

Population parameters of *Tetranychus urticae* (Acari: Tetranychidae) on five rose varieties under laboratory conditions

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Two-spotted spider mite (TSSM), *Tetranychus urticae* Koch, is one of the most important pests of greenhouse crops including rose varieties. The main aim of this research was to evaluate resistance of different rose varieties to *T. urticae*. Therefore, population parameters of TSSM on five rose varieties (Full house, Cherie brand, Yasie, Marina and Avalanzh) were estimated at $25\pm 1^\circ\text{C}$, $65\pm 5\%$ RH and a photoperiod of L16:D8 h. Rose varieties had significant effect on population parameters of *T. urticae*. The significantly highest and lowest value of intrinsic rate of increase (r_m) was recorded 0.380 and 0.255 day^{-1} on Yasie and Avalanzh, respectively. The recorded values for this parameter on Full house, Cherie and Marina were 0.354 , 0.368 and 0.331 day^{-1} , respectively. In addition, doubling time (DT) and mean generation time (T) had the highest values on Avalanzh (2.703 and 14.368 days, respectively) and the lowest values of these parameters were obtained on Yasie (1.801 and 9.867 days, respectively). Finite rate of increase (λ) on the above-mentioned varieties was determined 1.425 , 1.442 , 1.471 , 1.395 and 1.290 day^{-1} , respectively. Full house had

the highest value of net reproductive rate (R_0), (47.620 offspring). The lowest value of this parameter was shown on Marina and Avalanzh, 38.956 and 38.984 offspring, respectively. According to the results, Yasie is the most favorable and Avalanzh is the most resistant variety to the *T. urticae* than the other varieties. The results of this study indicated that rose variety is a factor which can significantly affect the population parameters of *T. urticae*. The findings of the present study could be useful to design a comprehensive IPM program for this pest on different rose varieties.

Speaker Biography

Mostafa Haghani is an Applied Entomologist with a strong interest in Population Ecology, Biological Control, Thermal Biology, Tritrophic Interactions, Integrated Pest Management and Cop Loss Assessment of insects and mites pests especially on protected crops (vegetable crops and ornamental flowers). He have enjoyed interactions with other researchers in many areas, especially the Population Ecology and IPM, which have given him opportunities to learn about these fields. He has done research on biological control of vegetable leaf miner using parasitoid wasps and efficiency of egg parasitoid *Trichogramma* on laboratory hosts.

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