

PLANT & PEST ADVISORY

CRANBERRY EDITION \$1.50

JULY 19, 2007



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Insect Update

Cesar Rodriguez-Saona, Ph.D., Specialist in Entomology

At the present time, visual inspection for insect presence and/or damage to fruit is critical in cranberry beds. I recommend growers to randomly sample fruit and inspect for insect damage. Fruit should be inspected for caterpillars of **Sparganothis fruitworm, spotted fireworm, and cranberry fruitworm**. Growers should also inspect weeds for presence of eggs of spotted fireworm. When inspecting eggs, check for egg parasitism. Tiny wasps of the genus *Trichogramma* are common generalist parasitoids in cranberry beds and will attack lepidopteran eggs. These beneficial insects will cause eggs to turn black when parasitized.

Sparganothis fruitworm- This insect was considered one of the most destructive pests in cranberries in New Jersey in the past; however, numbers of *Sparganothis* fruitworm have declined over the last few years. Across the state, average numbers of larvae have remained low and this agrees with the low pheromone trap catches observed earlier this summer.

First generation adult flight is over. Larvae will feed on fruit surface, inside berries, and on foliage. One larva may feed on several berries. A second adult flight is expected to start in mid-August and to continue through September, these adults will lay eggs, and the hatching first instars will overwinter. This insect has 2 generations a year.

Spotted fireworm – Spotted fireworm larvae are seen in cranberry beds where weeds are present in high densities (adults lay their eggs on weed leaves). There is no threshold for this insect, so decisions should be based on past experience. The first adult flight peaked 1 month ago (mid-June). The second adult flight will start in early August, eggs from the second generation will begin to hatch by mid-August, and these larvae will feed on berries and overwinter as second instars. This insect has 2 generations a year.

Confirm and Intrepid provide good spotted fireworm control. These products (insect growth regulators) are very effective against lepidopteran pests.

Cranberry fruitworm – At this time larvae are inside the berries and insecticide sprays will not control them. Therefore no insecticide treatment is recommended for this insect this late in the growing season. Unlike *Sparganothis* fruitworm and spotted fireworm, cranberry fruitworm has only one generation a year. The fully developed larvae will drop from the fruit and overwinter inside a hibernaculum. One larva

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can consume several berries to complete its development. Larvae are often greenish and feed inside the fruit, filling it with frass.

In New Jersey, cranberry fruitworm is not currently considered a major problem in cranberries. However, this insect is a major pest in blueberries in New Jersey and in cranberries in Massachusetts and Wisconsin. It is not fully understood why in New Jersey cranberry fruitworm is a major pest in blueberries and not in cranberries. It is important to prevent this insect from becoming a pest in cranberries because it is very difficult to control because insecticide applications require very precise timing and intensive scouting. Monitoring populations of cranberry fruitworm will help us stay on top of this potential problem. Eggs are laid on the calyx end of fruit. After eggs hatch, early instars move to the stem to enter the fruit. This is the most susceptible stage for insecticide application because the larvae have not yet penetrated the fruit. If you observed high numbers

Upcoming Events

August 16, 2007 – American Cranberry Growers Association (ACGA) Summer Meeting, PE Marucci Center, Chatsworth NJ

October 1-3, 2007 –North American Cranberry Research and Extension Workers (NACREW) Meeting, Tuscany House, Renault Winery, Egg Harbor City NJ

of infested fruit this year you will have to wait until next year to monitor for adult moth populations using pheromone traps or by searching for eggs laid in the calyx of young fruit.

See pictures of spotted fireworm eggs and spotted fireworm and cranberry fruitworm larvae in our June 25 (2007) issue. □

Weekly Weather Summary

Keith Arnesen, Ph.D., Agricultural Meteorologist

Temperatures averaged above normal in the north and central, averaging 74 degrees and 77 degrees, respectively, and much above normal in the south, averaging 80 degrees. Extremes were 98 degrees at Pomona on the 10th, and 56 degrees at Charlotteburg on the 13th and 14th. Weekly rainfall averaged 0.60 inches north, 0.50 inches central, and 0.04 inches south. The heaviest 24 hour total reported was 1.22 inches at Newton on the 11th to 12th. Estimated soil moisture, in percent of field capacity, this past week averaged 82 percent north, 72 percent central and 47 percent south. Four inch soil temperatures averaged 73 degrees north, 76 degrees central and 78 degrees south.

WEATHER SUMMARY FOR THE WEEK ENDING 8 AM MONDAY 7/16/ 7

WEATHER STATIONS	RAINFALL			TEMPERATURE				GDD BASE50		MON
	WEEK	TOTAL	DEP	MX	MN	AVG	DEP	TOT	DEP	%FC
CANOE BROOK	MISSING									
CHARLOTTEBURG	.25	20.60	1.84	92	56	73.	3	1344	383	65
FLEMINGTON	.26	25.09	7.19	96	57	76.	2	1456	224	75
NEWTON	1.29	17.52	.43	93	57	74.	3	1315	257	87
FREEHOLD	1.20	21.97	4.53	97	58	77.	3	1645	312	82
LONG BRANCH	.45	21.20	3.82	95	64	77.	3	1438	180	54
NEW BRUNSWICK	.15	26.87	9.63	96	59	77.	2	1566	154	70
TOMS RIVER	MISSING									
TRENTON	.21	22.77	6.44	94	63	78.	2	1632	161	46
CAPE MAY COURT HOUSE	MISSING									
DOWNSTOWN	MISSING									
GLASSBORO	.07	20.38	3.29	96	66	80.	4	1824	361	39
HAMMONTON	MISSING									
POMONA	.00	15.87	.59	98	62	80.	5	1631	281	29
SEABROOK	.00	16.77	1.30	97	64	80.	4	1832	339	35
SOUTH HARRISON	MISSING									
WES KLINE -- GDD BASE 40 PINEY HOLLOW	LAST WEEK 226 (Ending 7/9/07) THIS WEEK NA (Ending 7/16/07)									

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