

Control of Swarming in Honey Bees

Seasonal Notes for the Domestic Beekeeper

BY the middle of spring most normal, healthy colonies of bees will have greatly increased in strength and the impulse to swarm will be becoming manifest. Swarming is the natural method of propagation of honey bee colonies as distinct from the reproduction of the individual, and though much time and study has been devoted to this phenomenon, an efficient, absolute method of control has yet to be devised. In this article D. Roberts, Apiary Instructor, Department of Agriculture, Auckland, describes some methods which will assist to keep swarming to a minimum.

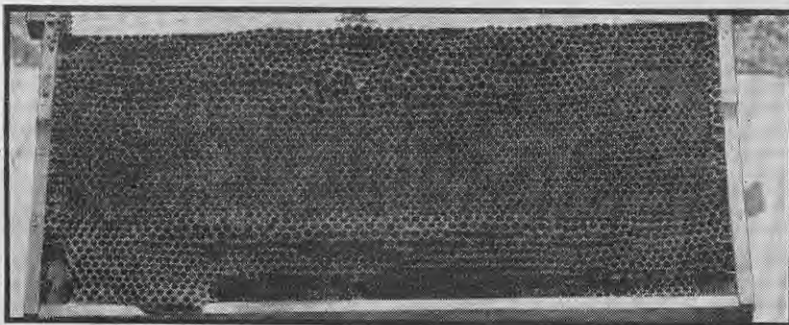
IN earlier times beekeepers gauged the success or otherwise of their efforts by the number of swarms their colonies produced in a season. The more swarms there were the happier the beekeeper was. Today successful beekeepers recognise that the casting of a swarm before or during a honey flow very seriously affects a colony's production of honey and they direct their hive management to control swarming as far as is possible without undue disturbance of colony routine.

By the middle of this month all colonies should have been thoroughly checked over for brood disease and the condition and vigour of the queen.

Factors to Control Swarming

Healthy colonies with vigorous queens will now have up to 10 or more frames of brood and very heavy inroads will have been made on their stores of honey and pollen. As long as sufficient food is available brood rearing will continue. At this time it will be found that the bees are also rearing quantities of drones. This is an indication that they are preparing to give way to the natural impulse to propagate the species and at this point swarm control must be started if it is to be at all effective. The main factors in swarm control are:—

1. The provision of young, vigorous queens of good strain.
2. Good brood combs which must be free of drone comb.



A brood comb which should be culled. Note the amount of undesirable drone cells.



A well laid out domestic apiary.

[Rendell's]

3. Ample room for expansion and storage of honey and pollen.

4. Good ventilation.

Observation of these points and a few simple manipulations will tend to reduce swarming in most colonies and ensure a satisfactory honey crop.

Introducing a New Queen

Colonies with an old queen whose egg-laying ability is declining will tend to swarm much more readily than those having young queens at the peak of their egg production.

At this period of colony build up the egg-laying powers of a queen are taxed to the utmost, and because older queens are unable to meet requirements, the bees quickly become eager to replace them and begin to raise queen cells. Introduction of a young laying queen at this time will stimulate colony morale and assist greatly toward attainment of that strong force of bees so necessary for the collection of nectar when the main honey flow begins.

Introduction of a new queen should, of course, always be preceded by the removal of the old queen. This should be accomplished with as little disturbance as possible and the new queen should not be introduced until the colony has quietened down some hours later. Acceptance of the new queen will be more likely if there is some nectar being gathered at the

time. If there is a dearth of nectar at the time of introduction, artificial feeding will help to ensure acceptance.

Queens supplied by commercial breeders will usually be forwarded in cages suitable for introduction and accompanied by printed instructions. The introduction of a new young queen will not be of much value if the brood combs of the hive are old, distorted, and full of drone comb. For the best results brood combs should be well constructed and consist of all worker cells built right out to the top and bottom bars and the ends. Brood combs should be carefully examined each spring and any with more than a few drone cells culled out.

Ample Worker Comb Essential

The provision of an ample amount of good worker brood comb to allow unrestricted laying space for the queen is essential to swarm control. If a new queen is introduced to a colony where sufficient worker brood space is unavailable because of damaged, faulty combs with excessive amount of drone cells, the whole advantage of the introduction will be lost and the colony will very likely swarm. The work of culling and replacing faulty, worn-out combs is amply repaid by better swarm control, ease of manipulation, and improved honey crops.

With the rapid expansion of the colony much more room for brood rearing and honey and pollen storage will be required. Colonies that have been wintered in a single box should now be given a second super of drawn combs. If the single box is packed with brood and bees, it will most likely be found that the side combs are full of honey and pollen. These should be lifted into the second box, where they can be again placed to the sides and their position in the brood chamber filled by good empty drawn combs.

Congestion Must be Avoided

Bees will not tolerate congestion of the brood nest, as this throws the colony population out of balance and queen cells are soon started in preparation for swarming. The brood nest should be kept as free as possible from any condition which will lead to congestion. Ample comb space is essen-