ABSTRACT

A Survey of the Incidence and Distribution of the Sweet Potato Stem Borer, *Megastes grandalis* Guen. in Trinidad

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The incidence of *Megastes grandalis* Guen. (Lepidoptera: Pyralidae) was investigated as well as the spatial distribution of the pest in these fields in Trinidad. Explanation of different levels of infestation was attempted in terms of cultural practices of the farmer and the presence of parasitoids of the pest.

Fields at the University Field Station (UFS), St. Joseph; Chaguanas; Princes Town; and Moruga were sampled. Pest incidence was measured by percentage infestation of plants, and its significance tested statistically. Spatial distribution in these fields was examined using the χ^2-test for goodness-of-fit to a Poisson distribution. Additionally Taylor's power law was used to determine distribution for a series of samples obtained from Moruga. The pest was randomly distributed in all fields.

Rearing of *M. grandalis* larvae and pupae, and trapping were used to obtain parasitoids of the pest, and farmers were also interviewed about their cultural practices.

Infestation levels varied in the seven fields sampled: Cultivar A, UFS, 93.3 per cent; Cultivar B, UFS, 27.8 per cent; Cultivar C, UFS, 63.9 per cent; Farmer B, Chaguanas, 93.3 per cent; Field 1(a), Moruga, 56.7 per cent; Field 1(b), Moruga, 63.9 per cent; Field 2, Moruga, 18.0 per cent. The infestation levels were found to be significantly different.

Chemical spraying of crops was the main method of control used by farmers and is a factor which may have been responsible for low parasitoid populations, since none was found in these fields.