

**The Impact of the Sweet Potato Leaf Beetle *Typophorus nigrinus viridicyaneus*
(Coleoptera: Chrysomelidae) on Sweet Potato Production**

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ABSTRACT

Sweet potato (*Ipomoea batatas*, L.) is a major root crop within the region, providing a source of carbohydrate and an income for many rural families. With the current concern for food security within the region there has been an increase in the production of staple crops including sweet potatoes. Production is limited by pre and postharvest pests that significantly reduce yields. In recent years, the sweet potato leaf beetle, *Typophorus nigrinus viridicyaneus* (Crotch) (Coleoptera: Chrysomelidae) has emerged as a major limiting pest reducing the quality of harvested yields by over 80%. Sweet potatoes are damaged when the immature beetles feed on the surface of the roots thus reducing their marketability. Identifying management practices to reduce beetle populations and crop damage is therefore critical for ensuring the production of high quality sweet potatoes and optimal returns to the producer. Replicated field trials were conducted in two major growing areas North West and West Central Jamaica to determine the impact of four insecticides; lambda cyhalothrin, imidacloprid, thiamethoxam, azadiractin and two popular export varieties on population levels and root damage. Populations averaged 2.36 (± 0.54) beetles per plot during the growing season with levels being higher at root formation and enlargement than root initiation and the vegetative growth phase; mean numbers were 1.72 (± 0.19) and 2.51 (± 0.43) respectively. Differences in beetle populations were observed between varieties and locations. Little differences were observed among the treatments with respect to the percentage clean roots as well as the severity of damage. These data are discussed within the context of developing an Integrated Pest Management strategy for the leaf beetle.

KEY WORDS: Sweet potato, Sweet potato Leaf Beetle, *Typophorus nigrinus viridicyaneus*; (Coleoptera: Chrysomelidae), Integrated Pest Management