

BROOD PRODUCTION IN *MELIPONA MANDACAIA* (APIDAE, MELIPONINI)

Francimária Rodrigues^{1*}; Márcia de Fátima Ribeiro²; Vera Lúcia Imperatriz-Fonseca³; Dirk Koedam¹.

¹*Universidade Federal Rural do Semiárido – UFRSA, Programa de Pós Graduação em Ciência Animal, Mossoró, RN, Brasil; ²Embrapa Semiárido, Setor de Entomologia, Petrolina, PE, Brasil; ³Instituto Tecnológico Vale Desenvolvimento Sustentável - ITVDS, Belém, PA, Brasil. *Embrapa Semiárido, BR 428, Km 152, zona rural, C.P. 23, 56.302-970 Petrolina, PE, Brasil.

francimaria.rodrigues@ufersa.edu.br

Information on the brood production in stingless bees is relevant to the biological knowledge of these species. In this way, the aim of this work was to follow the production of individuals and castes of *Melipona mandacaia* in a semiarid region of its natural occurrence. Thus, seven colonies of *M. mandacaia* kept at the meliponary of Embrapa Semiárido (Petrolina, PE) were observed in June and July of 2015. A map was fulfilled with the new operculated cells that appeared each 24 h. The observations began from the construction of the first cell of a brood comb up to the moment it was finished. At 35 days, after the first cell was oviposited, these combs were collected, desoperculated and put under a stereo microscope for counting and identification of castes. The results showed that there was no significant differences among the colonies, for the total production of individuals and for the castes production ($P=0.423$, $N=7$ colonies, Kruskal-Wallis, for all comparisons). For this reason, all of the colonies were analyzed together. The building of the combs lasted between seven and 13 days ($x= 10.43 \pm 2.57$, $N= 7$ colonies). However, not all individuals could be identified, because some of them have been removed by the workers, and/or had no pigmented eyes yet. Thus, from a total of 542 produced individuals, 445 were identified, being 77.97% workers, 11.68% queens and 10.33% males. Concerning the tax of cells' production, it varied from one to 16 cells a day, but this difference must have been compensated by the colonies, since they produced at the end, similar total number of individuals. All colonies also followed the same pattern of castes' production, i.e., a larger number of workers, and similar quantities of queens and males.

Keywords: stingless bees, *Melipona mandacaia*, production of individuals, production of castes.

Financial support: CAPES; Embrapa Semiárido.