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PP-284 [Bee Health]
"Varroa destructor" in an apiary in the municipality of Petrolina – PE, Brazil

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The mite "Varroa destructor" has been developing in recent years in several Brazilian apiaries, which may be associated with the abandonment and loss of colonies, leading to decreased production and productivity for beekeepers. In view of the above, the aim of this study was to verify the occurrence of ""Varroa destructor"" mite in an apiary in the municipality of Petrolina-PE. The experiment was carried out from 03/20 to 03/24/23, with two methods of analysis (adult bees and closed brood cells), in five random boxes (CX- 1;2;3;4;5). The adult bees (120) were collected in plastic tanks with 70% alcohol and the brood cells were taken from the brood frame itself (100 broods), packed in plastic bags, sealed and sent to LEAPMEL (Laboratory of Entomology, Apiculture and Meliponiculture), to check the amount of bees and mites found. The data were analyzed by variance analysis, in the SISVAR program, for the Tukey test at 5% significance level. The occurrence of "Varroa destructor" was verified in both analyzed methods. However, in the brood cells obtained a greater quantity and diversity of the mites (males and females (in various stages: young and adult). Observing the occurrence among the boxes in the adult bees, it was verified a higher occurrence in box 4 (Me=5'2), while boxes 1 and 2 presented a better performance (Me=0). Regarding brood cells, boxes 2 and 4 presented the worst performance (Me=17.9 and 28.3) respectively, box 5 presented the best performance (Me=0). We conclude that the area with brood cells presents a better performance for determining the infestation rate of "Varroa destructor" and hygiene in apiaries, thus avoiding a decrease in productivity.

PP-285
Varroa destructor infestation in adult bees of Apis mellifera in Pantanal, Brazil, 2018-2021

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Brazil has a high potential for beekeeping production and is considered one of the exporters of high-quality honey. However, it ranked eleventh in world honey production and had only 4.8% of global export capacity in 2019. In addition, parasitism caused by the mite Varroa destructor, a virus vector and ectoparasite of larvae and adult bees of Apis mellifera still lacks further studies in the country. This work aimed to determine the infestation rate of this ectoparasite in the two castes of adult bees: workers and drones. In the analysis of the adult bees, five colonies were used in an Embrapa Pantanal apiary located on the Nhumirim ranch (18°59'15.70"S, 56°37'09.30"W), sub-region of Nhecolândia of Pantanal, in Corumbá-MS, Brazil. Collections were carried out between October 2018 and March 2021. The number of ectoparasites in adult bees was analyzed after removing approximately 100 bees from each colony. The infestation rate was reached by the formula: infestation rate (%) = (number of mites/number of bees) x 100. The months of analyzes were divided according to the seasons of the year, spring: October, November and December; summer: January, February and March; autumn: April, May and June, and winter: July, August and September, it should be noted that the first day of each month was adopted as the beginning of these seasons. The acquired results were expressed as mean (%) and standard deviation. The highest infestation occurred in the spring (April) of 2020 with an average of 10.78 ± 5.36 and the lowest also in the spring (June) of 2020 with an average of 1.42 ± 1.64. According to the results of this work, the rates of infestation by V. destructor are within the parameters determined in Brazil based on other authors, relating the situation of Africanized bees with the subspecies of other countries. However, as there is little bibliographic data for places where the climate is tropical, as well as the Pantanal region, more long-term research is needed to monitor variations in infestation levels and possible damage to Africanized bees caused by the mite V. destructor.