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ITALIANISING THE APIARY.

(By ROBERT STEWART.)

(Reprinted by request from Conference Report, 1913.)

I have been asked to give an article on some aspects of queen-raising at this meeting. I will first take the case of a beekeeper who has black or hybrid bees, from 50 to 150 colonies, and wants to Italianise, yet is so situated that he cannot do it by buying to advantage, and has had little or no previous experience in queen-raising.

He should start by procuring the previous autumn from five to twelve pure untested queens from some reliable breeder; also, if he is in an early district, procuring two at least select tested or breeding queens, as these will also be needed before it is safe to get them through the mails in the spring.

We will take it that the untested queens were introduced to strong colonies, and that the most of them are doing well in the spring. These are to be kept well supplied with stores, and if in any way short are to be fed up so as to be strong in bees early. About six or seven weeks before the usual swarming time each of these colonies is to have a frame of from half to three parts drone comb put in near the centre of the hive and kept well supplied with food, so that brood raising is kept going. When some of them have the first drone cells sealed over it is time to get queen cells started.

Five days previous to its being needed, a frame of bee comb that has not been bred in more than once or twice is inserted in the centre of the brood nest of the colony with the breeding queen. On the fifth day it will have a large patch of eggs in its centre, and the simplest way to prepare it is to cut out an inch strip of the comb along the outer lower edge of the eggs in it; a half-inch strip may be also taken out straight up and down through the centre of the eggs. It is round these edges that the bees will start the queen cells principally.

Here we will go back to the hive that is to receive this prepared frame. Eight or nine days before it is required, take a fairly strong colony whose queens you do not want to keep; one with from five to seven frames of brood and strong in bees will do, the stronger the better. Have a division board made of excluder zinc to fit the hive neat so that a queen cannot get round or over it. Now find the queen, put the frame of brood she is on next to the outside frame on one side of the hive, put in the excluder division, and crowd up all the other frames of brood next to it. On the eighth or ninth day after take out the two frames the queen is on, kill her, shake all the bees off those two frames, and give them to some other colony. This leaves your colony now queenless and with no brood of its own young enough to start queen cells on, but with plenty of nurse bees.

It is now ready for the frame of eggs, which must be taken from the colony selected to breed from, prepared and inserted.

If the weather should not be fine now, or there is no honey coming in, this colony must be fed on a little sugar syrup each evening while cell-building.

If it is strong in bees and weather is fairly warm, a second prepared frame may be put in five days later. The first one will in a day or two be having the first of its cells capped over. The cells started can be counted, and eight days from the time the prepared frame was given deprive as many colonies of their old queens as you have cells for. Two days later the cells can be carefully cut out with a little of the comb round their base, and each one inserted in one of the colonies made queenless by cutting out a small piece of comb in one of the frames of brood and carefully putting the cell in its place.

If all goes well, these cells will hatch out in a few days, and the bees, being queenless, will accept them, and the young queen will herself destroy any other cells they may have begun on their own brood.

When the usual swarming season is about due all hives given cells should on the ninth day from the time of the old queen's removal be carefully examined in case of their keeping their own cells, when they would swarm if allowed to do so. In such a case, if the young queen has hatched out all right, their own cells must be removed.

If all has gone well by the time the young queens are ready to take their first flight there will be a fair number of drones flying from the colonies fed up for that purpose.

All black or undesirable colonies must be prevented from raising any drones, or as few as possible, so that a fair number of the early queens will get a chance to be purely mated. This is about the simplest way to Italianise, as no special outfit, appliances for introducing of queens, or anything not in every-day use in an apiary is required. By using several colonies to raise queens a large number of colonies can be given young Italian queens early in the season.

I would advise anyone who intends to succeed to procure some up-to-date work on queen-rearing, a small outfit of special appliances, and to use two or three colonies to experiment and work on. Also, if within reach of an up-to-date apiarist, try and get him to give a working lesson or two on the subject.

Having got Italian queens at the head of each colony, if it is a district with many black bees about, it will be found that a good many of the young queens have been mismated. This will not interfere with the working capabilities of their bees, but no mismated queen should be used to raise queens from, and as they get aged or fail in any way must be replaced by a young one from a pure mated mother.

In the selection of the queen mother will depend success or failure to a large extent.

It will usually be found safest for one not experienced to use from six to a dozen of the queens in the best doing colonies to raise his young queens from for re-queening, and to procure new stock occasionally from a reliable source, not only to introduce new blood, but to compare with what he already has. If young queens raised from new stock are superior to his own

when tried, they can be used to re-queen all inferior or failing stocks. As a rule, it will be found best to re-queen colonies with bad-tempered, mismated, aged queens, and poor stocks towards the end of the honey season. At that time it will not affect the season's honey yield, and there will be young, vigorous queens ready to go ahead the following spring.

The above should give an apiarist about to Italianise a fair idea of how to proceed.

We will now turn to the man who has mastered the idea of raising queens, but now he is going to keep up the quality of his stock and possibly improve them.

The first necessity to the production of good queens is to have good stock as a foundation, and to have the right conditions when queen-rearing. During the swarming season these conditions are easily obtained. A colony to raise good queens must be strong in nurse bees, and have abundance of honey and pollen coming in. With such conditions cells can be started in a colony deprived of its queen and all brood over seven days old, either on the natural comb, as previously outlined, or prepared artificially, and also in the top storey of any colony that is preparing to swarm.

In using a strong colony to start cells that is not making any attempt to swarm or build cells of its own, lift four or five frames of brood into the top storey, and put a half-storey in between top and bottom so that the top is cut off from the queen below by an excluder and the combs of honey in the half-storey. In a few days they will start cells in the top almost as readily as in a queenless colony, so long as honey is coming in plentifully. A separate entrance to the top storey will also assist if it has been in use some little time previous by the bees.

In handling frames with queen cells or the cells themselves they must never be jerked about or roughly handled in any way. If the bees have to be taken off such frames, brush them off with a feather, and never allow cells with young queens to get the least cold or chilled.

From the day the egg is laid by the queen mother to the time a young queen is ready to mate there must be no chance of chilling allowed even for a minute. Chilling is one of the most prolific sources of inferior and short-lived queens.

In procuring his first Italian stock, the apiarist will be well advised to get them from someone of established reputation. Later on he can try different breeders if he has a mind to.

In getting queens by mail it must never be lost sight of that they may be, and sometimes are, permanently injured, in some cases by rough usage, but principally by getting chilled. Even if a queen breeder does his best, the result in such cases is disappointing.

If, however, the damaged queen is bred from, her young stock will be all right and not in any way adversely affected, but she herself will never be as good as formerly. If valuable, young queens should be raised up from her as soon as possible, as damaged, such queens are apt to and generally die suddenly in a few months' time, sometimes sooner.

The best way to improve is to breed for it by selection, and this requires constant attention and observation over every colony.

First, note all colonies with serious faults, such as mismated, badly marked, with too much inclination to swarm during the season;

Any that are always strong in bees but do not store honey in proportion to their numbers during honey flow;

Any that easily allow other bees to rob them;

Any that seem to have a larger proportion than the average of small-sized bees or drones in their hives;

Any that are vicious without cause;

Any colonies slow in getting on to forage at a distance;

Any with too little brood during the breeding season to keep the colony populous;

And also any colonies that show larvæ replaced by eggs in any large proportion of their unsealed brood.

All with these faults and characteristics are to be ruled out.

Then to select your breeders:—

Note the colonies whose bees come in with the heaviest loads of honey during the honey flow;

Those which show plenty of old workers amongst their number all through the season;

Those that have a regular brood nest closely packed with young, the sealed brood with a few empty cells through it;

Those that do not stop work when the hive is opened, but are going as usual in a few minutes;

Those that are out early and in late on all fine days during the honey flow;

Those that are amongst the first to get on to honey at a distance;

Those that as long as they have combs to fill and plenty of room do not attempt to swarm during the honey flow;

Those that, other things being equal, are the first to start sealing up honey when the flow comes on.

Use your oldest queens that are best in these points to breed from.

If several young queens during their first season show exceptional promise of good qualities, raise a small number of young queens from each of them. You can judge the next season whether the good qualities are likely to show up in their stock or not.

We now come to the queen herself. She should when a virgin be active in her movements, large-looking round the thorax, with abdomen rather long and tapering, with good lengthy wings. Queens with very short wings will give bees of poor flying powers.

After starting to lay, her abdomen should fill out and show full and well-rounded while she is in full laying.

Queens showing a taper-ended abdomen while fed up for laying will give bees of poor honey-carrying capabilities, and always remember that the more generations of good qualities there are behind a queen the surer are these of transmission to her descendants.

In selecting for non-swarming a few words may be useful.

First, there must be always sufficient room given to prevent overcrowding for any length of time, and especially during the honey flow, so that bees are always in full work.

When bees prepare to swarm note all those colonies that

slacken in their work or are prevented by removal of cells from swarming, for such will be persistent swarmers.

Raise your queens and drones from colonies that either do not swarm, or when forced to swarm keep at full work piling in the honey right up to the minute of coming out.

HOW I SECURED ELEVEN TONS OF HONEY FROM ONE HUNDRED HIVES.

(By R. GIBB.)

To begin with, I must state that all my bees are Italians, 70 per cent. pure mated, and I have not had any disease among them for the past six years, although it is within a mile of my home yard, and oceans of it within three miles. For the benefit of beginners, I would advise them to buy absolutely clean bees from a reliable source, and whenever disease makes its appearance, go for it at once; treat it the night you find it.

Six years ago I discovered two cases. That night I dug a hole, lit a fire, and burned them both, and I consider that was one of the best night's work I have ever done. Of course, I would not recommend such treatment if, say, 50 per cent. of the apiary were infected. I would apply the McEvoy cure, and no other, for the man who tries to save a few paltry combs is only playing with the trouble, and I would advise my good friends, Messrs. Allen, Cottrell, Clayton and Stewart, to get a job for a few months as apiary instructor, in order that they may modify their views on this much-debated question. I think I have delved into this subject as fully as any man in New Zealand, both from the biological and microscopical standpoint. I have inspected apiaries, and advised apiarists from North Cape to the Bluff, and I have come to the conclusion that to eradicate the disease you must get rid of the spores, and to get rid of the spore, you must take away the honey and melt the combs.

But you will say, what about that crop of eleven tons from one hundred hives? Well, I am coming to that. Now, my home yard is situated in the middle of the Edendale Plain. To the west, three miles distant, lies the Edendale bush, but it is too far away for the bees to do much work in. To the east lies the Glenham bush, 1½ miles distant; but as most plains are badly wind swept in early spring, even 1½ miles is a serious bar, though my bees visit it regularly on fine days.

Now, Edendale is famous for its clover, and from a beekeeper's point of view clover only. There is only one other plant of importance, and that is gorse, but it is only useful for its pollen.

Many of our native trees—pohutukawa, rata, manuka, fuchsia, the pittosporums and parsonsia and native flax—secrete huge quantities of from fair to inferior honey, and as many of them bloom early in the spring, why not take the bees to the bush and gather it.

This is what I did. In the middle of September I took my bees to the Edendale bush, and by the end of the month they were more than holding their own from the white pittosporum; by the middle of October fuchsia and black pittosporum were

yielding heavily, and supers had to go on; in November parsonsia was yielding, and by the middle of December I had extracted one ton of inferior bush honey and stacked aside three-quarters of a ton of combs for winter use. If I had had the combs to spare, I would not have extracted a drop, as it never pays to sell an inferior article. By the middle of December the clover was yielding in the home yard, so I made preparations to bring the bees home.

Now, when I took the hives to the bush, they went in a horse waggon, but they were not strong in bees, and were easily shut in, and one load took the lot; but by the middle of December all were at least two storey high, and many of them three, and a few four. Horse traction was out of the question, so I fastened a hook to the back of my car, and hitched up a two-wheel trailer, which I had manufactured from a pair of old car wheels and trap springs.

The trailer is 8 ft. long by 4 ft. wide, and will just carry a dozen hives nicely. I packed another eight in the back of the car to put weight on the back wheels, and my word it would do you good to see the much-maligned Ford lifting three-quarters of a ton in a grass paddock without chains or grippers of any kind. I was a little apprehensive as to how she would pick up when I let her into the top gear, but she just raced home with that load at fifteen miles an hour, and in spite of the heavy combs I never broke one in the whole transportation of 160 supers. (I did not take all my bees to the bush; I only took 60 hives.)

On arrival at the home yard I set out the hives in their permanent positions and made my increase, for up to this I had not had any swarms. I always make a point of having plenty of young queens in the spring, and nuclei are always easily made when you have two apiaries a few miles apart.

(To be concluded next issue.)

Comments on Passing Bee Events.

By CRITIC.

Pages 475-6.—No hard-and-fast rule can be laid down for the whole of New Zealand as to the best time to make the first examination of colonies in early spring, as so much depends upon the weather and the latitude in which the apiary is situated. "H. R." suggests the last week in September; that would probably be the best time in the southern parts of the Dominion, while the end of July would be the most suitable in the far North, and the second half of August in the Auckland Province. An early examination in suitable weather is very important; it is then that symptoms of disease can be more readily detected, and the value of the queens as to their laying qualities can be judged.

I quite agree with "H.R." that queen-rearing is best done at swarming time, if he means we can raise the best queens by the forcing method at that time. I have proved to my own satisfaction that up to the end of December is the best period

for queen-rearing in New Zealand. Other things being equal, we can get the most robust and long-lived queens (regarding their usefulness) reared at that time.

Pages 477-8-9.—I have been particularly interested in the subject of "Marketing Honey at Home," and have watched the doings of the New Zealand Honey Producers' Association and that of the Bristol and Dominions' Association very closely, and am of the opinion that New Zealand beekeepers have been very fortunate indeed in securing such a combination to conduct the honey export trade. It will be admitted without contradiction that without a well-conducted export trade in honey our beekeeping industry would be in a very poor way. I sometimes think that there are many of our commercial beekeepers who do not fully realise this, otherwise they would give the New Zealand Honey Producers' Association their unstinted support.

I believe that every thoughtful beekeeper who heard or who has read Major Norton's address, as reported in the Journal, will appreciate his action in refusing to take advantage of a temporary gain in the disposal of our honey to the loss of the permanent trade which he had built up. The fact that he has secured practically an unlimited market for our dark and bush honey speaks for Major Norton's ability as our agent. I can only hope that our beekeepers will, one and all, not let the present arrangements fail from indifference.

Page 481.—Disease usually shows itself in the discolouration of the larvæ at the time of capping on the eighth day from the laying of the egg.

The appointment of what we term "local inspectors" requires some discrimination, or there will be trouble. No one in my opinion should be appointed as inspector in his own district. None of us are entirely free from bias, consequently we are inclined to favour our friends and to keep strictly to the letter of the law with others. At all events, those we were compelled to deal strictly with would be almost certain to advance that proposition and make trouble. Supplementary inspectors should be appointed to inspect in districts away from their own.

Page 483.—Mr. Mannix endorses Mr. Baines' suggestion re signing letters to the Editor in the writer's name, and includes "Critic" among the "cusses." Now, I am quite contented to remain under that ban, as it was one of the conditions of my contributing to the Journal that my name should be withheld. Possibly Mr. Mannix is not aware that writing under or over a nom de plume is a recognised custom all over the world, and such writings, accompanied by the real name (to be withheld), are accepted by the world's leading journals. It is not the name of the writer that so much matters as his writings. So long as a writer does not descend to personal matters, a person is quite entitled to request an Editor to withhold his name, and it remains with the Editor to judge whether a communication is worthy of production or not. Dr. Miller, Mr. Doolittle, Mr. Holterman and others would have written just the same, and made as many or as few mistakes, had they signed their articles "Snooks," "Shadband," "Stiggins," or any other nom de plume. "Critic's" "Comments" are open to criticism, and as he feels sure that no personal

remarks will be allowed to enter a controversy on either side in the Journal, my critics, so far as I am concerned, may use any name they prefer.

Page 491.—R. H. Nelson has suggested a very wise procedure for beginners to adopt—that is, to put in a whole season with some first-class apiarist previous to making a start on their own. It will pay a learner well to do so, even supposing he gives his services for nothing beyond being taught the business.

Now, I wish to give a hint on this matter that may save trouble. Lately, some enquiries on this subject were made to settle the question of liability, the result of which, I am given to understand, was that, according to the labour laws, if an agreement is made between the apiarist and the beginner that the latter shall give his services for a stated time, the full rate of wages for unskilled labour must be paid. For instance, suppose that an agreement is drawn up that the learner shall give his services from the 1st October to end of March free, or at a nominal wage of, say, 5/- or 10/- per week, and in return he is to be taught beekeeping, both the apiarist and the learner will be liable under the labour laws to be fined—the one for giving and the other for accepting lower than the ruling rate of wage for unskilled labour. But if no actual agreement is made, and the learner is free to come and go when he likes, there is no liability. It is a point upon which it will pay to get legal advice upon; in fact, it is just one of those matters that rightly come within the duties of the National Association to ascertain and make known through its Journal.

Page 493.—Hold over enough young queens bred the previous season in nucleus colonies to serve your needs before the current season's bred queens are ready.

Hints for Beginners.

WHAT TO DO.

(By W. B. BRAY, Barry's Bay.)

It is just this time of the year when bes are liable to get a severe set-back through lack of stores. There may not be enough coming in just before clover begins yielding, or a spell of cold or wet weather may prevent them from going to the fields. As brood-rearing is at its height now, they use more honey at this time of the year than at any other time, and a scant supply of stores will soon give out if nothing is coming in besides. When that happens, all the unsealed brood perishes, and in a severe case of starvation the bees themselves soon perish. It is not enough to see that the bees are alive; it must be ascertained whether they have enough food to continue brood-rearing, because it is the brood being reared now that produces the bees which are going to gather the crop. Therefore, be prepared to feed any time now. It is the greatest mistake to neglect it now if it should be necessary. The syrup can be made thin—say, as much sugar as cold water will dissolve by stirring for ten minutes. Almost any kind of a

feeder will do in an emergency. If there is no other way, empty combs can be held flat over a bath, and the syrup be poured into the cells through the rose of a watering-can.

It will be time to treat foul-brood everywhere now. It is better to get it done now when clover is beginning to yield than when the height of the flow is over, though the bees under treatment must not be on short commons any time. Feed if necessary. See what I said in last issue about treating foul-brood. Where there are only a few combs to destroy, it might be better to burn them than fuss about getting the wax from them. Where anyone has a couple of hundred to render down, I should certainly advise purchasing a Hatch wax press, as the extra wax it will save pays for it at once.

However few hives a person has, I cannot give him better advice than to make himself acquainted at once with the rearing of queens. Read up all about the life history of the queen, then learn to recognise the queen herself and the queen cells in their various stages. Queen-rearing is perhaps the most interesting part of beekeeping, and, properly handled, it can be made to play no mean part in augmenting the returns. By queen-rearing I mean the rearing of queens from queens that have proved themselves better than the others and replacing the inferior queens with the daughters of the breeding queen. I would advise the beginner to thoroughly study the subject in one of the standard bee books, as it is impossible for me to convey anything like an adequate idea of the principles of queen-rearing in these short notes. Queen-rearing cannot be carried on at any or all times of the year, but the conditions will be just right during the next two months.

At one of the Conferences Mr. Cotterell gave us a very useful wrinkle—that was, to oil the honey tins with raw linseed oil to prevent them rusting. I have done all my tins that way since then, and find that they keep their new appearance, and getting wet does not hurt them. Now is the time to get the tins in and oiled. The oil is put on with a piece of cloth as thinly as possible. If put on too thick it will run into thick patches, and give a nasty appearance. If put on just right nobody could tell it was there. It is much better than lacquer, which when put on by hand gives an unsightly appearance.

Combs that are built in the brood chamber are never joined to the bottom bar. If you are going to use such combs in the extracting super and want to get them joined to the bottom bar, shave off a strip along the bottom of the comb. It sets the bees to work repairing it, and they will likely finish up by building it down to the wood. The same applies to a pop-hole in the comb, where the bees delight in building queen cells.

'H. R.'' says it is a good plan to pull woollen socks over the hands and up over the coat cuffs. I should say it is a bad plan. There is nothing which will irritate bees more than wool. Try the plan, and see if you don't have hundreds of bees clinging to the socks trying to sting them. If the socks are thick the operator is safe, but it is a bad plan to wear anything that irritates the bees. It gets them in a continual state of nervousness, so that anyone within a hundred yards must be fully armoured to escape stinging. Black and blue clothes are very irritating to bees; a rough surfaced cloth is the same. White drill or calico is the best stuff to wear. A

suit of overalls costs so little, and it makes the work so much pleasanter. The bees like my white trousers so much that they mistake them for the hive, and often alight on the bottom of the leg, only to find their mistake. To prevent bees crawling up legs and sleeves, I have tabs sewn on and two buttons—one to take the tab when not in use, and one to button the sleeve up tight.

I have always noticed that people who wear gloves have vicious bees. Why? Because they feel so secure they care not how much they bump the hive, or how many bees they crush in handling the frames. After a time there is such a smell of crushed bees and stings on the gloves that they alone are enough to make the bees mad. By working with bare hands the operator will handle the bees more carefully, and will be surprised to learn that bees do not sting so much after all.

The handiest place to put the smoker while the frames are being handled is between the knees. It can be held there ready for instant use, and it is quite possible to walk a few paces holding it there.

HOW MONEY IS LOST BY NOT UTILISING WAX SECRETED BY BEES.

When I say that the modern beekeepers, in using fully drawn out combs in their extracting supers, are losing money hand over fist, a good many of your subscribers will smile. Now, the bee has, on the under-side of the body, six wax pockets or plates, and under certain conditions—e.g., when a colony of bees is engaged upon a flow of honey, a minute quantity of translucent liquid exudes from these plates and immediately hardens to a scale. This, then, is beeswax, and if not utilised is lost. Now, I do not mean to imply that the use of combs causes a direct loss—far from it; but I maintain that through the use of combs we are losing a large quantity of beeswax. Having got next to this fact, you will say, how are we going to utilise it? I suggest that beekeepers when extracting uncap their combs down to the thickness of the top bar; if this were done they would increase their wax production by about one-third, consequently the price of foundation would drop considerably. At the present price it costs 4/- to fit a twelve-frame super with medium brood foundation. As the secreting of wax is involuntary on the bees' part, it makes little or no difference in the size of the honey crop whether one uses foundation or combs in the supers; but if fully drawn out combs are used, the wax secreted by the bees in gathering the honey to fill them is lost, whereas if foundation or thinly pared combs are used they can use the wax in making comb. As proof of the amount of wax they will secrete during a good season, I last year bought fifty shook swarms. They were put on to foundation, and had foundation in the supers, and in spite of the fact that they had to draw everything out from foundation, I secured an average crop of 83½ lbs. of honey per colony and slightly over 2 lbs. of wax per colony. What would have become of all the wax used to build combs if they had been given combs instead of foundation?

H. BENTON.

CO-OPERATION.

(By W. B. BRAY, Barry's Bay.)

I was pleased to see the report of Major Norton's address to the Waikato beekeepers in the Journal. More space in the Journal ought to be devoted to the doings of the Honey Producers' Association, and I hope this will be the beginning. The Honey Producers' Association is not an exclusive corporation, neither is it run by outside interests, and it is not too much to say that its failure would be a calamity for the future prospects of commercial beekeeping in this country. No amount of effort on the part of the National Beekeepers' Association could ever accomplish what the H.P.A. can do for us. It is one thing to produce honey and another to sell it to best advantage. It is here the H.P.A. steps in and gets the maximum price for the least expenditure. Formerly, when each beekeeper endeavoured to sell his honey on the local market, the buyers played one off against the other, told him about the big quantities they could get at low prices, and then bought their requirements at their own price. Honey sent Home for sale passed through too many hands, and reached the consumer at too high a price to ever create a healthy demand.

Now everything is changed. While we get a better price, it is sold much cheaper at Home, so that the demand is increasing. With a payable export market behind us, we are in a good position to build up a payable local market. It is this part of the Company's business which many beekeepers do not seem to understand. The export contract is, as it were, a solid foundation for the Company to build on, but in just such a season as the past has been, through many beekeepers not being able to see beyond the end of their noses, it nearly proved a rock on which the Company would come to grief. The beekeepers are lucky to have escaped this time, but the danger is still there.

The position was that the contract called for practically the whole of last season's crop, so if it had all been exported where would local prices have gone to? Non-shareholders would have received unheard-of prices. Not only would that prevent their joining the Company in the future (as they would, say, to get a lower price), but it might have led to the secession of short-sighted shareholders and perhaps the loss of the contract. The Company was faced with an impossibility—that was, to supply the local demand so as to keep the prices near the export value and yet fulfil the contract. There was an enormous local shortage, and great prices have been offered by merchants. I say "have been offered," because they secured nearly all there was at a very little more than the usual price. Now they are holding out tempting offers, which, like Mr. Miller's, will fail to materialise when the time comes.

And the time will come again when at the end of a good season every beekeeper will have quantities of honey to sell. I know one beekeeper who thought he was getting a better price from the merchant than he could from the H.P.A., but he reckoned without the bonus, so it remains to be seen whether he did. I know of firms wanting honey badly now who a few years ago were paying 2½d. for the very best honey Canterbury

produces (not mine). I would advise any shareholder who receives a big offer for honey for forward delivery to remain loyal to the Company, and secure it for them, not for himself. Acts of disloyalty will lead to the wrecking of the Company. It must be remembered that next time the ship might founder, and we shall all be struggling against one another. How many would survive? No, we cannot afford to go back to the old conditions.

(To be continued.)

Correspondence.

(TO THE EDITOR.)

Sir,—I have read various works on beekeeping, but find no mention of a process I have for starting the bees to work in the sections. I choose a good day, remove the hive from the bottom-board, and place the half-storey containing section boxes on to it, and then place the hive of bees on the top, and leave for four or five hours, and then reverse things. I find that by this time most of the bees are in the half-storey, and are then more ready to commence work. This system might be of use to your readers, for I have used it for several seasons with great success.—I am, &c.,

Pembroke. R. S. SUTHERLAND.

(TO THE EDITOR.)

Sir,—I am working 100 Alexander and about three dozen division board feeders. Most people favour the Alexander. Well, they can have them; I can feed the division board feeder just about as quick as the Alexander, and there is less chance of robbing, as it is inside snug and tight, while it takes a lot of work to fix on the Alexander, and unless everything is absolutely square there is robbing in the yard next day, while a certain amount of cold air gets in. The division board feeder holds half a gallon and warms the hive.

I noticed an article some time ago in your Journal re roofs, and generally condemning the gable roof. Now, I have fifty in use, and not one leaked. The only fault I had with them was the flange was not deep enough, and I believe the Alliance Box Co. has remedied that defect. I might say my gable roofs are zinc covered, and I prefer it much to rubberoid, but the zinc should be thicker.

I appreciate the Journal very much.

The season is very promising up here.—I am, &c.,

TIMARU.

(TO THE EDITOR.)

Sir,—Re quality of queens. In noting the different prices of queens as advertised for sale, can anyone give their experience why one should pay a very high price for untested queens to one breeder when they can procure them at less than half the price from another? Last season I procured some untested queens from a well-known breeder costing 5/- each. These

queens are at present (November 1st) doing fairly well. The poorest one is looking after forty-four frames and the best eighty-four frames (full-depth Langstroth frames). I estimate they have enough room to keep them going for three or four weeks; then I must get the extractor going and make room for the clover honey. If anyone has queens doing better than this I hope they will let me know, for I am out for the best, even if I have to pay a very high price. But why pay high prices unless we are sure of getting something extra prolific? If a farmer is buying a cow, he certainly would not pay £15 to one seller if he could procure the same quality animal from another for £10 unless he could distinctly prove it was worth the extra £5. Probably some queen breeders have a better system of working than others, and go to more expense in procuring and keeping the best of stock, or what a farmer might term pedigree stock.

I notice "H. R." in the Journal of October 16th warning beginners not to open the hives till, say, the last week in September. If "H. R." was in this district and never touched his bees till then, he would find half of them had gone to look for a fresh home.—I am, &c.,

A. L. LUKE.

Awakeri, November 1st.

(TO THE EDITOR.)

Sir,—Will you please enlighten me through the columns of the Journal on the following:—

1. Is it a fact that the beekeeper whose honey grades, say, 85 points, gets as much for it as the beekeeper whose honey grades, say, 94 points?

2. I understand that the honey exported is graded into four classes. What is the difference in price per pound (if any) between the different grades or classes?

3. Has the Act been passed for compulsory registration of all hives? If so, how is it that it is not in force?

The following is a good way to save healthy brood from diseased colonies. First, let me say that I always cure by the McEvoy method, except when disease is bad. I treat a la R. H. Nelson then to make sure of a cure. When I have a number of colonies slightly infected, I treat the strongest of them first, and put the brood from them on the weak ones, contract the entrances, and leave them twenty-one days to allow the brood to hatch out, then treat them. By this method one saves all the brood and builds up his weak colonies.—I am, &c.,

Newstead, Featherston. H. BENTON.

[When selling or consigning honey it is necessary to have a standard. The easiest method was to sell, or, rather, consign on the grade note. The number of points secured by any consignment does not necessarily mean that the honey is of better quality than another with a less number. In fact, as the honey is now graded, it is possible that the very best honey produced may secure only third grade. To answer the question, a grade with 85 points and upwards gets the same advance without recourse; a less number of points gets the same advance with recourse. The Bristol and Dominions sell the different qualities or flavours in different parts of England.

The clovers are sold in the southern cities, whilst the heavy, strong flavours were sold in the north as New Zealand heather honey until recently, when our Agricultural Department stepped in and announced that there is no heather in the Dominion. Even Government officers do not know all there is to know about the country they represent, and whose interest they are supposed to advance. What harm could it do anyone when we call the honey obtained from the native weeds heathers, flaxes, manukas, &c., heather honey? The Apiaries Act provides for compulsory registration. Why this part of the Act is not in operation is another of the questions which many beekeepers would like answered.—Ed.]

TREATMENT OF FOUL-BROOD.

I knew it was coming, and wondered whence it would come, and now that Featherstone man (page 465) and the chap from Eltham (page 483) have stepped into the breach, and suggest that I have mistaken black brood or European foul-brood for the American variety. This is rather refreshing after nearly a quarter of a century of beekeeping. To such as think as the above apiarists, let me say that I have never had any experience of European foul-brood, but I have had several visitations of American, stringing out the gluey matter sometimes to the length of several inches.

And now comes another from Banks Peninsula (page 479), and asks a very pertinent question—viz., what becomes of the dried-up foul-brood infected matter that has been cleaned out by the young bees? My answer to that is that after the brood-combs have been in charge of queenless young bees recently hatched for twenty-one days, every open cell will be polished bright, the remaining ones fully capped (no pin-holes), containing the diseased matter of foul-brood. The scales of dried matter of foul-brood removed by the bees are on the bottom board, from which they are scraped on to paper and promptly burnt. The remaining capped cells of infected matter are removed, cocoon and all, leaving the septum or original comb foundation intact.

In this connection, please note there is no cutting or mutilation of the comb base.

I have made no such admission as outlined by Mr. Bray (page 480), on which he bases his remarks, nor have I said that there may be too much disease in a comb to be cured by my treatment (page 480). On the contrary, there is now and again a comb met with containing a large proportion of capped diseased cells, in which case it pays better if time is valuable to pass it on to the destructor (see page 445) rather than spend time pulling numerous capped cocoons from each side, though understand me it is quite possible to make this comb sanitary or hygienic if one likes to take the trouble, as I have already indicated.

Now, you one-time bee inspector, let me whisper to you that I carry and put in use every season 4,500 storage combs, used over a queen excluder. These, when extracted, are returned without reference to the hives they came from, and during the two seasons the apiary was under treatment not one

of these combs was destroyed. This may in a measure account for the 10 per cent. of reinfected colonies the second season (see page 445).

I have recently shaken and closely examined 800 combs containing sealed brood, combs that at one time contained the germs of American foul-brood, and in no case could I trace a single cell of disease. American foul-brood, and this is the more remarkable, as foul-brood is by no means cleared out of my immediate vicinity.

Do bees become immune to disease, or can they of themselves secrete a disinfectant? Who knows anything about it? (See "Gleanings," page 803, Holtermann.)

J. S. COTTERELL.

November 13, 1916.

Good Things from Everywhere.

There are still a very large number of beekeepers who have not yet remitted their subscriptions for the current year of the Journal. If you happen to be one of them, please give the matter your attention without delay.

Owing to an early departure from the Dominion on business, the Secretary of the National Beekeepers' Association, Mr. R. W. Brickell, has found it necessary to hand in his resignation as secretary of that body. A new secretary will be appointed before the end of the year.

A big organisation campaign is to be commenced soon after the new year. In order that every man who keeps bees may be approached a new list is required. Will you right now sit down and send to the Branch Secretary nearest you a list of every beekeeper you know of? Don't say, "Oh, Jones will be sure to do it." It does not matter that a man's name may be already in; better in five times than not in at all.

Who said a permanent honey exhibit to send round to the various shows? Would it pay the cost of transportation? We doubt it. No advertising is wholly efficient which does not show in some way or other the actual article advertised, or else tells in unmistakable language where the article advertised can be procured. A honey exhibit such as the National could arrange would fail in nearly all the necessary essential features.

Several beekeepers want to know when they should count their hives to fix their subscription to the National Beekeepers' Association. The constitution does not define the question, and the National Executive decided that the count take place at the commencement of the National year, June 1st. All those who have been waiting for this intimation may now send their subscriptions to the General Secretary, or to any of the District Secretaries. Addresses will be found on the cover. Remember that every few shillings you send in is subsidised by the Government at the rate of pound for pound.

A good deal has been said at one time and another about a Defence Fund to assist beekeepers should they be prosecuted for an offence arising out of the nature of their business. The necessity for such a fund does not seem to be very urgent, as there are, as far as we can hear, no cases on record in this Dominion of such as would call for united action in a defence. The National Executive has power to assist any member of the Association, and will do so if the facts seem to warrant interference.

With the enormous number of calls now being made on the sympathy and the pockets of the people of this Dominion, it is hard to appeal to the pockets of beekeepers for subscriptions to our National Association. Still, there is a very real necessity to keep the organisation going strong. Since its advent the prosperity of the industry has been most marked, and it is safe to say that every shilling spent has produced results and dividends a hundred-fold. Let us keep the good work going.

Reports from apiary instructors and beekeepers all over the Dominion go to show that the prospects are good for the coming season. A boom crop will have a serious effect upon the local market unless some provision is made, and that soon, to dispose of the honey when it is harvested. The Honey Producers' Association offers a solution of the difficulty, and their programme is worth careful consideration.

A sample of honey packed by a food company recently reached this office. It was packed in an earthenware jar of the shape and substance of a common garden flower pot. The label stated that it was guaranteed pure honey as extracted from the comb. The honey was dark in colour, strong in flavour, granulated partially with coarse grain. The package was sealed with a piece of printed parchment pasted over the top and down the sides, similar to the covering used by many women in tying down their jam. A more uninviting and unattractive package it is hardly possible to imagine.

Why is it that in the North Island there are twenty-four local inspectors appointed under the Apiaries Act, whilst there are only four in the South Island? Is it that the inspectors do not want help, or that the beekeepers will not help them? From Taranaki comes the pleasing information that there is a very marked improvement in the condition of the apiaries in that locality.

Mr. T. W. Kirk, in charge of the Apiaries Division, would be glad of the names of those who are willing to act as local inspectors.

SUBSCRIPTIONS.

The following subscriptions have been received during the month:—

Messrs. E. Ayrton, Robt. Black, H. Betts, J. Barriclough, J. Stirling Coyne, C. Craw, T. J. Dobbing, A. W. Fleming, F. Higgs, R. Morrison, J. R. Midford, A. Mitchelmore, J. McCall, A. McDonald, R. McKnight, A. C. Potts, — Rillstone, C. G. Surrey, — Steel, Jas. Sim, K. Taylor, J. C. Woodfin, W. A. Willis.

KEEP HONEST BEES.

ROBBING SPREADS FOUL-BROOD—CARELESS METHODS CONDEMNED—WHAT THE LAW SAYS ABOUT IT.

(By MORLEY PETTIT.)

Persons who within recent years have had foul-brood in their apiaries should be particularly careful to prevent robbing during the warm days of spring. All hives where bees have died must be taken indoors away from all possible robbing. It is not enough to close them, because robbers will often gain an entrance when least expected. All entrances of live colonies should be made quite small, especially where the bees are weak in numbers.

Use every precaution and watchfulness to prevent robbing. Do not under any circumstances leave combs of honey out for the bees to clean up. Any honey you have is likely to contain germs which would scatter disease in your healthy colonies. On account of the prevalence of disease in unexpected places it is never wise to feed honey to bees, and where disease is known to exist it is the worst of folly.

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