## Foul Brood—The Gheshire Vs. The Starvation Plan S. Corneil's Criticism.

On page 6 of the CANADIAN BEE JOURNAL for April 1 appears an article entitled "Foul brood and its treatment" by S. Corneil. Friend C. criticises both our *methods* of curing the disease, and the *conclusions* at which we arrived after experimenting and testing the various remedies. First he cannot understand *why* we abandoned and ceased to recommend the phenol or carbolic-acid treatment when we had several times declared in favor of it as an anti-septic in our earlier reports. We will admit that our first utterances respecting the acid treatment are somewhat at variance with our later statements. This is easily explainable, because our knowledge was progressing; and what we first thought to be true we later concluded was incorrect. All first impressions are not liable to be as accurate as those received later. We *first* thought the acid answered as a check to the further spread of the disease; but later, when the field of our observation and experimentation had greatly increased, and our knowledge of what others had done had been extended, we changed our mind.

We haven't the time or space to make numerous quotations, as our critic has done, nor go into the details affecting this belief, but may give one of them. Toward the latter end of our experiments with phenol, and its effect on foul brood, it so happened that Prof. Sargent, of the Michigan Military Academy of the Department of Sciences, was home on a vacation. We explained to him the nature of foul brood, and added that it was due to a small microbe, *bacillus alvei*. Having at his disposal a very fine microscope, 1/12 inch immersion lens, he readily found the *bacilli* in samples of affected brood which we submitted to him. To make a long story short, he prepared "pure cultures" in a series of test-tubes Some of these he inoculated with *bacillus alvei*, and allowed them to grow and multiply, which they did very readily under sterilized cotton. Into these were then introduced a solution of phenol of the strength recommended by Cheshire. The acid had no affect whatever, as other tubes could be inoculated from the phenolated tubes .and the microscope revealed in each case the growing bacilli.

Mr. Corneil may challenge the correctness of these experiments of Prof. Sargent; but as they dovetailed nicely with our own experiments in the apiary, I can not think that phenol did much real good, if any, with our bees. If Mr. Corneil will consult a recent bulletin by Prof. Cook he will see that the professor and his associates quite independently came to the same conclusion that we did respecting carbolic acid or phenol.

Our critic says we did not use the Cheshire plan exactly as Cheshire recommended. While we admit that, we thought we did in a practical way; but in view of the failure of the acid to kill the *bacilli* in the test-tubes, and in view of the corroborative testimony of no less an authority than Prof. Cook, besides scores of reports from practical bee-keepers, testifying to the failure of the acid (whose exact statements we haven't time to look up and quote verbatim), we must still insist that our faith in phenol is still weak. However, in spite of all this we *might* be mistaken in our conclusion; and hence, if another opportunity should present itself we would test the acid exactly *a la* Cheshire.

We have run across a few reports—yes, a very few— where carbolic acid cured foul brood. We have also seen reports where *salt water* cured it, and a dozen other simple remedies. In some of these cases we are sure there was no foul brood, and that the apparent disease simply went away.

We find there are some very crude ideas regarding foul brood and what it looks and smells like, and hence supposed cures are no cures at all

So far as we can learn, Mr. Corneil has never had any practical experience with foul brood—at least, not to any great extent; and, although a close student, and a correspondent whose writings we read with pleasure, we think that, if he would mix a little practical experience with the disease with which he is dealing, he *might* modify his opinion also. At all events, it is a pretty safe thing for us to recommend for treating foul brood what we have tried and know to be a safe cure, rather than something we are skeptical about, and we imagine that D. A. Jones will agree with us.

## Bee-House Cleaning.

CLEAN, PAINT AND REPAIR HIVES.—SAVE WAX.

As I was returning from Florida, I watched eagerly from the car windows for bees, but saw none, until I reached Illinois. I found my bees in fair condition and few dead colonies, considering the miserable stores of honey dew. The bees were not confined to their hives at any one time longer than three weeks, and the frequent opportunities for cleansing flights accounted for their good condition. Reports indicate that bees wintered out of doors are in better condition than those which have been kept in cellars.

WORK IN THE APIARY.

Plenty of work can now be done which will facilitate matters during the busy season. Hives