B-101: Investigation on a new Leaf-mining insect attacking tomato in Sri Lanka

W R P T S Abeywarna, H N P Wijeyagunasekera
(Dept of Agric Biology, Faculty of Agric, Univ of Peradeniya)

This study was carried out to identify and examine the biology of a new leaf mining insect attacking tomato *(Lycopersicon esculentum)* in Sri lanka. Although leaf-miner could survive on a complex of host plants, tomato is preferred over others.

Preliminary identification was based on morphological features. The specimens were sent to the International Institute of Entomology for the confirmation of identity. It was confirmed that this leaf-mining damage is caused by *Liriomyza trifolii* (Burgess); (Diptera; Agromyzidae).

The insect has 4 larval instars, the entire life duration of the larvae within the leaflet was observed as 3-4 days and the pupal period was 8 days. Adult females were usually larger than males and adult longevity was 8-11 days.

Tomato foliage is damaged by adults puncturing the leaves to feed or lay eggs and by larvae tunnelling within the leaflet to make the characteristic serpentine mines which were confined to the palisade layer. The measured length of the mine was varying between 4.0 cm and 11.5 cm, while the width of the mine gradually increased from 0.14 mm upto 1.45 mm. Mines in heavily infested leaflets were numerous and could not be counted due to overlapping of mines. The damage symptoms were observed from seedling stage to harvesting stage. This polyphagous leaf-miner has a wide host range and 15 host plants were identified.