

## Watermelon (American serpentine) leafminer (259)

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### Summary

- Worldwide distribution. On over 400 species in 28 families (potato, legume, cucumber, cabbage and daisy), on vegetables and ornamentals. An important pest.
- Eggs laid beneath leaf surface; larvae hatch and mine leaves, which dry up and fall early; loss of leaves may cause sunburn. Damage also done by female using ovipositors to feed on sap (both sexes feed on nectar).
- Natural enemies: parasitoid wasps; insecticides use for other pests kill them and lead to leafminer outbreaks.
- Cultural control: monitor using yellow sticky traps above crops; avoid water stress; weed.
- Chemical control: Bt (*Bacillus thuringiensis*), spinosad, abamectin, cyromazine; resistance to pyrethroids exists.



Photo 1. Characteristic white mines or trails of the vegetable leafminer, *Liriomyza sativae*, on the upper surface of watermelon leaves.

### Common Name

American serpentine leafminer, serpentine leafminer, broad bean leafminer, celery leafminer, chrysanthemum leafminer.

### Scientific Name

*Liriomyza trifolii*. See other fact sheets for accounts on separate species (**Fact Sheet nos. 262, 377**) and, for a general account, (**see Fact Sheet no. 110**).

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Information from Waterhouse DF, Norris KR (1987) *Biological Control Pacific Prospects*. Inkata Press, Melbourne; and CABI (2015) *Liriomyza trifolii* (American serpentine leafminer). *Crop Protection Compendium*. (<https://www.cabi.org/cpc/datasheet/30965>); and Johnson MW (1993) Biological control of *Liriomyza* leafminers in the Pacific basin, Micronesia, Supplement 4, 81-92; and from Sooda A et al. (2017) Multiplex real-time PCR assay for the detection of three invasive leafminer species: *Liriomyza huidobrensis*, *L. sativae* and *L. trifolii* (Diptera: Agromyzidae). Photo 1 Sione Foliaki, Deputy Director and Head of Agricultural Research and Information Division, MAF, Tonga.

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