

# PLANT & PEST ADVISORY

LANDSCAPE, NURSERY & TURF EDITION \$1.50

JUNE 24, 2004



Source: Ohio State University Extension

## Black Spot of Rose

Ann B. Gould, Ph.D., Specialist in Plant Pathology

As a plant pathologist, I most commonly look at plant material from the "disease" perspective (the more the better!). Recently, however, my family is spending more time gardening, and I'm less enthusiastic about the diseases we encounter from time to time, although recognizing them is still fun.

Outdoor roses (of which we have a few) are most commonly affected by a disease known as **black spot**, caused by the fungus *Marssonina rosae* (*Diplocarpon rosae*). This disease occurs worldwide and was first reported in the northeast about 1830. Although not normally seen in greenhouses, black spot can cause damage all season long in temperate climates where leaf tissue remains wet for extended periods.

Black spot is most troublesome early in the growing season. In the spring, fungal spores are produced and disseminated from lesions on canes and leaves infected the previous year. These spores infect young leaves (6- to 14-days old) when a 7-hour period of continuous leaf wetness occurs. Disease development is greatest at temperatures of 75 to 85°F with greater than 85% relative humidity. Symptoms appear as black leaf spots (0.1 to 0.5 inch) on the upper leaf surface within 3 to 16 days following infection. These spots have feathery edges and are accompanied by yellow "halos" of leaf tissue. Spores produced in these spots continue to infect newly expanding leaves and canes throughout the summer. Black spots may also form on the lower leaf surface about a month following infection. On first-year canes, irregular, raised, red-purple blotches appear that become blackened and blistered.

*Marssonina* produces a toxin that causes affected leaves to turn yellow and defoliate prematurely. Indeed, heavily infected plants lose much of their carbohydrate reserves, thus they grow poorly and become more susceptible to winter injury and other stresses. Since the fungus overwinters on diseased leaves and canes, rake old leaves, and prune diseased and damaged canes before spring. Avoid overhead watering and excessive shade, and when planting, space plants to avoid excessive humidity. Disease management before the growing season begins is critical; control is difficult once black spot is established in a planting. Resistance to black spot varies among the different types of roses. Floribunda, shrub, and climbing roses tend to be more tolerant to this disease, whereas hybrid tea, grandiflora, and miniature roses are more susceptible.

SEE BLACK SPOT ON PAGE 2

## INSIDE

- Black Spot of Rose ..... 1**
- Diseases of Turfgrass ..... 2**
- Plant Diagnostic Lab Highlights ..... 3**
- Turf Management ..... 4**
- Workshop: "Sudden Oak Death" and its Potential Impact on the NJ Nursery Community ..... 5**
- Sports Field Managers Association if NJ's Annual Outdoor Trade Show & Equipment Demo Day ..... 5**

### BLACK SPOT FROM PAGE 1

For best results, spray fungicides after budbreak (mid-May) and repeat at intervals specified on the label. Compounds labeled for black spot control include *Bacillus subtilis* (Rhapsody), captan, chlorothalonil, Consyst, copper (hydroxide, metallic, salts, sulfate), ferbam, Junction, mancozeb, maneb, Manhandle, myclobutanil, neem oil, paraffinic oil, propiconazole (outdoor use only), Spectro, sulfur (elemental, flowable, wettable), SysStar, thiophanate-methyl, trifloxystrobin, ziram, and Zyban. Use a surfactant to enhance fungicide coverage if this practice is listed on the fungicide label, and rotate classes of chemicals to reduce the likelihood that fungal resistance to compounds will develop. Pay close attention to spray practices during wet periods, especially when caring for roses that are highly susceptible to this disease. □

## Diseases of Turfgrass

Bruce B. Clarke, Ph.D., Specialist in Turfgrass Pathology

### Brown Patch

This disease, caused by the fungus *Rhizoctonia solani*, was present on golf and landscape turf for several weeks in late May and should reappear with a return to hot, humid weather. To reduce the incidence and severity of **brown patch**, avoid large applications of quick release nitrogen sources (e.g., more than ¼ lb actual N/1000 sq. ft) during hot weather, irrigate between midnight and 8 a.m. to minimize the leaf wetness period, and spray turf now with Banner (preventive only), Chipco 26GT, chlorothalonil, Compass, ConSyst, Curalan, Eagle, Endorse, Heritage, Insignia, mancozeb, Medallion, Prostar, Spectro, thiophanate-methyl, or Touche per manufacturer's recommendations.

### Dollar Spot

This disease, caused by the fungus *Sclerotinia homoeocarpa*, has been active on greens and tees for the past five weeks. To prevent **dollar spot** from causing severe damage on susceptible turf again this year, maintain adequate nitrogen fertility, water in the early morning hours, reduce thatch, avoid the sole use of any fungicide for prolonged periods of time (to reduce the possibility of fungicide resistance), and apply Banner, Bayleton, Chipco 26GT, chlorothalonil, ConSyst, Curalan, Eagle, Emerald, mancozeb, Rubigan, Spectro, thiophanate-methyl, Touche, or Vorlan per manufacturer's recommendations. Repeat fungicide applications as needed through mid-October.

### Summer Patch

In areas with a previous history of **summer patch**, now is a good time to apply a second application of a fungicide for the control of this disease. For optimum results, apply Banner, Bayleton, Compass, Eagle, Heritage, Insignia, Rubigan, or thiophanate-methyl in 4 to 5 gal of water/1000 ft<sup>2</sup>. Repeat every three to four weeks (every two weeks if using thiophanate-methyl). If fungicides cannot be applied with this much water, irrigate them into the thatch immediately with 1/16 to 1/8 inch of water. Aerification (when symptoms are absent) and improved drainage will also aid in disease suppression. Soil pH should be maintained at or slightly below 6.0 for optimum disease suppression.

### Turf Field Days at Rutgers University

The **Rutgers Turfgrass Research Field Day – Lawn and Landscape section** has been set for July 28, 2004 at the Plant Science Research Farm in Adelphia, NJ. Registration will begin at 8:00 AM. Guided tours will commence at 9:00 AM and will conclude at 3:30 PM, "rain or shine." The **Rutgers Turf Research Field Day – Golf and Fine Turf section** will be held on July 29, 2004 at the Turf Research Farm (Ryders Lane) in North Brunswick, NJ. This event starts at 8:30 AM (registration); field tours will run from 9 AM to 2:30 PM, "rain or shine." The cost of registration for each day will be \$35 (lunch included). Pesticide recertification credits and GCSAA CEUs (July 29 only) will be available at the conclusion of each program. Call Marlene at (732) 932-9400 ext. 339 for further information or directions. □

# Plant Diagnostic Laboratory Highlights

Richard J. Buckley, Laboratory Coordinator

## Golf Turf

Once again this week (every week!) **anthracnose** was the primary turf disease diagnosed in the Plant Diagnostic Laboratory. Golf turf samples diagnosed with active anthracnose in some form or another were submitted from Atlantic, Burlington, Camden, Morris, and Somerset Counties in New Jersey, as well as on golf turf from Pennsylvania and New York. The conventional wisdom with anthracnose is that the disease is most common on turfgrass predisposed by some type of stress. Turf plugs containing **annual bluegrass weevil** larvae have dropped off at this point, but we are certain that some of the anthracnose we will see throughout the summer was damaged this spring by weevil activity. Watch for the next generations of annual bluegrass weevils – we have heard reports from the field of up to 60 adults per square foot from soap flushes! Another common problem associated with anthracnose outbreaks is **summer patch**. Summer patch, which is caused by the fungus *Magnaporthe poae*, is beginning to show up on annual bluegrass putting greens at this time. Almost every case of summer patch we see in the laboratory has a secondary anthracnose infection. Summer patch was diagnosed on plugs of annual bluegrass submitted from Morris and Burlington Counties. Another root-infecting pathogen, *Gaeumannomyces graminis*, the cause of **take-all** on creeping bentgrass was identified on samples from Ohio and from Gloucester County, New Jersey. Both of these turf plugs had some anthracnose activity too. The last batch of anthracnose samples we saw had environmental and cultural issues as predisposing factors. Excessive thatch, poor drainage, layering, compaction, shade, low fertility input, excessive growth regulation, low cutting height, scalping, traffic, bruising from aerification and top dressing programs, and drought stress completes the short list. In most cases it is the cumulative effects of several of these abiotic stresses that ultimately allow anthracnose to creep in. Other turf diseases of note from the golf arena include several samples of **dollar spot** from New York and northern New Jersey golf courses; **copper spot** on the colonial bentgrass at the Rutgers Turf Farm; and a wicked case of **brown blight** on perennial ryegrass surrounds at an Atlantic County golf course. Finally, as we move into the summer stress periods, questions concerning **nematodes** arise. Since mid-May we have been evaluating soil samples from golf turf areas for nematode activity. High populations of nematodes were identified in some of these soil samples. In my experience (speculation and conjecture), **lance, stunt, and root knot nematodes**

appear to do the most damage to turf. When nematicides are applied to turf with *exceptionally large populations* of these nematodes the grass generally responds positively. **Spiral and ring nematodes** are also found in great abundance in golf turf, but nematicide treatments to those populations do not seem to offer much. At any rate, there is a lot of gray concerning nematodes in golf turf, so nematicide use is not a decision to take lightly.

## Ornamentals

We are also chuggin' along on the ornamentals front. Several samples of ornamental pears were submitted with **fire blight** (*Erwinia amylovora*). It seems we had a mini outbreak of that disease in mid-May. Linden samples – one from a Long Island resident and another from a central Jersey nursery were diagnosed with **anthracnose**. The anthracnose on linden is caused by the fungus *Colletotrichum gloeosporoides* and causes new shoots to dieback and leaves to drop from petiole infections. **Dutch elm disease** is actively causing dieback in susceptible elms at this time. Samples of elm with branch dieback and nice vascular streaking were submitted from landscapes in Mercer, Somerset, and Burlington Counties. Another shade tree wilt, **Verticillium wilt**, was identified in samples of maple from Bergen County, and *Koeleruteria* from a Monmouth County nursery. The canker diseases – **Botryosphaeria** and **Cytospora canker** – have also been common submissions. As for the insects, **hibiscus sawfly** on hibiscus (of course), **four lined plant bug** on *Caryopteris x clandonensis*, and **pear leaf blister mite** on pear leaf provided the challenge! We also had a couple ornamental cherries and a pin oak with severe **cicada** oviposition damage. No samples, but have you noticed all of the **fall webworm** activity out there? Could the fall webworm be this season's bagworm epidemic? ☐

# Turf Management

*Jim Murphy, Ph.D., Specialist in Turfgrass Management*

Symptoms of drought stress in turf have begun to appear on shallow compacted soils. Drought stress has been exacerbated on turf growing on such soils that also have root competition from nearby trees or shrubs. The carrying capacity (water availability) of many soils has been reduced by a couple important factors: i) the subsoil in many areas is becoming sufficiently dry to “pull” or “wick” water away from the surface and ii) the long day lengths and higher air temperatures have dramatically increased ET. (Beware, billbugs insect damage can often be misdiagnosed as drought stress - inspect tillers and determine if the bases of tillers have been chewed-off by billbug larvae).

Rain showers will help alleviate the problem of lower water availability, but don't be surprised to find symptoms return in a matter of 1 or 2 days. Once the soil becomes so dry, water infiltration becomes very slow, and the limited rain showers of this time of year fail to penetrate deeply into the soil. Thus, the water either quickly evaporates from the soil surface or has run off to

a lower wetter soil area, and drought symptoms return sooner than expected.

Conservation hint: Hand water these areas if the remainder of the turf is not in stress. This will limit the amount of water needed to manage overall turf health and vigor.

Disease activity has been less severe so far compared to this time last year on general lawn-type turfs. I have seen some **red thread** on perennial ryegrass, but it is not severe like spring 2003. **Leaf spot** has been present for several weeks on lawns containing older less adapted varieties of fine fescue and Kentucky bluegrass - you could recommend these property owners renovate to improved species/varieties to reduce or eliminate this annual problem. Modest nitrogen fertility can be applied now to encourage recovery from moderate levels of damage - do not over apply the nitrogen. Suggested range of nitrogen rate would be 1/3 to 2/3 pound per 1000 square feet (multiply by 44 to convert to acre basis). Both slowly and quickly available sources of nitrogen are acceptable for this range of application rate. The main difference will be slower healing with slowly available nitrogen compared to quickly available. Also raising the mowing height to 2.5 to 3 inches will help with recovery if mowing height is 2 inches or lower. □

## Weather Summary for the Week Ending 8 am Monday 6/21/04

WEATHER STATIONS	R A I N F A L L			TEMPERATURE				GDD BASE50		MON
	WEEK	TOTAL	DEP	MX	MIN	AVG	DEP	TOT	DEP	%FC
BELVIDERE BRIDGE	.17	13.03	-1.06	88	45	70.	1	965	271	65
CANOE BROOK	.25	15.24	.01	91	53	75.	6	1039	379	60
CHARLOTTEBURG	.60	15.04	-.28	87	45	71.	5	889	384	63
FLEMINGTON	.16	15.49	.97	88	47	73.	3	988	302	65
LONG VALLEY	.28	12.82	-2.75	84	47	71.	4	855	295	60
NEWTON	.21	13.66	-.11	86	47	71.	4	880	307	56
FREEHOLD	.11	15.58	1.27	90	49	74.	4	1075	304	61
LONG BRANCH	.12	13.48	-.96	90	51	75.	5	903	196	32
NEW BRUNSWICK	.10	14.12	.13	89	49	74.	3	1027	210	67
TOMS RIVER	.36	15.46	1.23	91	54	76.	7	1104	403	37
TRENTON	.42	12.61	-.38	89	50	74.	2	1071	204	47
CAPE MAY COURT HOUSE	.17	13.15	.54	88	54	74.	4	1016	239	26
DOWNSTOWN	.61	14.14	1.27	88	55	75.	3	1174	286	60
GLASSBORO	3.49	19.84	5.95	89	56	76.	4	1237	370	75
HAMMONTON	1.12	14.78	1.26	91	54	76.	4	1211	352	49
POMONA	.12	12.63	.29	89	53	75.	5	1118	335	44
SEABROOK	1.06	16.39	4.14	89	56	77.	5	1313	419	64
SOUTH HARRISON	1.93	18.66	4.83	89	57	76.	NA	1243	NA	NA
WES KLINE — GDD BASE 40 PINEY HOLLOW										
Last Week 197 (Ending 6/14/04) This Week 267 (Ending 6/21/04)										

# Workshop: "Sudden Oak Death" and its Potential Impact on the NJ Nursery Community

Tuesday, June 29, 2004

6:00 – 8:30 pm

Gloucester County Office of  
Government Services - Auditorium  
1200 North Delsea Drive  
Clayton, NJ

Sponsored by Rutgers Cooperative Extension of Gloucester County in cooperation with the New Jersey Nursery and Landscape Association and the New Jersey Department of Agriculture

## AGENDA

6:00 p.m. Registration and Refreshments

6:30 p.m. Biology and development of diseases caused by *Phytophthora ramorum* by Dr. Ann Gould, Specialist in Ornamental Pathology, Rutgers Cooperative Extension

7:30 p.m. Update and Regulatory issues associated with *Phytophthora ramorum* by Carl P. Schulze, Director, Division of Plant Industry, New Jersey Department of Agriculture

8:10 p.m. Discussion and Questions

8:30 p.m. Adjourn

NJDEP pesticide applicator units will be available.

This location is totally accessible to the physically impaired.

For directions call Rutgers Cooperative Extension of Gloucester County at 856-307-6450 or visit their website at: <http://gloucester.rce.rutgers.edu/directions>. □

# Sports Field Managers Association of NJ's 3rd Annual Outdoor Trade Show and Equipment Demonstration Day

Plainsboro Community Park, Plainsboro, NJ  
August 17, 7:30 AM — 4:00 PM

Supporting Organizations: NJ Turfgrass Association, NJ Recreation & Parks Association, NJ Landscape Contractors Association, and The Irrigation Association of NJ

## EDUCATIONAL SESSIONS

- ◆ Intermediate Walk Behind and Riding Mower operation & Safety
- ◆ Mid Size Equipment Operation and Safety
- ◆ Laser Grading; the Technology, the Equipment, the Application
- ◆ 5 Points In a Quality Irrigation Installation
- ◆ Playground Safety

Cost: Members \$40, Non-members \$50  
Coffee, donuts and lunch included.

Contact:

SFMANJ

P.O.

Box 370

Annandale, NJ 08801

Phone: 908-730-7770

<http://www.sfmanj.org/>

FIRST CLASS  
POSTAGE PAID  
PERMIT #576  
MILLTOWN, NJ 08850

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

## PLANT & PEST ADVISORY LANDSCAPE NURSERY & TURF EDITION CONTRIBUTORS

### RCE Specialists and Staff

Bruce B. Clarke, Ph.D., Turf Pathology  
Ann B. Gould, Ph.D., Ornamentals Plant Pathology  
Steven Hart, Ph.D., Weed Science  
Joseph R. Heckman, Ph.D., Soil Fertility  
Albrecht Koppenhofer, Ph.D., Turfgrass Entomology  
James A. Murphy, Ph.D., Turf Management  
Gladis Zinati, Ph.D., Nursery Management  
Richard J. Buckley, Coordinator, Plant Diagnostic Laboratory  
RCE County Agricultural Agents and Program Associates  
Bergen, Joel Flagler (201-599-6162)  
Burlington, Raymond J. Samulis (609-265-5050)  
Camden, James Willmott (856-566-2900)  
    Steven Rettke, Program Associate IPM  
Cape May, Russell Blair (609-465-5115)  
Cumberland, James R. Johnson (856-451-2800)  
Essex, Jan Zienteck, Program Coordinator (973-353-5958)  
Gloucester, Jerome L. Frecon (856-881-4191)  
Hunterdon, Winfred P. Cowgill, Jr. (908-788-1338)  
Mercer, Annette Capp, Program Associate (609-989-6830)  
Middlesex, William T. Hlubik (732-745-3443)  
Monmouth, Richard G. Obal (732-431-7261)  
Morris, Pedro Perdomo (973-285-8307)  
Somerset, Nick Polanin (908-526-6293)  
Sussex, Brian Oleksak, Program Associate (973-579-0985)  
Union, Madeline Flahive-DiNardo (908-654-9854)  
Warren, William H. Tietjen (908-475-6505)

### Newsletter Production

Jack Rabin, Associate Director for Farm Services, NJAES  
Cindy Rovins, Crop Management Communications Editor

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

**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.

**Reproduction of Articles:** RCE invites reproduction of individual articles, source cited with complete article name, author name, followed by Rutgers Cooperative Extension, Plant & Pest Advisory Newsletter.

For back issues, visit our web site at: [www.rce.rutgers.edu/pubs/plantandpestadvisory](http://www.rce.rutgers.edu/pubs/plantandpestadvisory)