

## **INFLUENCE OF THE CROP AREA' SURROUNDINGS ON POLLINATION OF GUAVA - QUALITY OF FRUITS**

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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 fruits produced in a guava plantation located at rural zone of Petrolina (Brazil) which suffered alterations in the surroundings. Data were collected 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). A sample of 30 mature fruits was collected and measured in each of the situations. The following characteristics were evaluated: length, width, mass, shape, formation, total soluble solids (brix), number of seeds, and dry mass of seeds. It was used a digital scale, a digital paquimeter, and a manual counter to get the data. Comparing both situations, we found smaller averages for all analyzed characteristics in fruits obtained at LV condition, except for the fruits formation (100% well formed fruits in both cases). These differences were highly significantly ( $p < 0,001$ , Mann-Whitney and Chi-square tests). This led us to conclude that the pollination taxes decreased after the vegetation destruction at the crop' surroundings affecting directly pollinator numbers. Indeed, simultaneously observations on flower visitors confirmed the declining in bee numbers and their diversity at flowers. Obviously, pollinators were affected by the lack of vegetation, since they lost their nesting sites and other places to feed. As a consequence, pollination was affected and fruits quality decreased.