For THE GANADIAN BEE JOURNAL. Foul Brood.

WISH to discuss two or three points raised by Mr. Pringle in his letter republished in the C.B.J., page 202.

Mr. Pringie asks the following questions :--"If the queen is diseased, and the workers are diseased with the germs of foul brood, communicable by them, how is the mere putting of the diseased queen and bees on foundation going to prevent the disease breaking out as soon as they begin raising brood in the new combs."

There is no evidence on record showing that a diseased colony, having a diseased queen, has ever yet been cured by merely being compelled to build new comb in a clean hive. So far as is known at present, nothing short of requeening will render a cure possible in such a case. If it is argued that since the transferring cure is always effectual, therefore there are no diseased queens. I reply that the transferring cure is not always effectual there are failures, but the advocates of this method often hold to their theory with a tenacity so nearly bordering on fanaticism, that they seek for a cause for the failures anywhere else than in the diseased, queen. Some queen dealers have persuaded themselves, and have tried to persuade others. that the queen never transmits the disease be cause, as they say, they have never known such a case to happen. Writing of the danger of queens carrying the disease, Mr. Chas. F. Muth, of Cincinnati, Ohio, says :- "I had ample proof of it in several instances, when I did not wish to give up a fine queen from a diseased colony, introduced her into a healthy one, and created a new trouble." Similar testimony from several other respectable observers might be cited, but, being well known, Mr. Math's statement as to what he has seen, will be accepted by most readers on this side of the Atlantic. All queens in foul-broody stocks are not diseased. As the result of dissection, a German scientist says he found three diseased out of twenty-five. Cheshire also dissected many queens, and found some of them diseased, but he says "a majority perhaps are not." Mr. Pringle says :-- "We impeach not the scientist or discredit the microscope." When he argues that there are no diseased queens or workers, he tacitly does both. With the evidence now before the public no well informed beekeeper should any longer doubt that the disease may be transmitted by the queen, the workers and the drones.

Mr. Pringle asks : - "Why are infected swarms from diseased colonies cured by merely putting them into clean hives on comb foundation?" and he answers the question as follows: —" Simply because they use up the whole of the infected honey they carried with them in making wax and drawing out foundation, instead of giving it to young brood."

It is not denied by any one that the infection may and sometimes does get into the cells of pollen and honey, and it is admitted that in this way the intection may be taken into the chyle stomach, and in due course may be given in the "bee pap" to healthy brood. But of what does the infection consist? To read the statements of some writers one would be led to infer that it must be like a perfume, permeating every particle of food in the hive. These writers say that even a single bee load is certain to start the disease. They seem to forget that, if their contention is true, every larva in a liseased hive in early spring would in turn become diseased and die, because all are then fed from the same stores ; but this does not happen. Such teaching arises from a misapprehension of the nature of the infecting agent. Mr. Pringle does not belong to this class of writers. He admits that the infection consists of germs. These germs are either in the form of fully grown plants-bacilli, or the seeds of these plants-spores. Now I wish to ask Mr. Pringle what becomes of these micro-organisms when the infected honey is, as he says, all used up in comb building? If, like Mr. J. A. Green, he should say that they are digested with the honey, and thus there is an end to them, I answer, no. It is not a matter of hypothesis, but an observed fact, that neither the fluids of the stomach, nor the digestive act, destroy either the bacilli or their spores. It is a fact, proven by the uniform testimony of competent observers, that the infecting organisms are very plentiful in the chyle stomachs of diseased bees. Since such is the case, I would ask Mr. Pringle further, is there not a probability, amounting almost to a certainty, that some of these organisms would become mixed with the brood food, and would be given to the larvæ, even if the diseased nurse bees were fed on honey and pollen free from infection? It is not sound reasoning to say that because water poured from a vessel tainted with ink is found to be discolored, therefore the fountain from which the vessel was filled must of necessity have contained the same impurity. It is equally bad logic to sav that because larvas become diseased on food prepared in diseased chyle stomachs, therefore the honey and pollen used in preparing the food must of necessity have contained the infection. I concede that in the system of cure