Bombus pascuorum (Scopoli, 1763) is very useful as a pollinator. It can be used to enhance seed production of genetic material. The advantage of this approach is the possibility for selections of the same species in beds situated close to each other by unwanted pollen from the neighboring beds (Ptáček, Drobná 2006).

Of M. pascuorum the authors developed the method of selection based on the experience in management of real laboratory condition. Here, queens were able to start an attendance of several young honey bees, or in couples, from another colony, or finally, those having their young B. terrestris worker. Bumble bees were kept in a temperature of – 30 °C and with the air humidity of 65 - 70 %. They were fed with sugars sucrose with 10 % of fructose were used. The pollen in the form of pellets taken by pollen traps in honey bees was able to consume also quality dried pollen pellets bought from nursery. Dry pollen was moistened approximately to the natural moisture and fed into suitable plastic containers to avoid drying.

Couples were selected from couples. Those uneven were kept single till some of them were formed. They were immediately supplied with sugar and pollen (remains are visible in fleeces) is a signal of egg laying. In the couple of queens one develops as the dominant and the other queen is put into a separate box together with pollen pellets to prevent the possibility of egg laying in laboratory. Nearly 70 % of queens lay eggs under this treatment. The brood of the first ones are before the emergence of the first worker can be given to the queen falling behind with her worker and also the contact with the worker appeases her.

Cells with eggs

Cells with larvae

Young bumblebees can be already seen through the walls of cocoons.

When the first workers emerge, the colony is placed to the hive and let to develop outside.

The final stage in the development of nest.

Early in the spring, lungworts and hollow-roots are the first food source of the overwintered queens of M. pascuorum.

Queens alone are let for another 3 days to fill their honey supiments. When workers emerge, the colony is placed to the hive and fed with both, pollen and sugar in a cage. In the age of 5-7 days, the queens copulate with males of clovers. Queens alone are let for another 3 days to fill their honey again and then served food enough for the bumble bee colonies to continue their development and even to produce several generations in the open air.

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