



# Different food for *Bombus terrestris* L. (Hymenoptera, Apidae), colonies reared in laboratory



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Deeply frozen honey bee pollen pellets (fpp), honey bee bread taken from combs (bb), and brewer yeast with addition of 15% of frozen pellets (pp+by) were compared as a food for groups of *Bombus terrestris* workers under laboratory conditions. The shortest intervals to egg laying, the largest amount of brood cells as well as the amount of reared larvae and cocoons were registered in groups fed by frozen pollen pellets. The lowest extremes caused the brewer yeast. The bee bread brought the medium comparative values (Figs 1-4). The differences were statistically significant.

Fig. 1: Average numbers of days to start brood rearing

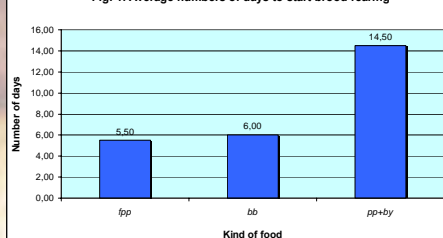
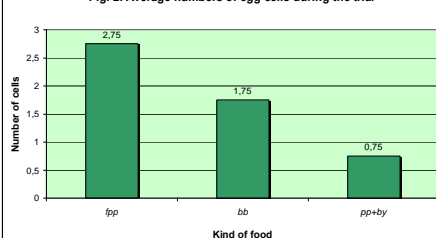


Fig. 2: Average numbers of egg cells during the trial



In the second trial bumble bee workers did not reared any brood on the bee bread sterilized by  $\gamma$ -irradiation - the dosage of 27 kGray (Fig 5).

Fig.3: Average total numbers of cocoons and larvae toward the end of the experiment

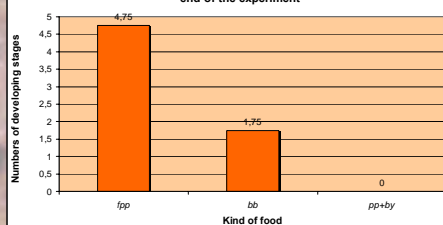


Fig. 4: Average numbers of egg cells at the end of the trial

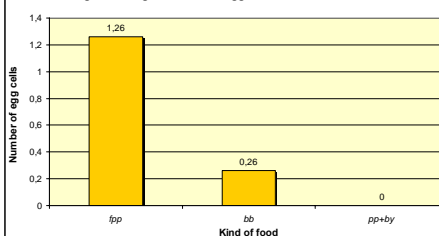
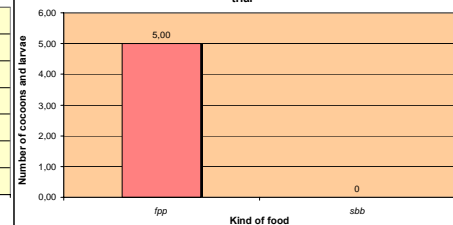


Fig. 5: Numbers of cocoons and larvae at the end of the second trial



During the last three years the possibility of natural conservation of honey bee pollen pellets was tried. In this way the fresh pellets from pollen collectors were pressed into jars and covered with a layer of granulated honey on the top surface. The mass was then let in tightly closed jars till the next spring in dark condition under laboratory temperature. It changed the structure and taste, which was similar to the honey bee bread. When tested on bumble bees, the food was accepted not only by workers but even by queens in their initiation nesting phase.

