Effect of Granular Insecticides to control Banana Stem Weevil (*Odoiporus longicollis* Oliver)

A.S. Pushpakumari and M.G.N.E. Mahagollage

Fruit Research and Development Institute, Kananwila, Horana, Sri Lanka

ABSTRACT

Banana stem weevil, *Odoiporus longicollis* Oliver is one of the most important pests of banana. The adult females lay eggs only in the leaf sheaths of the plants. The larvae feed on tissues of the succulent sheath by tunneling. Non emergence of the flower buds may result due to this damage. This infestation affects the translocation of nutrients, water and growth and development retardation. Plants may be lodged even in a mild wind and yield loss may be 10-90% depending on the growth stage of the crop and management practices. Use of pseudo stem traps with granular insecticide is one of the ways to control banana stem weevil. However, the only recommended granular insecticide; Carbofuran 3%G for banana weevil control was baned in 2012. Therefore, experiments were conducted to select effective safer granular insecticides as an alternative to Carbofuran 3%G recommendation for pseudo stem traps.The experiment was carried out in research field at Fruit Research and Development Institute, Kananwila, during 2014 and 2015. Traps were prepared by cutting 6-10 cm discs from fresh pseudo stems and sandwiched with different insecticides according to the treatments. Traps were randomly placed using 25 traps per acre into Randomized Complete Block Design with 8 replicates. During 2014, Thiocyclam Hydrogen Oxalate 5%G, 5 g and 10 g per trap, Diazinon 5%G, 10 g per trap were evaluated with Carbofuran 3%G, 6 g per trap as standard check and untreated control. In 2015, Fipronil 3%G, 10 g/ trap and Cadusafos 2 g /trap also tested with previous treatments. Traps were replaced at 2-4 weeks interval. Dead and live number of weevils was counted weekly. Mortality percentage was analyzed using ANOVA and means were compared using LSD at 0.05 probability level. According to the results obtained in 2014, Diazinon gave the highest mean mortality compared to other treatments. It was similarly effective as carbofuran. In the second experiment during 2015, Thiocyclam Hydrogen Oxalate 5%G, 10g per trap gave the highest mortality. However, Diazinon, Fipronil and Carbofuran also equally became effective in controlling banana stem weevil. Thiocyclam Hydrogen Oxalate 5%G, 10 g per trap, Diazinon 5%G, 10 g per trap and Fipronil 3%G, 10 g per trap can be recommended to use in pseudo stem traps to control banana stem weevil. Therefore, Carbofuran 3%G can be replaced by the above mentioned insecticides. The pseudo stem traps can be used in banana cultivation under Good Agriculture Practices (GAP).

Key words: Banana stem weevil, Granular insecticide, Pseudo stem trap

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