

EVALUATION OF FLORAL VISITORS OF THE MELON CROP AT ORGANIC FARMING IN THE SÃO FRANCISCO VALLEY, PETROLINA-PE, BRASIL

Embrapa

Semiárido

CNPq
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INTRODUCTION

The important crops pollinators have shown decline resulting in considerable economic impacts. The culture of melon (*Cucumis melo* L. – Cucurbitaceae) is dependent on pollination services done by honey bees (*Apis mellifera* L.). However, there is no care in relation to agrochemicals application concerning the visitation of these bees in the cultivated areas in the irrigation. Thus, this study aimed to evaluate the floral visitors of melon plants in organic farming.

MATERIALS AND METHODS

The experiment was conducted at 24 to 29 October 2010, in the Campo Experimental of Bebedouro, in Embrapa Semi-Arid, in Petrolina-PE (09°09'S; 40°22'W and altitude of 350m).

The frequency and behavior of floral visitors were observed from 5:00 a.m to 6:00 p.m, in five non-consecutive days, totalizing 58 hours of sampling effort. The male and hermaphrodite flowers were selected randomly, marked with tape and labeled for subsequent analysis of results. The presence of pollinators were marked with the help of a counter and annotated in spreadsheets.

RESULTS AND DISCUSSION

The anthesis of flowers of melon occurred around 5:00 a.m. in the two floral types (Figure 1). As senescence, it was found that the male flowers (3:30 pm to 5:10 pm) started the process before of the hermaphrodite flowers (4:38 pm to 5:30pm).

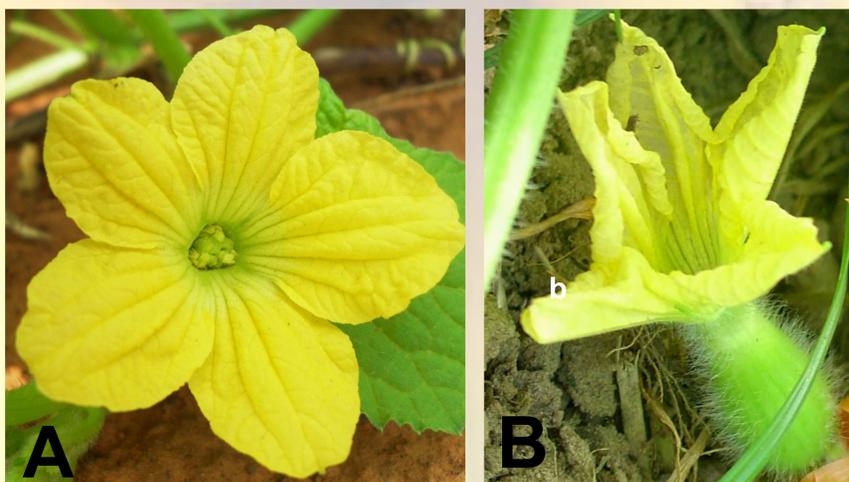


Figure 1. Hermaphrodite flowers of melon in anthesis (A) and in senescence (B)

During the observations it was recorded the presence of *Apis mellifera* L.; *Plebeia* sp.; *Melipona mandacaia*.; *Synoeca cyanea*.; Diptera sp. (Figure 2)

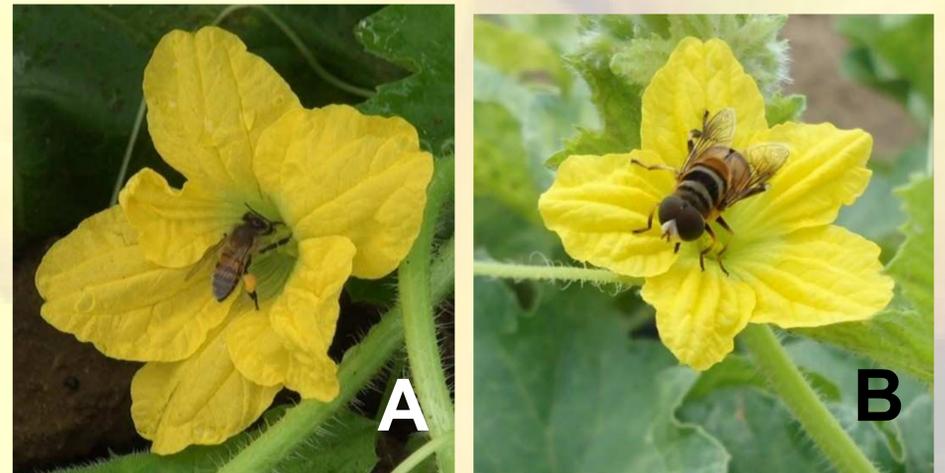


Figure 2. Floral visitors. A- *Apis mellifera*. B- Diptera sp

As the frequency of visits in relation to the floral type, it was found that 56.06% (n = 1170) were registered in hermaphrodite flowers and 43.94% (n= 917) in male flowers. In both floral types, the peak visitation occurred from 10h01 to 11h00, and *A. mellifera* was the most frequent visitor (Figure 3). The appeal floral foraged, the male (89,42%, n=820) and hermaphrodites flowers (75,98%, n=889) were visited mainly for nectar collection.

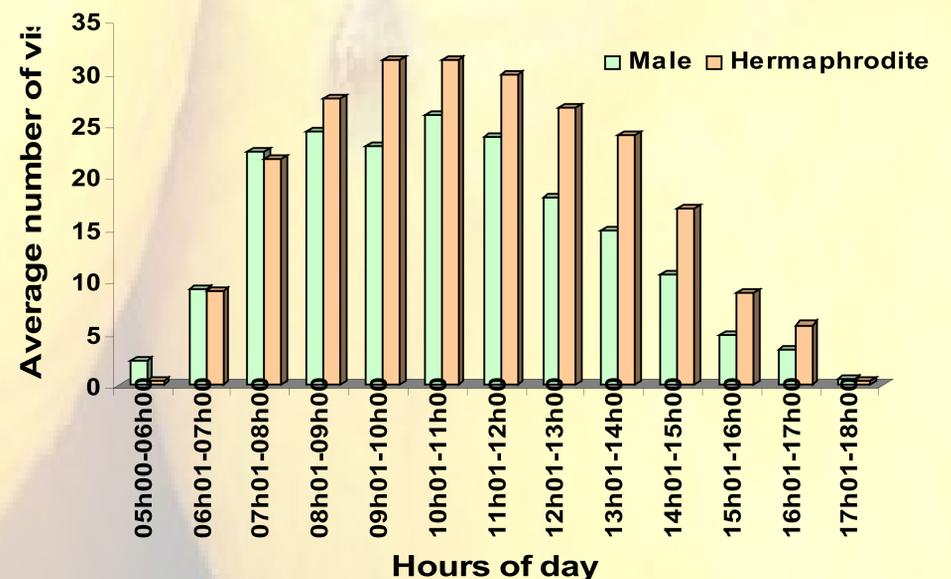


Figure 3. Average numbers of visits of *A. mellifera* during observation period

CONCLUSION

The diversity of insects found in the organic cultivation was higher than that reported for conventional farming, although while *A. mellifera* was the most frequent pollinator.