



MINISTRY OF AGRICULTURE
COOK ISLANDS



Bug of the week



The vegetable leaf miner (*Liriomyza sativae*) is a common pest in many crops such as tomatoes, pepper, cucumbers, courgettes, pumpkins, watermelons and beans. It is often recognized by its wiggly pale tracks made by larvae on leaves of host plants, but eagle-eyed observers may see the small adult flies flying around leaves. Adult females lay eggs inside leaf tissue, and larvae hatch and tunnel (mine) between the upper and lower tissue of the leaves. A female can lay several hundred eggs during its four week life span. The larvae feeding remove chloroplasts (green tissue), leaving a pale white trail where it has grazed, and fine black lines which are the frass (insect poo). Larvae can be observed as 1-3 mm long caterpillars at one end of the trail. At the end of the larval stage the larvae usually drop to the ground to pupate amongst leaf litter.



Typical vegetable leaf miner larva damage (left) (photo: Mike Bowie) and vegetable leaf miner pupae (photo: William Wigmore)



Vegetable leaf miner (*Liriomyza sativae*) adult flies (photos: Mike Bowie)

Research by William Wigmore showed the vegetable leaf miner could be controlled using Neem and D-C-Tron oils together, but at the recommended rate of 5mL/L water which shouldn't cause burning on beans or any other vegetable crop. The oils appear to disrupt the leaf miners behavior, causing pupation to occur on the leaves possibly exposes them to predation to birds and other natural enemies. Avid (Abamectin), a bacterial insecticide, is recommended for use on tomatoes, peppers and watermelon. Avid is not recommended for use on beans, and farmers should adhere to the withholding period for each crop as stipulated on the label.

