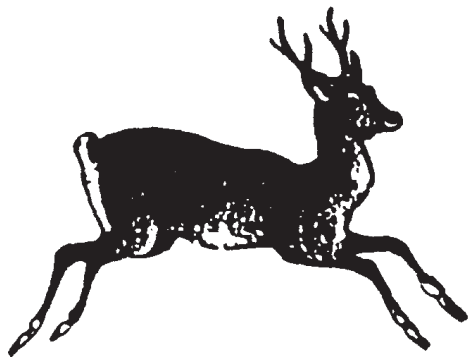


PLANT & PEST ADVISORY

VEGETABLE CROPS EDITION \$1.50

AUGUST 26, 1998



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Prepare Yourself and Guests on Your Property for Hunting Season

Michelle Infante, Gloucester County Agricultural Agent

The New Jersey Division of Fish, Game, and Wildlife provides free "HUNT SMART" Courtesy Cards for landowners to issue to hunters they allow on their property. It is a two-part card that is given to guests after he or she reads the following statement and signs their name pledging to follow these guidelines:

"I agree to conduct myself safely, responsibly, and lawfully, respecting the landowner, property, and others using it. I accept the responsibilities which are part of the activities which I pursue. I agree to comply with the instructions of the landowner while on this property. I understand the laws of New Jersey absolve the landowner from liability for non-paying recreationists engaged in hunting, fishing, trapping, boating, hiking, and certain other activities, except in the case of willful or malicious failure to guard or warn of hazards."

The landowner may also list dates or a certain period of time that the guest will be permitted on the property. There is also a section on the card where the landowner can list any limitations as to the use of the land by the guest. The landowner keeps one part of the card with the guest's signature and the guest must carry the other part with the landowner's signature while utilizing the property.

This card is only intended to be used as an agreement between the landowner and the guest hunter. Cards and the information on them need not go any further. The intent of these cards is to discourage guests from acting irresponsibly while on private lands and to be identified as a guest with permission to be on these properties. Hunting season can be a controversial time of year and this simple card can alleviate disagreements during this season. For more information on obtaining free "HUNT SMART" Courtesy Cards contact your local Division of Fish, Game, and Wildlife in the following locations:

Northern Region: Captain Glenn Hawkswell at (908) 735-8240 (Bergen, Essex, Hudson, Hunterdon, Morris, Passaic, Somerset, Sussex, Union, Warren)

Central Region: Captain Martin Morales at (609) 259-2120 (Burlington, Mercer, Middlesex, Monmouth, Ocean)

Southern Region: Captain Ed Markowski at (609) 629-0555 (Atlantic, Camden, Cape May, Cumberland, Gloucester, Salem)

Vegetable Crops Diseases

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

✓ **Asparagus:** Maintain applications of mancozeb as a foliar spray every 7-10 days for control of **rust**.

✓ **Bean, lima & snap:** If soil is wet 6-10 days before bloom, a fungicide should be applied when 70-80% of the plants have one or more open blossoms for control of **white mold (Sclerotinia)**. A second application needs to be made 6 days after the first application if soil remains wet and blossoms are still present. Add a spreader sticker to each fungicide application to enhance activity.

✓ **Cole crops:** On new seedlings, apply Ridomil Gold 4E in a 7-inch band over the row for control of **damping-off** and early season control of **downy mildew**. Maintain applications of maneb or Bravo every 7-10 days for the control of **Alternaria leaf spot** and **downy mildew**.

✓ **Carrot: Leaf blights** are present in fields at this time. Infected leaves have numerous, small black lesions with gray centers and dark reddish borders scattered over the leaf and petioles. Maintain applications of Bravo every 7-10 days for control.

✓ **Cucumber: Angular leaf spot** continues to appear in several fields at this time. In addition to angular lesions clustered around the veins on leaves, infected fruit have several small lesions that exude an amber gum. Apply a copper fungicide + mancozeb as a foliar spray every 7 days for control, and do not work in fields while the foliage is wet.

✓ **Eggplant:** Maintain foliar applications of a copper fungicide + maneb + a spreader sticker every 7-10 days for control of **Phomopsis & Phytophthora fruit rots**.

✓ **Leek:** Maintain foliar applications of Bravo every 10 days for control of **purple blotch**.

✓ **Lettuce:** Apply Ronilan or Rovral as a directed spray to the base of the plants and surrounding soil after thinning, 10 and 20 days later for control of **drop (Sclerotinia)**. Use of Rovral will also control **bottom rot (Rhizoctonia)**. **Corky root** is present in some fields of romaine. Infected plants are wilted and the tap root is dark orange and brittle. This is caused by excessive soil moisture. Reduce irrigation time to a minimum to reduce incidence of the disease.

✓ **Pepper:** Maintain foliar applications of maneb + copper fungicide + a spreader sticker every 7-10 days for control of **bacterial leaf spot & Phytophthora blight**.

✓ **Pumpkin & winter squash:** Maintain applications of Bravo + a copper fungicide every 7-10 days for control of **foliar & fruit diseases**.

✓ **Spinach:** Apply Ridomil Gold 4E in a 7-inch band over the row immediately after seeding for control of **damping-off** and early season control of **blue mold & white rust**.

✓ **Squash (summer): Root-knot nematode** damage is present in some fields at this time. Infected plants are stunted, and the entire root system is covered with galls. The damage is severe in sandy fields in which squash has been double cropped following a field of cucumbers on plastic mulch. Following the cucumber crop, metam sodium should have been applied via the drip irrigation system to control the nematodes. In fields with nematode damage, apply Vydate L as a foliar spray or injection via the drip irrigation system for control. Maintain applications of Ridomil Gold/Bravo as a foliar spray every 14 days for control of **Phytophthora blight**.

✓ **Tomato:** Maintain foliar applications of chlorothalonil every 14 days and on alternate 14 days apply Quadris. Quadris has a 24C registration in New Jersey for a 1-day preharvest interval.

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

Twilight Horticulture Research Meeting for Commercial Producers

September 2, 1998

6:00 p.m. - 8:30 p.m.

Rutgers Snyder Research and Extension
Farm, Locust Grove Road, Pittstown, NJ
(Hunterdon County)

Tour and Review Current Vegetable and Fruit
Research Plots.

Sponsored by Rutgers Cooperative Extension. For
more information call Peter Nitzsche at Rutgers Coop-
erative Extension of Morris County at 973-285-8307.

Pest Notes

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

✓ **Cucumber:** Gloucester County Ag Agent Michelle Infante reports that she is finding high numbers of **cucumber beetles** in young squash plantings. If the plants are young, there is a risk of both direct feeding damage as well as the spreading of bacterial wilt by the **beetles**, which will cause the plant to wilt and die. Apply foliar insecticides before **beetles** feed extensively on the cotyledons and first true leaves to protect the plants, and repeat applications on a weekly schedule if new **beetles** continue to invade the field. Asana, Lannate, Sevin and Thiodan are effective foliar sprays for the control of **cucumber beetles**.

✓ **Pepper:** The black light traps are catching high numbers of **European corn borer moths**. Fields should be receiving weekly applications of Orthene, or an application of Asana twice weekly, to reduce the damage caused by these pests. Thorough coverage is important for maximum protection of the pepper.

Consult label for all rates and restrictions.

✓ **Tomatoes:** **Corn earworms** and **beet armyworms** continue to cause damage in tomato fields by feeding directly on the fruit, leaving large holes in the tomato. For the **corn earworm**, Baythroid, Lannate, Warrior and Asana are effective. The **beet armyworm** is more difficult to control, and the high rate of Lannate may be needed to control this pest. Thorough coverage of the foliage is important for effective control of both of these pests.

Also, **stinkbug** damage is increasing in some tomato fields. Monitor fields frequently for **stinkbug** numbers and damage, and apply a spray if either is increasing. Warrior, Baythroid, Thiodan and Monitor are all registered for **stinkbug** control in tomatoes. More than one application may be required. If tomato fields are bordered by other crops, particularly field crops such as soybeans, alfalfa, etc., monitor the tomato field closely if the neighboring fields are harvested because **stinkbugs** will migrate rapidly from a harvested field crop into a nearby tomato field. □

Weekly Weather Summary

Keith Arnesen, Agricultural Meteorologist

Temperatures averaged slightly above normal. Extremes were 92 degrees at Toms River on the 19th, and 44 degrees at Charlotteburg on the 20th. Weekly rainfall averaged 1.50 inches north, 1.17 inches central, and 0.93 inches south. The heaviest 24 hour total was 2.87 inches at Long Valley on the 17th to the 18th. Estimated soil moisture, in percent of field capacity, this past week averaged 87 percent north, 76 percent central and 69 percent south. Four inch soil temperatures averaged 71 degrees north, 73 degrees central and 74 degrees south.

Weather Summary for the Week Ending 8 a.m. Monday 8/24/98

WEATHER STATIONS	RAINFALL			TEMPERATURE				GDD BASE50		MON %FC
	WEEK	TOTAL	DEP	MX	MN	AVG	DEP	TOT	DEP	
BELVIDERE BRIDGE	1.76	29.40	6.09	87	48	70.	1	2310	246	81
CANOE BROOK	.84	28.18	3.73	90	49	72.	2	2643	567	72
CHARLOTTEBURG	.98	31.51	6.82	87	44	67.	1	2042	399	86
FLEMINGTON	.78	25.86	2.29	90	49	71.	1	2281	152	73
LONG VALLEY	3.15	29.77	4.31	82	48	68.	1	2074	234	84
FREEHOLD	1.32	29.03	6.06	89	50	73.	2	2467	200	79
LONG BRANCH	1.16	32.98	9.76	88	55	72.	1	2343	154	78
NEW BRUNSWICK	1.74	28.41	5.26	90	50	72.	0	2532	173	88
PEMBERTON	.56	22.65	-.86	91	50	74.	3	2709	396	46
TOMS RIVER	1.43	35.31	11.55	92	55	74.	3	2598	427	74
TRENTON	.81	25.88	3.87	88	49	71.	-1	2443	-21	59
CAPE MAY COURT HOUSE	1.68	22.61	2.10	90	54	74.	1	2596	451	69
DOWNSTOWN	1.15	22.88	1.18	90	51	74.	2	2688	219	69
HAMMONTON	.75	20.12	-2.55	91	51	74.	1	2654	203	47
POMONA	.63	24.47	3.58	91	51	75.	4	2634	349	48
SEABROOK	.82	25.28	4.50	89	54	74.	1	2835	352	62
ATLANTIC CITY MARINA	.53	25.55	5.53	89	57	75.	3	2629	415	42
WOODSTOWN	2.52	23.97	1.52	91	49	74	NA	2860	NA	NA
WES KLINE — GDD BASE 40 PINEY HOLLOW										
Last Week	247	(Ending 8/17/98)	This Week	236	(Ending 8/24/98)					

Vegetable IPM Update

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

General

At this time **corn earworm (CEW)**, **European corn borer (ECB)** and **fall armyworm (FAW)** are all active at moderate to high levels throughout the state. **CEW** warrants particular attention due to a dramatic increase in activity within the last 4 days. These pests are at damaging levels for sweet corn, peppers, tomatoes, snap and lima beans and lettuce. Fields should be monitored for these pest and their damage. Review this publication weekly for updates on adult (moth) activity. Consult the [1998 Commercial Vegetable Production Recommendations for New Jersey](#) for control measures.

Lima and Snap Beans

Both **ECB** and **CEW** adults counts are very high in blacklight traps in the southern counties. For processing snap beans, the **ECB** counts indicate that a 4-5 day spray schedule is warranted following the pin stage application through to harvest. Sprays for snap beans should target both **ECB** and **CEW** in areas where the trap counts of **CEW** exceed 20 per night.

Lima bean fields that are in bloom should be sampled for **CEW** at least once a week until harvest, and preferably twice a week under the heavy population occurring now. Treatment will be needed if you find 1 **CEW** larvae per 6 foot of row.

Cole Crops

Cabbage looper (CL) activity continues to be high on cole crops in all areas. As fields are treated for **CL**, **imported cabbageworm (ICW)** and **diamondback moth (DBM)**, they quickly become re-infested with **CL**. Scout fields weekly and treat when 20% of plants are infested with any larvae prior to heading and when 5% are infested as heads mature. Treat leafy greens when 12% or more plants are infested.

Peppers

All of the major fruit pests of pepper are active at moderate to high levels throughout the southern and central counties, including **ECB**, **CEW**, and **FAW**. In the southern counties, **beet armyworms (BAW)** also continue to be active on plants and fruit. In the northern counties, **ECB** is the predominant fruit pest at this time.

Leafminers are starting to show up in low numbers. The damage can be found on the top of the leaves and looks like circular blotches that range in color from off-white to brown. Usually **leafminer** damage remains below economic levels, but we occasionally see defoliation due to this pest. Pay particular attention to fields that were planted with southern transplants, as an outbreak that occurred one year was associated with plants brought up from the south.

Tomatoes

CEW counts have increased to very high levels in blacklight traps in the southern and central counties and are a concern for tomato fruit at this time. Fields need to be treated preventatively for this pest (also called the **tomato fruitworm**) in the areas where the adult counts are high and sweet corn acreage is on the decline. Monitor fields for fruit damage in order to evaluate control. Larvae tend to enter the fruit near the stem end, and can usually be found feeding inside the fruit. The larvae can vary greatly in color, but can be distinguished from other caterpillars by the presence of more obvious hairs and tiny spines covering the body.

BAW have again been found feeding again on tomato plants and fruit in Salem and Atlantic counties. Larvae are a dull green with a light colored strip along each side, bordered by a darker green line, and the older larvae have a noticeable black spot on each side of the second segment behind the head. The fruit damage can vary from small holes to a ragged shallow feeding on the surface of the fruit.

Stinkbug adults continue to be active in blacklight traps located next to tomatoes, and damage is still being found on fruit.

Sweet Corn

Adult catches of **ECB** in our blacklight traps are moderate to very high throughout the southern and central counties depending on location. In the northern counties trap catches are moderate. This pest is currently a threat to sweet corn in all areas. Late season **ECB** can be quite damaging, as egg masses are frequently deposited on or near the ears. Silk schedules targeted at **CEW** will likely provide adequate control of **ECB**.

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

Shirley	50	Crosswicks	12
Cohansey	40	Pedricktown	12
Centerton	30	Ellisdale	11
Eldora	21	Allentown	10
Woodstown	21	Cedarville	10
Tabernacle	19	East Vineland	10

Adult **CEW** catches have increased dramatically within the past week. Moth numbers had been suppressed by cool night temperature late last week, but now are ranging to above 20 per night in southern counties. Activity is high in all areas at this time and is not likely to subside soon with the appearance of tropical storms. Silk spray schedules should be adhered to as much as possible to minimize damage from this pest.

SEE IPM ON PAGE 5

IPM FROM PAGE 4

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

Shiloh	100	Sheppards Mill	19
Eldora	25	East Vineland	14
Cedarville	24	Indian Mills	14
Elm	20	Green Creek	11
Fishing Creek	19	Tabernacle	11
Hammonton	19	Pedricktown	10

General Sweet Corn Spray Schedule

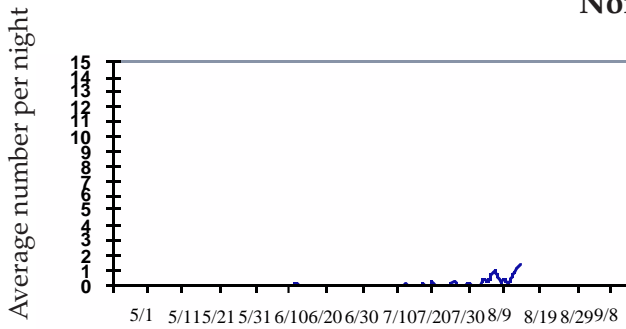
Silking stage: North 3 day *
 Central 2 to 3 days*
 South 2 to 3 days*

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

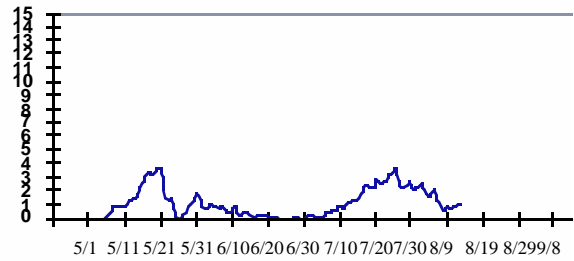
Blacklight Trap Catches

Corn Earworm

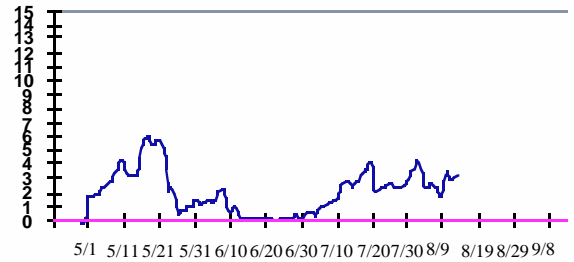
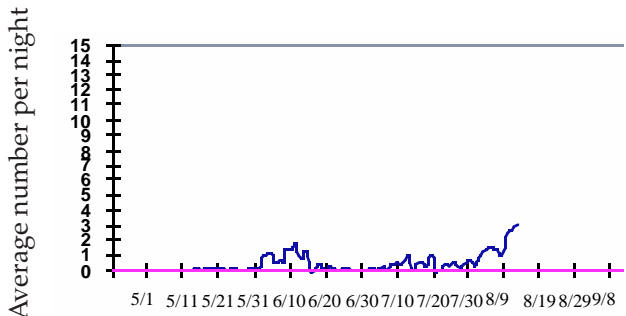
Northern Region



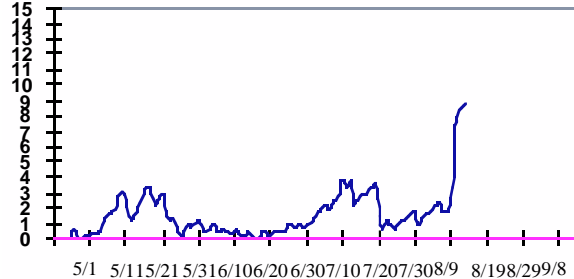
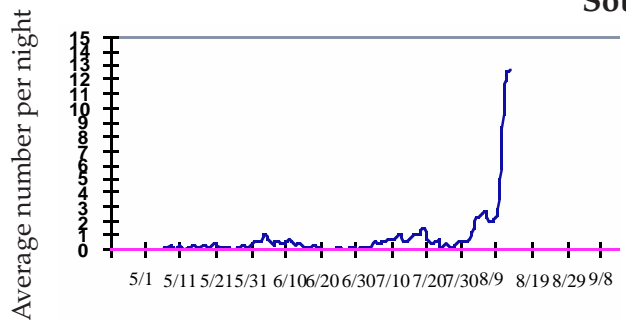
European Corn Borer



Central Region



Southern Region



Date

Date

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