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CONTROL OF SWARMING

By R. S. COLEMAN, Government Apiculturist

It has often been said that the secret of getting a high yield of honey is to have a large field force of young bees in every hive at the beginning of the nectar flow. The colonies should not have to build up numerical strength when they should be collecting nectar.

It is just as important for the apiarist to have a large proportion of field bees compared with hive bees as it is to have well-bred queens, efficient equipment and all the other factors which make for success in beekeeping.

The drag on production caused by a large number of hive bees is regarded as so important by apiarists in other countries that some actually cage the queen during nectar flows so that the nurse bees are released for duty as nectar gatherers.

Because of extended flows and the policy of migratory beekeeping, such a practice is not suited to Australian conditions and we have concentrated on breeding longer-living bees from young prolific queens.

This gives rise to full hives and brings an attendant problem—that of swarming—a tendency which is accentuated by a large and varied supply of pollen in the spring. This abundance of balanced protein from the early European fruit trees and the sandplain flora allows the queen to lay to the limit of her powers and the maximum ability of the hive to care for the larvae.

An overcrowded hive is liable to swarm and the building of swarm queen-cells will indicate the imminence of the act.

The most primitive method of controlling the swarming tendency is to cut out the queen cells, but it has little to recommend it. Apart from the fact that a cell is often missed, there are occasions when the bees will swarm and leave no queen-cells to take the place of the absconding queen.

THE DEMAREE METHOD

The Demaree method of preventing swarming is very popular and has much to recommend it. In this method, the brood chamber is raised above a queen excluder, the queen being left with one frame of brood in a box of empty dry combs.

Above this is a super filled with honey, next is the queen excluder, the whole topped by the super filled with brood
in which the young nurse bees are raising queen cells due to the superseding instinct. These queen cells must be broken down between eight and ten days after the change of storeys has been made.

By using the Demaree method, the queen is left with ample laying space and the strength of the colony is maintained. Swarming is discouraged, but no special effort is made to increase the field force ready to go into action at the beginning of the nectar flow.

ARTIFICIAL SWARMING

The "artificial swarming" method involves more labour but swarming is definitely controlled, the number of hives is increased if desired and a large field force is reared in readiness for the flow.

In this method, the brood chamber and bees are removed to another site within the apiary, the queen being left with only the frame of brood she is found on. The rest of the box is filled with dry empty comb.

**Fig. 1.**—Before applying the Demaree method. The supers are numbered for easy reference. At this stage, No. 1 contains brood, No. 2 contains honey, and No. 3 is a super just added containing empty dry combs.

**Fig. 2.**—Demaree method in operation. The queen is left in No. 3, now the bottom super, with one frame of brood and the balance of the frames, dry and empty. Above this is the super filled with honey and this has a queen excluder between it and No. 1 super containing brood.
Fig. 3.—The first stage in artificial swarming. Supers No. 1 and No. 2 containing brood and honey, are removed from the original site but the queen is left on the original site with super No. 4 containing a frame of brood and a number of empty combs, with a few frames of honey in super No. 3. The flying bees will mostly find their way back to the queen.

Most of the flying bees will find their way back to the queen, leaving the brood and the young nurse bees on the new site—in an ideal situation for introducing a queen cell or even a virgin queen. The next day, or at some time within the first week, break down all the queen cells already started and introduce a cell or a queen bee raised from the best available stock.

So we will have two hives. One is headed by the old queen with oldish bees and very little brood—just as if we had hived a swarm. The other will be filled with young bees, brood and queen cell—just as if a heavy swarm had left. Our “swarming” has, in effect, taken place but without loss of bees. It took place too at a time convenient to

Fig. 4.—At a suitable time, the two colonies may be united. A sheet of newspaper is placed over No. 3 super and Nos. 1 and 2 are placed on top.
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the beekeeper, and the queen in the new hive is from a first-class strain, while neither of the hives will be likely to swarm again that season.

When the flow is ready to start, the two hives should be united again, preferably by spreading a sheet of paper with a few pin-holes in it over the old hive and placing the new one on top. The bees tear away the paper in due course and the two colonies unite peacefully.

The poorer queen can be killed off before uniting the hives, giving a strong colony headed by a young prolific queen. Such a hive should store the maximum quantity of honey from any nectar flows.

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**A HOSPITAL Paddock**

Wherever many head of stock are kept on a farm there are two things that will always pay very handsome dividends—a loose box and a small hospital paddock.

For big stock such as horses and cows a fair sized loose-box is really a necessity. A place about 10 or 12 feet square sited so that it faces north and gets plenty of sunshine throughout the greatest portion of the day is marvellously handy whenever one of the animals is off colour. It should be well protected on the weather side so that the sick animal is sheltered from the cold winter winds, for a sick animal left without adequate protection is liable to become a great deal worse on a winter night when its natural resistance is further lowered by cold weather. Then too, the farmer can give the animal better attention when it is housed under cover not far from the house. The loose-box need not be an elaborate affair. Even a well-constructed bush shed with a straw roof thick enough to keep out the rain can be a very snug spot for an ailing animal.

A small hospital paddock near the homestead can be a paying investment too that will be very handy during the blowfly season. All the flystruck sheep can be drafted into it and they are right there under your eye for inspection and dressing. The fact that the struck sheep are out of the flock will often reduce the likelihood of further strikes because such sheep attract more flies. When one has to yard the whole flock to handle a few sick sheep the average man is liable to put the job off until tomorrow—and tomorrow is apt to be next week. Footrot and other ailments and injuries will nearly always ensure that there are one or two sheep in the hospital paddock, and it will effect a surprising reduction in the casualty list. Where possible your little hospital paddock should contain, or adjoin a shade and shelter clump to give adequate protection from wind and sun.
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