

Heliothis virescens (Lepidoptera: Noctuidae)

This short description has been prepared in the framework of the EPPO Study on Pest Risks Associated with the Import of Tomato Fruit. The whole study can be retrieved from the EPPO website.

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Africa	Asia	Oceania	North America	South-Central America and Caribbean
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***Heliothis virescens* (Lepidoptera: Noctuidae) (tobacco budworm)**

Why	Identified in the EPPO tomato study. <i>H. virescens</i> is highly polyphagous and especially pest of cotton, tobacco, tomato and maize (CABI CPC).
Where	<p>EPPO region: absent</p> <p>North America: Canada, Mexico, USA (CABI CPC - eastern and southwestern United States, also known from California – Capinera, 2012; also reported from some western States in CABI CPC)</p> <p>Central America: Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama (CABI CPC)</p> <p>Caribbean: Antigua and Barbuda, Bahamas, Barbados, Bermuda, Cayman Islands, Cuba, Dominica, Dominican Rep., Greater Antilles, Grenada, Guadeloupe, Haiti, Jamaica, Lesser Antilles, Martinique, Puerto Rico, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago, United States Virgin Islands (CABI CPC)</p> <p>South America: Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, French Guyana, Guyana, Paraguay, Peru, Uruguay, Venezuela (CABI CPC)</p>
Climatic similarity	High. 13 common climates considering the countries listed above, possibly lower. In the USA, it overwinters generally in southern states, but may survive cold climates in greenhouses and sheltered locations. It disperses northwards annually. Its precise limit of overwintering is not known.
On which plants	<i>H. virescens</i> is highly polyphagous (55 species in 14 families CABI CPC). Cotton, tobacco, tomato, sweet potato, beans, pigeon pea, chickpea, lettuce, squash, maize, flax sunflower, sweet pepper (CABI CPC). Capinera (2012) mentions alfalfa, clover, cotton, flax, soybean and tobacco, sometimes vegetables such as cabbage, cantaloupe, lettuce, pea, pepper, pigeon pea, squash, tomato, common pest of geranium and other flower crops (e.g. ageratum, chrysanthemum, gardenia, geranium, petunia, marigold, petunia, verbena, zinnia) (Capinera, 2012).
Damage	Eggs are deposited on/near flowering or fruiting part of the plant, and larvae feed on leaves, flowers, fruit (CABI CPC). Larvae feed on buds and blossoms, sometimes on leaves, petioles and stalks, and may enter fruit; pupae are in the soil (Capinera, 2012). Larvae also feed on leaves (Bayer Chile, ND). Larvae bore in pods and fruit, and feed on seed (King and Saunders, 1984). The pest causes significant damage on cotton, tomato, tobacco, maize (CABI CPC). It is mentioned as a pest of tobacco and maize (at least), but not tomato, in Bayer Chile (ND). <i>H. virescens</i> became a major pest of cotton in the Americas from the 1930s (Reed and Sarwar, 1982). In Central America, it is a minor and occasional pest, but may be important in tomato and pigeon pea (King and Saunders, 1984). In North America, it is not a pest at northern latitudes (e.g. New York) and is sporadic in Central and South America (Capinera, 2012).
Dissemination	Adults fly at long distance (CABI CPC). During summer, the pest spread northwards in North America (CABI CPC).
Pathway	Fruits and vegetables?, plants for planting of host plants, cut flowers, soil, from countries where <i>H. virescens</i> occurs.
Possible risks	Tomato and other hosts are major crops in the EPPO region. The climatic similarity according to the EPPO Study between the area where it occurs and the EPPO region is high. For the pest to establish, it would have to be introduced in areas where it could overwinter, which is probably limited to the Southern part of the EPPO region.
Categorization	Quarantine pest for Guinea 2009 (for cotton, tomato), Japan 2011, Mozambique 2009, Korea Rep 2011, Mexico 2011, Seychelles 2010 (from IPP); Eastern Africa A1 2001, Southern Africa A1 2001, Israel 2009 (from PQR)
Sources	Bayer Chile. ND. <i>Heliothis virescens</i> . http://www.bayercropscience.cl/soluciones/fichaproblema.asp?id=1033 (Accessed August 2013)

CABI CPC. 2013

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Quarantine lists for Guinea 2009 (for cotton, tomato), Japan 2011, Mozambique 2009, Korea Rep 2011, Mexico 2011, Seychelles 2010 (from IPP)

PQR

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