

عنوان مقاله:

Impact of hexythiazox on life table parameters of the *Amblyseius swirskii* (Acari: Phytoseiidae) and its prey *Tetranychus urticae*

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خلاصه مقاله:

The two-spotted spider mite *Tetranychus urticae* Koch (Acari: Tetranychidae) is one of the most important and destructive herbivorous mites in farm and greenhouse that has developed high levels of resistance to many acaricides. In this study, we investigated the effect of sublethal concentrations of hexythiazox at LC_{10} , LC_{20} , and LC_{30} on the development and reproduction parameters of *Amblyseius swirskii* Athias-Henriot (Acari: Phytoseiidae) and its prey *T. urticae*. The crude data were analyzed based on age-stage, two-sex life table analysis. Hexythiazox (at LC_{20} and LC_{30} levels) reduced the oviposition period (۹.۶۸, ۸.۰۶ days), total lifespan (۲۲.۳۷, ۲۰.۸۸ days), and total fecundity (۵۰.۹۷, ۴۶.۲۱ eggs/female) compared to the control but did not affect those parameters of *A. swirskii*. The intrinsic rate of increase (r) and finite rate of increase (λ) were not significantly different at tested concentrations, but the net reproductive rate (R_0), gross reproductive rate (GRR), and mean generation time (T) reduced significantly. Our study demonstrated lower toxicity of hexythiazox on *A. swirskii* compared to its prey. It could be concluded that the use of selective acaricides at lower concentrations may be helpful in integrated pest management programs.

کلمات کلیدی:

Two-spotted spider mite, LC_{50} , life table, biological parameters, Phytoseiidae

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