

Tomato Hornworm



(*Manduca Quinquemaculata*)

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Vector of the Tomato Hornworm

*Tomatoes were originated in South America and were spread worldwide thru the tomato trade.



Map View: Robinson Projection

Transported and Released



*Its rarely found in argentina however there have been reports that a few have been found there.

Population Established

Hornworms are found in:

*Plants

*Vegetables

*Landscapes.

*Adaptable to different Climates



Spread

- * A single moth can lay up to 2,000 eggs.
- * Deposits 1-5 eggs per plant visit
- * Takes eggs take 6-8 days to hatch
- * Lay eggs during warmer climates



Ecological, human health, or economic health impact



- *Veggie growers worst nightmare
- *Slowing down vegetables sales
- *It is not considered harmful to humans.

Prevention

*Keep garden weed free.

*Check beneath the leaves.

*Till the soil after harvest to destroy burrowing caterpillars and pupae.



Early detection, rapid response, and eradication

*Droppings

*Chewed Leaves and Stalks

*Insecticides - Botanical Bt (Bacillus Thuringiensis)



Control and slow the spread & Human adaptation

*Hand Picking



*Garden Insecticide



* Lime



*Soapy water

*Jalysus spinosus (Killer Bug)



Resources

http://www.ehow.com/how_8454758_use-lime-control-tomato-hornworms.html

<http://www.extension.umn.edu/distribution/horticulture/M1224.html>

<http://www.ext.colostate.edu/pubs/insect/05517.html>

<http://www.vegetablegardener.com/item/8000/how-to-prevent-hornworms-from-devastating-your-tomato-plants>

<http://ipetrus.blogspot.com/2010/07/invasive-species-russian-pickler-versus.html>

<http://www.sdedible.org/garden-pests/hornworm/>

<http://ipm.ncsu.edu/AG271/tobacco/hornworms.html>

<http://organicgardening.about.com/od/pestcontrol/p/tomato>

<http://ipetrus.blogspot.com/2010/07/invasive-species-russian-pickler-versus.html>

<http://www.gardengrapevine.com/TomatoWorm.html>

http://en.wikipedia.org/wiki/Manduca_quinquemaculata

<http://en.wikipedia.org/wiki/Solanaceae>

<http://www.ext.colostate.edu/pubs/insect/05517.html>

<http://www.backtonature.net/Tips-for-Improving-Your-Ecology/Grow-Your-Own-Food/ Tomato-Hornworms-and-Braconid-Wasps.html>

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<http://en.wikipedia.org/wiki/Tobacco>

<http://www.extension.umn.edu/distribution/horticulture/M1224.html>

<http://www.greenthumbarticles.com/article/What-Do-Hornworms-Eat--a2728.html>

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<http://www.ext.colostate.edu/pubs/insect/05517.html>

