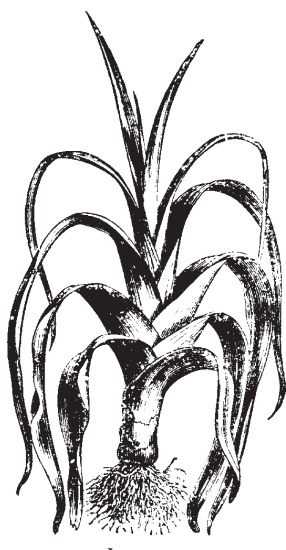


PLANT & PEST ADVISORY

VEGETABLE CROPS EDITION \$1.50

MAY 27, 1998



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Vegetable IPM Update

*Kristian E. Holmstrom and Sally Walker, Program Associates
in Vegetable IPM*

Cole crops

Frank Spiecker of Garden State Pest Management has observed larval infestations of **diamondback moth (DBM)**, **imported cabbage-worm (ICW)** and a few **cabbage looper (CL)** in plantings of cabbage and broccoli in Ocean and Middlesex counties this week. As yet, infestations are low in these areas, but should increase with warmer weather. In Hunterdon County fields of broccoli and cabbage are infested with moderate levels of ICW. It is important to note that plantings of cole crops should be monitored for the presence of ICW, DBM and CL larvae. Blacklight traps do not catch ICW adults, and are not useful for predicating field infestations of the three pests mentioned above. When scouting, be sure to examine the innermost leaves of young plants and the undersides of heads on more mature broccoli for the presence of larvae.

Pepper

Green peach aphids are being found at low levels in fields in Camden County. Check 2 leaves in the lower third of the plant in 5 plants in 10 locations in the field. The threshold is 1-2 aphids per leaf. Also note the presence of predators such as ladybeetles and lacewings, and whether or not light brown aphid mummies are present (indicating aphid parasitism). If insecticides are not being regularly applied, predator and parasites can usually keep aphid populations below threshold levels.

White Potato

Fields checked in Salem and Cumberland counties are not yet showing any signs of **European corn borer (ECB)** infestation, and trap peaks in this area have not exceeded the threshold of 25 per night. However, moths were seen flying in fields in Salem County. Scout all early fields for the presence of borers and treat if 25% of the terminals are infested. If relying on blacklight trap counts, treat one week after trap counts reach 25 per night. In fields where imidacloprid was not used at planting, check for all stages of **Colorado potato beetle** (adults, eggs, and larvae). Eggs and small larvae were seen in a field in Salem County last week.

Sweet Corn

Blacklight catches of ECB are increasing throughout the state at this

SEE IPM ON PAGE 2

Onion Maggots Moving into 2nd Generation: Protect Leeks and Green Onions!

Wesley Kline. Cumberland County
Agricultural Agent

The first generation of onion maggot fly emergence peaked in mid-April which was two to three weeks ahead of last year. The second generation is now near its peak. If no insecticide was applied since the last rains, now is the time to make an application. The flies lay their eggs for 7-10 days and the eggs hatch in 2-3 days. Once the eggs hatch, the larvae enter the soil and burrow into the onions near the base. It is critical to concentrate the insecticide as a banded treatment over the row to control the larvae as they hatch and burrow into the soil. Research over several years in New York has shown that broadcast treatments over the whole field have little effect. If the field is near harvest (two weeks) there is little reason to make an application. Also, young plantings appear to be more susceptible to damage. Check the vegetable production recommendations for control measures.

Onion maggot peaks can be predicted using degree days (base 40°) comparing the temperatures with trap catches. A study is under way to fine-tune this system so growers will be able to better time future sprays. Last year there were four maggot generations in Southern New Jersey. This is probably common for the southern portion of the state. In Northern New Jersey, there may only be three generations. □

IPM FROM PAGE 1

time, with most traps averaging at least one moth per night. In some localities the average catches are much higher. As early sweet corn plantings progress from the seedling to whorl stages, begin monitoring for signs of ECB infestation. Check 5 plants each in 10 random locations in the planting for a total of 50 plants. Multiply the number of infested plants (those with the presence of pinholes in the leaves) by 2 to access a percent infestation level to the planting. The action threshold for sweet corn is 12% plants infested. It is important to scout fields for ECB damage as the blacklight traps do not indicate the severity of field infestations. As fields progress from the whorl stage to the pretassel stage, emerging tassels should be examined for the presence of ECB larvae. The same 12% action threshold applies for this stage. In order to protect forming ears from damage, insecticide treatments should be applied to exposed tassels and the stalks as the tassels open. This will help eliminate ECB larvae as they move downward from the tassel to the ear. This week, a whorl stage field in northern Burlington County exhibited 14% plants infested. Many fields have low level infestations at this time.

The highest average nightly **ECB** blacklight trap catches are as follows:

Crosswicks	35	Georgetown	5	Allentown	3
Eldora	6	Ellisdale	4	Dayton	3
Green Creek	6	Mullica Hill	4	Hancocks Brdge	3
Elmer	5	Oldwick	4	Springdale	3

Consistent blacklight catches of CEW are occurring throughout southern New Jersey. As of this week, sporadic low catches have been found in Ocean and northern Burlington counties. This activity is a strong indication of successful overwintering of this pest. As sweet corn plantings progress into the silking stage, blacklight trap counts should be watched closely to determine the frequency with which silking corn should be treated. Silking spray schedules will be posted by region in the next issue of this newsletter. Occasionally, CEW larvae may be found feeding on corn tassels. This is not usually a concern. However, due to potentially higher early population of CEW this year, this occurrence should be included with ECB infestation when determining percent plants infested.

The highest average nightly **CEW** blacklight trap catches are as follows:

Elmer	2	Ellisdale	1	Indian Mills	1
Cedarville	1	Fishing Creek	1	New Egypt	1
Crosswicks	1	Hammonton	1	Rosenhayn	1
Eldora	1	Hancocks Brdge	1	Shiloh	1

As fields of grain begin to dry, **true armyworm (TAW)** may be seen feeding on nearby sweet corn. TAW feeding is very similar to **fall armyworm** feeding in appearance. Although this is not a very common occurrence, there is the potential for economic damage, and TAW feeding should be included with percent plants infested when scouting sweet corn plantings.

IPM Private Consultant

Garden State Pest Management is still accepting those interested in the Vegetable IPM Program in Middlesex, Monmouth, Ocean and Somerset counties. Those interested should contact Frank Spiecker at

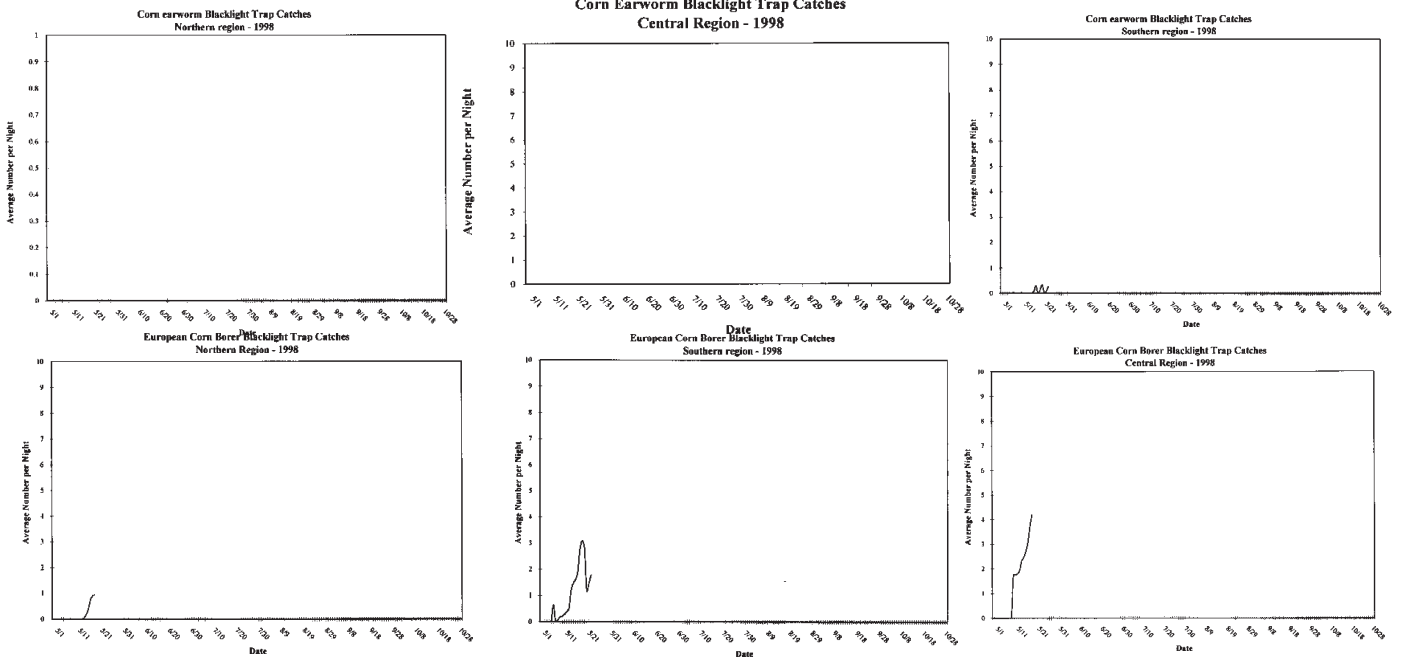
SEE CONSULTANTS ON PAGE 3

732-583-5516.

In Cumberland, Salem, Gloucester and Atlantic counties, IPM services are available from McConnell Agronomics (contact Luke McConnell at 410-479-3664) or AgChem/Brubaker Agronomic Consulting Company

(contact Rob Hofstetter at 410-348-2084 or Dave Bachinsky at 609-694-0120).

In Cumberland, Salem and southern Gloucester counties, IPM services are also available from Helena Chemical Company (contact Bob Moore or Tim Hahn at 609-769-0147).



Weekly Weather Summary

Keith Arnesen, Agricultural Meteorologist

Temperatures averaged much above normal. Extremes were 93 degrees at Woodstown on the 21st, and 38 degrees at Newton on the 23rd. Weekly rainfall averaged 0.05 inches north, 0.25 inches central, and 0.07 inches south. The heaviest 24 hour total was 0.55 inches at Toms River on the 20th to 21st. Estimated soil moisture, in percent of field capacity, this past week averaged 74 percent north, 72 percent central and 58 percent south. Four inch soil temperatures averaged 61 degrees north, 65 degrees central and 67 degrees south.

Weather Summary for the Week Ending 8 a.m. Monday, 5/25/98										
WEATHER STATIONS	RAINFALL			TEMPERATURE				GDD BASE50		MON
	WEEK	TOTAL	DEP	MX	MN	AVG	DEP	TOT	DEP	%FC
BELVIDERE BRIDGE	.10	18.40	7.71	87	40	65.	3	444	189	66
CANOE BROOK	.13	17.19	5.39	88	40	65.	3	549	319	74
CHARLOTTEBURG	.00	18.01	6.38	86	39	62.	3	379	230	62
LONG VALLEY	.00	17.07	5.03	84	39	64.	4	380	199	70
NEWTON	.00	14.05	3.71	85	38	62.	2	375	191	69
FREEHOLD	.38	18.96	7.81	89	46	68.	4	530	230	74
LONG BRANCH	.00	22.59	11.08	89	48	67.	5	399	140	48
NEW BRUNSWICK	.00	18.09	7.13	89	44	66.	2	493	164	72
PEMBERTON	.52	16.28	5.66	91	44	68.	4	651	326	78
TOMS RIVER	.55	25.72	14.58	89	43	66.	3	548	266	66
TRENTON	.02	18.61	8.52	89	43	66.	1	489	124	62
CAPE MAY COURT HOUSE	.02	14.64	4.86	89	46	67.	4	486	163	53
DOWNSTOWN	.28	14.16	4.11	90	46	67.	2	596	218	56
GLASSBORO	.11	12.81	2.13	90	47	70.	5	602	240	53
HAMMONTON	.00	14.30	3.91	91	45	68.	3	552	198	43
POMONA	.00	18.89	9.18	91	44	69.	6	523	223	46
SEABROOK	.06	15.06	5.88	92	48	69.	4	621	238	51
ATLANTIC CITY MARINA	.00	18.70	9.52	86	52	69.	7	449	164	46
WOODSTOWN	.00	11.47	1.57	93	44	69	NA	653	NA	NA
WES KLINE — GDD BASE 40 PINEY HOLLOW				Last Week	144 (Ending 5/18/98)	This Week		194 (Ending 5/25/98)		

Southeast Pennsylvania Twilight Small Fruit Growers Meeting

Wednesday, June 3, 1998

6:30 p.m.

James Rodichok Farm
200 Wiconiso Avenue
Tower City, PA

Agenda:

Guest Speakers: Dr. Joseph Fiola, Specialist in Small Fruit and Viticulture, Rutgers Cooperative Extension
Scott Walker, Jersey Asparagus Farms, Inc.

Strawberries:

Chandler is the primary cultivar.
Planted on raised beds. Plastic culture for 3 years, 2 years, and 1 year will be observed.

This is the fifth year Jersey Asparagus Farms, Inc. has used this system.

Sprayers:

Sprayers used for herbicide, insect and disease control will be demonstrated by Jim Rodichok.

For more information and directions, call Joseph Fiola at Rutgers Fruit Research & Extension Center, Cream Ridge, NJ, (609) 758-7311.

Pest Notes

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

✓ **Parsley:** In Atlantic County, Rick VanVranken reports that high number of **carrot weevil** adults are being trapped in celery and parsley fields. Monitor fields closely for this pest—if you don't have traps in the field, contact a local County Agricultural Agent and get some assistance. Several materials are labeled for **carrot weevil** control in celery, carrots, and parsley, including Asana, Vydate, and Guthion (depending on crop). Consult label for all rates and restrictions (**Note:** The use of Guthion in parsley is using a SLN 24(c) label, and a copy must be in applicator's hands at time of application.)

✓ **Potato: European corn borer** moths are active, and numbers of moths are increasing in the black light trap catches. If the warm weather continues, it is likely the moth flight activity will peak within the next 7-10 days. Moth activity has been relatively low so far, and much lower than originally predicted based on the past winter weather patterns. Best timing of an insecticide spray would be an application now and one in 5-10 days depending on material used. Furadan, Guthion, Monitor, Penncap-M, and Asana are labeled for control of **European corn borer** on white potatoes. If the moth population continues to rise during warm, humid weather, a second application would be best. If the population declines or temperatures are cool at night, a second application may not be needed. If Asana is used, a second application should be made within 4-5 days (DuPont recommends a third spray if the moth population remains high). If Furadan, Guthion, Monitor, or Penncap-M is used, a second application may be needed within 7-10 days or not needed at all if the population decreases or cool weather occurs. At best, this is a hit-or-miss guess because much depends on the present population status (is it rising, remaining steady, or already peaked) as well as the weather during the next 1-2 weeks (will we have warmer nights, increased humidity, or cooler nights) as well as the variety/stage of plant growth (lush plants will attract **borer moths** more than older plants or very young plants).

Colorado potato beetle adults and egg masses are present on untreated potatoes at RAREC. If Admire was used at planting, monitor fields closely for indication that beetles are not being controlled by this material (first signs of insecticide resistance). If Admire was not used, consult page 160 of the 1998 Commercial Vegetable Production Recommendations of New Jersey for information on effective control materials. Alternative materials include Agri-Mek, Align (Neem - for small larvae only), Raven (*Bt* - for small larvae only), cryolite, Provado, Thiodan, and Vydate. Remember that Provado should not be used against second-generation **Colorado potato beetle** adults or larvae. This may help reduce or prevent the onset of insecticide resistance to this material. □

Vegetable Crops Diseases

Stephen A. Johnston, Ph.D., Plant Pathology

✓ **Asparagus:** Do not overcut production fields. Once spears' quality starts to decline indicated by smaller diameter and fewer quantity, stop harvesting; and do not harvest beyond June 15. Overcutting production fields will predispose plants to infection by **Fusarium root & crown rot**. After the last harvest, apply Nematicur 3SC to the soil surface and incorporate by reshaping the beds or by irrigation. Nematicur application increases the vigor of the planting, which also helps to reduce incidence of **Fusarium root & crown rot**.

✓ **Bean:** Apply Ridomil Gold 4E in a 7-inch band over the row after seeding, or apply Ridomil Gold PC 11G as an in-furrow application at seeding for control of **damping-off** for both snap and lima beans.

✓ **Beet:** Maintain applications of a copper fungicide every 7-10 days for control of **leaf spots**.

✓ **Cole Crops:** Maintain foliar fungicide applications for the control of **downy mildew**.

✓ **Corn (Sweet):** Several fields have reduced stands this year due to the excessive soil moisture conditions present in early May. Several soilborne fungi are responsible for causing **damping-off & root rots**. These diseases are generally only a problem on early plantings. In future years, practice crop rotation and be sure seed has been treated with the newly registered fungicides, Apron XL, Imazalil and Maxim.

✓ **Cucumber:** Maintain foliar applications of Bravo + Benlate or Topsin M every 7-10 days once the vines begin to run for the control of **anthracnose** and **gummy stem blight**.

✓ **Eggplant:** Produce the crop on raised beds, and apply Ridomil Gold 4E in a 12- to 16-in. band over the row after transplanting or via drip irrigation for control of **Phytophthora blight**.

✓ **Lettuce:** Maintain foliar applications of maneb every 7-10 days for control of **downy mildew** and other **foliar diseases**.

✓ **Muskmelon:** Maintain foliar applications of Bravo every 7-10 days once the vines begin to run for control of **Alternaria leaf blight**.

✓ **Pepper:** Produce the crop on raised beds, and apply Ridomil Gold 4E in a 12- to 16-in. band over the row after transplanting or via drip irrigation for control of **Phytophthora blight**. Reapply Ridomil 30 and 60 days later. Maintain foliar applications of a copper fungicide + maneb shortly after transplanting and 7 days later for control of **bacterial leaf spot**.

✓ **Potato (White):** Once tubers are nickel size, apply Ridomil Gold MZ as a foliar spray and repeat in 14 and 28 days for control of **pink rot**.

✓ **Spinach:** Maintain applications of a copper fungicide every 7-10 days for control of **white rust** on

young fields. Fields closer to harvest should receive applications of Aliette to avoid phytotoxicity associated with use of copper fungicides.

✓ **Squash (Summer):** Once a canopy is complete, apply Ridomil Gold/Bravo as a foliar spray every 14 days for control of **Phytophthora blight**.

✓ **Tomato: Bacterial leaf spots** are present in some fields at this time. Infected leaves have numerous small, black lesions present, and the underside of the lesions are water-soaked. Avoid working in the fields while the foliage is wet, and apply a copper fungicide + mancozeb as a foliar spray every 7-10 days to reduce spread. Once crown fruit are 1/3 final size, apply chlorothalonil as a foliar spray every 14 days and apply Quadris as a foliar spray on the alternate 14 days for control of **foliar & fruit diseases**.

✓ **Watermelon:** Once vines begin to run, apply Bravo + Benlate or Topsin M as a foliar spray every 7-10 days for control of **anthracnose & gummy stem blight**. □

RCE Pesticide Education Web Site

George Hamilton, Ph.D., Pest Management

The RCE Pesticide Education Program now has its own web page. You can access it at <http://aesop.rutgers.edu/~hamilton>. The site currently has information available on Applicator Certification Requirements, Licensing Exam Dates, Recertification Meetings and links to Other Pesticide Related Sites. In the future we plan to make available other types of information including our certification textbooks. Please check out the site. □

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PLANT & PEST ADVISORY

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Pesticide User Responsibility: Use pesticides safely and follow instructions on labels. The user is responsible for the proper use of pesticides, residues on crops, storage and disposal, as well as damages caused by drift. For specific labels, special local-needs label 24(c) registration, or section 18 exemption, contact Rutgers Cooperative Extension of your County.

Use of Trade Names: Trade names are used in this publication with the understanding that no discrimination is intended and no endorsement is implied. In some instances the compound may be sold under different trade names, which may vary as to label clearances.