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CANADIAN BEE JOURNAL

PUBLISHED MONTHLY.

NEW SERIES
VOL. III, No. 7.

BRANTFORD, ONT., FEB., 1897.

WHOLE NO.
384

The Youth's Companion is a weekly publication full of interest to old and young, clean and free from objectionable matter, we can club it with The Canadian Bee Journal,

The Youth's Companion. The regular price of the paper is \$1.75. Sample copies can probably be secured by addressing Perry, Mason & Co., Boston, Mass.

* * *

The report as it appears in The Canadian Bee Journal is almost word for word, the same as received and is the work of Mr. Geo. Angus, C. S. R., the official reporter. His address is Adelaide St. east, Toronto We believe is the best report ever taken. It has in it about all that is of value to the public and that is worth printing.

* * *

The investigations carried on with foul brood *bacillus alvei* by Mr. Harrison, B. S. A., and the Ontario Foul Brood Government Experimental apiary, appears to confirm in almost every point, the claims which our Brood Inspector Mr. Wm. McEvoy, made in connection with this disease. We have claimed that the disease was to be found in the honey, Mr. Harrison has proved it there. Another remarkable fact is that the spores of the disease did not appear in the laboratory as the spores of the disease frequently do. Again the

germ of the disease under most favorable conditions did not develop from the comb foundation. Mr. McEvoy has also claimed this. We trust a fuller investigation will be made next season. In the meantime Mr. McEvoy has every reason to feel proud of the result.

* * *

From the Foul Brood Inspector's report it will be seen that during the year 1896 he did not have to de-

Not a single colony destroyed during 1896.	stroy a single colony infected with foul brood. Everywhere a keen desire was
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manifested to do the best to cure the disease and put it out of the way of spreading to other colonies. The law is so framed that it will never be a hardship to anyone, and only an unreasonable and stubborn crank, or a man who has insufficient knowledge of bee-keeping to see the danger, would allow the law to be enforced compelling the foul brood inspector to destroy his bees.

* * *

By the report of the North American Bee-Keepers' Association held at Lincoln, N.-b., it will be seen that that association will in future be known as the United States Bee-Keepers' Association.

While it is not without regret that we see the International or North American Association exists no more, we cannot ignore the arguments used by our brethren in the United States. They claim, and the claim would appear to be reasonable, that

as long as the Association is International they cannot look for government assistance. They have very strong reason to believe that the authorities at Washington are willing to help the bee-keepers of the United States. Under these circumstances Canadians would be selfish, indeed, did they object to the change. The next convention will be held at Buffalo, N. Y., and we may rest assured that we will be welcome at that convention and that there will be no bar in taking part in the discussions.

A Rare Chance.

For the next sixty days we will take from our subscribers \$1.50 as payment for renewal for one year and one year's subscription sent to a new address. Our object in making this liberal offer, is to get our old subscribers to send in new subscriptions. Do not wait until you have forgotten this offer, but go to work at once. Send subscriptions to

GOULD, SHAPLEY & MUIR Co., (Ltd.).

Bramford, Ont.

A Strong Endorsement.

Mr. E. Yeigh of Toronto, writes us: "Doubtless the C. B. J. publishers are interested in knowing that any good article is advertised in its columns, and therefore I am pleased to say that Buck's Leader Furnace, recently placed in my home, is a marvel of simplicity and efficiency. I am sure a saving of one-third in coal will be effected, and a higher degree of heat secured. I cannot speak too highly of the "Leader."

Mary E. Wilkins is engaged in writing a series of striking sketches of New England neighborhood life for The Ladies' Home Journal. They will portray a small community's social indulgences, sketching the old-fashioned quilting-party, the time-worn singing-school and an apple-paring bee.

Salt and water held in the mouth after having a tooth pulled will stop the bleeding.

Seventy-First Birthday.

THE YOUTH'S COMPANION will celebrate its seventy-first birthday in 1897. Among the many attractive announcements of the Companion for the coming year is an article of exceptional value by Mr. Andrew Carnegie, on "The Habit of Thrift." Successful men in other walks of life will second Mr. Carnegie's paper with readable, practical articles based on their own experience, and valuable to the old as well as to the young.

Stories will be given by Ian Maclaren, Rudyard Kipling, Stephen Crane, Harold Frederic and Clark Russell. Speaker Reed, Secretary Herbert, Senator Lodge, Hon. Carl Schurz, Postmaster-General Wilson, Dr. Lyman Abbott, Hon Theodore Roosevelt. These are a few of the two hundred names that figure in the latest list of Companion contributors.

The non-partizan Editorials and the Current Events and Nature and Science Departments are of special interest to students and to all who wish to keep informed of the doings of the world. As a reference book a file of Companions is well-nigh invaluable, for its reputation is founded on seventy years of tested accuracy.

New subscribers sending \$1.75 to the Companion for 1897 will also receive, free, the Companion's artistic, twelve-color Calendar. Illustrated Prospectus of the next volume will be sent free upon request. Address

THE YOUTH'S COMPANION

205 Columbus Ave., Boston, Mass.

Those who have not subscribed to the Youth's Companion can have the Canadian Bee Journal and the Youth's Companion for one year for \$2.50. The Editor of the Canadian Bee Journal can heartily recommend the Youth's Companion as a home paper.

Dominion Analyst Mr. Macfarlane and his staff have completed the examination of a large number of samples of strained honey, collected in different parts of the country. The analysis reveal that in many instances there is a large percentage of cane sugar and glucose instead of the pure honey. No prosecutions have yet been instituted. The analyst are now turning their attention to cream tartar.

Seventeenth Annual Meeting

of the

Ontario Bee-Keepers' Association

Held in the Council Chamber of the City Hall at the City of Toronto,
December 8th, 9th and 10th, 1896.

(President's Address continued from page 1004.)

grasp the situation and work with the determination of the pioneers of advanced dairying. While all may not agree with this, we are at least safe in saying, that bee-keeping might take a very prominent position and become a very important branch of agriculture.

What has been done during the last 10 or 20 years in almost every branch of agriculture requiring intelligence, energy, application, and hope, could have been done, and can yet be done for bee-keeping. Neither we nor the people have been alive to the necessities and importance of the profession. If we have not storage problems to solve we have others of as great importance.

Ontario is at present the banner production province of the Dominion. Some will attribute this to greater enterprise on the part of its inhabitants, others to nature having been more lavish in her gifts, while still another class will attribute this to accident merely. But the important question for us to decide, is, what can be done for bee-keeping, and it is necessary that we consider the indications that point to its being an industry which is capable of development in our country, and further that we urge the importance of being "up and going."

Bee-keeping in Ontario (and my remarks apply to many other parts of the Dominion) is an industry for which our country is naturally adapted; the farther north you go the better the quality of honey obtained, provided that blossoms will distil in sufficiently large quantities to pay the bee-keeper. I am not asking you for the world to take the statement of the Association in this matter, but, I ask you to examine the statement of disinterested judges and record of Ontario honey where has been exhibited, side by side with honey from other parts of the world.

We have chosen a profession in which the gates to success can only be opened by intelligence, experience, and judicious application, and we in this respect have chosen wisely, leaving the fields of keener competition to countries less fortunate than ourselves in this respect. Again, ours is a profession that creates wealth. The honey crop displaces no other crop on the farm, and further the primary object of the existence of the honey-bee is not to gather honey, but to assist by the distribution of pollen, the cross fertilization of plant life, the honey bee is of the greatest value to the fruit grower, and all that bee-keepers ask in return from the fruit grower is a little nectar from the flowers in his orchard and field, and the firm and kindly grasp of his hand acknowledging the common interest and common benefits. I have not spoken thus far of the great, and at present economic, value of honey as a food. This is generally conceded and attested to by holy writ. At the present price, honey, is no longer a luxury, but is accessible to all. The possibility to development lies in various directions. When we consider the chances of bee keeping growing in importance, and we have as a guide the example of countries by nature, and in some cases by cultivation, less richly endowed than our own. Take Germany, for instance, the last statistics give the number of colonies kept as 1,910,000; the annual production of honey 44,800,000 pounds; Spain, 1,090,000 colonies, and annual production of honey 42,500,000 pounds; France, 950,000 colonies, and the annual production, 22,500,000 pounds, and European production of honey, 85,000,000 tons, wax, 15,000,000 pounds, and yet we find such countries as Britain, Germany and France, importing honey from the N. American Continent. We know that England imports a large quantity of honey, as we have very strong evidence that those who have tried the American product prefer it to all others,

except their own production. I might also add the English market is favorably disposed to the Canadian product. A year ago in response to an invitation, the Gould, Shapley & Muir Co., L^{td}., of Brantford, sent a sample of comb and extracted honey to the Imperial Institute, England. Mr. Watson the Canadian curator, suggested that the Company send a larger exhibit. Among other remarks he writes: "I conclude that you have large supplies and can ship regularly." The Company sent another exhibit with packages which could be distributed among interested parties. As president of this Association I consider it my duty to advance in every way the interests of its members, and with that object in view I induced the Company to supply the goods in packages, and prevailed upon the Ontario Government to pay the freight, and now there is an exhibit of honey at the Imperial Institute with the labels of the Ontario Bee-keepers' Association upon the packages. In connection with the exhibit is a list of the members of the Association with their post office address. British extracted honey is frequently quoted in the *British Bee Journal* as high as 13c. per pound in bulk. Bee-keepers in this country will be satisfied if they can net 7c. per pound for their entire crop. There appears to be a reasonable prospect, if we can supply Great Britain with Canadian honey during the greater part of the year at least, that more than that sum can be realized. Many parts of our Dominion never see honey, and even in this city in which we are at the present gathered, 200 pounds could to advantage be consumed where one is used to-day. How few of the restaurants, lunch counters and hotels have honey on their bill of fare. How few even use it rarely, and yet I know of one firm in this city which last fall purchased 135 twelve section cases for their lunch counter. Concerning wax, I know of one firm in the province of Quebec willing to place an order for 1000 pounds of bees wax a month, a quantity this country is at present unable to supply. But we must not dwell too long upon this side of the question, inviting as it is and open as the field is for cultivation. Let us next look upon what can be done to improve the quality of honey and decrease the cost of production.

Some of us can indicate possibilities in this direction, but even to the most advanced and the most farseeing the future is vague. Only the prophet can foretell the details of the future. As to quality, Canadian honey is generally pure. In the few cases where adulteration has taken place it has, I feel satisfied, almost always been done by the

dealer. Seeing that the Government was going to put the adulteration act into force, in respect to vinegar, I urged that the same should be done with honey. I found the Department of Inland Revenue, with Sir Henri Joly de Lotbiniere as Minister, very anxious to respond to our wishes, and between one and two hundred samples of honey has been collected from many directions and are now being tested by that department. This work will be actively carried out in the future, and the public may rest assured that there is no difficulty in securing pure honey.

Next, as to quality. During my visit to Ottawa in connection with this matter, the specific gravity, or ripeness of honey was touched upon, or as the chemist would put it, we considered the percentage of saccharine matter. I thought it well that public attention should in an official way be drawn to the difference in honey in this respect. The Government promised to do this; they also have it in their power to pass an order in council calling for a certain percentage of saccharine matter in honey. Sir Henri Joly de Lotbiniere, with whose department this matter largely rests promised to act in this direction, and at our request very kindly consented to send to our Convention Mr. Thos. McFarlane, F. R. S. C., chief analyst of the Department, and that gentleman is with us and awaits our decision. Such an act, provided, a judicious decision as to percentage of saccharine matter was arrived at by Mr. McFarlane, would be of great value to bee keepers as well as to the consumers of honey. During the past year, we have secured through the efforts of S. T. Pettit and our Association an amendment of the adulteration act, which established a principle and throws additional safeguards about the standard of quality in honey.

As to the questions concerning the cheapening of the production of honey better methods of wintering which will tend to bring colonies through the winter not only alive, but with the loss of vitality reduced to a minimum, is a problem few if any, have yet mastered. To reduce swarming and keep worker forces together more in the future than in the past is also an important for investigation. Comb foundation with the number of square feet per pound reduced without weakening the foundation beyond the point where it will not sag or break and if possible a thinner base, and higher side wall would enter greatly into the reduction of cost in production.

During the past year the Ontario Government's Experimental Apiary, among other work, made a careful test as to the likelihood of transmitting through foundation

the spores of the disease known as foul brood (*Bacallis Alvei*). Soft wax of excellent quality was taken and Mr. F. C. Harrison, B. S. A., Bacteriologist at the Ontario Agricultural College injected infected spores into the wax. Foundation was made from this, barely bringing the wax to the melting point in the process. This foundation was given to bees on the 8th of June, the queen began laying June 11th; Mr. McEvoy, the bee inspector for the Government examined these bees on the 17th of August and later in October and found them entirely free from disease. Mr. Harrison has done some valuable work in the laboratory, his investigations all being brought before the Ontario Agricultural and Experimental Union, and while he has done much, a great deal more required to be done.

After careful investigation, it appears to me that this Association might draw attention to a fruitful cause of the spread of this disease and that is through honey. This disease, may exist in almost any apiary without the knowledge of the bee-keeper, and for this reason it becomes dangerous to feed honey when the bees are short of sufficient stores. Next, it would be well if the foul brood inspector could visit every County Bee-Keepers' Association in the province, and there give the symptoms and treatment of foul brood, illustrating his lecture by a specimen. The meetings might be arranged in regular order to avoid unnecessary travelling expenses. Again it might be well to make an effort to pass a Foul Brood Act in the remaining portions of the Dominion; and we would then be able to secure the same protection that is given to protect the Dominion from the liability of infection from stock imported from countries not having the same safeguards.

Some of these questions may engage your attention with profit. I earnestly hope that the organization may receive increased attention from bee-keepers. It has during its comparative childhood been the means of giving legislation of value and has carried on useful work in other departments; and as we reach maturer years and attain greater discession, and attain to greater activity, and receiving, as I hope we shall, an increased Government grant, we will have opened up greater avenues of usefulness and will assume greater responsibility.

Mr. Gemmel moved, seconded by Mr. [unclear] that a hearty vote of thanks be tendered to the President for his able and interesting address. Carried amid applause. The President introduced Mr. T. Macfarlane, chief analyst of the Inland Revenue

Department at Ottawa, to whom, he said, they were indebted for pointing out the clause in the Act which gave power to pass an order-in-Council.

Mr. Macfarlane.—Mr. President and gentlemen: In the proceedings of any Society with which I have had anything to do, the President's address is usually received with gratitude, and is not exposed to any criticism at all. And it may possibly be the case (I don't know whether it is the case or not) that that should be done here. It is not usually the practice to look a gift horse in the mouth, and the President's address usually passes without discussion, but as discussion is permitted in this case, I would just like to say a word or two with regard to the thoughts that have occurred to me while the President was reading his address.

Of course, the object of the address and the object of the meeting is, as far as possible, to gain a wider market and get better prices for the product. In what I have to say, I may make mistakes common to those who have no practical acquaintance with the production of honey. In this case you have only got to check me and tell me when I am wrong. But it occurred to me that we might liken honey to other articles of commerce—say tea. Tea is tested by the tea tester in a very different way from the chemist; he has his own way of testing and he puts a very great deal of value on what he calls the aroma, and that is a substance which we cannot handle chemically; it is not an article that we can weigh as we do other constituents. In the same way you have got winetesters, who value a wine not exactly with regard to the ponderable or weighable constituents of the wine, but with regard to how it smells, what the taste is, what the flavor is. It seems to me that honey can be very reasonably compared to these two articles—tea and wine, for you have got in honey the same substance, the same constituent which the chemist cannot tell you anything about, and which the chemist in his analysis would not be able to tell anything about or make any report upon; that smell, that bouquet, that aroma, which is derived from the flowers upon which the bee feeds. And it seems to me if you want to get a higher price for the product, you must do just as tea-producers and wine manufacturers do, you must get into it these superlative qualities that the chemist cannot detect, but that the connoisseur can detect, and that he values highly.

If that is the case, then it seems to me that you have got to look as far as possible in the direction of providing the bees with that food which will be capable of giving to

the honey the particular aroma that you seek after.

Is it not, then, the sole thing to be able to feed the bee with sugar in that condition, or accompanied by these other constituents that give to honey its value? If you cannot get these other constituents into the honey, I don't suppose you can ask a higher price for it than syrup. You can get sweetness easily into syrup that resembles honey, but you cannot get the particular flavors without which honey is not constituted, as it were.

I had some conversation with Mr. Clarke before leaving the meeting this afternoon, and I think I misunderstood him when he first made a statement with regard to the identity of certain sugars, and it may be that he is quite correct in maintaining that sugar contained in the nectar of flowers is the same as that which is contained in sugar cane. But then, even although that is so, that is not a matter of practical consequence, because sugar is not merely the food that bees will take, but it is sugar accompanied by certain other qualities, and these you can only get in the sugar that exists in the nectar of flowers. If you simply supply the bees with sugar, they will give you sugar without those qualities you so very much want. The President has said that seven cents is the value, and possibly before it got to the retailer you would have to get 10 cents for the honey sold by the retailer. That comes into competition with ordinary syrups, which are sold at a much lower figure, and unless you can get the peculiar qualities infused into the honey, I don't suppose you can expect the extra price.

I have much pleasure in joining the gentlemen who proposed and seconded a vote of thanks to you, Mr. President for your interesting address.

Mr. McKnight.—I think it is a matter of congratulation with all of us that we have a gentleman here from Ottawa—Mr. Macfarlane—who is in a position to give us some advice from a scientific standpoint, and who has a warm interest in the prosperity of the beekeepers. There are a number of questions touched upon by the President in his address, which are worthy of the consideration of this association. One of them is the extended market for the product of the beekeepers of Ontario, another is the purity of the article and its exceptionally fine quality when put upon the market. I am not very sure that Mr. Macfarlane is right in believing, if he does believe, that it is within the power of the beekeeper to secure for honey those essential properties that he says ought to be contained in it and that he says rightly and

justly should be contained in it. He tells you that there is at least one, if not more than one property in honey that is not tangible, and that the chemist cannot touch, cannot lay hold upon, and that is its aroma. The beekeeper has no power in the world to impart to the honey-producers that desirable aroma—none whatever. As I understand, that is the product of the flower, and the aroma of the honey will correspond with the aroma of the flower from which it is gathered. I presume that Mr. Macfarlane meant by his remarks that beekeepers might perhaps cultivate, or cause to be cultivated, or use their influence to cause to be cultivated those flowers that give to honey that desirable aroma and these desirable properties. In practice I don't think that is very easily attained.

I am not going to discuss the address at all, but there is another point I would like to advert to for a moment, that is the desirability of finding an outside market for the work of the beekeepers of Ontario. My own candid belief is that there is ample room within our own Province to dispose of all the honey that we can produce, and to dispose of it at a price as good as can be obtained elsewhere. If that be so, it is not necessary to push the foreign market to any great extent. He refers to the price of honey in Britain. Those of you who have watched the price of honey in England and Britain generally, will have noticed that in the last ten years the price of honey there has varied very little, indeed. I believe the time has come that if the Ontario Beekeepers have honey they cannot dispose of here at current rates, the President says seven cents, (I never sold it at that in my life) they can ship it to the Old country and realise that much and very little more; and I believe there is no time between now and ten years ago when very little more could have been secured for it. Some of our friends advocated the cultivation of that market even at that distant period, ten years ago when we were getting twelve and a half and sometimes fifteen cents, when I felt sure then and I feel sure still not more than eight cents could have been realised on the whole in Britain. I have myself visited a good many of the British cities and enquired as to the price of honey; I have been in Lewis & Co's store in Liverpool, one of the largest stores in England and the salesman brought me American honey in two pound tin packages that he told me he bought for four pence a pound ten years ago. I was in Glasgow, in Edinburgh, in Manchester and Belfast and I found the same thing every where. American honey would not realise, when British honey was bringing 9 pence a pound wholesale, more

than half the price. It is just the same to some extent now. I believe if Canadian honey could be put upon the market as Canadian honey and the British people understood it to be Canadian honey and not American, it would in time work up perhaps to the price of English honey, because there is no question about it that it is an article if not superior at least equal to any product of flowers obtained anywhere except it be heather and the honey obtained from no plant can compare for a moment with heather; it is a unique article.

Mr. Pettit—I was very much pleased indeed with the remarks of Prof. Macfarlane with regard to value being added to the food product through or by means of the flavor or aroma. It is a fact, and he emphasizes it that we should see to it that our honey has that desirable quality in the highest degree of perfection.

I think Mr. McKnight erred a little in his statement that we hadn't any choice in the matter, or could effect nothing in that line. First, we recognise the fact that there is a great deal in having the flavor of our honey as the editor of the British Bee Journal says; the value consists in the aroma or flavor; we find it in nuts, tea, wine, raisins and in almost everything; we can think of. It is the flavor we look at, it is the flavor that gives it value and I am very glad the point was brought out by our friend. I contend that we can have our honey possess the very highest possible degree of this very valuable quality, or we can deteriorate it according to the way we handle it. If we take it from the bees too soon before it is evaporated properly the flavor will be somewhat inferior. When I first started extracting honey I used to take it green and unripe and set it away and allow it to settle and then skim it and evaporate it and all that process for the sake of getting more pounds but later years and more experience taught me that I would get something better by allowing the bees to finish it and I would get all the exquisite flavors stored up in the honey that the flowers gave to it. If we take it too green from the bees we lose that volatile or essential oil. We all agree that next to any maple syrup is the best sweet product made by a wise Creator and some people go a little farther and think maple syrup is better than honey. All of us know, who have made it, that when we bring it to a certain degree of body, weight or consistency the flavor is better; it is finer and it will sell for more money. The flavor is there, the taste is there and just so with honey.

Mr. McKnight—I take exception to Mr. Pettit. Be the honey ripe, as we term it,

or unripe, I hold that there is no time in honey when it has that aroma so fully as when it is taken from the hive. It is a fleeting property and the older the honey becomes and the longer it is exposed the less evident will that property be in the honey. What Mr. Pettit says is true, that the proper ripening of the honey is what every bee-keeper should look to and see that it is secured, but the ripening of the honey only secures its specific gravity; it does not increase its aroma but rather decreases it.

Mr. Darling—I know, in some instances at least, the sale of some of my honey has been due to the fact that my bees are allowed to ripen the honey, while other parties have sold a greener article. This greener or less ripened honey possesses a pungent flavor which is disagreeable. The riper honey has a rich mellowness that the green honey does not possess.

Mr. Best—If the honey is not properly capped it has a tendency to sour a little; it will have a tendency to lose quite a bit of that flavor which I claim it would have provided the bees kept possession of it till it was in its proper shape. I think if we as a rule allow it to be perfectly capped we will improve the quality and have better market for our honey than we will if we are in a hurry to have it extracted.

The President—The next thing on our programme is a paper by Mr. J. W. Sparling, of Bowmanville.

Mr. Sparling—I wrote the Secretary not to put my name on the programme and I have not prepared a paper.

Moved by Mr. H. N. Hughes, seconded by A. Pickett that after hearing the address of the Hon. S. E. Fisher, Dominion Minister of Agriculture and his suggestions that the Ontario Bee-Keepers' Association express their views as to what should be done by the Dominion Government for bee keeping. Be it resolved that we ask the Dominion Government to render the same assistance to bee-keeping that is being given to other branches of agriculture. We would respectfully suggest that experiments be conducted in bee-keeping with the object of cheapening the cost of production and improving the general quality of honey put upon the market. Also to assist when opportunity offers in the development of home and foreign markets for honey. And that the Association would recommend Mr. R. F. Holtermann, of Brantford to the position of Apiarist at the Dominion Experimental Farm, Ottawa.

After some discussion the Vice-President Mr. Darling put the motion which was carried unanimously.

The President—I am sure it will not be out of place for me to thank you for the the station which you have given me. I think you understand what my views are in regard to the subject of bee-keeping. I think that there is a greater future than most people realise in the direction of the development of the bee-keeping industry.

Moved by Mr. Shaver, seconded by Mr. Brown that the Foul Brood Inspector's report be read. Carried.

Foul Brood Inspector's Report read by Mr. McEvoy.

During the past season I visited bee yards in the Counties of Lambton, Huron, Bruce, Grey, Middlesex, Perth, Norfolk, Brant, Wentworth, Lincoln, Halton, Simcoe, Peel, York, Ontario, Carleton and Prescott. I examined eighty-eight apiaries and found foul brood in forty-one bee yards.

The out-break of decaying brood which was found in so many apiaries in June and July caused many bee keepers to become very much alarmed and was often mistook for foul brood. I received many letters from bee-keepers describing the sort of dead brood that they found in their colonies, and also samples of combs with decayed brood in. Sometimes foul brood was mistook for dead brood of other kinds until it had made great headway. Every place that I went to I found the bee-keepers anxious for me to examine their apiaries, and pleased when I did so. And for the very nice way that I have been treated by all the bee-keepers I here return to them many thanks. I am also pleased to say that those that had the disease in their apiaries did their duty, and that I did not have to burn one colony in 1896.

My time, livery hire and railway fares, \$65.85. Wm. McEvoy.

Woodburn, Dec. 7th, 1896.

Mr. Gemmill moved, seconded by Mr. Shaver that the Foul Brood Inspector's report be received and filed. Carried.

On Motion of Mr. Pettit the Convention adjourned to meet Wednesday, 9th December at 9 o'clock a. m.

Wednesday, Dec. 9th, 1896, 9:30 a. m.

The President in the chair, called the meeting to order.

Mr. Fixter, Dominion Experimental Farm, Ottawa, presented his report on

FURTHER EXPERIMENTS WITH CERTAIN BRANDS OF COMB FOUNDATION.

(By Frank T. Shutt, M.A., F.I.C., Chemist, Dominion Experimental Farms.)

This investigation commenced in 1894 and repeated annually since that date, has for

its chief object the determination of the relative usefulness in comb building of certain brands of "foundation." It was supposed that those brands of wax of which the bees used the most or, in other words, to which they added the least amount of wax in the building of the cell walls, would prove to have the greater value to the beekeeper. It is argued by some practical men that in supplying the bees with a wax that they will readily draw out and utilize in cell formation, a greater store of honey may be expected. This indeed, seems to be the main reason for furnishing bees with artificial comb. On the other hand, however, there are those that claim that there is no advantage in this respect, the only benefit being a more regular structure of the cells in the section. In connection with the question of wax utilization and deposition, Mr. R. F. Holtermann, editor of THE BEE JOURNAL is of the opinion that bees utilize the wax in the foundation to a greater extent when the honey flow is light. In other words that when gathering large quantities of honey, bees manufacture or produce more wax than when the honey supply is light. It might be urged that this argument carried to its logical conclusion, would, in a large measure, go to show that in seasons of a heavy honey flow there is little economy in supplying "foundation." In these considerations the fact must not be lost sight of that wax is not a material gathered by the bees, but a true secretion, the result of the physiological functions of certain glands in the bee, and is produced to a large extent at the cost of the honey consumed by the insect. Wax is, therefore, in a sense, a physiological concomitant of honey, and, consequently, it is improbable that all the wax necessary for the construction of the comb can be furnished the bees; indeed, our past results all point in this direction. It is, however, at the same time true that a portion of this wax can be economically supplied in the foundation, and within certain limits it would appear that the wax added by the bees is inversely proportionate to that furnished as foundation. I am further inclined to the belief that the weight of the comb varies somewhat with the season. The reason for this may be accounted for by Mr. Holtermann's theory already referred to.

For the details of the method of procedure the reader is referred to Page 171, Report of the Experimental Farms, 1895. An additional experiment has, however been made this year, namely, the endeavor to ascertain directly the weight of "foundation" after it had been drawn out by the bees. This was done by carefully shaving away

percentage was between 80 and 40; in three trials, more than 40 per cent., and in instances, less than 80 per cent. As remarked in considering the "weight of wax added," the higher numbers were obtained from the heavier foundations.

Table 3, which presents the averages of the foregoing data, was prepared for the purpose of making clearer the features already alluded to and to assist in the more ready comparison of the data from the various brands.

The average weight of "foundation" after the removal of the cells, all things considered, seem to be fairly constant. The greatest weight was from "Choice Wax, Given Process"—the heaviest foundation experimented with—the least weight was obtained from "Choice Wax, Root Mill, Temperature 89 degrees F."—by no means the lightest brand used, but the brand from which the bees utilize the most wax.

In considering the average weight of foundation wax utilized, the largest

TABLE III—TABLE OF AVERAGES, 1896.

Designating Letter	Name of Wax and Mill.	Milling Temperature.	Average weight in grams of 2 in sq. of empty honey comb.	Average weight in grams of wax added by bees.	Average percentage of wax added by bees.	Average weight in grams of "foundation" after removal of cells.	Average weight in grams of "foundation" wax utilized by bees.	Average percentage of foundation wax utilized by bees.
A1 A2	Choice Wax, Root Mill.....	89°	2.695	1.294	92.3	.671	.729	52.0
B1 B2	Choice Wax, Root Mill.....	120°	2.669	1.465	121.7	.802	.401	33.3
C1 C2	"Foundation" in general use, 1896..		2.974	1.759	144.7	.791	.423	35.0
D1 D2	"Foundation" in general use, 1895..		2.780	1.515	124.7	.815	.399	32.8
D3 D4	"Foundation" in general use, 1895..		3.132	1.917	157.7	.756	.459	37.7
E1 E2	Heavy Sheet, Root Mill.....	120°	3.065	1.750	133	.878	.437	33.2
F1 F2	Inferior Wax, Root Mill.....	89°	2.797	1.573	128.4	.788	.435	35.6
G1 G2	Inferior Wax, Root Mill.....	120°	2.665	1.498	128.3	.719	.448	38.3
H1 H2	Choice Wax, Given Process.....		3.552	1.751	97.1	1.087	.713	39.5
I1 I2	Poor Wax, Given Process.....		3.755	2.173	137.3	1.121	.461	29.1
J1 J2	Patent Process, 12 sq. ft. per lb.....		3.252	2.248	223.8	.883	.121	12.0
K1 K2	Patent Process, 15 sq. ft. per lb.....		3.442	2.329	213.1	.933	.159	14.5
L1 L2	Heavy Sidewall, R. F. H.....		2.838	1.576	125.4	.777	.480	38.1

There would not appear to be any definite relation between the weight of wax added and that of the wax utilized, though the results of I 1, I 2, and K 1, K 2, make it evident that in very light foundations the amount of wax utilized is very small, and the amount added correspondingly large. This would point to economy in supplying heavier foundations than the brands just named, if the question resolves itself into one of furnishing wax that can be utilized by the bees.

amounts were from A 1, A 2, and H 1, H 2—the Choice Wax of the Root Mill and Given Process, respectively. The least amounts so utilized were from "Patent Process" 12 square feet and 15 square feet, per pound.

In summing up the results of this year's work, we may conclude that, considering the values of the comb foundations to be dependent upon the extent to which they are utilized by bees in cell formation, the Choice Wax, Root Mill, temperature 89° F., gave the best, and the "Patent Process," 12

square feet and 15 square feet per pounds, the poorest results. Both the Choice and Poor Wax of the "Given Process" give very heavy "fishbones." Concerning the other brands on these points, the differences are not sufficiently well marked to allow of any emphatic statement being made respecting them.

Mr. Sparling moved, seconded by Mr. Shaver, that the result of the reports as handed in by Mr. Fixter be embodied in the annual report. Carried.

The President called upon Mr. Macfarlane to address the Convention on the Act regarding the adulteration of honey.

Mr. S. B. Macfarlane. --Gentlemen: I think it was an excellent idea which befell your President when he applied to the head of the Inland Revenue Department for assistance in this matter. I think he has done better in that way in calling upon the Executive of the Government for assistance, rather than in lobbying in the House of Commons. It is a very good thing to have such associations as yours come into closer contact with the Executive and ask them to carry out whatever laws exist with reference to the various industries: it is only in that way, by intervention of such associations as yours that we can prevent the establishment, under the government, of a bureaucracy.

I must thank you for the invitation to be here personally. I came here to learn from the gentlemen now assembled. We chemists have got too many subjects to study and attend to and we cannot possibly be supposed to know much about the practical details of bee-keeping. I learned a good deal, however, by a good many hints privately from several gentlemen now here, and although I must confess I could not follow the subject discussed yesterday with reference to the technology of bee-keeping and the embryology of the bee, still I learned a good deal from that discussion. I was afraid at one time yesterday that the bee-keepers of Ontario were going to belie their reputation; they ought to be men of sweetness and light from their vocation, the sweetness coming from the honey and the light from the manner in which the bee performs its duties, because we all know how the little busy bee improves the shining hours. I suppose if it is allowed to anybody to be a little erratic on any occasion, the bee-keeper should have the license and should be excused if he comes to these meetings with a bee in his honey; that meant among us Scotchmen, when a man is a little off, he is supposed to be tormented with a bee in his bonnet. However, the thing has gone off very nicely, and now

after having expressed my feelings to the members of this association, I suppose we might go to business, and I might try to explain in what way the government, or, at any rate that branch of the government called the Inland Revenue Department, can assist the beekeepers. I don't think the gentlemen now present are fully aware of our abilities in that respect. If they had been aware of the extent to which it was possible for the department to help them, I don't think they would be so very anxious about obtaining additional legislation on the subject. They would have tried, I think, in the first place to have made use of the powers which the Government now has before proceeding much further. I was not aware that there was additional legislation on the subject going or until after the passage of Dr. Sproule's bill, and before that time Dr. Sproule, among others had suggested that we should obtain samples of honey throughout the country, which the present Adulteration Act allows us to do. It has been done before, but we have now started to do the matter up a little more thoroughly. Already orders have been issued for the collection of a large number of samples—I should think about 160—and they have already been collected, for the most part. These samples when they are being collected, are each divided into three parts: one remains with the seller of the sample, another is put in the hands of the local or district analyst, and the third part, or duplicate, is sent to Ottawa, in case a duplicate analysis of it may be desired.

Now the Act itself may have been to some extent misunderstood by not only gentlemen here present, but others outside. The name "Adulteration Act" leads one to suppose that the Act is for the purpose of preventing the sale of any food or drug which may contain something injurious. It certainly does that, but it goes farther, and I think I may say that the chief object of the Adulteration Act reaches into the realms of trade, tries to secure that those articles which are sold are such as the purchaser wishes when he asks for them, and that, I think, is the principle of the Adulteration Act. A man, when he buys anything, has a right to that which he thinks he is going to get, to that which he asks for. The Adulteration Act provides that food shall be deemed to be adulterated within the meaning of this Act: first, if any substance is mixed with it, etc., etc.

So that you see from this the adulteration spreads over very wide ground, indeed, and if an article is sold as honey which is merely an imitation of it, the act comes in

very forcibly indeed. It describes the manner in which it shall be carried out and in which its provisions shall be met, and with regard to the samples that are now being collected, the district analysts have first to examine them and make their reports. In this case, however, the samples will not only be examined by the district analysts, (there are eight district analysts in the Dominion, I believe), but will also be examined at headquarters in Ottawa. After the examination is finished, the Act provides for proceeding against those whose samples may have been found to be suspicious or adulterated.

We have introduced another system which the Act does not prevent our practicing, and which we have found to be of great advantage. We have published something like forty bulletins, which are partly for the information of the public and partly for the purpose of showing which samples have been found to be good and which have been found to be otherwise. In the present case it is proposed we shall publish such a bulletin, giving the name of the vendors; the samples will be fully described, the analysis will also be given as found by the district analysts throughout the country, and on a second line will also be given the results of the analysis as carried out at Ottawa. Then will be given the opinion of the district analyst and the opinion of the authorities at Ottawa on those particular samples. And it has seemed to me that before this Association should take any action as regards the points that you, Mr. President, have mentioned in the order of the proceedings, it would be well that this bulletin should be studied by yourself and the gentlemen interested, so that they may form just and clear ideas of the subject before making any representation to the Government, not only to the Inland Revenue Department, but to the Government itself, with a view of issuing an order in council.

The bulletin when published will be, in the first place, mailed to all those who have sold samples, so that they may know exactly where they are, and a sufficient number of copies will be printed to place the bulletin in the hands of each member of the association if they so desire.

We have adopted this plan not only for the purpose of giving publicity to our results, and informing the public generally in order that it may have some effect in stopping adulteration and stopping illicit practices, because we have found these practices are very much enquired and sought after, and those who have been found guilty of selling adulterated goods

are not at all anxious to find their names in this publication as having sold goods that are not up to the mark, and in that way I think the publication of these bulletins has been an advantage. And in some cases, when prosecutions were not vigorously followed up, we have found it really had a very considerable influence with regard to other goods, at any rate, in preventing adulteration. We are, of course, not confined to merely publishing the names of the parties who have not done their duty as regards the sale of unadulterated goods.

The Act goes farther, and a provision has been made to avoid, as much as possible prosecutions, which are disagreeable things to follow up, and which have the disagreeable effect of occasioning a vast amount of expense. We have found that this expense consisted chiefly of legal fees and lawyers' expenses; that even in cases where we succeeded in procuring a conviction against the vendor that their cases were sometimes followed by a demand for very large amounts, indeed, of lawyers' fees, not upon the defendant, but upon the prosecutor, namely, the Government, and very frequently these expenses have had to be paid, and paid out of the grant that the Legislature makes every year for the purpose of carrying out the provisions of the Act. Now, of course, the greater the sum that we have got to pay in order to carry on the prosecutions, the less the sum that we have to expend, the less money we have to carry out the ordinary provision in regard to the examination of goods. Therefore, Sir Henri Lotbiniere introduced a clause which I will read to you, which has had a very good effect in saving money in saving fees, and, at the same time, without having the defect of causing any injustice to be felt, or causing anyone to suppose that they were being treated unjustly. This is an amendment to Sec. 11 of the Act. It says: "Should any sample on examination be found by the analyst to be adulterated within the meaning of this Act, and it is so reported to the Minister of Inland Revenue, the said Minister may, at his discretion, cause the result of the analysis to be communicated to the vendor, and require him to pay at the rate specified in the second schedule to this Act; the cost of procuring and analyzing the said sample." That is to say, before any prosecution is begun, and, indeed, after the vendor has had the opportunity of requiring an analysis by the chief analyst, in order to confirm the results of the local analyst, the Minister of Inland Revenue may say: "Now your sample has been found to be bad—that is to say, the Minister is not

bound to give this intimation but he may, if he thinks fit, tell the vendor that his sample has been found bad and that unless he pays the expense of collecting and analyzing the sample, which in the case of honey would be about \$9, he will be proceeded against at law. In carrying out this Act, especially with regard to milk, we have tried to carry it out fairly and justly and we have never, I think, done injustice to anyone, which is proved by the fact that no complaint has ever been made. Of course, we would render ourselves liable to an action if we were proceeding unjustly but nothing of that kind has ever occurred or even been threatened and in the case of milk we have found rather than stand the trouble and expense of prosecutions the vendors were willing to pay this fine; and I suspect it will be the case too, with a good many samples of honey that have been collected; a man rather than stand suit will pay this fine. That is only as a sort of warning; it is not to be supposed that the Minister of Inland Revenue, after a man had been once punished in that way, would allow him to escape. A record is kept and in the case of a man persisting in this course he would be proceeded against to the utmost rigor of the law. After the vendor has a chance of settling the matter in that way he may in effect say "I won't pay anything; I don't think I ought to; it would not be just to exact that from me;" he can refuse to pay in which case the prosecution goes on in the old way, but I think you will perceive from this that we are able to get rid of a great many troublesome cases and we are able in that way to save a large amount of money for public service which otherwise would go into the pockets of the legal gentleman. Now, I think you will understand why it is that I recommend delay in the matter in regard to recommendations to the Government until everyone interested has had an opportunity fully to think out the matter, and fully to take advantage of the information which this bulletin will certainly contain.

I don't there is much more to be said with regard to the legislation as it has been for several years.

Subsequent to this of course came Dr. Sproule's bill, which goes a little bit further than the ordinary adulteration act and which I believe (perhaps my conception of the act is not sufficiently clear) renders it illegal for anyone to feed cane sugar to bees for the purpose of producing honey. I cannot yet see how this act is to be carried out, or how it will be handled.

Mr Pettit— The Bill does not prohibit the production of sugar honey, simply the sale of it.

Mr. McFarlane—I perfectly appreciate what Mr. Pettit has said but from my point of view, we of the Inland Revenue Department have only got to do with the samples of honey thus sold; we have nothing to do whatever with the samples that are merely produced by a single individual for his own consumption. Perhaps the object of the originators of Dr. Sproule's act was more to hold it up as a threat against the use of cane sugar for the production of honey, but I think it might be made use of, although the carrying out of the provisions of the act might assume a different form, it is pretty well known and think it has been pretty well established that bees that have an opportunity of consuming as food a larger than normal amount of cane sugar that it is frequently shown in the product. The little animals have not the capacity of transforming or converting an unlimited quantity of cane sugar; it seems to pass, to a very large extent through their bodies unchanged and can be found in the product. We may be able to find out something about that in the examinations that are now going on. Even that might be a subject for experiment as to what the quality of the honey is which would be produced by an abnormal feeding of bees on cane sugar. The impression now is that a very large amount of it is not converted and still remains in cane sugar in the product. Indeed it is stated that in a sample of honey collected in the neighborhood of a beet root mill it contained a much larger amount of cane sugar than it should, as much as twelve per cent. After we have gained experience in this matter and when those who are interested are making their application to the Government to issue an order in Council stating what shall be considered adulteration, the Association might be able to suggest that honey should be considered adulterated which contained more than a certain percentage of cane sugar; in that way the supplementary act of which Dr. Sproule was the author may possibly be carried out. So that in making a suggestion, when the Association sees fit to make a suggestion, to the Government with a view to the order in Council they should not only take into consideration the quantity of water that honey ought to contain, which I don't think should be allowed to be more than twenty per cent, but also to recommend the amount of cane sugar that honey should have. In that way we may be able to carry out the act of Dr. Sproule without requiring evidence as to how the honey which had been sold had been diluted.

I don't think that I have touched upon all the points of which information may be required at this meeting but I am prepared

to give any explanations that may be in my power and I am extremely anxious to hear what the opinions of the members of this Association may be as regards the points that I have brought before them this forenoon.

Mr. Macfarlane's remarks were greeted with applause.

Mr. Darling—Will there be a place in this bulletin that will be published giving the specific gravity of every sample tested?

Mr. Macfarlane—The ascertaining of the specific gravity of honey is rather a troublesome thing on account of its thickness, but what amounts to the same thing will be given and that is the percentage of water; all that you care for as regards the specific gravity is in order to ascertain how strong the honey is.

That is to say, the percentage of solid matter that is contained in the honey; that will certainly be given, or what amounts to the same thing, the amount of water it contains, and with that I think you will be equally as well served as with a statement regarding the specific gravity, which perhaps some members of the Association might not be able to make use of.

Mr. Brown—I am more than pleased to see our friend Mr. Macfarlane with us. In regard to the adulteration of honey, I consider myself to have been a victim to the fraud of adulterated honey, on account of it being distributed with the grocers in Eastern Ontario. I do not speak only of one certain locality or county or district, but I speak of Eastern Ontario. It has been distributed freely, and I procured a sample of this so-called honey and had it analyzed by the chief analyst about a year ago, and his report is that there was very little honey in its contents. About a year ago, at the last annual meeting, we had a motion brought up and passed authorizing me, as I appear to have been the greatest victim in the matter, to apply to our County Crown Attorney and have him prosecute these parties for selling, or offering for sale adulterated honey. That is in the united counties of Prescott and Russell. I wrote him, but at this time the proposed bill was before the Parliament was not passed, and his answer was he couldn't do anything until this bill became law.

In considering the matter further, I came to the conclusion that it was not on the part of the Crown Attorney to move in the matter; it was, in my opinion, the part of the Ontario Beekeepers' Association to move in the matter and prosecute, if it was found necessary to do so, any parties manufacturing or offering for sale adulterated honey within the Province of Ontario.

Mr. McFarlane—I would answer that in my opinion all that this Association has got to do in the matter is to call the attention of the Executive Department of the Government of Inland Revenue, as to the actual fault, and ask them to put the provisions of the Adulteration Act in force. It is not the duty of this Association, or of any single individual, to collect a sample and send it to any analyst, whether the chief or local analyst, because the act provides in what way the sample is to be taken.

Mr. Holtermann.—The idea is that it is the duty of the Department of Inland Revenue to carry out the law in that, just as it is the duty of the Government to carry it out in other respects.

Mr. Macfarlane.—It is the duty of the Department to carry out the law that has been made by the Government, and a certain sum of money is devoted to that purpose. The Association has a very useful part to perform, to keep the officials who have charge of carrying out the law, up to the mark.

Mr. Pettit.—I would just like to caution the Association to be very cautious about calling the attention of the Government to any case unless they are very sure, because a failure only strengthens the other side.

Mr. Brown.—How are we to be sure? Have we not to procure a sample of this adulterated honey, leave one portion with the vendor, the other with the district analyst, and send the other to the chief analyst?

Mr. MacFarlane—Yes, but that is done by the officer of the Department; not by the single individual that feels himself aggrieved. That is done after the information has been given by the aggrieved person.

Mr. Holtermann—I think the idea is that we should not be reckless and send in a man's name when we have no grounds for suspicion. The idea I have of it is this, that if we have some reasonable grounds for suspicion that we then write the Department of Inland Revenue, the Department takes the matter in hand and if the honey is pure there is no harm done. But at the same time we do not want to put that Department to unnecessary trouble.

Mr. McFarlane.—It is open to this Association, if they feel so minded, to appoint a Committee, before which all such cases shall come. Whenever anyone thinks that illicit selling is going on in one place let it be brought before that Committee and let those gentlemen who understand the matter thoroughly from a practical point of view consider whether it would be right in these cases to call the attention of the

(To be continued.)

REPORT OF THE PROCEEDINGS....

of the Twenty-Seventh Annual Convention
of the

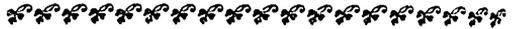
North American Bee-Keepers' Association

Held at

Lincoln, Nebraska, October, 7th, and 8th, 1896.

By Dr. A. B. Mason, Secretary.

(Continued)



Mrs. Heater—I have had some trouble with moths getting into the combs. I have tried putting them into the cellar, but some of the hives standing next to the window where the light reached them, were filled with moth-worms.

Dr. Miller—Put them where they will freeze.

Mrs. Heater—That is where I kept them, but they were filled with moth-worms.

Pres. Root—I have had no trouble in keeping them. Pile your extracting-combs under the brood-chamber, and set the colony on top of the combs.

Mr. Abbott—A very simple way to keep extracting-combs is simply to make a rick with two parallel bars as far apart as the length of the combs, and hang the combs on these 2 or 3 inches apart. Then use a teaspoonful of sulphur and saltpetre, and set fire to it. I have kept them for three or four years in this way, and no moth got into them.

Mr. DeLong—I leave my frames on the hives until I get them ready for winter. Then I rick them up until they freeze, and then keep them in a cellar. I have kept them for three years and not a moth in them.

Pres. Root—A remedy for this is bisulphide of carbon. It kills rats, mice and everything.

Mr. Abbott—It is very dangerous. Some fool might put a match to it.

Mr. Kretchmer—Sometimes tarred building-paper is used. It will keep away rats, mice and moths.

A member—Will the President give us particulars, how to use carbonate bisulphide?

Pres. Root—Make a room as tight as possible. A half-pound is enough for a whole room. It is produced very cheaply—about 10 cents a pound. If fire gets to it, it explodes. In grain mills, they just take the cork out and let it get out into the room. The

fumes prevent any one from coming too near with fire.

A Member—Would it be safe to put it in to a room with a ton or two of comb honey?

Pres. Root—Yes it is very penetrating. Leave the doors and windows open for several hours, and it will all disappear. It will kill bean and pea weevils inside the beans.

Pres. Root—Our next subject, by George W. York, of Chicago, Ill., is

HONEY COMMISSION-MEN AND ADULTERATION.

The subject assigned to me is not only a very important one, but is really a double one—though in some instances as closely united as were the once famous Siamese twins, for are not honey commission-men, sometimes also large adulterators of the sweet product of the bee?

It may be, however, that I can make myself better understood, and also do better justice to my subject, if I speak of the honey commission-men, and follow with a few words on that modern abomination—the adulteration of honey.

First, I want to say that I do not for a moment question the honey commission-men's right to live. They are a necessity—I mean the honest honey commission-men. The other kind may be a necessary evil though I am inclined to doubt it.

I sometimes think that honey commission-men are just what bee-keepers make them, or allow them to become. But some of them, I must confess, are as "wise as serpents" and fully as harmful. It is surprising how easily wide-awake bee keepers permit themselves to be "roped in" by flaming honey-circulars, sent out by new and untried commission men, quoting high prices for honey. If those who receive such consignment-soliciting circulars would stop to consider for only a moment, it seems to me they would be wise enough to know

that any quoted prices higher than those given in the market columns of the bee-papers, must be entirely fictitious, and wholly unreliable—simply thrown out as tempting "bait" to catch the unwary, and easily duped.

I know that we all like to get high prices for our honey or other products, and yet we should not be such blanked fools as to suppose that a new honey-commission firm can secure better prices than an old firm that perhaps has worked up a large and regular demand for honey in its years of upright dealing.

Then the proper thing for honey-producers to do, is it to let new honey-commission firms entirely and severally alone, unless satisfied beyond all doubt of their ability and willingness to do just as they propose.

Residing in what is thought by many to be the greatest honey market in the world—Chicago—I am often placed in a position to discover some things about the doings of honey commission-men that few have the opportunity to learn. For instance, you come to Chicago with one or two carloads of honey. You call upon a large honey-commission firm; they of course are fully informed as to the needs of the market, or, if necessary, they can easily communicate by telephone with all the other large honey-dealers, and in fact no one will make you an offer, but keep you running from one firm to another, always wanting to know your figures on the honey—just what you are asking for it. After one of the firms finally purchases your honey—likely at their own figure—they will offer to divide it with the other honey commission-men at an advance of perhaps 4 cent per pound, or even at the same price they paid for it. Thus you see they really can work together, and there is practically no competition whatever.

Firms with plenty of available cash capital, can buy honey outright, in carload lots, at a greatly reduced rate, and throw it on the market at a very slight advance—one or two cents per pound on carload lots—thus making from \$250 to \$300 per carload, and running the market price down. On the other hand, permit me to quote two sentences from a private letter that I received from an honest honey-commission firm in February, referring to another firm who claim to have plenty of cash capital, and some of whose dealings will hardly bear investigation. The two sentences read

They boldly say that we are the cause of grocers having to pay 10 cents per pound for choice comb honey. Our competition

makes honey cost them so much—more than it otherwise would!"

Again, the dishonest honey commission-men have every thing in their own hands, once they have your honey in their possession. There is scarcely a law by which you can hold them in case you catch them at all. They can sell your consigned honey for whatever they please, and return to you as little as they please. You have only to submit, and next time let such alone if you are wise.

But there are honest honey commission-men. What producers should do, is to find such, and encourage them as much as possible, by giving them their patronage, and endeavoring to aid them in every way they can—by preparing and packing their honey as the particular market requires, and allowing them to be the best judges as to the best time to sell. By crowding the honest and careful commission-men, you may often cause the loss of quite a good deal on your shipment. Forced sales must always be at the lowest figures.

But honey commission-men are not the worst evil with which honey-producers must contend, as we shall presently see.

The world has had what is known in archæology as "Ages"—the Stone Age, the Bronze Age, and the Iron Age. But just now we seem to be in the midst of another "Age," namely, the Adulteration Age! It appears that everything susceptible of adulteration is besmirched with this growing, devastating fraud. Sanded sugar, corn-cobbed maple syrup, watered milk, paraffined beeswax, and glucosed or corn-syruped honey. But enough for our consideration, perhaps is that of honey adulteration.

Who are the slimy bipeds, guilty of the adulteration of our pure, sweet product? They are mainly the city wholesale grocers, the syrup mixers, and some of the so-called honey commission-men! I am credibly informed that out of 40 of the largest city customers of a certain Chicago honey-dealer, 27 adulterate the honey they purchase! Think of that, my fellow bee-keepers! How many times over can those 27 frauds multiply the honey product, when the price of glucose-day in Chicago is but a trifle over one cent per pound?

You have often seen one-pound tumblers holding a clear liquid with a piece of honey-comb in it. Well at least one honey commission-man in Chicago puts up such, and there is just one cent's worth of pure honey in each tumbler, and the rest is glucose. It retails at 10 cents, and costs 3 cents, including the glass tumbler.

Why is glucose used almost wholly as a honey adulterant? Because it carries no taste or flavor of its own—so that when only a little honey is added it gives the honey flavor to the whole; Another reason is, that glucose does not granulate as does most of the pure extracted honey; this latter is looked upon with suspicion, hence as glucose does not candy, it is a feature in its favor with the uneducated.

The agent of one Chicago adulterating firm said they had to have a piece of comb in each tumbler, as that is the only way people would buy honey (?) put up in glasses nowadays. And that shows there is a great lack of education or information on the part of the consumers these days concerning pure honey.

So long as the glucose business holds out, it matters not how limited is the genuine honey product on the market, under existing circumstances.

Now, fellow bee-keepers, what can we do to stop this gigantic evil which threatens to destroy the legitimate and honorable industry of honey-production? Why, unite, and push for the enactment of a prohibitory law that will compel the entire cessation of honey and other adulteration, or the requirement that every package of food products offered for sale shall bear upon it, in conspicuous letters, the true name or names of the contents. Then if a consumer desires to purchase glucosed honey, let him do so, and not be deceived into buying the adulterated article when he thinks he is getting the Simon-pure honey.

But some will say, "You can't enforce such a law!" I say we can. How? Elect men to office and not politicians; men who are honest, who are not afraid to do their duty. Then when our officers attempt to put down our common enemy—the honey adulterators—let us give them all the help within our power, instead of standing around and whining, "You can't enforce it!"

Until bee-keepers have in their hands this legal weapon with which to pulverize the monster of honey-adulteration, I can see in the future no encouragement for our pursuit. But equipped with an adequate anti-adulteration law, bee-keeping would go marching onward with the full assurance that its devotees have an even chance to become thrifty and prosperous in a pursuit that endeavors to place upon the table in every home, one of Heaven's purest and best sweets—honey, as gathered by the blessed bee.

GEORGE W. YORK.

Chicago, Ill., Oct. 1. 1896

At the close of Mr. York's paper, Pres. Root said: "Now friends go on."

Dr. Miller—I endorse the whole thing, heartily.

(To be Continued.)

DEEP CELL FOUNDATION.

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When Mr. E. B. Weed was in Canada perfecting the sheeting machine, he privately informed the editor of The Canadian Bee Journal and showed him his plans for securing deep cell comb for brood and surplus. I was immensely taken with the idea, and the only difficulty I saw in the way was that of being able to produce it, or manufacture it at a cost that it could be put upon the market at a price bee-keepers could afford to pay for it. I saw that a deep cell foundation half the depth of natural comb, and ten to twelve square feet to the pound would have this immense advantage. For brood, the queen could lay in it at once and the bees begin to store honey and pollen, and one pound of this more valuable product would go twice as far as medium brood. In other words if the latter were 50c. per lb the deep cell going twice as far, could sell at \$1 per lb. and bee-keepers have for nothing the immense advantage of the deep cells. As to comb think of having deep cell foundation or half drawn comb in the sections, the bare and side wall as thin as the natural. No fish bones. The sections ready to store honey in. How the bees will rush into them instead of swarming. The sections can be filled tightly all around, and there will be no narrow pop holes for the bees will not gnaw down so deep a side wall. The comb attached all around will not be liable to break down. If this can be made a success. It will be one of the greatest steps in bee-keeping. Mr. E. B. Weed deserves great credit for his work. The A. I. Root Co also deserve credit for the assistance they have given. This comb can only be put upon the market in samples this season. For more stamps I will try and mail every Canadian applicant a piece of comb. Those ordering first shall receive first, but it will likely be some little time before the order will be filled. More next month. Address

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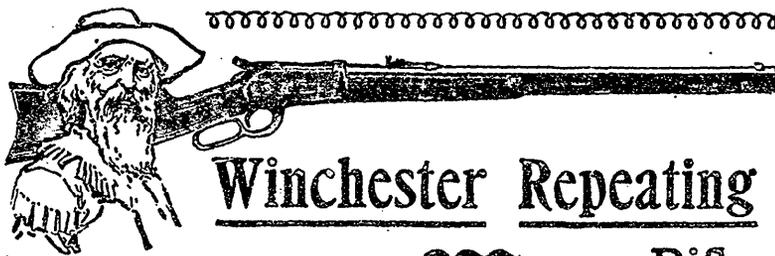


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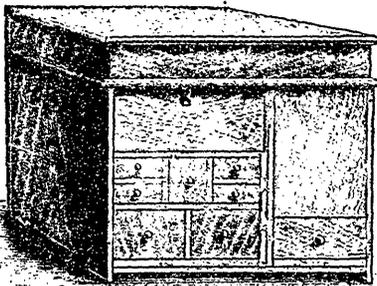
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