



*KALRO/NAVCDP Factsheet No. 023/2024*

# Integrated Management of Leaf Miner (*Liriomyza spp.*) in Pyrethrum

## Introduction

The adults are small black and yellow flies. They lay eggs which hatch into small larvae that feed by mining between the upper and lower epidermis of the leaves making tunnels. Occasionally, the larvae can be within the leaf mine as it feeds. The act of laying eggs and feeding on leaves can kill seedlings and in older plants allows the fungal diseases to enter the leaves.

### Symptoms

- Tunnels in leaves showing damage by “mining”
- Whitish blotches inside leaves caused by extensive mining
- Death and premature falling of infested leaves



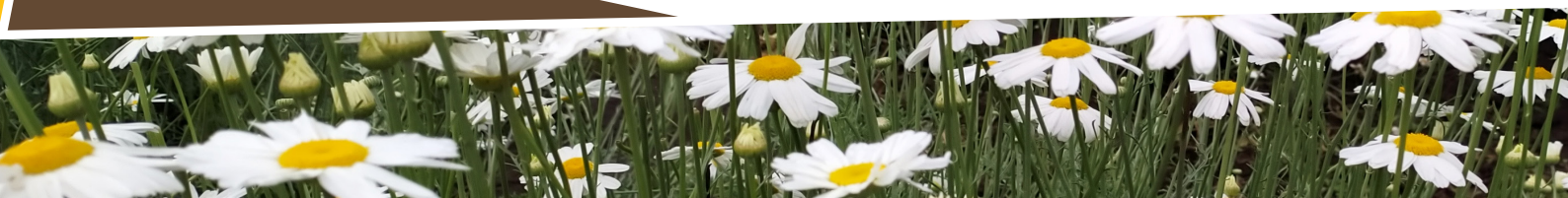
## Management

### Cultural practices

- Avoid planting new crops next to an infested field
- Apply mulch to prevent pupae getting to the soil for further development into adults



*Tunnels in leaves (top) and Leaf miner adult (bottom)  
(Central Science Laboratory, Harpenden Archive, British Crown, Bugwood.org)*





- Avoid continuous cropping of pyrethrum and solanaceous plants (potato, tomato, eggplant, nightshades) in the same field
- Practise good crop hygiene by removal of infested plants and destroying by burning
- Hand pick mined leaves (in low infestation cases) and those with the larvae still in the tunnel and destroy by burying 30cm deep
- Use yellow sticky trap to attract and kill adult leaf miners.

### **Biological control**

Use soft/safe pesticides such as Nimbecidine, Achook, Neemroc or apply bio-pesticides based on *Phytoseiulus persimilis* (e.g. Phytotech, Spidex, Phytogard) or *Neoseilus californicus*/*Amblyseius californicus* (e.g. Amblytech) at manufacturers' recommendations.

### **Chemical Control**

Spray using insecticides based on any of the following active ingredients: Abamectin or Abamectin + Acetamiprid (e.g. Abalone, Abamite, Agrimech, Dynamec, Amazing Top), bifenthrin (e.g. Thiamerin or Foray), Flubendiamide (e.g. Belt 480SC) at manufacturer's recommendations. Avoid using same active ingredient for more than 3 times in a season.



**Compiled by:** Janet Obanyi, Miriam Otipa, Violet Momanyi, Hannah Chore Oduor and Lusike Wasilwa

**Edited by:** Nyabundi, K.W., Mukundi, K.T., Maina, P., Wanyama, H.N., Mugata, R.K., Kibunyi, N. K and Kinyua Z. M.

**Design and Layout:** Nogrecia Mnene

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**For more information Contacts:** Director General

Kenya Agricultural & Livestock Research Organization, Kaptagat Road, Loresho Nairobi Kenya  
P.O. Box 5781 I, City Square, Nairobi, 00200, Kenya

**Email:** [info@kalro.org](mailto:info@kalro.org)

**Safaricom:** +254 722206986/722206988; **Airtel:** +254 733-333-223/4/733333299/4