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The Effect of Different Cucumber (Cucumis sativus L.) Varieties on Growth and Development Time of Aphis gossypii Glover (Hemiptera: Aphididae)

Authors : Rochelyn Dona, Mohamed F. Nur, Serdar Satar

Abstract : The biological response of Aphis gossypii Glover (Hom. Aphididae) was investigated on the effects of seven cucumber varieties (Cucumis sativus L.) such as Kitir, Muhika, Ayda, Beit, 14-F1, Ruzgar, and Ptk in the laboratory condition at 24±1°C, 65±5% relative humidity (RH) and a photoperiod of 16:8 (L:D) hour. The results were related that the developmental time of A. gossypii at the nymphal stages was presented a significant difference only on the first instar stage. From the lowest to the highest respectively, 0.98 days on ruzgar to 1.18 days on Kitir, the second nymphal stage 0.98 days to Beit alfa, 1.08 days on Muhika, the third from 0.94 days to Kitir, from 1.16 days to 14-F1, and the last instar 1.22 days on Ptk, 1.48 days on Kitir were investigated. The total development time was evaluated at 4.46 days Beit on alfa 4.72 days on Kitir. The offspring number was 60.42 aphids on ayda and 83.72 aphids on muhika, the significant differences between varieties were based on one-way ANOVA (Tukey test). The lifetime of A. gossypii was recorded 19.10 days on Kitir, 27.64 days on Ptk. The results showed that cucumber cultivars were affected by the biological life of A. gossypii. The combination of this study with the other methods of the IPM tactics can serve as the best strategy for controlling this pest on cucumber varieties into the greenhouse.

Keywords : cucumber cultivars, fecundity, intrinsic rate, mortality, resistance
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