

COMMERCIAL HONEY PRODUCTION

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Commercial honey production requires the least amount of labor to produce the largest crops.

To achieve this end requires year of experience as adoption of methods to fit into each beekeepers environment and conditions. The following itmes of operation can be considered to be of greatest importance.

1. Production and Breeding of Queens.
2. Swarm Control.
3. Extracting
4. Wintering
5. Equipment.

1. Without question, the queens are o of greatest importance .Without good queens, all other operations are of no avail. Queens to produce the largest crops must be vigorous. The bees and queens must be long lived. They must not swarm excesssively. They must conserve food and not waste it on useless brood rearing. They must be resistant to disease. They must winter with no loss.

In our selection for queen reproduction, color or uniformity receives no consideration. This in only an indication of in-breeding, not production ability. To produce long lived and vigorous queens and bees, it is important to avoid inbreeding, even though this is the easiest method to produce queens on a large scale.

While it is possible to control swarming by selecting and in-breeding non-swarming queens as a rule do not produce honey. Such queens usually do not swarm only because of degeneration, they do not become strong enough to swarm. It is not due to the elimination of the swarming characteristic. Bees that do not swarm are of no value if they do not produce a honey crop.

We find it impossible to buy queens with the qualities we need in our environment, we are forced to raise our own queens.

A honey producer normally does not have time to raise queens and such operations must be developed that will not interfere with normal operations for honey production or reduce the honey crop.

We do not requiem normal colonies, but let each colony requiem itself. We produce queens by divisions early in the spring only to replace losses from wintering or failure of queens. With our present strain of bees, we find that we need to raise only 1/3 or ¼ the number of colonies we have in the apiary to replace losses each season.

When we divide, we pick the colonies that were the best producers the season before. We winter our colonies in 21/2 or more brood chambers so that even in early spring the colonies are strong and divisions of good strength can be easily made with one full hive body containing plenty of bees, honey and sealed brood and enough eggs to produce cells. This division, without the queen, is placed on top of the parent colony above a solid cover with an entrance. This saves the need of extra covers and bottom boards. We do not graft, but just let the bees produce their own cells, and do not look at them again until a month later with queens will be laying. After the queens are laying, the nucleus and queen can be moved anywhere needed for requiring or replacement. We find queens produced in this manner are equal to those produced by any other system.

By letting each division raise its own queen, we reproduce only one daughter from each mother queen. This helps greatly to prevent in-breeding and prevent losing our basic stock of breeding queens.

We endeavor to keep a broad genetic foundation by maintaining as many queens as possible, not directly related to each other. Each year as we find good queens from other sources, these are introduced to add new blood as it becomes necessary. In this way we have been able to maintain our basic strain of vigorous queens over a long period of time. Over the years, our basic strain has adapted itself to our conditions and environment.

2. Since it is impossible to maintain non-swarming queens with high honey production because of degeneration caused by in-breeding to achieve non-swarming, to some degree must be done by manipulation. Such manipulation must not involve excessive-labor of equipment, such as finding queens or removing queen cells. With only two people operating 1200 colonies of bees, laborious manipulations are impossible.

We use no queen excluders so that queens have range of two or three hive-bodies for brood rearing. To inspect for swarming, we simply lift up a hive body containing brood and look under it, into the combs for queen cells. If queen cells have been started, one half of the brood is placed on top of the colony on a cover with an entrance such as we use for raising queens. No attempt is made to look for the queen. The supers are usually placed on top of the lower hive body.

In about two weeks when swarming season is over, we unite the brood together again. One hive body may still have the old queen and the other may have a virgin or a new laying queen. We only make sure that at least one of the hive bodies has a laying queen and if there are two queens, the best queen will

win. We find in most cases, this simple manipulation will stop swarming without loss of bees or loss of the honey, with very little labor.

3. In commercial operations it is necessary to have the most efficient equipment for extracting the honey crop, especially during a good season with a heavy honey flow. The beekeeper will soon find himself without empty supers and it then becomes necessary to extract the finished supers and return them quickly to be filled again.

When taking off the supers, we place them on pallets in the truck. When the supers are brought to the extracting plant, the truck and floor of the extracting plant are on the same level. This makes it possible to unload the supers quickly and easily with hand trucks.

We also find an uncapping machine of great help. We have used them for 20 years now, and the machine we built recently has proved to be very efficient. It can easily uncap 10 to 20 combs per a minute, with no damage to the combs or bad effects on the honey. One man with the machine can uncap as fast as four men with hand knives.

4. In our area of the Northeastern part of the United States, our bees usually have no flight between November 15 and April 15, a period of almost 5 months confinement. Our bees go thru the winter in two and a half or more hive bodies containing 20 to 30 kilos of honey for winter food. We do not feed any sugar syrup at anytime. It involves too much labor, but more important we find bees cannot brood with sugar syrup. Bees that have a large supply of honey will build up into much stronger colonies of bees than those fed with sugar syrup.

We find plenty of ventilation is important. We leave full sized entrances with our American styled hives and upper entrances which are usually holes drilled into the hive bodies of about 25 cm in diameter. Ventilation is important for the hives to keep dry inside. Bees with sufficient honey never suffer from cold, but moisture is most detrimental. Our only packing is black, asphalt paper wrapped around the hive and a bag of shavings on top of the inner cover to give about 8 cm of insulation. Even when the temperatures goes many degrees below freezing and may not go above zero centigrade for months at a time, the bees suffer very little losses.

5. For equipment, we find that whatever type of hives are used, they must all be uniform and interchangeable. We find that the standard Langstroth hive body for the brood is the best size to handle. Larger brood bodies are too heavy to handle. For extracting supers we find the standard shallow super that contains about 15 kilos of honey when full, to be the best size for efficient extracting. They are easy to lift and carry when full of honey, and in a radial type extractor, the combs can be extracted much more quickly than deeper sized combs, without breakage.

It is difficult to describe these operations with words, but the moving pictures can show these operations more clearly.