

Short paper

## **Effect of insecticidal soap, Palizin on the crapemyrtle aphid, *Tinocallis kahawaluokalani* and its coccinellid predator, *Harmonia axyridis* under laboratory conditions**

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### **Abstract**

The crapemyrtle aphid, *Tinocallis kahawaluokalani* Kirkaldy, is an important pest of ornamental woody plant, *Lagerstroemia* spp. causes premature drop of leaves and decline of summer flowering and reduces the commercial market. Effect of botanical insecticide, Palizin at the recommended concentrations of 1500, 2000 and 2500 ppm evaluated on aphid and its predator, *Harmonia axyridis* Pallas. Experiment was done on aphids by two methods leaf dipping and spraying and then the numbers of dead aphids were recorded at 24 after treatment. The results showed that spraying method was more effective than other method and caused 86.6%, 90% and 95% mortality at 1500, 2000 and 2500 ppm of Palizin, respectively. By dipping eggs of coccinellid in insecticide solutions the lowest eggs hatching percent (50%) and the longest developmental period (19 days) were observed at 2500 ppm of Palizin. Eggs hatching percent and developmental period were slightly affected by 1500 ppm of Palizin in comparison with the control. By topical application of Palizin on the fourth instar larvae, the survival of larvae and pupal developmental period were not significantly affected. However, the highest survival of treated fourth instar larvae (96.9%) than control (100%) was observed at 1500 ppm of Palizin. According to the results, Palizin at 1500 ppm had remarkable mortality on aphids without affecting many of tested characteristics of *H. axyridis*. So, Palizin at 1500 ppm can be used for integrated pest management in integration with *H. axyridis* to control of *T. kahawaluokalani*.

**Key words:** Aphid, *Lagerstroemia*, Botanical insecticide, Coccinellid, Palizin

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