EFFECT OF CUCUMBER CULTIVARS ON BIOLOGY OF APHIS GOSSYPII GLOVER (HEM., APHIDIDAE)

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ABSTRACT
The melon aphid, Aphis gossypii Glover (Hem., Aphididae) is an important pest of cucumber which can cause both direct and indirect damage on plants. Population attributes of insects may be influenced by different cultivars of a host plant. In this research, effect of nine different cucumber cultivars including Isfahan, Bahman, Bonanza, Beit alpha, Talsia, Davus, Sakata, Suprina, and Yalda were studied on biology of the melon aphid. The experiments were carried out in Petri dishes in a growth chamber at 25 ± 2 °C, 65 ± 5% RH and 16L : 8D. The data were analyzed by SPSS software. Various cucumber cultivars significantly affected the biology of A. gossypii. Developmental time of the aphid was varied from 4.70 to 5.35 d. The longest longevity and life span of the aphid were on Sakata cultivar and the shortest values of these parameters were on Isfahan cultivar, respectively. The shortest oviposition period of the aphid was on Isfahan, Bonanza, Suprina, and Bahman cultivars and the longest was on Sakata. The total fecundity of the melon aphid on the tested cultivars ranged from 45.90 to 107.60 nymphs per female. The highest and lowest values of this parameter were on Sakata and Bonanza cultivars, respectively. The number of offspring per female per day was lowest on Bonanza cultivar. The results of this study showed that the Sakata cultivar was susceptible to A. gossypii and its susceptibility should be considered in IPM programs.

Keywords: Biological parameters; cucumber; fecundity; melon aphid; susceptible cultivar