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shaking of the on of the New I wish I could of how matters stood when we began this work and compare it with what they are now. The men were thoroughly discouraged. their living was destroyed, there was no honey coming-that is, no marketable honey, the bees were too weak. In place of that we have finer apjaries than we ever had before, we have better bee-keepers. Any man that was slovenly and did not care enough for his bees to accept the inspector's help dropped out, and the more I see of it the more convinced I am that the inspector should not help some of them at all, if they will not help themselves. We used to keep on using the old worn-out combs; we found the new combs paid better, that the bees did better and were more prosperous than they ever were before. I think the combs do get too old, and they should be renewed frequently. This plan will inevitably effect a great improvement. It is the colonies with old combs that need to be fed and helped.

Another thing that we have got to have in order to get better crops is better bees and better methods. I do not fear disease if you have a strain of bees that will clean it up immediately. In many respects this has been a blessing to the bee-keepers in New York State. If a man is not in trouble it is pretty hard to make him believe that he has got to work, and it certainly has been a blessing in Eastern New York and to some extent also further west in the State. I found in every case where it struck the apiary for the first time that it is much more virulent than it is later on. The reason for that is that you get rid of most of the weak colonies in your yard. They are the first to drop out, and as time goes along they yield more quickly to treatment; you will not have so many re-infections. We advocate disinfecting and we shake them. I have not disinfected a hive for years, although there are people with whom when we say to them "You had

better disinfect this hive pretty thoroughly," it works out good, as it makes him careful, even if he does not do it.

## EXPERIENCES WITH EUROPEAN FOUL BROOD IN THE OTTAWA VALLEY

BY F. E. MILLEN, O.A.C., GUELPH.

European Foul Brood has made considerable headway in all directions in the Ottawa Valley since a year ago, and is now found in Carleton County in the following townships: Huntley, Nepean, North Gower, Gloucester. In Russell County, Cumberland Township, Prescott County in North Plantagenet, and Renfrew in McNab Township.

In most cases the disease was not suspected by the bee-keeper until his apiary had been inspected and the disease pointed out to him.

Except in rare cases the disease did not seem to do so much damage the first year, but if left untreated, the second year it ruined the colony. I found the worst cases in the vards of the incompetent bee-keeper. The man who tried to understand his bees was in a better position to detect anything wrong, and so often prevented the disease from becoming as bad as it otherwise would. The germs of disease will always thrive much better in surroundings suited to their requirements, and when we go into a yard and see old combs laying about, from which honey has probably been taken by the bees, we can see how easily the disease spreads.

The bacillus of this disease is very small, and of course invisible to the naked eye. It requires any number from twelve to fifteen thousand placed end to end to nake one inch in length, and then remembering that one bacillus is enough to start the disease, and that one will multiply many times in twenty-four hours, we can see that great care is necessary in being clean and thorough in our work in the yard.