

## INFLUENCE OF THE CROP AREA' SURROUNDINGS ON POLLINATION OF GUAVA – FLOWER VISITATION

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Although guava (*Psidium guajava*) presents self-pollination, previous works have proved the importance of pollinators for improvement of pollination. Moreover it is well known the relevance of natural areas and wild pollinators for crop pollination. Consequently changes in landscape might have an influence on crop pollination. The objective of this work was to compare flower visitors in a guava cultivation located at rural zone of Petrolina-PE (Brazil) which suffered alterations in the surroundings. Observations were done in two moments of neighbor's crop area: a) first, with natural vegetation and other crops (NCV), and later on, b) with lack of vegetation (LV). Four flowers were marked and observed during 5 days, in intervals of 10min each half an hour, since flowers' opening (5:00 a.m.) up to the end of visitors' activity (12:00 a.m). Microclimatic data were collected with a thermo-hygrometer. Comparing flower visitors there was a remarkable decrease on the diversity of bees in LV. Although *Apis mellifera* was still predominant, on LV native bees were much less frequent (*Partamona cupira*, < 0.1%, against ~13% in NCV), or were not present at all (*Melipona mandacaia*, and *Xylocopa* spp.). Concerning the pick of visitation of *A. mellifera*, in NCV the average was  $39.2 \pm 27.3$  bees (n= 5 observations) while in LV,  $15.3 \pm 9.9$  bees (n= 5 observations). This difference, although not significant (p= 0.07), was outstanding. Small differences in temperature and humidity were not able to explain decrease in flower visitation. Therefore, the vegetation had a strong influence on flower visitation, and certainly on guava pollination. The analysis of fruits produced in both situations confirmed that (data presented on other abstract). Because vegetation offers nesting and feeding sites, the fact of being removed caused the exclusion of pollinators, who should have searched for other shelters and possibilities of feeding places.