

PLANT & PEST ADVISORY

VEGETABLE CROPS EDITION \$1.50

MAY 21, 2003

Pest Notes

Gerald M. Ghidui, Ph.D., Vegetable Entomology



Swede midge, adult female
Source: Canadian Food Inspection Agency,
Science Branch, Plant Pest Surveillance,
Plant Pest Information

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The total accumulation of Degree-Days thus far is only 380, which is significantly less than 2002 at this time (about 560). This total should increase rapidly after the next week or so when the warm temperatures arrive (70's). More information will be placed in the newsletter during the spring as the value increases (for European corn borer development and potatoes).

✓ **Beans:** Temperatures and moisture are ideal for development and survival of **seed maggots**. If possible, use seed pre-treated or hopperbox-treated with an insecticide for maggot control (such as Agrox-D, diazinon, or Lorsban). Or, use an in-furrow application of Di-syston or Thimet. Seed treatments protect only the seed, while in-furrow treatments will give protection from early season insects for 4-6 weeks after application.

✓ **Cabbage:** Canada reports a new pest on cole crops, the **Swede Midge**. Larvae of this pest (the adult is a small fly, the larva is a small maggot) destroy the growing tips of many brassica vegetables, including cabbage, broccoli, brussels sprouts, cauliflower, Chinese cabbage and related crops. Although not found in New York or in New Jersey yet, it has been found in eastern Canada, and will likely find its way into New York and even New Jersey over time.

✓ **Corn:** "Yield Gard Rootworm Protected" corn seed is a modified corn hybrid from Monsanto Company to control **corn rootworms**. When the rootworms feed on the developing corn roots, they do not survive and die before maturity. With this corn seed, excellent control of corn rootworms can be obtained regardless of weather, time of planting, placement or field conditions.

✓ **Cucurbits:** The current weather conditions (cool, moist soils) are ideal for **seed maggot** development and survival. Protection against seed maggots can be obtained using any of a variety of seed treatments containing chlorpyrifos, diazinon, or permethrin. Also, Lorsban 50SL is approved as a seed treatment. The use of Admire 2F at planting for foliar insect pests MAY reduce seed corn damage.

✓ **White potato:** An untreated white potato field in Salem County was examined for **Colorado potato beetle** activity (near Shiloh), but only 3 adult beetles were found on a total of 40 plants scattered at 8 different stations throughout the field. No egg masses were found. This data reflects the cooler temperatures, both soil and air, that are currently in effect throughout most of New Jersey. Significant beetle activity may not be observed until after next week, when the rain stops and temperatures increase. □

IPM Update

*Kristian Holmstrom, Program Associate
in Vegetable IPM*

Sweet Corn

Cool evening temperatures continue to delay the onset of the first **European corn borer** (ECB) flight. At present, the limited focus of adult ECB activity is in lower Cumberland County. Activity is extremely low for mid-May. As evening temperatures moderate, moth activity will increase. Egg laying on whorl stage sweet corn plantings will follow.

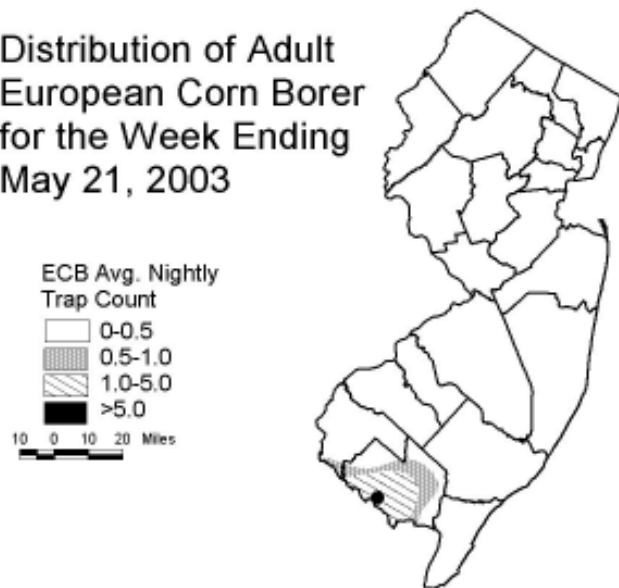
In northern counties, **wireworm** damage has appeared in some seedling stage planting. Most of this damage appears to be minor, with affected plants comprising less than 1% of the plantings. When scouting seedling corn, the occasional wilted plant may be seen among the healthy ones. If this plant is dug up, a wireworm may be found feeding on the stem below the soil line. Most of the in-furrow insecticide treatments used on early sweet corn plantings will protect against this pest, although seed that has been pre-treated with Gaucho is susceptible to wireworm injury unless another product has been used at planting. Many plantings emerged promptly with good weather several weeks ago. Now, with cold temperatures, the plants are not growing quickly. The seedlings are not large enough to tolerate feeding, so any damage to the stem results in death of the plant.

Cole Crops

The dominant pest continues to be **crucifer flea beetle**. This insect can do considerable damage to recently emerged plants and new transplants. Warm sunny days favor flea beetle activity, and numerous beetles may be found on individual plants under these conditions. Look for beetles and signs of their feeding ("shot-hole" or damage near the leaf margins). Consider treating if beetles are found on more than 50% of plants and damage is occurring.

Imported cabbageworm (ICW) adults have been active in northern cole crop plantings. ICW often feeds on the most tender tissue, so be sure to check the newest leaves on plants when scouting. With moderating temperatures, expect larvae to appear shortly. Consider treating for caterpillars when greater than 20% of plants are infested with any larvae prior to heading, or when greater than 5% of plants are infested with heads present. For leafy cole crops, consider treating when 12% or more plants are infested.

Distribution of Adult European Corn Borer for the Week Ending May 21, 2003



*Data collected and processed by: Kris Holmstrom, Marilyn Hughes
Rutgers Cooperative Extension & Center for Remote Sensing*

South Jersey Disease Update

Michelle Infante-Casella, Gloucester County Agricultural Agent, and Wesley Kline, Ph.D., Cumberland County Agricultural Agent

In the past week the following diseases have shown up in some South Jersey fields. Growers should scout fields and consult the 2003 Commercial Vegetable Production Recommendations for controls. Also contact your local Rutgers Cooperative Extension County Agricultural Agent if you need more information.

Pythium has been found on young melon transplants in the field. Roots turn brown and the outer layer of the root rots and will slide off when the root is pulled. Cool, wet weather has made the disease worse, since plants are not growing rapidly to overcome the infection. Once temperatures increase and growing conditions are more promising, Pythium should become less of a concern. Be sure not to over irrigate fields that have Pythium. Pythium also causes **seed rot** and **damping off**. Planting seed when conditions favor quick germination and growth will increase plant stands and lessen the effects of Pythium.

Rhizoctonia has been seen on tomato transplants in the field. Plants have been in the field for more than 2 weeks and for up to 5 weeks in some areas. This disease causes **root rot**, **stem rot** and **stem canker**. Later on it can also cause **fruit rot**. The disease is most severe when temperatures are low and plants are slow to grow.

Bacterial Spot has been seen on cilantro and parsley. Again, weather conditions are favorable for this disease. Avoid working in fields when plants are wet to reduce spread of the disease and do not plant parsley and cilantro in the same field for at least 2 years. Keep successive plantings as far away from each other as possible.

*Weather conditions are favorable at this time for bacterial diseases, especially with rain forecasted in the coming days. Be sure to take appropriate measures to protect plants from the spread of bacterial diseases. Avoid working in fields when plants are wet. When plant injury occurs, such as when tying or pruning, be sure to protect plants with preventative measures.

Wind Damage has caused disease-like symptoms on some plants in the field. Wind can cause leaf edges to die back and curl. Dried out spotting can also occur on young leaves. The use of wind breaks from rye strips and hedgerows can help. Some growers have also been trying synthetic wind breaks made of a mesh material similar to the erosion control black fencing used at development sites. □

Vegetable Integrated Crop Management Twilight Meeting Series

Tuesday, May 27, 2003

7:00 PM

DiBella Bros. Farm

693 Russell Mill Road

Woolwich Twp. (Swedesboro), NJ

The Rutgers Cooperative Extension Agricultural Agents from Atlantic, Cumberland, and Gloucester Counties invite you to the third twilight meeting in this year's series. This is an ongoing activity at growers' request and will continue with your support.

If you have any plant, insect, disease, or weed samples bring them to the meeting so they can be identified and discussed (please bring samples in sealed plastic bags).

AGENDA

- ◆ Summer insect pest control for vegetables, Dr. Gerald Ghidui, RAREC
 - ◆ Weed management in asparagus, cucurbit and solanaceous crops, Dr. Bradley Majek, RAREC
 - ◆ Update on Vegetable IPM Programs and Sweet Potato Pests, Joe Mahar, Vegetable IPM Coordinator
 - ◆ Update on Worker Protection Standards and Pesticide Application Records, Michelle Infante-Casella, Agricultural Agent
 - ◆ Update on Food Safety Issues and Worker Sanitation, Wes Kline, Agricultural Agent
 - ◆ Discussion of your spring and summer season production issues, RCE Agents and Specialists
- Pesticide Recertification Credits have been requested for this meeting. Hope to see you there!

For further information or directions, call Michelle Infante-Casella of RCE of Gloucester County at 856-307-6450, Wesley Kline of RCE of Cumberland County at 856-451-2800 or Rick VanVranken of RCE of Atlantic County at 609-625-0056. □

Weekly Weather Summary

Keith Arnesen, Ph.D., Agricultural Meteorologist

Temperatures averaged much below normal. Extremes were 75 degrees at Belvidere and Pomona, on the 13th and 19th and 32 degrees at Charlotteburg on the 19th. Weekly rainfall averaged 0.10 inches north, 0.14 inches central, and 0.40 inches south. The heaviest 24 hour total reported was 0.79 inches at Cape May Courthouse on the 16th to 17th. Estimated soil moisture, in percent of field capacity, this past week averaged 85 percent north, 72 percent central and 61 percent south. Four inch soil temperatures averaged 54 degrees north, 55 degrees central and 57 degrees south.

Weather Summary for the Week Ending 8 am Monday 5/19/ 3

WEATHER STATIONS	R A I N F A L L			TEMPERATURE				GDD BASE50		MON
	WEEK	TOTAL	DEP	MX	MN	AVG	DEP	TOT	DEP	%FC
BELVIDERE BRIDGE	.10	7.29	-2.70	75	37	54.	-7	239	53	86
CANOE BROOK	.07	9.21	-1.82	71	33	54.	-6	251	88	81
CHARLOTTEBURG	.00	9.63	-1.23	70	32	51.	-7	122	24	81
FLEMINGTON	.18	8.70	-1.78	69	34	53.	-7	246	71	78
LONG VALLEY	.00	8.29	-2.96	66	38	50.	-9	129	5	82
NEWTON	.22	6.58	-3.09	69	37	52.	-7	203	77	83
FREEHOLD	.05	8.34	-2.09	70	36	53.	-9	279	56	71
LONG BRANCH	.07	8.85	-1.92	71	35	52.	-9	209	21	57
NEW BRUNSWICK	.03	7.96	-2.24	69	36	53.	-9	245	-4	82
TOMS RIVER	.26	7.52	-2.92	74	36	54.	-8	260	52	67
TRENTON	.30	7.61	-1.83	68	38	54.	-9	257	-23	77
CAPE MAY COURT HOUSE	.83	8.39	-.76	74	43	55.	-7	222	-25	62
DOWNSTOWN	.20	7.80	-1.61	72	36	54.	-9	306	15	77
GLASSBORO	.22	8.42	-1.56	70	42	55.	-8	335	57	65
HAMMONTON	.28	7.28	-2.43	73	38	55.	-8	314	43	75
POMONA	.51	7.61	-1.51	75	37	54.	-8	251	26	63
SEABROOK	.24	8.44	-.12	72	41	56.	-7	359	63	63
ATLANTIC CITY MARINA	.50	6.66	-1.95	72	41	54.	-7	212	-4	55
SOUTH HARRISON	.32	9.01	-.30	72	42	55	NA	352	NA	NA
WES KLINE — GDD BASE 40 PINEY HOLLOW										
Last Week 127 (Ending 5/12/03)										
This Week 98 (Ending 5/19/03)										

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