ABSTRACT

The Susceptibility of Selected Sweet Potato Cultivars to Damage by *Megastes grandalis* Guen. (Lepidoptera: Pyralidae)

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The sweet potato moth borer, *Megastes grandalis* Guen. (Lepidoptera: Pyralidae), is the major pest of sweet potato in Trinidad and Tobago. It has forced the country to import at considerable cost, more than 80% of the sweet potato which it consumes, and is largely responsible for the high price of the commodity to consumers. The need for suitable management programmes to be developed, for this pest, is strongly indicated by the failure of single component strategies against it.

Resistant cultivars are pivotal to the success of any of these programmes. Thus, this project was undertaken to evaluate the susceptibility of fifteen selected sweet potato cultivars to damage by the borer; secondly, to determine possible reasons for any observed differences among the cultivars. The selections included ten which are apparently resistant, and two with features which are believed to confer resistance. They were planted in three concentrically arranged randomized blocks of 15 plots each. The plants were examined, at weekly intervals and at harvest, and the incidence of borer damage recorded. Morphological features, which are believed to influence resistance, were also recorded.

Less than 4% of all the plants were attacked, and none of the infestations lasted more than 21 days. Thus, it was impossible to make any conclusions about the relative susceptibility of the cultivars. It is proposed that the very low infestation of the plants was the result of abnormally low rainfall, good weed control, and the activity of predatory birds and ants. It is suggested, also, that observed morphological differences among the cultivars, in plant vigour, average number of tubers per plant, moisture content of the stems; and length of tuber stalk, could explain some differences in varietal susceptibility which have been recorded in previous studies.