

PLANT & PEST ADVISORY

LANDSCAPE, NURSERY & TURF EDITION \$1.50

DECEMBER 18, 1997



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Plant Diagnostic Laboratory Highlights

Richard J. Buckley, Coordinator, Plant Diagnostic Laboratory

◆ General Interest

Another year of death and destruction comes to a close for the Plant Diagnostic Laboratory. To date, submissions are running just over 1400 samples. This figure is slightly less than last season, but represents an increase in samples of ornamental landscape plants and a decrease in turf samples. In the landscape, disease problems relating to the drought years of 1993 and 1995 are finally coming to fruition. In turf, well let's face it, the dry summer and lack of any real heat stress made it easy for the golf course crowd. The following is a brief account of the problems submitted to the laboratory since late-September.

◆ Turf

Damping-off/Seedling blights, caused by the fungi *Rhizoctonia* and *Pythium*, were evident in newly seeded turfgrass this fall. Golf courses in Ocean County, and in New York, Pennsylvania, and Virginia each had their fair share of problems establishing new turf.

Leaf spot & melting-out, normally considered to be a spring disease, was quite active on a sample of Kentucky bluegrass sod that was produced in Atlantic County. This disease also caused severe damage to annual bluegrass on a golf green in Virginia. In this case, (I had to see it to believe it!) the turf manager was aggravating the symptoms with frequent applications of systemic fungicides, lots of water-soluble nitrogen, and irrigation.

Pink snow mold, caused by the fungus *Microdochium nivale*, and **yellow patch**, caused by the fungus *Rhizoctonia cerealis*, were active late in the period. **Pink snow mold** was diagnosed on turf samples from Camden and Monmouth Counties. **Yellow patch** was evident on turf from Morris County.

Other diseases of note include: **Anthracnose**, which was diagnosed on turf from golf courses in Burlington County, New York, and New Mexico; **Take-all patch** on turf from two Maryland Golf courses and the course in New Mexico; and **Necrotic Ring spot** from a Kentucky bluegrass lawn in Connecticut.

◆ Nursery and Greenhouse

A greenhouse grower in Middlesex County had problems with **Pythium black leg** in the geranium cuttings. This disease causes a

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black rot of the cutting end. **Pythium and Rhizoctonia root and crown rots** were identified on lavender in a Gloucester County operation. In Passaic County, St. John's wort and Echinacea were diagnosed with **root knot nematode**.

In the nursery, **pythium root rot** was a problem in boxwood production for a grower in Gloucester county. Samples of Scotch pine from an Atlantic County Christmas tree grower were diagnosed with **pine root collar weevil**. The **northern pine weevil** caused problems on spruce for a nursery in Monmouth County. In each case, the trees were planted or cultivated too deep. Andromeda from a Mercer County nursery was compromised by **Phytophthora root and crown rot**. The fungus *Phomopsis* caused cankers on cherry trees in a Monmouth County nursery.

◆ Landscape

In the landscape, an oak sample from Mercer County was diagnosed with **oak leaf scorch**, caused by the bacterium *Xylella fastidiosa*. This disease is very severe in central and southern New Jersey and is often confused with environmental stress. Symptoms of the disease include leaf scorch, branch dieback, and eventually tree death.

Other diseases of note include: **Phytophthora root and crown rot** on juniper samples from Union and Morris Counties, **tar spot** on a maple from Middlesex County, **oak leaf blister** on oak leaves from Bergen County, **black spot** on elm leaves from Middlesex County, and **anthracnose** on vinca from a Middlesex County landscape.

A number of insect and mite problems were identified on landscape plants this fall. Two different samples of pine from Union County were diagnosed with **pine bark adelgid**. A boxwood from Mercer County exhibited injury from **boxwood leaf minor**. A sample of Rhododendron from Mercer County had **black vine weevil** and **rhododendron borer** injury. **Spider mites** were observed on spruce, arborvitae, and red cedar samples from Middlesex County, as well as on pine from Somerset County. **Pine needle scale** and **pine tube moth** were also identified on the pine from Somerset County. **Red pine scale** was active on red pine in a Union County landscape. **Juniper scale** was found on an arborvitae sample from Bergen County. Injury from the **yellow poplar weevil** was identified on Magnolia leaves from Union County. □

Greenhouse Sanitation

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

Adapted from an article written by Dr. John Hartman, Kentucky Pest News, University of Kentucky, 1997.

The greenhouse environment is almost ideal for the development of many soilborne and foliar diseases. Greenhouse growers make a large investment in growing facilities and in healthy stock plant material, and they must do their utmost to protect their investment. The following reminders could prevent crop loss for growers of greenhouse crops.

- * Inspect plant stock; avoid spreading disease by purchasing disease-free cuttings or transplants
- * Devise ways to propagate plants in an aseptic way or in the absence of disease-causing microbes.
- * Surface sterilize or disinfest benches; spread new plastic over the floor if pots or flats are to be placed there.
- * Keep treated soil or growing mixes clean. Place mixes only in new or disinfested containers.
- * Keep feet and pets off of greenhouse benches; allow only essential personnel in the greenhouse.
- * To prevent the spread of fungi and bacteria from old to young plants, keep seedlings and young cuttings separate from mature plants.
- * Discard old plants, even those with sentimental value, that are not essential to the business.
- * Hang the water hose up off the floor.
- * Clean up and remove weeds from walkways and spaces under the benches.
- * Disinfest transplanting tools and workbenches to prevent disease spread.
- * Keep trash picked up around the greenhouse.
- * Remove or mow unwanted vegetation outside the greenhouse.
- * Pick up and remove senescent and fallen leaves from the pots and benches to eliminate any substrate for the gray mold fungus (*Botrytis*).
- * Be prepared to apply fungicides to prevent gray mold disease, especially if greenhouse conditions are warm and moist. Fungicides that contain chlorothalonil, mancozeb, and thiophanate-methyl are effective for gray mold management. □

Fungicide Update

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

Novartis Crop Protection, Inc. has released a new protectant fungicide, Medallion, for control of foliar and soilborne diseases in ornamentals grown in containers, greenhouses, and other enclosed structures. It can be used as a soil drench for control of damping-off diseases caused by the non-water mold, *Rhizoctonia*, or as a foliar spray for *Botrytis*, foliar *Rhizoctonia*, and *Alternaria*. This product may be applied at the time of seeding, transplanting, or on established plants. As with any pesticide, follow label recommendations before use. □

Successful Ideas for Your Landscape Business

Jerome L. Frecon, Gloucester County Agricultural Agent

One hundred and forty landscape contractors, designers, maintenance firms and others interested in landscaping attended the recent conference in Glassboro. Four excellent talks were presented by Rutgers Cooperative Extension Specialists George Hamilton, Paula Shrewsbury, Ann Gould and Agricultural Agent Jim Willmott all who frequently write for this newsletter.

If you did not attend the conference you may be interested in information presented by the participants. Therese Haaf discussed the importance of promoting a professional image and operating in a professional manner. One of the things her company does is dress professionally at each job site. Peter Haran discussed the importance of diversity. His large company offers diverse services in designing, contracting, and building, including irrigation systems and water gardens. They also grow some of their own plant material to cover shortages. Jeff Link emphasized the importance of

efficiency. As a small landscape maintenance business he pulls a large trailer to each sight that includes everything needed on the job including extra tools and equipment to avoid downtime. This increases efficiency. Gerry Fox has had success directing her business toward state and local governments. She showed some of her successful projects in wetlands mitigation. Michael Scian, Jr. discussed some valuable tips on workmen's compensation. He distributed a handout outlining facts on workmen's compensation for landscapers. Copies are available by contacting me at 609-863-0110 or Fax 609-881-4191.

Dr. Darrell Apps, world famous plantsman and now owner of Woodside Nursery in Bridgeton, gave a visual presentation on his 32 favorite "Workhorse Shrubs for the Landscape". See table below.

He emphasized the characteristics of each shrub that make it desirable.

Professor Howard Ayre of Delaware Valley College gave two informative presentations on "Cost Recovery of Landscape Bidding" and "Completing a Landscape Bid". Handouts are available on each of these talks by contacting me at 609-863-0110 or Fax 609-881-4191. Professor Ayre has also written a book on these procedures. Copies are available for \$15.00 at Delaware Valley College, East Butler Avenue, in Doylestown, PA 18901. □

Workhorse Shrubs for the Landscape

1. Aesculus parviflora	Bottlebrush Buckeye
2. Aronia arbutifolia 'Brittiantissima'	Red Chokeberry
3. Berberis thunbergii 'Crimson Pygmy'	Crimson Pygmy Japanese Barberry
4. Callicarpa dichotoma	Purple Beautyberry
5. Calycanthus floridus	Carolina Allspice
6. Clethra alnifolia 'Rosea'	Summersweet, Sweet Pepperbush
7. Cornus alba 'Argenteo-marginata'	Variiegated Dogwood
8. Cornus sericea 'Flaviramea'	Golden-twig Dogwood
9. Corylopsis pauciflora	Buttercup Winterhazel
10. Deutzia gracilis	Slender Deutzia
11. Deutzia gracilis 'Nikko'	Nikko Slender Deutzia
12. Enkianthus campanulatus	Redvein Enkianthus
13. Euonymus alata 'Compata'	Compact Winged Euonymus
14. Fothergilla major	Large Fothergilla
15. Hamamelis x intermedia	Witchhazel
16. Hydrangea quercifolia 'Snow Queen'	Snow Queen Oakleaf Hydrangea
17. Ilex verticillata	Winterberry
18. Itea virginica 'Henry's Garnet'	Henry's Garnet Virginia Sweetspire
19. Kerria japonica	Japanese Kerria
20. Potentilla fruticosa 'Goldfinger'	Goldfinger Shrubby Cinquefoil
21. Spiraea x bumalda 'Anthony Waterer'	Anthony Waterer Spirea
22. Spiraea x bumalda 'Goldflame'	Goldflame Spirea
23. Spiraea nipponica 'Snowmound'	Snowmound Nippon Spirea
24. Stephanandra incisa 'Crispa'	Dwarf Cutleaf Stephanandra
25. Syringa meyeri 'Palibin'	Palibin Meyer Lilac
26. Syringa microphylla	Littleleaf Lilac
27. Viburnum x burkwoodii	Burkwood Viburnum
28. Viburnum x 'Mohawk'	Mohawk Viburnum
29. Viburnum carlesii	Koreanspice Viburnum
30. Viburnum carlesii 'Compactum'	Compact Koreanspice Viburnum
31. Viburnum plicatum var. Tomentosum 'Shasta'	Shasta Doublefile Viburnum
32. Viburnum x utile 'Eskimo'	Eskimo Viburnum

Calendar of Events

January 6-8, 1998 - Eastern PA Turf Conference and Trade Show, Valley Forge Convention Center, Valley Forge, PA, (610) 828-0253

January 7-8, 1998 - Creating and Marketing Natural Landscapes, Villanova University, PA, (215) 247-5777, ext. 156

January 9-10, 1998 - Eastern Regional Nurserymen's Assoc. (ERNA) Expo '98, Meadowlands Expo Center, Secaucus, NJ, (800) 376-2463

February 5, 1998 - S. Jersey Greenhouse Grower's Meeting, Masso's Crystal Manor, Glassboro, NJ, Contact: Charlene Costaris, RCE of Atlantic County, (609) 625-0056

March 11, 1998 - Tree Day, Morris County College, Randolph, NJ, Contact: Ed Milewski, RCE of Morris County, (973) 285-8300

March 13, 1998 - Turf Day, Morris County College, Randolph, NJ, Contact Ed Milewski, RCE of Morris County, (973) 285-8300

Note: This is your
last issue for the '97
growing season.
Thanks for
subscribing.

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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 in 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 a compound may be sold under different trade names, which may vary as to label clearances.