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CONTROL OF WHITE GRUB (*HOLOTRICHIA SERRATA* F.) ATTACKING RUBBER AT THE NURSERY STAGE IN INDIA

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In a 2 year field experiment, seven insecticides viz., carbofuran 3G, phorate 10G, carbaryl 5D, HCH 10D, carbaryl 4G, phosalone 4D and carbaryl + lindane (sevidol) 4 : 4G broadcast at the time of sowing were evaluated for their relative effectiveness in controlling white grub infesting rubber seedlings in the nursery. Among the insecticides tested, phorate 10G followed by carbaryl + lindane (sevidol) 4 : 4G was proved to be very effective in managing the population of white grub in rubber nursery below the economic threshold. The treated plots recorded the lowest grub population and highest plant survival.

Key words – *Holotrichia serrata*, Phorate 10G, Carbaryl + lindane (sevidol) 4 : 4G, Carbofuran 3G.

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INTRODUCTION

White grubs have attained the status of a national pest infesting a variety of crops. The losses inflicted by them are so high that in India the white grub has been declared as a national pest (Yadava and Yadava, 1973). White grubs of the species *Holotrichia serrata*, *H. rufoflava*, *H. fissa* and *Anomala varians* are the serious pests of rubber causing severe damage to seedlings in nurseries and rendering them unfit for transplanting (Jayarathnam and Nehru, 1980 and 1984). The most predominant and serious among the four species is *H. serrata*. The peak period of occurrence of the pest in the field is from June to December, when the grubs of different instars would cause serious damage to rubber seedlings. The damage in general is severest when the voracious third instar grubs are abundant in the nursery. In endemic areas, the estimated quantum of losses inflicted by this major pest to nursery rubber seedlings ranges from 42 to 45 per cent.

The control of white grubs by chemicals has been evaluated by several research workers in India (Kalra and Kulshrestha, 1961; Ramakrishnan and Radhakrishna Pillay, 1964; Desai and Patel, 1965; David and Kalra, 1966; Patel et al, 1967; Sachan and Pal, 1974; Raodeo et al, 1976; Veeresh, 1977 a, b and 1981; Jayarathnam and Nehru, 1980; Lal, 1983; Viswanath et al, 1984). So far, field trials have been conducted mainly to evaluate insecticidal formulations in different dosages before and after sowing. In the present investigation, granular and dust formulations of newer and commonly available insecticides were tested for their comparative effectivness at sowing time for the control of *H. serrata* F.