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# The New Zealand Beekeepers' Journal.

AUGUST 26th, 1915.

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

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

STONE, SON & CO., LTD., PRINTERS, DUNEDIN.

# National Beekeepers' Association of New Zealand.

**The object of the Association is the Improvement of the Beekeeping Industry and furthering the interests and the 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 a small fee.**

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Pahiatua Beekeepers' Association. Hon. Sec., G. Bentley, Pahiatua.

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A large membership will give the Executive increased funds with which to develop the local and foreign markets and push the export trade. Increased demand will raise the value of your honey crop.

# The New Zealand Beekeepers' Journal

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

No. 14 DUNEDIN. 3/6 Per Annum.

## SPRING.

"Hope springs eternal in the human breast," and to no class does the hope come with greater force than to the beekeeper. The expectation of a good season this year, in spite of the failures of the past, is one of the peculiarities and fascinations of the industry. The hope and expectations, however, are of little value unless all realise the urgent necessity of the work peculiar to this season. Each and every beekeeper in the land should see to it that his bees have plenty of stores. The Spring is the most critical time in the whole season. The warm, bright sunshine breaks up the winter clusters, the queen commences to lay, and stores are rapidly consumed. With the very first dawn of Spring the careful apiarist goes round every hive, and sees to it that the bees have plenty of stores to carry them through until the honey flow. Just what is plenty each must decide for himself, remembering always that a little too much is better than just too little. In years gone by thousands of colonies of bees have been lost through neglect of this simple precaution. Plenty of food now means good strong colonies when the honey flow commences. The expenditure of a few shillings on sugar, which is generally admitted to be the best spring feed, will bring in returns a hundredfold. There is another side of the question to consider quite apart from the individual profit, to which attention may be drawn, particularly at this time, and that is the patriotic duty. New Zealand is essentially a food-producing country. The Governments in all countries are urging the planting of increased areas for wheat and other food products. Hundreds and thousands of men who in the time of peace helped to produce the foodstuffs of the world are now fighting for their country, and are consumers instead of producers. We in New Zealand can each do our share towards filling the gap. Very large quantities of honey were produced in all countries which are now at war, and there will be a tremendous shortage of the world's crop unless all those who are able to increase their production do so.

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After very long-continued drought extending over two years, we are pleased to hear that excellent rains have fallen in the Hawke's Bay Province, and that beekeepers there are looking forward to a good season.

# Honey Crop Prospects.

The Director of the Orchards, Gardens, and Apiaries Division has received from the apiary instructors the following reports concerning the honey crop prospects:—

Auckland.—During the season I have graded twenty-nine tons of honey for export, the major portion of which graded "Special" and "Prime." New Zealand beekeepers will be pleased to know that the Waikato Beekeepers' exhibit secured the gold medal award at the Panama Exhibition. I would take this opportunity to warn beekeepers in the Auckland district to at once ascertain if their bees have plenty of stores. Owing to the fine mild winter we have had the bees have been flying constantly during the winter, and so have consumed more food than usual. Those who find they are short would do well to feed a syrup made of two parts sugar to one of water. These quantities may be reversed in the spring. A useful leaflet on "Feeding and Feeders" may be obtained free by writing to the Department of Agriculture.—G. V. Westbrooke. August 2nd, 1915.

Wellington.—Honey for export is still coming forward, and since the report of last month I have graded 172 cases in Taranaki and 30 cases in Wellington for shipment to the West of England per the "Somerset," via Wellington. There is a great improvement in the way the honey is prepared for export over last season. Honey in any quantity for local consumption appears to be scarce, and prices should remain firm.—F. A. Jacobsen. August 4th, 1915.

Christchurch.—There are indications of an early spring: willows are beginning to burst buds, and in very snug districts peaches are in bloom. Unless beekeepers have kept a careful watch on stores during winter, I am very much afraid there will be a heavy mortality in a number of apiaries. This is the worst time for bees during the whole season, but a few pounds of sugar, which is only a trivial cost, will save many a stock from starvation. Soft candy is the best for feeding during cold weather. What little honey is offering is bringing from 4d. to 5d. in bulk according to quality. Sections are almost unobtainable. A regular supply comes forward to grade each month. The various lines are not so large as the previous season. —L Bowman July 27th, 1915

Dunedin.—There is little fresh to report. A few special lines have been sent in to a bare market, and sold at prices ranging from 4d. to 4¾d. in bulk. Beekeepers forwarding honey in small packages suitable for the retail trade have met a good market. A strong demand exists for two, five, and ten-pound tins, also one and two-pound glass jars. Beekeepers would be well advised to pay attention to small packages when dealing with next season's crop. The local demand for honey in bulk has greatly decreased, and this no doubt is largely due to the increased cost of labour. Retailers prefer to buy lines ready for sale, and, moreover, it is to the beekeepers' interest to place on the market honey in its natural state—i.e., that which has not been liquified by heat. Beeswax is scarce, and auctioneers advise short supplies.—E. A. Earp. August 2nd, 1915.

## BLACK v. ITALIAN BEES.

By F. C. BAINES.

The following article I took from the British Bee Journal, and read it with great interest, and I think it is worth putting in our Journal because it should bring out a lot of interesting remarks by those who have had years of experience of both the black and Italian bees. I am sure there are many beekeepers like myself who have had no experience whatever with the blacks—that is, in any large way. We who started beekeeping within the last few years were told the Italian bee was best in every way, and we took the word of those who had had experience, without finding out for ourselves, and after reading this article I thought this: Has the black bee been given its due; has it had a fair chance of showing its capabilities? Would it not, with the same attention as to its queen, freedom from disease, plenty of stores, etc., as we give to the Italians, give us as good a return? Had the Italian been first introduced into New Zealand instead of the blacks, would they have survived the treatment meted out to bees before intelligent beekeeping began?

What was the treatment they got? It seems to me the position was this. A swarm of bees was found hanging, an old box was found, and they were dumped into it, the box turned upside down, and the job was done. Was the position windy, damp, or where no sunshine could get to it?—that didn't matter. Were they short of stores, and a spell of bad weather on?—that didn't matter. Were they getting weak, and the moth and disease getting a hold?—don't know, and it doesn't matter; it's only a swarm of bees. Would Italians do any better given the same treatment? I don't know, and I should like to.

I had a swarm of blacks given me last spring (November), and they gave me quite as good a return as any in my apiaries—better than a large number of Italians. I went round with Mr. Jacobsen to an apiary of blacks about the same time, and they were much ahead of mine, although they hadn't been fed as much.

Please don't think I'm out to champion the black bee, because I don't know sufficient about them. The object of this article is to prompt discussion on the matter for our enlightenment and instruction; therefore, I hope we shall get some interesting letters from the "old-timers" who have had experience with both breeds.

### ITALIAN BEES.

Every now and again some enthusiast works himself up to fiery eloquence about Italian bees. If all that has been said about them at various times were true, no one would ever keep any other kind. They have been declared to be 50 per cent. better than blacks in the matter of honey storing, to work early and late, to be better resisters of disease, to be chary of swarming at inconvenient moments, and, above all, to be so amiable that they may be handled like flies without smoke or any other form of intimidation.

It will, therefore, be somewhat of an anticlimax to all this wonderful record to assert that it would probably have

been better for English bee-keeping if the Italian bee had never been introduced into this country at all. Yet that is what I feel very strongly disposed to allege, after a careful examination of all the evidence I have been able to get upon the subject.

Although specifically the same as the black bee, the Italian or Ligurian bee is very different in appearance. It is, in fact, one of those local races or varieties which are met with very frequently in the insect world. It is, as its name implies, a native of Italy, being found wild in the Alpine region. The most obvious difference between this variety and the black bee is the colouring. It is in general somewhat lighter brown, and the three anterior segments of the abdomen are bright golden yellow. The queens sometimes have the abdomen entirely yellow, and are always very much brighter in colour than the workers. The only other physical difference is in the tongue, which is a trifle longer than that of the black bee. It was probably this difference in the length of tongue which aroused the enthusiasm I have spoken of, the contention being that it enabled the Italian to extract honey from flowers which the black could not reach. From time to time various beekeepers have said that the Italians work on red clover, notoriously inaccessible to the black bee. That they do this as a matter of course seems to be extremely doubtful, to say the least, and it is probably the real truth that those reported were on the second crop of clover blossom, which is smaller than the main crop, and can, in point of fact, give up what little nectar it contains to the black equally well. There is certainly no other flower in this country yielding nectar in quantity which the Italian alone can secure the honey from, and in all my researches into this question I have failed to find any mention of a particular flower as being visited by Italians and not blacks.

With regard to the second point, it would certainly seem to be well established that in fine weather the Italians do work earlier and later in the day. At the same time this is, in my experience, more a matter of individual characters in certain colonies. Regardless of race, I have often noticed one hive working steadily an hour after others had left off. In most cases there is a sound reason for this inside the hive. The colony may be breeding at very high pressure, and be obliged to store to the very utmost of its ability; but, more often than not, the simple explanation is that this particular stock has found a hive, a jam store, or some other illicit supply of sweets. To such perverted ways it is, perhaps, only in the nature of things that the hours of sunshine are not the most suited.

The contention that blacks were more subject to foulbrood comes from America, but the experience of the Swiss is overwhelmingly against this. They say that the disease is not only more common, but more virulent, in the Italians. In this country there appears to be no notable difference in this respect, although it should be borne in mind that those who go in for Italians are the more advanced beekeepers, who naturally take precautions to keep their stocks free from disease. For some time it was confidently asserted in some quarters that the Italians were not attacked by the "Isle of Wight" disease. That was proved to be all nonsense by the reports of the Board of Agriculture, and, if anything, the Italians succumb more easily, given an equal opportunity of

infection. As I shall show later, the chances are that they take it more readily than the blacks. Italians are certainly very prolific, and, providing the spring is favourable, become ready for swarming earlier than the blacks. "Pure" Italians (I quote this advisedly) are more amiable than blacks, and have the merit of sticking fast to their combs when these are handled, instead of spreading themselves all over the apiary.

Notwithstanding the records of high yields of honey from stocks of Italians, I am convinced that these are exceptional, and are only made when the season is of very uniform character. When the weather is uncertain and changeable, as most of our seasons are, the Italian stocks drop behind. This is only natural, having regard to the country of their origin. There is strong testimony to the fact that Italians do not winter so well, and here, again, one could hardly expect anything else. In fact, those experimental beekeepers who have given Italians a prolonged trial have been so impressed with the unhardy nature of the variety that they have, in several cases, endeavoured to produce, by Mendelian methods, a race of bees coloured like Italians, but having the better qualities of the black bee. That good results have been permanently secured is, I think, very doubtful.

One definite characteristic of Italians which should go far to wipe out all virtues, real or imaginary, is their inveterate devotion to robbing. I have been much struck with the weight of evidence on this point. One beekeeper after another has given them up entirely, solely on this account. Even when other stocks were busy gathering honey—a time when robbing should certainly not be going on—the Italians have been engaged in this nefarious pursuit. Of itself, robbing is a most undesirable thing to have in the apiary. At the best it means only the transference of honey from one hive to another with loss of life. At the worst it means the rapid spread of disease and the wiping out of weak and nucleus hives.

If it were possible to segregate the Italians, these bad qualities—to which might be added their poor comb-sealing ability, which puts them entirely out of court for the production of section honey—would be kept to themselves. Unfortunately, however, it is impossible to control the mating bees, and the consequence is that there are a very large number of hybrid stocks of bees about the country. Indeed, one of the reasons adduced by Neighbour, who introduced the Italian in the year 1859, was that it would improve our race of bees by introducing new blood. If there were real in-and-in breeding among bees there might be reason in this contention, but, as a matter of fact, it is not the case that close inbreeding occurs commonly among bees. It is notorious that queens often make very long flights on their wedding journey, and a black queen has produced hybrid offspring when the nearest Italian colony was over two miles away.

What are the characteristics of these hybrids, or, rather, mongrels, for, being the same species, they cannot be hybrids? First and foremost, excessive irritability. They are positively wicked bees. Most stocks wait until they are interfered with before doing any damage, but mongrels sally out and attack you while yet a long way off. Why it should be so I do not understand, but it is abundantly proved. Beyond this the

mongrel appears to be nothing more than one would expect, neither wholly good nor wholly bad, but simply a mongrel. In my experience they went under first when "Isle of Wight" disease appeared on the scene, and it is my deliberate opinion that the sooner we stop importing Italian bees and allow our native black race to thoroughly rehabilitate itself, the sooner are we likely to get free from the scourge that has troubled beekeepers so long.—Herbert Mace, in "The Field."

## NELSON AS A LOCATION FOR BEES.

By JAMES ALLAN.

By the same mail I received two letters. One was from friend Brickell, who wanted an article for the "Beekeepers Journal"; the other from a gentleman in Invercargill, who had heard that the writer had been to Nelson, and wanted to know what like a place it was for bees. I am going to try and answer them both at one shot.

When the Beekeepers' Conference closed the writer, in company with Mr. Kirk, our esteemed head in the Apiary and Orchard Division of the Agricultural Department, crossed over to Nelson, the object being, on Mr. Kirk's part, business at his orchard and to do a friend a good turn, and on mine to enjoy a short holiday and to get what information I could about orcharding. I am not going to describe the trip, as I have already done so in the Bee Column of the "Otago Witness," but rather to give a few surface impressions that may be of use to my beekeeping friends.

From all I could learn Nelson, in common with many other parts of New Zealand, has experienced during last season an unusually dry summer. The average yearly rainfall is given by the weather bureau as 37 inches, and the average sunshine as 8¼ hours per day, or some 3,000 hours for the year; further, there is very little wind—so little that the question of shelter for orchards seems to give the orchardists but little concern. Such weather conditions will appeal to most beekeepers as ideal. I would, however, fear that for clover work in a well-drained district it is just rather dry. In California a 20-inch rainfall means abundance of honey, but there is this difference, that in California it is not clover, but such plants as the sages that give the honey crop; while in the flat districts of Nelson, from Nelson City out towards Bridgewater and in the country round Motueka, clover must form a considerable part of the support of bees. I should think that these districts will be ideal for spring work, but probably only medium during summer, and poor in autumn. In Southland during twenty-four years the writer waited longingly for a dry, warm season, just for once to give the bees a chance and see what they could do. Well, six or seven years ago two of them came in succession, with clover in abundance, and what was the result? This: they were, with the exception of the year that has just gone, the worst two seasons of my whole beekeeping experience. I should imagine that in these Nelson districts that is what would happen often.

In the Moutere district, in which most of my holiday was spent, there is no clover. The native vegetation is manuka

and fern. The land is hilly, and before its value for orchard purposes was discovered it could be bought for sheep-grazing at the rate of three acres for one pound. For that purpose, to me, it would be a very severe punishment to have to live on it. I do not think that it can ever be a bee district. The orchard men will probably require to keep a few colonies for fertilising purposes, but it seems to me that beyond that it would be foolish to attempt it. I tasted honey raised in Waimea West, and also in the Moutere hills; both were a reddy brown colour, and were evidently almost pure manuka.

Further to the westward, towards Glenhope and beyond it, and also further north, at Takaka and Collingwood, I was told that they are good dairying districts; that the rainfall is much greater, and clover more abundant; and when such is the case I would expect that much better bee locations could be found than anywhere in the vicinity of Nelson. Taken altogether, my opinion of Nelson as a bee country is not very favourable, but I would again say that it is only first impressions, and taken in the winter time. I would also expect that in the best districts the honey would not grade very high; a great deal of it must be flavoured and coloured by manuka.

[It must be understood that Mr. Allan only visited a very small portion of the Nelson district. Nelson as a province gives promise of being one of the large honey-producing districts of the Dominion.—Editor.]

## QUEEN-REARING.

By J. C. HOBBS.

Thinking that a few of my experiences in the fascinating occupation of queen-rearing may be of interest to the readers of the N.Z. Beekeepers' Journal, I have undertaken to write this article.

Of all the methods tried, I prefer the Doolittle, and for years have used that exclusively. When undertaking to run a number of apiaries, it was necessary for me to use other methods, or else neglect queen-rearing.

For a long time I have not used forcing methods or taking away the queen when the bees have no desire to build cells, but have waited till the bees start cells of their own sweet will, and thus get better cells and queens. When using the Doolittle system exclusively, I used to carry round to the apiaries a nucleus box or hive containing about six frames of artificial cell cups freshly made, as described by Doolittle in "Scientific Queen-Rearing." These were hot-waxed on to little cubes of wood, which were attached to a bar by small nails being driven through them. The points of the nails were then snipped or filed off to a suitable length, and filed to a chisel shape while being held in a vice. The nails were also driven while in the vice; fine ¾-inch nails were used. I also use wooden cell cups, but fill up the holes with hot wax. A teaspoon for mixing the royal jelly in a larvæ spoon wrapped in a piece of canvas for protection, little lamp and vessel to warm water for mixing in the royal jelly if too thick (which it generally is), also some queen cells containing cyme (these are kept in a little tin box), and a few queen cages and cell protectors.

When larvæ are being grafted into artificial cell cups, these are first warmed in the sun or over a lamp so as not to chill them, and the box or nucleus hive they are carried in is also treated the same way. Larvæ should never be chilled by exposure.

At each of the apiaries are kept two or more breeding queens, so as to avoid carrying queens or cells from apiary to apiary. As the above method consumes more time than can be given when working a number of apiaries single-handed in the spring and early summer, the following plans are now mostly used.

As soon as a strong colony prepares to swarm or supersede, the queen and brood are taken away, when a comb containing the most eggs and larvæ from a breeding queen is given. All drone brood is first cut out, as bees are in the habit of building cells with drone larvæ under these conditions. By putting combs containing strips of drone comb along the bottoms into the hives of the breeding queens, mutilating good combs when the cells are being cut out is avoided, and by removing the drone comb along the bottom of the comb, a space is provided which enables the bees to build cells in a hanging position. Extra space is also given each side of the comb to give building room. If this is done the bees are more apt to float the larvæ out with cyme and construct fine big pending cells.

If time and conditions allow, and a lot of cells are wanted, to make double sure a frame of grafted cells is also put in with the comb of brood. Some bees, mostly pure Italians, have been found to build out artificial cells better than hybrids or blacks; while hybrids prefer building cells on brood: blacks perhaps more so. It is all right to give them their choice sometimes. By using a combination of these two methods, an abundance of good cells is usually procured. The best cells are generally built during a fair or good honey flow. This is not always the case. If a colony is strong in bees and has plenty of stores, and the bees supersede their queen, which may have failed suddenly, they will build the very finest cells when there is little or no nectar coming in.

While a colony is cell-building a condition as near approaching a good honey flow is produced by giving it from two to six combs of honey; by bruising, rubbing, or scratching them so the bees have to shift the honey. If no combs of honey are available, combs of syrup or syrup in large feeders may be used. The extra heat produced by the greater activity procures fine cells and consequently superior queens. One or two combs containing plenty of fresh pollen should be given the colony, and, if procurable, some sealed drone brood.

It is all right to crowd the bees somewhat. If the hive is very strong two storeys may be used, and the honey or syrup be placed in a third super over the mat. Another method practised is when an Italian hive prepares to swarm and a number of cells are built, take away the queen with the brood comb she is on with several other combs with bees and honey, and make a fresh hive of them. The old colony may be broken up into strong nuclei hives. This plan has usually given good results.

By visiting each apiary every nine to eleven days there are usually plenty of fine cells from breeding queens to give round to hives that have been made queenless the visit before. Their own cells should be carefully destroyed; yes, every one of them.

## THE THICK HONEY PROBLEM.

### A SOLUTION OF THE DIFFICULTY.

The finest way to extract thick honey is to let it remain in the combs and rear young bees with it for work on clover. Fine-grained clover honey will always extract.

W. L. Hutchison says, in "Advanced Bee Culture," "know your location." That it plays a very important part any beeman will admit. In an apiary situated near native bush or flax there is bound to be thick honey in galore.

By the way, I have never yet seen bees working on manuka blossom. I have watched off and on for the last eight years. Near my Otehuna yard there are cabbage trees, flax, and native bush in plenty, also plenty of clover. Now the problem I set myself to solve some years ago was something like this:—How can I prevent the colonies from plugging everything up with bush and flax honey and get a crop of clover honey?

Rear bees on it.

Just here is where a knowledge of your location comes in—here. Cabbage trees yield heavily from the second week in November until the end of that month; flax from about 7th December until the 26th. Clover is generally yielding heavily when the bees come off the flax, and continues to yield until 20th January, if the climatic conditions are right.

I use a 12-frame hive, as I find the 10-frame too small for my purpose.

The following stops the swarming business, which is one important feature. First, we will assume that all the hives have been thoroughly overhauled and cleaned from propolis, etc., for rapid manipulation of frames. In the first week in November the bees in this district show the first indications of swarming—eggs or larvæ in cells. Commence at No. 1 colony and find the queen; place her with the frame she is on in an empty hive alongside of the parent colony, **but facing in opposite direction**; remove three or four more frames of sealed brood and adhering bees and put them along with the queen. Fill up the empty space with foundation or combs. Sometimes it is as well to give her a frame of honey if the weather is not just right. Secondly, on the eighth day cut all cells. Your parent colony is now hopelessly queenless and broodless, consequently out of normal condition. Bees out of a normal condition will loaf, reserve their energies until there is some brood to look after. You may now give parent colony a ripe cell from one of your breeder queens. We will presume you have two or three colonies rearing queens from select stock. Watch your old queens and see how the egg-laying is progressing. When your young queen is mated and laying commences, she will have plenty of room for her energies in that direction, plenty of field workers, also plenty of nurses. I winter all stocks now in two 12-frame hive bodies.

During the flax honey flow your young queen will be right into her stride, while the old queen is doing her little bit alongside. Thirdly, on the 26th December pinch the head of your old queen if she is of no further use; take any flax honey out of the hive, and give empty combs, and set it on top of the old colony; also give it a fourth storey of combs. Perhaps it will require a fifth storey.

There is nothing new about this, only a modification of the hand switch-board and some little knowledge of bees and their funny little ways. I may here state that it is useless to commence this or any other manipulation unless you are in possession of properly constructed hives and fixtures, frames properly cleaned, etc.

With a summer such as the last one there is no system that will work. Martinborough looked like a place that I sojourned in once, Aden, Arabia. It last rained there about the time of Noah! There is no clover flow in that location.

Wai Tapu. R. H. NELSON.

## BOOSTING HONEY.

By "CALIFORNIA."

Honey is an article of food which has to be advertised to compete with jam and butter. This last winter I put in two or three ads. in our local paper, and disposed of 1,000 lbs. The season before I didn't advertise, and sold one can; wouldn't have sold that, but the carpenter who put my honey-house up thought it was up to him to buy a can. I have even heard beekeepers say there's only some people who like honey. The first winter I was here I peddled about 800 lbs. of honey at Stratford, which was sold mostly in 5 and 10-lb cans, at 2/6 and 4/6, and each time I came round they wanted more. One family, with the two parents and two small children, used only 180 lbs. a year. There wouldn't be much need to export if everybody ate honey like that! Only where there were old people I couldn't sell any, but they were made up for where there were children. As the Company will be practically controlling all the honey in New Zealand, it has a splendid chance to push the sale of it, but at present I think it is asleep. Honey should not be put up in tins like sardines and other canned stuff; cartons and Aitken honey sacks would help its sale much better. Many people I have spoken to don't like the tin honey, as it has a dirty black ring around it, and prefer to buy it in other containers, to the detriment of our Company.

In the March issue R.B., of Waimanu, has the best suggestion I have heard of yet for advertising by moving pictures. Fruit, flowers, and even some on mushrooms are shown that way; why not honey? Blotting-paper with an ad. on one side supplied to every Post Office, school, and railway station in New Zealand would more than help some; it could be bought very cheaply in large quantities. The stickers "Eat Honey," put on letters and parcels and anywhere else one can put them will help to keep honey before the public. One can buy 1,000 for 1/3. If the beemen throughout New Zealand wrote up articles on bees and how honey is produced and other items on those lines, it would help to clear up some of the strange ideas some people have about it.

## COMMENTS ON PASSING BEE EVENTS.

By CRITIC.

["Critic" will in future look over each number of the Journal, and criticise any items which appear to need criticism. The criticisms are not undertaken in a captious spirit, but with the view of drawing attention to matters which may have been overlooked by contributors.]

July number, page 218.—The strict grading of our honey will be the making of the export trade; but the readjustment of the grading points is urgently needed.

Page 219.—Will Mr. Jacobsen kindly inform us which of the eucalypti he refers to as yielding honey at same time as clover? I imagine it will be news to many that a mixture of eucalyptus and clover honey is stored by bees in New Zealand, or is it meant that the two are artificially blended?

It has been proved over and over again that bees cannot break the delicate skin of a ripe grape with their jaws. Professor A. J. Cook, the well-known American entomologist, has placed sound ripe grapes smeared with honey in the hive of a starving colony; the honey was cleaned off the fruit, but not a grape was punctured. The hive bee is known to take advantage of holes in the calyx of deep blossoms previously made by humble bees. May not this have been the case where Mr. Barker saw the former busy on the foxglove? If the hive bee can puncture the tough calyx of the foxglove, it would have no difficulty in doing so with the skin of a ripe grape.

Page 221.—How much longer are we to be compelled to put up with the box hive and its careless owner? It is now more than seven years since the common box as a domicile for bees became illegal, yet complaints are constantly being made from one district or another that they are still in existence and giving trouble. Is it the fault of the apiary inspectors, or are their hands tied in such a way that they cannot act on their own initiative? In this respect the Act seems to be almost a dead letter.

Page 222.—Mr. Clayton must either have been misreported or he has made a slip of his pen. He advocates the McEvoy plan of treatment of disease by transferring the bees from the diseased combs on to sheets of foundation, and says: "I have treated (bees) all the seasons of the year, and have never had a failure." A failure would be certain to follow at all times of the year when too cold to build comb.

Page 224.—Mr. Robertson would be well advised to be careful in advocating the use of a different size frame to that generally used throughout the Dominion. Even supposing for a moment that there might be some slight advantage in using a deeper brood frame than the one in general use (which I for one cannot agree with), is it of such paramount importance as to warrant the introduction of something that will put us to more expense and upset the general smoothness of the working of our present arrangement with regard to the standard Langstroth frame? On this point Mr. C. P. Dudant (whom Mr. Robertson quotes), who uses largely the Grimly frame,

which is two inches deeper than the Langstroth, says (page 154 in the latest edition of "Langstroth"), after speaking of his preference for the Grimly:—"Yet the Langstroth Simplicity being the standard frame of America, we would hesitate to advise any apiarist to change from this size," etc. Has Mr. Robertson given attention to the many who formerly used a deeper frame than the Langstroth that now advocate the latter? Even Doolittle, who learned his beekeeping under Gallup, and used the Gallup frame, writing a few years ago to a New Zealand beekeeper, advised the use of the Langstroth. The Gallup frame is 11¼ inches square. My advice is, stick to your standard frame.

Page 226.—Mr. Jacobsen's system of artificial swarming is a modification of the Alley and Pratt systems, both of which were accomplished by switching off the entrances from one hive to the other placed alongside, as Mr. Jacobsen describes. I tried the plan for a while, but found, like the working of the Heddon reversible frame, it needed too much attention to make it a success to warrant its general adoption. These swarming devices have been legion, but scarcely any are retained after a season or two.

# Correspondence.

(TO THE EDITOR.)

Sir,—I want to buy the very best honey tank, and don't know just what is the best. What would you recommend—a very large wooden tank, or two smaller ones? Is it advisable that the tank be lined with galvanised iron or tinned steel?—I am, etc.,

Southland. H. B.

[It is difficult to give you just the information you require. Will some reader answer our correspondent's enquiry?—Ed.]

(TO THE EDITOR.)

Sir,—Writing on size of hives (July number, page 224), Mr. W. Robertson (Mosgiel) advocates a larger or rather deeper frame. Mr. Robertson is a close observer, and I believe he is right in urging that a deeper comb would suit the queen better. But would it suit the beekeeper? I am afraid not. It would necessitate shallow extracting frames, or else extracting combs that are so deep as to be awkward to handle and more apt to break when handled. The Langstroth frame has proved itself to be a good all-round one, as is shown by its great popularity. To my mind, two sizes of combs or very deep ones would be a great disadvantage. Will anyone tell us who has tried them?—I am, etc.,

J. HOBBS.

Kauwhata, August 3rd, 1915.

(TO THE EDITOR.)

Sir,—In looking through the last number of the Journal I noticed W. Robertson's idea of sizes of hives. I had some experience of these deep frame hives in the United States in one yard of 150 stands. They take more time to manipulate, as one has to give more smoke, and the frames are not a handy size, especially in uncapping they take much more time. Why not give those 4,500-eggs-a-day-queen another storey or super? I think if Mr. Robertson had some experience with those non-interchangeable combs in super and brood-nest he advocates, he wouldn't praise them any.

First when I started beekeeping here I was greatly enthused over the shallow system 5⅝ depth supers, same as Louis Scholl of Texas has. For Taranaki they are the last hive I would recommend to anyone. I then made up my mind to stick to the full-depth 10-frame, but since bought fifty of Lenz's 12-frame hives. The advantage of the 12 frames is one can run them on more let-alone plan. One beekeeper from this part at the meeting at Wellington said he found the 12-frame a great advantage, as he leaves the bees 70 lbs. of honey. Some honey, isn't it? Mine get along with 40 to 50 lbs. At present I have 100 in 10-frame hives, and use the shallows for supers, and 100 in 12-frame. From now on I intend to use the 12-frame. When it is all summed up, I think it is just a matter of locality: in a warm climate one must give the bees plenty of room; in a cold place, like the Eastern States in United States, most of the beemen there use the 8-frame, and find them satisfactory.—I am, etc.,

T. J. MANNEX.

Eltham, August 13th, 1915.

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(TO THE EDITOR.)

Sir,—It seems to me that this is a suitable season to discuss hedge plants for apiary sites. Unless an apiary site has natural shelter—say, native bush or high ground—some form of shelter is absolutely necessary to keep the driving, keen spring winds from gaining access to the hive and the brood. If the hives are in an exposed position and there is a lack of shelter, then brood rearing in the early spring will be very much retarded. First, so many bees will be battered down into the grass and lost just when the hive is least able to spare them. Secondly, so many bees will have to stay in the hive to keep the brood warm that breeding will necessarily be restricted, and the result will be that the clover will be on, and very few workers will be there to do the gathering. It is admitted by all that shelter is an absolute necessity. What shall we plant? There are many hedge plants—macrocarpa, holly, native matipo (maple), several native olearias, broom, gorse, tree-lucerne, privet, hawthorn, and barberry. Seeing that we have to plant something, why not plant that which will give honey at a time when it is most wanted. Of the above, holly, matipo, broom, tree-lucerne, hawthorn, and barberry (yellow) produce honey

in varying quantities in early spring, and none of them grow too high to present any difficulty in pruning. Of the foregoing, however, two stand out far ahead of the rest in the quantity of honey they produce—tree-lucerne and yellow barberry. The first comes very early in spring, is a free flowerer, and grows rapidly from seed. In two years it is a fair hedge, and begins to bear blossoms and honey; but it is subject to the frost, does not take kindly to pruning, is liable to the borer, and only lasts about ten years, but for quick shelter it is the very best. Yellow barberry, I think, must bear the palm as a hedge plant. It prunes well, will spring again and again after being cut back, is not attacked by the borer, frost does not affect it, and it bears a profusion of handsome yellow flowers that literally drip with honey in September and October in Southland. It seeds freely, and the berries are greedily eaten by thrushes and blackbirds, and transported from place to place. It is easily got rid of, for when cut down and allowed to dry for a week or two it burns with the fierceness of a furnace, so that if it were to spread to our patches of bush it would be an acquisition at least to the beekeeper. At present there are thousands of seedlings under my hedge, and if any subscriber wishes to try this plant I will be only too pleased to send on a few provided he sends the necessary postage.—I am, etc.,

ROBT. GIBB.

West Plains, July 29th, 1915.

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Mr. F. C. BAINES, Secretary N.Z. Co-op. Honey Producers' Association, Ltd., Normanby, Taranaki.

Mr. R. W. BRICKELL, Secretary National Beekeepers' Association of N.Z., P.O. Box 572, Dunedin.

And the Secretaries of all the District Associations

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