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POTENTIAL IMPACTS OF GENETICALLY MODIFIED EUCALYPTS ON DEVELOPMENT OF *Apis mellifera* LINNAEUS, IN SOUTHEAST BRAZIL

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The flowers of eucalypts are strongly sought for honeybees to collect nectar and pollen. The worldwide distribution of the genus and the experiments with genetically engineered in Brazil emphasizes the need for information about possible adverse effects of this process on bees. It were evaluated the possible impacts on development synchronism and morphological changes on *A. mellifera* immatures. The study was conducted in two fields in São Paulo state, from February to March/2011. Three hives were placed at different distances in relation to the experimental area with genetically modified (GM) plants (0, 400, 1000 and 85.000m) and, from each, a brood comb was collected, getting a subsample. It were opened 144 cells, the development stage was identified, following the distribution in three concentric areas, each with 48 cells. For morphometric analyzes it were used 35 pupae/comb, measuring the head width (HW) and the intertegular distance (ID). Similarity in proportions of different development stages, occurred in all areas ($p > 0,05$). Differences were observed comparing the HW and ID obtained in each area. Those placed at 1000m away from the experimental area were differed from others (0m, $p=0,001$; 400m, $p=0,023$ and 85.000m, $p=0,001$). It was also observed, difference among the areas 400 and 85.000m away ($p=0,005$). The samples of 85.000m away differed from those obtained from 400 e 1000m away ($p=0,007$ and $p=0,014$, respectively). Furthermore, the area 400m away differed from the experimental ($p=0,043$). It infers regularity of queens laying on period, because the temporal and spatial pattern of laying occurred according to the expected. The differences demonstrated in the analyzes are expected because, in Brazil, the honeybees represent hybrid populations with phenotypic expressions among individuals. Once the differences verified aren't progressively related to the distance from experimental area, the hypothesis of changes caused by ingestion of GM pollen is discarded.

Palavras-chave: GM plants, development synchronism, morphometry, honeybee immature