

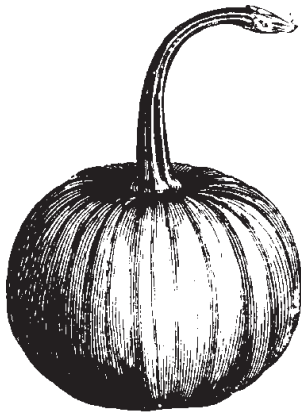
PLANT & PEST ADVISORY

LANDSCAPE, NURSERY & TURF EDITION \$1.50

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Diseases of Ornamentals

Anne B. Gould, Ph.D., Ornamentals Plant Pathology



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◆ Dogwood Powdery Mildew

Powdery mildew on dogwood has severely affected trees in New Jersey plantings for the second year in a row. By early September, leaves on many affected trees throughout the state were completely covered with the white, powdery growth of the mildew fungus. Other symptoms associated with the disease include leaf yellowing or reddening, blotch, distortion, and scorch.

In September 1997, the severity of powdery mildew was rated in a variety trial in North Brunswick, NJ that included *Cornus kousa* trees, five *Cornus florida* cultivars, and two large-bracted dogwood hybrids in the Rutgers' STELLAR series. The *C. kousa* and hybrid trees exhibited very little to no evidence of powdery mildew. Among the *C. florida* cultivars, Cherokee Sunset, Rubra, and Cherokee Red were severely affected (more than 50% of the leaves were covered in mildew, and in the case of Cherokee Sunset, the leaves were severely distorted and scorched). Barton and Cloud 9 fared quite well; less than 20% of leaves on most trees were affected by the disease, and there was no leaf scorch or distortion apparent.

To manage powdery mildew next year, reduce humidity through proper spacing and weed control. Practices that promote succulent growth, including pruning and nitrogen fertilizing, should be avoided. Fungicides such as thiophanate-methyl might be considered for use at the first sign of disease, especially on highly susceptible *C. florida* cultivars.

◆ Oak (Bacterial) Leaf Scorch

Leaf scorching in shade trees is usually attributed to environmental factors as well as to diseases caused by living organisms. During the past several years, many trees throughout the state have been affected by soil moisture extremes, particularly drought stress. Scorching often occurs in trees where normal root function has been impaired by drought. In most cases, this type of scorching is fairly uniform around leaf edges, affects newer leaves as well as older leaves, and will appear on vast expanses of the canopy.

Leaf scorch can also, however, be the result of disease caused by biotic agents. Residents in Camden, Burlington, Gloucester, and Salem counties may be increasingly familiar with one such disease, known as **oak (bacterial) leaf scorch**. Oak leaf scorch, caused by the bacterium *Xylella fastidiosa*, affects oaks in the red oak group and has been quite

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noticeable in oaks all throughout the affected counties. Leaf scorching due to this disease is not clearly defined and, in many cases, is reminiscent of early fall color. Scorch symptoms are often irregular in shape, and frequently a dull red "band" is apparent between healthy and scorched (necrotic) tissues. These symptoms usually occur in mid- to late-summer on leaves of one or more branches in the canopy. Affected leaves may curl and drop prematurely. As the infection progresses over several years, branches die and the tree declines. Affected trees eventually decline to the point where they must be removed.

There is no cure for oak leaf scorch. The best management tool for this disease is to maintain tree vigor for as long as possible. Other diseases, insects, and environmental stresses such as drought enhance the development of oak leaf scorch. This disease may also predispose infected plants to other disease and insect problems. Branches that have died due to oak leaf scorch should be routinely removed. Infected trees that are in a severe state of decline should also be removed.

◆ Tar Spot on Maple

A foliar disease known as **Tar spot** was evident this past year on many red, sugar, and silver maples throughout the state. Tar spot lives up to its name; thickened, black blotches of fungal growth appear in late summer on the upper surfaces of affected leaves.

The damage due to tar spot is merely cosmetic and appears too late in the growing season to seriously affect trees. To manage this disease, however, rake up and remove diseased leaves in the fall. If desired, Mancozeb may be applied once just before buds open on highly prized specimen trees.

◆ Supplemental Label Information

New Jersey has received a supplemental label for use of NemaCur 10% to control nematodes in ornamental plants. Growers must have a copy of this label in their possession when using the product on nursery stock. To obtain a copy of the label, contact your local Rutgers Cooperative Extension county office. □

Fall and Winter Weed Control

Submitted by Jerome L. Frecon, Gloucester County Agricultural Agent

The following information was prepared by Dr. John Meade, Retired Extension Specialist and Professor Emeritus - Weed Science with Rutgers Cooperative Extension. Dr. Meade presented this information at a twilight nursery meeting at A. Ferrucci & Son Nursery, on Piney Hollow Road in Newfield, NJ on August 27, 1997.

◆ For the Field

At this time of year it is best to think of **ROUNDUP**. It can be used as a directed spray for control of existing perennial weeds and is also useful for killing perennial weeds where you want to plant next spring. It is very persistent in peat so don't treat weeds on your peat pile with it. Use something like **GRAMOXONE** instead. Remember that **TOUCH-DOWN** is a compound similar in activity to **ROUNDUP**. Another compound that has activity similar to **ROUNDUP** is **FINALE**. It doesn't seem to have quite as much translocation as **ROUNDUP** so may be a little less active on some perennials.

Remember that diclobenil, sold as **CASORON, NOROSAC, or DYCLOMEC** is useful for perennial weed control. It should be applied between November and March, and controls things such as mugwort (wild chrysanthemum), Canada thistle, quackgrass and others. Don't apply on frozen soil or over snow.

Also in the fall and winter, read a lot. There are several useful publications available on ornamental weed control, plus read every label of the herbicides you plan to use.

Plant some ground covers to prevent erosion and mud. Try a hard fescue or *spring* oats or maybe a legume. All should be low-growing and minimum maintenance. If the winter doesn't kill the *spring* oats, stand by with a grass herbicide.

Apply pre-emergence herbicides in the fall. If you want to control fall germinating weeds such as chickweed and horseweed, apply simazine (**PRINCEP**) in September. For weed control in the spring from a fall application, apply **PRINCEP** in October or November. **GALLERY** can also be used for broadleaf weed control at this time. With either one you will need a grass herbicide such as **SURFLAN** or pendimethalin, sold as **SOUTHERN WEED CONTROL** by Scotts or **PENDULUM** by Am Cy. **BARRICADE** could also be used. These fall treatments should provide weed control through the digging season.

Think about your weed program for next spring. List your weed problems and ornamental species so you will have a clear idea of what material fits your demands. One quirk comes to mind. We have suggested a directed application of **GOAL** for control of some broadleaf weeds in the spring. Apparently, under some weather conditions, it volatilizes and injures plants. This occurs under conditions of a temperature inversion when air is held down to the ground and no breeze occurs.

If nutsedge is a problem, use **PENNANT** at the max use rate; it also controls annual grasses.

Consider **BASAGRANT/O** as a directed spray for Canada thistle and nutsedge control. It is labeled for over top of some ground covers.

◆ For Containers

First of all, remember that some herbicides are volatile and in closed structures will cause serious damage to ornamental species.

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These include: **TREFLAN**, diclobenil (**CASORON**, **DYCLOMEC**, **NOROSAC**), **PENNANT**, **GOAL**, **ROUT**, **ORNAMENTAL HERBICIDE II**, **LISSO**, **PRAMITOL**. **RONSTAR** causes bronzing on some varieties of azalea.

Many weed species in containers move with the wind. These are *groundsel*, *horseweed*, *dandelion*, *catsear*. Some have exploding seed capsules such as *oxalis* and *bittercress*. Some just appear mysteriously such as chickweed and liverworts.

Choose your herbicide for:

1. Safety to ornamentals.
2. Activity on expected weed species.
3. Resistance to leaching.

One application per year is not usually enough. Read the label for suggestions on repeat timing. Slow release formulations are being researched and may provide extended periods of weed control.

For knock down in aisles, etc. think about **GRAMOXONE**, **REWARD**, and if the house is empty, **ROUNDUP**, **TOUCHDOWN**, **FINALE**.

For control of existing grass in containers, consider **VANTAGE** (the old **POAST**), **FUSILADE**, **ORNAMEC**, **PRISM**, or **ACCLAIM**. Most of these can be sprayed over top of ornamentals. *Read the label!*

◆ Weed ID References

Newcomb's Wildflower Guide. Lawrence Newcomb. Little brown and Co., Boston 1977. \$18.95. Paperback is less. Line drawings and colored drawings. This is the one I carry into the field with me. Very easy to use and has most of our weeds.

Some Grasses of the Northeast. Univ. Of Delaware Agricultural Experiment Station, Newark, DE. The only vegetable ID book for grasses. (May be out of print)

Weeds of the Northeast by Phillips and Fisher. Agricultural Experiment Station, University of Delaware, Newark, DE.

Weeds of the North Central States. Bulletin 772, Univ. of Illinois, College of Agriculture, Agric. Exp. Station, Urbana, IL.

Field Guide to Wildflowers. Peterson and McKenny, Houghton Mifflin Co., Boston. This is the book I used before I found Newcomb's.

Identifying Seedling and Mature Weeds Common in the Southeast US. Stucky, Monaco, and Worsham. Agricultural Extension Service, North Carolina State University, Raleigh, NC 27695. a very useful book. Check on price before ordering. About \$7.00.

At the same meeting Dr. Richard Ilnicki, Professor Emeritus of Weed Science presented a talk on Weed Identification. If you would like a copy of Dr. Ilnicki's handout "Some Weeds Found In and Around the Pine Barrens", please contact me at 1200 N. Delsea Drive, Clayton, NJ 08312. (609) 863-0110 or e-mail Gloucester@aesop.rutgers.edu.

Another excellent publication for all nurserymen growing perennials is "Weed Management Guide for Herbaceous Perennials", part of Weed Facts. Weed Management Series No. 1 by Dr. Andrew Senesac & Dr. Joseph Neal, Cornell Cooperative Extension, Department of Floriculture & Ornamental Horticulture, Plant Science Building, Ithaca, New York 14853. This has just been updated and is available for \$1.25 by writing them. □

Invasion of the Crane Flies

*Paula M. Shrewsbury, Ph.D.,
Ornamental and Turf Entomology*

Crane flies are flies that look like giant mosquitoes at first glance. However they are not harmful and do not bite! There are hundreds of species of **crane flies**. In general, the adults are tannish-brown, have elongate, thin bodies (1-2"), long legs similar to a daddy long leg, and have one pair of wings. There is one generation a year and this is the time of year adults are most active (late summer/early fall). Adults are only active for a short period of time (several days) and do no damage so there is no need for any control measures to be taken. **Crane flies** overwinter as larvae. Larvae are maggots, sometimes known as "leather jackets" that live in the soil. They are elongate and legless. The larvae are aquatic or semi-aquatic and feed on decaying organic matter. This is why crane flies are most abundant in areas where there are damp, wet soils. **Crane fly** larvae also do not cause damage.

The only **crane fly** known to cause damage is the European **crane fly** which only occurs in the northwestern U.S. This species feeds on the roots of turf and pasture grasses. □

Conference on Successful Ideas for Your Landscape Business

Jerome L. Frecon, Gloucester County Agricultural Agent

Successful Ideas for Your Landscape Business" is the title of the South Jersey Landscape Conference to be held on Wednesday, December 3, 1997 at Masso's Crystal Manor in Glassboro, NJ. This year's conference will focus on a number of different ideas on improving landscape businesses.

Mr. Howard Eyre, Assistant Professor of Ornamental Horticulture and Environmental Design at Delaware Valley College in Doylestown, PA, will give two presentations. The first "Cost Recovery for Landscape Bidding" will focus on procedures for the recovery of equipment and labor expenses in the landscape industry. To remain a viable and competitive company it is necessary to have a strategy for the recovery of costs incurred in the operation of a business. The second presentation "Completing a Landscape Bid" will focus on practical steps to follow in recognizing all the costs related to the installation of the planting plan. Knowing how to recover business costs is the first step in preparing a profitable bid.

Dr. Darrell Apps, owner of Woodside Nursery in Bridgeton, NJ and former Department Head of Education at the world-famous Longwood Gardens, will draw on his experience to discuss "Workhorse Shrubs for the Landscape". He will provide details on some of the best shrubbery for landscape plantings.

A panel of successful nurserymen will share some of their experiences and ideas for running a successful landscape business. They are:

Therese J. Haaf, owner T.J.'s Lawns and Landscapes in Woodstown, NJ;

Peter Haran, vice president Landscape & Irrigation Contractors in Mount Laurel, NJ;

Jeff Link, owner Virgo's Landscaping and Lawn Care in Franklinville, NJ;

Geraldine Fox, owner Alliance Landscaping, Inc. in Pittsgrove, NJ;

Michael Scian Jr., owner Scian's Landscaping Inc. in Berlin, NJ.

Jim Willmott, Agricultural Agent with Rutgers Cooperative Extension of Camden County and former horticulturist with Chem Lawn Corporation, will present information on "Good Management for Trees and Shrubs During a Drought."

Dr. Paula Shrewsbury, Extension Specialist in Ornamental and Turf Entomology, will discuss "Management Strategies for Insect Pests on Trees and Shrubs in

the Landscape." Dr. Shrewsbury will emphasize integrated pest management approaches to control.

Dr. George Hamilton's, Specialist in Pesticides with Rutgers Cooperative Extension, presentation will focus on new and revised pesticide regulations for landscapers and ideas on pesticide safety. Dr. Hamilton's presentation will be entitled, "Update on Pesticide Safety and Regulations Facing Landscapers".

Dr. Ann Gould, Extension Specialist in Plant Pathology with Rutgers Cooperative Extension, will discuss "Diseases & Physiological Disorders of Trees and Shrubs in the Landscape." Dr. Gould will review many of the problems experienced in 1997 and controls to better manage them.

New Jersey Pesticide Applicator Units will be available to all attendees for the CORE and Categories of PP-2, 2, 3A, 6, and 8C.

A trade show will also run in conjunction with the conference. Sponsored by Rutgers Cooperative Extension and the New Jersey Nursery and Landscape Association, the \$25.00 registration fee includes Masso's famous buffet luncheon, the educational meetings, literature handouts, and the trade show. Registration information is available by contacting: Jerome L. Frecon, Rutgers Cooperative Extension of Gloucester County, 1200 N. Delsea Drive, Clayton, New Jersey 08312, (609) 863-0110, Fax (609) 881-4191. □

Calendar of Events

November 6-8, 1997 - Tree Care Industry Expo '97, Columbus, Ohio. Contact: (800) 733-2622.

November 14-18, 1997 - Professional Landscape Contractors Assoc. (PLCAA) Green Expo, Charlotte, NC. Contact: (800) 458-3466.

November 17, 1997 - "Focusing on Biological Control for the Green Industry", University of Massachusetts, Amherst, MA. Contact: Kathleen Carroll, Umass Extension, (413) 545-0895.

November 20 - "Landscaping for the 90's," IPM Conference, Holiday Inn, Toms River, NJ. Contact RCE of Ocean County, (732) 349-1246.

November 21, 1997 - "Landscaping for the 90's," IPM Conference, Holiday Inn, Saddle Brook. Contact: NJ Landscape Contractors Association, (201) 251-8033.

December 3, 1997 - Successful Ideas for Your Landscape Business, Masso's Crystal Manor, Glassboro, NJ. Contact: RCE of Gloucester County (609) 863-0110.

December 9-10 - NJ Turfgrass & Landscape Expo '97, Trump Taj Mahal, Atlantic City. Contact: (732) 821-7134.

Rutgers Symposium on IPM Research

Deborah Smith-Fiola, Ocean County Agricultural Agent

A November 20th symposium sponsored by Rutgers Cooperative Extension will present the latest innovations in Integrated Pest Management research and landscaping practices.

The day long seminar will feature experts on IPM landscape monitoring practices, "problem" soils, pesticide safety, ornamentals, turf endophytes and IPM marketing. This year's presentations include a demonstration on how commercial landscapers and nurserymen can use computer software to maintain plant health records.

The symposium will be held at the Holiday Inn, Route 37, Toms River, NJ, from 8:30 a.m. to 3:30 p.m. Anyone interested in receiving a registration form should call Rutgers Cooperative Extension of Ocean County, (732) 349-1246. The conference registration fee is \$50 before November 1st, and \$60 thereafter.

The morning session will begin with a presentation on IPM landscape monitoring practices by Purdue University entomologist Clifford Sadof. Dr. Sadof will demonstrate how computer software can help IPM landscapers monitor pests in order to prevent plant damage. This will be followed by a session on monitoring trees and shrubs while incorporating biological controls by Donald Gable of Alpine Nursery, Blauvelt, NY. The morning session will conclude with a presentation on long-term management of turf soils, natural fertilizers and soil amendments by Paul Sachs of North Country Organics, Bradford, VT.

The afternoon session will include presentations on pesticide safety by Rutgers Cooperative Extension of Union County agent Madeline Flahive and a talk by Dr. Sadof on calculating pest thresholds to determine if pesticide spraying is necessary. The afternoon will conclude with presentations on successful IPM marketing by Paul Marsan, a commercial landscaper from Swampscott, MA, and practical recommendations for using turf endophytes (fungi in turf which combats insects) by William Hlubik of Rutgers Cooperative Extension of Middlesex County.

This program will be repeated at the Holiday Inn in Saddle Brook on Friday, November 21st. The Saddle Brook event is sponsored by Rutgers Cooperative Extension of Bergen County and the New Jersey Landscape Contractors Association (NJLCA). For more information, call NJLCA at (201) 251-8033. □

Biological Control Conference

*Anna Greene, Program Associate
in Entomology*

A one-day conference entitled "Focusing on Biological Control for the Green Industry" will be held on Monday, November 17, 1997 at the University of Massachusetts in Amherst. The conference is intended for green industry professionals, Extension personnel, and other interested individuals who would like to expand their knowledge base and learn how to incorporate bio-control into pest management programs. Separate sessions are planned for nursery/landscape, turfgrass, and greenhouse floriculture crops.

The registration fee is \$95 before November 11, 1997 and \$115 at the door. The cost includes lunch and parking. To register contact Kathleen Carroll at UMass Extension. The phone number is (413) 545-0895. □

Rutgers Cooperative Extension - NJAES
U.S. DEPARTMENT OF AGRICULTURE
Rutgers - The State University of New Jersey
P.O. Box 231
Cook College
New Brunswick, N.J. 08903-0231

PLANT & PEST ADVISORY LANDSCAPE NURSERY & TURF EDITION CONTRIBUTORS

RCE Specialists and Staff

Raul I. Cabrera, Ph.D., Nursery Management
Bruce B. Clarke, Ph.D., Turf Pathology
Ann B. Gould, Ph.D., Ornamentals Plant Pathology
Joseph R. Heckman, Ph.D., Soil Fertility
James A. Murphy, Ph.D., Turf Management
George J. Wulster, Ph.D., Floriculture
Paula Shrewsbury, Ph.D., Ornamental & Turf Entomology
Richard J. Buckley, Coordinator, Plant Diagnostic Laboratory

RCE County Agricultural Agents and Program Associates

Atlantic, Charlene H. Costaris (609-625-0056)
Bergen, Joel Flagler (201-599-6162)
Burlington, Raymond J. Samulis (609-265-5050)
Camden, James Willmott (609-784-1001)
Cumberland, James R. Johnson (609-451-2800)
Essex, Jonathan H. Forsell (201-678-7988)
Gloucester, Jerome L. Frecon (609-863-0110)
Hunterdon, Winfred P. Cowgill, Jr. (908-788-1338)
Middlesex, William T. Hlubik (908-745-3443)
Monmouth, Richard G. Obal (908-431-7261)
Morris, Edmund Milewski (201-285-8300)
Ocean, Deborah Smith-Fiola (908-349-1246)
 Steven Rettke, Prog. Assoc. IPM
Passaic, Stanley Kamara (201-305-5742)
Somerset, Clare S. Liptak (908-526-6293)
Union, Madeline A. Flahive, Prog. Assoc. (908-654-9854)
Warren, William H. Tietjen (908-475-6505)

Newsletter Production

Jack Rabin, Assistant Director, NJAES
Cindy Rovins, Editor and Designer

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