

PLANT & PEST ADVISORY

CRANBERRY EDITION \$1.50

MAY 8, 2008



INSIDE

Insect Update1

**2008 RCE Cranberry Growers
Twilight Meeting.....3**

Weekly Weather Summary3

Insect Update

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

Correction: It was brought to my attention that information provided in the last newsletter was not accurate. I indicated that Avaunt was a "newer carbamate, with cholinesterase inhibitor activity; but also blocks sodium channels in nerve cells". This information was taken from "The Pesticide Book" by G. W. Ware and D. M. Whitacre (6th Edition). The statement is partially incorrect in that Avaunt does work by inhibiting sodium ion entry into the nerve cells that results in paralysis and death of the targeted pest (DuPont Avaunt insecticide Technical Bulletin), but does not act on cholinesterases. Avaunt has a novel mode of action and thus it is different from a carbamate insecticide. Actually, it belongs to a new class of insecticides called the oxidiazines. Avaunt has broad-spectrum activity and is designated by the EPA as a "reduced-risk" pesticide.

This year, we have gotten into a very quick start as far as insect pests. In previous meetings and in the last newsletter, I advised growers to watch for **gypsy moth**. Most growers are now experiencing high numbers of gypsy moth larvae in their cranberry beds. In fact, we have found very high numbers of gypsy moth in our sweep net samples, with most samples largely exceeding the threshold of 4.5 larvae/25 sweeps. Numbers of gypsy moth found this year exceed those from last year. In addition, gypsy moth occurrence is about a week earlier than last year. This is of no surprise considering the warm temperatures we have experienced in recent weeks. At this time, most larvae are small (1st-2nd instars); these larvae will feed on the new growth, causing severe damage to the plant. These size caterpillars are most susceptible to chemical treatment.

We recommend growers to use Confirm or Intrepid for the control of this pest in beds that reach numbers above threshold. Confirm and Intrepid are Insect Growth Regulators (IGRs), very effective against lepidopteran pests. IGRs work by disrupting the molting process. Because they mainly act by affecting normal insect growth, results might be observed several days after treatment. A study conducted last year at our Research Center showed that Intrepid remained effective against gypsy moth 14 days after application. Delegate is another selective, reduced-risk product effective against lepidopterans. Delegate is a newly labeled insecticide for use on cranberries which is a replacement for SpinTor. Delegate is also very effective against caterpillars. Another insecticide labeled in cranberries this year that has good caterpillar

SEE INSECT UPDATE ON PAGE 2

control is Avaunt. This year we will conduct field evaluations of Intrepid, Delegate, Avaunt, and Assail against major cranberry pests in New Jersey.

Blunt-nosed leafhopper is another insect that I recommend scouting for in the weeks prior to bloom. The figure shows results from our 2007 sweep net samples for blunt-nosed leafhoppers. These are average numbers per sweep set (a sweep set consists of 25 sweeps) from four NJ cranberry farms (total of 10 beds). Populations of blunt-nosed leafhoppers are low in most cranberry beds; however, we have seen an increase in numbers in some beds in the last few years. This insect is a problem because they can transmit **false blossom disease**. There is no known cure for false blossom. The only recommended method to stop spread of the disease within a bog is to control leafhoppers. Leafhoppers can carry the false blossom disease from plant to plant.

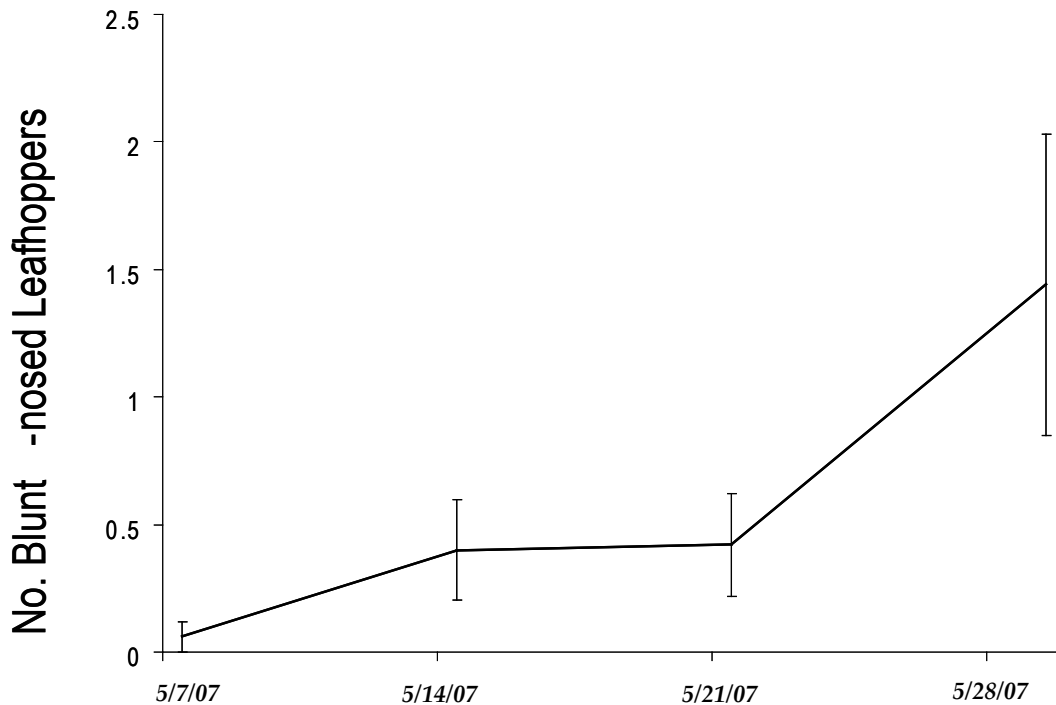
If you have large populations of leafhoppers, we recommend treatment with Actara, Assail, or a broad-spectrum insecticide (e.g., Diazinon, Lorsban). Actara and Assail are neonicotinoid insecticides excellent against sucking insects (aphids and leafhoppers). This class of insecticide acts systemically, potentially accumulating in

flowers, and there are recent claims that they can negatively affect honeybees. If growers use Actara or Assail against leafhoppers, we recommend using them after bloom to reduce any negative effects on bees.

Other insects common in sweep net samplings at this time of the growing season are **springtails** (Collembola) and **thrips**. Springtails are very small, black, round, and very active insects. These insects are not damaging to cranberries. They are detritivores (they feed on fallen plant material). Thrips are very small insects; they are hard to see with the naked eye but easily detected with the aid of a microscope. The economic importance of thrips in cranberries remains unknown; however, at this point we do not consider thrips to be a big threat to cranberries.

Growers will soon need to start scouting for **cranberry blossom worm** (just prior to bloom). Older instars of this insect are nocturnal. I expect that treatment for gypsy moth will likely control for early instars blossom worm. However, monitoring for this insect even in previously treated beds will identify larvae that might have escaped this earlier treatment. More information on this pest will be provided in the next newsletter.

Abundance of Blunt-nosed Leafhoppers in 2007 Sweep net Samples



2008 RCE Cranberry Growers Twilight Meeting

Ray Samulis, Burlington County Agricultural Agent

**Wednesday June 5, 2008, 5:30 pm
Darlington's Farm-J. J. White
Browns Mills, NJ**

All cranberry growers are invited to the 2008 Cranberry Twilight Meeting sponsored by Rutgers NJAES - Cooperative Extension that will be held at Joe and Brenda Darlington's Farm located at 1 Pasadena Road, Browns Mills, NJ.

We will have topics such as the latest news on Calisto for weed control by Dr. Brad Majek, disease control

update by Dr. Peter Oudemans, insect control by Dr. Cesar Rodriguez-Saona, irrigation management, pesticide safety, propagation and much more.

We will be serving dinner at the meeting and will start eating at 5:30 so please arrive hungry don't eat before you come! I will be obtaining pesticide credits when the full program is finalized. While there, we will be touring some of the new innovations made by the Darlington's at their farm in recent years. In addition, I will update everyone regarding the most recent developments with the Agricultural Irrigation Certification program and the recent involvement of the DRBC-Delaware River Basin Commission in the process. I hope to see you all there to share in education, fellowship, good food, and last but not least pesticide credits. □

Weekly Weather Summary

Keith Arnesen, Ph.D., Agricultural Meteorologist

Temperatures averaged much below normal, averaging 51 degrees north, 53 degrees central and 56 degrees south. Extremes were 82 degrees at Downtown on the 3rd, and 28 degrees at Charlotteburg on the 2nd. Weekly rainfall averaged 1.41 inches north, 0.85 inches central, and 0.67 inches south. The heaviest 24 hour total reported was 1.38 inches at Belvidere on the 28th to 29th. Estimated soil moisture, in percent of field capacity, this past week averaged 99 percent north, 94 percent central and 91 percent south. Four inch soil temperatures averaged 53 degrees north, 53 degrees central and 56 degrees south.

Weather Summary for the Week Ending 8 am Monday 5/ 5/ 8										
WEATHER STATIONS	RAINFALL			TEMPERATURE				GDD BASE50		MON %FC
	WEEK	TOTAL	DEP	MX	MN	AVG	DEP	TOT	DEP	
BELVIDERE BRIDGE	1.67	9.18	.80	74	32	52.	-4	172	109	98
CANOE BROOK	1.48	8.38	-.84	75	31	52.	-4	154	103	97
CHARLOTTEBURG	1.39	9.67	.59	69	28	48.	-5	135	117	96
FLEMINGTON	1.12	8.50	-.31	73	30	51.	-5	169	112	95
NEWTON	1.41	8.60	-.20	72	33	51.	-3	212	182	98
FREEHOLD	.73	5.46	-3.27	72	33	53.	-5	170	85	92
LONG BRANCH	.68	6.80	-2.23	68	35	52.	-4	103	36	87
NEW BRUNSWICK	1.41	6.95	-1.49	74	33	53.	-5	160	56	94
TOMS RIVER	.54	6.64	-2.17	73	32	53.	-4	161	88	78
TRENTON	.90	6.65	-1.27	72	35	54.	-5	221	97	84
CAPE MAY COURT HOUSE	.71	5.20	-2.48	76	38	55.	-3	192	86	81
DOWNTOWN	.76	6.31	-1.61	82	34	55.	-4	237	105	83
GLASSBORO	.88	5.42	-2.94	76	39	56.	-3	268	144	82
HAMMONTON	.51	5.45	-2.68	80	34	55.	-4	248	129	72
POMONA	.52	6.47	-1.26	77	35	55.	-2	220	132	81
SEABROOK	.63	5.92	-1.18	80	40	58.	-1	267	132	80
SOUTH HARRISON	.64	6.12	-1.50	77	41	56.	NA	256	NA	NA
WES KLINE -- GDD BASE 40 PINEY HOLLOW										
LAST WEEK	135	(Ending 4/28/08)								
THIS WEEK	109	(Ending 5/5/08)								

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Pesticide User Responsibility: Use pesticides safely and follow instructions on labels. The pesticide user is responsible for proper use, storage and disposal, residues on crops, and damage caused by drift. For specific labels, special local-needs label 24(c) registration, or section 18 exemption, contact RCE in your County.

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