

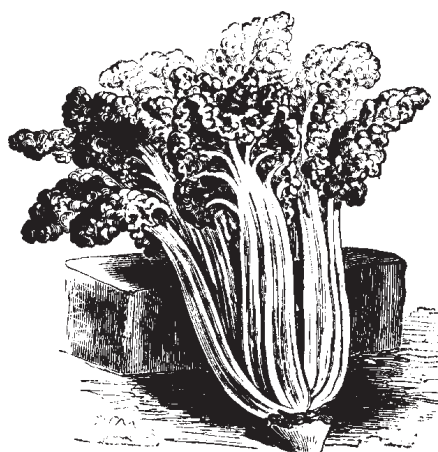
PLANT & PEST ADVISORY

VEGETABLE CROPS EDITION \$1.50

OCTOBER 8, 1997

Vegetable Crops Diseases

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



INSIDE

Vegetable Crops Diseases	1
Pest Notes	2
IPM Update	2
'97-98 NJ Farm Management Program	3
Conservation Reserve Program	3

✓ **General:** Keep records of cropping history in fields. In 1998, be sure to produce crops in different fields from those produced in 1997 (crop rotation). Fields not rotated away from the previous year's crop will experience greater disease pressure in 1998. Improve poor drainage areas in fields during the winter months. This will help to prevent water from accumulating in fields in 1998, and thereby reduce conditions favorable for the development of **Phytophthora blight**. In fields where **nematode** damage was suspected, collect soil samples in the fall and have the samples assayed at the Plant Diagnostic Laboratory in New Brunswick. Fall is the best time to collect soil samples because **nematodes** are at their peak populations. For fields with high **nematode populations**, apply a fall soil fumigation; or if time permits, fumigate next spring prior to planting.

✓ **Asparagus:** After the brush has died off this winter, be sure to mow off and disc into the soil thoroughly. This will destroy overwintering inoculum of the pathogen that causes **purple spot**. The disease causes elliptical purple lesions on spears during wet periods in the harvest season. There is no control of the disease during the growing season.

✓ **Cole Crops:** **Downy mildew** is present in some fields at this time. Infected plants have irregularly shaped lesions on the lower leaves. The underside of the lesions is covered with white sporulation of the fungus. Apply Ridomil/Bravo or Aliette every 14 days for control. For fields where cole crops will be grown in 1998, be sure to raise the pH to 7.0 or above this fall in order to reduce the incidence of **clubroot** during the 1998 growing season.

✓ **Lettuce:** Fall is a good time to fumigate greenhouses that will be used for transplant production. Use of metham sodium (formerly known as Vapam) applied through the irrigation system is an effective method. Be sure all plant debris is removed from the soil or thoroughly incorporated. Prewet soil to field capacity. Apply the proper amount of metham sodium through the irrigation system the entire irrigation period (apply 1 inch of water). Keep greenhouse closed until time of seeding in order to prevent debris from blowing in and contaminating the greenhouse.

✓ **Pepper:** After the harvest season, be sure to completely disc pepper plants into the soil in order to destroy any bacteria present on the plants that cause **bacterial leaf spot**. Allowing pepper plants to remain above ground during the winter enables the bacteria to survive, and they will infect the crop next season. During the winter months,

SEE DISEASES ON PAGE 2

Pest Notes

Gerald M. Ghidui, Ph.D. Vegetable Entomology

✓ **Cabbage:** Cabbage looper and imported cabbageworm populations are high in areas throughout southern New Jersey, while diamondback moth larvae counts are low. Monitor the crop closely to determine infestation level, and treat with an insecticide if cabbage has more than 20% of the heads infested with any species of worm (including diamondback moth larvae) before heading. After heading, treat if 5% of the heads are infested with any of the worms. Most other states report that successful management of the worms has been obtained with rotational applications of a *Bt* followed by a pyrethroid. For diamondback moth, the most effective *Bt* has been reported to be Javelin or XenTari, although several new *Bt*'s are now available that are also likely to be effective. The *Bt*'s will be most effective if applied early in the morning. The warm weather allows the worms to actively feed during the day, thus picking up the *Bt* toxin as they feed. Also, the worms will likely move to the outer edges of the leaves during the warm weather, where they will contact more of the *Bt*.

During this warm weather you should monitor your crop closely for aphid population explosions. Aphid outbreaks frequently occur when a period of cold weather is followed by warm weather, and especially so if several applications of pyrethroids were recently applied. Effective control of cabbage aphids can be obtained using Metasystox-R, Monitor, Orthene, or Provado.

Thorough coverage is important, and the addition of a spreader-sticker to the tank will improve control of insects in the cole crops.

✓ **Lettuce:** Corn earworm adults are still being caught in the black light traps. Adult activity will likely be above normal for this time of the year because of the unusually warm weather (well above 80 degrees). Head lettuce younger than the 18-leaf stage and leaf lettuces are susceptible to attack from corn earworm. Effective control can be obtained with Ammo, Fury, Larvin, Mustang, Pounce, Ambush, or Warrior. Consult label for all rates and restrictions. Thorough coverage is necessary for effective control. □

Vegetable IPM Update

Kristian E. Holmstrom, Vegetable IPM Program Associate and Sally Walker, Vegetable IPM Program Associate

◆ Pepper

Moderate levels of fall armyworm (FAW) adults continue to be caught in pheromone traps in Cumberland and Atlantic Counties. Small and large FAW larvae were found in pepper fruit from both of these counties.

Continue to check fields for aphids. A good indication of a heavy population is the presence of sticky, shiny honeydew residue on the plant and on the plastic mulch.

◆ Sweet Corn

Due to the warmer weather, adult corn earworm (CEW) counts remain at moderate levels in the southern counties. Silking corn may still be infested if warm weather persists.

The highest nightly CEW blacklight trap catches are as follows:

Cedarville	4	New Egypt	4	Hammonton	2
Elmer	4	E. Vineland	3	Hancock's Bridge	2
Jamesburg	4	Ellisdale	2	Rosenhayn	2
Medford	4	Farmingdale	2	Shiloh	2

European corn borer (ECB) adult counts remain very low to non-existent in most areas of the state.

The highest nightly ECB blacklight trap catches are as follows:

Blairstown	1	Ellisdale	1	Lawrenceville	1
Cedarville	1	Elmer	1	Long Valley	1
Chapel Hghts	1	Farmingdale	1	Medford	1
Cranbury	1	Hancock's Brdg	1	Sergeantsville	1

◆ General Sweet Corn Spray Schedule

Silking stage:	North	4 - 5 days*
	Central	3 days*
	South	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. □

DISEASES FROM PAGE 1

perform grading operations to improve field drainage in fields where peppers will be produced in 1998. This will prevent conditions (poor drainage) favorable for the development of **Phytophthora blight** from occurring in 1998.

✓ **Spinach:** Observe fields for the presence of **white rust**. Once observed in young fields, apply Kocide LF as a foliar spray and repeat every 7 days. In fields closer to harvest, apply Aliette as a foliar spray.

✓ **Tomato:** When removing stakes from fresh market fields, be sure to remove as much soil and plant debris as possible. This will reduce the amount of **bacterial canker** pathogen that will survive on the stakes. Also, when dipping stakes in chlorine or fumigating with methyl bromide in the spring next year, the less soil and plant debris present the more effective job of sterilization will occur. Be sure to completely disc tomatoes into the soil after the harvest season to destroy fungal and bacterial pathogens. Leaving the plant debris on the soil surface enables these pathogens to survive, and they will infect tomatoes next season. □

1997-98 New Jersey Farm Management Program

Frances E. Adelaja, Program Associate in Farm Management

Following is the '97 - 98 schedule continued from last week.

Event Date: January 16, 1998
Event Time: 1:00 p.m. to 4:00 p.m.
Event Title: Creating a Home Page for Your Business
Event Location: Loree Building, Microcomputer Lab, Cook Campus, New Brunswick, NJ
Contact: Joan Sorensen (732) 932-0100

Event Date: January 20, 1998
Event Time: 9:30 a.m. to 12:30 p.m.
Event Title: Positioning Your Greenhouse Business for the Future
Event Location: Somerset County Extension Office, Bridgewater, NJ
Contact: Joan Sorensen (732) 932-0100

Event Date: January 22, 1998
Event Time: 1:30 p.m. to 4:30 p.m.
Event Title: Farm Recordkeeping Options: Making Them Work for You
Event Location: Trump Taj Mahal, Atlantic City, NJ
Contact: Joan Sorensen (732) 932-0100

Event Date: February 9, 1998
Event Time: 6:00 P.M. to 9:00 p.m.
Event Title: All in the Family: Business Issues for Farm Families
Event Location: Labor Education Center, Cook Campus, New Brunswick, NJ
Contact: Joan Sorensen (732) 932-0100

Event Date: February 11, 1998
Event Time: 10:00 a.m. to 3:00 p.m.
Event Title: Getting the Most from Your Employees
Event Location: Labor Education Center, Cook Campus, New Brunswick, NJ
Contact: Joan Sorensen (732) 932-0100

Event Date: February 16, 1998
Event Time: :00 P.M. to 9:00 p.m.
Event Title: How to Invest in Mutual Funds for Financial Independence
Event Location: Labor Education Center, Cook Campus, New Brunswick, NJ
Contact: Joan Sorensen (732) 932-0100

Event Date: February 19, 1998
Event Time: 9:00 a.m. to 1:00 p.m.
Event Title: 1997 Tax Law Update for Estate, Business, Retirement, and Family Succession Planning
Event Location: Rutgers University Snyder Research Farm, Pittstown, NJ
Contact: Joan Sorensen (732) 932-0100

Event Date: February 23, 1998
Event Time: 6:00 P.M. to 9:00 p.m.
Event Title: Investing for Income: How to Select Fixed and Variable Income Securities and Preserve Capital
Event Location: Labor Education Center, Cook Campus, New Brunswick, NJ
Contact: Joan Sorensen (732) 932-0100

Event Date: February 24, 1998
Event Time: 7:00 P.M. -10:00 p.m.
Event Title: Dealing with State and Federal Labor Regulations
Event Location: Gloucester County Extension Office, Clayton, NJ
Contact: Joan Sorensen (732) 932-0100

Event Date: March 3, 1998
Event Time: 7:00 P.M. -10:00 p.m.
Event Title: Dealing with State and Federal Labor Regulations
Event Location: Atlantic County Extension Office, Mays Landing, NJ
Contact: Joan Sorensen (732) 932-0100

Event Date: March 10, 1998
Event Time: 7:00 P.M. -10:00 p.m.
Event Title: Dealing with State and Federal Labor Regulations
Event Location: Cumberland County Extension Office, Millville, NJ
Contact: Joan Sorensen (732) 932-0100

Event Date: March 18, 1998 Event
Time: 8:00 A.M.-11:00 a.m.
Event Title: Dealing with State and Federal Labor Regulations
Event Location: Burlington County Extension Office, Mt. Holly, NJ
Contact: Joan Sorensen (732) 932-0100

Event Date: To be determined
Event Time: To be determined
Event Title: Dealing with State and Federal Labor Regulations
Event Location: Morris County, NJ
Contact: Joan Sorensen (732) 932-0100

Event Date: March 2, 1998
Event Time: 6:00 P.M. to 9:00 p.m.
Event Title: Developing a Business Plan for Your Farm

Event Location: Cook Campus Center, Cook Campus, New Brunswick, NJ
Contact: Joan Sorensen (732) 932-0100

Event Date: March 9, 1998
Event Time: 6:00 P.M. to 9:00 P.M.
Event Title: Production Recordkeeping and Cost Analysis
Event Location: Cook Campus Center, Cook Campus, New Brunswick, NJ
Contact: Joan Sorensen (732) 932-0100

Conservation Reserve Program

The Conservation Reserve Program (CRP) Sign-up 16 will run October 14, 1997 through November 14, 1997. Under CRP, owners or operators receive a rental payment and up to 50% cost share assistance in return for converting environmentally sensitive acreage to desirable environmental practices. Operators or owners of eligible cropland and those with expiring CRP contracts may apply to participate in this program. Rental rates are based on soil type. The term of the contract is for 10 to 15 years. Planting permanent vegetative cover on highly erodible land and environmentally sensitive land can improve water and air quality as well as benefiting many species of wildlife. For further information, please telephone your local Natural Resources Conservation Service (NRCS) or Farm Service Agency (FSA) office. □

Editor's Note: This is the last issue of the Vegetable Crops edition of the Plant & Pest Advisory for the '97 season. Thank you for subscribing.

Rutgers Cooperative Extension - NJAES
U.S. DEPARTMENT OF AGRICULTURE
Rutgers - The State University of New Jersey
P.O. Box 231
Cook College
New Brunswick, N.J. 08903-0231

PLANT & PEST ADVISORY

VEGETABLE CROPS EDITION CONTRIBUTORS

Rutgers Cooperative Extension Specialists

Joseph A. Fiola, Ph.D., Small Fruit & Viticulture
Stephen A. Garrison, Ph.D. Vegetable Crops
Gerald M. Ghidui, Ph.D. Vegetable Entomology
Joseph R. Heckman, Ph.D., Soil Fertility
Stephen A. Johnston, Ph.D. Plant Pathology
Bradley A. Majek, Ph.D. Weed Science
Craig A. Storlie, Ph.D. Agricultural Engineering
Rutgers Cooperative Extension County Agricultural Agents
and Program Associates

Atlantic, Richard W. VanVranken (609-625-0056)
Burlington, Raymond J. Samulis (609-265-5050)
Cape May, Larry E. Newbold (609-465-5115)
Cumberland, Wesley Kline, Ph.D. (609-451-2800)
Gloucester, Michelle Infante (609-863-0110)
Hunterdon, Winfred P. Cowgill, Jr. (908-788-1338)
Mercer, Daniel Kluchinski (609-989-6830)
Middlesex, William T. Hlubik (908-745-3443)
Monmouth, Richard G. Obal (908-431-7260)
Morris, Peter J. Nitzsche (201-285-8300)
Salem, Peter R. Probasco (609-769-0090)
Somerset, Clare S. Liptak (908-526-6293)
Warren, William H. Tietjen (908-475-6505)
Kristian E. Holmstrom, IPM Program Associate
Sarah Walker, IPM Program Associate
Newsletter Production
Jack Rabin, Assistant Director, NJAES
Cindy Rovins, Editor and Designer

Rutgers Cooperative Extension provides information and educational services to all people without regard to sex, race, color, national origin, disability or handicap or age. Rutgers Cooperative Extension is an Equal Opportunity Employer.

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.