Efficacy of the Novel Termiticide Dinotefuran 20% SG on Mound Building Termite *Odontotermes redemanni* Wasmann in Sri Lanka

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ABSTRACT

Dinotefuran 20% SG, which is a systemic neonicotinoid insecticide obtained from a new source, was tested to determine its termiticidal activity against the mound building termite *Odontotermes redemanni* Wasmann in 2017. Two field locations with termite mounds, (a) plantation at Digana, Pallekale and (b) a secondary forested area at the Research Centre, Maha-Illuppallama were selected for the study. The novel termiticide Dinotefuran 20% SG was tested against two reference termiticides Bisect-Bifenthrin 10% EC and Biflex-Bifenthrin 10% EC and against water as a control. There were three replications for each treatment including control. Ten dried sticks (30-50 cm long and 2-5 cm in diameter) of Kapok (*Ceiba pentandra*) were inserted into each termitarium after spraying of chemicals and the termites were allowed to feed on them. Sticks were removed at four and eight weeks after spraying and weighed separately to measure the weight loss (wood consumption by termite). Analysis of variance showed highly significant difference (p=0.0001) in weight loss between treated and control plots in both locations. Maximum mean weight loss (27.99 g) was recorded in the control plot at Maha-Illuppallama after eight weeks. Minimum feeding loss (1.22 g) was recorded in the test plot with new termiticide Dinotefuran 20% SG at Digana, Pallekale after eight weeks. However, there were no significant differences in weight loss between the plots treated with Dinotefuran 20% SG and other two reference termiticides. As termiticides in powder forms are limited in the country, Dinotefuran 20% SG would be a suitable candidate to control economically important termites in Sri Lanka.

Key words: Feeeding loss, ound building termites, Termiticides, Termite control, Termitaria

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