

Tomato leaf miner on tomato

Tuta absoluta (syn. *Gnorimoschema absoluta*, *Scrobipalpula absoluta*)



Tuta leafminer caterpillar feeding inside tomato (<1/2 cm) (Marja van der Straten, NVWA Plant Protection Service, Bugwood.org)



Feeding tunnels Tomato leafminer on the upper leaf (Margaret Kioko)



Damage on tomato fruit by *Tuta absoluta* (Peter Kodwaran, MoALF)

| Prevention | Monitoring | Direct Control | Direct Control | Restrictions |
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| <ul style="list-style-type: none"> Plant seedlings free from infestation of the pest Rotate tomatoes with non-host plants like maize, beans, cabbages Avoid staggered tomato cropping because <i>Tuta</i> moths fly around Remove alternative reservoir hosts such as night shade, Sodom apple, pepper, before and during cropping cycle During harvesting, pick all infested plant parts and fallen infested fruits. Do not throw them into countryside as moths will emerge. Instead, put them into a black polythene bag up to 25kg and seal it. Leave in the sun for 5-7 days (heat kills larvae inside). Then, compost rotten fruits Start monitoring 2 weeks before planting in neighbouring tomato crops. So that, when the pest is present, you don't plant | <ul style="list-style-type: none"> <i>Tuta absoluta</i> is a small moth with harmful tiny leaf mining caterpillars on tomato. The moth is active at night and hides between leaves during the day. Start monitoring before flowering Put sticky sheet traps (with pheromone if available) at a height of 15 -20cm before planting and move traps to 60cm high when plants grow. Use 2-3 traps per ha (spacing of 25m along all four edges of the field) to determine the direction of the infestation. Look for a silver/grey brown thin 5-7mm longish moth. Take action once you notice 1-3 moths in sticky trap per week or in pheromone trap per day. Look for thin to large silvery feeding tunnels on leaves. Consider action, if a few tunnels are on each plant. Search for irregular holes and tunnels from caterpillars feeding on fruits (smaller than those caused by African bollworm) with dried black frass at caterpillar exit hole. If found, action is too late. | <ul style="list-style-type: none"> Use light traps in and around the affected field to capture moths. Bury infested fruits and foliage. | <ul style="list-style-type: none"> Spray in early mornings (caterpillars normally hatch during this time) and when temperatures are relatively low. Never spray onto fruits; caterpillars are hidden inside, and sprayed fruits cannot be eaten. WHO toxicity class II products may not be allowed in local IPM schemes. When using a pesticide or botanical, always wear protective clothing and follow the instructions on the product label, such as dosage, timing of application, pre-harvest interval, max number of sprays, restricted re-entry interval. Do not empty into drains and water sources. Pre-harvest intervals of pesticides in a certain crop must also be followed for the intercrop, and are sometimes even longer Always consult recent list of registered pesticides by MAAIF of Uganda. Azadirachtin biopesticide products (Neem, Nimbecidine). Disrupts insect moulting, anti-feedant, repellent. Translaminar so reaches some larvae inside leaf tunnels. IRAC group UN. Check label for dose Abamectin (Foliar spray). Contact action and translaminar. IRAC group 6 Avermectins; Check label for dosage Thiamethoxam –products (Actara 25WG, Apron Star 42WS, Cruiser 350FS, Cruiser 70WS, others); Contact and systemic activity; Foliar and seed dressing; IRAC group 4A Neonicotinoids. | <ul style="list-style-type: none"> Not classified by WHO, but unlikely hazardous in normal use. Not toxic to bees or earthworms. Restricted re-entry interval ½ d after spray. Pre-harvest interval p.h.i – 7 days. Not classified by WHO, but unlikely hazardous. Toxic to bees and fish. r.e.i 1/2d, p.h.i. 14 d Not Classified by WHO but considered moderately hazardous. p.h.i 5 days, r.e.i. 21 d. Toxic to bees. Check product label for dosage |

Uganda

CREATED/UPDATED: July 2017

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