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County Extension

Integrated Pest
Management

Blueberry IPM
Manual

Introduction

Pre-Bloom

Bloom

Pre-Harvest

Harvest

Post Harvest

Scouting Sheets

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Pest Profiles

INSECTS &
INVERTEBRATES:

Aphid

Cherry and Cranberry
Fruitworm

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Midge

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Sawfly

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Symphylans

Tent Caterpillar and
Fall Webworm

Weevil

Winter Moth and
Bruce Spanworm

Yellowjacket and
Paper Wasp

DISEASES:

VERTEBRATES:

Weed Management

Pesticide Selection

Pesticides and Water

Cherry Fruitworm (*Grapholitha packardii*)

Cranberry Fruitworm (*Acrobasis vaccinii*)

Insects & Invertebrates



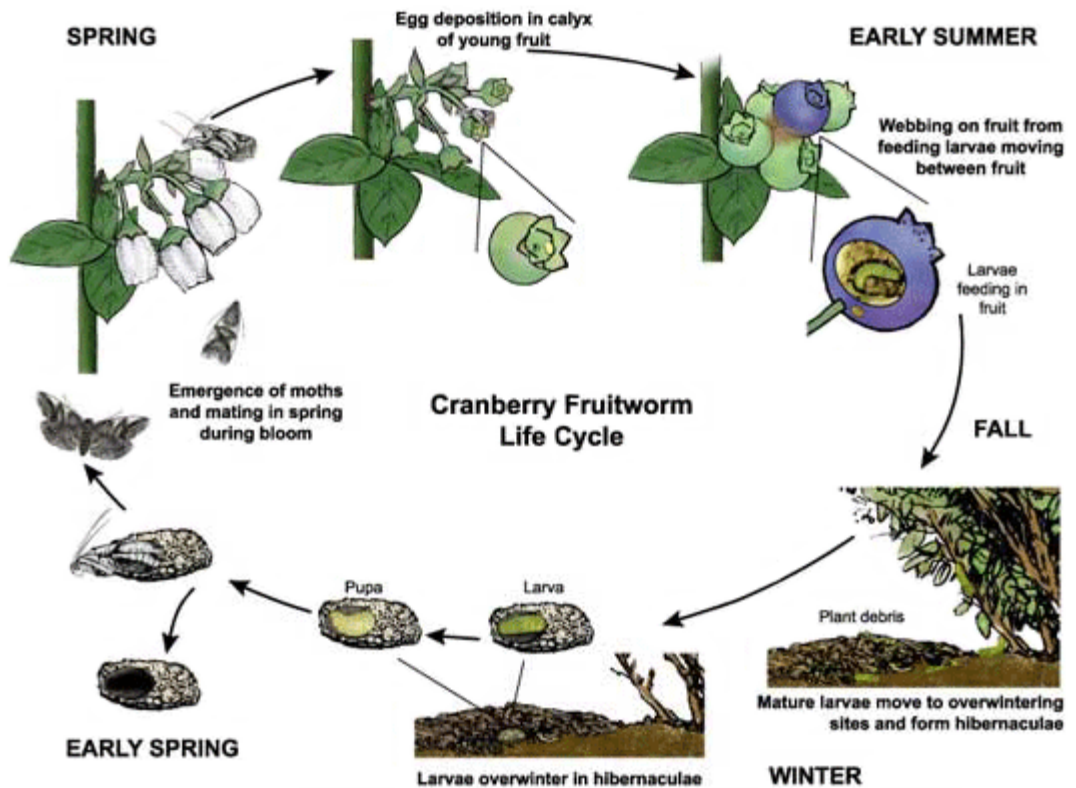
Symptoms

Larvae of both species feed on the inside of fruit by creating a pinhole entrance. One larva is able to destroy several berries by moving between and feeding on berries in a cluster. Symptoms are seen as prematurely blue, shrunken berries since the penetration holes are often not seen. Small entrance holes may appear as brown trails caused by tunneling. Cranberry fruitworm feeding can be identified as frass inside the fruit and the berry cluster clinging together with silk webbing. Larvae may eat only part of the berry or completely consume the inner flesh of a berry.

Identification

Adults of both species are small, dark gray moths with a wingspan of about 1/3 inch (9 to 10 mm). Cranberry fruitworm moths have white patches on their wings. Larvae are smooth caterpillars that will grow to 3/8-inch (9 mm) in length. Cherry fruitworm larvae have pink-red bodies with brown or black heads. Cranberry fruitworm have green bodies with dark heads.

Cranberry Fruitworm Life Cycle



Life History

Fruitworms overwinter as large larvae in cavities usually made in the dead wood on the bush. The adult moths emerge in the late spring. Green-white flattened eggs are laid on the underside of leaves as well as on developing small green fruit. After hatching, larvae enter the berries. They usually feed on one berry and then penetrate and feed on another. Cherry fruitworms seal entrance holes with silk so that frass is not visible outside the berries. Both species have one generation per year.

This Lepidopterous pest is found on a number of host trees including cherry, apple, rose and hawthorne, all of which are commonly found near blueberry fields.

Monitoring

Fruitworm may be monitored in three ways: pheromone traps, scouting for eggs, and scouting for larvae. Pheromone traps are available for Cranberry fruitworm, but this will not attract the Cherry fruitworm. Number of males caught provides an estimate of population levels and distribution within a field. Trap counts can also act as an indicator for timing of egg laying; eggs are laid shortly after initial adult emergence.

Eggs should be scouted for after early blueberry fruit set and adult flight has started. Eggs are opaque and flattened and are seen on the underside of leaves.

Larval infestations may be difficult to detect early in the season because there is little external evidence of the insect's presence. Look for a pin-sized entry hole near the stem of any small, shrunken berries that have turned blue, and then open adjacent berries to find the larva. Evidence of Cranberry fruitworm can be seen as frass in the fruit and clusters clinging together with webbing.



Thresholds and Management

Remove overwintering environments for larvae, such as weeds and trash around plants; also manage alternate hosts on borders. In small plantings or with low infestation levels, fruitworm can be controlled by hand removing infected fruit. When damage is severe, treat with insecticide. These should be used when larvae are small, usually starting at petal fall.

Resources

Michigan State University; Fruitworm Identification in Blueberries
<http://web1.msue.msu.edu/fruit/bbfrtwm.pdf>

Michigan State University; Blueberry Facts; Cherry Fruitworm
<http://www.blueberries.msu.edu/chryfrtwrm.htm>

Michigan State University Extension; Fruit IPM Factsheet; Cherry Fruitworm
http://web1.msue.msu.edu/vanburen/cherry_fruitworm.htm

Michigan State University; Blueberry Facts; Cranberry Fruitworm
<http://www.blueberries.msu.edu/crnbrfrtwrm.htm>

Michigan State University Extension; Fruit IPM Factsheet; Cranberry Fruitworm
<http://web1.msue.msu.edu/vanburen/fcranfrw.htm>

Ontario Ministry of Food, Agriculture, and Rural Affairs; Control of Cranberry and Cherry Fruitworm in Highbush Blueberries
<http://www.omafra.gov.on.ca/english/crops/hort/news/hortmatt/2005/08hrt05a5.htm>

North Carolina State University; Cherry Fruitworm
http://ipm.ncsu.edu/small_fruit/cherworm.html