

DII 10 Flower and pod-feeding Lepidopteran species on selected grain legumes in Hambanthota district

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Lepidopteran infestations have been identified as one of the yield constraints on grain legumes in Hambanthota district. In the present study, species composition, prevalence and level of damage caused by flower and pod-feeding Lepidopteran species on four grain-legume species, i.e., Cowpeas, Mung beans, Peanuts and Soybeans, grown in seven locations, i.e., Debarawewa, Kachcheriagama, Karambagalmulla, Kattakaduwa, Gangawalana, Eraminiyaya and Thuduwamulla, in Hambanthota district, were determined during May 2009 to July 2011. Altogether, eight Cowpea and Peanut, seven Mung bean and six Soybean fields were sampled within these locations. In Peanuts and Soybeans, only flowers, while in Cowpeas and Mung beans both flowers and pods were sampled. Larvae of two Lepidopteran species, i.e., *Maruca vitrata* and *Spodoptera litura*, were encountered and their prevalence varied with the legume species, plant structure, i.e., flowers/pods, and the location. Seventy five percent of the Cowpea fields sampled, showed either flower or pod damage, or both. Flower damage of Cowpea was solely caused by *M. vitrata* with the maximum of 65%/plant at Karambagalmulla. In contrast, pod damage (maximum 15%/plant at Thuduwamulla) of Cowpeas was caused by combination of *M. vitrata* and *S. litura*. *Maruca vitrata* damage on pods was higher compared to *S. litura*. At all the infested Cowpea fields, 100% of the plants inspected, were found to be infested by at least one of these two Lepidopteran species. On Mung beans, no flower infestations were detected. However, *S. litura* damage was found on pods at 86% of the Mung bean fields sampled with the highest value, 43%/plant at Kachcheriagama. On Peanuts, only 25% of the fields showed flower infestation (3-4%/plant) and was caused by *S. litura*. The findings indicated that *M. vitrata* and *S. litura* caused substantial damage on Cowpeas and Mung beans, but on Peanuts low damage level was found.

Keywords: flowers, grain legumes, Hambanthota District, lepidopterans, pods