

**Investigation on the effect of Abamectin in competition for nonselective insecticides on first instar larvae of cucumber leafminer  
*Liriomyza sativae* Blanchard (Dip., Agromyzidae)**

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**Abstract**

Vegetables leafminers is one of the most important pests of greenhouse cucumber in Iran. In early years the population of this pest in greenhouse has been increased because of the irregular application of insecticides. This study was carried out to determine the toxicity (LC<sub>50</sub>) of Abamectin, Deltametrin, Imidacloprid and Acetamiprid, the leaf dipping manner used for bioassay tests on first instars larvae, on the laboratory conditions was carried out at 25±1°C, 65±5% R.H., and 16:8 photoperiod of L:D. Data was analyzed using probit analysis procedure and POLOPC softwares. The results (based on ppm active ingredient) for Abamectin, Deltametrin, Acetamiprid and Imidacloprid revealed that LC<sub>50</sub> were 1.5, 200, 492 and 630 ppm respectively. According to results, the rate of toxicity for Abamectin, in larval stages was more toxic than other insecticides.

**Key words:** Abamectin, Acetamiprid, Deltametrin, Imidacloprid, *Liriomyza sativae*

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