

PLANT & PEST ADVISORY

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Anthracnose on White Lady

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Anthracnose Rot on Peach

Norman Lalancette, Ph.D., Specialist in Tree Fruit Pathology

Anthrachnose disease on peach, plum and cherry, also some times referred to as **ripe rot**, has only occurred sporadically in New Jersey. The last significant infection in a commercial peach orchard was in 1998. However, several orchards, consisting of the cultivars White Lady, Klondike, Bounty and Harrow Beauty, have recently been observed to have a considerable amount of fruit infection.

Identification

Anthracnose of stone fruit is caused by the plant pathogenic fungi *Colletotrichum gloeosporioides* and *Colletotrichum acutatum*. These same two pathogens are known to cause bitter rot on apple and anthracnose fruit rot on blueberry; *C. gloeosporioides* also causes ripe rot on grape and anthracnose on pepper. The pathogens are also found on a wide variety of herbaceous plants, including many legumes.

On peach fruit, symptoms initially appear as small brown spots, often resembling brown rot. However, unlike brown rot, the circular lesions enlarge more slowly and become characteristically sunken. Older lesions are often found to have concentric rings covered with orange or salmon-colored masses of spores.

Disease Control

Adequate control of anthracnose on peach usually results when Captan 50W at 4 lb/A is applied during the cover sprays. The final cover sprays leading up to the first preharvest brown rot spray are particularly critical. However, frequent rains throughout this summer probably reduced the available residue of this fungicide, thereby decreasing the level of protection. Also, the practice of switching from captan to sulfur cover sprays most likely increased the risk of infection. Little information is available on the efficacy of sulfur on peach anthracnose. Nevertheless, since sulfur provides poor control of bitter rot on apple, good control of peach anthracnose is not likely.

Fruit susceptibility increases as the fruit ripens and infection is particularly favored by moist, warm (80-90°F) weather. Environmental conditions this summer have therefore favored anthracnose development. Thus, captan should be used at the above rate in combination with an SI fungicide (Elite, Indar, or Orbit) during the preharvest brown rot sprays if any of the following conditions are true: (1) the orchard has a past history of anthracnose; (2) the orchard is adjacent to an inoculum source (e.g., apple orchard, woods, previously harvested peach block

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with anthracnose); (3) weed control has been inadequate, particularly for legumes such as clover; (4) sulfur was used instead of captan for cover sprays; or (5) captan was applied during the cover sprays, but too infrequently relative to frequency of rainfalls (e.g. 14-day or longer interval).

Alternative Fungicide

Although captan can be applied up to the day of harvest, its 4-day re-entry interval is problematic during the harvest period. An excellent alternative is Abound 2F, which will also provide control of **brown rot**; Abound has a 0 day PHI and 4 hour REI. Given the high risk of brown rot this season, this fungicide should be used at the full 15 fl oz/A rate. However, given that Abound is highly phytotoxic to apples, only those growers who have only peaches should consider this fungicide (see label for precautions).

So, for those at-risk late cultivars that are beginning to ripen, what disease program would be best? The first and second preharvest applications should consist of an SI fungicide plus captan. Then, if apples are not being grown, the final spray just prior to harvest can be Abound. If apples are part of yours or a neighbor's operation, then the final spray will have to be the SI + captan mixture at 4-days prior to harvest. And, as always, follow pesticide labels.

A Note on Cultivar Susceptibility

No information is available on resistance of peach cultivars to anthracnose. So far, those cultivars that have been observed with anthracnose are those that have been ripening/recently harvested. Lack of anthracnose on other currently maturing cultivars does not necessarily indicate that they are resistant. Thus, without additional information on resistance, we should expect that later cultivars are just as likely to become infected, particularly if they meet the high risk categories mentioned above. □

Fruit IPM

Dean Polk, Fruit IPM Agent

Peach

✓ **Oriental Fruit Moth (OFM)**: The last of the third generation treatments should be applied at between 2500 to 2650DD. The last treatments are due in northern counties this week. Additional treatments for the fourth generation are not yet due in any county. Since the model still has to be refined for fourth generation timing, growers should plan on looking at both trap counts and degree day accumulations. For the remainder of the season, trap counts in excess of 5 to 8 moths per trap will justify treatment in unharvested blocks. At the present time we are seeing a number of blocks with trap counts that exceed 50 to 100+ per trap.

✓ **Tufted Apple Budmoth (TABM)**: Last week saw a surge in TABM trap captures and the presence of young 2nd instar larvae in harvested fruit. Insect pressure is highly variable from farm to farm, but is still concentrated in the southern part of the state. Growers who have a TABM problem can use Asana up to 14 days PHI. Spintor is also a good product for TABM control, and does not harm predators. Some farms experienced variable control with this product in 2002. This insect should be at about 50% egg hatch in southern counties (26% in central and 7% in northern counties). Treatments of conventional materials (non IGRs) will continue through this month and into the first week to 10 days of September. If using Intrepid (an IGR), then apply in full cover applications (2nd spray) from 8/21-24 in southern counties, and now and again on 8/27-30 in central counties. Growers in northern counties would not need the first treatment until 8/24-27. Some growers are using a strategy in southern problem areas of applying Asana, followed by Intrepid if between 14 to 7 days preharvest, and if close to the 8/21-24 timing bracket.

✓ **Anthraco**se: This disease is seen in some years when we experience periods of continued precipitation. We are seeing a number of blocks with anthracnose. Disease severity seems to be at least varietal in nature, since we have so far seen infections mostly on Harrow Beauty, Klondike, Bounty, and White Lady. The disease can be identified by the presence of numerous sunken lesions, often between 1/8 to 1/4" in diameter. The presence of concentric rings and a light tan to salmon colored sporulation will further identify the disease. While the disease will often infect fruit earlier, infections are still going on at this time. **A high rate of Abound is an option for control – see accompanying article and photo.**

Apple

✓ **Codling Moth (CM)**: CM pressure is variable from farm to farm. Since the timing for 2nd generation treatments is now over statewide, growers should target CM only if trap counts continue to exceed 5 moths per trap. Some blocks do have trap counts that exceed our threshold of 5 moths per trap (19% in southern counties).

✓ **Oriental Fruit Moth (OFM)**: OFM trap counts are increasing in many apple blocks. This can be **The Other Internal Worm** found after the fruit is harvested. Therefore, growers should treat this insect as if it were a regular key pest. Many of our trap sites show OFM captures as high as 91 moths per trap.

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- ✓ **Tufted Apple Budmoth** – See peach section.
- ✓ **Apple Maggot:** Counts have been low to non-existent this year, so this insect should not be a problem.
- ✓ **Black Rot and White Rot:** Some lesions are starting to show up on the fruit. Most of these are the visible start of black rot infections. Growers should maintain good summer disease programs, while being aware that Captan, Topsin, Thiram, and Sovran offer the best rot control.

Blueberry

- ✓ **Leafroller larvae:** Some leafroller larvae remain in the field, although activity is only in 3 or 4 fields, and larvae are being found in only 4% of samples. Older larvae are pupating. Over the past several weeks larvae have consisted of both redbanded and obliquebanded leafrollers.
- ✓ **Aphids:** Aphid levels exceed 10% infestation in 11% of samples. A higher percentage of samples are being taken in Elliott fields, so the reported levels may seem higher than last week.
- ✓ **Anthraxnose:** Some Bluecrop fields still have berries, some overdue for picking. Disease levels are higher in these fields, with 46% of overall samples showing anthracnose presence.

Insect Trap Captures

Tree Fruit – Southern Counties

Week End	LPTB	PTB	OFM	TABM-PAM	CM	DWB	OFM-A	STLM	TABM	
8/8	19	8	20	17	0	3	15	20	2588	17
8/15	31	18	23	19	0	3	0	35	2342	19

Tree Fruit – Northern Counties

Week End	LPTB	PTB	OFM	TABM-PAM	CM	DWB	OFM-A	STLM	TABM	
8/8	0	0	10.5	1.2	0	5.1	3.5	—	1112	0.7
8/15	1.2	0.7	11.2	2.3	0	3.1	2.0	—	1200	1.1

Blueberry – Atlantic County

Week End	CBFW	RBLR	SNLH	OB	BBM
8/8	0	2105	0.1	158	0.1
8/15	0	37	.01	20	0.1

Blueberry – Burlington County

Week End	CBFW	RBLR	SNLH	OB	BBM
8/8	0	0.2	0.1	99	0.1
8/15	0	2.1	0.2	19	0.2

Calendar of Events

August 20 – August 22, 2003 – North American Strawberry Growers Association Summer Tour, Park Inn & Suites, Brandywine Valley, PA and tours S. Jersey and S. PA. Contact: NASGA Business Office at 526 Brittany Drive, State College, PA 16803, phone: 814-238-3364, fax: 814-238-7051 or email: info@NASGA.org or www.NASGA.org.

September 3, 2003 – Fruit Variety Showcase, Rutgers Cooperative Extension of Gloucester County, Clayton, NJ. Contact: Jerome L. Frecon at 856-307-6450 ext 1.

NJ Pesticide Applicator Website

*Patricia Hastings, Program Associate,
Pest Management*

Not sure if you are in compliance with the new pesticide applicator regulations? Check out the Rutgers Cooperative Extension Pest Management Office 'Pesticide Applicator Training' web page at: www.pestmanagement.rutgers.edu/PAT. The purpose of these pages is to provide information and tools to meet the November 2001 licensing requirements for New Jersey commercial and private applicators. It is a good resource for those seeking a license for the first time, as well as those that wish to keep their certification and license current.

For licensed applicators, it offers the current schedule of recertification training courses in New Jersey. Further, there are links to easy-to-use templates for required pesticide application record forms. These templates incorporate all of the 'new' record-keeping requirements of the revised regulations. Remain in compliance with these easy-to-use tools. □

Midseason Peach Varieties

Jerome L. Frecon, Agricultural Agent

We have seen an abundance of peach varieties ripening just before, with, or behind Loring that are all better than Loring for skin color and some other characteristics. Fruit size has been exceptional on all varieties in this season. Bounty was the largest variety with Flamin Fury PF 17 a close second. This later variety was originally rated as too small the first time we fruited it in 1990 however, each year it continues to look larger and still retains the same attractive complete over color. Bounty was huge with fruit averaging 3 – 3 ½ inches. Flamin Fury PF 20-007, Flamin Fury PF 24-007, Fruit Acres 53, Fruit Acres 63, Coralstar, Flamin Fury PF Lucky 13 and Allstar were also large. The color on all fruit has been very good but the soluble solids on most are lower than normal. Flavor has still been good but very seldom have I had a sample above 11% SSC.

One peach that still concerns me is Flamin Fury PF 24-007 which we evaluated at three locations. This peach has not gotten the red color where the tree is heavily foliated, unlike many of the other Flamin Fury and Fruit Acres selections. Many growers have planted it and I would caution them to make sure they summer prune and keep the tree open for best color. Trees should be treated like a Loring.

There seems to be some confusion about Allstar and Coralstar. According to information from International Plant Management all of the nurseries catalog Coralstar (FA 59) about 4 days before Allstar (FA 80). I have consistently found this to be accurate in our variety tests. Some growers are picking Allstar before Coralstar, which I do not understand.

We have a large number of selections from both the Fruit Acres and Paul Friday programs, and it is difficult to select the best because they have all had exceptional color, firmness and good size. Maybe there are one or two like Paul Friday 18B that are almost oblate. We have also seen some nice firm, highly colored selections from the USDA Byron program and the NJAES program of Dr. Joe Goffreda. NJK32-118 has really been a beautiful peach in this midseason; almost as pretty as Julyflame which is probably the prettiest peach that we have evaluated in midseason. Both have beautiful bright orange undercolor. The NJ selections will crop regularly and have tolerance to **bacterial spot**, something that will not occur with a peach like Julyflame. Other midseasons with unusual characteristics include a stony hard yellow fleshed freestone flat peach from the NJAES program and other white and yellow fleshed freestone flat peaches from the USDA Byron program.

Most of these varieties and many more will be discussed and on display at our Fruit Variety Showcase on September 3, 2003. Details are available at <http://gloucester.rce.rutgers.edu>. □

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MILLTOWN, NJ 08850

PLANT & PEST ADVISORY FRUIT EDITION - CONTRIBUTORS

Rutgers Cooperative Extension Specialists

Robert Belding, Ph.D., Pomology

George Hamilton, Ph.D., Pest Management

Norman Lalancette, Ph.D., Plant Pathology

Sridhar Polavarapu, Ph.D., Entomology

Peter W. Shearer, Ph.D., Entomology

NJAES/Cook College

Joseph Goffreda, Ph.D., Breeding

Rutgers Cooperative Extension Agricultural Agents and Program Associates

Atlantic County, Gary C. Pavlis, Ph.D. (609-625-0056)

Gloucester County, Jerome L. Frecon (856-307-6450)

Hunterdon County, Winfred P. Cowgill, Jr. (908-788-1338)

Morris County, Peter J. Nitzsche (973-285-8300)

Warren County, William H. Tietjen (908-475-6505)

Fruit IPM, Dean Polk (609-758-7311)

Meredith Compton, Program Associate (908-788-1338)

Gene Rizio, Program Associate (856-566-2900)

David Schmitt, Program Associate (856-307-6450)

NJAES Sustainable Agriculture Coordinator

Olga Wickerhauser

Newsletter Production

Jack Rabin, Associate Director for Farm Services, NJAES

Cindy Rovins, Crop Management Communications Editor

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Rutgers Cooperative Extension - NJAES
U.S. DEPARTMENT OF AGRICULTURE
Rutgers - The State University of New Jersey
Plant & Pest Advisory
18 College Farm Road
Cook College
New Brunswick, N.J. 08901-8551

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