

movement of some nature, yet I feel that with present good prices ruling, it will be difficult to get enough bee-keepers interested to make the scheme a success. All the fruit growing and other co-operative organizations have been forced by circumstances to their present status. Whether the bee-men will be wise enough to co-operate without being forced to do so, remains to be seen."

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Perhaps Mr. Byer is correct. We sincerely hope not. Personally we do not believe that bee-keepers are so blind to their interests that it will be difficult to get them interested in the proposed organization. They will not wait until forced by circumstances to co-operate.

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Some of us seem to be at sea on the question of Foul Brood nomenclature, and the sooner the matter is cleared up the better. On this side of the Atlantic it is generally assumed that Cheshire and Cheyne were on the wrong track, and were working on what is sometimes described as the "European type of disease." Whether that be true or not, when English bee-keepers mention Foul Brood they refer to what is known over here as **American Foul Brood**. European Foul brood is known as black brood in the old country.

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Re eliminating the swarming instinct by selection (Gleanings 787). The swarming instinct is the natural instinct of reproduction and perpetuation of the species. It is only when queens are hatched and a swarm issues that real and complete reproduction takes place in the case of the honey bee. Is not W. G. Flower mistaken when he states that the natural instinct to reproduce by sitting has been bred out of the Leghorn and other breeds of hens? On the contrary the modern Leghorn is capable of more rapid reproduction than formerly. The duty of sitting on and fostering the eggs does not constitute the act of reproduction.

W. W.

BEEES AND IMMUNITY TO DISEASE.

Wm. White.

With all the benefits that precise scientific knowledge has conferred on the bee-keeping industry, but little advance has been made in the direction of keeping foul brood under control. Bee-keepers are up against a stiff task. It is well sometimes to pause and see just where we stand.

The only effective treatment so far discovered is that of removing from the diseased stock all matter subject to possible infection—larvæ, honey, comb, etc.—a course of procedure, which from the bee's point of view is perhaps somewhat of the nature of a surgical operation. This, the McEvoy treatment, in the words of C. P. Dadant "is accepted everywhere as positive."

At one time it was considered possible that a means of curing foul brood might be found in the use of appropriate drugs, and many bee-keepers, especially in England, still profess to see in the feeding of medicated syrup, an important adjunct to the first method of treatment. The idea, however, is fast dying out, for it has been shown that drugs, necessarily of a poisonous nature, in order to produce fatal results on the bacteria, must be applied in such quantities, that they produce poisonous effects also on the creature under treatment.

It would seem, therefore, that our only hope lay in the efficaciousness of the first of these two methods. There is, however, a third—that applied by nature in restoring a condition of equilibrium between disease and forms of life susceptible to disease. G. W. Bullamore (Gleanings Jan. 1), refers to the subject in an excellent article on "Natural Selection and Diseases of Bees." He says: "The power to resist bacterial invasion is an attribute which varies with the individual; and, when present to a marked degree, constitutes immunity." * * "When a dis-

ease visits a district all the very susceptible bees are killed. The immune, if a recovery perpetual sive epidemics will revert to susceptible last established in though propagated stocks, is not sufficient to inhibit the production of swarms."

Bee diseases have memorial and in coming has been carried for many centuries the process of intended to produce susceptibility is so the bees to maintain fully against bacteria themselves are acquainted with individual aptive bees have immunity.

Without travers covered by Mr. B haps be permitted the natural process living tissues, substituted by pathogenic bacteria of showing that possible and may petuated in the tissue, from its bacterial life, for sistant forces which from growing or There are present agents perpetually attacks. The principal poisons produced the purpose of a parasitic organism the active powers very effective in combat between the disease germs is far here. We must merely stating the