RESEARCH ARTICLE

COMPARATIVE EVALUATION OF ENTOMOPATHOGENIC FUNGI AND CHEMICAL INSECTICIDES AGAINST WHITE GRUB (*HOLOTRICHIA* SP.) IN SUGARCANE

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Abstract: Field trials were conducted in sugarcane crop for management of white grub (*Holotrichia* sp.) using talc based formulations of entomopathogenic fungi *Metarhizium anisopliae* and *Beauveria bassiana* and chemical insecticides namely carbofuran 3G, Chloropyriphos 20 EC and Fipronil 40%+ Imidaclorpid 40% WG. Pretreatment count of white grub larvae was taken for every individual microplot. Fipronil 40%+ Imidaclorpid 40% WG @ 375 gm/ha proved to be the best treatment against white grub and provided up to 100% control of white grub. Chloropyriphos was second most effective treatment and checked 100% soil population of white grub followed by *M. anisopliae* which resulted in 80.97% decrease in soil population of white grub. After economic analysis *M. anisopliae* appeared to be significantly cost effective as compare to Fipronil 40%+ Imidaclorpid 40% WG. Net return of Rs. 31153/ha was recorded in this treatment whereas, net return of Rs. 27816/ha was recorded in case of *M. anisopliae.*

Keywords: White grub, *M. anisopliae, B. bassiana*, Biological control, Chemical control

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