

研究报告

薇甘菊乙醇提取物对桔全爪螨种群的控制作用

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收稿日期 2004-2-12 修回日期 2003-7-8 网络版发布日期 接受日期

摘要

研究薇甘菊 (*Mikania micrantha*) 乙醇提取物对桔全爪螨 (*Panonychus citri*) 种群的控制作用, 并比较其与常用杀螨剂哒螨灵的效果. 在实验室用0.1、0.2、0.4 g·L⁻¹ 3个浓度提取物分别喷布桔全爪螨卵、幼螨和若螨, 除了0.1 g·L⁻¹ 浓度处理对卵没有效果外, 该处理幼螨、若螨存活率以及另2个浓度处理3个螨态的存活率都显著下降. 在非选择性试验条件下, 用这3个浓度的提取物处理叶片饲养的桔全爪螨雌螨繁殖量显著减少, 寿命也显著缩短. 在田间用这3个浓度的提取物在20 d内连喷2次, 桔全爪螨卵、幼螨和若螨的存活率都低于对照, 干扰作用控制指数分别为0.518、0.292、0.277, 即对种群增长控制的效果分别为48.2%、70.8%、72.3%, 比15%哒螨灵乳油2000倍处理更有效控制桔全爪螨的田间种群. 田间试验结果还表明, 提取物处理的叶片比对照和哒螨灵处理的浓绿, 而且对桔全爪螨的天敌较安全.

关键词 [薇甘菊乙醇提取物; 桔全爪螨; 控制作用](#)

分类号

Control effects of *Mikania micrantha* alcohol extract on citrus red mite *Panonychus citri*

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Abstract

This study showed that spraying 0.2 and 0.4 g·L⁻¹ *Mikania micrantha* alcohol extracts on *Panonychus citri* could significantly decrease the survival rates of *P. citri* eggs, larvae and nymphs, and 0.1 g·L⁻¹ *M. micrantha* alcohol extract could also significantly decrease the survival rates of larvae and nymphs. In a no-choice test, both the fecundity and the longevity of female *P. citri* fed on the leaves treated with all three test concentrations 0.1

, 0.2 and 0.4 g·L⁻¹ of *M. micrantha* alcohol extracts were significantly reduced, compared with those fed on alcohol treated leaves. In a field experiment, the efficacy of *M. micrantha* alcohol extracts at three test concentrations was compared with water, alcohol, and 15% Pyridaben, an acaricide widely used in commercial control of red mite in sweet orange orchards. The survival rates of *P. citri* eggs, larvae and nymphs in all three *M. micrantha* treatments were lower than the control, and the interference index of population control (IIPC) was 0.518, 0.292 and 0.277, respectively, while the IIPC for the Pyridaben treatment was 0.945, with a control efficacy of only 5.52%.

M. micrantha extract had an increased control effect with its increasing concentration, and was safer to natural enemies than 15% Pyridaben. The leaves in the three *M. micrantha* treatments were less damaged, and their color was much deeper than that of the other three treatments. Therefore, *M. micrantha* alcohol extract provided a better control of citrus red mite populations than Pyridaben.

Key words

扩展功能

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