4. Control of Tomato leaf miner

- **Monitoring of the pest infestation**

This is the first step for controlling the pest. Use pheromone to attract and detect its presence in the farm. Pheromone traps is an effective tool in providing early warning. Use Tomato leaf miner monitoring systems in tomato nurseries, farms, storage, packing, processing and distribution centers. Examples of synthetic pheromones are TUA-500, TUA-Optima and TUA-100 N. Traps can be used in combination with pheromones. Examples of the traps include solar powered (Ferolite), and sticky roller traps (TutaRoll and OptirollTuta+)

- **Attract and kill**

Use a combination of pheromone and pesticide to attract and kill the pest. Employ this technique once in a season to provide safe and constant control. Attract and kill is very effective in controlling the male adults of Tuta absoluta with a minimum amount of pheromone and insecticide application. It reduces mating opportunities and therefore the number of eggs.

- **Crop rotation and use of botanicals**

Tomato leaf miner has shown resistance to insecticides. Farmers need to practice crop rotation and biological solutions as an alternative for controlling Tuta absoluta.

Do not alternate in crop rotation cycles crops that *Kanitangaze* attacks. Such crops include egg plant, potato, pepper, beans and tobacco.

Tomato affected by Tomato leaf miner

Tomato plant affected by Tomato leaf miner (*Kanitangaze*)

Prepared by: Dr. I.H. Babili

Institute of Continuing Education
SUA, Chuo Kikuu, P.O. Box 3044, Morogoro
***Email: ice@suanet.ac.tz*, Website:**
www.suanet.ac.tz

Acknowledgement: Dr. H. Mtui, College of Agriculture (CoA), SUA,

SOKOINE UNIVERSITY OF AGRICULTURE (SUA)

INSTITUTE OF CONTINUING EDUCATION (ICE)

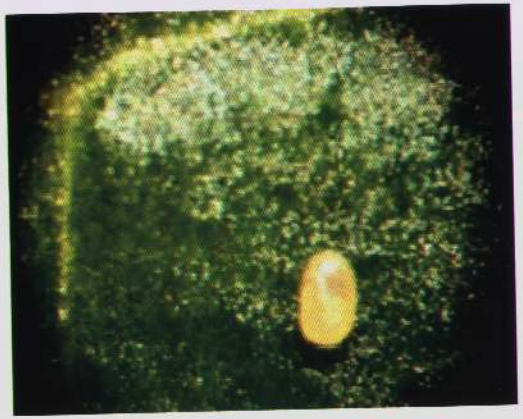
Control of the tomato leaf miner "KANITANGAZE"

1. Introduction

Tomato leaf miner (*Tuta absoluta*), popularly known locally as *Kanitangaze* is a native pest of South America but has spread to Africa, Asia and Central America. In Tanzania, devastating effect of the insect pest on tomatoes was first reported at Ngabobo village, Ngarenanyuki ward, King'ori division, Arumeru District, Arusha in 2014.

2. Identification of the pest

The pest was first identified in 1917 and was given the name Tuta absoluta in 1994.



An egg of Tomato leaf miner

Larva of Tomato leaf miner

Pupa of Tomato leaf miner

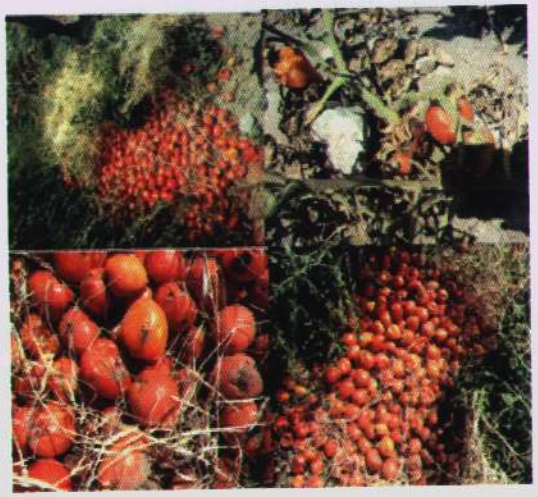
Adult Tomato leaf miner

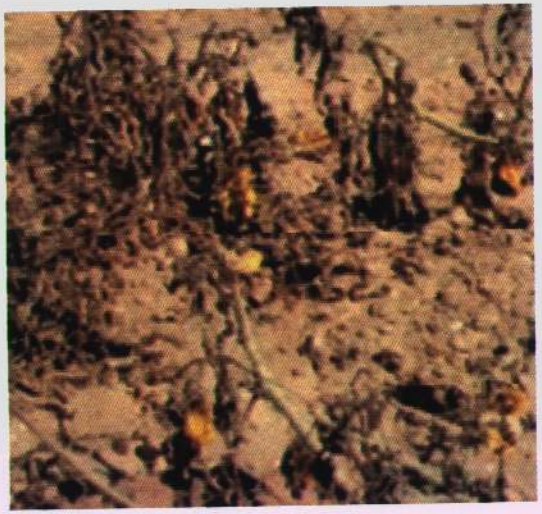
The total life cycle is completed within 30-35 days. Adults are nocturnal and hide between leaves during the daytime. Adult females lay eggs on host plants and a mature female can lay up to 260 eggs before completing its life cycle.

Eggs are small, cylindrical, creamy-white to yellow and approximately 0.35 mm long. Egg hatching takes place 4-6 days after egg laying. The larva is cream-colored with a characteristic dark head. Pupa has four larval instars. Pupa appear in the soil, on the leaf surface or within mines. The adults are small moths with 5-7 mm body length. They can be easily identified by their thread-like antennae and forewings with grey scales and black spots.

3. Tomato leaf miner attack and losses

Tomato leaf minor attacks leaves and berries of the crop. As shown in the photos below, tomato leaf miner can cause up to 100% tomato loss.





Photos above showing tomato losses caused by Tomato leaf miner