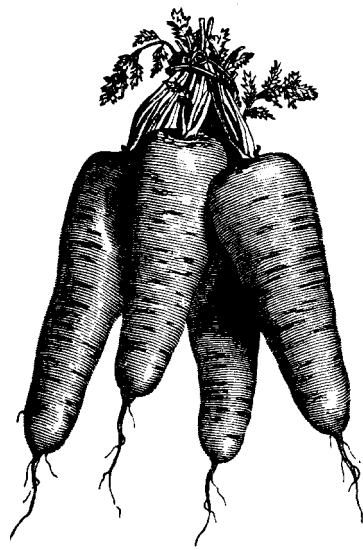


# PLANT & PEST ADVISORY

VEGETABLE CROPS EDITION \$1.50

MAY 2, 2007



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## Pest Notes

*Gerald M. Ghidui, Ph.D., Specialist in Vegetable Entomology*

✓ **Asparagus:** Spears have been emerging, and this current warm weather has been bringing out the **asparagus beetles**. Adults will feed on the spears as well as deposit eggs directly on the emerging spears. Treatment is recommended if >2% of the spears have eggs, or if >5% of the plants are infested with beetles. Effective materials labeled for beetle control on asparagus include Lannate, Lorsban, and permethrin. Malathion is also labeled, but effectiveness is not known. SpinTor (or Entrust for organic growers) is labeled for beetles but as a post-harvest spray only.

✓ **Cabbage: Cabbage maggot flies** are active and will deposit eggs at the base of cabbage transplants and other cole crops. The only materials currently labeled for cabbage maggot on cole crops include either Lorsban as a banded treatment for direct seeded crops (or as a spray directed at the base of the plant for radishes), or diazinon as a pre-plant incorporation or as a transplant water treatment. Diazinon can still be used according to the label, and the directions vary for different crops – be sure to follow all label directions and restrictions.

✓ **Carrot: Carrot weevils** have been emerging in carrot and parsley fields (emergence commences when soil temperatures reach 60 degrees F), and will begin ovipositing when the degree day accumulation reaches 300 DD (we have reached that point already). Oviposition will occur *only* if the plant reaches a 4-true leaf stage as smaller plants are too tiny for larvae to tunnel into. Oviposition also will continue until the Degree day accumulation reaches about 850 (base 45). In carrots, directed sprays of Asana or Baythroid are effective against adult weevils. Vydate is also labeled, but is effective when eggs are hatching. Use a pyrethroid for the adults before oviposition occurs, and use Vydate during the 4-6 leaf stage if oviposition has occurred, or if egg scars are observed. Apply pyrethroids at this time, and in mid-May switch to Vydate directed at the base of the plant (apply 2-3 applications 2-3 weeks apart). In parsley, a Special Local Needs label is still in effect for the use of Guthion. The applicator *must* have a copy of this label in his/her possession at time of application.

✓ **Corn (sweet):** In areas where **seed maggots** and/or **flea beetles** have been a problem, consider using a seed treatment or resistant varieties. For susceptible varieties, use either Poncho 600, Cruiser or Gaucho 480 for excellent control of flea beetles and seed maggots. Also, Lorsban SL is available for control of seed maggot and is very effective.

SEE PEST NOTES ON PAGE 2

Several hopper box treatments are available, including Concur and Latitude and diazinon. Options for in-furrow treatments include Force, Fortress, Furadan, and Counter or Lorsban for maggot only. See pages F108-F109 of the Commercial Vegetable Production Recommendations for NJ for a complete listing of materials for maggot, wireworm and flea beetle control using at-plant, hopper box or seed treatment applications.

✓ **Cucurbits:** Growers that have had problems with seed maggots in cucurbits in the past should consider using either pre-treated seed for maggot protection, or using an at-plant application of insecticide such as diazinon or Lorsban. Daytime temperatures are now reaching into the 70's or higher and evening temperatures remain relatively low, which are ideal 'working' temperatures for **maggot flies**. Once seeds are attacked or damaged, rescue treatments are not an option and nothing short of replanting can be done.

✓ **Onions: Onion maggots** start emerging about this time in New Jersey. Adults begin emerging early May, and peak flight is about mid-May. Use either a seed treatment or a directed spray of chlorpyrifos for maggot control. Application of insecticides must be accurate – if misplaced, maggot damage will occur. Research has shown that if sprays are off by more than ¼", control will decrease. Chlorpyrifos is relatively insoluble and thus stable even after spring rain showers, indicating that it will likely still be effective through the growth of the seedling. □

## Insect Monitoring

*Kristian Holmstrom, Research Project Coordinator II, Vegetable IPM Program*

The Rutgers Cooperative Extension Vegetable IPM Program's blacklight trap network is currently being deployed for the 2007 growing season. As catches of **European corn borer (ECB)** and **corn earworm (CEW)** are made, trap numbers will be published. As catches increase, weekly population maps of those pests will appear in this publication and on the web at <http://www.pestmanagement.rutgers.edu/IPM/Vegetable/Pest%20Maps/maparchive.htm>. In July, **beet armyworm (BAW)** population maps will be included for the southern counties of New Jersey.

### Cole Crops

**Crucifer flea beetles** have been active in cole crop plantings (direct seeded and transplanted) throughout the state on warm, sunny days. This pest is capable of causing significant damage to young plants, and plantings should be monitored weekly. Consider treating if flea beetles are found on greater than 50% of plants in a 50 plant sample, and damage is occurring. Check 5 consecutive plants each in 10 random locations in the field. Count the number of plants with flea beetles present. Also note the presence of injury (marginal feeding as well as holes in the interior of leaves). □

## New Jersey Pesticide Container Recycling for 2007

The New Jersey Department of Agriculture, in partnership with the Cumberland County Improvement Authority, will continue to offer free recycling of empty plastic pesticide containers on specific collection dates in 2007. The collection program will be held at the Cumberland County Solid Waste Complex in the Township of Deerfield. This is a *free* program and will save pesticide license holders in excess of \$61/ton in landfill tipping fees.

Non-refillable, high-density polyethylene # 2 (HDPE #2) containers used by agricultural, professional and commercial pesticide applicators will be accepted at the collection sites. Containers must be no larger than 55 gallons and properly rinsed.

The program is open to anyone who holds a New Jersey Department of Environmental Protection pesticide license and to state, county and municipal government agencies. Participants must follow the processing guide or material will be rejected.

One core credit will be issued to pesticide

license holders who participate in the program. To receive credit, participants must bring their pesticide license to the collection site and must follow the processing steps.

If growers have plastic pails, bulb crates, or other plastics that are HDPE #2, contact the NJDA to determine if they are suitable for the recycling program and can be brought to the collection site.

The vehicles used to transport the pesticide containers to be recycled are not required to be licensed by DEP so long as the material is transported directly to the Solid Waste Complex.

Many of the pesticide containers arrive at the farm in cardboard boxes. Growers who wish to recycle the cardboard should flatten the cardboard boxes and bring them to the Solid Waste Complex and deposit them in the cardboard collection container located at the convenient center.

If you have any questions or need more details on the plastic pesticide container-recycling program, contact Karen Kritz, Recycling Program Manager, NJ Department of Agriculture, at (609) 984-2506.

SEE COLLECTION SCHEDULE ON PAGE 5

# Vegetable Disease Update

Andy Wyenandt, Ph.D., Specialist in Vegetable Pathology and Wesley Kline, Ph.D., Cumberland County Agricultural Agent

## ✓ Asparagus – Phytophthora crown and spear rot

– In fields with low spots (poorly drained soils) or fields with a history of crown and/or spear rot apply Ridomil Gold 4E (mefenoxam, 4) at 1 pt/A over beds just before 1<sup>st</sup> harvest. For new plantings, apply the same after planting or after crown covering. For more information please see 2007 New Jersey Commercial Vegetable Production Recommendations Guide.

## ✓ Cabbage – White mold, Bottom rot and Soft rot-

Unfortunately, little can be done to correct the problem in maturing plantings. White mold and bottom rot will cause mature outer leaves to wilt, brown out and die. White mold will produce thick, fuzzy white growth on the stem. Black fruiting bodies are produced and easily distinguishable in the fuzzy, white growth. Bottom rot will cause grayish, black lesions on the base of the mature leaves and extend upward. Greyish, brown mycelium will often be seen on these lesions when leaves are pulled apart. Soft rot will cause cabbage leaves to disintegrate quite rapidly. Leaves often look greasy and wet at first and eventually infected tissue dissolves away creating holes. Crop rotation is the best method to controlling these diseases. However, cultural practices such as avoiding late season cultivation which may cause wounding of leaves and throwing soil onto the cabbage plant may help. For more information please 2007 New Jersey Commercial Vegetable Production Recommendations Guide.

✓ Collard/Turnip – Peppery leaf spot - Symptoms of Peppery leaf spot include water-soaked spots that turn purplish-brown surrounded by yellow 'halos'. These lesions can be up to 1/8 inch and can join together turning leaves yellow can causing them to drop off. The pathogen can survive in the soil and on debris from previous crops. During cool, wet periods, the disease can become severe and be spread by splashing rain. Best management practices for control include i) start with clean seed ii) plant in clean beds and iii) use proper crop rotation of one year or more. If Peppery leaf spot has been a problem in the past, beds should be sterilized prior to planting.

✓ Lettuce – Bottom Rot/Drop – Reports of lettuce drop have increased this past week, growers should take precautions to help control Bottom rot (*Rhizoctonia*) and Lettuce drop (*Sclerotinia*) which may cause potential problems. For Bottom Rot, Endura 70W (boscalid, Group 7) at 8 to 11 oz/A, or Rovral 50WP (iprodione, 2) at 1.5 to 2 lb/A or OLF should be applied one week after transplanting or thinning and 10 and 20 days later. For Lettuce drop, the biological Contans

5.3WG at 2 to 4 lbs/A pre-plant can be incorporated at a depth of 1 to 2 inches; or apply Rovral (iprodione, 2) at 1.5 to 2 lb/A 50WP or Endura (boscalid, 7) at 8 to 11 oz 70W/A beginning one week after transplanting or thinning and again at 10 and 20 days later. For more information on control of Bottom rot and Lettuce drop and other important diseases of lettuce please see the 2007 New Jersey Commercial Vegetable Production Recommendations Guide.

✓ Strawberry – Anthracnose fruit rot -Strawberry anthracnose can be extremely destructive during warm, wet weather causing significant fruit rot. Symptoms of Anthracnose include blackish-brown circular spots on maturing green fruit and soft, sunken (flat) circular lesions on ripe fruit. On ripe fruit, lesions can expand rapidly and are often covered with a pinkish-orange spore mass. Spores are spread from infected to healthy fruit with splashing water. Control of Anthracnose always begins with a 7 to 10 day preventative spray program no later than 10% bloom and/or prior to disease development. For control apply the following combinations:

- #1) captan (M3) at 4 lb 50WP/A plus Pristine (pyraclostrobin + boscalid, 11 + ) at 18.5 to 23.0 oz 38WG/A
- #2) captan 5(M3) at 4 lb 50WP/A plus Abound (azoxystrobin, 11) at 6.2 to 15.4 oz 2.08F/A, or Cabrio (pyraclostrobin, 11) at 12 to 14 oz 20EG/A
- #3) Captevate (captan + fenhexamid, M3 + 17) at 3.5 to 5.25 lb 68WDG/A

For subsequent applications, alternate:

- captan (M3) at 4 lb 50WP/A plus Abound (azoxystrobin, 11) at 6.2 to 15.4 oz 2.08F/A, or  
Cabrio (pyraclostrobin, 11) at 12 to 14 oz 20EG/A with captan (M3) at 4 lb 50WP/A, or  
Captevate (captan + fenhexamid, M3 + 17) at 3.5 to 5.25 lb 68WDG/A

To help manage fungicide resistance development, do not make more than 2 consecutive applications of either Pristine (pyraclostrobin + boscalid, 11 + 7), Cabrio (pyraclostrobin, 11) or Abound/Quadris (azoxystrobin, 11) before switching to another fungicide chemistry.

✓ Strawberry – Botrytis (Gray Mold) and Blossom blight – can cause serious losses in strawberry plantings if not controlled properly. Development is favored by moderate temperatures (59 to 77°F) with prolonged periods of high relative humidity and surface wetness. Control of Gray mold begins with preventative fungicide applications. Apply at 5 to 10 percent bloom and every 10 days until harvest. During periods of excessive moisture, spray intervals of 5 to 7 days may be necessary. Rotate fungicide chemistries to aid fungicide resistance management.

Application #1: captan (M3) at 4 lb 50WP/A plus Topsin M (thiophanate-methyl, 1) at 1 lb 70WP/A or Switch (cypridonil, 9) at 11-14 oz. 62.5WG/A

SEE DISEASE UPDATE ON PAGE 4

Application #2; Elevate (fenhexamid, 17 - See restrictions) at 1.1 to 1.5 lb 50WDG/A, or Pristine (pyraclostrobin + boscalid, 11 + 7) at 18.5 to 23 oz 38 WG/A

Application #3: captan (M3) at 4 lb 50WP/A plus Topsin M (thiophanate-methyl, 1) at 1 lb 70WP or Switch (cypridonil, 9) at 11 to 14 oz. 62.5WG/A

For subsequent applications, alternate:

Captan (M3) at 4 lb 50WP/A, or Captivate (captan + fenhexamid, M3 + 17) at 3.5 to 5.25 lb 68WDG/A, or Switch (cypridonil, 9) at 11 to 14 oz. 62.5WG/A or Pristine (pyraclostrobin + boscalid, 11 + 7) at 18.5 to 23 oz 38 WG/A, or Thiram (M3) at 4 to 5 lb 65WSB/A

✓ **Tomato – Bacterial spot and speck**

– Both bacterial diseases can cause serious problems in the field if infections begin in the greenhouse prior to transplanting. Symptoms of spot and speck look very similar on infected leaves. Lesions are small, circular, blackish-brown and with time develop a halo, or yellowing of tissue surrounding the lesion. As lesions develop they can coalesce (join together) and can cause premature death. Since sources for these diseases include seed, weed hosts, volunteer plants and contaminated wood (benches) make sure production or holding areas are disinfested, weed-free and clean prior to introducing transplants. Inspect all seedlings prior to transplanting. Infections can occur on all parts of the tomato plant and can easily be spread during transplant production and transplanting with contaminated equipment and workers' hands. Tomato plants with suspected symptoms can be treated with streptomycin (Agri-Mycin 17, Agri-Strep, 25) at 1 lb/100 gallons, or 1.25 teaspoon per gallon prior to transplanting every 4 to 5 days. After transplanting apply Actigard at 0.33 oz 50 WG/A, or fixed copper (M1) at 1 lb a.i./A plus a mancozeb (Dithane, Manex II, Manzate, Penncozeb, M3) at 1.5 lb 75DF or OLF, or ManKocide (M1 + M3) at 2.5 to 5.0 lb 61WP/A, or Cuprofix MZ (M1 + M3) at 1.75 to 7.25 lb 52.5DF/A on a 7 day schedule. □

## Vegetable Disease Briefs

Andy Wyenandt, Ph.D., Specialist in Vegetable Pathology

### Are you and your fields prepared for Phytophthora blight?

Do you have areas in your fields which favor Phytophthora blight development? Such as low, poorly or slowly drained areas? Has water pooled in rows after the first extensive rainfall of the summer season? Were tomatoes, eggplant, or cucurbit crops grown in the same field last year? Now is the time to answer some of these basic questions. Poorly drained soil or soils that pool water for extended periods after rainfall are extremely conducive for Phytophthora blight development. These areas should be avoided at all costs, especially if Phytophthora has been a problem in the same field in the past or a susceptible crop was planted in the field last year. Take adequate measures to make sure any excess rainfall does not pool, especially at the ends of rows either on bare ground or between black plastic mulch. Dig diversion ditches to allow excess water to run-off and away from the field. Along with appropriate fungicide applications at planting (i.e. mefenoxam, etc.) fields should be scouted regularly and poorly drained areas should be noted. Any infected plants should be removed from the field. Removing infected plants early, although time consuming, may help to remove an early-season source of inoculum, thus helping reduce the chances for further crown, stem and/or fruit rot development later in the growing season. Besides avoiding poorly drained areas and removing sources of inoculum, cultural practices such as removing plastic mulch in low and poorly drained soils before symptoms of Phytophthora appear may help to keep the soil dry and keep water from pooling.

Taking preventative precautions is extremely important when it comes to controlling a disease such as Phytophthora blight, any measures which can be done to reduce the chances of it developing should be taken.

### Tomato and Potato Disease Forecasting Reports for 2007

Tomato and Potato Disease Forecasting Reports will start the 1<sup>st</sup> week of May. The Tomato Report will track DSV accumulation for the timely control of Early blight, Septoria leaf spot and Anthracnose fruit rot. The Potato Report will track DSV accumulation and conditions favorable for Late blight and Early blight development. *If you received 2006 reports, you are already on our list to receive reports in 2007!* Anyone interested in receiving these weekly reports either by FAX or email should contact Andy Wyenandt at (856) 455-3100 ext. 4144 or by email at wyenandt@aesop.rutgers.edu. □

# The Internet as a Marketing Tool: A Case for Continuous Change

*Jhilson Ortiz, Senior Program Coordinator - Agriculture*

DECIDING WHAT TO GROW AND WHERE TO SELL	CHECK
FINDING HOW MUCH CONSUMERS ARE WILLING TO PAY	CHECK
ESTABLISHING QUALITY PARAMETERS	CHECK
DEFINING SALES STRATEGIES	CHECK
PRIORITIZING TRANSPORTATION OPTIONS	CHECK
<i>FINDING ALL THIS INFORMATION WITHOUT SPENDING A FORTUNE HOW?</i>	

Mastering your production skills, taking care of the environment and obtaining a good product after harvest among others have become the signature for a good farmer. Farmer entrepreneurs go beyond that. They make sure their way of living is safe by obtaining the highest benefit from their business endeavors.

**How?** Finding the right information at the lowest cost possible.

One of these methods is the Internet. There are so many opportunities to receive continuous up to date information and research market information that would otherwise cost you lots of money.

Start by defining your "area of influence". Download the Google Earth program from:

<http://earth.google.com/download-earth.html>

Use the program to learn what communities are within your market capability area. Leave it open to map your competition when you find their address by searching them with Copernic, a web program that filters search engine content. It can be found at:

<http://www.copernic.com/en/products/agent/download.html>

Remember that you have to know what to look for. Only in that manner you get valuable information back. If you have a doubt about a town, you can get the population makeup from Yahoo Neighborhood Profiles at:

<http://realestate.yahoo.com/Neighborhoods; ylt=ArTiG38xOFpb.zd7q2x5FcmkF7kF>

This information will help you learn the income profile of any given community.

Remember that most information is given in a few sources; other details must be obtained thru conclusion and data gathering, such as combining information and resources from several business competitors to find out what products are competing on the market. Do not take everything you read for granted. Cross check the information obtained in different websites and person to person contacts. Many of the resources available on the internet have been placed there for a reason, often for the self interest reason of the publishing party.

And last but not least, keep your presence on the internet professional, and alive. Do not let your presence become obsolete, boring, out of touch. People are looking. ☐

COLLECTION SCHEDULE FROM PAGE 3

## 2007 Collection Schedule

**LOCATION:** Cumberland County  
Solid Waste Complex  
169 Jesse Bridge Road  
(located off Route 55, Exit 29)  
Deerfield, New Jersey

**TIME:** 9 a.m. to 12 Noon

**DATES:**

Friday, May 25 Friday September 28  
Friday, June 29 Friday October 26  
Friday, July 27 Friday November 16  
Friday, August 31

## New Jersey Pesticide Container Collection Program Guide

### Plastic Pesticide Container Processing Steps:

All pesticide containers must be either triple rinsed or pressure rinsed and drained;

1. All pesticide containers must be free of residue (other than stains);
2. Lids should be removed;
3. The MSDS booklet must be removed (it is not necessary to remove all of the paper labels glued to the container);
4. Only non-refillable pesticide containers will be accepted – drill a ¼-inch hole in the bottom of the container or with a utility knife make a 6-inch slit in the bottom of the container so the container will not hold liquids;
5. Only pesticide containers embossed with HDPE and the recycling #2 will be accepted;
6. Pesticide containers up to 55 gallons in capacity will be accepted but we are asking that if all possible they be cut in half, quarters, or eighths. This can be accomplished using a sawzall, chainsaw, circular saw, or jigsaw; and
7. Pesticide containers must have originally held an EPA registered pesticide.

### Items That Will Not Be Accepted and Will be Returned to the Recipient:

1. Pesticide containers with dried formulation on the container, pour spout or the spout threads;

SEE NOT ACCEPTED ON PAGE 6

# Weekly Weather Summary

Keith Arnesen, Ph.D., Agricultural Meteorologist

Temperatures averaged much above normal, averaging 57 degrees north, 59 degrees central and 61 degrees south. Extremes were 88 degrees at Freehold on the 4th, and 39 degrees at Charlotteburg on the 26th. Weekly rainfall averaged 1.83 inches north, 1.50 inches central, and 0.52 inches south. The heaviest 24 hour total reported was 1.94 inches at Canoe Brook on the 26th to 27th. Estimated soil moisture, in percent of field capacity, this past week averaged 96 percent north, 88 percent central and 78 percent south. Four inch soil temperatures averaged 57 degrees north, 59 degrees central and 59 degrees south.

Weather Summary for the Week Ending 8 am Monday 4/30/ 7										
WEATHER STATIONS	RAINFALL			TEMPERATURE				GDD BASE50		MON %FC
	WEEK	TOTAL	DEP	MX	MN	AVG	DEP	TOT	DEP	
CANOE BROOK	2.80	17.87	9.30	84	42	58.	4	118	92	97
CHARLOTTEBURG	1.30	13.77	5.33	83	39	57.	5	94	89	96
FLEMINGTON	2.34	16.92	8.70	85	42	58.	4	112	82	99
NEWTON	.88	10.09	2.57	83	41	56.	3	78	66	96
FREEHOLD	1.40	13.14	5.01	88	44	62.	6	172	121	96
LONG BRANCH	1.58	12.82	4.41	79	45	58.	3	113	74	91
NEW BRUNSWICK	1.82	16.96	9.15	85	44	58.	2	129	61	97
TOMS RIVER	.65	10.82	2.59	87	44	59.	4	150	106	85
TRENTON	2.06	14.36	6.98	84	47	60.	3	155	71	92
CAPE MAY COURT HOUSE	.20	6.93	-.23	80	47	60.	4	141	72	70
DOWNSTOWN	.35	11.94	4.55	85	47	61.	3	180	91	73
GLASSBORO	1.11	10.77	2.99	84	47	61.	4	198	114	93
HAMMONTON	.41	11.12	3.56	85	46	61.	4	185	106	74
POMONA	.25	9.04	1.80	85	48	61.	5	172	117	69
SEABROOK	.81	11.65	5.07	85	48	63.	5	218	126	91
SOUTH HARRISON	1.04	13.29	6.23	83	47	62	NA	194	NA	NA
WES KLINE -- GDD BASE 40 PINEY HOLLOW										
LAST WEEK 69 (Ending 4/23/07)										
THIS WEEK 150 (Ending 4/30/07)										

NOT ACCEPTED FROM PAGE 5

2. Pesticide containers with any liquid residue;
3. Pesticide containers where the insides are caked with dried residue;
4. Mini-bulk, saddle tanks and nurse tanks, which can be made of fiberglass;
5. Pesticide containers with lids or lids by themselves;
6. Containers that held any type of petroleum oil product or anti freeze.

Any agricultural, professional and commercial applicator of crop protection and other pesticide products who generate very large quantities of agricultural crop protection containers can contact USAg Recycling ([www.usagrecycling.com](http://www.usagrecycling.com)) at 1- 800-654-3145 for direct service. USAg, an approved vendor of the Ag Container Recycling Council ([www.acrecycle.org](http://www.acrecycle.org)), will come to your site at no cost. □



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**Pesticide User Responsibility:** Use pesticides safely and follow instructions on labels. The pesticide user is responsible for proper use, storage and disposal, residues on crops, and damage caused by drift. For specific labels, special local-needs label 24(c) registration, or section 18 exemption, contact RCE in your County.

**Use of Trade Names:** No discrimination or endorsement is intended in the use of trade names in this publication. In some instances a compound may be sold under different trade names and may vary as to label clearances.

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