

Salvaging Tomato Production in Kenya



Theme

Towards adoption of Integrated Pest Management (IPM) packages for sustainable management of Tomato leafminer (*Tuta absoluta*) and Fusarium wilt-Nematode complex.

Project Title

Development, validation and dissemination of Integrated pest management (IPM) Packages for Tomato leafminer (*Tuta absoluta*) and Fusarium wilt-Nematode complex affecting tomato production in Kenya.

Overview

Tomato is the second most valuable vegetable in terms of production and value in Kenya. It plays a critical role in generation of income and creation of employment for both rural and urban populations, in addition to meeting nutritional food requirements. However, commercial farming of this important crop is under immense threat from Fusarium wilt-Nematode complex and the recent attack by Tomato leafminer (*Tuta absoluta*). Some farmers have reported yield losses of up-to 80-100 % per growing season.

Major Constraints

Proposed Interventions

Tomato leafminer (*Tuta absoluta*)



Adult Moth



Damaged Fruit



Larvae



Damaged Leaves



Pheromone (*Pherodis Tuta absoluta*)



Deltatrap



Tutasan Watertrap

Major Constraints

Proposed Interventions

Fusarium wilt



Stem discolouration



Yellowing of the leaves



A dying mature crop



TRIANUM

Root-knot Nematodes



2nd stage juveniles of root-knot Nematode, *Meloidogyne sp.*



Infected roots, non-infected root



Resilient Cultivation with NatuGro

Project Objectives

- To establish the current status of *Tuta absoluta* and Fusarium wilt-Nematode complex in Mwea, Kenya.
- To evaluate the efficacy of biological control tools for management of *Tuta absoluta* and Fusarium wilt-Nematode complex within smallholder farms in Kenya.
- To develop, validate and disseminate IPM strategies for *Tuta absoluta* and Fusarium wilt-Nematode complex

Expected Outputs

- Publish catalogues and papers on diversity & identity of *Tuta absoluta* and Fusarium wilt-root-knot nematode complex
- Sustainable management of *Tuta absoluta* and Fusarium wilt-Nematode complex within smallholder farms

- Improved Tomato production in Kenya
- Increased capacity and knowledge for agricultural practitioners in Integrated Pest Management

Project Partners & Roles

Koppert Kenya: Develop, validate, disseminate and upscale Integrated Pest Management (IPM) Packages for management of *Tuta absoluta* and Fusarium wilt-Nematode complex. Disseminate information and capacity building.

Kenyatta University: Carry out identification, characterization and maintenance of pure isolates of *Tuta absoluta*, Root-knot nematodes and Fusarium wilt pathogens. Disseminate information and capacity building.

Koppert BV: Technical backstopping on biological crop protection