

Fertility life table parameters of *Trichogramma pintoi* reared on two hosts, the flour moth, *Ephestia kuehniella* and the carob moth, *Ectomelois ceratoniae*

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The carob moth, *Ectomyelois ceratoniae* Zeller (Lep.: Pyralidae) is the most important and destructive insects attacking pomegranates in Iran and world. Chemical control of the carob moth is ineffective because its immature stages develop inside the fruits. Development of integrated pest management programs against this pest is therefore needed with application of various alternative control methods including biological control as a major component. Egg parasitoids of the genus *Trichogramma* have been used successfully as inundative biological control agents against a range of agricultural pests mainly Lepidopterans and are the most widely used natural enemies in biological control worldwide. With the aim of choosing the best *Trichogramma* strain for biological control programs of the carob moth, we evaluated the efficiency of one indigenous strain of *T. pintoi* Voegele collected from the carob moth eggs in pomegranate orchards, by comparing fertility life table characteristics on different hosts. Life table parameters including intrinsic rate of natural increase (r_m), finite rate of increase (λ), gross reproductive rate (GRR), net reproductive rate (R_0), doubling time (DT), mean generation time (T), intrinsic rate of birth (b) and intrinsic rate of death (d) were calculated. All of experiments were carried out at $25\pm 1^\circ\text{C}$, $65\pm 5\%$ RH, and 16L:8D photoperiod. The above calculated parameters of *T. pintoi* reared on *E. kuhniella* were 0.21 ± 0.01 , 1.32 ± 0.01 , 34.10 ± 2.98 , 32.00 ± 3.35 , 2.52 ± 0.06 , 12.58 ± 0.16 , 0.32 ± 0.01 , 0.04 ± 0.00 and reared on *E. ceratoniae* were 0.26 ± 0.00 , 1.30 ± 0.00 , 28.63 ± 2.36 , 27.15 ± 2.56 , 2.64 ± 0.05 , 12.56 ± 0.26 , 0.30 ± 0.01 and 0.04 ± 0.00 , respectively. The overall parameters were significantly different for two species ($P < 0.05$). This result showed that the efficiency of *T. brassicae* reared on *E. kuhniella* is much better than *E. ceratoniae*.

Keywords: *T. pintoi*, *E. kuhniella*, *E. ceratoniae*, life table parameters