



KNOWLEDGE  
TRANSFER

# *Tuta absoluta*

## Teknikal na Gabay

### What is *Tuta absoluta*?

The **leafminer**, *Tuta absoluta* (Lepidoptera; moth), is a major pest in tomato. It thrives also in eggplant, cucumber and french bean.

Tomato production loss can reach up to 50-100% if it is not well managed.



FILIPINO



# Damage and Symptoms

## LEAVES:

Irregular leaf mines by larvae with larger patches to whole leaf damage, reduced photosynthetic capacity



### REMINDER:

What is the difference? Left photo shows symptom of another tomato leafminer, *Liriomyza* sp. (Diptera; fly) with narrower mines than *Tuta absoluta*.

## FRUITS:

Puncture marks, chewed out areas, entry for secondary pathogen, fruit malformation



# Management Strategies

## Integrated Pest Management (IPM)

for effective and sustainable control of *Tuta absoluta*

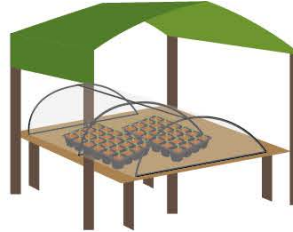
### PREVENTION: How to avoid?



Check crop field and pest history



Crop rotation

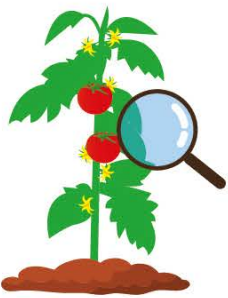


Net nursery for seedlings



Avoid high Nitrogen use

### MONITORING: How to check presence?



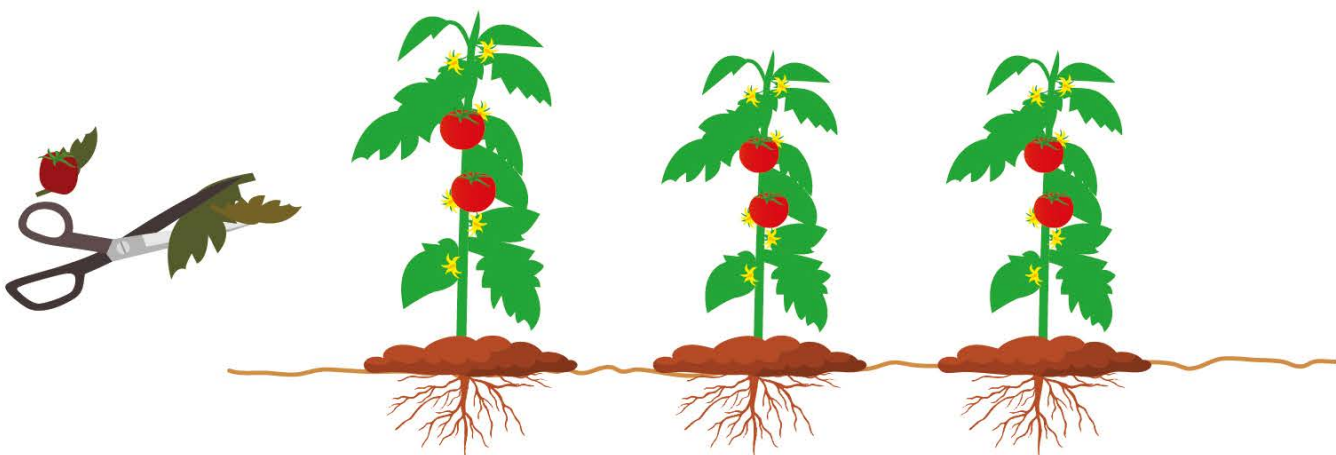
Daily monitoring of the field



Use of sticky traps, or sex pheromone lures (before transplanting)

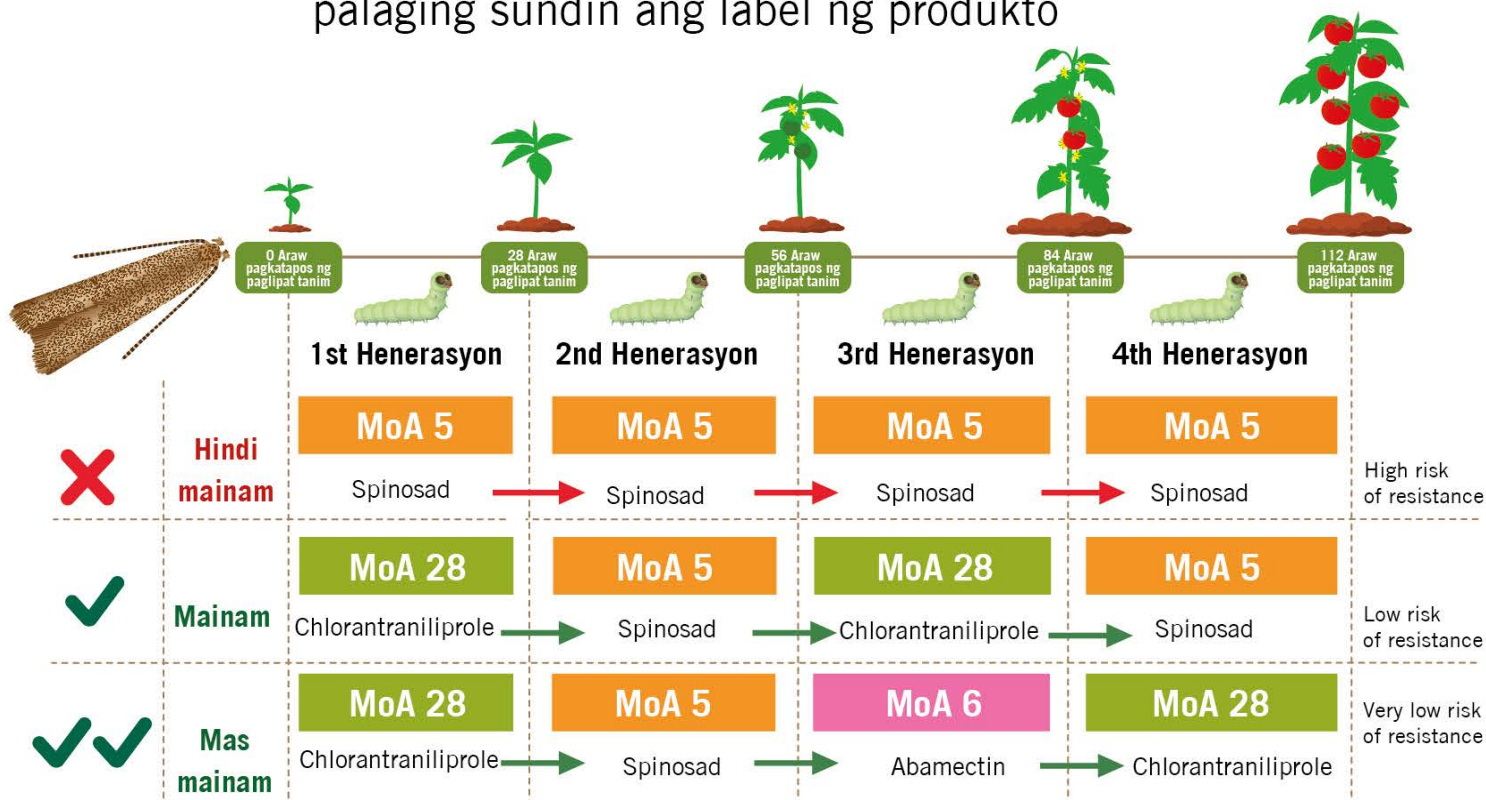
### INTERVENTION: What to do when *Tuta absoluta* is present?

- » Removal and destruction of infested leaves and fruits
- » Weeding
- » Mass trapping with sex pheromone lures, sweet traps and/or light traps
- » Biopesticides like neem extract and *Bacillus thuringiensis*
- » Spray insecticides alternately. Always read the label.



# • SAMPLE SPRAY SCHEDULE: alternate MoA groups to prevent resistance

PAALALA: mag-apply lamang kung kinakailangan; regular na magmonitor; palaging sundin ang label ng produkto



## Insecticides Mode of Action (MoA) groups para sa Tuta absoluta (ayon sa IRAC)

MoA Group Number	Common Active Ingredients (e.g.)	MoA Group Number	Common Active Ingredients (e.g.)
5	Spinetoram, Spinosad	22A	Indoxacarb
6	Abamectin, Emamectin benzoate	22B	Metaflumizone
11	<i>Bacillus thuringiensis aizawai</i> , <i>Bacillus thuringiensis kurstaki</i>	28	Chlorantraniliprole, Flubendiamide
13	Chlorfenapyr	UN	Azadirachtin (galing sa neem)
18	Chromafenozide, Methoxyfenozide, Tebufenozide		

\* Palaging suriin ang mga rehistradong insecticides para sa Tuta absoluta na uma-ataki sa kamitis sa inyong bayan.

## Ligtas na paghawak sa insektisidyo



**1** Magsuot ng protective gear



**2** Magandang panahun



**3** Magandang nozzle



**4** Hugasan pagkatapos ng pag-spray

### References:

AVRDC, 2016. [https://avrdc.org/download/publications/from\\_the\\_field/technol/Tuta-revised-flyer.pdf](https://avrdc.org/download/publications/from_the_field/technol/Tuta-revised-flyer.pdf)  
Tuta absoluta information network. <http://www.tutaabsoluta.com/ipmcrsp>

Pinagmulan ng mga larawan: EWS

<http://growhow.eastwestseed.com>

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