

PLANT & PEST ADVISORY

VEGETABLE CROPS EDITION \$1.50

JUNE 3, 1998



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Vegetable Crops Diseases

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

✓ **Asparagus:** After the final harvest, apply Nema-cur 3SC as a broadcast application over the soil surface. Incorporate by reshaping the beds or with irrigation/rainfall. Nema-cur 3SC can be mixed with herbicides. The application of Nema-cur is to increase the vigor of the planting to lessen susceptibility to **Fusarium root & crown rot**. Also, during the summer months, do not let fields undergo excessive amounts of stress resulting from insufficient soil moisture, weed, insect or disease pressure. Apply ample irrigation and control weeds, insects and foliar diseases in order to reduce incidence of **Fusarium root & crown rot**.

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

✓ **Cole Crops:** Maintain foliar applications of fungicides every 7-10 days for control of **downy mildew**.

✓ **Cucumber:** Maintain foliar applications of Bravo + Benlate or Topsin M every 7-10 days for control of **anthracnose**.

✓ **Eggplant:** Apply Ridomil Gold 4E in a 12- to 16-inch band over the row after transplanting, and repeat twice at 30-day intervals with a 6- to 8-inch band on each side of the row for control of **Phytophthora blight**.

✓ **Lettuce:** Maintain foliar applications of maneb every 7-10 days for control of **downy mildew & leaf spots**.

✓ **Muskmelon:** Maintain foliar applications of Bravo or mancozeb every 7 days for control of **Alternaria leaf blight**.

✓ **Pepper:** **Phytophthora blight** is present in some fields at this time. Infected plants are wilted, and there is a black, girdling lesion at the base of the stem. Remove infected plants whenever possible to reduce spread to the rest of the field. Apply Ridomil Gold 4E as a banded application or by injecting via drip irrigation.

✓ **Potato (Sweet):** Dip plants in a solution of Mertect 340F prior to transplanting for the control of **scurf**.

✓ **Potato (White):** Conditions are favorable for the development of **late blight**. Apply a fungicide as a foliar spray at this time for protection.

✓ **Pumpkin & Squash (Winter):** Plant in well drained fields, and avoid leaving a depression around the base of the plant to prevent conditions favorable for the development of **Phytophthora blight**.

✓ **Squash (Summer):** Maintain foliar applications of Ridomil Gold/

SEE DISEASES ON PAGE 2

Bravo every 14 days for prevention of **Phytophthora blight**.

✓ **Tomato: Tomato Pith Necrosis** is present in some fields at this time. Infected plants are wilted with areas of adventitious roots present along the main stem. The internal portion (pith) of the stem in these areas is black (necrotic). This is a disease caused by a common bacteria present in the soil. Infection occurs under high soil fertility conditions, rapid growing conditions of high humidity, and cool nights with drip irrigation and plastic mulch. The disease does not spread from plant to plant. Some fields of staked tomatoes have plants dying with a brown lesion at the base of the stem. This is **Rhizoctonia stem rot**. A foliar application of Benlate will protect remaining plants in the field.

✓ **Watermelon:** Maintain foliar applications of Bravo + Benlate or Topsin M every 7-10 days for the control of **anthracnose** & **gummy stem blight**. □

Twilight Fruit, Vegetable & Flower Meeting

Tuesday, June 30, 1998

5:30 p.m.

Demarest Farm, Hillsdale, NJ

Speaker & Topic

Dr. Bob Belding, Spec/Tree Fruit Pomology, "Tree Fruit Culture & Management to avoid pest problems"

Dean Polk, IPM Agent - Fruit, "Fruit IPM Update"

Dr. Peter Shearer, Spec/Fruit Entomology, "Tree Fruit Pests & their Control"

Dr. George Wulster, Specialist in Floriculture, "Flower Crop Pests & their Control"

Dr. Steve Johnston, Spec/Plant Pathology, "Vegetable Diseases & Management"

Carmen Valentin, DEP Public Outreach Representative, "DEP Update"

Recertification credits will be offered in
CORE & PP2

Also...Hayride Tour of Demarest Farm
Rain or Shine!

Call Joel Flagler of Rutgers Cooperative Extension of Bergen County at (201) 599-6167 for information or directions, or call Demarest Farm at (201) 666-0472.

Pest Notes

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

✓ **Cabbage, Brassica Crops:** The white butterflies flying around fields at this time are adults of **imported cabbageworms**. They will be depositing eggs that hatch into small green larvae that will chew holes in the leaves of cabbage and related crops. All of the recommended materials in the 1998 Commercial Vegetable Production Recommendations for NJ are effective against this pest. The *BT*'s are especially effective when applied in high volumes (thorough spray coverage is important for the *BT* insecticides). Eggs will be hatching within 3-5 days, and small larvae are most susceptible to the *BT*'s.

✓ **Potato: Potato leafhopper** numbers are increasing in potato fields throughout the mid-Atlantic region wherever Admire 2FS was not used. Monitor fields for early buildup of **leafhopper** populations, and apply a treatment if **leafhopper** counts exceed 1 adult per sweep or 1 nymph per 10 leaves. *Do not* let **leafhopper** populations get out of control as they can and will seriously reduce the potato yields.

Also, numbers of **European corn borer** adults trapped in the black light traps in the field at RAREC are increasing with an average of 10-12 moths caught per night. Terminals are being invaded by small larvae; and if more than 25% of terminal tips have **borer** entry, treatments should be applied. If a treatment was applied last week, a second treatment may be necessary approximately 7 days later, which should get you through the first generation of the **European corn borer**. For a spray material, consult page 161 of the 1998 Commercial Vegetable Production Recommendations for NJ for recommendations, restrictions, etc.

✓ **Tomato:** We have been trapping relatively high numbers of **stinkbugs** in the light traps at RAREC. These pests are general feeders but can feed on many vegetables, including tomato. There are no threshold limits for **stinkbugs** on tomatoes, especially when plants are still small. Monitor the fields; and if you find increasing numbers of **stinkbugs**, effective control can be obtained using Baythroid, Warrior, Monitor, or Thiodan. If Monitor is used, a copy of the label *must* be in your possession at time of application as this is an SLN 24(C) label for New Jersey. □

Weekly Weather Summary

Keith Arnesen, Agricultural Meteorologist

Temperatures averaged much above normal. Extremes were 93 degrees at Freehold on the 1st, and 48 degrees at Belvidere on the 26th. Weekly rainfall averaged 1.36 inches north, 1.34 inches central, and 0.50 inches south. The heaviest 24 hour total was 1.29 inches at New Brunswick on the 31st to 1st. Estimated soil moisture, in percent of field capacity, this past week averaged 73 percent north, 70 percent central and 41 percent south. Four inch soil temperatures averaged 66 degrees north, 68 degrees central and 68 degrees south.

WEATHER SUMMARY FOR THE WEEK ENDING 8 AM MONDAY, 6/ 1/98										
WEATHER STATIONS	RAINFALL			TEMPERATURE				GDD BASE50		MON %FC
	WEEK	TOTAL	DEP	MX	MN	AVG	DEP	TOT	DEP	
BELVIDERE BRIDGE	1.18	19.58	8.07	88	48	69.	5	582	234	79
CANOE BROOK	1.89	19.08	6.37	91	55	72.	8	704	383	86
CHARLOTTEBURG	1.20	19.21	6.68	86	49	67.	6	502	280	77
FLEMINGTON	MISSING									
LONG VALLEY	1.17	18.24	5.28	86	52	68.	6	506	245	78
NEWTON	MISSING									
FREEHOLD	1.41	20.37	8.37	93	57	73.	7	694	291	86
LONG BRANCH	1.37	23.96	11.60	84	54	67.	2	522	167	81
NEW BRUNSWICK	1.79	19.88	8.06	89	56	71.	5	642	207	91
PEMBERTON	.60	16.88	5.47	90	55	73.	7	810	380	63
TOMS RIVER	1.39	27.11	15.16	92	52	72.	8	702	328	84
TRENTON	1.45	20.06	9.21	87	55	70.	3	634	156	83
CAPE MAY COURT HOUSE	.00	14.64	4.13	86	58	71.	6	631	206	17
DOWNSTOWN	.44	14.60	3.82	88	57	72.	5	754	262	46
GLASSBORO	.77	13.58	2.09	87	54	72.	5	754	281	62
HAMMONTON	.20	14.50	3.31	89	54	72.	5	703	238	25
POMONA	.50	19.39	8.99	86	54	71.	6	673	273	41
SEABROOK	.52	15.58	5.65	89	56	73.	6	783	286	47
ATLANTIC CITY MARINA	1.04	19.74	9.90	84	58	69.	5	580	201	52
WOODSTOWN	.56	12.03	1.37	91	54	73	NA	814	NA	NA
WES KLINE — GDD BASE 40 PINEY HOLLOW										
Last Week 194 (Ending 5/25/98)										
This Week 228 (Ending 6/1/98)										

Calendar of Events

June 16, 1998, 6:30 p.m. - Direct Marketing Twilight Meeting, Passaic County, Farms View Roadstand, 945 Black Oak Ridge Road (Rt. 202), Wayne, NJ

This third-generation farm, located in the middle of suburbia, has steadily grown over the years and has recently undergone a major expansion. They have also diversified the business by developing a successful leaf recycling business, thereby creating a source of organic matter for use in their fields. For further information, please contact Ramu Govindasamy at (732) 932-9171 ext. 25.

June 30, 1998 - Twilight Fruit, Vegetable and Flower Meeting, Demarest Farms, Hillsdale, NJ. Call Joel Flagler of Rutgers Cooperative Extension of Bergen County at (201) 599-6167 for information or directions, or call Demarest Farm at (201) 666-0472.

August 18, 1998, 6:30 p.m. - Direct Marketing Twilight Meeting, Monmouth County, Atlantic Farms, 1506 Atlantic Avenue, Wall Township (Rt. 524), NJ 08736

Located in suburbia, John Tobia and family have carved out a wonderful market, serving consumers with Jersey produce, plants, farm entertainment and agriculture education tours. A steadily growing wholesale produce business serving restaurants and other marketers has been established, further diversifying the operation. For further information, please contact Ramu Govindasamy at (732) 932-9171 ext. 25.

Vegetable IPM Update

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

Cole crops

Cabbage looper (CL), **diamondback moth (DBM)**, and **imported cabbageworm (ICW)** are all active in central New Jersey cole crop fields. **CL** is earlier than usual this year and can be particularly destructive if not controlled. Fields should be monitored weekly for the presence of all 3 pest species. Prompt destruction of cole crop residue after harvest can be critical for preventing **DBM** damage in subsequent plantings. This is especially important where sequential plantings are in close proximity to one another.

Pepper

Threshold levels of **melon aphids** were found in fields in Camden County. **Melon aphids** are smaller and darker green than **green peach aphids**, and can be differentiated from **green peach aphids** by black cornicles, or "tailpipes" that extend off the back of the body. It is likely that this is an isolated case for control, but identification between the 2 aphids is important so that the correct chemical can be used. High levels of **ECB** egg masses were found in Hunterdon County on recently transplanted peppers this week. Although fruit are not present at this time, the plants may sustain damage to the central stems as larvae bore into them. Fields should be monitored weekly for the presence of **ECB** egg masses. Check 2 leaves each on 50 plants (5 plants each in 10 random locations). Look for flat masses of whitish eggs on the undersides of leaves. 2 egg masses per 100 leaves is the action threshold if fruit are present. Consider the age of the plant. Treatment may be warranted on young plants if significant growth has not occurred since transplanting. Frank Spiecker of Garden State Pest Management reports local outbreaks of two-spotted spider mite on peppers in Ocean County. The action threshold for this pest is 10 leaves infested per 100. Spot treatments in the field may be possible if the infestation is identified early.

White Potato

The first **European corn borer (ECB)** egg mass was found in a field in Salem County, indicating that egg laying is occurring in potatoes in the southern counties. The traps in this area have not reached threshold levels (20-25/night), so we are not expecting major problems with corn borer in potatoes. However, conditions for infestation can be very localized, so we are recommending that growers check fields at least weekly for the presence of corn borers and treat fields that reach 25% terminal infestation.

Also check fields now for **potato leafhopper (PLH)** activity. **PLH** adults were easily found in a field in

Salem. Use a sweep net and take 10 sweeps in 5 random sites in the field. The threshold is 25 adults per 50 sweeps. Check also for **PLH** nymphs on 5 leaves in 10 random locations and treat if levels exceed 5 nymphs per 50 leaves.

Sweet Corn

The first **ECB** flight is now in full swing throughout the state. Moth catches are high in most areas and resultant larval feeding in sweet corn is increasing. In Burlington County whorl stage corn plantings have up to 20% of plants infested. Lower level infestations may be found northward to Sussex County. The pretassel stage is critical for control of this pest. Sweet corn plantings should be treated at pretassel and again at full tassel if **ECB** infestation is at 12% or greater. At this time, sweet corn started under plastic is most at risk for damage due to its advanced size relative to other plantings. These plantings will reach silking stage earlier than bare ground plantings and will be at risk for **ECB** infestation directly in the silks. Many areas will have **corn earworm (CEW)** generated silk spray schedules, however, in areas where **CEW** activity is low, weekly silk schedules should be maintained if **ECB** activity coincides with the appearance of silks.

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

Crosswicks	21	Eldora	8	Mullica Hill	7
Cinnaminson	14	Jutland	5	Georgetown	6
Hammonton	5	Ellisdale	7	Little York	10
Sergeantsville	8	Elmer	7	New Egypt	12

CEW activity is increasing somewhat throughout southern and central counties. At this time there is considerable variation among trap locations. Many areas are not catching **CEW** but every county in the southern and central regions has some traps consistently catching 1 to 2 **CEW** per night. Under these pest conditions, a silking spray schedule is necessary. As of this issue, general silk spray schedules will be published weekly by region.

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

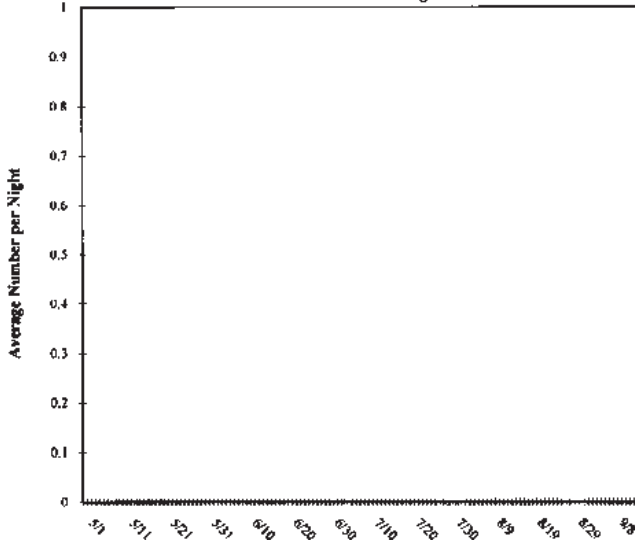
Chapel Heights	2	Medford	1	Eldora	2
Crosswicks	2	Beckett	1	New Egypt	1
Hammonton	2	Cranbury	1	Sewell	1
Hopewell	1	Elmer	2	Shiloh	1

General Sweet Corn Spray Schedule

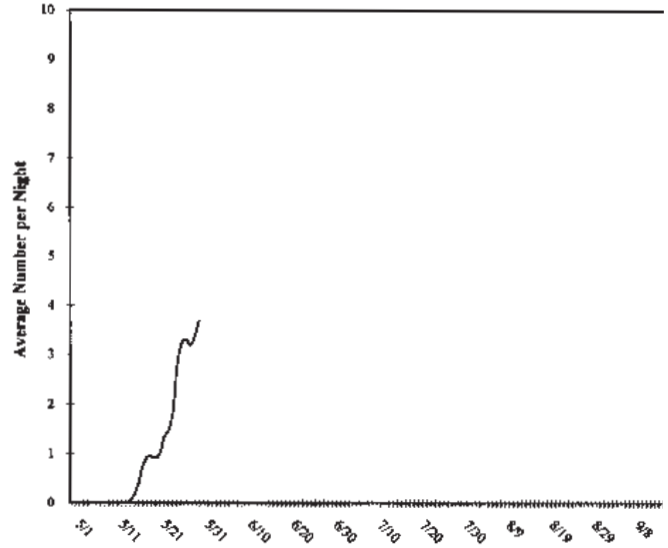
Silking stage:	Central	4 – 6 days*
	South	3 – 5 days*

*These are general spray recommendations for large areas of the state. Growers can increase or decrease the intervals based on their own local situations.

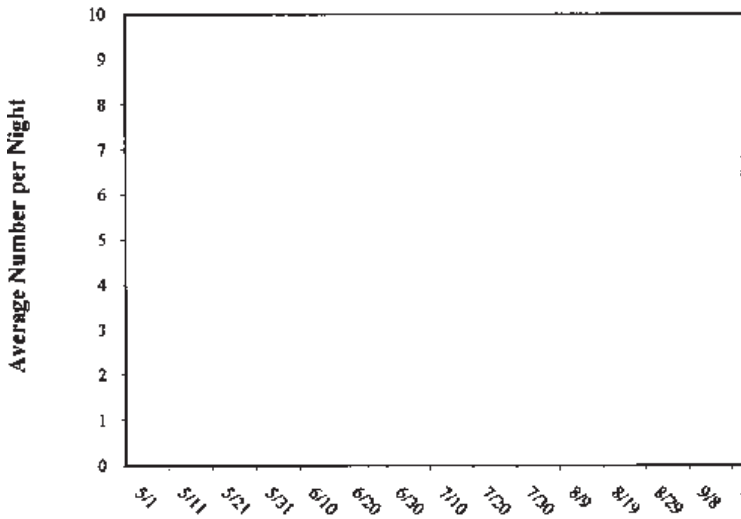
**Corn earworm Blacklight Trap Catches
Northern region - 1998**



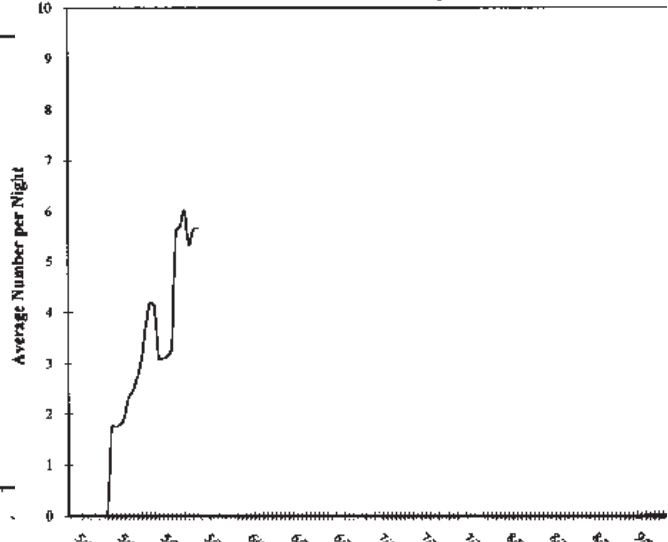
**European Corn Borer Blacklight Trap Catches
Northern Region - 1998**



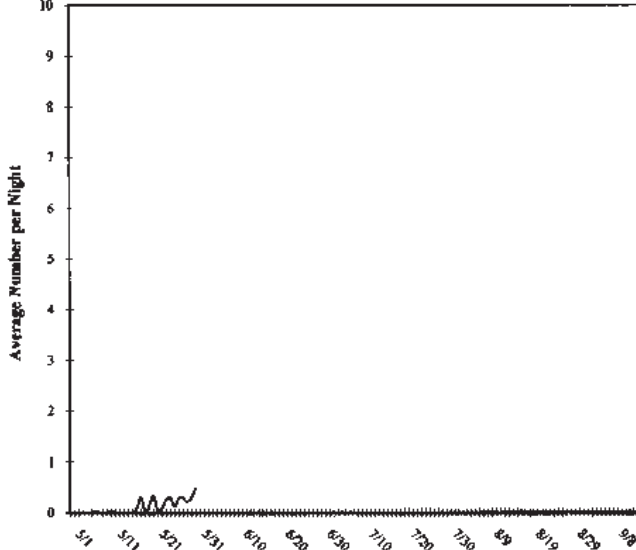
**Corn Earworm Blacklight Trap Catches
Central Region - 1998**



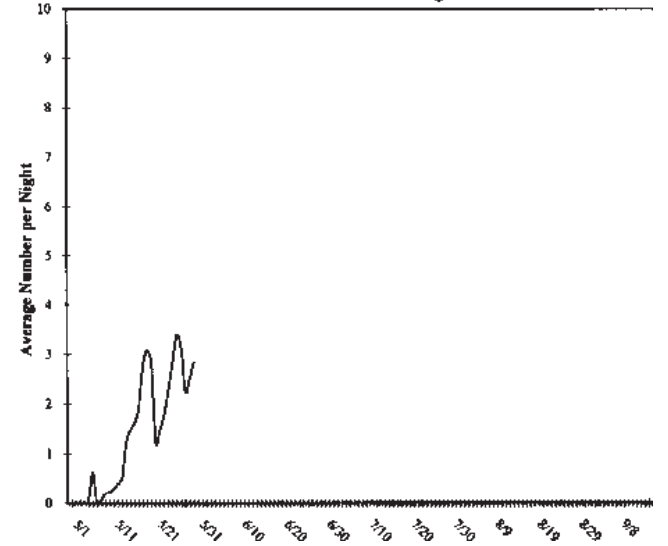
**European Corn Borer Blacklight Trap Catches
Central Region - 1998**



**Corn earworm Blacklight Trap Catches
Southern region - 1998**



**European Corn Borer Blacklight Trap Catches
Southern region - 1998**



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