RUTGERS COOPERATIVE EXTENSION AT THE NEW JERSEY AGRICULTURAL EXPERIMENT STATION

PLANT & PEST ADVISORY

LANDSCAPE, NURSERY & TURF EDITION $1.50 JUNE 29, 2000

INSIDE

Diseases of Ornamentals

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

Powdery Mildew of Dogwood

During the past few years we have observed an increase of **powdery mildew** (caused by the fungi *Microsphaera* and/or *Phyllactinia*) on flowering dogwood (*Cornus florida*) in New Jersey landscapes. By late summer, leaves on affected trees have been covered with the white, powdery growth of the mildew fungus. Other symptoms associated with the disease included leaf yellowing, reddening, blotch, distortion, and scorch.

High humidity favors disease development, so expect to see more powdery mildew this summer if weather remains humid. Since this disease may adversely affect the growth of severely diseased trees, watch susceptible trees closely for the mildew fungus. Dogwoods that appear to be less troubled by this disease include *Cornus kousa* and *C. florida* X *C. kousa* hybrids. Fungicides such as AQ10, azoxystrobin, Benefit, elemental sulfur, kresoxim-methyl (greenhouse only), myclobutanil, Phyton 27, propiconazole, Spectro, thiophanate-methyl, triadimefon, *or* triflumizole (enclosed structures only) may be used to protect valuable trees. Begin sprays at the first sign of disease and repeat at intervals on label.

Anthracnose of Shade Trees

Look for **anthracnose** this year on sycamore, ash, maple, oak, and walnut. Diseased leaves appear "scorched" along veins and leaf margins, and twig and branch dieback may occur on trees in poor health. Leaves infected with anthracnose are often shed by mid-summer. It is too late to spray for this disease now. If desired, some control of this disease can be obtained *next season* with foliar applications of fungicides. Refer to the April 6th issue of this newsletter for further information.

Crabapple Scab and Rust

Two other diseases prevalent at this time throughout New Jersey landscapes are **scab** and **rust** of crabapple.

Scab is caused by the fungus *Venturia* and is one of the most common diseases of crabapple. The disease affects other rosaceous ornamentals, such as cotoneaster, hawthorn, mountain ash, and pyracantha, as well. Symptoms of scab appear as olive-colored spots with fuzzy borders on infected leaves and petals. Fruit affected by the disease develop bumpy, corky lesions, and severely affected leaves, petals, and fruit may prematurely drop from the tree.

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Diseases of Turfgrass

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

Brown Patch

This disease, caused by the fungus *Rhizoctonia solani*, continues to be reported on tees, greens, and home lawns due to the warm, humid weather. To reduce the incidence and severity of **brown patch**, avoid nitrogen applications during hot weather, irrigate between midnight and 8 a.m. to reduce the period of leaf wetness, and spray turf with Banner, Chipco 26GT, ChloroStar, Cleary 3336, Compass, ConSyst, Curalan, Daconil, Eagle, Fungo, Heritage, Manicure, Pentathlon, Prostar, Sentinel, Spectro, Thalonil, or Touche per manufacturer's recommendations.

Pythium Blight

With the return to hot, humid weather, **pythium blight** has recently been reported on golf greens and tees. **Pythium** thrives in low or poorly drained areas, especially when the night temperatures are above 68 to 70°F. For best results, improve drainage, water in the early morning hours, avoid over-fertilization, and apply Aliette, Banol, Heritage, Koban, mancozeb, Prodigy, Quell, Subdue, Terraneb SP, or Terrazole, according to the manufacturer's recommendations.

Slime Mold

Although not actually a disease, inquiries have been received recently regarding the appearance of tan to black colored clumps on turf, flowerbeds, and home gardens. In many cases, this material has been reported to occur virtually overnight on plant stems, grass blades, soil mounds, or other vertical objects and is easily removed with light pressure. Leaf tissue underneath these clumps is green and healthy. Upon close examination, these mysterious structures were identified as clumps of the common **slime mold** fungus *Fuligo*. Fuligo is not injurious to plants and will soon disappear on its own. It can be easily dispersed with a rake or steady stream of water, if desired. No fungicides are recommended.

Turf Field Days

The Landscape Turf Research Field Day will be August 2, 2000 at the Turf Research Farm (Ryders Lane) in North Brunswick, N.J. Registration will begin at 8:00 AM. Guided field tours will commence at 9:00 AM and will conclude at 3:30 PM, "rain or shine." The registration cost is $20 ($30 with lunch). The Golf Turf Research Field Day will also be held at the Turf Research Farm (Ryders Lane) in North Brunswick, NJ. This event will occur on August 3, 2000 at 12:30 PM (registration) and field tours will run from 1:00 to 5:00 PM. Registration is $25. Recertification credits will be available at the conclusion of each program. Call Marlene at (732) 932-9400, ext. 339, for additional information. ❑

Plant Diagnostic Laboratory Highlights

Richard Buckley, Plant Diagnostic Laboratory Coordinator

Turfgrass

I knew it would come sooner than later, we already had our first **gray leaf spot** scare among the golf turf crowd! Last year, the first confirmed disease outbreak in our area was at the Rutgers turf farm around *July 22* on perennial ryegrass research plots that were spiked with the fungus to promote the disease. This season, some researchers have been able to detect "dormant" overwintering populations of *Pyricularia grisea* on certain golf courses. This information undoubtedly started the rumor mill. No infection or symptoms were observed on these sites. The fungus was simply detected in preliminary research trials. Even if they find that the fungus has established itself in our area, we still won't see the disease unless the right environmental conditions exist. The disease is absolutely not active at this time and should not be a concern for another month or so. What we have been seeing is **brown blight**, caused by the fungus *Drechslera siccans*, and **net blotch**, caused by the fungus *Drechslera dictyoides*. These diseases were identified in perennial ryegrass from rough areas on samples submitted from New Jersey, New York, and Pennsylvania golf courses. Dr. Wakkar Uddin at Penn State has also seen *Bipolaris sorikiniana* on ryegrass fairways in Pennsylvania. These **leaf spot diseases** are easily mistaken for **gray leaf spot**. Remember it is always prudent to have your suspicions confirmed by a competent pathologist or testing laboratory before jumping to any conclusions!

Speaking of jumping to conclusions, **Anthracnose basal crown rot** continues to be a problem for golf turf managers in the Northeast. We see many turf samples with yellowing and thinning *Poa annua* that is suspected to be **anthracnose**. Some of them have the disease, while many do not. Cultural and environmental stresses often cause very similar symptoms on their own. These stresses usually act as predisposing factors for **anthracnose** and need to be identified to get control of the problem. Furthermore, I have also been hearing about fungicide resistance to **anthracnose**. This is not very likely if you rotate fungicide mode-of-action and your program includes multi-site toxicants, like chlorothalonil. My feeling is that these perceived resistance problems are situations where there is no disease or that the stress issues that lead to disease outbreak had not been properly addressed. Fungicides work best when we support their use with

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Plant Diagnostic Laboratory and Nematode Detection Service

The Plant Diagnostic Laboratory is a diagnostic service available to the residents of the State of New Jersey. The mission of the Plant Diagnostic Laboratory is to cooperate with Rutgers Cooperative Extension (RCE) personnel to provide the residents of New Jersey with accurate and timely diagnoses of plant problems. There is a fee for this service (see sidebox).

The laboratory was established in 1991 on the Cook College campus of Rutgers, The State University of New Jersey. The lab began accepting samples in July of 1991 and is now fully operational.

The Plant Diagnostic Laboratory is staffed with two full-time diagnosticians who are trained in all aspects of plant health. Seasonal employees and students assist in the lab. The Plant Diagnostic Laboratory staff works in close cooperation with Rutgers Cooperative Extension specialists, county faculty, and other university personnel, to provide accurate diagnosis and up-to-date recommendations.

How to Submit Samples

1. Sample submission forms can be obtained from your local county Rutgers Cooperative Extension office. They can also be downloaded from the Rutgers Cooperative Extension website at: http://www.rce.rutgers.edu/plantdiagnosticlab/index.html. Forms are also available on RCE's 24-hour fax back service, FaxInfoLine at 732-932-6767 (documents 3605, 3602, 3603, 3604 and 3606 respectively, as listed below). There are five distinct forms:
   - ◆ Plant Identification Submission Form (22 KB PDF).
   - ◆ Golf and Landscape Turf Submission Form (23 KB PDF).
   - ◆ Landscape, Home Grounds, and Garden Submission Form (21 KB PDF).
   - ◆ Commercial Growers Submission Form (22 KB PDF).
   - ◆ Insect and Tick Identification Submission Form (27 KB PDF).
2. Completely fill out the sample submission form.
3. Collect the appropriate samples, then carefully follow all of the directions.
4. Properly package the sample, submission form, and payment.
5. Mail the sample to the address on the form.
6. The laboratory will respond with the diagnosis by mail in a timely manner. ❑

Diagnostic Lab Fee Schedule

All In-State Samples (except fine turf)	$20
In-State Fine Turf	$50
All Out-of-State Samples	$75
Other Services Negotiable	

ORNAMENTALS FROM PAGE 1

Crabapples and several other rosaceous hosts are also commonly affected by the **Gymnosporangium rusts**. Rust spores, released by the alternate hosts of this disease, red cedar and juniper, infect developing tissue in the spring. By mid-summer, rusty orange pustules appear on infected leaves or young stems, petioles, and fruit.

Since both scab and rust develop in the spring, it is too late to manage them with fungicides at this time. If desired, however, fungicides may be used *next season* to protect susceptible trees. Refer to previous issues of this newsletter for further information. ❑

HIGHLIGHTS FROM PAGE 2

sound agronomy. Going on a program to suppress your *Poa* and then trying to save it with fungicides does not make much sense. Identify your problem and set clear objectives before embarking on a time-consuming and expensive fungicide or management program.

In landscape turf, **dollar spot**, **red thread**, **leaf spot and melting out**, and **brown patch** are currently active.

Landscape

Juniper tip blight is the most common problem coming from the landscape in June. The disease was diagnosed on juniper samples submitted from Mercer, Middlesex, and Bergen Counties. Rust diseases are also beginning to be submitted to the laboratory. **Douglas fir rust**, caused by the fungus *Melampsora occidentalis* was evident on Douglas-fir samples from Morris County. **Cedar apple rust** was identified on crabapple from a Middlesex County landscape, and **juniper broom rust**, *Gymnosporangium ribis-nidis*, was confirmed in branches of serviceberry from Somerset County. **Stripe smut**, caused by the fungus *Ustilago striiformis*, was identified in variegated ribbongrass from a Somerset County landscape. **Cucumber mosaic virus** caused light yellow mottling on leaves of butterflybush. The virus was confirmed with an ELISA test kit and the sample was from Somerset County. The grower said that the disease does not hurt the plant much - just discolors the leaves. Sounds like a conversation piece to me! Other diseases of note include **powdery mildew** on lilac and dogwood from Mercer and Middlesex Counties respectively, **apple scab** on crabapple from Somerset County, and plenty of **shade tree anthracnose** on oak, maple, sycamore, and ash from all over the place. ❑

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