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**An Insect Pest of Susumba  
LEPTINOTARSA UNDECIMLINEATA STÅL  
(COLEOPTERA: CHRYSOMELIDAE)<sup>1</sup>**

**Introduction**

In June 2006, a sample of susumba (*Solanum torvum*) from Dallas Castle, St. Andrew was submitted to the Plant Protection Unit infested with an unknown leaf beetle which was later identified as *Leptinotarsa undecimlineata*. In Jamaica susumba/gully bean commonly grows wild on abandoned lands, backyards and in gullies and is traditionally used in many dishes including soups, stew chicken and seasoned rice. Though not a crop of economic importance, the Plant Protection Unit has received numerous samples and has sought to inform the public on how to identify and manage this pest problem.

**Description**



**A. Egg mass**



**B. Larvae**



**C. Adult**

**Figure 1A - C:  
Life Stages of  
*L. undecimlineata***

The **eggs** are yellow clumps and laid on the underside of susumba leaves. The **larva** is yellow with a black head and black legs. Mature larvae possess one row of black spots on each side of the body. The **adult** beetle is yellowish-brown in colour and ... cm (1/2 inch) long (Figures 1A-C). *L. undecimlineata* closely resembles *L. decemlineata* (the Colorado potato beetle) both possessing ten black stripes on the wing covers (elytra) and black spots behind the head. However, they differ on the ventral side which is black for *L. undecimlineata* and brown for *L. decemlineata*.

**Distribution**

The highest diversification of the genus *Leptinotarsa* occurs in Mesoamerica with central Mexico thought to be the area of origin. *L. undecimlineata* is also present in Colombia, Honduras, El Salvador and Guatemala. In Jamaica the pest has been detected in St. Andrew, St. Catherine and Clarendon.

**Hosts**

In Jamaica this beetle only affects susumba (*Solanum torvum* Swartz) (Figure 2) which is also known as turkey berry, wild eggplant and pea eggplant in other countries. In Columbia it also affects the orange berry nightshade (*S. lanceolatum* Cav.) (Figure 3) and the giant devil's fig (*S. chrysotrichum* Schltld.) (Figure 4), all of which are perennial shrubs.



**Figure 2:  
Branch of  
susumba  
(*S. torvum*)**



**Figure 3: Orange berry night shade plant; Berry and Flower**



**Figure 4: Giant devil's fig (*S. chrysotrichum*)**

## Biology and Ecology

Each female is able to produce up to 122 eggs. Each egg mass may contain between 67 – 128 eggs and has two weeks duration. The first instars which emerge may cannibalize other eggs remaining in the mass. The duration of one beetle generation from egg to adult ranges from 107 - 112 days.

## Damage Symptoms

Adults and larvae feed vigorously on leaves particularly along the leaf edges (Figure 5). In heavy populations this beetle can de-bark the host stem (Figure 6) and completely defoliate and kill the host plant.



Figure 5: Susumba leaf beetle damage



Figure 6: Stem of susumba debarked by larvae of beetle

## Economic Importance

In the United States several *Leptinotarsa* spp. including *L. undecemlineata* has been considered as biocontrol agents for *S. torvum* and related species which are considered invasive plants. In addition expeditions to Mexico and Honduras have taken place to find natural enemies of *L. undecemlineata* that can be reared for control of the Colorado potato beetle, *L. decemlineata*.

*L. undecemlineata* has not been recorded affecting any crop of economic importance and does not pose a threat to the local agricultural industry. Hence, this pest is not of economic importance in Jamaica.

## Control Strategies

**Cultural:** Prune and destroy infested branches and allow re-growth. The plant can be destroyed if it is not valuable to the property owner.

**Bio-control:** In Jamaica natural enemies attacking *L. undecemlineata* include the tachinid fly, *Myiopharus doryphorae* (Diptera; Tachinidae) (Figure 7) and a predator reduvid bug (Figure 8). Natural enemies attacking *L. undecemlineata* in Columbia includes two predator ladybird beetles *Cyclonida sanguinea*, and *Chilocorus cacti* which are also known to exist in Jamaica and may provide additional control for this pest.



Figure 7: Adult of *Myiopharus doryphorae*, parasitic tachinid fly of *L. undecemlineata*



Figure 8: Predator reduvid bug of *L. undecemlineata*

**Chemical:** The use of insecticides will destroy any natural enemies present. Therefore the treatment of the pest is not being recommended.

**For further information contact:**

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