TESTING OF MITICIDES AGAINST CITRUS MITES

T.M.N.M. Tennakoon[1], L.D. Galanihe[2], A. Balasuriya[1]

[1]*Department of Plant Sciences, Faculty of Agriculture, Rajarata University of S Lanka, Puliyankulama, Anuradhapura, Sri Lanka.*

[2]*Horticultural Cr ops Resear ch and Development Institute, Gannoruwa, Peradeniya, Sri Lanka.*

Citrus mites are one of the major pests, which cause severe damage to citrus leaves and fruits. This study was aimed at testing and recommending effective and environmental friendly miticide formulations against three species of citrus mites as alternatives in the current Integrated Pest Management (IPM) package. The current IPM package, which includes Sulphur (S) was used as the treated control. Laboratory and field studies were conducted at the Division of Entomology and in the research field of HORDI, Gannoruwa, Peradeniya in 2012/13 *Maha* season to test the bioefficacy of five miticides against citrus mites. Five miticide formulations namely, Nissorun 10% WP, Nissorun 5% EC, Abamectin, Fenpyroximate 5% EC and Sulphur as the treated control were tested with an untreated control. The experiment was laid out in a Randomized Complete Block Design (RCBD) with three replicates. Observations were made on the population levels of three different mite species (rust, red and yellow mites) and their natural enemies, severity of fruit damage, and marketable and unmarketable yield at harvest. Results show ed that all the miticides were effective in controlling citrus rust mites. Abamectin and Fenpyroximate 5% EC were more effective and environment friendly, compared to the Sulphur treatment. Any of the miticides tested was not effective against red and yellow mites. All the miticides have reduced the damage severity rate of citrus fruits but Nissorun 10% WP was significantly most effective, compared to Sulphur. Abamectin and Fenpyroximate 5% EC gave the higher marketable yield compared to the other treatments. This study reveals that the alternative chemicals tested are able to control rust mites more effectively, while being more environmentally friendly and contributing more towards the quality and quantity of fruit, compared to the current recommendation, which includes Sulphur.

Key words : Citrus, Fruit damage, Mites, Miticides, Natural enem