

Efficiency of Some Pesticides for the Control of Nursery Pests and diseases of Cinnamon (*Cinnamomum zeylanicum* Blum)

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Abstract

In these experiments pests and diseases severity, infection time and suitable insecticides and fungicides were studied from 2006 to 2008. At the first experiment damage severity percentages of pests and diseases were recorded bi-weekly. Five fungicides Tebiconasol (5ml/10L), Hexaconasol (20ml/10L), Propaconasol (10ml/10L), Copper based Champion (20g/10L) and Carbenderseem (7ml/10L) with four insecticides Dimethoate (20ml/10L), Chlorphyrofos (15ml/ 10L), Imidacloprid (10ml/10L) and Phenyl Phyrasol (4ml/10L) were used as treatments of second experiment and third experiment was designed with based on the results of second experiment. Sulphur (80g/10L), Hexaconasol and Dimethoate, Hexaconasol and Chlorphyrifos, Sulphur and chlorphyrifos, Sulphur and Dimethoate were used as different treatments, as well as design was RCBD and untreated plots were maintained as control. Treatments applications and data collection were done bi-weekly. One month after seed germination, leaf minore (*Acrocercops* spp.) damage was the highest (10%). At the same time leaf eating caterpillar (*Dasychira mendosa*) damage was 1.75% and gradually increased up to 7.6%. Mite (*Eriophytes boiisi*) and jumping plant louse (*Trioza cinnamomi*) galls appeared only after three months, and end of nursery period it was recorded at 43 %, 0.1% respectively. Leaf blight (*Collatotrichum* spp.) disease was observed at 0.1% and the end reached up to 2.5%. Second experiment results revealed that, leaf blight was significantly reduced by Hexaconasol, Tebiconasol and Propaconasol. However, Tebiconasol and Propaconasol were badly affected the plant height and number of leaves per plant. Leaf galls were reduced by Chlorphirofos and Dimethoate. Leaf eating caterpillar damage significantly decreased with Chlorphyrifos. In second experiment, selected pesticides were Hexaconasol, Dimethoate and Chlorphyrifos. As a result of third experiment together with Sulphur and Chlorphyrifos recorded low damage severity of leaf eating caterpillar and leaf galls. Leaf blight disease decreased in Sulphur treated plots. At the nursery, economically important pests were leaf minore, mites and leaf eating caterpillars and disease was leaf blight. Together with sulphur and chlorphyrifos can be used to control both pests and diseases at the cinnamon nursery.

Keywords: cinnamon, nursery, pests