

ABSTRACT

Investigations of Mango Seed Weevil, *Sternochetus mangiferae* (Fabricius) in Barbados

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The distribution, level of infestation, economic importance, varietal incidence and effect on seed germination of the mango seed weevil, *Sternochetus mangiferae* (Fabricius) (Coleoptera: Curculionidae) were investigated.

An islandwide survey was conducted to determine weevil populations as well as percentage infestation. The weevil was found infesting fruit in all parishes of the island. Data on Barbados' mango imports from CARICOM were obtained and analyzed; data on expenditure by the Ministry of Agriculture as a result of the weevil was similarly treated. Analysis showed that between 1987 and 1991 Bds.\$104,123.00 were spent on activities related to the weevil. Analysis also revealed that since the 1984 embargo on St. Lucian mangoes, there has been a considerable rise in imports from St. Vincent to the point where they now supply 99 percent of Barbados' mango imports from CARICOM.

Varietal incidence of the seed weevil was investigated at the Ministry's Orchard at Haggats, St. Andrew. Six varieties were examined and their infestation levels recorded in picked and ground-collected fruit. The lowest infestation (five percent) was recorded for "Julie" and the highest (93 percent) for "Graham". There was no significant difference in infestation between fallen and picked fruit.

Seeds from four mango varieties were tested to determine the effect weevil damage had on germination. Seeds having >50 percent damage were graded heavy damage, <50 percent but not zero, light damage and no weevil damage, clean. Seeds were planted in sand and germination percentages were recorded two weeks after sowing. Heavy damaged seeds showed poor germination (0 to 6 percent), light damage (55 to 66 percent), and clean (70 to 94 percent).

For these studies it is concluded that the weevil has spread throughout Barbados. Infestation levels however vary according to location, and host variety. The effect on seed germination is also variable. Where seeds have light damage and the weevil is excised, viable seedlings can be obtained.