

Toxicity of some insecticides to larvae of *Frankliniella occidentalis* (Pergande) (Thysanoptera: Thripidae) evaluated by the petri dish-spray tower method

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Abstract

Three populations of the western flower thrips (WFT), *Frankliniella occidentalis* (Pergande), were collected from commercial greenhouses (strawberry, rose and gerbera) in Wakayama Prefecture, Japan. Four females were transferred onto a kidney bean leaf, *Phaseolus vulgaris* L., floated on 0.5% agar gel in a plastic petri dish. The petri dish, which contained 40-80 larvae 2 to 3 days after hatching, was sprayed with 6 ml of insecticides through a spray tower. Of the organophosphates, dichlorvos, sulprofos, profenofos, prothiofos, malathion, chlorpyrifos-methyl, chlorfenvinphos, fenthion and phenthoate were toxic with more than 90% of corrected mortality. Most carbamates except for methomyl and pyrethroids were less toxic. Of the IGRs, lufenuron, chlorfluazuron and flufenoxuron were effective. Chlorphenapir and spinosad achieved 100% mortality. There was no remarkable difference in sensitivity to the insecticides among the populations except for acrinathrin. The Kishigawa and the Inami populations collected from rose and gerbera, respectively, were more tolerant to acrinathrin than the Iwade population collected from strawberry.

Key words : *Frankliniella occidentalis*, petri dish-spray tower method, susceptibility, organophosphate, IGR

摘 要

ミカンキイロアザミウマの幼虫に対する薬剤の殺虫効果

ミカンキイロアザミウマの薬剤感受性の実態把握と有効薬剤を探索するために、虫体・葉片散布法による薬剤検定を行った。和歌山県内のイチゴとバラ、ガーベラから採集した雌成虫をインゲンの葉片に放飼し、23℃で2日間産卵させた。放飼7日後に回転式薬剤散布塔で幼虫に対して薬液を6ml散布し、処理24時間後に生死を判定をした。殺虫効果の高かった薬剤（補正死亡率が90%以上）は、DDVP乳剤、スルプロホス乳剤、プロフェノホス乳剤などの有機リン剤とクロルフェナピルフロアブル、スピノサド顆粒水溶剤であった。カーバメイト剤ではメソミル水和剤、IGR剤ではルフエニユロン乳剤、クロルフルアズロン乳剤などの効果が高かった。供試薬剤の殺虫効果は個体群間で概ね差異が見られなかったが、周年栽培されるバラとガーベラから採集された個体群はイチゴの個体群に比べるとアクリナトリン水和剤の殺虫効果が低かった。