

The Canadian Bee Journal

Devoted to the Interests of Bee-Keepers

Vol. 18, No. 1.

January 1910

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The 20th Century is Ours

MP F. W. THOMPSON, Vice-President and Managing Director of the Ogilvie Flour Mills Company, became very enthusiastic about Canada's wheat prospects a few days ago. Mr. Thompson was talking to some Montreal journalists and imparted some very interesting statistical information. He deplored the ignorance among Canadians of the wheat-growing capacities of the Dominion. A great many people, according to him, were not aware that the golden grain could spring up five hundred miles north of Edmonton; that the total area of the western trinity of provinces for cultivation was two hundred and fifty millions of acres of which only seven million have been so far touched by the plough. Last year this land produced 115,000,000 bushels of wheat. Mr. Thompson illustrated that at the apex of its development the Northwest should yield 1,600,000,000 bushels of wheat per annum. These are startling figures. They mean that Canada's wheat supply would satisfy three times over the demands of the British Empire; five times the requirements of those portions of it which hunt elsewhere than under the flag of Britain for their sustenance; and would equal one-half of the present wheat stores of the whole world. Mr. Thompson submitted that in consideration of these figures, no one could sympathise with those who feared the ability of the Empire to support herself.—Canadian Courier.

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THAT PILE OF OLD COMBS

THE Honey Season over, and the bees snugly packed away for the Winter, the Bee-keeper will be able to turn his attention to the accumulation of old and broken combs in the honey house and other places. To the careful Apiarist this accumulation represents so much extra cash over and above his honey crop, and will be treated accordingly. He uses a Wax Press, of course—the latest and best.

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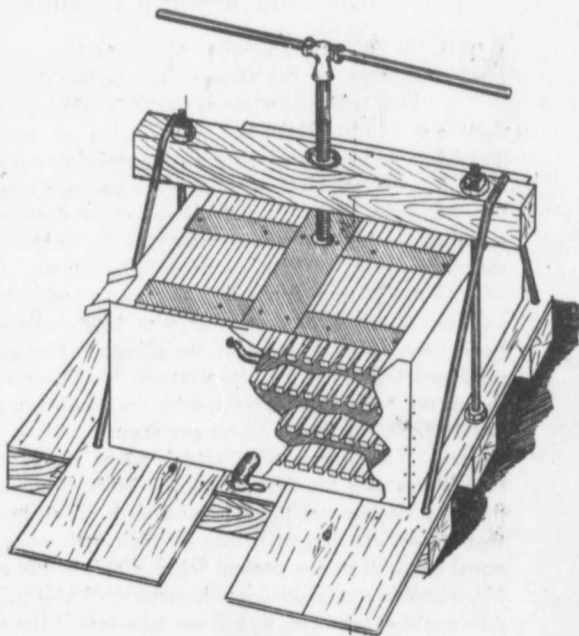
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The Canadian Bee Journal

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JAS. J. HURLEY, Editor

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Bee-keepers desiring the services of the inspector of apiaries should address their requests to Hon. James S. Duff, Minister of Agriculture, Toronto, giving nearest railway station and distance of apiary from station.

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The Canadian Bee Journal

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The Canadian Bee Journal

PUBLISHED MONTHLY

(JAS. J. HURLEY, EDITOR, BRANTFORD, ONTARIO, CANADA)

Vol. 18, No. 1.

JANUARY, 1910

Whole No. 539

Mr. Byer supplies us in this issue with excellent unsolicited testimony as the advertising qualities of the C. B. J. Queen breeders will please take notice.

* * *

Switzerland is up to-date with a good law regarding the sale and importation of honey. See Mr. Haberer's notes. Canada and the U. S. could take pointers from this.

* * *

Mr. Morley Pettit has kindly sent us his first examination paper submitted to first year students. The paper is an excellent one, and he is to be congratulated on the excellent results of the examination.

* * *

We would like to draw special attention to Mr. Haberer's notes in this issue taken from the German bee journals. The item on the making of wax by the bees is very interesting and attacks some of our old-time beliefs.

* * *

We are pleased to produce elsewhere in this issue a good discussion on the size and weight of honey pails. We are glad our remarks have brought out this discussion of the matter. We hope we will have some more opinions next month.

* * *

We take the liberty of reproducing from Gleanings, Dr. Miller's experience with European foul brood. It is very important and valuable. We trust our readers will be able to learn something from his experience. The good doctor has had a hard time of it, but he is rendering great good to the bee-keeping industry.

We are indebted to Mr. R. B. Ross, jr., for a very able article in this issue. In our own experience we have found bees slow to use up capped stores for brood rearing as rapidly as they should. Our remedy for this has been uncapping, where sufficient stores were in the hive. This is particularly the case after the arrival of fine weather when the bees seek nectar outside. However, we will leave it to Mr. Adams and Professor Surface to settle the matter with Mr. Ross. We have ourselves always advocated two-to-one for winter feed.

* * *

Mr. Holtermann called on us the other day and showed us a colored plate he received from Germany. It was as near like the original comb as the art of man could make it. We understand from Mr. Holtermann that the Ontario Agricultural department is about to order some of these prints. The C. B. J. will be glad to assist in their distribution if they are procured.

* * *

Mr. Herchiser, of Buffalo, has promised us a valuable article on wax production, to appear soon. This month we are presenting to our readers Mr. Byer's paper on wax craft, as read by him at the late Ontario convention. The discussion following the paper will appear next month. We are enabled to do this by the kindness of Mr. Hodgetts, who has forwarded to us the stenographer's report of the proceedings. The wax end of the bee-keeping business is growing of more importance every year, and this is a good season of the year in which to study the problem. Mr. Byer's paper will be found a very valuable one.

Journal
Canada

Bro. W. Z. Hutchinson is revelling in the possession of a new house, built to his manner and liking. Soon may it be paid for and long may he and his good wife enjoy it, is our best New Year's wish.

* * *

The Chicago Northwestern Bee-Keepers' Association held their thirteenth convention recently at Chicago. Dr. Miller and W. Z. Hutchinson were present, also Mr. R. F. Holtermann from Canada. The meeting was a very interesting one.

* * *

There has been a smart movement in new subscribers for the C. B. J. during the past month, which is most encouraging. Several of our readers have sent us in their neighbors' names, together with their own renewals. No bee-keeper can afford to be without the C. B. J.

* * *

Mr. McEvoy's letter in this issue is pretty strong testimony to the effect that full combs of honey will bring bees through the winter and give them a big start off in the spring. He makes no allusion to the so-called "winter nest," but it is quite evident that there could be no winter nest unless the bees first cleaned out the cells. Would they clean out the cells and waste the honey? There would not be time for them to consume it in sufficient quantity to make a winter nest by the time cold weather arrived. That they would waste it, is unthinkable. That abundance of stores is a prime necessity all will agree. But we do not think that all will agree to a "winter nest" being made with deliberation. We are inclined to believe that it is the result of the ordinary consumption of stores from well-filled combs or of combs that have not been full. The cluster of bees keeps moving, rolling and working from inwards to outwards and vice versa. Being buried in a cell may be all right temporarily, but we do not think the bee would wish to remain there long.

OPINIONS ON HONEY PAILS.

Indexed

Mr. J. L. Byer.

Perhaps a few words of explanation might be in order, relative to the discussion on honey pails at the closing session of our late convention. Said explanation I deem to be really necessary after reading the editorial on the subject in the November C. B. J. In the first place it might be mentioned that in the season of 1908, the 10-pound pail gross weight size, i. e., the pail supposed to weigh 10 pounds pail and all, which was put out by the Macdonald Mfg. Co., was too small and would not weigh the 10 pounds by quite a margin. The company learned of the mistake, and on the suggestions and instructions of one of our members, the size of the pail was corrected, and as far as I know is giving satisfaction. Personally, we use nothing but the five-pound pails, so can give no personal experience with the ten-pound pail as put out this season. However, the five-pound pail, gross weight size, which the most of us found satisfactory last year, was this year slightly reduced in size, and while it could be made to weigh five pounds, yet the pail had to be made too full to do so. As honey will never be heavier in body than was the case this season, quite a number thought that the pail should be made a trifle deeper, and the Macdonald Company were made aware of this at different times this past fall. Accordingly a member of the firm visited the convention at the last session and asked that instructions be given them as to the exact sizes required for both gross and net weight pails in the two or more sizes. While I am aware that the discussion that followed drifted off into comparative merits and demerits of the different styles of pails, yet that discussion was entirely foreign to the question at issue, as the manufacturers will make just what the bee-keepers ask for, in spite of any motion that the Association might choose to make to the contrary. Accord-

ingly after much consisting of Mr. and the writer, with the Macdonald fully decide by the the correct sizes of different pails, be styles. A well much opposed weight size, remains as soon as the pail was made known, see what the decision the men on the has been no meeting yet, we feel that circumstances as given as there will be try and arrive at styles of pails. I so apprehensive mittee, thinks to dictate as to who size of pail, the to say that it would be very of none of our but he chooses to record to others they cannot allow him?

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ingly after much discussion a committee consisting of Mr. Sibbald, Mr. Timbers and the writer, was appointed to meet with the Macdonald Company and carefully decide by means of tests with honey, the correct sizes that they shall make the different pails, both gross and net weight styles. A well known member who is much opposed evidently, to the gross weight size, remarked rather sarcastically as soon as the personnel of the committee was made known that "it was easy to see what the decision would be now, by the men on the committee." While there has been no meeting of the committee as yet, we feel that anybody under the circumstances as given will know that much, as there will be nothing done other than try and arrive at correct sizes for both styles of pails. If my friend who seemed so apprehensive of the work of the committee, thinks that we might try and dictate as to who is to use any particular size of pail, the writer for one, hastens to say that it would be one of the last things thought of, for personally we would be very candid and say that it is none of our business what style of pail he chooses to use. Surely he would accord to others the same latitude, when they cannot always see eye to eye with him?

So far we have said nothing as to the desirability of using one pail instead of another, and while it would be an advantage if all pails made for honey were made of a standard size, yet such a possibility is one of the future, and while the great majority of the five-pound pails now used are of the gross weight size, yet quite a lot of the other size are still turned out. This being the case the Macdonald people will certainly continue to make both sizes, and any work done by the committee will be with this thought in view. While both sides of this pail question can be backed up with good arguments, yet it is a fact that the gross weight size is gaining ground every year, particularly in the five-pound size. The

great majority of the best grocers now prefer this pail and will often ask for it in preference to the larger size, as I had some evidence this past season to prove this fact conclusively to my satisfaction. As the Editor points out, where a lot of retailing is done, it is quite an important matter, but with the man who wholesales almost all his crop not so much difference is made. Personally, every buyer knows that he is getting a pail that weighs five pounds, pail and all, and during the past five years I do not remember of having heard a single complaint.

This being the case, I freely admit that it would take a lot of resolutions from any association to make me go back to the old style of pail, and at the same time I hope to be charitable enough to not try and force my views on another who sees things different than I do in the matter.

W. L. Couper, Saskatchewan.

I was rather pleased to see in the last C. B. J., a few remarks about the ten-pound can, and an invitation to readers to give their opinions on the subject, as the question has exercised me a good deal.

When I first got the ten-pound cans, I tried to put ten pounds of honey into them. I did not succeed in this, though I did manage to make the gross weight considerably over ten pounds. When I took the first lot to a grocer, I mentioned the matter to him, and he assured me that all syrups and honeys were sold that way. I did not like it at the time, but now I am not so sure about it. In any case, I feel sure that a can, with a capacity of ten pounds, not quite filled would prove a failure. Though it is true that cans are not sold with their covers off, they have to come off before the honey is eaten and the purchaser would be very likely to think that he was being swindled and buy no more honey with that label. The question seems to be whether the purchaser thinks he is buying ten pounds of honey or a ten pound

package. I doubt whether he thinks about the thing at all. He has probably often bought tins of syrup of about the same size, and, knowing roughly how much they contain, gives no further thought to the matter. Something the same question has been argued before about sections. In Canada they are usually sold by the piece, but a good many people believe that a section holds a pound. As a matter of fact, I do not think that the section I use ever holds a pound—many of them are quite a lot short of it. I always explain this to the purchasers, but I doubt whether retailers do. I think, probably, the best solution of the ten-pound can question, would be to have "ten pounds gross weight" printed on the label.

Since writing the above, I have been told that syrups are usually sold net weight. This alters the question, as, though not nearly so wholesome or appetizing as honey, syrup does, undoubtedly compete with it to some extent.

Jacob Haberer.

I gladly take the opportunity to give my opinion on honey pails, as you requested your readers. I think that matter should have been taken up long ago. In my opinion, you are right, if one buys a 10-lb. pail of honey, he should have 10 lbs. of honey, and not 9 or 9¼ lbs. I had some of these small pails a year ago. They were only a trouble to me, when I filled the first ones and found that they did not hold much more than 9 lbs., it caused me not a little vexation, and sold them finally as 9 lb. pails. You will also find that many other articles in the market are always sold net weight and are so wanted, and it is right too! If I sell a pail of honey and the buyer puts it on the scale, he will make a different face altogether if he says, "Yes, full weight," than if he says "Your pails don't hold the weight of honey." A bee-keeper friend told me last year: "I like these small pails because people always want to buy

cheap and don't want to pay more than a dollar a pail, and with this pail I can do it!" But can you sell them always for a dollar? Possibly they will want them another year for 90 cents, and are you willing to cut the dollar? Now, I think there is a feature in this not fully honest, except you stamp your pail, 10 lbs. gross weight, as you cannot always tell the buyer personally that it is not net weight of honey, as he most likely expects.

The intention of our association is to work in the interests of the members in general, and on an honest scale. Now, if one sells a small short weight pail, and the other a net weight one, they can't keep the same price, or else one will be a loser. I think we should have only one size of pail and that should be net weight and allow a little air space below the cover, because, if a well-fitting cover you must have this, otherwise you will squeeze out some honey at the seam of the pail. These pails might be stamped net weight, and the price of pails has to be added to the honey or charged extra. This is my way of doing it, and if everyone does so it will be no trouble, and is the most honest way. But should the committee agree on a gross weight pail it should be stamped on. What about 60-lb. cans? Is gross weight customary in these also? I really think anything sold in any package should be net weight by law.

ONTARIO AGRICULTURAL COLLEGE

Apiculture Christmas Examinations 1909.

Have just finished examining the Christmas Examination papers. Am sending you a copy of the question paper. One hundred and eighteen men wrote on it and the results are as follows:

First Class Honors, 75%—100% obtained by 23 candidates.

Second Class Honors, 60%—74% obtained by 32 candidates.

January, 1910

Pass 33%—59% of dates.

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Considering the practical nature of the subject and the entire lack of facilities for practical work I consider these results quite satisfactory. When we get the College apiary and a good building and facilities for the students to get practical work we can hope for better results.

Question Paper—First Year.

1—(a) What three kinds of bees are found in a hive? (b) Trace the life-history of each from the egg in the ovaries of the mother-bee to the death of the adult.

2—(a) Describe the symptoms of American Foul Brood. (b) Describe the McEvoy cure. (c) How is Pickled Brood distinguished from American Foul Brood?

3—(a) How would you have a swarm of bees; (1) with a queen that can fly?; (2) with a clipped queen. (b) How would you get the best work from the swarm and at the same time prevent "after swarming"? (c) Mention three causes of swarming. (d) Give three reasons why bees should not be allowed to swarm naturally. (e) How can natural swarming be prevented?

4—(a) How would you prepare a hive of bees for winter? (b) What are the requirements for good wintering? (1) In cellar; (2) Out doors?

5—(a) Name four leading Ontario Honey Plants, telling the kind of honey each yields. (b) How does nectar of flowers become well ripened honey? (c) Write a note on the harvesting and care of extracted honey, giving directions for liquefying when granulated.

6—(a) Name the principal organ of (1) the head, (2) the thorax of the honey bee. (b) Which race of bees do you prefer and why? (c) State three requisites of a complete hive. (d) What three inventions in bee-keeping do you consider most important?

Yours truly,
MORLEY PETTIT,
Provincial Apiarist.
Examiner.

WANTS INFORMATION.

Herman Leclair.

Before telling you what information I would like to get from you as regards the keeping of honey in sections, I must state I am a French-Canadian, living among French-speaking people, and on account of that I do not know much of the English language, but as I am a reader of your valuable paper, I hope you will do your best to find out the meaning of my letter and you will answer me in the C. B. J.

I have been keeping bees for six years, I have never produced honey other than in sections. The room which I always stored it in is on my second house floor. My honey used to keep nicely all the year round, but this year, just now, my dark honey, produced after the 15th of August is nearly all hard and granulated in the cells. I wonder what might have caused that change. The room is not warm, but still the thermometer seldom falls below 32 above zero. The honey has been gathered from corn stalks, buckwheat and golden rods. Does honey granulate quicker in a warm room than in a cold room? What is the best temperature to keep honey in sections? Does honey gathered from corn stalks, granulate sooner than any other kind of honey? I am inclined to think so.

Ste. Therese, P. Q.

[Your experience is not uncommon; some honey granulates much sooner than others. Honey will granulate much quicker if left in a cold place than if left in a warm place. We believe your room is altogether too cold. The natural habitat of honey is out under the hot sun, and when inside should always be kept in a high temperature—summer heat. So far as we know, honey gathered from corn should not granulate sooner than other honey. You write our language well, and we will be glad to hear from you again.—Ed.]

NOTES AND COMMENTS.

J. L. Byer.

The work of the Honey Exchange or Crop Report Committee, has been so universally satisfactory, that one is loath to make any suggestions as to how the work might be even more profitable to the beekeepers, even if we admit that such would be possible. However, the personnel of the committee is such that we feel at liberty to advance for their consideration any hints that come to us in the line of lending them assistance in their work, and it is with this feeling in view that we speak of a plan given us a short time ago by one of the directors of the Ontario Bee-Keepers' Association. As the most of us know, there is a difference of opinion among the bee-keepers in the province as to just when the reports should be sent out—said difference being mainly because of the different times that the crop is ready for market, as those in the southwest part of the province harvest their crop about two weeks sooner as a rule, than do their brethren in the northern and eastern sections. Then again in case of a heavy crop in some local sections, some are apt to get a bit uneasy, and be tempted to sell before the crop report is issued. Others sometimes sell on the representations of buyers who are anxious to close a deal before the producers get inside information—this was the case in a section not a great ways from us last year, and a number actually sold for figures quite low as compared with the prices paid at a later date. As a partial remedy for these difficulties, the director in question suggests that some time before the issuing of the report proper, that a circular letter be sent out to all the bee-keepers on the list of the secretary giving what information is available, and at the same time request all to hold their crop for the report that will be issued just as soon as it is possible to do so. Of course as the

years go by and the usefulness of the committee becomes even more generally recognized than it is now, many of the difficulties mentioned will cure themselves, but it seems to the writer, that a course like that suggested would have a tendency to stiffen up the backbones a little, and might be the means of sometimes preventing a break in the market at critical times. Results this past season should go a long way towards preventing a panic another year even in the event of a good crop, of which we are at the present by no means assured of. However, we give the suggestion for what it is worth, feeling sure that the committee will as in the past give the very best service at their disposal.

Hold hard there, Mr. Editor, and in future cut out all ads. in my favor as to my future queen-rearing operations. Would you believe it, some of the C. B. J. readers actually failed to notice that that editorial was from an Irishman, and they actually swallowed the thing in all seriousness and have been placing orders for queens with me for delivery next summer. My, how easy it must be to get customers in the queen business, but I more than suspect that it is must be a harder matter to keep the customers after they have been secured. Let me say that it is hardly probable that this scribbler will ever be in the queen-rearing business, and it is quite doubtful if friend Clark could have picked out a member in our association who would be less likely to make good use of the queen-rearing paraphernalia than the one to whom he so kindly donated these articles. Nevertheless, the gift was none the less appreciated, and if for nothing else it will be kept as a valued souvenir of our convention of '09, and a pleasant reminder of the good-fellowship of the donor. May his shadow never grow less, and the next time he aspires for any office in the gift of his country, may he be just a little

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The writer is quite a greenhorn in the matter of cellar wintering, and during a warm open fall such as we have had, with him it was quite a problem to know just when to put the 40 colonies at a neighbors, into the cellar. Some of our Victoria County friends had their bees in the cellar at the time of the convention early in Novmber and I began to think that possibly mine should have gone in too. Warm weather for the bees to fly, shortly after the convention made me change my mind and the bees stayed out all November. On Nov. 28th, some pollen was brought in from a few venturesome dandelions and this I believe establishes a record for late pollen gathering in our northern climate. On December 4th the bees were put in the cellar, although the weather was bright and balmy, and the next day the change came for cold weather, so I believe I hit it right this year. No severe cold struck us all through November, and it is doubtful if the bees suffered any by not going in earlier. However, I am not sure on this point, for the question, like many others in beedom, is hard to prove or disprove.

EUROPEAN FOUL BROOD INSPECTION.

Indexed

Warrington Scott.

I understand that during the discussion which followed my report, as foul brood inspector for District No. 10, for the past season, that it was mentioned that there was some dissatisfaction in my district among the bee-keepers, who, after putting their bees through the shaking treatment, came to the conclusion that it was not European foul brood that caused the trouble, but was caused by their bees getting poison from dandelion in blossom, under fruit trees during spraying. These bee-keepers are very

much mistaken as to the cause of the disease. I did not see any case of poisoning in my inspection work during the past season; but in every case of disease it was genuine European foul brood. There is but little danger of mistaking poisoned brood for foul brood, as their appearance and order is entirely different. I enquired of some of the large fruit growers in sections where foul brood did not exist, if they sprayed their fruit trees, and they told me they did spray regularly. As for my locality, where European foul brood first broke out, there was no spraying done since some years before. Then another bee-keeper says he did not treat his bees at all, and they did well at honey gathering and that they are all first-class. I believe I know the apiary, and the disease was just making a start, and the honey flow was quite good, which would hold the disease in check. European foul brood does not make much progress in a good honey flow or the latter part of the season, but in every case, like this, where it came under my notice, it breaks out with redoubled energy the following spring. Two seasons will about wipe out any apiary where European foul brood is allowed full swing. I inspected one apiary of 74 colonies; the owner believes in the poisoning theory. I found the colonies badly affected with European foul brood which had started the season before, I believe. The owner united the colonies down to 18 colonies. I am not surprised to hear that he got only a light crop of honey, as there was scarcely any healthy brood in any of the colonies, and the bees were old and would die of old age too soon for the best results in honey gathering. I am told that some of the bee-keepers west of Toronto look upon the outbreak of European foul brood in Murray and Brighton Townships as a trifling affair. In conclusion I would say that if these bee-keepers would be called upon to battle with the disease in the near future, I believe they will certainly change their minds.

WAX CRAFT.

Ontario Bee-Keepers Convention.

Indexed By J. L. Byer, Mount Joy.

Beeswax, we know, is a mysterious substance secreted by the bees and not gathered, as our forefathers used to think. We cannot understand the process any more than we can understand how the spider spins his web. Wax is a product from the body of the bee. We find if we look through ancient history and along through the medieval ages wax was known in a commercial way. Bees wax, I believe, was of much larger production many years ago than now, but modern methods of bee-keeping explain this. Mention of the use of wax in the fine arts was made away back as far as the second or third century. We find also that the ancients had a knowledge of the art of making wax flowers from beeswax; it was rolled out in thin sheets.

Beeswax to-day comes into competition with many other waxes. I think paraffin and ceresin are most largely used for the adulteration of beeswax. While wax is simply a by-product and does not secure nearly the same attention in production as honey does, yet the great packing houses of Chicago and other places pay their dividends to the stockholders from the by-products—things formerly wasted. I have been impressed with the fact, in the last two or three years, especially as to the enormous waste of beeswax in the country. I would not be capable of making even an estimate of the thousands of dollars of wax wasted in Ontario every year, without going outside of the province, and this condition, to say the least, is poor economy. And it is well to remember that while beeswax comes into competition with a number of inferior waxes—I use the term guardedly—it seems to me that the use of beeswax is increasing all the time, and there are calls for beeswax in the last few years in certain lines that in other years I hadn't the faintest

idea it was used for. For the last three years I myself have supplied beeswax to a firm that makes a special line of paper. I know another bee-keeper who is supplying exclusively a firm of engravers with wax for silver plating and work like that, and they are particular as to the kind of wax they get, as to its purity, as to how it is rendered and so on.

The extracted honey producer is more largely interested in the line of wax production than the comb honey producer, because the comb honey producer does not have cappings. The chief sources of wax are cappings and old combs that are filled with drone cells and misshapen and not fit to be left. If you happen to use extracting combs with narrow top bars, you will get a nice little income by scraping those every year. I have seen these same kind of combs used year after year by lots of bee-keepers where they never were cleaned up at all. There are big wages in scraping off those combs, to say nothing of the nicety in handling them for next year's work.

Another source of wax production, which is not so welcome to the most of us, is when we happen to get a dose of foul brood. One man melted up over 5,000 combs, and if it had not been for the wax press it would have been a hard matter to estimate the big loss he would have had, but the wax he received more than paid for all the foundation he needed, and he had about \$50 to \$75 to the good.

We cannot speak of wax production without coming to the question of how best to secure the most wax, and then we get into the question of wax presses. To get good results in rendering up combs, we must have some kind of wax presses. I have had slumgum sent to me different times from different bee-keepers, and while I have not taken the trouble to bring any figures here, I want to say, every time when the wax press was used I could make big wages in handling that slumgum which was sent to me, but it is not a nice job. It would run from 25% to

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 to me, but it is
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30% of wax on an average. As to presses, I am not a bit backward in saying I would not have one of the German wax presses if you would give it to me as a gift. Mr. Greiner, of New York, reported that with hard work and good faithful attention you could get about fifteen pounds a day; and for any bee-keeper to go and spend all day for that amount I don't wonder he would be disgusted with it. With regard to the press Mr. Hershiser has brought out I am not competent to make any remarks, because I have not used it, but my impression is for the ordinary bee-keeper it is a little too bulky and cumbersome. I think Mr. Hershiser will agree with me that we should have some special facilities and special rooms, and if that is so there is no question you will get all the wax, or nearly all of it. The next press after the steam press I used was the Hatch-Gemmell press, and I might say that that press is still my preference, all things considered. Two years ago you remember Mr. Sibbald bringing out an improvement, in his estimation, on the old Hatch-Gemmell press. He went to a lot of trouble and had it here. He got out a model and it was illustrated in our Annual Report. I have tried the Sibbald wax press, and for some reason I can't make any headway with it as compared with the old Hatch-Gemmell. The only fault I had with the latter press was in applying the pressure. The pressure was applied in the centre with a screw, having a cap on it, similar to a jack screw, to hold it steady, and I found the screw was turning around all the time, and I was bothered sometimes with the follower tipping. I got that rectified and now it is all right. We found by actual experience in three or four days' test that we could get a very small percentage more of wax with the Sibbald press than with the Hatch-Gemmell, but on the other hand the extra work more than counter-balanced that. I only made one test as to what wax we were leaving in the slumgum. Last winter some time

we rendered up one afternoon with the Hatch-Gemmell, 127 pounds of wax. More than one-half of it was from old comb, and the balance from scraping the narrow top bars. We saved that slumgum, and while it was still moist the next morning I happened to have a wax press there of the model of Mr. Sibbald's and I suggested we take this slumgum and see how much wax we could get from it. We worked all day and we got 6¼ pounds of very inferior wax. The question resolved itself with me to this; if we had run that same slumgum through the Hatch-Gemmell, we should certainly have got some wax anyway.

As to the purity of wax, Prof. Shutt and others have given us different tests from time to time. Paraffin and ceresin, I believe, are the main adulterants. If the beeswax is pure, and if you take and chew a sample you will find it will all granulate in your mouth. If there is any great amount of paraffin along with it, it will be pasty and not like gum in your mouth. It is a simple test, which I am assured by manufacturers and others will tell if there is any perceptible amount of paraffin with it. Ceresin, I understand, is the main adulterant used in comb foundation. They tell me as good a test as you can make for that—I have never tried it myself—is to take a hot iron and drop a sample of what you know to be pure beeswax on it and notice the smell and odor of the smoke, and then take your suspected sample, and if there is a very small percentage of ceresin in it you can tell it right away; a very fatty pungent smoke will come from it.

In our experience the quality of wax from the hot water press is not as good as from the Hatch-Gemmell. We rendered this 127 pounds and sent a shipment to Mr. Craig, just as it came from the press, and he reported it O. K. I used sap pans and covered them up well and let it cool slowly. Sometimes you will notice cakes of wax will start to check all over the top. That is the fault of

cooling too fast. On the other hand we sent some 40 or 50 pounds, which was put through the hot water press twice, and it was spongy at the bottom.

We should be very careful in rendering our beeswax. The only specification the firm that I have supplied for the last three years sent me was, we want you to guarantee absolutely there has not one drop of sulphuric acid ever come in contact with that wax. They don't object so much to the color. They use that wax in making a certain grade of paper. I believe the sulphuric acid is sometimes left in the wax and it affects the steel rolls. The same proviso is made with reference to the wax supplied to the electro plating establishment. I believe it is possible to spoil the texture of wax for the fine arts and some lines of work by over heating. You can prove it by a simple experiment. Take one lot of wax as soon as the comb is thoroughly melted, and press that one out and allow the balance to boil for half an hour or so, and you will find the wax damaged. The Root Company have told me they have come to find that the less sulphuric acid that is used the better. If they are supplying wax for any of the fine arts or any fine manufacture, they are careful that it has never been subjected to sulphuric acid.

[Discussion on the above will follow next month.—Ed.]

SOME QUERIES.

H. S. Showell.

We have two outyards in sheltered places, with plenty of swamp willow close at hand. These came out in good shape in the spring.

Our home yard is not in a sheltered place and very little willow close by, and they came out weak in the spring. I moved some of the bees to another part of the farm where there is splendid shelter, but very little willow (as an experiment) to see if it is the willow or shelter they need, or both.

1. Could I not stimulate them in the spring by feeding in place of the willow? If so, when and how much feed would they require each day?

2. Is there any patent on a hive with a portico in the front. We get our hive lumber cut here.

3. Would you advise putting them on so as to shut them up while extracting?

4. Are bee-escapes used successfully in extracting time?

We don't extract any as a rule until the basswood is over, and then there is nothing in the fields, so they are ready to rob.

I appreciate the Journal very much. Wishing you a prosperous new year.

Answers.

1. You could, but we would not advise it, unless absolutely necessary. If they have sufficient stores do a little uncapping of the stores within the hive. If feeding is necessary feed about one pound a day of sugar syrup, made of about one-and-one or one-and-one-half-and-one of sugar and water. Feed it warm.

2. We know of no such patent. Mr. Holtermann has designed such a hive, but we do not know that he has it patented. Nothing can prevent you making such a hive for yourself, however.

3. I do not think I would. Extracting can be done without imprisoning the bees.

4. Yes. They are a splendid thing when extracting at a time when there is nothing for the bees to work upon.

A CONVENIENCE IN THE APIARY

Harry W. Jones.

One of the handiest things in my yard is a small house I made to hold my smoker and wood and the rest of my tools. Everything I use about the yard I keep in this place, so when I start work there's no time lost getting my smoker from one place, a match or a coal to light it with in another (as I keep a match box in it with matches), with still a third place to get the tools.

January, 1910

It is made from waterproof roofing where I lay my in the middle, bits of wood sill where they may front is about back 3 feet 3 inches took me half an hour, and is, as in the yard.



Speaking about lasting and durable ever tried was blocks cut up inch square and bit of coal. For start and, using smoke, three for half a day's size Bingham

[This is certainly convenient and useful to you for description of s

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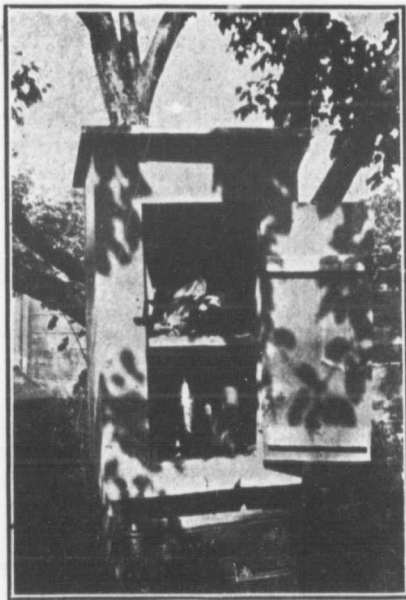
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IN THE APIARY

W. Jones.

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It is made from $\frac{7}{8}$ inch cull pine, tin waterproof roof and a concrete bottom, where I lay my smokers. It has a shelf in the middle, tin lined to prevent small bits of wood sifting down on the smokers, where they might catch fire. Height in front is about 3 feet 6 inches, and at the back 3 feet 3 inches and 2 feet square. It took me half a day to make it and paint it, and is, as I said, the handiest thing in the yard.



Speaking about smoker wood, the most lasting and durable "smoke" that I have ever tried was produced by dry maple blocks cut up two inches long by half an inch square and ignited with a good live bit of coal. Fill up the smoker when you start and, using a moderate amount of smoke, three or four fillings will suffice for half a day's work with a "Conqueror" size Bingham smoker.

[This is certainly a very original and convenient device. We are very thankful to you for the photograph and description of same.—Ed.]

Laying Workers.

I had in my yard last year one or two colonies that from queenlessness or loss of queen developed laying workers. I cured them as follows:

With the first colony I found I introduced a queen at once. Two or three days later I found her missing when I looked the swarm over. The bees of the swarm in question had evidently realized the fact that they were not "queen-right" for they had endeavored to raise queens from the drone eggs, some cells having been built and capped over. I had some good queen cells in other swarms and I took a couple of them which were capped and grafted them on the combs of the laying worker colony. A queen hatched and was accepted by the bees and, I am sure, in course of time would have assumed her position as mistress of the swarm.

I had some good queens on hand just then which were about ready to lay, so, after three or four days I removed the virgin queen in favor of the other, ready to lay. The colony gradually returned to normal, which I assisted a bit by shaking the combs in front of the hive and letting the bees come back through queen-excluding zinc, thus excluding from the hive a plenteous crop of drones which hatched out.

WANTS, INFORMATION.

R. P. Williams.

I was much interested in Mr. L. C. Wheeler's letter in the December number, page 429, for I have been having my first experience with foul brood, too, and it quite agrees with that of Dr. Miller, in that many of my hives when shook for the second time took flight for parts unknown, and left me with empty hives. Now, I should like to ask Mr. Wheeler if I understood him aright in saying that only one shaking was necessary, for my bees did not leave until after the second shaking, and I am afraid I am not through with the disease yet.

INTERESTING GERMAN ITEMS.

Translated by Jacob Haberer.

How Are Bees Secreting Wax?

Mr. Dickel, of Darmstadt, writes in *Hess Biene*: With H. Mulot of Hrnstadt, I come more to the opinion that the natural secretions of wax is not through the wings of the lower part of the body, but takes place through parts of the mouth in liquid form. Wax scales on the body are only secreted if the temperature is too low, and no opportunity to build. For many years I have watched the bees how they work up this scale so often seen on their body, and on the bottom board of the hive. For many hours I have watched through the glass of my Alberti hive the building of combs. In doing this, for years, I never saw bees taking scales from their wings of the body, nor did I ever see these scales when building was going on, and if considered that it would take very many of these small scales, we should be able to see the operation. Last year I took a small after swarm from the starts of the new combs and put them under a glass bell, after I had looked sharply whether I could notice any wax scales on their body I put them in a cool cellar, and after a few hours many of these scales could be seen on the bottom board and also between the body wings.

By closely watching a comb-building colony, we will see the bees run through the comb spaces or come out from the cluster without having anything in their mouth running to the building place, put their head in a started cell, working a little in there, bring out the head and have a small lump of wax between their mandibles, add it to the wall of the cell and draw it out, or run to another place to use it up there.

For a long time I had the idea that bees secret wax through one of the glands in the mouth, and only in cool weather through the wings, but I will

not dispute that under circumstances they may use some of the dropping scales. I would have published this earlier, but as most scientific men have a different opinion, I wanted to observe it for a little longer time. It was confirmed lately that food for the larvæ contained quite a lot of wax that can only come from the glands, and after speaking with many of the best bee-keepers and close observers, they had to state that they never observed how the bees took off and used the scales from the wings. I may ask all interested bee-keepers to pay more observation to the matter, so we may clearly understand the secret and be confirmed of it.—*Leipziger Bienenzeitung*.

A law for the protection of honey in Switzerland has been introduced lately.

1. The term honey is only allowed to be used in commerce for pure honey from the bees.

2. Honey produced by feeding sugar to the bees has to be declared as sugar honey.

3. Foreign honey only can be brought in and marketed by naming the country of its origin. The packages with foreign honey, if offered for sale have to show in large letters the country of production. In all advertisements and accounts the same has also to be mentioned. Honey mixed with foreign honey has to be handled as foreign honey.

4. In judging honey chemical consistency, appearance, smell and flavor has to be considered.

5. Honey with more than 20% consistency is not allowed to be marketed.

6. Fermented or otherwise spoiled or impure honey is not allowed to be sold.

7. All kinds of artificial honey have to be named and labelled so. The term "Table Honey" or similar names can only be used for pure, natural honey.

8. Artificial sweets, colors, or mineral substances are not to be used in artificial

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honey; a small percentage of acid may be used.

9. Artificial honey must contain more than 20% water.

10. All impure and adulterated honey is forbidden to be sold.

11. All packages of honey have to be labelled with the name in large letters.

12. In advertisements and circulars, table cards in handbooks, artificial honey has to be named.

13. Whoever manufactures or sells honey has to notify the authorities of the amount has to be kept on hand.

14. The amount of product coming in and the amount of product turned out has to be reported to the buyers.

15. The authorities have a right to inspect the honey at any time.—P. Wegweis

16. The authorities have a right to inspect the honey at any time.—P. Wegweis

17. The authorities have a right to inspect the honey at any time.—P. Wegweis

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36. The authorities have a right to inspect the honey at any time.—P. Wegweis

circumstances the dropping published this. Some men have a right to observe it.

It was concerning the larvæ content that can only be ascertained after speaking with bee-keepers and to state that the bees took from the wings. I advise bee-keepers to pay attention to this matter, so we can keep the secret and protect the Bienen-

production of honey in the United States introduced lately. It is only allowed to be pure honey from

feeding sugar to be labeled as sugar

can be brought into the country from other countries with foreign labels. They have to show in the country of production. The label accounts the production. Honey has to be

chemical content and flavor

can 20% consist-ent be marketed.

otherwise spoiled or damaged to be sold. All honey have to be so. The term natural names can be used in artificial

honey; a small percentage of sulphuric acid may be used.

9. Artificial honey is not to contain more than 20% water.

10. All impure and spoiled artificial honey is forbidden to be sold.

11. All packages of artificial honey have to be labelled as such with large, plain letters.

12. In advertisements, accounts, freight bills, table cards in hotels and restaurants, artificial honey has to be so named.

13. Whoever manufactures artificial honey has to notify the board of health.

Account has to be kept of all the raw material coming in and the kind and quantity of product turned out; also list of names of buyers. The board of health

has a right to inspect the business at any time.

It has the right to inspect the business at any time.—P. Wegweiser, F. B.

M. Mona, of Bellinzona, Swiss., reports on Parisian Apiculture, to have a colony of bees with three queens. He found them living peacefully together on one comb.—Lux, Bienenzeitung.

A FEW COMMENTS ON RECENT ARTICLES.

R. B. Ross, Jr.

The careful reader of our apicultural journal must often be surprised at the statements and advice which frequently are published without editorial comment or warning, and which seem to be dangerous in their teaching, if not indeed absolutely wrong. A strong desire to write off a letter on the subject is frequently overcome by indecision as to whether the "oversight" on the part of the editor was accidental or intentional—the latter, then no doubt for the purpose of calling out comments and promoting useful discussion.

The foregoing thoughts have been going through my mind rather frequently, prompted by the late discussion on Foul brood between the editors of "Gleanings"

and "The Canadian Bee Journal," but as I have had no experience of bee diseases I'm not going to "butt in" between you on that subject. I cannot feel easy, however, without asking the editor's attention to Professor Surface's writings under the head of "The Preparation of Bees for Winter," page 437 of the C. B. J. for December, which, while written primarily, no doubt, for the needs and conditions of bee-keeping in Pennsylvania, have a very direct influence on people outside that state.

On page 441 he recommends "thick" syrup for winter stores, but one would infer from his directions that a "one-to-one" mixture was correct. As this is "for the one purpose of giving stores in winter," and need not be given as early in the fall as for stimulative feeding, it leaves the impression, if I am not mistaken, that an equal amount of sugar and water by bulk formed into a syrup is a suitable food for late feeding to bees for winter stores. Is this safe advice? If so, why do such good authorities as E. R. Root and G. M. Doolittle (see "Gleanings" Sept. 15, '09, pages 556 and 561) insist on so much thicker material for feeding at this time and for this purpose? Dr. Miller goes so far as to recommend two and one-half parts of sugar to one of water, but I may say that I have not found it any advantage to use a thicker food than two sugar to one water. But is a one-to-one mixture as suggested by Prof. Surface safe? I question the advisability of letting this teaching go unchallenged until a sufficient amount of evidence has been produced to show that it is safe.

Now while I'm at it I want to tackle the article on page 426 by that good Canadian F. P. Adams. From a careful reading of the bee-papers during many years I doubt if Mr. Adams will find many of the big men endorse what he says in his third to last paragraph.

"Bees will not use up sealed stores for brood-rearing to any extent, and the pres-

ence of this surplus honey in the hives is no indication of prosperity. It is rather the reverse."

If so what does Dr. Miller mean by saving combs of honey to supply his colonies in the spring with abundance, and what does Doolittle mean by "advocating 'Millions of honey at our house' so earnestly as THE GREAT INCENTIVE to spring brood-rearing; and why does McEvoy (to take an example in our midst) say to see that the bees have combs chuck full to the bottom bars in the fall for winter and spring use? It is true that Mr. McEvoy advocates late spring feeding if fruit, dandelion and thorn bloom have not yielded enough to bridge the gap to clover, but this is altogether a different thing from general spring stimulative feeding which he roundly condemns. (see C.B.J. for April, 1908, page 131). My own experience teaches me that abundance of stores in the spring will, in normal ten-frame colonies, be turned into abundance of bees for the harvest without any spring feeding or fussing if the hives are warmly protected on top and entrances suited to the size of the cluster.

In closing, I am going to ask the Editor to reproduce the experience of Mr. F. H. Cyrenius as quoted on page 410 of the American Bee Journal for Dec. 1909; and after comparing same with the last twenty lines of Mr. Adams' article to endeavor to reconcile these conflicting views without using the word "Locality."

Montreal, 23rd Dec., 1909.

The following is what Mr. F. H. Cyrenius wrote for Gleanings:

"During my 40 years' experience in trying all plans of stimulation, I believe all things considered, abundant store of sealed honey or syrup give the best results.

I will say right here, no doubt we can increase their activity by daily feeding; but after all it is an activity in the wrong direction. The bees are induced to fly in unfavorable weather, and large numbers are lost. I should prefer a plan to keep them at home during the early breeding season rather than encourage them to fly except for business.

In 1878 the season was considered very unfavorable, as the bees had only about one flight in a week; but at that time mine had plenty of honey, which was rapidly changed into brood. It proved to be a very favorable season for early breeding.

The bees that remained at home reared brood, and were not induced to fly out and die. Right in this connection allow me to call attention to the old box-hive unstimulated, undisturbed, but with good queen and plenty of stores—the outstrip our stimulative colonies even at this time. Their ambition at this time is to convert as much honey into brood as possible; and any man who thinks he can help them at that time of year by spreading their brood, etc., is making a great mistake."

DISTRIBUTION OF SEED GRAIN AND POTATOES.

From the Central Experimental Farm
Ottawa 1909-10.

By instruction of the Hon. Minister of Agriculture a distribution is being made this season of samples of superior sorts of grain and potatoes to Canadian farmers for the improvement of seed. The stock for distribution has been secured mainly from the Experimental Farms at Brandon, Sask., Brandon, Man., and Ottawa, Ont. The samples consist of oats, spring wheat, barley, peas, Indian corn (for silage only), and potatoes. The quantity of oats sent is 4 lbs., and of wheat or barley 5 lbs., sufficient in each case to sow one-twelfth of an acre. The samples of Indian corn, peas and potatoes weigh 1 lb. each. A quantity of each of the following varieties has been secured for distribution:

Oats—Banner, Abundance, Danforth, Island, Wide-Awake, White Giant, Thousand Dollar, Improved Ligow—white varieties.

Wheat—Red varieties: Red Fife (beardless), Marquis, Stanley and Queen of the Sea (early beardless), Preston, Hiram and Pringle's Champlain (early bearded)

White Varieties—
Bobs (early bearded)

Barley—Six rows
and Mansfield
Standwell and Canada

Field Peas—Archie

Indian Corn

sorts: Angel of
Early and Longfellow

Selected Leaming
and White Cap Yellow

Potatoes—Early

Rose, and Irish
varieties: Gold
Money Maker. The

rule, more productive
kinds.

Only one sample
applicant, hence it is
a sample of oats
one of wheat, barley
or potatoes. A
cards or sheets,
one individual, or
than one sample
not be entertained
sent free of charge

Applications should
the director of Experi-
taw, and may be made
the 1st of December
ruary, after which
so that the samples
sent out in good
cants should men-
prefer, with a sec-
tive. Applications
der in which the
the supply of seed
vised to apply to
disappointment.

Canadian Corn or po-
tatoes until April, and
mailed until the
No postage is required
to the Central Experi-
mental Farm, Ottawa.

W. J. ...
Director

January, 1910

on was considered very
the bees had only about
week; but at that time
of honey, which was
into brood. It proved
favorable season for early

remained at home reared
not induced to fly out
in this connection allow
on to the old box-hive
disturbed, but with
plenty of stores—the
cumulative colonies even
winter at this time is
honey into brood as per
man who thinks he can
time of year by spreading
etc., is making a great

LIST OF SEED GRAIN AND POTATOES.

Central Experimental Farm,
Ottawa 1909-10.

of the Hon. Minister
distribution is being made
samples of superior sorts
to Canadian farmers
of seed. The stock
has been secured mainly
at the Central Experimental
Farms at Ottawa, and
London, Man., and Ottawa.
The samples consist of
oats, spring wheat, Indian
corn (for silage), and
potatoes. The quantities
are 100 lbs., and of wheat or
corn sufficient in each case to
sow an acre. The samples
of oats and potatoes weigh
100 lbs. and of each of the
others 50 lbs. has been secured for

Abundance, Dan
Awake, White
Improved Ligow

varieties: Red
Marquis, Stanley and
beardless), Preston, Ham
champlain (early beard

White Varieties—White Fife (beardless),
Bobs (early beardless).

Barley—Six rowed: Mensury, Odessa
and Mansfield. Two-rowed: Invincible,
Standwell and Canadian Thorpe.

Field Peas—Arthur and Golden Vine.

Indian Corn (for ensilage).—Early
sorts: Angel of Midnight, Compton's
Early and Longfellow. Later varieties:
Selected Leaming, Early Mastodon,
and White Cap Yellow Dent.

Potatoes—Early varieties: Rochester
Rose, and Irish Cobbler. Medium to late
varieties: Gold Coin, Carman No. 1, and
Money Maker. The later varieties are as a
rule, more productive than the earlier
kinds.

Only one sample can be sent to each
applicant, hence if an individual receives
a sample of oats he cannot also receive
one of wheat, barley, peas, Indian corn
or potatoes. Applications on printed
cards or sheets, or lists of names from
one individual, or applications for more
than one sample for one household, can-
not be entertained. The samples will be
sent free of charge through the mail.

Applications should be addressed to
the director of Experimental Farms, Ot-
tawa, and may be sent in any time from
the 1st of December to the 15th of Feb-
ruary, after which the lists will be closed,
so that the samples asked for may be
sent out in good time for sowing. Appli-
cants should mention the variety they
prefer, with a second sort as an alterna-
tive. Applications will be filled in the
order in which they are received, so long as
the supply of seed lasts. Farmers are ad-
vised to apply early to avoid possible
disappointment. Those applying for In-
dian Corn or potatoes should bear in
mind that corn is not usually distributed
until April, and that potatoes cannot be
mailed until the danger of frost is over.
No postage is required on mail addressed
to the Central Experimental Farm, Ot-
tawa.

WM. SAUNDERS,

Director of Experimental Farms.

HIS EXPERIENCE.

F. J. Lee, Algoma.

About a year ago I wrote you a letter
headed "A Beginner," and told you about
putting in the cellar two swarms of bees,
one weighing only 24 lbs., and the
other 25 lbs., hive and all, each hive
weighing twenty lbs. empty. Well, I fed
them by pouring some syrup on some
comb that lay flat on the frames every
few days. I thought they were great
eaters, as every time I went to feed them
the combs would be dry and clean. But
when I came to carry them out in the
spring, I found they had not eaten all,
but the frames were nearly as heavy as
when they went into the cellar. I took
the cover off one hive and set the other
on top as you told me, Mr. Editor, and
left them that way until this fall. I put
a partition board between the hives and
found they had used the top hive as a
super and filled it chuck full—a nice
block of honey, weighing eighty pounds,
hive and all. The lower hive I put in
the cellar this fall, weighing seventy-
seven pounds. Now, Mr. Editor, I do
not approve of breeding sprouts on the
potatoes a foot long in order to keep
light colonies warm and alive, but it can
be done, and being a little older in the
business I will try and have no light col-
onies any more. My bees were in excel-
lent shape this fall. I put 22 hives in
the cellar, all about 65 pounds apiece. I
use all eight-frame Langstroth hives and
run for comb honey only. There is no live
stock on the farm that pays as well. I
told you in my other letter last winter
how I bored a two inch hole through the
six-inch super and put in wire mosquito
netting and set the hive on it for the
winter. It does not hurt the super a bit,
the wire being put in so that it will not
protrude on either side, and nothing can
get to the bees as large as a mosquito.

A Mr. Moore, from near Athens, was
here this winter. He went down cellar

to see the bees. He is a bee man, and says he will adopt my plan of wintering.

After my letter appeared in your journal last winter I received a letter from a perfect stranger, at Little Britton, giving me lots of good hints on bee-keeping. I could not make out his signature, but I replied thanking him, and writing his name as nearly like his as I could. I have not heard from him since and do not know if he received it. I saw a couple of letters from the Manitoulin. I live on the north shore across from there. There is no sweet clover here, but I sowed some buckwheat and gave a neighbor some seed if he would sow it, thinking the bees would get the pay for the seed for me. I went over to the field when it was white with blossoms and to my surprise I could not find a honey bee on the field, but there were countless numbers of wasps and flies on it. I kept a watch on my patch and I could sometimes see three or four or more. My wife sowed a bed, about a yard square, of mignonette. The bees were on that from morning till night, a bee for every stem, until the frost killed it. I think one acre would employ my whole apiary. Wasps and flies did not seem to bother with it.

[Very glad, indeed, to hear from you again Mr. Lee. You seem to have had very good success. You carried out our instructions a little too explicit in leaving the weak colony on top of the other one all summer till fall. You should have left it on for only two or three weeks till it became quite strong, and then put it on a stand of its own. Your description of the super—"chuck full"—shows that the bees were crowded for room. Had you lifted the top hive off and put a super on each, with a queen in each hive, you would, perhaps have had two supers instead of one. You certainly would have had one more hive of bees at all events to go into winter quarters in good shape. Apart from this you seem to have done well. We cannot account for your buck-

wheat not yielding honey. It must have been because of the condition of the weather. If it is cold and windy when buckwheat is in flow, the bees cannot do much.—Ed.]

EUROPEAN FOUL BROOD.

Dr. Miller's Experience.

From Gleanings in Bee Culture.

When I began treating foul-broody colonies last summer I piled the brood of four colonies over an excluder on a fifth colony, this fifth colony being equally foul-broody. At the end of three weeks the combs over the excluder would be emptied of brood and ready to melt up. But the combs in the lower storey would be as bad as ever. Then a new set of piles would have to be made; and, no matter how many times this would be repeated, there would always be left the foul-broody lower stories. Then it occurred to me, "If there is anything in the Alexander, and if bees queenless three weeks will clean out their frames, why will they not clean out the frames in these upper stories? It's worth trying, any way."

So when the piles had put in their three weeks, this is the way I did: I took the whole pile off its stand. On the stand I put the second storey—that is, the storey that had been immediately above the excluder. Into this I brushed the colony—that is, the bees and queen that had been in the lower storey. In most cases this was an entire success, the colonies being and continuing entirely healthy.

So here was what may possibly be an important "discovery,"—with apologies to A. I. Root for the use of the word. The discovery is that, at least in some cases and under some conditions, a diseased colony with a queen may clean out combs over an excluder so that they will be entirely healthy. But if any credit is due for this discovery, the chief credit

January, 1910

ongs to our good Alexander; for whatever would have those possible.

Possibly some do not Alexander plan for the European foul brood (black) but a few words colony strong; make it remain queenless it a vigorous you. That's all: the

Alexander Plan American Foul

desire to record her giving us this plan Alexander has given and lasting value. failures with the American have been reported with it there will all failures. It is just where failures occurred's teaching were. Were the failure brood, or with American never insisted succeed with American I believe he told

very much doubt that, succeed with American European foul brood down in the cell in not so very difficult it out entirely. In the dead larva dries all like so much glue. At least that is and it.

The Colonies Should I other cause of failure failing to note or Mr. Alexander's the colony strong. A good lot of bees should do very vigorous out their cells, especially.

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Bee Culture.

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may possibly be an ,"—with apologies e use of the word. , at least in some conditions, a dis- queen may clean out r so that they will but if any credit is y, the chief credit

ongs to our good friend the late E. Alexander; for without his head I ver would have thought the discovery sible.

Possibly some do not know what the Alexander plan for the treatment of Eur- an foul brood (black brood) is. It es but a few words to tell it. Make colony strong; make it queenless, and it remain queenless three weeks; then e it a vigorous young laying Italian en. That's all: the bees do the rest.

Alexander Plan Not Suitable for American Foul Brood.

desire to record here my belief that, iving us this plan of treatment, Mr. Alexander has given us something of and lasting value.

failures with the Alexander plan, I ve, have been reported. It is possible with it there will always be more or failures. It is just possible, also, where failures occurred, Mr. Alex- er's teaching were not strictly fol- ed. Were the failures with European brood, or with American? Mr. Al- nder never insisted that his plan d succeed with American foul brood, ough I believe he thought it might

very much doubt that it will often, er, succeed with American foul brood. European foul brood the dead larva down in the cell in such a way that not so very difficult for the bees to it out entirely. In American foul the dead larva dries down upon the cell like so much glue, impossible of al. At least that is the way I un- and it.

The Colonies Should Be Strong.

ther cause of failure may have been ailing to note or sufficiently em- Mr. Alexander's instructions to e colony strong. A weak and dis- ged lot of bees should not be ex- d to do very vigorous work at clean- out their cells, especially when less.

Mr. Alexander found that a strong force of bees would clean out their cells provided they were rearing no fresh brood to keep up the infection. I went just a step further, and found that a force with a queen would clean out combs to which they, but not the queen, had access.

A Variation of the Alexander Plan.

The last performance I have men- tioned—taking away the pile and leaving the colony in what had been the second storey—still left the lower storey with its infected brood to be dealt with. There were several of these, and upon them I tried another variation of the Alexander plan. Upon a new stand I make a pile of them, four or five stories high, taking with each enough bees to care for the brood, also a few extra to make up for the bees that would return to their old stands. Understand that each story contained a full quota of brood in all stages from the egg to the young bee just emerging, but there was no queen in the pile.

Of course, queen-cells were started. In ten days I destroyed all of them, and put in the lower story a virgin of choice stock. There was an excluder over the first story, for the purpose of confining this young queen to the lower storey. In about three weeks from the time the pile was formed, the queen was laying in what generally proved to be clean combs.

It is possible, if not probable, that wherever the bees did not clean out the combs perfectly it was because they were not strong enough. At any rate, if it were to do over again, not so many colonies would be thrown on foundation, and more would have the Alexander treat- ment. But I would certainly continue the variation of giving the young virgin in 10 days rather than a laying queen at the end of 21 days. Many a time I have noticed in a nucleus having a young queen not yet laying how the workers polish out the cells before she begins to y. In- deed, if I find the cells well polished I

feel almost as sure a queen is there as if I saw the queen. Now, it seems to me that it must make quite a difference whether the bees are left utterly queenless for twenty-one days, or whether in the last ten or eleven days they have a virgin. After being queenless for ten days they begin to feel discouraged and inclined to let things go at loose ends; but let a virgin enter upon the scene and they are wide awake to clean up in preparation for the work they expect her to do.

I have an interesting letter from John T. Greene, Interlaken, N. Y., who has been doing some things hardly according to orthodox teaching in his dealings with black brood. He says:

"I had six yards the past season in which nearly every colony had the disease. We started in to shake every diseased colony; but when one man, with only his wife to help, undertakes to shake about 300 colonies and care for a yard 50 miles away at the same time, he has got to go some.

We had to shake at "any old time" while daylight lasted, and then found we couldn't quite catch up. At the beginning we disinfected our hives, burning them out with a painter's torch. We also had lots of other work to do while caring for the bees.

Well, to make a long story short we began to requeen with young Italian queens (most of my bees were blacks or hybrids). We then began to wonder if the young queens would not do the business and save us a lot of work. You see we were getting tired and wanted help. So we began to requeen and leave all the old combs in the hive, and were greatly pleased to find about 95 per cent. of the colonies thus left without a trace of the disease at the close of a very light buckwheat flow."

He explains that one thing that led to a trial of this sort of treatment was the fact that the previous year a colony in very bad condition had had a young queen given to it, and some time later he was surprised to find that not a diseased cell was to be found in the hive. He also says that where a colony was weak,

or did not clean up, two were united, the stronger being placed on the weaker.

Of course, as he says, it is too soon to say that there may be no return of the disease; but the plain facts that he gives are none the less valuable.

After knowing what a scourge black (European) foul brood had been in the State of New York, I had had some question whether it were not in a mild form in Illinois. According to Mr. Greene's letter there is probably no doubt.

According to the teachings of Mr. Alexander, the two essential things in treatment are, first strength of colony and second a term of queenlessness. Perhaps he would stipulate a third, the raising of a young Italian queen. My own experience confirmed and emphasized the importance of having colonies strong. But instead of having a colony entirely without a queen for three weeks I would give it a virgin at the end of ten days. Now comes Mr. Greene, who believes in strong colonies, but who makes no mention of any time of queenlessness—merely requeens. At any rate, when a strong colony was requeened a cure followed 95 per cent. of the cases.

The question arises, is the queen diseased or at fault in any way? and is a mere change of queen all that is necessary? It looks just a little that way. A number of times my assistant, while looking at the queen of a bad colony, said, "How logy that queen appeared." And one out of five of the queens that appeared not many days after being thrown on foundation. It was not erseding; generally no queen-cells started until after the disappearance of the queen. Were the foul brood virus in the body of the queen? If so, were not in the eggs, for the brood that these eggs was in all cases healthy. It seems that in some way the queens were weak, and perhaps their weak progeny were correspondingly weak,

ing a change of queen necessary for recovery.

Yet it was possible that a mere change of queen would cure. Mr. Greene's treatment remembered that general principle is introduced, there is a practical queenlessness more, and perhaps for when the new queen is not up to her full strength and a diminution in strength ought to give the bees a chance to clean up.

This much seems true. That bees are able to clean up a number of cells in a colony (American) foul brood. It has been proven that bees can clean out all, if they are given time for them to do, and a diminution in egg-laying and number of foul cells to clean up increases the chances. The practical question is: "How long a colony be queenless to give it a chance to clean up?"

Mr. Alexander's rule is to requeen a colony queenless for ten days. I understand the matter differently. Mr. Alexander had hardly reached the experimental stage, and he never tried any thing for three weeks. Perhaps the way is: "It takes three weeks for a colony to hatch out, so it takes three weeks for the colony to be queenless. It is just possible that the chance for conveying the virus is in a cell that is sealed, and that a few days' queenlessness will do the job just as well as three weeks. There be not too much time. It seems reasonable to try it for less than eight days if we take into account the experience, and also the fact that a number of my colonies that were affected cured themselves without any interference on my part.

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Yet it was possible that it was not a
mere change of queens in the case of
Mr. Greene's treatment. It must be re-
membered that generally, when a queen
is introduced, there is a break in laying—
practical queenlessness—for a day or
more, and perhaps for several days. Even
when the new queen begins laying, she
is not up to her full count for some time,
and a diminution in the amount of brood
ought to give the bees a better chance to
clean up.

This much seems clearly established:
That bees are able to clear out a certain
number of cells in European (not Amer-
ican) foul brood. It also seems nearly
proven that bees in good heart will
clean out all, if there is not too much
for them to do, and that a stoppage or
diminution in egg-laying diminishes the
number of foul cells to be cleaned up, and
increases the chances for cure. A practical
question is: "How long should a
colony be queenless to give it a fair
chance to clean up?"

Mr. Alexander's rule was to leave the
colony queenless for three weeks. But if
I understand the matter correctly, Mr.
Alexander had hardly gone beyond the
experimental stage, and it is possible that
he never tried any shorter time than
three weeks. Perhaps he reasoned in this
way: "It takes three weeks for all the
brood to hatch out, so that the time for
the colony to be queenless." But it is
just possible that there is little or no
chance for conveying the disease from a
cell that is sealed, and that eight or ten
days' queenlessness will serve the pur-
pose just as well as three weeks. And if
there be not too much cleaning up to do,
it seems reasonable to believe that even
less than eight days may answer, when
we take into account Mr. Greene's ex-
perience, and also the fact that a num-
ber of my colonies that were mildly af-
fected cured themselves without any in-
terference on my part.

Let me give one example of self-cure.
No. 100 was foul-broody, but not very
bad. July 16 I put an excluder on the
hive, and then piled on it four or five
(I think five) stories of foul-broody
combs. Aug. 13 I took away the upper
stories, out of which, of course, all brood
had emerged, and then opened the lower
storey in order to treat it. To my sur-
prise not a single diseased cell could be
found in the hive!

Marengo, Ill.

NOTES ON HONEY BEES GATHER- ING HONEY-DEW FROM A SCALE INSECT, *PHYSOKERMES PICEAE*,

Indexed SCHR.

Burton N. Gates, Ph. D., Bureau of
Entomology, Washington, D. C.

It is known that scale insects as well as
aphids secrete honey-dew. For instance,
Lecanium oleæ,¹ upon the citrus fruits of
California produce great quantities of
honey-dew, which collects as a coating
upon the leaves and is a medium for the
growth of a fungus, *Capnodium* sp. The
mycilium of this fungus sometimes forms
a felt over the leaf, closing the stomata
and thus killing the tree.

On the spruces at Amherst, Mass., a
scale, less well known than this black-
scale attracted the writer's attention late
in May and June, 1908. Large numbers
of bees were humming in the trees on the
campus of the agricultural college. At
times the roar was suggestive of a
swarm. At first, however, it was
thought from the behaviour of the bees
that they were collecting materials for
propolis, but none were seen with a bur-
den packed upon their legs. By following
a single bee it was possible to see her on
a twig at the union of the last two
years' growth searching with extended
tongue for something apparently sweet.
At the base of what looked to be a

³ Washington, 1901.

¹ Kellogg, Vernon L., 1905, *American In-
sects*, New York, Henry Holt & Co. VIII
+679 pp. Page 187.

bud the bees invariably worked as eagerly as at a drop of honey. This bud-resembling structure was crushed and immediately revealed animal tissue. There were thousands of these bud-like scales on the spruces and from them the bees were busily collecting a liberal store of honey-dew. Some scales, however, apparently produced more of the substance than others, because in some instances globules or dried crystals of honey-dew were noticed, at the base of the insects.

Specimens were sent to Mr. J. G. Sanders of the Bureau of Entomology, who determined the scale to be *Physokermes piceæ* Schr., "a European species which affects the spruce trees and only recently has been introduced into the United States."²

The species is not likely to become a serious pest to the spruces, Mr. Sanders wrote, because of its numerous parasites. Consequently, bee-keepers will probably not be greatly annoyed with the honey-dew it produces as compared with the large amounts from aphids.

During the past summer (1909) the amount of aphid honey-dew stored by bees has been almost unprecedented in all localities east of the Mississippi, and especially northward. Reports in the apicultural periodicals show excessive production in Illinois, Indiana, Ohio, Southern Michigan, Pennsylvania, New Jersey, Maryland, and to some extent in New York and New England. In an editorial in *Gleanings in Bee Culture*³ Mr. E. R. Root states: "The abundance of honey-dew [and the resulting admixture with pure honey] will make the year 1909 the shortest on a strictly clear white honey, east of the Mississippi and south of the Great Lakes, that we have ever known." He further adds: "Reports continue to pour in, showing that this is probably the greatest year for honey-dew ever known in this country."

² To his knowledge, it has been taken at three points in Massachusetts.

³ Vol. 27, Oct. 1, 1909, p. 388.

GOING INTO WINTER

With Bees on Solid Capped Stores.

Indexed Wm. McEvoy.

Will colonies prepared this way give better results than those having plenty of empty space in the combs for the bees to cluster on. Yes. Because they will winter better, come into spring stronger, build up faster, and gather more honey in the clover season. Crowding the bees up with division boards on all sealed combs, shuts out all brood rearing until near spring. This shutting out of brood rearing until nearly spring gives the bees a long quiet rest, which prolongs their life and during this long period of rest less stores are consumed, and when opened these colonies will be found in the best possible condition for business.

In the fall of 1875, with division boards I crowded the bees up on combs of solid sealed honey in about half the colonies in my apiary, and in all others where they had honey enough, I left them as they were, with the lower half of the centre combs empty, and then packed all on their summer stands. The winter of 1876 was the warmest we ever had in our province, and before the middle of January brood rearing was going on at a great rate in every colony that I packed in the fall that had empty comb for the bees to cluster on. Of course the mildness of the winter had a great deal to do with so much early brood rearing.

The bees in these colonies used up their stores at a rapid rate, and wore themselves out at brood rearing in winter, when they should have been at rest, and in the spring they dwindled down to very weak colonies. The other half of the colonies that I crowded up with division boards on solid capped combs of honey, wintered good, built up fast in spring and gave large yields of honey in the clover season. This experience taught me one of the most valuable lessons that I ever learned, and since then for nearly a

third of a century, bees up on solid caps when preparing the winter of 1904 was a success. In *Gleanings in Bee Culture* for 1877, from letters and reports from 50 to 75 beekeepers who wintered on summer stands. Mr. Root that spring, asking me how I wintered. I wrote him that I wintered well, and my apiary against a winter for who would have thought it. I walked through my apiary and the bees flew from me. "Mr. McEvoy, you can't fool yourself over this a winter."

Woodburn, Jan. 11

M

Toronto

Dear Sir,—Referring to the 5th, instant, the exceptionally cold, the 12th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, 20th, 21st, 22nd, 23rd, 24th, 25th, 26th, 27th, 28th, 29th, 30th, 31st, December and February 17, 1874, the same period of years showing as low as 1875, had a mean 14th March in the former much colder than in the latter.

Wm. McEvoy, Esq.,
Woodburn, Ontario.

Indexed

HONEY

F. P. Adams

There is a tendency among American bee-keepers to winter on summer stands, but after a few years ago, bee-keepers in this locality have learned a very dangerous lesson

WINTER

Capped Stores.

McEvoy.
 I tried this way give
 use having plenty of
 combs for the bees to
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 gather more honey
 Crowding the bees
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third of a century, I have crowded the bees up on solid capped stores every fall when preparing them for winter. The winter of 1904 was an extremely cold one. In Gleanings for March 15, 1904, page 277, from letters received, Mr. Root reports from 50 to 75 per cent. of the bees dead that were wintering on their summer stands. Mr. Alpaugh wrote to me that spring, asking me how my bees had wintered. I wrote him that my bees had wintered well, and that I would show my apiary against any apiary in the province for who would take both. Mr. Alpaugh came to my place and when he walked through my apiary and saw how the bees flew from every hive he said: "Mr. McEvoy, you can shake hands with yourself over this apiary after such a winter."

Woodburn, Jan. 11, 1910.

Meteorological Office,
 Toronto, January 7, 1910.

Dear Sir,—Referring to your letter of the 5th, instant, the winter of 1904, was exceptionally cold, the mean at Toronto, December and February, having been 17.4, the same period of 1874-5, only in 63 years showing as low a mean, viz., 17.3. Taking the four months, December-March, 1875, had a mean 18.2, and 1904, 20.2, March in the former year having been much colder than in the latter.

I am, dear sir,
 Yours truly,
 R. F. SHIPART,
 Director.

Wm. McEvoy, Esq.,
 Woodburn, Ontario.

Indexed

HONEY DEW.

F. P. Adams.

There is a tendency on the part of some American bee-keepers to minimize the danger of honey dew, when used for winter stores, but after the experience we had a few years ago, I think that most bee-keepers in this locality would consider it a very dangerous substance to winter

on, even in small quantities mixed with the honey.

There is only one safe rule to follow when preparing hives for the winter that contain honey dew, and that is to feed heavily with good sugar syrup. If brood combs are nearly empty of everything in the fall, such as is often the case in a poor year, when honey dew has been gathered in place of honey, it would be all right to feed the syrup without extracting the mixture of honey dew and honey, but if brood nests are filled with honey containing more or less honey dew it would be necessary to extract at least part of the combs, placing clean empty combs in the centre and then feed with syrup until everything was filled up.

When preparing bees for the winter in this way it is not necessary to leave the full set of combs in the hive. About six combs of Langstroth size will be sufficient for the needs of the colony if well filled.

In this locality we frequently get a little honey dew during fruit bloom, and I believe it is the presence of this substance in small quantities that gives the early gathered honey such a strong unpleasant flavor.

Its effect on the bees when gathering it is quite noticeable. They are very much excited and start out after it early in the morning, and usually a number of bees can be seen crawling on the ground in front of the hives during the time that it is being gathered.

In order to detect it in the combs, choose a piece of light-colored comb that contains freshly gathered honey, and if honey dew is present it will be noticed that a cell here and there has a dark, cloudy appearance. Sometimes if the cell is nearly filled only a thin coating on top of the honey and up the sides of the cell indicates the presence of this substance.

It has a strong brassy taste and is easily detected, both by its peculiar color and strong flavor.

THE HOMING BEE.

—E. Pauline Johnson, in the January
Canadian Magazine.

You are belted with gold, little brother
of mine,

Yellow gold, like the sun
That spills in the west, as a chalice of
wine

When feasting is done.

You are gossamer-winged, little brother
of mine,

Tissue winged, like the mist
That broods where the marshes melt into
a line

Of vapor sun-kissed.

You are laden with sweets, little brother
of mine,

Flower sweets, like the touch
Of hands we have longed for, of arms that
entwine,

Of lips that love much.

You are better than I, little brother
of mine,

Than I, human-souled,
For you bring from the blossoms and red
summer shine,
For others, your gold.

A subscriber sends us the following in
reply to the above:

The Worker Bee's Reply to the Poet.

Written for the Canadian Bee Journal.

He is laughing at me, that brother of
mine,

Whom you have mistaken for me,
And says, "I work hard to be brother of
thine,

Though brother I never shall be."

He is belted with gold, that brother of
mine,

But gathers no nectar for you.
I bear my three bands, in an honest bee
line,

Returning well laden, 'tis true.

The gossamer wings of that brother of
mine,

Have never been sullied by work,
That has torn into shreds my gossamer
fine,

Though I was never known to shirk.

Remember, Pauline, 'tis the sisters of
thine,

Who've done all the work of the hive,
And won all the palms in the honey bee
line,

Whether they're dead or alive.

(Signed) WORKER BEE.

FEEDING BEES IN WINTER.

I am a beginner. I got 12 colonies last
fall from some farmers who used to kill
their bees in the fall to get their honey.
I made four strong colonies with them
by uniting and gave each one a comb of
brood, and filled the hives with extracting
combs. I fed them with syrup made
with equal parts of granulated sugar and
water, but I am afraid that I did not
give them quite enough. I would like to
know if it will be all right to give them
granulated extracted honey. If I have
good success with these four colonies I
intend to make a large increase next fall.
As you understand the bees do not cost
anything but the trouble to go and get
them from the farmers.

GEORGE WADDELL.

Laurentides, P. Q.

[Glad to welcome you as a new addition
to our bee-keeping fraternity. You will
find it pleasant and profitable. What you
did when you got your bees was, doubt-
less, about the best you could have done
while? You do not say what time in the fall
you were; but we suppose it was after the last
honey flow. If this was the case your
feed was too thin. It should have been
at least two of sugar to one of water.
One-to-one is all right in the spring when
fed for stimulative purposes—and the
only in small quantities. You do not say

how you are wintering
therefore, difficult for
to feeding at this
bees should not be dis-
in of the year. If t
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the cellar you might
syrup, but you must
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THE YOUTH'S
Companion Building,
Now subscriptions rece

of that brother of
allied by work,
shreds my gossamer
r known to shirk.
'tis the sisters of
ne work of the hive,
ms in the honey bee
ead or alive.

WORKER BEE.

S IN WINTER.

I got 12 colonies last
ers who used + kill
l to get their honey.
colonies with them
each one a comb of
hives with extracting
n with syrup made
granulated sugar and
fraid that I did not
ugh. I would like to
ll right to give them
l honey. If I have
these four colonies
rge increase next fall
the bees do not cost
ouble to go and get
ers.

ORGE WADDELL.

you as a new addition
fraternity. You will
profitable What you
your bees was, doubt
you could have done
at time in the fall
e it was after the late
is was the case you
It should have been
gar to one of water
ht in the spring when
e purposes—and the
ities. You do not see

ow you are wintering the bees; it is,
erefore, difficult for us to advise you
to feeding at this time of the winter.
ees should not be disturbed at this sea-
on of the year. If they are wintering
utdoors you cannot do much for them. If
the cellar you might give them a little
rup, but you must contrive some way
getting it into the hive or immediately
a top. But it must be done very cau-
siously, so as not to excite them too
uch. Granulated extracted honey will
ot do for feed. If you give them any-
ing it—must be in liquid form. Of
ourse, you must understand, that all the
bove is said on the supposition that they
ust be fed to save their lives. Of this
ou should be sure. Write us more fully
ext month.—Ed.]

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Which makes the better Christmas box
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truth and honor, not a phrase that makes
doubt of the things that are sweet and
pure. Is it not a Christmas gift worth
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tian" Calendar for 1910, lithographed in
thirteen colors and gold.

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PRESS BULLETIN

**From the Ontario Agricultural College,
Guelph, Canada.**

If you are interested in farming for
profit you have probably noticed that
there has been recently a great revival of
interest in fruit growing. No other
branch of agriculture offers so large a
financial return at the present time, and
it is because of this fact that large num-
bers of neglected orchards are being
cleaned up, fertilized, pruned and
sprayed. Such splendid profits are being
realized that wide-awake men are setting
out new plantations of the best varieties
in the firm belief that they will return a
high percentage profit on the capital in-
vested. These men have carefully looked
into the situation and any who do like-
wise will most certainly come to the same
conclusion. Ontario possesses beyond all
question unrivalled possibilities as a fruit
producing province. The climate and
soil are unequalled on this continent.
Markets have never been fully supplied
with strictly high-grade fruit, and are
demanding larger quantities each year.
To those who are looking for a more pro-
fitable line, we earnestly recommend a
study of the fruit situation. The best in-
formed and most expert fruit men in the
province will be assembled at the Ontario
Agricultural College, Guelph, for the
special course in Fruit Growing, January
25th to February 4th, 1910. Come and
hear them tell their experiences, if you
doubt the truth of these statements. And
if you are already interested you and
your neighbors cannot afford to miss the
wealth of practical knowledge and up-to-
date information which will be presented
at that time. There is money in growing
fruit, and this free short course is worth
dollars to you and your friends. The pro-
gram will appear in these columns. Watch
for it. For further particulars write J.
W. Crow, Department of Horticulture, or
President Creelman, O. A. C., Guelph.

CROP REPORT.

J. E. Farr.

My honey crop report is as follows: Seven hundred of early dark; thirty-four hundred of buckwheat; forty-five hundred of clover honey; making a total of eighty-six hundred pounds from sixty-five colonies, spring count. I also increased my number to one hundred and five colonies, which I packed up on their summer stands for winter.

Following is my plan of riding a colony of lay workers: Take a clean hive with no scent of bees in it, shake the colony that has laying workers into new hive on full sheet of foundation at the same operation introduce a laying queen, in an introducing cage, and your work is done.

NOVEMBER CROP BULLETIN.

(Continued from Page 412).

culling out of poor milking cows. Correspondents in the counties of Leeds and Grenville, report that under the new U. S. tariff a large quantity of cream is now being exported across the border, even some of our cheese factories preferring to separate their milk for that purpose. Three hundred correspondents have reported as to the favorite breed of dairy cow (including grades), and the four leading classes now rank in the following proportion for the province: Holstein 8; Shorthorns 6; Ayrshires 3; Jerseys 2. In western Ontario, however, Shorthorns still lead Holsteins in the ratio of 5 to 4. The Ayrshires' popularity is mainly in the St. Lawrence and Ottawa counties.

Poultry—Good prices for fowl for the table and equally good prices for eggs, notwithstanding the high prices of grain, are encouraging farmers to give more attention to poultry raising, and correspondents have more to say about the subject than ever before, several claiming that poultry raising is one of the best paying branches of live stock on the farm.

While some speak well of turkeys, there are a number of complaints of a heavy mortality early in the season among the young birds, and it is likely that there will be a scarcity for the winter market. With this exception, but little mention was made of disease among fowl this year.

Farm Labor—There was a sufficiency of farm labor, generally speaking, although here and there a scarcity was reported. The quality of much of the labor offered was not up to the standard, and as many of the trained native born farm hands are going to the west and the north the question of the fitness of those taking their places is becoming serious. Complaints are made, and sometimes in very strong language, that many of the immigrants seeking employment on the farms are failures, although some are giving excellent satisfaction. The wages of farm laborers are not likely to rise, but rather to fall, judging by the remarks of correspondents, who hold that farmers cannot afford to pay more, and will do more improved machinery and exchange help with their neighbors, seed more grass, and raise more live stock, thus lightening labor. The domestic servant question has not yet found a satisfactory answer. The farmer's wife finds it difficult as ever to procure extra help for her home tasks.

Threshing and Marketing—Threshing was well advanced as correspondents wrote; in fact, it was finished in many cases. A dollar a bushel for wheat was coaxing a moderate quantity of the grain into the market, and some are evidently holding back for even better prices; but a majority are keeping a bulk of their wheat, barley, oats and other grains to feed to live stock.

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FREE
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about 100-year shingles? Show how to get most for your money in roofing anything that's worth roofing right. Proves the same we'll make you. News for you about shingles that last a century. Get a copy. Ask nearest office.

PEDLAR People of Oshawa
Montreal, Toronto, Halifax, St. John, Winnipeg, Vancouver

January, 1910

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WANTED—For bees, fully equipped for production; spring "B," Canadian B. Canada.

ITALIAN

**Good, So
Italian**

MY Italian bred stock, nized as Canadian bred stock, established in many apiaries through

The Ontario experimental apiary at Harbor was originated.

PRIC
Untested
Each..... \$1.00
Six for..... 5.00
Per Dozen..... 9.00

Breeders raised



Want and Exchange Column

Advertisements for this column will be received at the rate of 50 cents for 25 words, each additional word one cent. Payments strictly in advance, as the amounts are too small to permit of book-keeping. Write copy of ad. on a separate sheet from any other matter, and on one side of the paper only. Say plainly how many times ad. is to be inserted. Matter must reach us not later than the 23rd of each month.

WANTED—From 50 to 100 colonies of bees, fully equipped for extracted honey production; spring delivery. Address "B," Canadian Bee Journal, Brantford, Canada.

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**Good, Sound, Golden,
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The Ontario Government's Experimental Apiary at Jordan Harbor was originated from this stock.

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Six for..... 5.00	Six for..... 8 00
Per Dozen..... 9.00	Per Dozen..... 15.00

Breeders raised in 1909—\$5.00 each



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well of turkeys, the complaints of a head the season among, it is likely that the for the winter market, but little mention among fowl this year here was a sufficiency. ally speaking, although scarcity was reported of the labor offered standard, and as many native born farm hands west and the north fitness of those taking serious. Complaints sometimes in very strong many of the immigrants on the farms some are giving extra. The wages of farm hands to rise, but rather by the remarks of a hold that farmers can y more, and will machinery and exchange neighbors, seed more live stock, the domestic service yet found a satisfactory farmer's wife finds it to procure extra help.

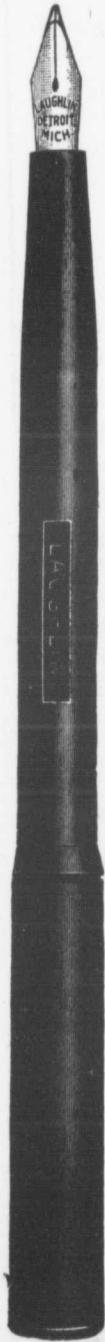
Marketing — Threshing as corresponded was finished in more a bushel for wheat a rate quantity of the market, and some are back for even better majority are keeping wheat, barley, oats and feed to live stock.

about 100-year shingles? Show to get most for your money roofing anything that's worth roofing right. Proves the savings'll make you. News for you out shingles that last a century a copy. Ask nearest office.

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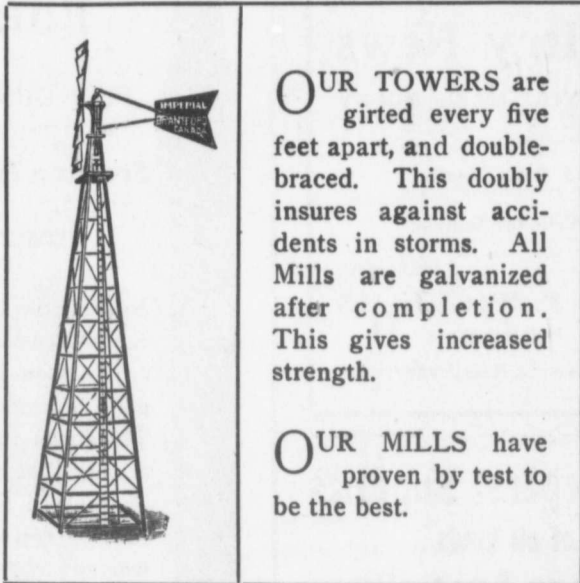
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