

Mr. V. Bařha, famous queen breeder in Czechoslovakia, made some attempts to produce large bees with longer tongues to gather nectar from red clover. He tried to get larger bees by the use of foundations having fewer cells to the square decimeter (564 cells to 1 sq. dm). The first attempts were appeared generally unsuccessfully and the bees do not draw the foundations. After feeding of the bees with syrup or honey they built normal combs between foundations and a large proportion of the large-based cells was drawn out into combs with thick cell-walls (Fig. 1). The another attempts in year 1935 were also made without success and the queen do not laid any eggs.

The successful results were supported in further tests by feeding of the bees with alcohol added in small proportion to syrup, while still warm (in proportion 10—25 grams to 1 liter syrup). The encourage bees drawn out the foundations. In spite of this success the queen do not laid. Then was removed the old queen and introduced the new young laying queen, by the narcotic method (with ammonium nitrate). This young and vigorous queen then laid worker's eggs into large cells of eight combs of the brood-nest.

The attempt was repeated with artificial swarm and gained the large worker brood-nest with 13 combs. Then were used larger frames (39 × 48 centimeters) and larger stock for better covering of the combs with bees. The stock made from normal and large bees built various cells; after 28 days built only the large cells.

The large bees built the large cells on most of the combs and they were larger than the cells on the original foundations (as reported from Dr. Rytřř).

In further tests were tried to produce the larger queens. For the queen cells used of the bees „Vlasta“. From 14 queen cells reared and mated 10 queens, which introduced to the normal colonies with brood-nest fitted with normal combs. The worker broods of these colonies resembled to the drone-broods of the normal stocks.

The variability of these large bees is in the following table:

Aver. length of tongue of large bee is 6.612 mm. Normally 6.085 mm.

Aver. width of wing of large bee is 3.303 mm, i. e. 8.2% larger.

Aver. length of III tergal is 9.584 mm, i. e. 3.4% larger.

Aver. width of III tergal is 2.454 mm, i. e. 4.8% larger.

The author believes that the further generations of large bees will be more larger.

It is presupposed, that the enlargement of these bees is do not any hereditary modification, but the successful results give the hope that further using of the foundations with large cells will have considerable effect on the races of bees.

Mr. V. Bařha asserts that the larger bees make 50% better production records.