

## APIARY.

### The Treatment of Foul Brood.

(Special correspondence.)

In contributing an article on beekeeping to your very practical journal from far-away England, I realize the fact that although the general principles of beekeeping are the same in both countries, the conditions under which the industry is carried on are widely different here to what they are in Canada.

There is a terrible disease I see your bees are likely to suffer from the same as ours, and that is "foul brood." This disease is the scourge of beekeeping in Great Britain. Let me make a few remarks on the scientific aspect of foul brood, bearing especially on the McEvoy method of treatment, which has been so successfully practiced in Canada in recent years. The apiarist who understands the scientific reason for this method of treatment will, when he has occasion to use it, be twice as successful and employ half the time and labor as the man who merely goes "by the book."

In all advanced cases of foul brood there are an immense number of the spores or seeds of the disease present, and these spores are endowed with such great powers of endurance that it is practically impossible to destroy them by any ordinary method of treatment without seriously injuring the brood and bees as well. Under favorable conditions, these spores hatch into bacilli. The bacilli represent the vegetative stage of the foul-brood organism, and if they cannot at once find a suitable food medium in which to grow and multiply, they must starve and die. The natural food medium of the foul-brood bacilli is the living juice and tissue of the bee larva, but it is an important fact, which cannot be remembered too well, that the juice of a perfectly healthy larva is unfavorable for the multiplication in it of the foul-brood bacilli.

The moral of the above facts, which appear to be well established, is that in our treatment of foul brood we should (1) endeavor to remove and destroy as many spores as possible; (2) that we should get those spores that we cannot destroy to germinate away from a favorable food medium, so that they may starve and die, just like the fledglings of a deserted bird's nest; and (3) that since it is often impracticable to prevent a few spores from passing through the bodies of the larvae, the larvae—and this here implies the whole colony—should be kept as strong and healthy as possible.

One of the best practical applications of these points is to be found in what is called the McEvoy treatment. All the above objects can be achieved without the use of drugs, and personally I believe that drugs are of little value in the practical treatment of the disease. There are, however, occasions when drugs may assist very materially in holding the disease in check, and the drug that we in England have proved to be most useful is naphthol-beta, which is fed to the bees by being mixed with the syrup in the proportion of 1 oz. to 145 lbs. of sugar. It is necessary to dissolve the naphthol-beta first in alcohol (or methylated spirits), and then to mix with the syrup while the latter is very hot.

The third point mentioned is very important. All animals are more liable to be attacked by disease when they are liable par than when they are healthy, and the honey-bee is no exception to this rule. When is a colony of bees below par? Most often in the spring, while the weather conditions are more or less unfavorable and the colonies are subsisting on the previous year's honey. This is the time when foul brood works the most havoc in British apiaries; the disease then spreads and develops with the most alarming rapidity. Weak colonies, too—those depleted in numbers—more easily fall a prey to foul brood than strong ones, and in doing so they may become much more easily a center of infection for the whole apiary or district. This is a most serious evil, and in an apiary attacked with foul brood all weak colonies should be immediately united together, and those that are diseased destroyed. Experience in England has taught us that it is often a mistake to deal drastically with mild cases of foul brood when the colonies are strong. This is especially so in high summer, when, with a steady honey-flow and plenty of sunshine, the disease often disappears as quickly as it developed, without any treatment at all. Yet there are times in the spring when the smallest outbreak should be immediately noticed and dealt with, and then it is that, in cases where the brood, being very abundant, is only slightly affected, it seems a pity to destroy it and ruin the colony, and a course of feeding with medicated syrup, if not too costly, seems to be the right line to pursue, for it has the double object of killing a large number of the bacilli and of stimulating and strengthening the colony, although it is open to doubt whether this last object is well attained by the use of such heavily-drugged food.

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England.

### A Start in Beekeeping.

I believe we are safe in assuming that of all the different things kept on the farm, animate and inanimate, bees are, as a rule, the least understood and the most neglected, so that when I am asked to outline conditions that will make the average farmer successful with bees, I fear I am undertaking a very difficult task; in fact, some noted beekeepers have declared that it is impossible for the farmer to keep bees at a profit, unless carried on as a specialty. However, I have seen exceptions to this, and although somewhat of a specialist myself, I have always maintained that every farmer should keep a few bees (especially if there are none near him), if for no other purpose than for the benefit of his orchards and clover fields. But as this article is not to discuss the economic value of the honey-bee as an adjunct to the most successful raising of fruits, clover, etc., I will say nothing further on that subject at present.

For the benefit of farmers who may be contemplating keeping a few bees, I will try and give a few practical hints in as few words as possible. Naturally, when we think of beekeeping, the first thing that comes to our minds is bees, but I would suggest to the prospective beekeeper to make good use of spare time between now and spring in getting posted a little in bee-culture; i. e., if he has no knowledge on the subject. Subscribe for one or more good journals dealing with the subject and secure some of the excellent works on beekeeping, among which I might mention "Langstroth on the Honey-bee" and Root's "A B C of Bee Culture." I would especially recommend the last-named work, as it is a complete encyclopedia and contains all the information necessary to any beginner, outside of practical experience. Spend some of these long winter evenings in studying the economy of the hive, the life and habits of these wonderful little creatures, and I think you will be amply repaid for your trouble, even if you should never keep a swarm of bees on the place. You will be led to think, as perhaps you never thought before, that there are some other things besides the human

length of frame, as nearly all comb-honey supers and other articles of hive furniture are made to fit that style of hive. I use a frame L. length, only much deeper, commonly called the Quinby. The beginner will need a good smoker, a couple of veils, some hives for increase, say one for each colony, spring count, also surplus cases, etc. If running for extracted honey, an extractor and uncapping knife will be needed. Would not advise any further outlay the first year. I have said nothing as to price of bees, as this will depend a good deal on your locality, prices of bees, like nearly everything else, being subject to supply and demand.

One of the things most dreaded by beginners is the stings. By careful manipulation you need not receive many; i. e., if you wear a veil and gloves, which latter you will soon discard as you get more experience. With the most of people, bee stings are at first quite painful and cause considerable swelling, but as the system becomes inoculated you will mind them but little; of all the different remedies prescribed, "grin and bear it" seems to be the most effectual. In conclusion, would lay particular emphasis on the need of understanding the business. I have often been surprised to hear comparatively smart people wondering why their bees did nothing, or died, when an enquiry would find that if anything the bees knew a little more about their owners than their owners did about the bees. If these same people had known as little about their cattle as they did about the bees, they (the cattle and horses) would certainly have died too. Nothing has made more strides these last fifty years than beekeeping. Remember, we are in the 20th century, so don't speak of skeps, gums, strained honey, king bees, and other phrases of beekeeping of fifty years ago, but be up-to-date in beekeeping as well as in other rural pursuits.

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## POULTRY.

### To Prevent Egg Eating.

The habit of eating their eggs is the result of

idleness among the hens. This idleness causes restlessness and morbid habits, and an inclination to grab at every new thing they see for something to do. If the hens are kept continually at work, digging and hunting in the litter for some small seeds, the restless habit is gone. One of the very best ways to cure the habit is to throw five or six of the white porcelain nest eggs among them on the floor, so they may learn they are like the stones, and a useless task to attempt to break them. In addition to this, elevate the nests from the ground so the hens can not see in them when running about; also place the nests in a dark, out-of-the



FARM HOME OF MR. JOHN D. ROSS, ELGIN, MANITOBA.

creation that are "fearfully and wonderfully made."

How many swarms shall you start with? So good an authority as Doolittle says four as the outside number. I think his advice is sound. Personally, I started with one. Acquire more bees if you want them, as you acquire more knowledge of the business. Make them pay for themselves as you go along. If you cannot make half a dozen colonies pay you, it is quite reasonable to suppose that you would not have much success with fifty or a hundred. Again, if you find you are not adapted to the business, with only a few colonies, your loss on the investment will be small. On the other hand, if you have bought fifty or a hundred and fail, the loss would be considerable. What time in the year shall you get the bees? Would say not before the middle of May, as by that time all danger of spring dwindling will be past. If possible, get some practical beekeeper to examine the colonies you purpose purchasing, to post you as to their condition—if free from foul brood, etc. Of course, if you are buying from a practical man whom you can trust, these precautions might not be necessary; but sometimes, I am sorry to say, we are apt to get taken in by trusting too much, as an early experience of the writer would show. The style of hive to use is a knotty question which beekeepers do not agree upon. However, size and style of hive is only a secondary matter at most, but I would advise beginners to get, if possible, standard Langstroth hives, at least as regards

way corner that is least frequented by the hens. It is usually the most restless hens that break the eggs, but when broken all join in eating them. All these habits can be traced to the nervous, restless members of the flock. We can not but feel satisfied that the prime cause of all these faults is the unnatural life the hens must live when kept for eggs during the winter months. If all their wants might be supplied in winter as in summer, then it might be different.

### All Sick Fowls Should be Killed.

No one can afford to keep sick fowls unless they are very valuable specimens, and even then the chances of recovery or a return to usefulness, at least, are very slim. When allowed to run about they will spread their disease among the balance of the flock. When placed alone for treatment, the time and money expended for nostrums to cure them are beyond the value of the fowl. Time, money, and anxiety would be better saved by killing the ailing one. Then there is no danger of the trouble spreading into the young stock, nor will there be any danger in the future of eating one of its young whose carcass may be infested by disease.—(Exchange).

A poultry raiser says that poultry in confinement do not fatten as well or as quickly on grain as on a mash. This is probably true, as the birds require exercise to help assist in grinding the whole grain.