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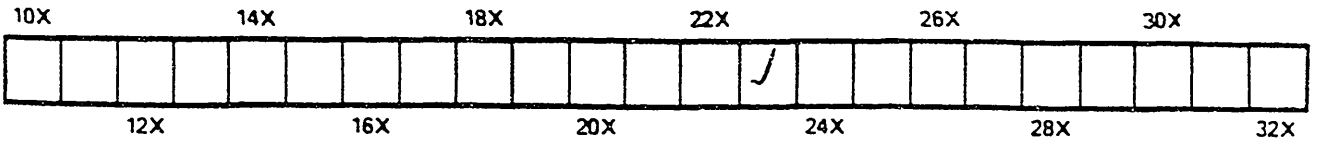

THE CANADIAN

Honey Producer.

Its Reading Columns for the advancement of Honey Producers exclusively.

Vol. 2. BRANTFORD, OCTOBER, 1888. No. 8.

The Canadian Honey Producer,

PUBLISHED BY

E. L. GOOLD & Co.,

BRANTFORD, - - - - ONTARIO.

Published Monthly, 40 cents per year.

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The Subscription price of the Canadian Honey Producer is 40 cents a year. 3 subscriptions at one time, $1.00 to one or more addresses.

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TO CONTRIBUTORS.

We will always be pleased to forward sample copies to any.

We will thankfully receive for publication items of interest to Bee-Keepers, and we would like to have every issue of the paper contain at least one good article bearing directly upon the management of the Apiary for the coming month.

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THE CANADIAN

HONEY PRODUCER.

Vol. 2. October, 1888. No. 8.

COOK'S MANUAL OF THE APIARY.—The thirteenth edition of the above work is out, and is a very great improvement of an already valuable work. The price will be $1.50. It is scientific as well as practical. Of Frank Cheshire's work upon "Bees and Bee-keeping," Prof. Cook says, "This is a compilation. Many of the pages and illustrations are taken bodily from such writers as Schemenz, Gerard, Wolff, etc., and we are pained to say, generally without any credit whatever."—We have been aware of this fact for some time, and although the work is a valuable one, yet Mr. Cheshire must fall in the estimation of men for taking unto himself undue credit.

BUCKWHEAT.—Mr. S. J. Youngman in the *American Bee Journal* asks if it is characteristic of buckwheat to yield honey only in the morning. Honey is secured from buckwheat generally till about 10 or 11 o'clock. The reason is that it requires moisture and secures it from the dew. If there is no dew there will be but little honey in the buckwheat. Again, if we have a cloudy day and light showers there will be buckwheat honey in the blossom all day. Such a day we had lately and one colony gained 10 lbs. that day.

The *Canadian Bee Journal* under the Toronto Exhibition says: "In the supply department there was but one exhibitor and all the prizes went that way whether sufficiently meritorious or not." The editor must surely be ignorant or untruthful. The prize list especially stipulates that no prize need be given unless the article merits such, and instructs the judges so to act. The judges at Toronto also mentioned this fact to the exhibitors. Too bad that the firm conducting the paper should be so situated as not to exhibit and then mislead the public, trying to belittle those that do show.

The D. A. Jones Co., Limited, dealers in supplies and publishers of the *Canadian Bee Journal* are desirous of securing one or two young men with $2000 or $3000 to invest in their business, and assist in managing their supply business. They head it "A rare chance."

No doubt some will have neglected feeding their bees. This should be done at once. Take granulated sugar two lbs. and one lb. of water, bring the mixture to a boil. Feed at a temperature of about 80 degrees or even 85. If the weather is cool it will be taken up more readily.

For The Canadian Honey Producer.

Preparing Bees for Winter, &c.

BY G. W. DEMAREE.

I have had reasons heretofore to say that locality, climate, &c., must be taken into consideration when preparing bees for wintering. The precise manner in which I prepared my bees for winter as suited to my locality, and adopted to the climate of Kentucky, would not be safe to follow in a rigid northern climate. Hence every Bee-Keeper must depend somewhat on his own judgment, and his own experience. To prepare my bees for winter I wait till the fall flowers are killed by the first killing frost which may visit these parts at any time between the 20th of Sept., and the middle of Oct. In the average years we have some nice weather after the first frosts have destroyed the bloom and I take advantage of this to overhaul my bees. The surplus cases are removed, and the brood chambers are examined, and if they do not contain sufficient stores they are replenished by exchanging full combs of sealed honey for the empty ones in the brood nest. The question rises here, How much sealed honey ought a good strong colony have to insure their safe wintering, and to supply the heavy draw on stores in the Spring for

brood rearing. Well I would like all my strong colonies in ten frame L. hive to have 6 full frames of sealed honey, three on each side and the four middle frames filled with honey one-third or one-fourth from the top bars downward. This would give at least 35 lbs. of honey. Good colonies thus supplied in my yard are a dead sure investment. The old stores not consumed, if there be any left when the Spring flowers begin to yield a support, is not lost as the bees will take care of it. If any of it is carried into the surplus department no harm is done, as it is pure honey, but such is not the case if sugar is fed to the bees for winter stores, for if the bees shift the old sugar stores to the surplus department, which they will never fail to do if it gets in the way of the extension of brood, you will have sugared honey, that is, your honey will be adulterated with sugar syrup.

No Bee-Keeper can afford to sell mixed or adulterated honey. What then, if we do not have enough honey to supply our bees? In that case we must feed sugar, and we can manage so as not to impose on our customers. Let the colonies be supplied with what honey is at our command and then supply the rest with sugar syrup, and the following season take the first surplus from the sugar fed colonies with the extractor and keep it separate from the main crop and use it for feeding, or sell it as *mixed* honey. This is the only honest straight way out of the difficulty. Those persons who are practical and advising the plan of forcing all the honey into the surplus with a view of swapping sugar to the bees for honey, are perpetrating a gigantic fraud on the public, by selling *sugar mixed honey*. It is not a matter of very great wonder to me that the agricultural chemist, Prof. Wiley, has pronounced so many samples of honey "apparently pure," and "apparently mixed, &c," The wholesale feeding of sugar for winter stores must necessarily bring suspicion on the purity of the honey of commerce.

After supplying the brood chamber with winter stores the bees are confined to the brood nest by spreading a cloth over the top bars of the brood frames, first placing two or three pieces of split corn stalk on the frames to give circulation between the cloth and the tops of the frames. Now a shallow super (I use empty section cases,) is placed on the brood chamber and partly filled with some good absorbent. Between chaff, sawdust, forest leaves, and ordinary bee quilts, I have discovered but little difference. In this condition I consider my bees entirely safe. Further north packing at the sides of the hives seems necessary, and this is easily accomplished by placing an outer case around the hive and filling in between the outer walls of the case and the hive.

As to whether bees ever freeze to death or not, is perhaps a question not easily answered? sometimes a colony will apparently succomb to cold, while another colony no better protected will come through all right.

I once had a colony of bees to survive in good shape, a dive of the temperature to 20° below zero, when they had no covering over the top bars of the frames and the hive cover rested on the top of an empty super ten inches above the top bars of the brood nest. I do not approve of crowding bees in their winter quarters, "Honey Comb" is nature's nest for bees in winter and at all times. Bee diarrhea is caused by a humid atmosphere around the cluster of bees, preventing the usual escape of moisture by exhalation from the bodies of the bees, thus a dropsical trouble follows, resulting in what is called dysentary or diarrhea.

The presence of pollen is only an aggrevating element. This I have proven by the application of artificial heat at intervals of about 10 days during the winter months.

Since August 16th we have had an abundance of rain, and our bees will most probably gather plenty of stores for winter, and perhaps some more.

Christianburg, K'y.

For the Canadian Honey Producer.

To Prepare Hives for Wintering.

DR. DUNCAN.

About two weeks after removing the surplus cases whether comb for extracting or sections; you will find some of the colonies short of stores; when the brood are all hatched out is the proper time to weigh them, the weight of the brood is sometime mistaken for honey; again late swarms and second swarms will be found light; the sooner they are fed up to the proper weight for wintering

the better, a strong swarm will require about 20 lbs. of honey or fine sugar syrup to winter; if you want to winter small swarms contract them by division boards to four or five frames according to the number of bees, they ought to cover nearly all the frames at this season of the year, if their are not bees enough to cover four frames unite them with another small swarm or neucleus, about 10 lbs. of honey will carry them through; another method besides feeding is to equalize, then take a frame from those that are extra heavy and exchange with a light one; but unless they are extra heavy it is best to let them alone; when you have them all fed or equalized, the next thing is to prepare them for winter quarters, for cellar wintering there is not much packing required. Langstroth frames don't require winter passages cut through the comb, for cellar wintering only a winter passage under the quilt by making a bridge with two ½ inch pieces laid across the top of the frames under the quilt which ought to be done before cold weather sets in to give the bees a chance to seal everything tight by propolis, as upward ventilation is not necessary, put on your cushions to keep the brood nest warm until they are put into the cellar then you may take them off if your cellar is at the proper temperature, viz., from 40 to 45 ° in the coldest weather; contract the doorway to keep them warm and prevent robbing but open wide when put in and if you see any signs of dysentry clean out all dead bees and put some air slacked lime in on the bottom board as far back as you can; and also scatter some on the cellar floor; if you have your hives well stored with *good honey*; a good swarm of young bees; a good queen not over three years old; good comb, viz., not drone comb; and free from disease; a cellar that is warm and dry; there is every chance they will come out all right in the spring.

Embro, Sept. 10th, 1888.

The Farmers' Advocate.

CLIPPING QUEENS' WINGS.

Some bee-keepers who appear unable to place themselves in the position of a farmer, or in fact anyone who has but little practical experience with bees, and yet keep a few hives for pleasure and profit, will often advocate the clipping of queens' wings. Now let us look at the question in detail. The object of clipping a queen's wings is briefly to prevent her leaving the hive with a swarm. The queen *by an experienced hand*, may be caught at the entrance and caged. The old hive may be removed and the new one put on the old stand, and the queen placed in a cage and put upon the combs or foundation in the new hives. The swarm finding that they have lost their queen will return to their old home, or rather the place where their old home was, and which is now occupied by the new hive, and they joyfully enter and remain with the queen. All this is well, and the ease with which the swarm has been hived pleasing, but we are supposing that all will be rightly done. But how is it with the novice? How many find it difficult to detect a queen even in the hive when all is quiet, and how many will point to a drone even and say, "There she is." Let the reader answer for himself. Enough to say there are many who will not be able to detect the queen as she issues with the swarm, and not being able to fly she will hop or run out from the hive and be lost from the swarm and often the swarm returns having lost its queen. Again, as one must watch the bees all the time, the presence of the bee-keeper is required when the swarm issues, and he must be there to tell from which hive the swarm issues, or he may again loose his queen. In this way valuable queens may be lost, and the swarm returning to the hive has to wait till the young queens may emerge from the cell, when a dozen young queens may go out with the swarm, and the bee-keeper has after all to hive his swarm with the queen; for her wings will not have been clipped. The colony has lost the use of a laying queen from the time that a swarm emerges until the young queen has become fertilized and is laying. This latter may or may not prove a disadvantage, depending upon the time the bees swarm and the duration of the honey season. If the queen is lost four or five weeks before the honey season closes it is a loss, as the worker bee hatches in 21 days and becomes of use one or two weeks after she hatches.

Of course there is an advantage in clipping,

it may be argued, and the advantage is, that should a swarm issue and not be seen, the queen may be lost but the swarm will return. So it will; but what then when the young queens hatch the swarm they leave with them and you may all the time be lulled into false security and think the clipped queen is still in the hive.

Clipping queens' wings is all right if you are an experienced hand and can watch your bees and look for the queen the moment a swarm commences to issue. Under these circumstances clip by all means, and now how shall you clip? The bees are very keen at detecting a foreign scent, and especially dislike it if on a queen, therefore you should avoid touching her person any more than necessary. Therefore, after having found her take her by one wing and clip it half off if you can. If you cannot to advantage, cut this wing cut the other half off. Some will, without thinking, imagine the wings clipped on both sides would be better, but such is not the case. If the bees show an inclination to pile on the queen to sting her to death, smoke them and shake all bees off a comb and let the queen run on it; by the time the bees reach her she will be calm and normal in her movements, and all danger will be passed.

It will also be remembered that a queen is impregnated when on the wing, and only once in her lifetime. Cases have been known where a novice has clipped a virgin queen's wings to keep a colony from leaving the hive. This means the destruction of the colony, for the queen cannot take wing to be impregnated, and she being unable to produce anything but drones, the colony must perish; therefore be sure your queen has been fertilized before you clip her wings.

Brood Combs—Some Practical Points by Dr. C. C. Miller.

(*Concluded*)

Now, I suppose there are a great many like myself, with combs by the thousand more than four or five years old. We do not want to have the trouble and expense of renewing all these; but if there is any gain in it, we must do it. Although some of these things have somewhat shaken my former views, I confess I am anxious not to be convinced that it is necessary to remove combs four or five years old, and will be obliged for any facts that may help to stiffen my faith.

Looking at the old comb an inch thick, and pulling it apart, I find it has a division wall made chiefly by the successive deposits left by the brood at the bottom of the cell, these deposits in each cell being about a sixteenth of an inch thick If such addition were made to all parts of the cell-walls, the cells would be each one narrowed about an eighth of an inch, making the cell less than half its usual diameter; and it is easy to believe that bees raised in such cells would pe a "pigmy race." In the comb under examination, however, I find that the addition is only at the bottom of the cell—at least, the addition to the side wall is very trifling. Is this the general rule, that, in old combs, the bottom of the cell is gradually filled up, but that the diameter of the cells remains practically unchanged? If this be the case, then perhaps we may conclude that the only matter necessary to consider, as combs grow old, is to see that sufficient additional space is allowed between combs to make up for their increased thickness. Is anything further necessary?

C. C. Miller.

American Bee Journal.

ON THE SCALES.

Testing the Storing Qualities of the Bees for Years.

Written for the Farmer and Dairyman.

BY D. KAUFFMAN.

I have had one of the best colonies in my apiary on a scale during the last six years, in 1886 I marked down the amount gained for the day every night, and also kept a close watch on the amount of surplus honey stored, and from this I found that when bees gain from one to three pounds, about one quarter of the gain is stored as surplus honey, and when the gain is from 3 to 8 pounds, about one half is stored as surplus honey, and from the record kept for this season, about two-thirds was stored as surplus honey. These experiments were all made for extracted honey.

But it seems to me that the rearing of brood would not have anything to do with the gain of a colony of bees, for if the bees did not feed the brood it would not gain in

weight, and if they take the feed from within the hive, it would not get any heavier, on account of the brood; but it would make a difference in the amount of surplus honey stored, and when bees gain from 10 to 16 pounds per day they will lose from 3 to 5 pounds during the night; and should the next two or three days be cool or rainy, so that the bees could not fly, they would loose about 3 pounds in the first 24 hours, 2 pounds in the second, 1 pound in the third, and ½ pound in the fourth day.

This loss is caused by the evaporation of the honey, and I think it is nearly as great when bees gather honey as it is when they do not, so that this would make the actual weight carried in by the bees during one day from 3 to 5 pounds more than the scales would show by weighing the hive in the morning and again in the evening; and I believe that when bees gain at such rates the old ones wear out as fast as the young ones come on, for they fill up the brood-combs with honey as fast as the young bees hatch, so that the queen will not be able to find any empty cells to put any eggs in, especially when running for comb honey.

I believe there were one-fourth less flying, or working bees in my apiary, at the close of the season than there were when I first put the scales under the hive on July 28th, and three-fourths less brood.

I think that it is a great help to have a hive placed on a scale during the honey season, for you can tell just what your bees are doing, and how fast you will have to get your sections ready to put on, how much more room they need, &c., from two to five days sooner than you would if you had no scales, and these few days would amount to several hundred pounds of honey for each day in an apiary of from 50 to 100 hives.

From the British Bee Journal.

SUGARS—FEEDING UP FOR WINTER.

We think the season of 1888 may be reckoned as the most disastrous that modern Bee-keepers have ever experienced in the British Isles. Flowers have been plentiful, but when in bloom the weather prevented the bees leaving their hives and also retarded the secretion of the necessary nectar in them. In consequence of this, many stocks at the present time are either starving or bordering on that condition.

Having satisfied ourselves that "feeding up" is now the only and most remunerative course to pursue, the next question to arise is, What to feed? There is such a variety of sugars on the market that the novice scarce knows which to choose, and even when he does know the description of sugar, the form in which it is to be given to the bees is a stumbling-block. "Dry sugar feeding," says one; "Syrup," says another; "Candy," another; "'Good' candy," a fourth; "Place the sugar in a dummy-board," advises a fifth; "No, don't; put it on top of the frames." chimes in a sixth. Well, between all these numerous words of advice, he becomes bewildered, and gives the apparent enigma up in despair; and yet each of these advisers is giving sound advice in as far as the different requirements of a colony at a given time necessitate. A little reflection on the part of the bee-keeper will prove to him that dry sugar feeding alone during the coming season will be of no use whatever; the food given must be syrup—good thick cane sugar syrup; no washy sugar-and-water—we might almost say, water and syrup. We have for some years tried dry sugar feeding, and have found it in some cases very useful, but where a colony has little or no natural stores it has invariably been a failure; times and times have we endeavoured to rear condemned bees placed in fully-built combs upon dry sugar, but always failed. A colony at commencement of winter having six or seven pounds of stores, if fed on dry sugar will die out, or be of little use the next season, but where a colony has just a shortness of stores barely enough to last it until the following spring, then dry sugar feeding will be invaluable, and so will candy, both ordinary and 'Good.' Having then satisfied ourselves that for the present season, at least, syrup feeding is our only resource, it behoves us to consider what sugar to use, how to make the syrup, and how to feed. The first question is, perhaps of the greatest importance, as the quality of—we cannot call it adulterated—unsuitable sugar for bee feeding on the market is enormous.

Sugar at the present time is obtained com-

mercially from a variety of vegetable substances. After describing various sugars, the editorial says: We now come to a description of sugar which we have found eminently suited for bee-feeding, not only have we found it useful and suitable in this respect, but we never use any other description upon our table, as its clean sweetening properties are far before loaf and raw sugars. It is called 'granulated.' When this was first brought berore the bee-keeping public one manufacturer only produced it, Duncan; it then was known by the name of 'Duncan's Pearl Sugar.' This firm ceased refining, and certain manufacturers in America purchased the royalty, manufacturing and importing large quantities to England packed in barrels of about 238 pounds; unfortunately during the last few months no consignments of this sugar have been received in England. This sugar made a splendid clear thick sprup if half-a-pint of water was added to each pound of sugar and made in the ordinary manner. The forgoing sugar being now beyond our reach, we have found an excellent substitute for same in a granulated sugar, manufactured by two firms, viz., Messrs. Geo. Crosfield & Co., of 6 Stanley Street, Liverpool (registered trade-mark C. in a diamond,) and Messrs. Lyle, of Glasgow and London; both these firms guarantee their granulated sugar as perfectly free from beet. These firms, being refiners will not supply a private individual, but any respectable grocer will obtain the sugar for a consumer; the wholesale price is from 19*s.* to 20*s.* 6*d.* per cwt.; of course, the grocer will require a profit on these prices, the rate would be about 3*d.* per pound in small quantities or in hundredweights about 24*s.* to 25*s.*

The answer then to the question, What sugar to use in making syrup? will be found to be granulated guaranteed by the makers to be free from beet. How to make the syrup is answered also in the above paragraph, and will also be found in any modern manual of bee-keeping.

How to feed is then the next question. The ordinary regulating bottle-feeder will be of little service this season; a fast feeder must be used. There are plenty of these to choose from, and where expense is of little object any of the boxes with numerous divisions, upon the principal of which most fast-feeders are now made, can be used, but there are other and cheaper methods of making a fast-feeder, the following one we frequently use:—Obtain a 2*d.* tin dish, having almost perpendicular sides, into this place a wood float almost fitting the dish, and having a number of holes, freely dispersed, bored through, we place this on top of the frames, after filling it with syrup, and under the quilts, allowing, by laying pieces of wood across the tin dish, the bees to work up over the edge and take the syrup down. This feeder costs 3*d.* It is not what we call a tidy way of doing it, but it answers as well as the most expensive feeder. The dish is refilled through the hole in the quilt, and will hold about four pounds of syrup. The quilts must be tucked down snugly all round. A good stock with this feeder can be fed up in about ten days or less if weather is warm.

It is very noticeable that beet-sugar is objected to by most bee-keepers, and rightly so. Although beet-sugar is, chemically speaking, cane-sugar, it is vastly inferior in its saccharine properties to sugar made from the sugar-cane. If we place a quantity equal in bulk to what we usually find with sugar-cane sugar sufficient for sweetening a cup of tea, it will be found quite unsuited to our taste, necessitating a further addition of at least one forth the original bulk. Bees fed on same do not winter in at all a satisfactory manner, therefore we think that a knowledge as to where to get a sugar free from beet will be of great service to our readers, and likewise a comfort to our poor little dependants through the rigours of the winter 1888-9.

Gleanings in Bee Culture.

Miscroscopic tests of Honey—are they infallible?

FRIEND COOK RENDERS IMPORTANT SERVICE IN ANOTHER SERIOUS CRISIS.

Friend Root:—Your inquiry in reference to the reliability of the scientific tests for honey is very opportune. I made the past winter, in revising my book, a careful investigation of this whole subject, and I am led to doubt the existence of a sure test for honey, either chemical or by aid of the polariscope. As you doubtless know, there are

two kinds of sugars—cane, and the glucose group, or reducing sugars. The latter are so called because they reduce the copper sulphate, when made strongly alkaline by the addition of caustic potash. Of the reducing sugars we have the glucose of our factories, honey, liver sugar, digested starch, or the sugar of digestion, etc. The chemist using the copper test as given above calls all these sugars identical, simply because they give the same reaction with the sulphate. I don't believe they are the same. If so why will bees forsake common commercial glucose for honey? or why will they die on the purest commercial glucose, and thrive on good honey? Cane sugar will not reduce the copper salt; and when eaten by animals it must be digested to be absorbed and assimilated. Thus when we eat cane sugar we do what the bees do with nectar—we convert it into a reducing sugar, very likely the same as honey.

As will be seen by the above, nectar contains cane sugar. Indeed the cane sugar in nectar often equals in amount all the other sugars put together. Analysis show, however, that the amount of this cane sugar in nectar varies. Let this be remembered: *The amount of the different sugars varies in the nectar of different flowers.* Again, as the bee sips nectar it is mixed with the secretion from the racemose glands of the head and thorax; and this acts like our own digestive secretions on the cane sugar, and changes it to reducing sugar. Now, suppose the bees are gathering very fast from the basswood, for instance, where a single colony may gather over 20 lbs. per day; does it stand to reason that they can digest this nectar as perfectly as though they were gathering from some source where they secured their stores in mere driblets? Thus in such cases of very rapid gathering the digestion would be less perfect, and the honey would contain much cain sugar. May this not account for the marked sweetness of basswood honey? In this connection it is suggestive that, in the various analysis which have been made of honey, the amount of cane sugar varies. Thus I find the analysis generally give from one to three per cent of honey as cane sugar. Yet not infrequently the amount equals five or six per cent. while in some cases even twelve and sixteen per cent of honey has been found to be cane sugar. Here, then, mark the second uncertainty. Owing to the more or less rapid gathering, the digestion of nectar is more or less perfect. The chemist then, would find much cane sugar, and would report adulteration, when the honey was entirely pure, right from the bees, and through them from the flowers: but owing to imperfect digestion, the cane sugar was very prominent. Such honey would be sweeter than though more reduced, or digested, and so might have higher intrinsic value.

We see, then, that the chemist cannot tell us absolutely whether honey is adulterated or not. There is reason to believe that absolutely pure honey has been pronounced as probably adulterated. The chemist was honest and able, but did not understand the whole question or its many difficulties.

But what of the polariscope test? This test depends on the property of various sub stances to deflect the rays of polarized light to the left or right. Thus, cane sugar changes the polarized ray to the right; so does dextrose, one of the reducing sugars of honey. On the other hand, lævulose, another of the elements or sugars of honey bends the ray strongly to the left. Dextrose and lævulose are often called invert sugars; for when cane sugar is heated with a mineral acid like hydrochloric it is changed to dextrose and lævulose. Dextrose and lævulose are obtained from fruits as well as from honey. Glucose is a term used to designate all the invert or reducing sugars, and is exactly synonymous with grape sugar.

Now, usually honey rotates the ray of light, owing to the lævulose, from two to twelve degrees to the left. FROM TWO TO TWELVE. Are not these numbers very suggestive? In the first case, two degrees; there was likely much dextrose, possibly aided by not a little cane sugar or sucrose; while in the latter case the lævulose was in the ascendency. Now suppose the ray bends wholly over to the right. "Heyho!" says the scientist—"adulteration!" When, in fact, it was pure honey; but the cane sugar and dextrose were still more pronounced. Surely, if the ray often varies from two to twelve, left-handed rotation, we may certainly believe it will often show a a right-handed deflection. I fully believe that we have as yet no reliable methods to detect adulterations.

I am very certain that adulteration is never practiced by bee-keepers, and is very rarely practiced, if at all in these days, by dealers This opinion is not a mere guess, but the result of extended inquiry.

To conclude, Mr. Editor, I have already commenced just such a series of experiments as you suggested in last GLEANINGS. By aid of our chemical department we shall soon know the exact truth of the matter.—We shall not only test the present methods of analysis thoroughly, but shall strive to find if there is a method which is sure and practical to tell pure honey from that which is adulterated.

I have several kinds of pure honey, but I wish more. May I ask the subscribers of GLEANINGS to send me, say a pint of honey? I should like many samples and know in each case from what source the honey was gathered. Will those who *know* they have a pure article of some special kind, as basswood, clover, buckwheat, teasel, tulip, fruit, etc., send me a pint or quart? I will pay express. Before sending, please drop me a card stating kind, and I will write instructions for sending.

A. J. COOK.

Agricultural College, Mich.

CORRESPONDENCE.

Edmonton, N.W. T., Aug. 22nd, 1888.

Opened 2 first swarms yesterday, 21st inst. Both are full brood in abundance, and if weather hold fine will have to take swarm from each this week. My experience in this country goes to prove that a man thoroughly up in Bee culture in Ontario is very much at sea here. Four weeks old swarms have built up 10 frames in Mitchel hive complete, making all comb, &c., after swarm 12 days old in Langstroth hive have filled up ready for super. Have taken 40 lbs. surplus, which am retaining for any emergency. Honey boxes on two parent swarms and two first swarms. Will not sell any stores this season.

Yours,

J. KNOWLES.

SUNDRY ITEMS.

T. Black, Eastcoat, secured 4000 lbs. of extracted honey, and 500 lbs. of comb, being an average of about 50 lbs. to the colony.

C. W. Post, Murray P. O., started the honey season with 210 colonies, increased to 260 and took 5000 lbs. of honey and enough for winter. He has three apiaries.

F. W. Jones, Bedford, Que., took 6000 lbs. of comb honey and fed about 1000 lbs. back, he commenced the season with 180 colonies and increased to 230.

Wm. Couse, Secretary Ontario Bee-Keepers' Association reports that he fed a colony 30 lbs. of syrup and four days after feeding weighed it and found it had only gained in weight 19 lbs.

Bee-keepers weigh your colonies after feeding to see that they have sufficient stores. We have several times tested this matter by actual weight and find the results are frequently about as Mr. Couse stated.

Geo. Hewton, New Market, Ont., increased from 6 to 7 colonies and took 240 lbs. of honey and more than sufficient for winter.

ON THE WING.

THE APIARY OF WM. COUSE, SEC'Y OF ONT. BEE-KEEPERS' ASSOCIATION.

The five o'clock train, C. P. R. brought us to Streetsville, where we were met by Mr. Couse who it will be remembered had his entire stock of bees and fixtures destroyed by fire at Meadowvale a little over a year ago, We drove to Meadowvale, the place where the apiary is situated, an orchard with abundant shelter, although not too thickly planted, the only difficulty is, there is no breeze, and often very warm in Summer. Mr. Couse has rows of corn planted to afford shade for the bees and we should think this would also afford some protection from robbers when handling bees in the Fall. A Bee-Keeper can dodge from one row to another and with some success keep robbers off.

Mr. Couse purchased his new stock of bees in the Richardson hive, and for a honey hive he likes it very well, although he admitted quite freely the improved Langstroth Frame would be hard to better. Right here let us say it would be folly to say a hive just about the dimensions of the Langstroth is no good for honey production and must be just the Langs-

troth, the frame best suited for one queen may not be for another, but we would say most emphatically the Langstroth is as good as any ; it is used more generally than any other and a Bee-Keeper can dispose of colonies in these hives more readily than any other. If he adopts a hive of his own make or one not generally used, he must sacrifice his goods and sell at a reduction,

Mr. Couse has secured but little honey and was feeding his bees for winter when we visited him (Sept. 8.) He feeds from the top in an upper story, the quilt is thrown back at one corner, the feeder consists of a box holding about 5 lbs., waxed at the joints to prevent leakage ; some dry grass is thrown into the box and when the feeder is filled rises with the syrup. The feeder costs about 5 cents and works well.

Mr. Couse like many other Bee-Keepers has no returns for his season's work, he had to pay out money to keep his bees alive and has the winter before him.

THE APIARY OF DR. THOM, STREETSVILLE,

Ex. Pres. Ont. Bee-keepers' Association.

It will be remembered that Dr. Thom has been prominently connected with the Ont. Bee-Keepers' Association, he having held the position of President, and we believe was the first to suggest the exhibition of honey at the Colonial and Indian Exhibition.

Dr. Thom's apiary does not present a very inviting picture at present to the Bee-Keeper. There are great piles of empty hives which have been scalded and disinfected. Several hundred pounds of wax have been rendered and out of a once paying and prosperous apiary about 40 colonies remain, and these have sufficient stores for winter, and Dr. Thom thinks it may be throwing good money after bad to feed them. Foul brood is the trouble ; some years ago traces of it appeared in a comb here and there, but for two years it was kept under and gave but little trouble, but the last two years it has made terrible inroads and nothing appears to have been effectual in checking it. Mr. Couse who is a careful and conscientious Bee-Keeper, we think, will give us an article stating what he has done. His experience and results as far as that experience goes,—solid facts in short, and leave conclusions to themselves.

It is needless to say that Dr. Thom has not made any money on bees this season. Dr. Thom was the first man that we know of who turned the Jones' frame on its side. Mr. Jones followed him, only the latter spoiled what merit the hive possessed by diminishing the number of frames.

THE TORONTO INDUSTRIAL EXHIBITION.

The season has not only proved disastrous to the bee-keeper but the supply dealers have also felt the depression resulting from an almost complete failure in the honey crop.

Whilst the quantity of honey has diminished greatly there is certainly no degression in the quality of extracted honey and neatness of display. The exhibitors in quantities are R. McKnight Owen Sound, J. R. Smith, Bracebridge, R. F. Holtermann, Brantford. Mr. McKnight by the aid of potted flowers, mountain ash berries and 1 lb. bottles and other glass has decidedly the nicest display of honey ever seen in the Toronto Exhibition grounds. The display of R. H. Smith and R. F. Holtermann is also very neat and fully up to the display of A. G. Willows last year, which attracted so much attention.

There was no entry in 1000 lb. display of comb honey and the entire quantity of comb honey in the building will not exceed 300 lbs.

There were two entries in granulated honey and the display in this line is fully sufficient to educate the public as to the possibility of this article assuming that form and is all that is desired.

In bee-keepers' supplies the exhibit of E. L. Goold & Co. is good, they show a full line of bee-keeper's supplies, it is better than last year and well meritted the silver medal awarded them.

Will Ellis, St. Davids shows an excellent article of comb foundation.

Jacob Spence, Toronto, shows in glass as well as Mr. McKnight ; the glass display of the latter is imported, that of the former from Nova Scotia, both have some excellent packages and both a number of packages entirely worthless for marketing honey.

The following are the awards, the judges being ; J. Dunn, Ridgetown; Allen Pringle, Selby; W. McEvoy, Woodburn.

Best display of Extracted Granulated Honey in glass, not less than 200 lbs.

1st, equal, { J. H. Smith, ...$7.50 / R. F. Holtermann, ...$7.50

Best display of Liquid Extracted Honey, not less than 1000 lbs., not less than 500 lbs. in glass, quality to govern.

1st, R. McKnight, ...$20.00
2nd, R. F. Holtermann, ...$15.00
3rd, R. H. Smith, ...$10.00

Best display of Comb Honey in sections, not less than 20 lb., quality to be considered,

1st, R. McKnight, ...$8 00
2nd, R. H. Smith, ...$4.00
3rd, R. F. Holtermann, ...$2.00

Best display of Liquid Linden Honey in glass, quality considered, not less than 50 lbs.

1st. R. McKnight, ...$5.00
2nd, R. F. Holtermann, ...$3.00
3rd, R. H. Smith, ...$2.00

CLOVER HONEY.

1st, R. H. Smith, ...$5.00
2nd, R. F. Holtermann, ...$3.00
3rd, R. McKnight, ...$2.00

Best Beeswax, not less than 10 lbs.

1st, Will Ellis, ...$3.00
2nd, R. H. Smith, ...$2.00
3rd, R. F. Holtermann, ...$1.00

Best Fnd. for brood chamber.

1st, E. L. Goold & Co., ...$3.00
2nd, Will Ellis, ...$2.00

Best Fnd. for section Foundation.

1st, Will Ellis, ...$3.00
2nd, E. L Goold & Co. $2.00

Best mode securing the largest yield of Comb Honey.

1st, E. L. Goold & Co, ...$3.00

Best mode securing the largest yield of Extracted Honey.

1st, E. L. Gould & Co., ...$3.00
2nd, E. L. Goold & Co , ...$2.00

Best and largest display of Apiarian Supplies quality of workmanship to be considered.

1st, E. L. Goold & Co.....Silver Medal.

Best style and assortment of Tins for retailing extracted honey.

1st, E. L. Goold & Co., ...Silver Medal.
2nd, R. H. Smith, ... Bronze Medal.

Best style and assortment of Glass for retailing extracted honey;

1st, J. Spence, ...Silver Medal.
2nd, R. McKnight, ...Bronze Medal.

Best Section Super for top story and system of manipulating;

1st, E. L. Goold & Co., ...$3.00

Best and most practical and new invention for the apiarist;

1st, E. L. Goold & Co., ...$5.00

Best assortment of fruits preserved in honey;

1st, R. F. Holtermann, ...$5.00

Best Cake or Pastry made with honey;

1st, R. F. Holtermann, ...$3.00

Best Honey Vinegar;

1st, R. F. Holtermann, ...$3.00
2nd, Mrs. John Wilson, ...$2.00
3rd, R. McKnight, ...$1.00

Best and most useful Nursery Queen Cage;

1st, E. L. Goold & Co., ...$2.00

For the most tasty, attractive and neatly arranged exhibit of Honey in the apiarian department, all the honey the production of the exhibitor. Half this prize is given by the Ontario Bee-Keepers' Association.

R. McKnight, ...$50.00.

There were no 5c. pieces of Comb Honey this year and it was a great improvement.

Brant Agricultural Society's Show.

In spite of the poor season the display of Honey and Aparian Supplies was the best ever seen at the above Show, held at Brantford, Sept. 11-13th. There was about 1000 lbs. of comb honey shown. Mr. Burrell's was particularly worthy of note and by far the best on the grounds, but as it was not as well put up for display as that of Mr. Anguish, the prize was taken by the latter and justly. The display of comb honey was ahead of that at Toronto. There was about 1500 lbs. of extracted honey of very good quality. We notice that Mrs. D. Anguish takes a prize in a section that Mr. D. Anguish is prohibited from entering in. This is unfair, and no doubt next year the prize list will be so worded as to prevent any such tactics. The exhibition of honey attracted much attention and is a credit to Brant when the poor season is considered. The following is the list of awards:

Best display of comb honey in most marketable shape, product of exhibitor and not less than 300 lbs., quality to govern, 1st prize by Brant Bee-keepers' Association, 2nd do., 1st prize, $5, D. Anguish; 2nd, $3, William Burrell.

Best display of extracted honey in most marketable shape, product of exhibitors and not less than 300 lbs. quality to govern, 1st prize by Brant Bee-keepers' Association, 2nd do., 1st, $5; J. A Howell ; 2nd, $3, D. Anguish.

Display of comb and extracted honey (exhibitors who have entered in Sec. 1 and 2 excluded) not less than 200 lbs. of each, quality to govern, 1st prize by Brant Bee-keepers' Association, 1st, $4, Mrs. D. Anguish.

Best 10 lbs. of Linden extracted honey in glass, 1st prize, 1 bee hive, (value $3) by S. Dickie, Brantford, 2nd, Canadian Honey Producer, E. L. Goold & Co., 1st prize, $3, D. Anguish ; 2nd, C. H. P., J. A. Howell.

Best 10 lbs. comb honey in Section 1, one swarm bees by D. Anguish, Mohawk, (value $4.00) 2nd by J. R Howell, $1.00, 1st prize, $4.00, Wm. Burrell ; 2nd, $1, D. Anguish.

Best honey vinegar, 1st prize by R. F. Holtermann, Brantford, 1 bee-smoker, (value $1.50) 1st prize, $1.50, D. Anguish.

Best display of Bee-keepers' supplies, manufacture of exhibitor, 1st, prize, $5.00, E. L. Goold & Co.

Best hive for comb honey, Diploma 50c., 1st, E. L. Goold & Co, 2nd, D. Anguish.

Best hive for extracted honey, Diploma 50c., 1st, E. L. Goold & Co., 2nd, D. Anguish.

Best honey extractor, Diploma 50., 1st, D. Anguish, 2nd, E. L. Coold & Co.

Haldimand Bee-Keepers' Association.

Haldimand Advocate.

A meeting of the Haldimand Bee-Keepers' Association was held at Fisherville on Saturday, Sept. 1st.

Present—James Armstrong, President, in the chair, and Messrs. Wm. Kindree, Robt. Coverdale, W. Best, W. Atkinson, Israel Overholt, M. Schisler, F. Mehlenbacher, A. Nash, Mrs. J. Otterman, Geo. Werner, Hiram Gee, F. Rose, and the Secretary.

Minutes of previous meeting read and confirmed.

HOW AND WHAT TO FEED.

The President said that granulated sugar should be fed, as it was safer than to risk feeding cheap sugar. He made a thick syrup by putting the granulated sugar into boiling water, stirring it frequently to keep it from burning. He exhibited a Jones' Canadian feeder, showing how it worked, and urged early feeding, so that the bees could cap their stores before cold weather. It was also necessary to feed in the evening so as to avoid robbing.

Mr. W. Kindree's plan was the same as the President's, only that he boiled the sugar a little more than Mr. Armstrong. He thought that by doing so the syrup was not so apt to granulate.

Mr. Mehlenbacher described his plan of feeding, which was by tipping the hive up in front, and pouring the syrup behind the division board.

Mr. Overholt used a similar feeder to the Canadian, and found it ahead of any other.

Mr. Best had always used honey, but this year he would have to try sugar, as he had no honey. He had wintered colonies on 15 lbs. of honey, and they had come out all right.

Mr. Atkinson made syrup the same as described by Mr. Armstrong, and used inverted glass jars as feeders.

HOW TO UNITE COLONIES.

The President gave his plan of uniting colonies, which was to gradually move the hives to be united towards each other until they were close together, and then spreading the frames apart, and putting in frames alternately ; he then gave the bees a good smoking, and the work was done.

Mr. Kindree's plan is the same as described above.

REPORT OF THE SEASON.

	Spring.	Fall.	Crop.
James Armstrong,	80	84	—
Wm. Kindree,	42	44	—
Francis Rose,	80	76	—
F. Mehlenbacher	34	35	—
Israel Overholt,	5	8	—
W. Best.	17	23	—
Robt. Coverdale,	26	26	—
Abraham Nash,	4	6	—
George Werner,	7	9	—
M. Schisler,	9	11	—
Mrs. Otterman,	13	15	—
Wm. Atkinson,	30	31	—
E. C. Campbell,	5	7	—
	352	375	

From the above report it will be seen that the increase has been very small, and that no surplus honey has been taken; and what is worse, the bees have not stores enough to winter on, and will have to be fed.

Moved by Mr. Kindree, seconded by Mr. Mehlenbacher, and resolved, that the next meeting of the Association be held at Cayuga, at the call of the President,

E. C. CAMPBELL, Secretary.

QUERIES FOR OCTOBER.

No. 49. Do different kinds of stores, such as clover, basswood, and thistle honey all in one hive, influence bees in wintering? or, is one kind of honey better?

I have never noticed any difference. I think the "influence" is more imaginary than anything else.—Will. M. Barnum, Angelica, N. Y.

Different kinds of honey is all the same if well ripened, bees will winter on any or all of them just alike.—Dr. Duncan, Embro, Ont.

I don't suppose mixing makes any difference if it's all good honey.—C. C. Miller, Maringo, Ills.

I think it will make no difference.—L. C. Root, Stamford, Con.

No.—Dr. A. B. Mason, Auburndale, Ohio.

I have never discovered any difference.—A. D. Allen, Tamworth, Ont.

I don't know, but would risk the mixture.—Wm. Couse, Streetsville, Ont.

I think any kind of honey will do if well ripened.—F. Malcolm, Innerkip, Ont.

My bees winter well on any of the honeys you mention, and I would not fear them all combined.—G. W. Demaree, Christianburg, K'y.

Any kind of ripe honey will do alone or different kinds together.—D. P. Niven, Dromore, Ont.

I do not think it makes any difference.—Ira Orvis, Whitby, Ont.

I do not think it will make any difference, if the honey is all good, how many kinds there are —A. G. Willows, Carlingford, Ont.

No, any kind of good honey will do nicely.—John Yoder, Springfield P. O.

This is a question still unsettled, some honey is not good, what honey is good I think is yet to be learned.—Prof. A. J. Cook, Agricultural College, Mich.

I do not think there is any difference in the kind of stores used; the quality is all there is to be considered. If the honey is pure, well ripened and well sealed up, nothing more can be required so far as stores are concerned. In a state of nature bees winter well, and of course must subsist on such stores as they gather, the source thereof necessarily being from such flora as the locality affords.—J. E. Pond, North Attleboro.

There is a theory that the bees are disturbed when changing from one kind of honey to another for food, and that different temperatures are produced by feeding upon the different kinds of food, probably upon the principle of a man feeling warmer after eating a piece of fat pork than some wholesome fruits in summer, only on a lesser scale. That this change in temperature would be sufficient to cause loss in wintering we doubt very much, and would not be afraid to winter upon such stores. All things being equal one kind of honey would be preferred.—ED.

No. 50. Does it require more experience to raise comb honey than extracted honey? Why?

I think not.—Will. M. Barnum.

It requires a great deal more experience to raise comb honey.—Dr. Duncan.

Yes. There is more to learn about management for comb honey.—C. C. Miller.

No. Swarming is more easily controlled by extracting.—L. C. Root.

I do not raise comb honey.—A. D. Allen.

Yes. You must have your stocks all strong, and young Queens in them for comb honey. Wm. Couse.

Yes. It is more complicated.—F. Malcolm.

Yes, the "why," is because the modern comb honey is a fancy article, and must be nicely handled and it requires practice and good judgment to obtain paying crops of a fancy article. Most any novice can take honey from the combs if he has the combs and fixtures.—G. W. Demaree.

More for comb honey. More manipulating for a good yield and to get all sections sealed over as much as possible by the end of season. —D. P. Niven.

Yes, because it is more difficult to get a profitable return for one's labor.—Ira Orvis.

I believe so, but as I have never raised much comb honey I leave those who have had experience to give reasons.—A. G. Willows.

Yes, it is more complicated in *all* its parts. —John Yoder.

Yes, because it requires more skill, skill comes with experience.—Prof. A. J. Cook.

Much depends. It requires more experience to raise a large crop of comb honey under unfavorable conditions than extracted. The swarming fever has much to do with poor crops of comb honey, and experience is necessary to enable one to work to the best advantage at such times. Experience is a good teacher, but is most valuable when combined with theory, and a full and complete knowledge of the flora within bees flight; without, one can never become successful in raising either form.—J. E. Pond.

Decidedly so we think. You have to keep your bees nearer the swarming impulse and still prevent swarming by every good means. This alone requires long experience and good judgment. You must know your locality or you may be caught with a lot of partially finished sections, when the man of experience may prevent it.—You must study even your colonies—a colony may be good to run for extracted honey and but little good to run for comb honey. A colony on the other hand good for comb honey will also be good for extracted honey.—ED.

No. 51. Which is best for packing over bees in cushions, cork dust, chaff, wool, saw dust, or straw? Name in order of preference.

Cork-dust, Oat-chaff, Straw, Saw-dust, Wool. Pack *sides* of hives with newspapers. —Will. M. Barnum.

I prefer fine dry pine saw-dust, next chaff. —Dr. Duncan.

I winter in cellar, with nothing over but a quilt filled with newspapers, but if obliged to use the articles named, would choose in something like the following order at a guess: Wool, Cork-dust, Chaff, Straw, and then I'd ask some good natured Kanuck who had tried it to tell me where to place Saw-dust in the list.—C. C. Miller.

I prefer Chaff. Have never tried Cork-dust.—L. C. Root.

Chaff, Cork-dust, Saw-dust, Straw, Wool. —Dr. A. B. Mason.

I have always used sawdust, Cork-dust or Wool may be as good. Chaff and Straw inferior.—A. D. Allen.

Cork-dust.—Wm. Couse.

Have used little else except Saw-dust.—F. Malcolm.

The difference is not great, I prefer wheat chaff.—G. W. Demaree.

Have not tried any but wool—cotton batting, which I prefer.—D. P. Niven.

I do not use any.—Ira Orvis.

Think I would take them about in the order named in the question. Have only tried chaff and saw-dust. Wool might be better than chaff.—A. G. Willows.

I don't know, I use oat hulls and find they answer well.—John Yoder.

I don't know.—Prof. A. J. Cook.

Cork-dust or fine saw-dust equally good, chaff next, wool under any of them straw is worse than useless.—Henrietta F. Buller, Cambellford, Ont.

It makes but little difference what form of packing is used. I prefer dry forest leaves pressed loosely down. What is needed is some form of packing that will retain heat, and at the same time allow excess of moisture to pass off imperceptibly. Whatever is the cheapest in a given locality that will accomplish the above result, is the best to use; a season's test of the different kinds will tell the whole story far better than any advice given here.—J. E. Pond.

We prefer wool, old flannels, or cotted wool is not so very expensive and it permits moisture to pass through from the cluster, and yet retains the heat in the hive. Those having a few colonies can generally get plenty. Of course cotton comes next the bees first, the wool would irritate the bees. We have used chaff, sawdust and straw.—Would prefer these as follows: chaff, straw, sawdust. They say cork dust is very good.—ED.

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Sheetings,
Damasks,
Napery,
Cretones.

FAMILY MOURNING.

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Silk and Tweed,
Pith Helmets,
Caps in Cloth,
Silk and Lustre.