price of this article having risen only 50 per cent. during the war, whilst honey appreciated 500 per cent.

TAYLOR & CO.

Liverpool 24/12/18.

**Honey.**—Extracted Honey: Probable nominal value 1/3 per lb. Since our last report the decline we foretold has come to pass. Some few parcels were sold at the beginning of the month at the old prices, but since then offers of Jamaican honey have been made at 170/- per cwt., without eliciting bids. There have also been offers of Chilian at 155/- for first grade, but buyers did not respond with any bids. Finally, we wound up with offers of Jamaican at 110/., but still no buyers. The honey market, therefore, has completely collapsed, and what makes matters worse is that the Government are not granting licenses for export. If licenses could be obtained, it would without doubt create a demand from the Continent, which would help to relieve this market. There should, however, be greater elasticity in the New York market, because we understand facilities are given there for exporting honey. Under the present circumstances it is useless our giving you de-

tailed quotations for the various qualities, because they would be of little value.

Beeswax remains dull, and there is only retail business, at about 1/10 to 1/10½ per lb.

TAYLOR & CO.

Liverpool, 25/1/19.

London, 28th February, 1919.—There has been a heavy fall in honey owing to heavy arrivals, including 12,000 cases of Australian, for which the best offer was about 70/- a cwt.—N.Z. Herald, 3/3/19.

Market conditions are practically unchanged. Fair supplies from Coastal Districts continue to arrive freely, and any of good quality found ready sale. Choice Western, on the other hand, is particularly scarce, and odd small lots arriving are quickly cleared at 7d. per lb. The demand is exceptional for this time of the year, due, no doubt, in a measure to drought conditions in the principal honey producing centres, seriously curtailing the flow and keeping the market short of supplies. A quantity of dark coastal of strong flavour is available, but for this class the demand is quiet. Another small allotment of space for export has been made, all holders sharing proportionately on the basis of stocks. Latest market quotations are:—Choice, clear, liquid Western, 7d. per lb.; best Coastal, 6½d. per lb.; dark and treacly flavoured, 5d. to 5½d.—Australian Beekeeper, 15/2/19.

The Director of the Horticultural Division has received from the Apiary Instructors the following report concerning the honey crop prospects:—

Auckland.—February has been an ideal month for the bees, and prospects have improved accordingly. Waikato reports indicate the honey crops will be slightly below the average. Thames Valley will show good returns, mainly owing to the late flow from Pennyroyal. Generally the season will be fair.—G. V. Westbrooke.

Wellington.—A number of returns are now available showing the honey crop gathered from apiaries in my district. They are all good average crops, which serve to indicate that the climatic conditions were very evenly distributed, as usually the crops are patchy. The quality is all that could be desired. None of this season's crop has yet reached the market, but prices are likely to remain firm. Beeswax is in demand at 2/3 per lb.—F. A. Jacobsen.

Christchurch and Dunedin.—Weather conditions have been favourable for extracting operations, and, as indicated last month, there is an assured crop in Canterbury and northern districts. In Otago the crops are light, but in Southland the season generally has been a failure. If weather conditions had been favourable a good surplus would have been secured from the thistle bloom. Prices are firm. A few consignments of this season's crop are forward for export. Sections to 10/- per dozen; bulk honey to 9d. per lb.; no pat honey forward. Beeswax is in good demand.—E. A. Eary.

Department of Agriculture, Industries and  
Commerce, Horticultural Division,  
Wellington, 21st February, 1919.

To Mr. F. C. Baines,  
Secretary National Beekeepers' Assn.,  
Kati Kati, Bay of Plenty.

Dear Sir.—The following is a copy of a  
letter received by this Department from  
His Majesty's Trade Commissioner, 11  
Grey Street, Wellington:—

"I have the honour to inform you that  
I have received a communication from  
Messrs. Grace Brothers & Co., Ltd., of 144  
Lendenhall Street, London, E.C. 3. This firm  
is desirous of importing high-class New  
Zealand jams and honey, and would be glad  
to hear from exporters of these goods. I  
would ask you, therefore, kindly to make  
this matter known to such firms as may be  
interested."

Yours faithfully,  
T. W. KIRK,

Director of the Horticultural Division.

[The above may be of interest to some  
of our readers.—Ed.]

## H.P.A. Contract with the B. & D.

The following clauses are of considerable  
interest to the shareholders:—

Contract.—By last mail we sent to our  
Wellington office a draft of the new con-  
tract between your Association and our-  
selves, and no doubt ere this reaches you,  
you will have had it before you, and you  
will have noted there is really very little  
difference in the wording, with the excep-  
tion, of course, of the advance; and you  
will also observe that we are quite pre-  
pared to contract on the basis of 60/-, to  
take effect on January 1st, 1919—as a mat-  
ter of fact, we are now advancing you con-  
siderably more than the figure in the con-  
tract.

As regards the classification of the honey  
within the meaning of the contract, we  
agree that there should be a clear under-  
standing from the outset. For purposes of  
the contract we are quite agreeable to  
accept lines marked 1 and 2 in your letter  
under review as the class of honey we shall  
be prepared to advance 60/- against Line  
3—that is, dark amber and C grade honeys,  
which necessarily at all times would have  
to be with recourse—could be left outside  
the contract, for us to advance prices as  
may be arranged from time to time. At  
the present moment it looks as if it would  
not be necessary for us to advance less  
than 60/- on this class of honey for some  
time to come, but then, of course, so much  
depends on what the honey is like when it  
reaches us.

Comment.—I expect the lines marked 1  
and 2 are White and Light Amber, for  
which the 60/- without recourse is ad-  
vanced. The clause does not indicate the  
position of Med. Amber if my supposition  
is right.

Line 3 (Dark Amber and C Grade).—I  
do not think it quite a fair thing to place  
dark amber honey on the same footing as  
C grade. It is quite possible for a dark  
amber honey to grade special, and yet,  
simply because of its colour, it is placed  
on a par with a third grade, lighter coloured  
honey. Although I did not hear Major  
Norton when he first visited the Dominion  
and made the original offer to the bee-  
keepers here, I have always understood he  
made the statement that he could dispose  
of our dark honey at as good a price as the  
lighter by placing it in the part of the  
country where this class of honey is raised—  
viz., the north of England and Scot-  
land. The original contract made the ad-  
vance on the grade note only irrespective  
of colour, and was carried out for, I think,  
two years before the colour determined the  
price advanced. If it was possible then,  
why not now? So it really does not mat-  
ter, if you happen to raise dark amber  
honey, whether you grade Special, Prime,  
or C, you will only get the advance paid  
on the latter. This does not seem quite  
right; and as Major Norton will read these  
remarks I hope they will prompt him to  
give us an explanation. I readily admit  
this is partly a personal matter, as I raise  
chiefly dark and medium amber honey; but  
there are a great many others who are  
similarly placed, particularly in parts of  
the Waikato, North Auckland, and the Main  
Trunk districts.

The clauses on Insurance and Interest  
do not call for any comment, except as  
regards the latter, which, of course, claims  
the right of charging interest on advances  
made on honey being held in store awaiting  
shipment. No firm could be expected to  
advance thousands of pounds without  
charging interest.

Clause.—Another point in regard to the  
previous contract is that in accordance  
with the terms of our contract, and with  
the spirit in which the subscriber under-  
took to do the work for the last three  
years, owing to an inadvertence in this  
office we have actually undercharged you  
in commission. We do not wish to resur-  
rect this with a view of claiming anything,  
but merely to point out that as you will  
notice in the new draft, we have empha-  
sised it a little more—namely, that the  
commission is to be charged on the gross  
sales. This is undoubtedly as in accor-  
dance with the contract that was intended  
should happen in the past, but seeing that  
it has been our own mistake in this office,  
we have no desire whatever to further refer  
to the matter.

Comment.—As I was secretary to the  
H.P.A. at the time the contract was signed  
I must say I was quite cognisant of the  
fact that the commission was to be charged  
on the gross sales, and for any firm, after  
finding out that it had by inadvertence  
robbed itself of hundreds of pounds, to meet  
the case in such a generous spirit as the  
above should commend itself to every  
person concerned. Major Norton, I take  
off my hat to you!

Clause.—As regards the deducting of marks on account of the package, which we understand will sometimes bring B grade honey down to C grade, from our point of view we should give the shipper the benefit—that is, if the honey was only placed in C grade on account of the package; and providing that the package in no way interfered with the keeping qualities of the honey we should not regard it as C grade from the standpoint of advance without recourse. It is immaterial to us what the honey is packed in provided the tins are clean and in every way sound; nor are we particular in regard to the class of case, provided it is sufficiently strong to carry the honey safely. All we must stipulate in regard to the package is that the honey shall be packed in uniform-sized tins and cases, and that the tins and cases shall be sufficiently strong for the purpose for which they are intended. Provided this is the case, we shall take no notice whatever of any deduction in marks made by graders on account of the package. For your information we may say that recently quite a lot of Australian honey has been reaching this country packed in kerosene tins and frail cases, with the result that the honey has been unfit for packing owing to the taint and the cases having arrived in a more or less broken condition, which has meant leaky tins and various other troubles.

Comment.—I have drawn attention to this on previous occasions, and am very glad to see it embodied, as now, no supplier will lose money on his honey because his cases are not quite up to the mark, probably through no fault of his own.

Clause.—We are exceedingly pleased to note that you are making such good progress with your Association, and we can only trust that the position of shipping will be very shortly improved, because we are now in a position to sell to advantage any quantity of honey that you can send us. There is no limit at prices that we feel sure will be very remunerative to you. It is unfortunate that we have not any of your honey here at the moment, in order that you should get the full advantage of what is doing; but we can assure you we shall be immensely pleased when the price of honey once more gets to a reasonable

level. The foreigners are reaping a huge harvest at the expense of the consuming public in this country. Control has been threatening for months. At the time of writing, however, nothing has been settled, but we have reason to believe that before this reaches you something will have taken place. Assuring you of our best efforts at all times in your interest,

We remain, yours truly,  
THE BRISTOL & DOMINIONS PRODUCERS' ASSOCIATION, LTD.

(Signed) A. E. M. NORTON,  
Managing Director.

Is not that good reading! Are not the beekeepers of the Dominion fortunate in having a contract with such a firm? I am more than ever convinced that we are absolutely "on velvet," and for my part, if I were a director of the H.P.A. I would send every ounce of honey possible to our friends in Bristol. They have an unlimited market, will take all we can send, have paid big dividends every year, and they state there is no limit at prices which will be very remunerative to us.

I understand that the gentleman appointed manager of the H.P.A. is a very capable man, having had experience in large commercial concerns, and is right up to date in business methods. Therefore, I think we can look with confidence to the future prosperity of all those engaged in the industry.

Allow me to congratulate you on the Journal and its excellence. Apart from any consideration of merit in articles, instructions, etc., the charm is in the tone of cheerful fraternity and fellowship you adopt therein. That is what distinguishes from the usual type of journal which stands dry as dust upon its dignity, tries to be scientific, and lapses into pedantry (of a sort).—B. H. H., Mosgiel.

Arrange for your annual holiday to fit in with June 11th, 12th, and 13th, at Wellington.

Red-letter days in the N.Z. Beekeepers' calendar—June 11th, 12th, and 13th.

## To Beekeepers—Beginners or Experts.

TAKE NOTE.—The Dates of the  
ANNUAL CONFERENCE are

**JUNE 11th, 12th and 13th.**

**We want a Record Attendance this year.**

## Beekeeping for Beginners.

### MONTHLY INSTRUCTIONS.—APRIL.

[As these instructions conform to the seasons in the Auckland District, an allowance must be made for difference in latitude North and South. Average bee-seasons in the extreme North are four weeks earlier, and in Southland three weeks later.—Ed.]

If the instructions given last month were carried out the work in the apiary is now finished for the season.

If you have not disposed of your crop, just a word on the disposal of it will not be out of place. Don't sell below market value. Honey is worth to-day 8d. per lb. in bulk, and at least 9d. per section. I often hear the remark, "Oh! I'm not depending on the bees for a living, and as long as I can get sufficient honey for my own use I don't bother much about the surplus." There are plenty who are depending on the bees for a living, and it only wants a certain number of small beekeepers to sell below market value when the commercial man will be bound to do likewise. You notice the price the storekeeper charges—he sells at the ruling rate, and buys as far below that as possible. I was shown some honey in a shop in Christchurch that was marked 1/- per lb., which had been bought for 6½d. Honey has been sold below its real worth for a number of years, but is coming into its own just now, so do not go in for any cut-rate business.

F. C. B.

## Honey v. Sugar Syrup for Bees.

Proper Food for Feeding Bees When Short of Stores Not a Question of Dollars and Cents as to Food Value Supplied.

(By H. D. MURRY, Roxton, Texas.)

There is a tendency among beekeepers to depend largely upon sugar syrup to make up any lack of honey in hives for winter stores, or at any time when the bees run short of stores. I have wondered whether or not we are acting wisely in doing this. In the March and April issues of the American Bee Journal is a series of articles that throw considerable light upon this important question if closely studied. I shall not have space in this article to quote largely from these articles, hence must ask the reader to look them up and study them for himself. The articles referred to are by R. Adams Dutcher, Division of Agricultural Biochemistry, University of Minnesota. He says: "Chemical analysis shows all living organisms to be composed of chemical substances which are being continuously broken down and rebuilt during

the life of the organism. In order that the organism may best perform its natural functions, it is necessary that the right kind of chemical materials be furnished in correct proportions and in sufficient quantity. The chemical substances which are present in the food materials of higher animals, and which must be present for a normal growth and development, are (1) the protein, (2) the fats, (3) the carbohydrates, (4) mineral salts, and (5) growth-stimulating substances sometimes known as vitamins."

The author then goes on to give the mineral contents of various foods. From this table we learn that the honey contains 0.18 per cent. of the necessary mineral substances, while sugar contains none, being purely a carbohydrate, which serves only as fuel material in the animal body. While sugar is 100 per cent. carbohydrate, honey is shown to contain 75 to 81 per cent. of the same. This shows clearly that honey contains an ample supply of the fuel material.

Table VI. in the article quoted gives the contents of Sainfoin nectar and honey as follows:—

	Cane Sugar.	Invert Sugar.
Sainfoin nectar	57.20	42.80
Sainfoin honey	8.20	91.80

It has long been known that it is necessary for the bees to change the cane sugar contained in nectar to invert sugar before it becomes honey. This they do by a process of digestion. Mr. Dutcher says: "The changing of sucrose or cane sugar to invert sugar is brought about by enzymes or ferments in the body of the bee." This being the case, it must tend to exhaust the vitality of the bee to bring about this change. In the case of sugar syrup, do the bees make this change? If so, the result will be honey. We know this is not true, for there have been numerous attempts to feed sugar syrup to bees and have them store honey. All such efforts have been a complete failure, the result being the same old sugar syrup transferred to the combs. Since the bees do not make honey of sugar syrup, we are forced to the conclusion that sugar syrup cannot take the place of honey as a food for bees. It is lacking in the elements necessary for replacing worn-out tissue in the old bees, and does not contain the elements necessary for the proper development of the larvae in brood-rearing.

The author gives the composition of honey, Table III, as follows:—

	Per cent.
Water	17.00
Invert sugar	75.00
Cane sugar	1.90
Dextrin (a gum)	1.80
Protein	.30
Ash	.18
Undetermined (pollen, dirt, hair, &c.)	3.08

It has recently been discovered that honey contains vitamins. I understand that the vitamins are contained in this undetermined percentage. As Dr. Miller says, "I don't know." It is sufficient for



me to know that they are contained in honey and not in sugar.

I wish it distinctly understood that I am not a scientist. I am studying this subject purely from the standpoint of the layman, and a practical beekeeper. As it appears to my mind, honey contains certain elements essential to the well-being of the bees, especially in the proper development of the young bees during the building up of our colonies when preparing for the honey flow. Honey is the natural food for bees, and nothing else will quite take the place of it.

Dr. C. C. Miller has been keeping bees longer than most of us have been living, and he has long since discontinued the feeding of sugar to his bees. He saves up combs of honey during a honey flow and feeds them to his bees during a time of dearth. He says (April issue of *Gleanings*, page 217): "Feed bees on sugar alone for a sufficient length of time, even with the addition of pollen, and it is my belief they'll die of anemia." The good doctor then goes on to urge the young beekeeper to first see that his bees have plenty of honey for winter stores before he takes a pound of surplus. I believe it is good advice. Of course, we have all been through a dearth of several years, when there was little or no honey. In such cases it becomes necessary to feed sugar rather than let our bees starve outright. But, this by no means proves that we may properly take off everything above the brood chamber and feed sugar syrup for winter stores without causing our bees to deteriorate in vigor and vitality. Just notice what a change comes over the bees when a honey flow begins in the spring. While we are able to keep most of them alive on sugar syrup, they never seem to really prosper till flowers come into bloom and the bees are able to get their natural food from the fields. Again, it is noticeable how prosperous a colony in a hive will be where it was not robbed of its honey the previous season. They begin to breed up early in the season, and by the time the first surplus flow begins they are ready to swarm.

The beginner or the veteran who has never given this subject any serious thought may figure the matter this way: "I can take the honey from this colony and sell it and buy enough sugar to winter three or four colonies." To such I wish to say it is not a question of the market price of honey as compared with that of sugar. It is a question of maintaining the stamina and vigour of our bees. I take the position that the beekeeper who leaves plenty of honey for his bees will not lose anything thereby.

—'Domestic Beekeeper.'

I think the Journal "just it"; every number is an improvement, and I would not be without it for something.—(M.B.)

The dates of the Annual Conference are June 11th, 12th, and 13th.

## District Reports.

### TAIERI TALK.

It is now certain—I do not intend to coat my words with Heliconian honey to make the truth less harsh—that the crop is a ghastly failure. The following, contributed by the local bard, requires no comment:—

"None have much and few have more;  
Some are sad and some are sore;  
Some have little, but more have less;  
Some have not a pound to bless  
Their empty tins and yet possess  
Tons in dark and viscous mess."

Extracting (where begun) is not yet finished, but interim returns are estimated at 10 lbs. per hive. In most cases the returns will not reach that giddy height, as the greater part of the crop is dark and unextractable. So bad is it in fact on certain locations that the surplus is to be left to the bees. This season the clover has been left untouched by the bees, even in perfect weather. Perhaps the unbroken spell of cold and wet prevented a copious formation of nectar.

Hitherto the Taieri has been the earthly Paradise of the foul-brood germ; but recently it received a rude shock. A round-up is in progress. Drastic measures are being taken, which will result in the disappearance of many one-hive beekeepers—whence vague and dark mutterings. Next spring, we hope, will leave no doubt in the mind of *Bacillus Larvae* that the Taieri is an ideal habitat has lost much of its charm. Wherefore we look to its hurried departure. So mote it be!

ARISTAEUS.

### TARANAKI.

As anticipated last month, the season has proved well above the average, and those apiarists who kept their stocks well up to strength during the bad weather at Christmas and New Year have reaped a big reward.

The flow continued good until about the middle of February, the weather being perfect, with occasional heavy rains.

February has been a splendid month for queen-rearing, and mating has been a very high percentage, owing to the absence of that Taranaki westerly.

I received a letter from Allan Bates. He has just recovered from the "flu." He has, however, struck a clover patch, and has got an Army appointment as beekeeping instructor. He has to give two lectures a day of 40 minutes; and last, but not least, is to hold the rank of a Warrant Officer while so engaged, which, to use his own words, is "some promotion." He expects this job will delay his return to New Zealand for a few months, but should he arrive in time for the Conference, he should be in fair form for a lecture.

H. R. PENNY.

Okaiawa, 17/3/19.

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## Stung by a Bee.

### UNMASKED MAN'S DEFENCE.

When asked at the Newtown Court, Sydney, what he had to say for himself for not wearing a properly adjusted mask, Lot Watts, who was arrested on a tram with his mask suspended from his neck, declared that he took it off to scratch his ear.

The Magistrate: To scratch your ear?

Defendant: Yes, your Worship. I got stung by a bee, and a lump came in my ear.—(Laughter.)

"That's the limit," remarked the magistrate.

The defendant was fined £1, with the alternative of seven days.

—N.Z. Herald, 27/2/19.

## Answers to Correspondents.

W. K., Outram.—What is the use of offering a compliment (if it is one) in a language I do not understand? "Lang may your lum reek." At any rate, friend K., the same to you!

A. H., Oamaru.—Many thanks. Journal has been sent.

## Correspondence.

### (TO THE EDITOR.)

Sir,—May I be permitted in the columns of your Journal to introduce to the shareholders of the H.P.A. and honey producers generally Mr. C. F. Ryland, who has taken over the management of the N.Z. Honey Producers' Association. Mr. Ryland brings with him an advanced business knowledge as well as considerable experience in co-operative matters, by which the interests of the Company will be materially benefited.

Mr. Ryland takes charge at a time when producers of all primary products are faced with a falling market; but the Directors have every confidence that he will handle the situation to the best advantage. In this regard, the shareholders of the Company are in the happy position that they know that prices cannot fall below a certain figure, and can look forward with confidence to the next three years with the market assured to them, enabling them to give all their energies to increased production.—I am, &c.,

J. RENTOUL,

Chairman of Directors, N.Z.H.P.A.  
March 19th, 1919.

### (TO THE EDITOR.)

Sir,—I venture to forward you a few notes on bee matters in this district, which you may find acceptable.

This season will practically be a complete failure here, as far as surplus crop is concerned, owing to the inclement weather experienced here right up to 2nd February. I was feeding our stocks right up to that date when honey started to come in from thistles, catscar, ragwort, &c. Clover gave practically no yield here this season. On February 19th Mr. E. A. Earp, Government Apiary Instructor, held a demonstration on modern methods of handling bees, taking off honey, and extracting by power extractor, at Mr Leslie Irwin's apiary at Wainawa. About 50 people turned up, all apparently very much interested, some having travelled very long distances. The day was not too good, as not a bee was flying till 1 o'clock, then a start was made at 2 p.m. Mr. Earp, who was in great form, taking his hearers through the various stages of assembling a hive, hiving the bees and explaining the use of excluders, escape

boards, division boards, and feeders, and then opened a hive of pure-bred Italian bees. The bees were very gentle, and gave no trouble, but as he did not locate the queen he opened another hive, which had the brood elevated to the third storey, and he was able to keep his audience fully interested while he expounded the internal economy of the hive. Rain rather hurried proceedings, so some supers of honey were gathered, and all adjourned to the new honey house, which was just completed, having a cement floor and measuring some 18 feet by 18 feet. There Mr. Earp demonstrated uncapping with the steam knife and extracting by means of a 6-frame extractor driven by a Gilson engine.

Then followed a fatherly talk on foul-brood and its eradication, together with an exhibition of the disease in various stages. Proceedings were terminated with afternoon tea dispensed by Mrs. Irwin, assisted by one or two lady visitors. Mr. Earp's demonstration was of practical value, as it followed up one he gave at the same apiary last year, and carried his hearers a good bit further on the road to good beekeeping. Now that Mr. Earp has been granted some assistants, things in beedom in this district are being shaken up, and Mr. E. P. Brogan, assistant apiary instructor, has been giving the box-hive men and disease-breeders rather a jolt. I am looking forward to the latter gentleman's follow-up visit for tangible results.—Yours, &c.,

JAS. A. STEADMAN.

Waiānawa, 12th March, 1919.

(TO THE EDITOR.)

Sir,—Re Mr. Ward's remarks on my criticism of his article "Facts about Frames." First, let me thank Mr. Ward for so willingly giving my suggestions a trial and letting us know the results. I think Mr. Ward has missed the main point—namely, the standpoint of the beekeeper wishing to make frames by hand-work. I think this was the beekeeper Mr. Ward had in view when writing his article for the Journal. Now, Sir, I maintain that such a beekeeper will save time by using the diagonal method of wiring his frames. I admit this method will take Mr. Ward longer, but then he is the happy possessor of frame-making machinery, and does not make frames by hand. In testing the two methods for time taken, did Mr. Ward bore the holes by hand in the set of end bars required for the horizontal wiring test?—the beekeeper making frames by hand would have to. In this district, owing to thick honey and the old enemy (foul-brood), a large percentage of frames have to be re-wired every year. Such re-wiring, I think, can be done in less than half the time by the diagonal method than by the horizontal method of wiring. Regarding sagging wires, if this occurs, I think it is caused by not getting the wires tight enough in the first place. If carefully fastened there is no sagging, as the wire does not come in direct contact with the frame. I have not found that there is a greater number of drone-cells when

using this method of wiring. In extracting, there does not appear to be any advantage gained by either method of wiring the frames.—I am, &c.,

P. MARTIN.

Umukuri, Nelson, 12/3/19.

(TO THE EDITOR.)

Sir,—This year I experimented with a colony of bees in a district where abundance of yellow lupin was growing. The result was that the flavour of the honey was so objectionable that very few people would eat any of it. Upon opening the hive, the first thing one noticed was the strong odour of lupins, and upon examining further you noticed that the capping were of a bright yellow; also all wax produced was of the same colour. This experiment was carried out at Mt. Maungani, Tauranga.

Another experiment was carried out on Mayor Island, in the Bay of Plenty, to ascertain just what honey produced from the Christmas tree (Pohutukawa) was like. This was absolutely successful, the honey being of a very fine flavour.—I am, &c.,

K. M. WARD.

Tauranga.

(TO THE EDITOR.)

Sir,—Allow me to express my regret to have caused anyone disappointment at Ruakura Field Day. Being in the middle of my extracting season—this year being later than most seasons—at such times we are subject to be hustled, and in the hurry forget something. That is simply what happened. However, anyone interested in my melter will have an opportunity of seeing it demonstrated at the Conference in June. Do not forget, it is a capping and comb melter.—I am, &c.,

C. SMEDLEY.

To Awamutu, 14/3/19.

(TO THE EDITOR.)

Sir,—I feel sure you will insert in a spirit of fair play my comment upon your editorial remarks upon the demonstration of the Bartlett-Miller comb reducer at Ruakura Field Day.

In mentioning the specks in the honey after it had passed through the separator, you have omitted to state that, owing to the absence of the deflector-cup, into which the output of the reducer should have dropped (this loss was loudly explained by me during the demonstration), it was absolutely impossible for the separator to clean specks from honey; indeed, it is a marvel that it even cleaned the wax, for the apparatus was missing that prevented the honey and wax making one stream right through the separator, thus carrying the wax with it. I knew full well that the demonstration without the deflector-cup would be a farce, but to prevent disappointment of the crowd, and not to do as another exhibitor did—call off and decline demonstration—I did the best I could—which, as you remark, was a poor

"best"—without it. Still, it was better than fudging it.

Now, regarding that temperature of the honey, and your own and "the general opinion" thereon. I much fear we shall have to vote you a wag. You remark that the heat (190 deg. to 170 deg.) was "far too great to subject delicately flavoured honey to, and the general opinion was [I want readers to note that word 'opinion'] that it would spoil both flavour and colour if any quantity was put through." Now, see here, Mr. Editor, the B.-M. Reducer is primarily invented to deal with non-extractable manuka honey; it also is being used for cappings, but this season mostly for reducing foul-brood combs to save infection through the disease-infected extractor. Now, I want you to place your value upon "opinions" as to what would happen to delicately flavoured honey, when nobody but a born fool would put delicately flavoured honey through a comb reducer, except in cappings. As a general rule—indeed, I have yet to learn one exception—delicately flavoured honey is readily extractable.

Now, then, regarding those cappings of water-white (if you like) honey. The operator would once more need to be a born fool just to start out reducing cappings with a one and a-half horse power steam boiler registering close upon 100 lbs. pressure, as we had at Ruakura. I had my own boiler and Primus lamp; but as the demonstration was out of doors the lamp was impracticable, and I used the apparatus so kindly provided by the management. As you saw (but apparently utterly failed to adequately appreciate) the steam pressure which, according to the steam engineer, was "going to blow my reducer right over the fence," was far and away too great for melting so small a quantity of honey as was reasonably available, with the inevitable result that the steam, having so little to do, muchly over-heated the honey put through. This thought would have occurred to you had you any grasp of the physics of heat. But then St. Peter says "you cannot even keep bees!"

Seeing that the heating surface of the reducer was 26 sq. ft., and the honey put through would, if carefully cut and fitted to the heating surface, have covered less by over 1 sq. foot of such surface, and the fact that steam had to be cut off because the boiler pressure ran down (the reducer having "hogged" the lot), is evidence enough that had the reducer had its proper quota of two operators and (as is always advisable) been filled right up before applying the steam, the heat of the honey would have been (by the law of inverse squares) about 26 deg. lower than it was. Indeed, seeing that the sensible heat of that boiler steam was over 100 deg. above boiling point, it speaks volumes for the reducer (to any reasonable individual) that the honey got away so rapidly as not to go within 22 deg. of boiling heat. With so much heat on so little honey, it ought to have been expected to boil it.

With cappings a Primus lamp is essential, as the heat must be applied with a little common-sense, and regulated according to requirements. Then you will not hurt any honey to any commercially valuable extent.

It must be borne in mind that you cannot heat any honey for over five minutes to over 160 deg. without impairing its flavour. Further, if brought into contact with propolis you stain your honey. The only practicable way to avoid this slight shading from its original colour is to drain the cappings; but modern beekeepers prefer to get rid of it once of all muck, mess, and confusion, and bear the slight discolouration; and—do not forget!—such persons do not use steam at 100 lbs. pressure. They do use brains and good judgment.

More in this month's advertisement.—[am, &c.,

H. BARTLETT BARTLETT-MILLER.

Thoroughwork, Kibi Kibi, 7/3/19.

March 7th, 1919.

[Friend Miller, as you say, I have no grasp of the physics of heat. I tried to learn a bit from you once to find the truth of your statement that a steam-pipe was hotter at the top than the bottom: put my finger on the top and thumb at the bottom! Whew! Bang! —! No appreciable difference, friend Miller; blistered both, which caused me to write so badly that I had to apologise the next month for what I had written! No more fool tricks for me; I will let somebody else do the grasping, and suggest they grasp a steam-pipe for a start, and the physics they will want afterwards will fill the programme of the physics of heat. Brains and good judgment! Friend Miller, do you not think these were rather lacking when you allowed yourself to use this high-pressure boiler, which, according to your own admission, was far too great a heat for the amount of honey you had to put through your machine, and thus practically spoil the demonstration, or at least create a wrong impression? A Primus stove will work equally well in the open as in a shed, and for you to jeopardise the reputation of your machine as you did—well, we will say no more about it!—Ed.]

(TO THE EDITOR.)

Sir,—I have four hives of Italian bees, from which I have taken considerably more than 100 lbs. of honey.

I am a subscriber to your interesting Journal, and I think that as a beginner or an amateur beekeeper, you will have many more readers requiring the primary knowledge desired by me.

About half of my honey is in perfectly sealed sections and shallow frames. With this I shall have no trouble whatever; but the other half is in unsealed or partially sealed frames, both full sized from the brood-nest, and dark shallow frames from the supers, and clear and in incompletely sealed sections. I have been only moderately successful in "running" this lot, and now I question if I did it the best way. Firstly, I cut out and destroyed some small patches

of brood. I then chopped up the combs on a large plate and let the mixture drip through mosquito netting. I suppose I have obtained about four-fifths of the lot, but so far it has not granulated. Should it be heated or boiled? Can I recover any of the honey still adhering to the broken combs? Is there any better or simpler method of "running" honey? Should I boil the wax mixture that is left, obtain the wax, and get rid of the liquid matter remaining? This letter, of course, calls for no reply to me, but I think that a few hints from you in the Journal (especially its next issue) on this subject will be very acceptable to many beginners.—I am, &c.,

JAS. RAMSAY.

Auckland, 7/3/19.

[First I notice you have taken combs from the brood-nest containing brood and honey. This is decidedly wrong; the brood-nest should be left entirely alone, otherwise you will find you will be short of stores for wintering. If the combs were from the second super where the queen had occupied, these should have been shaken to get the bees down, and a queen-excluder put on until the brood had hatched out. Any method other than the use of an extractor is unsatisfactory in getting the honey away from the comb, and as you say you have got four-fifths, I do not think you will get much more. The fact that the honey has not yet granulated need not bother you: some honey is very slow, except there is a possibility of this honey not being sufficiently ripe, as you state it is from unsealed and partially sealed combs. The remaining honey and wax can be put into a vessel which can be placed in another containing a few inches of water and brought to the boil, which will separate the one from the other. The honey so obtained will not be marketable, but can be used for feeding if boiled for about twenty minutes so as to eliminate the risk of feeding diseased honey. Heating honey always has a tendency to retard granulation, and boiled honey is spoiled honey. Nothing above 140 deg. should be allowed, and that for a very short time, else aroma, flavour, and colour are spoiled. Try and pick up a second-hand extractor is the best advice I can give.—Ed.]

(TO THE EDITOR.)

Sir,—I am preparing a paper for next Conference on "Land Legislation to Improve the Status and Prospects of the Honey Producer." I should be very pleased if all beekeepers who have or have had difficulty in securing apiary sites on a safe tenure will communicate with me, giving full particulars, so that I can arrange the facts to show the need for legislation. I believe there is a need, and we should organise the demand for legislative assistance.

Another matter which I think the Conference should take up is this: The Government is suggesting bee-farming as a suitable occupation for soldiers to take up, but it is omitted from the list of occupations for which financial assistance is

granted. If soldiers who contemplate taking up bee-farming will communicate with me, particularly if they can give any instance of financial assistance being refused, I will lay the facts before Conference, which I am sure will do what it can to obtain better treatment.—I am, &c.,

W. B. BRAY.

Barrys Bay.

#### NUMBER OF FLOWERS VISITED FOR ONE POUND OF HONEY.

(British Bee Journal.)

In reply to Mr. Donkin, it would appear that the writer of the magazine article he quotes has given a very loose rein to his imagination. Professor Planta, of Zurich, a beekeeper and a celebrated chemist, found that about 100,000 sanfoin flowers would yield 1 lb. honey. Rhododendron hirsutum would give 1 lb. of honey from about 75,000 flowers. The statement in the magazine article that it required 219,000 flowers to produce 1 oz. of honey—i.e., 3,504,000 flowers for 1 lb. of honey—would, indeed, demand a colossal industry of our little workers.

The secretion of nectar varies enormously in different varieties of flowers. There are some tropical flowers which yield far more than a bee can carry; hence, when gathering from such flowers, the bees would only visit one on each journey. It has been found that during a good honey flow 10,000 bees will bring in 1 lb. of nectar on each journey, which means that each bee carries about two-fifths of its own weight of nectar. A soldier who weighs 10-stone carries two-fifths of his weight when in heavy marching order, but when carrying this load he does not feel at all like flying.—W. B. Wallace, Lieut.-Colonel.

Oh, yes, ladies are particularly invited to Conference, and they come, too, and enjoy themselves. Bring your wife or your intended.

June 11th, 12th and 13th are the dates, the Dominion Farmers' Institute, Featherston street, Wellington, the place. Be there!

"I am very pleased with the Journal, and think every beekeeper should take it."—C. W. L., Levin.

Have you a home-made appliance that you find useful? Bring it to the Conference in June.

Conference will be held this year in the Dominion Farmers' Institute, built for the purpose. Be there!

Last year saw the biggest Conference yet held. This year is going to beat it. Be there!

## Advantage of Full Sheets.

It is gross extravagance not to use full sheets of foundation, as it requires approximately ten pounds of honey for the bees to produce one pound of beeswax. Figure out the saving for yourself. For each dollar you invest in foundation you save several dollars in honey that the bees would otherwise use. Straight and stronger worker combs are also secured, and drone combs that would otherwise have to be destroyed are eliminated.

## Beeswax Production.

Experiments are interesting, but they still leave the matter of cost of wax in the indefinite condition we have always known. From the time of Martin John Fribourg (1686), the man who is said to have first discovered that wax is a product of digestion, like milk, hundreds of experimenters have attempted to get at the actual cost of wax to the bees, in honey. The results have varied greatly, not only because of difference in food, warmth, condition of the bees, and inaccuracies in the experiments, but also probably because the amount of wax produced naturally by bees from a given quantity of food is as variable as the production of milk or of butter-fat in animals. —American Bee Journal.

## The Essence of Co-operation.

A correspondent writes complaining bitterly because the Association did not get him higher prices for his honey than he could have gotten outside, and asks, "What is the use of co-operation if it cannot get us higher prices than we can get outside?"

The purpose of co-operative selling is not to raise prices to an excessive point, but to stabilize and unify prices, so that all may receive alike for the same grade of goods; to prevent one man receiving only six cents per pound for his honey, while his neighbour got 11½ cents from the same firm, on the same day, as happened in San Diego County in 1917.

Here are some wise words from another member, who is a recent convert to co-operation:—

"Being in an Association, one member cannot expect to be favoured above another. It may suit you and me very well to receive payment in full for the last

car-load, but how about the fellow whose honey is in the warehouse yet, and may stay there for weeks?"

"Selling our honey through an Association is a new idea to most of us, and we will have to get used to partial payments rather than getting our money all in one lump."

"I believe in the co-operative idea: it will help mightily to stabilize prices when things begin to go down, which they surely will."

A beekeeper brought a trailer-load of bees in their hives to the Pomona Valley Ice Plant, and had them put in cold storage for a month. The beekeeper said when he took them out they would make honey just like they did back east. He said the instinct of a bee was to hibernate in the winter, and he could not make them do it here without putting them in cold-storage.

—Western Honey Bee.

"Stimulative feeding is worth while when the weather is such that bees can fly and gather pollen," says Dr. Braysshaw, and he might have added that it is of little use at any other time.—Western Honey Bee.

What is a bee-man?—A fellow who keeps a few hives of bees sitting around.

What is a beekeeper?—A man who keeps a small apiary as a side-issue.

What is a honey producer?—That is a man too lazy to work, so the bees keep him. He sells his honey in car-lots, buys town lots, and takes life easy in an automobile.—Western Honey Bee.

June 11th, 12th, and 13th—Beekeepers' Conference in Wellington at the Dominion Farmers' Institute, Featherston Street. Be there!

The National expects you to be present at the "festive board" on the evening of the second day of Conference. Be there!

You can now arrange your annual holiday to fit in with the dates of June 11th, 12th, and 13th, at Wellington.

Conference this year to be held in a better hall, better locality, better papers promised, better demonstrations, better "spread" provided. You had better be there. You bet!

## Never Mind What Baines Says.

Y' ken Nature (or perhaps someone else) left the "r" out of his name. Now, I have a notion St. Peter might have had a hand in that omission. Y' see, St. Peter just hates a vacancy where he caretakes, and rather than have one up there, he preferred one down here, and purposely designed the omission of that letter for fear that its inclusion might lead to Baines becoming "a kommon beeman," and leaving that seat up above perpetually "To let."

Now, whether the Saint thinks Baines does or does not "know all about bees," Bartlett-Miller has no delusions about the fact that Baines knows about as much of the physics of heat as a new-born calf does about climbing up a telegraph pole backwards.

As instance: Baines reports that the honey from Bartlett-Miller's Comb Reducer, as demonstrated at Ruakura State Farm of Instruction last Field Day, was 190 deg. as it ran into the separator (which, by the way, did not separate) and 170 deg. as it (probably in deep disgust) ran out of the separator.

Now, Baines utterly failed to observe that these two temperatures were the grandest testimonial that could have been devised in favour of Bartlett-Miller's invention. Y' see, Baines wears spectacles, and thus may be excused for shortness of sight. That must be why he failed to observe that instead of the Comb Reducer being demonstrated inside the honey-room (which could not possibly have held one-twentieth of the crowd), it took place outside in the open. This arrangement prevented the use of the Primus lamp, or the oil-drum boiler, which the ordinary purchaser would use for his own work. Instead, we were obliged by a much-to-be-lauded management with the services of 1½ horse-power boiler. This "rampagious monster," I was advised, was to blow my Reducer (and possibly the feather-headed operator) "over the fence"!

(Just pause awhile till I whisper that the name of that feather-head commences with the letters H.B.B.-M.)

Now, a horse-power, as reckoned in the "incarks" of a boiler, means a capacity to vapourise into steam thirty gallons of water per hour. The "rampagious," therefore, could vapourise forty-five gallons of water an hour. Our demonstration lasted about fifteen minutes of actual steaming from the boiler to the Reducer. That means that the heat of some eleven gallons of

water converted into steam was applied to melt about 84 lbs. (say, six gallons—it was not as much as that) of honey.

We have to calculate that steam not under pressure can raise over four and a-half times that volume of water it was made from to boiling point, even if the water was at zero at the start. So that the steam generated in the "rampagious monster" B.-M. had to deal with could have raised four and a-half times forty-five gallons of freezing water to the boiling point in one hour, or about fifty gallons of freezing water in the quarter of an hour's actual steaming time the demonstration took. And all that heat, you say, was applied to six gallons of honey?

**No, it was not! Let us play fair.**

A vast proportion of it was expended on the outer walls of the Reducer (which purchasers are expected to cover with a wooden jacketing), and more upon those parts of the tubes which were not working, as there was not enough honey altogether to have covered the tubes once over.

What we have to consider is this: Every part of that Reducer was kept up to the heat of the steam in the boiler, because it had not sufficient work to do to reduce the heat as fast as it could be supplied.

Now, what was the heat of the steam in that boiler? Had Mr. Baines thought anything at all about it, and ALSO had he any working knowledge of physics, he would have remembered that if he intended giving the readers of his Journal information really worth while, all these matters must be taken into consideration, for the omission of the smallest may and does alter the complexion of the whole report. Thus he would have observed that the boiler was indicating a pressure of 85 lbs. per square inch. Further, he would have remembered that steam at that pressure is 115.8 deg. over boiling heat, and steam not under pressure is only just boiling heat by thermometer indication. See how these small matters count!

Baines states that the "general opinion" was that delicately flavoured honey would be badly injured if much of it was put through the Reducer. You will observe he fails to state that the persons expressing that general opinion knew no more about the actual facts of what was taking place before their eyes than the calf did of electricity WHEN he got to the top of that telegraph pole! Each and all of them advertised their complete ignorance of the subject of their opinions by forgetting



that the honey (the overheating of which they expressed such opinions about) had been subjected to a heat of over 115 deg. above boiling heat. Whew! Talk about flu—!

I leave my readers to judge whether anyone but a lunatic would subject "delicately flavoured" honey to such a temperature!—from choice. In my case at Rukura it was Hobson's choice. Beggars cannot be choosers, and my own apparatus, which would have supplied steam just generated, and at only boiling heat, was unusable, as no Primus lamp will keep going successfully out of doors: you lose too much heat.

No sane person would from choice subject cappings from even clover honey to any heat over that of freshly generated steam; and then they should possess at least sufficient sense to observe that a proper regulation of (even boiling) heat was necessary if they would avoid a noticeable darkening of such cappings-honey. There is little—and sometimes no—propolis or pollen or cocoons about cappings, and as a matter of actual fact one trough of the "Effective" size Reducer will take care of one man's work uncapping.

#### ASK AND YE SHALL RECEIVE.

It just occurs to me that it might (only to mention this temperature matter to the operator and inventor of the machine. Had such been the case, you might have read something interesting in this month's advt. instead of all this, because the mere mention of the temperature of the steam in that boiler would (as it doubtless now DOES) convince any fair-minded person that to compare honey temperature under such conditions with what the inventor would do under proper usage was not only unfair, but absolute bosh!

The Bartlett-Miller Reducer is meant to be used with an outside boiler only by those faddists who write and talk about the harmfulness of the 'exhausted' gasses from a lamp burning a spirit as fuel, and then not a pressure boiler. No harm can result from such gasses if the honey-room is properly ventilated; and if it is not, then serve you jolly well right if you are prevented from using a Primus lamp, and have to dance in and out of the honey-room attending to an outside fire, and suffering the worry of how it is going, and whether the boiler is going dry, or that threatening shower is going to put the fire out—excuse me!

The Primus beneath the Reducer is regulatable, and as soon as your steam is condensed (being still at boiling heat), it simply drops below again, and is re-converted. There is no actual flow of steam in the tubes, as in a pipe. It simply rises between the double end walls into the tubes as smoke rises in a room—i.e., by gravity, not by convection. The Reducer is fitted for both lamp and boiler, to suit all kinds of people.

#### REAL SEPARATION.

I have solved—(I knew I could)—the trouble of the specks in manuka honey. Eureka!—(which means, "I have found it"). But as there is no great amount of this honey around this season, and as the casting and "working" sufficient for a stock of some of the parts will take some months, the Separator for manuka honey will not be on the market until next season.

It may be as well to advise readers that the reduction of manuka honey will entail possession of three distinct apparatus. There will be, first, the Reducer; then the wax and honey gravity-separator; and thirdly (for tea-tree honey only) what I shall term the gum separator.

This word "gum" is adopted because my analysis of manuka honey proves to me that its non-candying peculiarity is caused by the presence of from two to as much as six per cent. of mucilaginous vegetable gum, forming a kind of matrix, which prevents the attachment of the sugar crystals, which would result in solid crystallisation. This gum holds the specks so tightly that ordinary gravity—at such temperatures to which it is safe to raise honey—fails to free all of the specks.

The newly invented apparatus is not so fearfully expensive—not by long chalks—as the one the writer once heard of, for which the engineer's draughtsman demanded £20 (twenty pounds) merely to draw the plans. What the finished machine would have cost I fear to contemplate!

#### QUERY.

Say! after all this, what now is your candid opinion of a honey-comb reducer that when heated up to 115 deg. over boiling heat, yet rushes that honey clean off the face of the Reducer, before it gets nearer than 137 deg. of that same heat! I think you will say with me that it is "SOME REDUCER." Perhaps we ought to re-christen it the Comb Heat Reducer, eh?

Mr. Printer: The Code word for the biggest Machine is "Glutton," not "Slutton."

Don't forget the Address:

**H. BARTLETT BARTLETT-MILLER,**  
THOROUGHWORK APIARIES,  
KIHIKHI, WAIKATO.

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[ADVT.]

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Owing to the difficulty of shipping Honey from New Zealand through the shortage of shipping space at the present time, and the uncertain prospects, we are not yet in a position to resume buying, but hope to do so in the near future when space is available.

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## Advice for Winter Months.

Now that conditions are returning to normal, beekeepers may, with some degree of accuracy, calculate the probable returns from their bee yards. In doing so they must take into consideration the value of their product.

Prices for Honey for the next three years will remain at a very high level, in fact at over fifty per cent. advance on pre-war rates. A wise beekeeper, therefore, will fill in the long winter evenings by making up hives, frames, supers, etc., in order that no time may be lost when the honey flow is on. In anticipation of an increased demand we commenced manufacturing some months earlier than usual, and we are now in a position to supply all orders within a few hours after their receipt.

ALLIANCE BOX CO., Ltd.,

1 Mason Street,

DUNEDIN.

## The Opportunity to Save Money

The wide-awake honey-producer knows that it pays to use the very best foundation. It means good, straight all worker combs which make beekeeping both pleasurable and profitable. As nothing but pure beeswax can be used in making comb foundation, it behoves every beekeeper to save every ounce of wax he can have it made into foundation. We have the best manufacturing plant in New Zealand: we have had longer experience than any other maker, and our foundation is made on the principle of the Weed Process. That is the reason why we make Foundation superior to any other locally made, and equal to the best imported. It is transparent and supple, and never loses its condition. It does not sag, and every sheet is perfect. We do not destroy the "temper" of the wax by using sulphuric acid to clean it. We have a better system of getting the wax perfectly clean. The result is that the bees go straight to work on the foundation, and draw it into nice straight combs. The best Foundation is always the cheapest in the end. Do not wait till the last moment, and pay exorbitant prices. We offer you the opportunity of saving all the middleman's costs and profits; but remember we are in this business only in the off season. When the bees are needing our attention, we cannot neglect them for the beekeeper, who neglects his opportunity NOW of having in a stock of Foundation at absolute bed-rock prices.

Therefore, get your Wax ready, and send it along AT ONCE. We cannot accept any Wax after the end of June. **Delay means loss to YOU!**

Owing to increased cost of freight and packing materials, we have had to increase our price by one penny per pound. But our Foundation is still cheap, because it is the BEST.

Our charge for making Wax into Medium Brood Foundation—8 sheets to the pound—is 9d. per lb. Some makers deduct 5 per cent. weight lost in cleaning, but we give credit for every pound of Wax used. It must be reasonably clean, though, however clean it appears to be, we refine it. Foundation will be returned packed in 25 lb. boxes, paper lined. We cannot pack odd weights, but will return the weight to the nearest box, and allow 2/- per lb. for storage, or charge 2/6 per lb. for surplus, as the case may be.

**Shipping Instructions.**—Wax must be packed in clean, sound bags or strong boxes, and no paper wrapping used. Each package must bear the sender's identification mark, and must be clearly addressed "Barrett and Bray, Barry's Bay." The sender must pre-pay the freight to Lyttelton, and consign through the Goods to "C. Anderson, Cutler Deveron, Lyttelton." Advise us of the weight, description, and when sent. We pay the sea freight both ways, and you pay the return railage.

**BARRETT and BRAY,**  
Barry's Bay.