

عنوان مقاله:

Effect of low lethal concentrations of Eforia on biological parameters of the predatory mite *Amblyseius swirskii*

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خلاصه مقاله:

The two-spotted spider mite *Tetranychus urticae* Koch (Acari: Tetranychidae) is one of the most important pests of many crops worldwide. Combined tactics for pest management have a significant special effect on reducing pesticide use and maintaining the activity of natural enemies, which is the main objective of IPM programs. The effect of low-lethal concentrations of Eforia (۲۴.۷ SC, Syngenta Co.) at LC_۵, LC_{۱۵}, and LC_{۲۵} were investigated on biological parameters of *Amblyseius swirskii* Athias-Henriot (Acari: Phytoseiidae) under laboratory condition at 25 ± 1 °C, $70 \pm 5\%$ RH and ۱۶:۸ (L: D) h. The data were analyzed based on a two-sex life table procedure. The results showed that Eforia caused a significant reduction in fecundity (Control: ۳۷.۱۷; LC_{۲۵}: ۲۳.۰۴ eggs/female) and total life span (Control: ۴۲.۶۷ days; LC_{۲۵}: ۲۴.۶۵ days). The net reproductive rate (R_0) was ۲۲.۳۱, ۲۰.۱۲, ۱۵.۱۴, and ۱۴.۹۸ eggs/individual, respectively, at control, LC_۵, LC_{۱۵}, and LC_{۲۵}. The maximum and minimum values for the intrinsic rate of increase (r) were recorded to be ۰.۱۷ (Control, LC_۵, and LC_{۲۵}) and ۰.۱۵ (LC_{۱۵}) day^{-۱} for the treated mites. Based on the results, the application of low lethal concentrations of Eforia harms some biological parameters of this predatory mite, and the results of this study showed that Eforia may not be applied for the control of *T. urticae* pest together with *A. swirskii*.

کلمات کلیدی:

Amblyseius swirskii, Life table, Sublethal concentration, Eforia, Two-spotted spider mite

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