

THE CANADIAN BEE JOURNAL

Vol. 19, No. 3.

MARCH 1191

\$1.00 Per Annum

Index

Shook-Swarming a Success

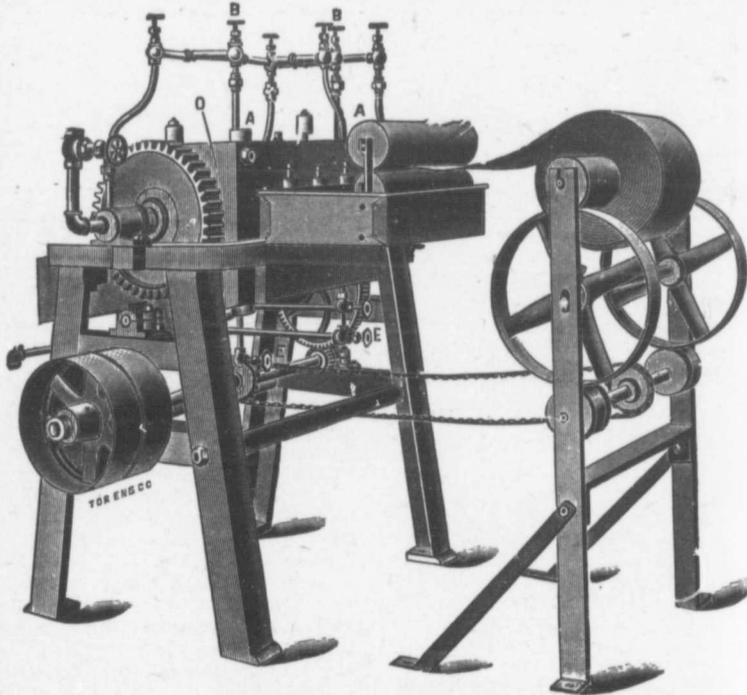
I will not discuss methods here, but will say that shook-swarming is a success, if properly done, in working for comb honey. I know many imitators say it is not a success; others say it is too much work; still others say their bees swarm after shaking them, even worse than before; but I am sure that they are wrong, either in their methods or practice, as I have never had any one watching my bees an hour; never had more than two helpers; and have not had a prime swarm in the air during the past ten years; and surely no extracting man could do any better or more work; and, with swarming out of the way, I feel sure that I could leave my extracting brother behind. With a warehouse filled with prepared supers I can give all the room needed for a honey flow, while most extracting men must extract to give more room during a heavy flow; and I know that I can take off more honey in a day than can my extracting brother but I admit the comb honey must still be cleaned and cased afterwards.

When the last super is off, my bees are in better winter condition than his, either for indoor or outdoor wintering; and, as a rule, will care for themselves a month later than his the next spring.—M. A. Gill, in The Bee-Keepers' Review.

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Devoted to the Interests of Bee-Keepers

JAS. J. HURLEY, Editor

Published monthly by
The HURLEY PRINTING CO.,
Brantford, Ont.

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The Canadian Bee Journal

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Vol. 19, No. 3.

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March, 1911

1911

The Canadian Bee Journal

PUBLISHED MONTHLY

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

Vol. 19, No. 3.

MARCH, 1911

Whole No. 553

We would welcome a few more opinions on the recent reciprocity proposals of the Dominion Government. Everyone is at liberty to express their views one way or the other, entirely regardless of what may be the Editor's view.

* * *

When asking R. F. Holtermann what he thought about Reciprocity, he stated that he did not care to enter into public discussion upon the question, but that he had no doubt the only thing that had kept European Foul Brood from spreading in Canada, was the duty which had prevented the importation of honey from infected countries.

* * *

With this issue we have pleasure in introducing Miss Ethel Robson in her opening of a Woman's Department. Miss Robson has been given a free hand in the conduct of this department, and we have no doubt that she will make it an interesting one. All who desire to communicate with this department will kindly write Miss Ethel Robson, Ilderton, Ont. We prefer that all communications be sent direct to her. We trust it will have the effect of bringing out the thoughts and aspirations of the many lady readers of the C.B.J.

* * *

Much interest will doubtless be taken in the article appearing elsewhere in this issue regarding British Columbia. This is a special bulletin prepared for the government of that province by Mr. Dundas Todd. It is a well prepared statement and Mr. Todd is to be congratulated. We have received a large number of enquiries regarding apicultural possibilities

in British Columbia, and are very glad to have this information to give to our readers. The Government of British Columbia has shown considerable enterprise in this matter, and we have no doubt it will be rewarded with good results.

* * *

The sad intelligence has just reached us that Mr. Joseph Bradley, of Campbell's Cross, a member of the Ontario Beekeepers' Association, has lately suffered the loss of his esteemed wife. Mrs. Bradley was confined to her bed for a short time, and was thought to be recovering. On the afternoon of Tuesday, February 14, she got up for a while, as was usual, and on going back, a weakness came over her as she got near her bed, and sank easily to the floor and died without pain or struggle. Mrs. Bradley took a great interest in bees, and was of great assistance to Mr. Bradley in the management of the apiary. In religion Mrs. Bradley was an Anglican, and her loss to the church will be keenly felt. The erection of the English Church was largely due to herself and her lamented husband. She was a good neighbor, and her kindness and hospitality was known by her many friends. Much sympathy is felt for Mr. Bradley in this his great loss. "Blessed are the pure in heart, for they shall see God." "Blessed are they that mourn, for they shall be comforted."

J. J. H.

* * *

In the A. B. J., Dr. Miller talks about the rewards of bee-keeping. "If money were the only thing to work for," says the doctor, "I certainly would not

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Journal
Canada

choose bee-keeping. But there are other rewards besides money, and outside the Christian ministry, I know of no calling that has greater rewards than bee-keeping, for one who has the proper taste for it. * * * The bee-keeper is much of the time out in God's free air and sunshine, with the right kind of exercise to make his food taste good and digest properly. With the chance to get more happiness out of each day so long as my days last, and with the chance to have them last longer than in any other business, why shouldn't I be a bee-keeper? And so say all of us!

* * *

We have been taken somewhat severely to task by several correspondents for our attitude regarding the proposed removal of the import duty on honey. We can merely explain that we were taught many years ago to regard every man as our brother, whether he be white, black, red or yellow; and as a natural consequence we have come to believe in free and unrestricted trade in all articles and commodities that make for the well-being of the human race. With us, it is a question, not of expediency, but of faith. Our columns, however, are open to all who desire to discuss the question. Perhaps, those friends who have been so good as to write us privately will favor our readers with their views.

* * *

Among the various suggestions offered to the Directors of the Canadian National Exhibition are the following: That more money should be spent on the dairy portion of the Exhibition; that the exhibits in the horticultural section be displayed to better advantage. May we express the hope that the management of the O. B. K. A. make similar representations on behalf of Ontario bee-keepers?

* * *

The "Adelaide Chronicle" says that the Australian Trade Commissioner in

England has been making strenuous efforts, with the result that extensive orders for Australian honey have been received from English ports. The formation of the South Australian Bee-keepers' Co-operative Union has made this possible.—(Irish Bee Journal).

* * *

The imports of honey into the United Kingdom during 1910 were \$52,800 in excess of the average for the last ten years.

* * *

The question of cane versus beet sugar crops up periodically. Wesley Foster in *Gleanings* advocates the use of cane sugar which he says is two to three times as fine as his local beet sugar and tastes sweeter. "The difference is noticeable when mixing bee-feed. The cane or fine sugar dissolves more readily, and there is less liability of undissolved granules being formed in the bottom." He also states that "a bee-keeper who fed a hundred sacks of sugar the past fall said his observation had been that cane sugar could be mixed with water cold without its granulating in the cells, while beet sugar, to get the same results had to be mixed with hot water." We have in our own case a decided partiality for the cane sugar. It is often stated that the manufacture of beet sugar involves the use of certain chemicals of which it is impossible completely to eliminate all traces in the refined product. These traces militate against successful wintering, it is said.

* * *

"Percolator feeding," says Dr. Miller in *Gleanings*, "takes ever so much less time and labor than hauling syrup ten miles away. Here's the way I've done lots of it. I took to the out apiary dry sugar in bags; put the dry sugar into Miller feeders on the hives, leaving them uncovered; then poured a pint or so of water, hot or cold, into each feeder, still leaving them uncovered (no robbing ever

started); then filled up each feeder as I Intyre has an interesting out-apiaries in the

* *

Two Irish bee-keepers in November last under the Pest Prevention Act to allow a duly authorized person to enter their premises if the bees kept there. The Act provides that the inspector in Ju provides that the visit "in reasonable time" of the latter expressed by the Irish department as "any time between October 31st, inclusive, and the weather conditions are such that the defendants contended fixed by the department a reasonable time, and should not be inspected in clover districts from 20, and in heather districts from 1 to September 15. They contended, and the magistrates in clover districts inspected from April 1, and again from September 1, and again from September 31. The defendants contended that the magistrates might be arranged between the Department of Agriculture and the Department of Justice cases were accordingly arranged for February 10th, when the case was heard. It transpired that the defendants had to bring about the suggestion would appear from the number of the colonies in the yards were diseased and to be destroyed. Defendants received 12 cents and one dollar

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versus beet sugar Wesley Foster in the use of cane is two to three cal beet sugar and ifferece is notice-e-feed. The cane more readily, and y of undissolved l in the bottom." 'a bee-keeper who of sugar the past ion had been that mixed with water lating in the cells, et the same results h hot water." We e a decided parti-ugar. It is often acture of beet sugar ertain chemicals of completely to elim- he refined product. against successful

" says Dr. Miller ever so much less hauling syrup ten the way I've done the out apiary dry the dry sugar into hives, leaving them red a pint or so of nto each feeder, still red (no robbing ever

started); then filled up with water, cov-ering each feeder as I went." Mr. Mc-Intyre has an interesting article on feed- ing out-apiaries in the present issue.

* * *

Two Irish bee-keepers were prosecuted in November last under the Irish Bee Pest Prevention Act for having refused to allow a duly authorized bee-inspector to enter their premises and inspect the bees kept there. The visits were made by the inspector in July, 1910. The act provides that the visits must be made "in reasonable time" and the definition of the latter expression was interpreted by the Irish department of Agriculture as "any time between April 20 and October 31st, inclusive, when the bees are flying on the premises, and when weather conditions are favorable." The defendants contended that the period fixed by the department was not at all a reasonable time, and stated that bees should not be inspected or disturbed in clover districts from June 1 to August 20, and in heather districts from June 1 to September 15. This would leave, they contended, ample time for inspec- tion. In clover districts bees could be inspected from April 1 to June 1, and again from August 20 to October 31; and in heather districts from April 1 to June 1, and again from September 15 to Oc- tober 31. The defendants therefore de- sired that the magistrates would adjourn the cases in order that a conference might be arranged between bee-keepers and the Department of Agriculture. The cases were accordingly adjourned until February 10th, when the hearing was re- sumed. It transpired, however, that the defendants had taken no steps to bring about the suggested conference. It would appear from the evidence that a number of the colonies in the defendants' yards were diseased and had subsequently to be destroyed. Defendants were fined 12 cents and one dollar costs.

It has been suggested that had a lit- tle more tact been shown by the bee-in- spector, matters might have happened a little differently. Bee inspectors have undoubtedly a very delicate task to per- form and they need to go about their business very warily. We approve of the intention of our Ontario Department of Agriculture, as announced by Mr. Morley Pettit at the Brantford conven- tion, to change the title from that of "inspector" to "instructor." The De- partment intends to pursue a vigorous educative policy, both through the "in- structors" and through the county as- sociations. Mr. Hodgetts, the Secretary of the O.B.K.A., has shown how much good and useful work can be performed by the county associations holding field demonstrations at various points within their areas. These are the right lines to work along and we are certain that bee-keepers generally will assist and co-operate with the department. We certainly prefer the idea of sending out instructors to educate rather than that of policemen to prosecute.

* * *

A correspondent proposes in connection with an apiary of 100 colonies, to con- struct a bee house and cellar, and seeks the advice of those of our readers pos- sessed experience in same. Whilst the building is to be fairly inexpensive, it should contain the very best features in bee-house construction. A slight slope to the land will permit of an entrance both to the cellar and the first floor. De- tails are asked for as regards the general arrangement, (dimensions, arrangement of rooms and cellar, ventilation, lighting, work benches, platform for extractor, screening, arrangement and type of doors and windows, storage or tank room, etc.), and also as regards the materials. Are there any special features which should be avoided or incorporated? Will our readers kindly oblige?

In this district, the winter has proved fairly favorable for the bees. In fact some fifteen colonies for which we had neither wintering cases nor cellar room have come through in first rate condition. We were hoping for a much more severe season in order to test how far we could winter the colonies without any other protection than that afforded by a three-frame space packed well with planer shavings on each side of the brood nest and a closed up ante-chamber in front of the ordinary entrance. We kept the supers on the hives and over the brood chamber placed several quilts together with a good thick cushion of planer shavings. We intend to repeat the experiment, but next time placing the hives in groups of four with the six frames upon which we usually winter, placed in each case close against the side adjacent to the neighboring hive.

W. W.

THE SWARMING INSTINCT

Can It be Eliminated by Selection.

In the last issue of the C.B.J. the assistant Editor refers to the possibility, or rather, from his point of view, the impossibility, of producing a non-swarming race of bees. He remarks that the analogy of the non-sitting hen is false. This may be so, but I hardly think he has made his point. He states that the productiveness of the Leghorn hen has actually been increased. Quite so, by the aid of the skilled poultry man and incubator. But what is the matter with the skilled apiarist and increase by nuclei? If an appeal to nature is to hold good, it must be made under natural conditions, and I maintain that in a question of a survival of the absolutely non-sitting hen and the absolutely non-swarming colony, the latter would have the best of it. In the first case, the life of the race would be simply the natural

life of the hen. In the second, there is no reason why the life of the colony should not continue indefinitely. If there were no other colonies in the neighborhood, it would eventually die out through in-breeding. Otherwise it would take some such accident as the loss of its queen, at a time when there was no brood, or the destruction of its home by fire. Of course, in the long run, both hens and bees would become extinct, but that is hardly the point. Man has succeeded in the case of certain breeds of hens in practically breeding out an instinct that is necessary to the continuance of the race under natural conditions. Why is it impossible for him to breed out a similar instinct in bees? It is generally admitted that where variability exists there is opportunity for improvement. There is certainly variability in the matter of swarming. Whether the production of a non-swarming race is desirable is another question. Instincts do not stand alone and the honey-gathering instinct might be impaired at the same time. Evidence on this point, however, indicates that the contrary would occur, as most bee-keepers agree that colonies that make fewest attempts to swarm are the best workers. I think it is a pity to throw cold water on the attempts to produce a non-swarming strain. Even if the desire to swarm is only slightly diminished, it is all to the good.

WM. L. COPER.

Hatzic, B.C.

We are strong advocates of proper methods of selection in breeding bees, and it is far from our intention to "throw cold water on attempts to produce a non-swarming race." In fact, we regard the matter of selection as one of the "major things" of bee-keeping. We shall be glad to hear from others of our readers, especially from any that may have been experimenting along these lines.—W.W.

WOM

We hear a great deal of the boys on the farm and the girls on the farm and how often do we hear of a chance? Year after year are leaving the farm they desire a chance economic independence. life is to be made attractive, it is just as if girls be kept on the farm. Of the girls who go to school we can make no complaint must be taught, and a responsibility nor the emotion of the rising generation appeal to the young men have to fill the need. all the girls who leave school teachers; many faces and shops and factories not go in the hope of business concerns, or if their ambitions; the best forward to is a comfort with the possibility of which their work by no fit them. Yet for man it is imperative that they perhaps the family finances stretched sufficiently far or it may be that a boy tried and they have been possibly it is a wholesome by their own exertions; —Heaven prosper their unquenchless ambition to serve in the service of humanity of our educational system been to educate the girls country. It does not dis

WOMAN'S DEPARTMENT

CONDUCTED BY

Miss Ethel Robson, Ilderton, Ont.

We hear a great deal about keeping the boys on the farm and about giving the boys a chance. This is all right, but how often do we hear about keeping the girls on the farm and giving the girls a chance? Year by year the girls are leaving the farm, mainly because they desire a chance for some sort of economic independence. But if country life is to be made attractive and interesting, it is just as necessary that the girls be kept on the farm as the boys. Of the girls who go for school teachers we can make no complaint—the children must be taught, and as neither the responsibility nor the emolument of teaching the rising generation makes much appeal to the young man, the girls will have to fill the need. But by no means all the girls who leave the farms become school teachers; many more go into offices and shops and factories. They do not go in the hope of making their fortunes, or becoming the heads of big business concerns, or if they do, few realize their ambitions; the best they can look forward to is a comfortable livelihood, with the possibility of marriage, for which their work by no means tends to fit them. Yet for many of these girls it is imperative that they make a living; perhaps the family finances cannot be stretched sufficiently far to go around, or it may be that a brother has married and they have been crowded out, or possibly it is a wholesome desire to exist by their own exertions; and with a few—Heaven prosper their efforts!—it is the quenchless ambition to spend themselves in the service of humanity. The tendency of our educational system seems to have been to educate the girls away from the country. It does not direct their atten-

tion to the farm, either for their pleasure or for the more practical matter of making a living in their own resources. How many, I wonder, looking back on their school days can recall a single effort made to fit them for a life on the farm either in the way of filling them with pride in the farmer's place in the community or teaching them that nothing can exceed the simple pleasure in growing and living things. With some shame I confess that it is not very long ago that I looked upon the discussion of the prices of butter and eggs and the best methods of raising turkeys as exceedingly petty, as, indeed, it can be, if viewed from a narrow, personal standard, but when viewed as a part of the great scheme of existence it takes on another meaning. And so our girls, when face to face with the vital problem of making a living rarely look towards the farm, instead they gravitate to the towns to swell the already over-full ranks of the wage-earners and drain the country of the fresh young life which it so greatly needs.

And now, oh dear women readers of the C. B. J., all this preamble is only preparatory to an expression of our firm belief that bee-keeping offers a most remunerative and healthful and interesting employment to women in the country; the great wonder is that they haven't turned their attention to it largely long ago. It is the object of this department to stimulate the interest of the women of Canada in this most promising industry that many may be induced to enter it on their own account. We do not propose to put men out of business; indeed, it will be necessary for long enough to have the enterprise and experience of

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WM. L. COPER.

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the men, if the honey trade is to prosper; but there are at present thousands of tons of nectar going to waste yearly in the fields of Canada, which we women may have for the taking, if we only have the initiative and perseverance to make it our own. So, come along, let us see how much of it we can gather!

II.

Not long since there arrived through the mail a large package from Mr. P. W. Hodgett's department. On opening it, it proved to be a supply of stationery with the O.B.K.A. stamp upon it, and there among the list of directors in clear black type in the upper right hand corner, "Miss E. Robson, Ilderton," I concluded it must be one of the emoluments of my office, or is it a reminder that I am expected to do some official correspondence? So far my duties have been light, however; being now supplied with stationery with my name upon it they may increase. But joking aside, isn't the fact that the bee-keepers elected a woman to their board of directors proof that they are the most chivalrous and appreciative of men, and eager to give us every opportunity to make good in their chosen business?

III.

The proposed reciprocity treaty is the one question in Canadian politics which has got beyond the range of mere party lines, and Canadians are discussing it with more national feeling than any other question within the memory of a good many of us. The discussion of the political aspect is hardly revelent to these columns, but the possible effect upon the honey market with honey on the free list is a very life question with Canadian bee-keepers. The writer has taken the pains to find out the opinion of many of our leading bee-keepers, men who have the widest knowledge of marketing conditions and they are unanimous in the expression of the opinion that the honey trade in this country has received a

severe and unnecessary blow. We depend entirely on the Western market for the disposal of our surplus honey; in fact it is the western market which has put bee-keeping on a business basis in this country. With the removal of the duty, handicapped as we are by a long freight haul, we shall have little chance of competing with the middle states except at considerably reduced prices, especially as honey averages one to two cents per pound lower there than here. Those who favor the agreement, and our editor is among them, dangle the \$0 million market to the south temptingly before us, but they neglect to tell us that this market is already well supplied with good honey and at prices generally lower than those current here. Then, too, our honey is unknown in these markets nor do we know the markets; it would mean a long and arduous fight to establish ourselves there. Men who have built up one market and who depend on the sale of their honey for their livelihood and that of their families can hardly be blamed if they shrink from undertaking it.

And it is hardly just to say the least, to speak slightingly of our own home market even if it is only a market of seven and a half millions, when we say that this same market consumes from 80 to 90 per cent. of our agricultural products and all of our honey.

It may be argued that we have no right to deny the poor man the privilege of buying in a cheaper market; it is hardly to be supposed that bee-keepers go into business from more philanthropic motives than other men. But granted so, the reduction in the retail price by the removal of the duty will hardly be sufficient to make a difference of more than a dollar or two to even the largest consumer, while the reduction of one or two cents makes a big difference in a man's whole crop. But the biscuit manufacturers, who use thousands of pounds

yearly, practically import will doubtless men don't particularly free honey, but we don't quite see only having our price market jeopardized, chances of having to getkets of whose conditioning, while the biscuit his market secure will from 25 to 32½%.

When the sober opinion dian people at the poll or reciprocity in nat the best interests of t ada then the bee-keep hind any other class present good for the until such time comes good deal of argument that they have not a ance against the pres government.

But because of our i to the tariff it would clude that we have an towards the bee-keep States. The tariff is the hands of the gover in the building up of the present government and so long as we have ers can reasonably cla as justly as any class in

IV.

Have you read Mr. address on co-operation Journal. Evidently he cheap honey.

V.

At the last meeting one of the speakers paid tribute to the value of partner in the business approval with which it have have no doubt th bee-keepers owe much o this cause. It is the

yearly, practically all of which they import will doubtless be benefited. Bee men don't particularly grudge them their free honey, but we may be pardoned if we don't quite see the justice of not only having our prices lowered and our market jeopardized, and of taking the chances of having to hustle for new markets of whose conditions we know nothing, while the biscuit manufacturer holds his market secure with a duty ranging from 25 to 32½%.

When the sober opinion of the Canadian people at the polls is that free trade or reciprocity in natural products is in the best interests of the future of Canada then the bee-keepers will not be behind any other class to sacrifice their present good for the general good, but until such time comes it will require a good deal of argument to convince them that they have not a very real grievance against the present action of the government.

But because of our feeling with regard to the tariff it would be absurd to conclude that we have any personal animus towards the bee-keepers of the United States. The tariff is an instrument in the hands of the government to be used in the building up of the nation, even the present government subscribes to this, and so long as we have a tariff, bee-keepers can reasonably claim its assistance, as justly as any class in the community.

IV

Have you read Mr. Hurley's excellent address on co-operation in the February Journal. Evidently he doesn't believe in cheap honey.

V

At the last meeting of the O.B.K.A. one of the speakers paid an enthusiastic tribute to the value of having a capable partner in the business. From the approval with which it was received we have no doubt that many of our bee-keepers owe much of their success to this cause. It is the enthusiastic hope

of this department that many of these hitherto "silent partners" will make generous use of these columns. We hope that each and every one will consider herself not only a partner in the business at home, but also an active worker in this department. We shall look for letters from some of you for next month. Do not fail because this is a new venture, and we must show the men that we can make good.

BEE-KEEPING IN BRITISH COLUMBIA

There have been one or two remarks lately in the C.B.J. about bee-keeping in British Columbia. As I have only moved into this province a few months ago, my opinion perhaps is not very valuable. There is this, however, to be said: A bee-keeper in Victoria does not meet the same conditions as one on the Lower Fraser, and the conditions in the Okanagan and Kootenay districts differ from both. As far as I can learn, bee-keeping on a large commercial scale has never been tried, and reports as to the average yield per colony vary so much as to be practically useless. Throughout the Lower Fraser Valley, however, where my apiary is now situated, one is constantly coming across small apiaries containing just a few hives each. In most cases they receive scarcely any care, and, so far as I have seen, none of them are protected in winter. Some of the owners claim that they pay well, others say "There is nothing in bees." This appears to be a fair location, for white clover is everywhere.

WM. L. COUPER.

Hatzic, B.C.

[The concluding part of your statement would lead us to believe that you have described a splendid location for the practical and experienced bee-keeper. The very same has doubtless been said of Ontario in times past.—Ed.]

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HINTS ON FEEDING OUT-APIARIES

(By Henry D. McIntyre.)

The management of out-apiaries includes many problems with which ordinary bee-keepers working their bees entirely at home are rarely acquainted. Amongst these may be mentioned the feeding problem. Often the water must be fetched from a distance, and if he makes the syrup warm the apiarist must improvise some means of heating the water. Celerity and system are especially needful in out-apiaries. In past years I have used cold water with great

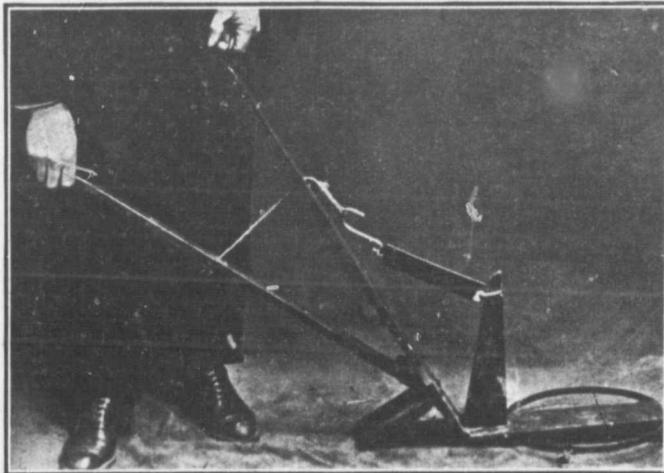


Fig. 1, Mr. McIntyre's Hive Weighing Scale.

success in making the syrup, and have not lost a single colony through poor wintering for three years. The method employed is as follows: Place 150 lbs. of sugar and 75 lbs. of cold water into the extractor and work the machine for about five minutes. After the syrup has settled and become clear, there will be formed at the bottom of the extractor a sediment of undissolved sugar about an inch in depth. Draw off the clear syrup and fill up again with water and sugar as before. Although one keeps this up all day long, the undissolved sugar at the

bottom of the extractor will not increase in depth. It would seem that the granules of the first batch do not disappear until the second mixing, and the hard granules of the second batch do not dissolve until the third mixing, and so on.

The feeders (Fig. 2) in use in my yards are of my own devising and construction. They are made from good pine lumber, one-half in. in thickness. All joints are covered with white lead before nailing, and afterwards the feeders are given two or three coats of paint, both inside and out. The painting on the outside is absolutely necessary, as is also

March, 1911

the floats (B.B.) all four, staples into the to permit of the bee when the feeder is cleaning up to the la. The feeders should b and length as the hi and length as the depth to hold all the require at one feedin

During the coming using a tank of su hold all the syrup r one yard. This tank a two-horse wagon agitator connected wi by means of a cra the hub. The water put into the tank bef the time I shall arriv the syrup will be rea

I have devised a w (Fig. 1) specially ad hives. This contrivan ed from wood and w quarter pounds, is 1 handy. By its aid I 100 colonies in 35 min ascertain the amount by each. The machin underneath the hive, sure on the handle en register the weight. chalked on the hives the yard. The feeder honey house are now cart, and commencing lift off the cover and side. A feeder is then placed over the brood bees cannot escape wh position over the passa will answer as a cover Any bees that are on against the hive will time I have all the f armed with a long h syphon-wise, into the proceed to fill the feed per amount of syrup.

that on the inside. If not painted on the inside the wood absorbs the syrup and swells, and afterwards, when dry, the pieces of which it is made will open out. Again, unpainted feeders, in consequence of the absorbed syrup, always prove a great attraction to robber bees whenever they are exposed, and become a veritable nuisance in a yard. A hundred of these feeders can be made at a cost of \$15. Mine have not leaked since they were constructed, and if they don't last me for twenty years longer I shall be disappointed. It is advisable to paint

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the floats (B.B.) all over, and to drive four staples into the under side of each, to permit of the bees passing underneath when the feeder is nearly emptied and cleaning up to the last particle of syrup. The feeders should be of the same width and length as the hives, and of sufficient depth to hold all the syrup a colony will require at one feeding.

During the coming season I shall be using a tank of sufficient capacity to hold all the syrup requisite to feed up one yard. This tank will be placed on a two-horse wagon and fitted with an agitator connected with the wagon wheel by means of a crank clamped on to the hub. The water and sugar will be put into the tank before I start, and by the time I shall arrive at the out-apiary the syrup will be ready for use.

I have devised a weighing contrivance (Fig. 1) specially adapted for use with hives. This contrivance, being constructed from wood and weighing five and a quarter pounds, is both portable and handy. By its aid I am able to weigh 100 colonies in 35 minutes, and can thus ascertain the amount of syrup required by each. The machine is simply slipped underneath the hive, and a gentle pressure on the handle enables the index to register the weight. The weights are chalked on the hives as I pass through the yard. The feeders taken from the honey house are now loaded on to the cart, and commencing at hive No. 1, I lift off the cover and lean it against the side. A feeder is then quickly but gently placed over the brood-nest, and as the bees cannot escape when slat (A) is in position over the passageway, the feeder will answer as a cover for the time being. Any bees that are on the cover leaning against the hive will have left by the time I have all the feeders on. Then, armed with a long hose-pipe, passing, syphon-wise, into the tank of syrup, I proceed to fill the feeders with the proper amount of syrup. The hose is car-

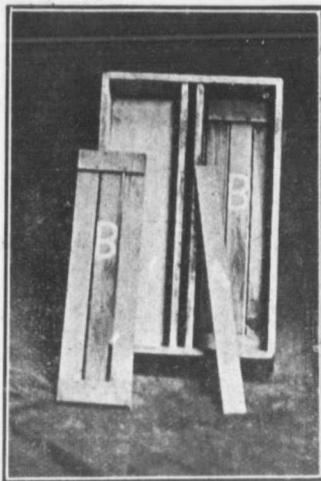
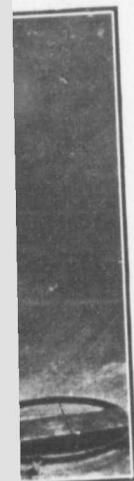


Fig. 2, Feeder.

ried in the right hand, whilst with the left I am able to pick up and replace the covers. When the bees have ceased flying for the day I commence again at hive No. 1, lift up the back end of the cover and remove slat (A) that covers the passageway, thus giving the bees access to the syrup. The whole apiary is gone through in the same manner, and by the morning most of the syrup is stored in the combs. Very few bees have left the hives; there has been absolutely no robbing, and everything is as peaceable as during a honey-flow.

With the system generally employed, the first colonies fed have their syrup taken down into the combs before the last ones get started, and robbing commences in earnest. After fall feeding the robbing will continue until cold weather sets in. The bees will look black, shiny and worn out, and not at all in condition to stand our long cold winter. Spring dwindling usually results.

When taking off the feeder in a day or two's time I commence as before at No. 1, leaving each feeder against the hive from which it is taken. By the time they are all removed the bees that



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were clinging to the first ones removed have left, and I may commence to gather them up with the hive cart.

Last September I had 2,200 lbs. of syrup in 102 feeders at one time, and not a bee had tasted it until I removed the slats in the evening.

This systematic method of procedure enables me to go through a 100-colony out-apiary in less than three hours. If any one has a better system I should like to become acquainted with it. I am able to hire a team for two or three trips to each out-apiary during the season at half the expense of feeding a horse for the whole year. I also use a motor bicycle (sorry to say I am the motor part) for the ordinary trips to and from, and enjoy the rides immensely. It is always ready, never gets stung, and requires less attention during the season than a horse would require in one day. I claim that my equipment causes the managing of out-apiaries to become a pleasure.

If you should prefer to feed from underneath the brood-chamber, this feeder works equally well. If an odd colony should require more than one feeder full of syrup, two feeders can be placed on at one time, either below or above the brood-nest. For stimulative purposes always place one underneath. By drawing the feeder back past the brood-chamber seven-eighths of an inch there will be a three-eighths-inch opening clear across the back of the feeder in which to pour the syrup. This opening can be covered with a strip of wood or the brood-chamber slid back each time, as you prefer.

Woodbridge, March 10, 1911.

WANTS TO SETTLE IN B. C.

Could you give me any information with respect to British Columbia as a good bee country? My intention is to start a bee, poultry and fruit farm, if the colony is a good one for bees, and there

is not an overcrowding in the bee line. I shall be glad, therefore, if you will give me information as to prospects, and whether honey can be disposed of at a fairly decent price. Is it possible to buy bees and appliances in the colony. I hold an expert's certificate of the B.B.K.A. I keep twenty stocks of bees here with good results. I want an outdoor occupation, being tired of business and am passionately fond of bees. I am also a good amateur gardener, joiner and understand farming as far as grazing goes. Your reply to the numerous questions will greatly oblige.

P. M. RALPH.

Jessamine Apiary,
Settle, Yorks, England.

[You will find all the information you ask for in the article "Aparian Possibilities of British Columbia," which appears in the present issue. We believe the country will prove suitable to your purpose. Shall be glad to hear from you again.—Ed.]

PRESIDENTIAL ADDRESS BRANT COUNTY CONVENTION.

Indexed

At the recent convention of the Brant County Bee-keepers' Association held in Brantford, the President, Mr. J. W. Clark, of Cainsville, opened the proceedings with the following address:

The Brant County Bee-keepers' Association welcome you here at their annual convention. We have met here to discuss mutually the best methods relating to the business in which we are engaged. The past season has on the whole been a good one for the bee-keeper. The demand for honey has been good, and altogether prices have been maintained. Yet they are not as high in comparison as many other products that are used in the same way. Fruits have ranged high, especially apples, this season.

Prices in food products are as a rule governed by the law of supply and de-

March, 1911

mand. The demand been keen, but price not advanced much. lowering our honey to sion men's hands, a Are they handling o tising same to our b

I believe that if v operatively, adverti open up new market able to realize more prices for our hone; of our province have, little in the way c goods. Few of us enough honey to bea tensive advertising, small fraction of a ce production in our p; long way towards ed as to the value of ho; people think honey lb., although they w per one pound box fo require sugar, jars a to keep till wanted. ther and will keep i undergoing any proce find it pays to adv why should not we?

We have seen whi have accomplished by a food product much handle than ours on a non-keeping qualities.

I fully believe we a opportunities before With the great Nor fast, are we letting th where they can get we not establish a Britain that would be to us? We must unite accomplish anything al send our honey out in trust it may not be together and co-operate in name.

in the bee line. e, if you will give prospects, and whesed of at a fairly ssible to buy bees colony. I hold an the B.B.K.A. I f bees here with an outdoor occu- business and am ees. I am also a r, joiner and un- ar as grazing goes. umerous questions

mand. The demand for good honey has been keen, but prices on the whole have not advanced much. Many of us are allowing our honey to get into the commission men's hands, and wholesale houses. Are they handling our goods and advertising same to our best interests?

I believe that if we were to unite co-operatively, advertise extensively and open up new markets, we should then be able to realize more uniform and better prices for our honey. The bee-keepers of our province have, on the whole, done little in the way of advertising their goods. Few of us individually have enough honey to bear the expense of extensive advertising, but by uniting, a small fraction of a cent per pound on the production in our province would go a long way towards educating the public as to the value of honey as a food. Many people think honey dear at 12½c. per lb., although they will pay 10c. to 12c. per one pound box for small fruits, which require sugar, jars and labor in canning to keep till wanted. Honey will go farther and will keep indefinitely without undergoing any process. Business men find it pays to advertise their goods; why should not we?

We have seen what the fruit men have accomplished by co-operation with a food product much more difficult to handle than ours on account of frost and non-keeping qualities.

I fully believe we are not alive to the opportunities before us as bee-keepers. With the great Northwest settling so fast, are we letting the new people know where they can get our products? Can we not establish a trade with Great Britain that would be very remunerative to us? We must unite if we are to accomplish anything along this line and send our honey out in large shipment. I trust it may not be long before we get together and co-operate in fact as well as in name.

MAKING INCREASE AND OBTAINING HONEY AT SAME TIME.

The following may be of interest to your correspondent, W. M. Spurr, page 49, February issue. I used plan with success last season. In the first place see that all colonies have abundance of stores, and every second day between fruit bloom and clover, either rncap, about a pound of honey, or feed in the comb the same weight of sugar syrup. When colonies are strong enough, add a second storey with drawn combs or full sheets of foundation, first taking a frame of brood above and replacing with full sheet of foundation or comb. Later when this second storey is well occupied place a third above a queen excluder. When the clover flow has been on a week and the foundation in the third storey has been drawn some, place this top storey on a stand and brush or shake the bees and queen at the entrance. Place a queen excluder over the lottom hive and another one with empty combs or full sheets of foundation on top, and over all the two hives of brood. In about ten days place the old hive body on top. The bees will now have queen cells completed in the two upper stories and all the brood will be capped. About three good colonies can be made out of the oldest brood, and in a week or less a couple more can be started with the brood in the second storey. All of the old field bees will return to the parent stand, but enough young bees will stay and these together with the hatching bees will make a good start for a colony. By this plan as much honey will be secured at the old stand, and if the old queen is a good one, two or three more frames of brood and young bees can be taken about July 20th. I have had colonies give me over 200 pounds surplus and four increase by the above plan.

J. A. McKINNON.

St. Eugene, Ont., March 7th, 1911.

M. RALPH.

England.

he information you le "Aparian Possi- lumbia," which ap- issue. We believe ve suitable to your ad to hear from you

ADDRESS BRANT CONVENTION.

vention of the Brant Association held in sident, Mr. J. W. opered the proceed- ng address: y Bee-keepers' Asso- here at their annual ve met here to dis- est methods relating hich we are engaged. on the whole been a bee-keeper. The de- s been good, and al- ve been maintained. as high in comparison lucts that are used in its have ranged high, his season. roducts are as a rule aw of supply and de-

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characteristics only in the higher alti-
tudes of her home mountains, the west-
ern spurs of the Julian Alps and Kara-
wanks, where, in the earliest spring (and
even in February), exposed to the biting
winds and stinging frosts of the glaciers,
she searches the highest peak after flow-
ers and blossoms that the weak rays of
the sun of this season have called from
the clefts and crevices of the barren
mountain sides. The unfavorable loca-
tion, the rarity of the nectar-bearing
blossoms, the long way of ascent and
descent in the teeth of inclement ele-
ments, have steeled her body, sharpened
her honey-finding instinct, and developed
the grim determination and undaunted
perseverance to get the nectar even from
plants, the blossoms of which refuse to
yield the same to other races of bees that
have been bred, and reared amidst more
comfortable physical environments.

The pure blooded Carniolan Alpine bees
alone are of value for breeding improve-
ments. The Alpine bee reared in Upper
Carniola, producing gray workers, is the
bee which is wanted by connoisseurs and
best breeders of fine stock.

It may here be said that in other parts
of Carniola than Upper Carniola pure-
blooded Carniolan bees are raised. In
Lower, and other parts of this province
are found isolated elevated valleys, sur-
rounded by high barren mountains where
the pure blood of the Carniolan bee re-
mains undefiled by any intermingling
with foreign blood. These bees in every
respect fully equal the strain raised in
Upper Carniola.

The immense prolificness of The Car-
niolan Alpine bee is instanced by Mr.
Gerstung, expert and writer on apicul-
ture, in the following words. "A small
swarm of Carniolan Alpine bees, received
on May 16, developed so rapidly that at
the end of June ten frames (40" x 25"
comb surface) were compactly filled with
brood and honey. The swarm gave a
virgin swarm weighing 6 pounds net--

from 35,000 to 40,000 bees. Adding to
this number say 10,000 bees that did not
leave with the swarm, taking into con-
sideration that at least three weeks
elapsed after the arrival of the bees be-
fore the first hatch reached the flying
stage, then we come to the conclusion
that in 20 days 52,000 bees were hatched
from eggs the queen had laid. We must
place the eggs in the brood cells at the
time when the swarming occurred at
about the same number. This gives us
the fact that during the period from May
16, until June 27, (day of swarming), the
queen laid 100,000 worker eggs—averag-
ing 2,500 daily. As in the first three
weeks, on account of the smallness of
the colony, the egg production could not
have been more than half this number,
the maximum daily egg production dur-
ing the later stages must have been not
less than 4,000."

Yes the Carniolan Alpine bees are un-
doubtedly the most prolific breeders,
passing easily through the most severe
winters and in the spring building up rap-
idly. Any child or woman can manipulate
them without fear of being stung, such
is their gentleness. They sting only in
self defence as the result of being roughly
handled. Further advantages they offer
to the bee-keeper are: They make very
little propolis, are exceptionally good
comb builders, and finish the cap and
combs very white. The good qualities
of the Carniolan bee, once known, will
make this race of bees the favorite among
all others. Let us here mention that for
queen rearing purposes, the Carniolan
Alpine bee cannot be surpassed. At the
time of swarming, 50 and more queen
cells in the colonies can be found.

It is no exaggeration if we here express
the conviction, that the bee of the future
will be a new and superior strain of bees,
whose chief attributes, industry, hardi-
ness, prolificness and gentleness, she will
have derived from the Carniolan Alpine
bee.

oses always select from those colonies production. During full combs everyting the honey, re colonies.

Carniolan bee de- A colony that after three half frames, ed or given up, or ng bees and brood f such a diminished in the spring is queen and is suf- warm by the time), it will become so y production will ison with any other

with the Carniolan on can be achieved n large hives, and ing space until four e the beginning of

Carniolan hives, the d.

Peasant Hive.
iginal peasant hive ns, in general use. box, about 2 feet t wide and 7 inches f the empty case is pounds) .

e contains always rames or comb sup- board on which the curely nailed on the ttom board, used in g board, is fastened the sideboards, and enever wanted. For re must be put up- d part down. The e entrance and the ce kept by ledges in easily taken away. in slanting position e.

The Carniolan hive is not sufficiently warm, when standing isolated, and therefore they are placed together in numbeds. Only the uppermost row is covered with blankets, sacks, etc. In the winter the hives are protected by covering the rear part of the pile with moss, dry leaves, etc.—(From the "Carniolan Gray-Banded Alpine Bee," issued by the Imperial Royal Agricultural Association of Carniola).

CO-OPERATION.

W. J. Brown.

Well, Mr. Editor, the last issue of the C.B.J. might properly be termed a co-operative issue, as that matter was discussed by three of your readers who were well qualified to take up that subject viz., Messrs. Couse, Moore and Pollock, whose articles I am sure have been read with much interest by all your readers. For myself I have very little to add to tht subject, as these gentlemen have so carefully pointed out the matter in all its phases, particularly Mr. Couse; he has left no stone unturned to show us the benefits to be derived from Co-operation in selling honey!

But, why not go somewhat further, and see if co-operation is not more needed to produce honey than to sell it? Why count the chickens before they are hatched? Why not first see what could be done by co-operation to get the honey to sell? It seems to me it would be far easier to get people interested in the production of honey than in the selling of it. If we have the goods we can get the market, as the one would naturally get the other.

Now, sir, some may pooh-pooh the idea of co-operation of production, and perhaps it cannot be done; but I think it can be done. Now, supposing that each local association would in some way select some suitable and central location, and each member of that local association

contribute a certain number of colonies, and a small sum of money to make and equip a first-class apiary (or more if deemed advisable), and put some smart, husky bee-keeper to take charge and manage it. I feel satisfied you would find many rallying around the standard of production. Yes there are many men and women who like bees and honey who are unable to give the time or attention required in an apiary and who would willingly contribute towards running an apiary along these lines, and in due course of time would give up the keeping of bees themselves and turn all over to the co-operation apiary, and in this way your co-operation scheme would come in O.K. This is only a suggestion and if it only brings out a discussion, which may result in some good, I will consider myself amply repaid for making the suggestion. The Department of Agriculture of Ontario has spent \$5,129.39, chiefly for foul brood inspectors, and their travelling expenses during the year 1910. Why not spend some of this money in a co-operative apiary?

CO-OPERATION — CALIFORNIA HONEY.

William Brunne.

As I have not written for a long time, and there are so many irons in the bee-keepers fraternity fire, which should be handled more or less in future, I shall take up the pen once more. The only thing I am afraid of is to worry the dear Editor to death with my scribbling.

My first subject is co-operation, second, co-operation, and third, co-operation.

Relating to an article in the C. B. J. of November, 1910, about the California Fruit Growers Exchange, I wish to give all the brother bee-keepers my opinion. In the winter 1907-1908, when I was in California, I saw many places and spoke to a great number of rangers (fruit rangers), right in the heart of the best

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orange belt, as Santa Barbaro, Los Angeles, Redlands, Ontario, Pomana, Santa Ana, and all along the Southern P.R.R., and the Santa Fe. I found them well pleased with the co-operative system; not one I found would go back to the competitive packing houses again. They are getting higher prices and better markets for their fruits. I endorse every word the Editor said in his article, pages 326-27.

Now, brother bee-keepers get a move on and help the co-operative movement; it pays!

After writing this I read the articles of W. Moore and F. L. Pollock about co-operation, in C. B. J. of February. Mr. W. Moore says: "Should the members of the association be obliged to sell their honey only through the association; I would say, decidedly no!"

I agree fully with Mr. Moore in this respect. The rules of the exchange (or what ever name may be given it), must not compel a member to spoil his local trade; that is individual work. The home market should never be neglected, for it will dispose of almost half of our output. But on the other hand I would state that I produce from four to six tons of No. 1 honey yearly. I have built up a very fair home market, and as yet have never kept any over to the next year; sold all before the new honey came in. Now, if I became a member of the honey exchange and would be compelled to sell only to same, I would certainly say: "Thank you, gentlemen!" But here is the key, leave each member free to supply his home market, and sell to the exchange what he can or will not bother to handle any longer. But by leaving a member free to keep up his home market, each member must pledge himself to respect and be governed by the prices of the exchange. No one should dare to under-sell the association. I think that most of the smaller bee-keepers will benefit by becoming members of the ex-

change to obtain better prices, for I fully believe that most of the smaller bee-keepers are the very ones that need co-operation for they rush off the small crops of honey for half their worth. They under-sell from two to four cents a pound and spoil the market for others.

Now, I want to give Brother T. Balmer's spring work ball a kick, to keep it rolling. As he expressed himself in his able article in C.B.J., January, Page 15. My system of spring feeding is much the same as his, with only a little difference; and to give beginners or those who do not control the honey-making engine yet (as Mr. Hand puts it), to a success, I shall endeavor to explain my last year's experiment in spring management.

We all remember with a frown the severe cold and wet weather we had last spring which threatened to kill off our pets by wholesale. In the first half of April I was tempted to take the bees out of cellar, two weeks earlier than usual (about the 10th of April), but I paid for it. The day after they were put out, after they had a nice cleansing flight, the weather changed to very cold, so that I could not examine them for stores. I lost many eager bees going out after something they did not find; got chilled, and the most of them did not return. I shaded the entrance then to save what was left. I then started to feed all those the same way as Mr. Balmer did, which I always have done successfully. Those that seemed light in weight, I took chances with when the thermometer showed from 55 to 70°, and I succeeded in bringing out of 163 colonies, 140 to a fairly good working condition. Fruit bloom and dandelion just coming in, a few warm days and everything booming, I sat down to breathe once more. But alas! Men think, but God rules. Another lasting cold spell, and the bees could not go out to make use of the food that was there for them, for everything in blossom was cut black by the heavy frosts; but

I was not afraid—t enough to hold the morning I went thru found at the entrance and other brood bro most paralyzed me, ment. I am not knowing that God v that help themselves Tom, Bill and Jack had 1½ barrels of su bee-keeper should al have either sugar or building up) and b more (best granulated the whole thing int fairly thin; took a combs in a wash tub up. By 2 o'clock p.m proceed with feeding to help. My son i hive, took a quick v ment, took out one outside of cluster (n ter), replaced with needed, which were l lady helpers; closed and no harm was don saved every hive, e were found too weak duced by uniting to in work. It never colonies when the h

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About bee-keeping Canada. As I ment was in California fo the winter, you may ited as many apiarie Well, most every i hives, but there are 1 Some are are doing v only keep them for tl about foul brood! If

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I was not afraid—thought they gained enough to hold their own. But one morning I went through the yard and found at the entrance of each hive, drone and other brood brought out. That almost paralyzed me, but only for a moment. I am not easily discouraged, knowing that God will help those only that help themselves. I started every Tom, Bill and Jack to make syrup. I had 1½ barrels of sugar on hand (a good bee-keeper should always be ready and have either sugar or honey on hand for building up) and bought 300 pounds more (best granulated always), and made the whole thing into 1,400 lbs syrup, fairly thin; took as many extracting combs in a wash tub and had filled them up. By 2 o'clock p.m. we were ready to proceed with feeding. There were four to help. My son and I opened each hive, took a quick view of the requirement, took out one or two empty combs, outside of cluster (never disturbed cluster), replaced with well filled combs as needed, which were handed to us by our lady helpers; closed up again quickly, and no harm was done to the brood. We saved every hive, except some which were found too weak or queenless. I reduced by uniting to 135 colonies to fall in work. It never pays to keep weak colonies when the honey flow is on.

Now, my readers can pass their own opinion, whether my system has been a good one or not, when I tell them that these 135 colonies gave me 11,300 pounds of the very best honey and increased to 183 colonies.

About bee-keeping in California versus Canada. As I mentioned before that I was in California for seven months in the winter, you may be sure that I visited as many apiaries, as I could find. Well, most every farmer has a few hives, but there are many large apiaries. Some are are doing very well but others only keep them for the fun of it. Talk about foul brood! If you never saw any

and don't know where to find any, just go out there and you can smell foul brood a mile away.

In the Santa Ana mountains I met Mr. Pleasant, who follows Mr. W. McEvoy's system. A foul brood inspector visited his apiary several times and found it very fairly kept, but five miles from him I saw two yards stinking with foul brood.

I ate three different kinds of honey—sage, orange, and some with no name to it. Sage, which bees can gather in the mountains, with no access to pepper and other useless flowers, which are plentiful, is a very fair clear honey. Orange, if taken in March and April, free from pepper trees, is not clear, but has a fair aroma. The unnamed third stuff, gathered from all creation is enough to kill a horse, if it is foolish enough to take it. Canadian bee-keepers, if you ever want to produce and eat good honey, stay in Canada. But the nice climate, fruits and sunshine are worth while experiencing.

I took with me one five-pound pail of my own basswood, and one five-pound pail of pure dandelion, which you all know is strong and dark. I had about half of the honey left and gave several people a taste of it, and what do you think they said? "What part of heaven have you come from, where such a honey as that is produced?" My proud answer was: "Canada."

Retail prices are from 5 to 6 cents a pound, and California produces an enormous amount of honey at these low prices, and if this really were carried out it will certainly hurt our honey industry.

ONTARIO AGRICULTURAL AND EXPERIMENTAL UNION.

Co-operative Experiment in Agriculture.

The members of the Ontario Agricultural and Experimental Union are pleased

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to state that for 1911 they are prepared to add further experiments to the work done by the Department of Apiculture. The experiment sent out last year was on the Prevention of Natural Swarming in the production of Extracted Honey. For 1911 the same experiment will be repeated, also experiment No. 2, on the prevention of Natural Swarming in the Production of Comb Honey.

Each person in Ontario who wishes to join in this work may choose either of these experiments for 1911. Fill out the form of application which may be obtained from the undersigned and return same to the Director of the Co-operative Experiments in Apiculture as soon as possible. A sheet containing the instructions for the experiment, and the blank form on which to report the results of the work, will be sent to each experimenter on receipt of application.

The committee on Apiculture desires to ask that each experimenter will follow Instructions very particularly, and that he will be very careful and accurate in his work, and forward to the Director a complete Report of the results obtained from the Experiment, as soon as possible after the close of the season.

MORLEY PETTIT,
Agricultural College,
Guelph, Ont.

**APIARIAN POSSIBILITIES OF
BRITISH COLUMBIA.**

Indexed

F. Dundas Todd.

In the Eastern Provinces of Canada, especially in Ontario, there are many men who depend on bee-keeping entirely as a means of livelihood, but, so far as is known, there is no such development of the industry in British Columbia. Thus far the largest number of hives reported as being operated by one individual is fifty, but anyone confining his energies to bee-keeping alone generally considers 300 hives as the minimum number on which to spend

his efforts, these being usually scattered over a considerable territory. On the other hand, it has been learned that bee-keeping as a side issue is much more common than was anticipated; in fact, in the dairying and fruit raising districts a small apiary would seem to be a necessary feature of almost every ranch. In some localities from which the information is rather complete there is seemingly one keeper of bees to every twenty people. This fact is rather valuable, because it shows that it is unnecessary for the home-seeker to bring with him to British Columbia his colonies of bees from the Eastern Provinces. Indeed, the Department of Agriculture earnestly advises that neither bees, empty used hives, nor used bee appliances of any kind be brought in, so as to prevent, if possible, the introduction of bee diseases, from which the province is at present apparently free. Of course, there is no objection to the importation of queens from reputable breeders.

In sixty cases there was learned the number of colonies owned, the total being 667, suggesting an average of eleven hives to an apiary. This is a much higher figure than was anticipated.

Source of Honey.

To those not familiar with bee-keeping terms, it is perhaps advisable to explain that the phrase "honey-flow" means that season of the year when the bees gather more nectar than is necessary for the daily need of the hive, and they are thus able to store up surplus honey for winter consumption. As from 25 to 30 pounds are usually sufficient to carry a colony over the winter, all above that amount may be taken by the bee-keeper. Since his returns are immediately concerned with the honey-flow, it is important for him to know its source, its real source, for not infrequently he assumes that it comes from a well-known honey-plant, when as a matter of fact, it may be actually obtained from one he

never suspected. For clover is a famous honey-crop in most regions can be obtained a good average yield in some and so even experienced beekeepers are tempted to assume that the clover in quantity shows a honey region. This does not follow, for both seasons of droughts or cool summers retard the secretion of honey. There may be a good honey-crop from a very different source at the southern end of Vancouver Island appear to be a good example of a plentiful in many portions of the province visited by the beekeeper. The snowberry bush is one of the best with blossoms at the time of bloom, and a good supply of honey is secured. It is contemplated an extension of bee-culture should be carried on a very large scale until it is certainly the actual source of honey-flow and how extensive it is found within a radius of half of the apiary.

White Clover the Chief

In every report that has been received from the Department, white clover is credited as the main source of honey. One from the Island of Vancouver also includes Fireweed or willow-bush (*Salix angustifolia*) is reported from Westminister and Rossland. In other places it is said to be a better place it is said to be a better place. The fruit-blossoms of the clover as will be seen later in the reports with yielding good returns. reports sage and Vernon sources. Cranbrook in British Columbia clover, alfalfa, fireweed and alfalfa. In West Kootenay generally the only source credited is alfalfa and wild mustard. alfalfa and wild mustard honey crop.

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never suspected. For instance, white clover is a famous honey-plant that in most regions can be depended upon for a good average yield in a series of years, and so even experienced bee-keepers are tempted to assume that the presence of clover in quantity should indicate a good honey region. This does not necessarily follow, for both summer and fall droughts or cool summer evenings may retard the secretion of nectar; yet there may be a good honey-flow in such a region from a very different source. The southern end of Vancouver Island would appear to be a good example. Clover is plentiful in many portions, but is sparingly visited by the bees. Some years the snowberry bush is generally covered with blossoms at the time clover is in bloom, and a good supply of very delicious honey is secured. Therefore anyone contemplating an extensive investment in bee-culture should not venture on a very large scale until he knows for a certainty the actual source of the honey-flow and how extensively it is to be found within a radius of a mile and a half of the apiary.

White Clover the Chief Source of Nectar.

In every report that has reached the Department, white clover is given the credit as the main source of surplus honey. One from the south end of Vancouver Island also includes snowberry. Fireweed or willow-herb (*Epilobium angustifolium*) is reported from New Westminster and Rossland; at the latter place it is said to always yield well. The fruit-blossoms of the Okanagan Valley, as will be seen later on, are credited with yielding good returns. Summerland reports sage and Vernon alfalfa as honey sources. Cranbrook is favored with clover, alfalfa, fireweed and sweet clover. In West Kootenay generally clover is the only source credited, but one region includes raspberry. In Yale District alfalfa and wild mustard add to the honey crop.

Form in Which the Crop is Produced.

As the nights in British Columbia are cool even in summer, it is not a favorable region for the production of section honey—that is, honey in the comb—and all the reports confirm this. A comparison of the selling price of the two forms in the grocery stores shows also that extracted honey is the more profitable to produce.

Quantity of Honey Got from Each Hive.

It is not alone the character of the region that influences the size of the crop; the skill of the bee-keeper plays no unimportant part. It is a truism in bee-keeping that any one can get a good harvest in a good year, but it requires skill to get a fair crop in a poor season. Notwithstanding all this, there is surprising agreement when one groups the data from the different regions. On striking an average from all the reports from each locality, the Okanagan Valley is the first with an average maximum of 105 sections a hive, and an average minimum of 38. The highest return is 150, the lowest 24 sections. When run for extracted honey, the average maximum is 141 pounds; the average minimum 52 pounds. Greatest yield for a hive, 200 pounds; smallest, 30 pounds. Vernon and Sunderland show the best figures.

Around New Westminster the average yield in section honey is given as 42; the highest quoted is 60; the lowest is 20. In the extracted form the average maximum is 82 pounds; highest, 200 pounds; lowest, 12 pounds. The average minimum is 23 pounds. In several instances attention is drawn to the fact that the character of the ground in the immediate vicinity is very important, as bottom lands that are sometimes under water give the best yields. The region above the Delta would appear more favorable. Building up in the spring is slow, on account of cool weather. One rancher in Chilliwack who has kept bees

for fourteen years says: "We keep bees now only to make certain the pollination of the fruit. Do not advise any one to attempt to make a living in this region from bees, as they rarely do more than get sufficient stores to winter on, and often not that much. Our nights are too cool for the secretion of nectar."

In the Kootenays, bee-keeping would appear to be in its infancy. Only one report has been received from East Kootenay, the writer being a resident of Cranbrook. He has secured as high as 100 pounds of extracted honey a hive in a good season, and altogether seems satisfied with the returns.

In West Kootenay, Revelstoke reports 40 to 56 sections per hive; Proctor, a little more; while a Kalso bee-keeper with ten years' experience gets 50 sections, adding that his source is entirely from the clover in town, there being no nectar-bearing plants in the vicinity. One apiarist in Revelstoke believes there is sufficient pasturage for 200 colonies in the neighborhood.

On Vancouver Island bee-keeping has been carried on for about thirty years, and at present there is an almost continuous chain of hives from Vancouver to Comox. The general climatic conditions are rather similar throughout the entire line, but the advent of the spring blossoms is much later by a few weeks in Nanaimo than in the south end of the Island. There is, however, great unanimity in the statement of returns, which, briefly put, is 25 sections per hive, or 40 pounds of extracted honey. There is also general agreement that a few hives make an interesting sideline that yields a moderate profit, but there is no present possibility of bee-keeping on an extensive scale with any hope of financial success. The climatic conditions are very similar to those described as existing in the New Westminster region; cool weather in spring, and

cool nights in June, this month being the season of the honey-flow.

From the Fraser River, in Yale District, two reports were received. At Lytton the principal source is alfalfa, the yield being 50 pounds extracted a hive. At Agassiz the source is clover and fruit blossoms, giving 25 pounds surplus in a good season.

Speaking broadly, the dry-belt region of the province is far ahead of the coast districts for the purpose of bee-keeping.

Seasonal Developments.

In the southern part of Vancouver Island the bees have occasional flights in January and February, but it is not until about the 20th of the latter month that they fly freely, and by that time the willow is in bloom, so that pollen is often carried in during the last week. Nanaimo reports free flight early in March, but Comox is later by a few weeks. Willow is plentiful in all regions.

From the Delta up to Mission free flight is usual in the first week of March. At Revelstoke it is after the middle of the month. All along the Fraser River willow is reported as plentiful.

In the Okanagan and other dry-belt regions the date of free flight varies from the 1st to the 15th of March. At Vernon the first pollen is carried in about March 12th. However, from several districts of the arid region there comes a complaint of the lack of pollen in the spring, so that it will be probably advisable to provide a substitute in the form of pea-flour, according to the methods described in a later chapter on feeding. In contrast, Rossland reports a plentiful supply of pollen.

In most regions dandelions and fruit-blossoms follow the willow; in fact, one rancher wants to know how to get rid of the first named, a rather unusual request from a bee-keeper. The writer would like to oblige with a remedy, but though he wrestled with the problem for

several years, and reports, the only conclusion was this: the more to the lawn, the quicker a dandelion paradise child, he learned to display of yellow; and welcomed the blossoms.

Clover and snow about Victoria, about not until about the that the bees begin to. As fruit blossoms are week in May, there a dearth of nectar but pollen is more to at this time that most lost unless sugar syrup brood-raising in the colonies may be started of nectar does start. would seem to obtain part of the Fraser River gated fruit regions that break in the flow brood-raising is continued starts.

On Vancouver Island is over by the middle conditions prevail in the District.

In the Okanagan area would appear that so from the fruit-bloom the clover ends with.

No fall honey-flowing from the Okanagan sage-brush in August

Honey.

Honey-dew, which is considered to be an excreted by certain scale insects, very plentiful on Vancouver is freely gathered by of nectar. It is collected winter stores unless fortunate enough to flight in December and very dark in color and

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the lawn, the quicker it developed into
a dandelion paradise. Therefore, like a
child, he learned to love the glorious
display of yellow; as a bee-keeper, he
welcomed the blossoms.

Clover and snowberry bloom round
about Victoria about June 1st, but it is
not until about the 20th of the month
that the bees begin to get surplus honey.
As fruit blooms are over about the last
week in May, there is frequently quite
a dearth of nectar for several weeks,
but pollen is more than plentiful. It is
at this time that many a honey-flow is
lost unless sugar syrup is fed to keep up
brood-raising in the hives, so that the
colonies may be strong when the flow
of nectar does start. Similar conditions
would seem to obtain along the lower
part of the Fraser River. In the irri-
gated fruit regions there is apparently no
break in the flow of nectar, so that
brood-raising is continuous after it once
starts.

On Vancouver Island the honey flow
is over by the middle of July. Like con-
ditions prevail in the New Westminster
District.

In the Okanagan and similar regions it
would appear that surplus honey is got
from the fruit-blooms. The flow from
the clover ends with July.

No fall honey-flow is reported except-
ing from the Okanagan, the source being
sage-brush in August and September.

Honey-Dew.

Honey-dew, which is usually consid-
ered to be an excretion from aphids and
certain scale insects, is in some years
very plentiful on Vancouver Island, and
is freely gathered by bees in the absence
of nectar. It is considered very poor
winter stores unless the bees are for-
tunate enough to have an occasional
flight in December and January. It is
very dark in color and when mixed with

honey in the supers impairs both its
color and its flavor. It occurs also some
years along the lower part of the Fraser
River, but in the dry belt it is practi-
cally unknown. It would appear to be
most plentiful in the fir-tree regions.

Fall Feeding.

It is generally necessary to feed sugar
syrup in autumn on the south part of
Vancouver Island, but from Nanaimo to
Comox feeding is generally unnecessary,
and the same is true of all points on the
mainland.

Wintering.

The general custom appears to be to
winter the hives on the summer stands
all over the province. On Vancouver
Island and the lower part of the Fraser
River cellar wintering is impossible as
there are occasional warm days
throughout the winter when the bees
fly freely. Many bee-keepers in these
districts make no difference between
winter and summer coverings, but oth-
ers endeavor to keep the hives dry by
wrapping with tar-paper or by placing
in an open-front shed. In the dry belt
a few favor cellar wintering, but the ma-
jority consider the average cellar as too
damp, and so pack the hives, with
shavings, leaves, or similar material held
in position by a water-tight casing, such
as a box. Those with double-walled
hives make no special preparations at all.

Hive Preferred.

The Langstroth hive is practically the
only one in use. There is equal favor
shown between the eight-frame and ten-
frame hive; in fact, where both sizes
are tried, any comment is to the effect
that there is practically no difference in
the results.

Races of Bees.

A few have blacks, all others Italians.
There is a little warmth occasionally
shown on this rather interesting and
controversial subject. The blacks have
their defenders, but many of those who
favor the others want to see the dark

bees wiped out, one enthusiast going so far as to wish the Provincial Parliament to pass an act ordering the decapitation of every black queen within its jurisdiction, in order to keep the Italian stock pure. Hybrids seemingly have no friends, on account of their vicious disposition.

Market Prices of Honey.

No attempt has been made to get quotations of the market prices of honey, but one may safely presume that those ruling in Victoria and Vancouver are at least indicative of the rest of the province. Here, as elsewhere, the stores prefer a package of such bulk that the price charged will be represented by a coin such as 25c., \$1, or even two coins of the higher values. Such prices as 20c., 65c., and \$1.15, are not popular, either with the trade or the customer. On the other hand, one must of necessity pack the honey in some vessel that is a staple commodity on the market; so it calls for quite a little consideration on the part of the producer to harmonize as far as possible the conditions. In Victoria we find the containers in common use are half-pint, quart and two-quart fruit-jars, United States measures. When filled with water, the contents weigh respectively $\frac{1}{2}$ lb., 1 lb., and 2 lbs. But honey is nearly one-half heavier than an equal quantity of water; therefore, the jars will hold almost $\frac{3}{4}$ lb., $1\frac{1}{2}$ lbs., and 3 lbs of the product of the hive. Larger quantities are sold in tins, the usual sizes being 5 lbs. and 10 lbs.

The retail prices for the three smaller sizes are 25c., 85c. and \$1.50. The grocer usually pays for them 20c., 67c., and \$1.22; that is to say, he gets a discount of 20 per cent. on the retail price. Probably two-thirds of the sales will be on the 25c. size.

The half-pint jars in gross lots cost 5.2c. each; the quarts in dozen lots, 12.5; the two-quarts in dozen lots 17c.

A little figuring will show that when the bee-keeper sells to the grocer he will get at the rate of 19.7c. a pound for the honey in the smallest jar, 18.5c. for that in the quart jar, and 17c. in the two-quart jar. When the apiarist is located near a city he will generally have no difficulty in selling all his product direct to the consumer at the full retail price, thus getting 5c. a pound more.

Comb honey usually retails at 25c. a section; price to the grocer, 20c. The average section contains 14 czs. of honey, so the bee-keeper is getting at the rate of 23c. a pound. This looks better returns than is got from extracted honey, but we must deduct cost of section and foundation starter, and then the two will come rather close together. Then when we consider that it is generally estimated that a colony of bees will produce in comb honey only two-thirds what it will yield in extracted, we see at once that in British Columbia extracted honey is the more profitable form of honey production. We have already learned that on account of the cool nights the bees make a rather poor showing when working for comb honey.

From Dominion statistics we learn that during the year 1909 there was imported through the ports of Vancouver and Victoria a grand total of 81,431 lbs. of honey. These figures indicate a demand in the province it will take a long time for the bee-keepers to supply.—From Bulletin No. 30, issued by B. C. Department of Agriculture.

A MANITOBA BEEKEEPERS' EARLY Indexed EXPERIENCES.

When a dear old friend in the year '03 said: "You ought to keep bees." I replied, "Why not say rattlesnakes or any other deadly thing." "Pooh, Pooh," he said, and there the matter dropped. Shortly after his son placed a hive of

bees under a tree in the block at entrance a statute, whilst (tigers I called them) head. For a few days side of the quarter so noticed that they did not ing for me, after a approach within ten the trunk of the friendly shade they re that bees did not "sh had always imagined. dwell on the spell th tures cast over me f the pleasure I have from standing over their industry. We g so they soon swarmed day. What was I to seen a swarm of bees sweet, besides I had I jumped into a bugg friend and saw the fi taken. How proud I colonies of bees that having left the neighb fear and trembling I netting over the entra in the cellar. Five m them out—one dead—t month later, my friend and for the first time, of a hive. My bees said; the parent colon cated and the old que had died. On the mor to my friend's, who p a nucleus. Oh, how th next day! A subsequ apiary of 150 colonies attack of bee fever. I bee-book, subscribed f and commenced the stud My new queen soon fill bees and brood. I gav hive on top and they more supers were put on August 5th she

I show that when to the grocer he of 19.7c. a pound smallest jar, 18.5c. jar, and 17c. in When the apiarist he will generally selling all his pro-consumer at the full setting 5c. a pound

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BEEKEEPERS' EARLY EXPERIENCES.

friend in the year '03 to keep bees." I re- ay rattlesnakes or any g." "Pooh, Pooh," he the matter dropped. son placed a hive of

bees under a tree in my garden, removed the block at entrance and then stood like a statue, whilst the infuriated bees (tigers I called them) circled round his head. For a few days I kept to my own side of the quarter section, but as I noticed that they did not seem to be looking for me, after a time I ventured to approach within ten feet, hiding behind the trunk of the tree under whose friendly shade they rested. I discovered that bees did not "shoot on sight," as I had always imagined. It is needless to dwell on the spell that these little creatures cast over me from that hour, or the pleasure I have ever since derived from standing over a hive watching their industry. We gave them no super so they soon swarmed—of course on Sunday. What was I to do? I had never seen a swarm of bees before; life was sweet, besides I had a wife and family. I jumped into a buggy and fetched my friend and saw the first swarm of bees taken. How proud I was of those two colonies of bees that fall. My friend having left the neighborhood, with great fear and trembling I nailed a piece of netting over the entrance and put them in the cellar. Five months later I took them out—one dead—the other alive. A month later, my friend came to see me, and for the first time, I saw the inside of a hive. My bees were queenless he said; the parent colony had been suffocated and the old queen in the swarm had died. On the morrow I drove over to my friend's, who presented me with a nucleus. Oh, how those bees did work next day! A subsequent visit to an apiary of 150 colonies resulted in a bad attack of bee fever. I bought a small bee-book, subscribed for a bee journal and commenced the study of bee culture. My new queen soon filled the body with bees and brood. I gave them the other hive on top and they filled that. Two more supers were put on, but too late, for on August 5th she threw off an en-

ormous (to me), swarm, which I took, to my great surprise, without being injured. The swarm started out to make a record. Goldenrod was in full bloom, and on the 8th day they commenced work in the super after filling the body with honey and brood. That fall I extracted 28 half gallon Jem jars, leaving 4 full combs of hoeny as a reserve. I began now to figure how much honey I should have when I had 100 hives at the rate of 160-lbs. per hive. I invested in more bee books, subscribed to another bee journal, and started out to get that 100 hives as quickly as possible. That fall I did not put netting over the entrance, (experientia docet), but placed two very full and heavy hives in the cellar. During that winter I read bees, talked bees and dreamed bees. Bought six beautiful hives in K.D. condition from a Brantford firm, and began to put them together. This brought on a serious relapse of the fever. I must buy bees. It was too slow raising them by natural increase, and I wanted enough to keep me busy all summer, putting on supers and busy all winter putting them together. My dear partner (I have none now), suggested caution, so I decided to run for increase instead of honey. In the spring I took out two very strong colonies, and began to handle frames and call it manipulating. I paid a flying visit to my friend for the purpose of consulting him as to clipped queens, and the way to do it, and also finding out what he thought of shook swarms, but to my enquiries he replied, "Bosh." I quoted Doolittle, Miller and other immortals. I remembered he was getting a little old-fashioned in other things. I returned home determined to clip queens, "shook" swarms and purchase a breeding queen of the non-swarmling variety, from which I decided I could raise better queens than I had at present. Next morning, armed with scissors I sallied forth to clip those two queens. I sat with my

back to the sun, took out a comb, looked at the front side of the next one before looking at the one in my hand and so on to the last; then put them back in the same order. No queen, however, did I see. Every bee seemed to be playing hunt the queen. They raced across the comb and fell in showers on to the ground, and I then learned why you are told to tuck your pants in your socks whilst working with bees. I closed the hive and left them till after dinner, when I again returned to the attack. I lifted out the combs as before, but with the same result, and on looking into the hive found a ball of bees the size of a small egg, which on examination proved to be a balled queen. I poured some thin syrup over them, but too late. Two day later the bees started queen-cells in all directions. Needless to say I did not clip queens that year. Soon the swarming season came, and the other hive was boiling over with bees, so I decided to "shook" a swarm as I did not have time to watch them. I don't know whether I shook any energy into the workers, but I did succeed in "shooking" the spark of energy out of the embryo queens in the cells with the result that I had not much honey, but obtained some very cheap and valuable experience. I also felt that I had been a little "fresh" and must go slowly, but possessed more determination than ever to become a bee-keeper worthy of the name. The following year I started with four colonies in fair condition, experimented less, and had consequently more honey. That season I had great difficulty in getting bees into supers, and accidentally fell into a system which I have since read is the method of one of Canada's leading bee-keepers. It consists of taking out the back comb, generally containing honey and inserting in the centre a frame of foundation. As soon as it is drawn out and the queen commences to lay, I take it and put it

up in super and return the original comb to hive as before. Finding this worked alright, I decided to use supers same size as brood nest and to lift combs as soon as safe and desirable. That fall I had over 300 lbs. of honey, and had increased to nine colonies. During the following winter I was much occupied with the question as to whether I knew enough to justify buying out a neighbor who owned 40 colonies, but who let them run themselves and consequently got little honey. Before spring I had decided to do so, provided they could be bought reasonably. In April I bought bees and fixtures, but found that they had dwindled down to 25 colonies, which with my 9, made 34 spring count. As I had lots of empty comb I expected but few swarms, but to my surprise over 20 swarms issued during June and July. I hived 17 and then decided I had enough, and returned later ones. My returns that fall were disappointing, amounting only to about 1,300 lbs. It now became a problem how I was going to winter the bees. My cellar, a small earth one, containing vegetables, etc., was too small, so I enlarged it, and put them in; and by leaving cellar door leading into the house open at nights, I brought them through, alive and strong. I might say I have not yet lost one colony by bad wintering, since my experience with the wire netting, although I find about four per cent. of the colonies queenless in spring. After last year's experience "swarm control" became a real thing to me. I wanted honey and only increase from approved colonies. I had found out that many of my colonies were useless as far as honey gathering was concerned. I studied systems with a view of finding something that would suit my requirements and locality, and finally decided upon the following modification of various systems: "Clipped queens," raising of two combs of brood to super as soon as colony is strong

enough, and weather
specification of combs ev
struction of cells, (if
time, take brood a
empty comb or fou
brod to some strong
one with queen of cur
This system gave me
year; 3,000 lbs, from
count, 60 colonies i
though rather too w
best.

Wishing the C.B.J
and the compliments

IMPROVEMENT OF BEE

Indexed
I am writing to so
whose names I have se
thousand secured from
the country, and from
I receive, I shall de
me to spend \$1,500 to
re-queen my apiaries.

All of the best quee
as the best stock bree
tomologists, agree that
much influence on the
mother has, but the
the drone bee is so gr
ers hesitate about pay
necessary to do so.
to think it will pay, b
opinion of my fellow
making a decision.

My plan will be to l
queens raised and sel
queen breeders in the
mate them, in my ow
raised from the best
that I can buy that
age of four or five ye
on the drone side, a
shall mate them by tl
in the American Bee
1910.

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 ending this worked
 use supers same,
 d to lift combs as
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 ided they could be
 In April I bought
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 my surprise over 20
 g June and July. I
 ecided I had enough,
 ones. My returns
 ppointing, amounting
 lbs. It row became
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 les, etc., was too
 it, and put them in;
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 ny of my colonies were
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 something that would
 ents and locality, and
 on the following modi-
 us systems: "Clipped
 of two combs of brood
 on as colony is strong

enough, and weather warm enough; in-
 spection of combs every seven days; de-
 struction of cells, (if cells started second
 time, take brood away, replace with
 empty comb or foundation and give
 brood to some strong colony, preferably
 one with queen of current year's raising).
 This system gave me good results last
 year; 3,000 lbs, from 50 colonies, spring
 count, 60 colonies in the cellar, and
 though rather too warm, hope for the
 best.

Wishing the C.B.J. continued success
 and the compliments of season.

MANITOBA.

IMPROVEMENT OF THE HONEY BEE.

Indexed

I am writing to some 200 bee-keepers
 whose names I have selected from several
 thousand secured from different parts of
 the country, and from the replies which
 I receive, I shall decide if it will pay
 me to spend \$1,500 to get 600 queens to
 re-queen my apiaries.

All of the best queen breeders, as well
 as the best stock breeders and noted en-
 tomologists, agree that the father has as
 much influence on the off-spring as the
 mother has, but the cost of controlling
 the drone bee is so great that bee-keep-
 ers hesitate about paying out the money
 necessary to do so. I am inclined to
 think it will pay, but wish to get the
 opinion of my fellow bee-keepers before
 making a decision.

My plan will be to buy the best virgin
 queens raised and selected by the best
 queen breeders in the United States and
 mate them, in my own yard, to drones
 raised from the best breeding queens
 that I can buy that have lived to the
 age of four or five years, thus securing,
 on the drone side, a long lived bee. I
 shall mate them by the plan mentioned
 in the American Bee Journal of June,
 1910.

As stated above the cost of securing
 the best virgins from well-known breed-
 ers, preparing the yard for mating, buy-
 ing the best breeding queens from which
 to raise drones, introducing and mating
 the virgins, keeping the records, etc., will
 be at least, \$1,500, and I will need 600
 queens, making an average of \$2.50 each.

Now if you will kindly inform me whe-
 ther you think the plan will pay or not
 pay as your best judgment dictates, you
 will do me a lasting favor and I shall be
 pleased to reciprocate by giving you the
 result of the experiment if I decide to
 make it.

C. O. SMITH.

Chicago, Ill., Feb. 5, 1911.

[We do not believe Mr. Smith's plan
 at all a good one. He intends buying
 virgins from various queen-breeders and
 mating them to drones raised from his
 own queens. What then? If he suc-
 ceeds in carrying out what he has al-
 ready outlined, what results does he ex-
 pect and what are his subsequent oper-
 ations to be? The answer to these ques-
 tions would decide whether the experi-
 ment were worth the expenditure involved
 in carrying it out. We are not con-
 cerned with the characters that our cor-
 respondent desires to improve; only with
 his methods. So far he will not have
 exercised any sort of selective influence
 on the progeny of the matings, nor will
 he in our opinion, have effected the
 desired improvement in his stock. Al-
 though one occasionally hears of bee-
 keepers who claim to have achieved won-
 derful results by rough and ready meth-
 ods of selection, we imagine that Mr.
 Smith's task is no easy one, as is shown
 by the principles of heredity and varia-
 tion. We should be very glad to hear
 how he intends to proceed after having
 mated his 600 purchased virgins.

The matter of bee-breeding by selec-
 tion is one of the most important that
 concerns bee-keeping, and we trust the
 near future will see a concentrated effort

made to improve the various races of bees. There are many obstacles in the way of success that breeders of other kinds of stock have not to contend with; the most obvious of which is the difficulty in controlling mating. Another arises from the parthenogenic origin of the male. However, we believe that the same determination to succeed that has characterized the operations of bee-keepers in the past, will enable them to produce varieties of bees far superior to those we have at present time.—W. W.]

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WANTED—Bees — bees for sale this sprin of any for sale, I with Drawer A, Cana Brantford, Canada.

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WANTED—A young student who is a kind of handy jack with tools, and anxious to learn the bee business. Address, J. Alpaugh, Galt, Ont.

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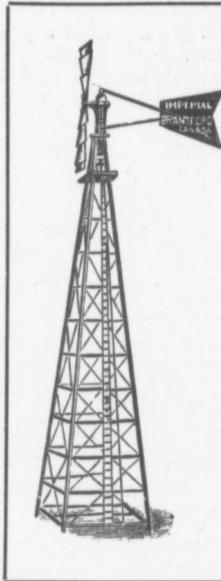
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