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## MEASURES TO PREVENT SWARMING

[Read by Orel L. Hershiser at O.B.K.A.]

The natural tendency to swarm during the main honey flow occasions more trouble and annoyance to the bee-keeper than all other apicultural duties combined during the season of honey production. Much has been thought and written on the subject of non-swarming hives, nonswarming strains of bees, swarm hivers and the like, the common aim being to diminish the work during swarming time without diminishing the maximum amount of honey obtainable by the best management and, by reason of swarm control, to enable the keeping of outapiaries and thus greatly increase the honey output.

That out-apiaries may be successfully managed for extracted honey without troublesome swarming many of us know, though I freeely confess that I annually lose a few swarms. While greater vigilance might prevent the losing of any swarms, I aim to conduct my apicultural operations on such lines as will produce a maximum profit with a minimum expense, and for extracted honey production I am satisfied with the result. I fancy the majority of bee-keepers who run out-apiaries for extracted honey are also satisfied with their success.

With me the control of swarming in the production of extracted honey is successfully accomplished by enlarging the brood chamber from time to time as needed by adding what I have found by experience will be not just enough, but an abundance, of room for the queen, and at the opening of the honey harvest, an abundance of room for the storage of the honey. At the near approach of the swarming season, too much room is just enough. But with very prolific queens, and especially when a visit to the outapiary has been delayed by rainy weather or for other reasons when the weather conditions are conducive to swarming, it occasionally happens that a few colonies will become overcrowded, and

hence the loss of an occasional swarm. But inasmuch as the lost swarms represent a smaller sum than would be required to keep an attendant in charge, or to compensate for the upsetting of plans in order to reach the out-apiary on exact time, the lost swarms with me do not represent an actual loss of profits.

The control of swarming in the production of comb honey in out-apiaries is quite a different proposition. This has proven to be a will-o'-the-wisp that many of us have been chasing with more or less fervor, but thus far it seems to have eluded our every effort to grasp it. Dequeening and breaking down queen cells eight days thereafter will certainly accomplish the desired end, but the compensation in comb honey produced over that of extracted honey is not enough to more than equal the expense of the additional labor. Going over all the colonies of an apiary that are at all likely to swarm during the next eight days, once in eight days, examining every brood comb for queen cells, is open to the same objection. In the arid regions of the West, where apiarian work may be planned with precision without interruption on account of rainy spells, this last-mentioned plan may be more economically and successfully followed than elsewhere where weather conditions interfere.

I believe it has been claimed that a swarm will not issue from a hive containing two or more queens, but I believe many bee-keepers will agree with me that we need first to know how, with precision and little labor and expense, we may be able to supply and have our colonies accept two or more queens before we will be able to determine whether this plan is successful when extensively applied.

Separating the brood combs by division racks, and allowing an abundance of room for clustering in spaces at the ends of the frames as well as between each two combs, is claimed to be a means of defeating swarming. While we have not tried this means of preventing swarming,