

**AGRICULTURAL AND EXPERIMENTAL UNION—JANUARY, 1911.**

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**Apicultural Division—Results of the Experiments on the Control of Swarming**

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The Apicultural Division of the Agricultural and Experimental Union was established in 1889. The first co-operative work done by it was in 1891, under the direction of Messrs. Holtermann, Husband and Haight. An experiment on the use of comb foundation in sections was sent to twenty-four bee-keepers. Twelve reports were received that year. The experiment was continued in 1892, but was not reported. In 1893 a self-hiving device for swarms was sent to twenty-five experimenters. Eleven reports were received. In 1894 the experiments were continued with the self-hiver, and some five-banded Italian queens were distributed for testing. In 1895 nine reports were received on the merits of the five-banded Italians. No co-operative experiments were conducted from that time until 1910.

At the beginning of that year the Apiculture Department was organized at the Ontario Agricultural College for instruction and experimental work. Steps were immediately taken to conduct co-operative experiments. A prospectus and application blank were sent to the mailing list of bee-keepers. In this it was stated that for the present at least, not material but methods would be distributed, and the first method to be tested would be one for the Control of Swarming. Applications were received for this experiment from three hundred bee-keepers representing nearly every county in Ontario, as well as most of the other provinces.

This most gratifying response can be attributed partly to the wide-spread interest there is at present in the work of the Experimental Union, partly to the in-

terest in bee-keeping as a business which is awakening all over the country, but more especially to the fact that the experiment announced, "The Control of Swarming," is one in which every progressive bee-keeper is interested.

There are three great problems in bee-management in this country, viz., Brood Diseases, Wintering, and Swarm Control. While the first two are very real, the swarming problem comes home to every bee-keeper whether he realizes it or not. If his bees build up strong enough to gather a good crop of honey they are sure to develop the swarming impulse if left to themselves. If he cannot control this impulse to swarm the bee-keeper must either spend a great deal of time watching for and hiving swarms, or else lose enough swarms to take the profit off his bee business. If he has any other work the swarming is more than likely to take place at the most inopportune time, e.g., when he is busy in the hay field at the back of the farm, or when he is on the way to church. Now all this is very expensive and quite unnecessary.

There is nothing on the farm which requires so little care in proportion to the returns as the bees. This is why they are so often kept at a loss; because the care they need is so small that it is utterly neglected. They require only a little attention, but what they do require they must have. It is to call attention to this bit of work, and to help fit it into its proper place among the other farm duties, that these co-operative experiments are undertaken.

The management of an apiary for honey must be approached in the same business-like manner as the management of a dairy herd for milk. There is no more "luck" or "chance" in the one than in the other. Scientific principles govern both. Failure in either is due to some definite cause, which must be discovered and mastered before success can be attained.

The first principal in handling any live

stock is to be managed so that it cannot get full of itself; it is completely the same with bees. A bee-keeper one must not in any cruel way with a horse. To know a horse from bees one must study position, and learn and how they do it but it is well spent.

Experimenters will find difficulties connected with experimental work. A number of variables, experiments, necessity, quite a lot of equipment, however, consisting of a good bees, a veil to protect tool of some sort, or supers, and a qu or wired frames with dation. It is necessary average of at leasters for each hive.

To control swarms the bees often, so condition all the time. Here again a comparison. Other live stock require three times a day, 365 days in the year. It is different; don't have to feed or milk them or don't have to clean gate their coops, or drench; but we do. SOME attention requires hours are set aside milking, so a certain part of that day is the apiary work.

For the Experimenters number of colonies not less than ten. They should be as