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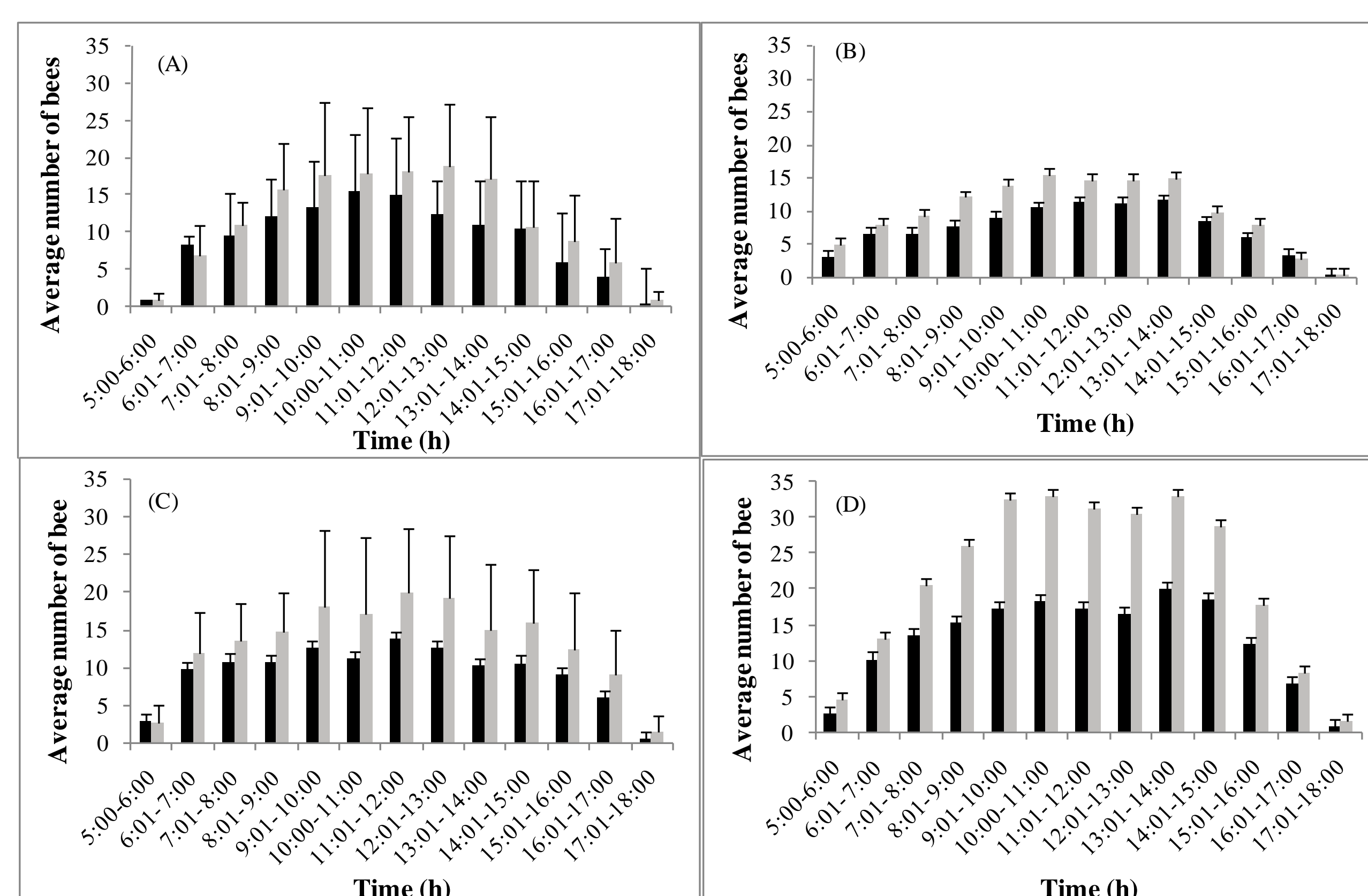
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## INTRODUCTION

Yellow melon (*Cucumis melo*) is an important fruit for production and exportation in Brazilian fruit culture. Honey bees (*Apis mellifera*) play an essential role on this being responsible for pollination and, consequently, improving production and better quality fruits. The objective of this work was to compare the bees' visitation on male and hermaphrodite flowers in a crop area using different number of hives.

## MATERIAL AND METHODS

The study was performed in November and December of 2011 in crop areas (0.5 ha each) in Petrolina (Northeast Brazil) where different number of hives (0, 1, 2, 3) were used. The number of observed flowers was 18 (1 hive) or 20 (0, 2, 3 hives), for each floral type, for five consecutive days. The observations were done from 5 am to 6 pm during the entire flower life. The comparisons were made according to male and hermaphrodite flowers together, and separated, and the hives: 0x1; 0x2; 0x3; 1x2; 1x3; 2x3, using the Mann-Whitney test.



**Figure 1:** Average number of honey bees on male (■) and hermaphrodite (□) melon flowers during the day (n= 20 or 18/flower type), with the introduction of 0 (A), 1 (B), 2 (C), and 3 (D) hives.

## RESULTS

The average number of bees visiting male and hermaphrodite melon flowers with different number of hives is shown at fig. 1. Clearly we see that hermaphrodite flowers are more visited by bees than male flowers in all situations. Considering both flower types together, it was verified that the results were not significantly different only for the comparisons 0x1 and 0x2; all the others comparisons were significantly different ( $P < 0.05$ , Table 1). For male flowers, the results were not significant for 0x1, 0x2 and 1x2; all other comparisons were highly significant ( $P < 0.01$ ). For hermaphrodite flowers, similar results were found: no significance for 0x1, 0x2 and 1x2; all other comparisons were highly significant ( $P = 0.00$ ) (Table 1).

**Table 1:** Comparison between the visitation of honey bees on melon flowers (hermaphrodite and male flowers considered separately: H and M, and together: HM) on areas with different number of bee hives (0,1, 2 and 3), in pairs. The number of observed flowers was different in the areas with 1 (n= 18 flowers) or 0, 2 and 3 hives (n=20).

Comparison of hives	P values for H (Mann-Whitney)	P values for M (Mann-Whitney)	P values for HM (Mann-Whitney)
0x1	0,299	0,219	0,105
0x2	0,372	0,871	0,579
0x3	<b>0,000</b>	<b>0,003</b>	<b>0,000</b>
1x2	0,055	0,118	<b>0,038</b>
1x3	<b>0,000</b>	<b>0,000</b>	<b>0,000</b>
2x3	<b>0,000</b>	<b>0,000</b>	<b>0,000</b>

## DISCUSSION AND CONCLUSION

Therefore, analyzing the data globally, it was observed that all comparisons made with 3 hives presented remarkable differences, showing that the number of visits increased drastically when they were added to the crop. Probably the competition among the bees increased hardly by the food sources offered by flowers.

## ACKNOWLEDGMENTS

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