

PLANT & PEST ADVISORY

LANDSCAPE, NURSERY & TURF EDITION \$1.50

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Guy wires left on tree trunks can “strangle” trees. Photo courtesy A. B. Gould

Common Injuries to Trees in the Urban Landscape

Ann B. Gould, Ph.D., Specialist in Plant Pathology and Mark C. Vodak, Ph.D., Specialist in Forestry

Each year we receive many inquiries about troubles with trees in urban settings. Everyone expects a certain amount of damage due to insects, diseases, and environmental factors such as drought or moisture stress; many of these are often unpredictable or unavoidable. Most tree injuries in the landscape, however, are caused by people. It is important to be aware of these injuries, how to prevent them, and of methods for keeping trees healthy.

The following are some of the more common injuries and suggestions for avoiding them.

Improper Planting

Many times trees are injured when improperly handled during planting or if planted at the wrong depth. Symptoms due to improper planting may occur soon after planting or not until several years afterward. Correct handling and planting techniques help to ensure survival of newly planted trees.

- Depending on tree species, plant in the early spring or fall.
- Prepare the planting hole properly so that roots are not cramped.
- Prevent roots from drying out before planting.
- Remove plastic and burlap wrapping on balled trees whenever possible. Plastic must be removed. Alternatively, after placing the tree in the planting hole, burlap should be loosened from around the trunk and/or cut away and removed from the top part of the ball, with the remainder left in place.
- Plant the tree at the same depth that it was growing in the nursery.
- Water immediately after planting (and periodically) for two seasons to maintain a moist, but not waterlogged, soil. Ideally, trees need about 1 inch of water every 7 to 10 days.
- Support the tree with rubber-protected guy wires attached to two sturdy stakes or poles. Support wires must be removed once trees roots have become established (usually within 2 years). Guy wires that are left on trees will eventually strangle the trunk.
- Mulch soil at the base of the tree to maintain soil moisture, control weeds, and minimize mower damage. Maintain mulching to a

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maximum depth of 2 to 3 inches. DO NOT pile mulch "beehive style" around the base of the tree – excessive mulch restricts aeration to the roots and keeps the trunk abnormally moist.

- Do not fertilize when planting; wait until about one year after planting.

Soil Compaction

Soil compaction around trees is caused by people, animals or pets, bicycles, and cars. Since compaction cuts off water and oxygen to tree roots, trees growing in such soils may decline and die. Design pedestrian and other traffic patterns to prevent soil compaction. Soils high in clay are more prone to compaction than are sandier soils.

Construction

Trees, like people, are easily disturbed by changes in their surroundings. It may be several years, however, before obvious symptoms appear. Construction of buildings and roads is a major cause of tree injury and loss.

- Although trunk injury can kill trees, it is root injury during construction that is most likely to kill trees.
- Prevent damage to trees near construction sites by fencing or otherwise protecting them from earthmoving equipment.
- Avoid the placement of excessive soil fills or impervious materials within the drip line (the entire area under the branches) of a tree. It is even better to protect an area several feet wider than the drip line. Since fill materials can cut off oxygen to plant roots, the extent of damage to roots is directly related to depth of material applied and the length of time it is allowed to remain.
- Alternatively, lowering the grade during construction or removing soil can also destroy plant roots.
- Carefully design and construct trenching for cable and water lines to avoid or minimize root damage.

Lawn and Garden Equipment and Chemicals

Use equipment carefully to prevent serious injury to tree trunks, branches, and roots. To prevent injuring trees accidentally with lawn mowers or weed-eaters, grass should be kept away from tree trunks. Mulches can be used as a "mower buffer."

Choose all pesticides wisely. Use all chemicals only in the precise manner described on the label. Remember that certain herbicides (weed killers) can kill trees, and many herbicides that are safe for grasses are not safe to use around trees. Check the pesticide label before applying any herbicide.

Recently transplanted trees are especially susceptible to herbicide injury. Avoid excessive use of commercial fertilizer-herbicide mixtures near trees.

Improper Pruning

Pruning every 2 or 3 years helps to improve tree vigor and maintains an attractive, natural shape. Pruning is also done to remove dead or diseased branches, and to remove branches near utility lines and buildings. Properly pruned trees can rapidly form callous tissue to compartmentalize injured tissues. Improper pruning, however, creates excessive wounding that reduces vigor and predisposes the tree to attack by diseases and insects.

- Pruning can be done any time of the year, but pruning some trees in the spring results in excessive sap flow or "bleeding" that is considered unattractive. Check with your local cooperative extension office or nursery for the best pruning time for the species in question.
- Prune living branches as close as possible to the trunk or connecting branch, without cutting the branch collar. Make a smooth cut.
- Remove broken tops and branches soon after storm damage or other injury.
- Prune diseased branches anytime during the year, but do so only during dry weather. To prevent disease spread, cut 6 to 8 inches below the affected tissue with surface sterilized pruning tools. To sterilize tools, dip them in denatured (70%) alcohol between cuts. Thoroughly wash and dry tools after use.

Treating Wounds

Properly cleaned and shaped wounds help prevent tree decay. Treat wounds by removing dead and torn bark tissue, then scribe and round the edges of the wound with a sharp knife. Although wound dressings have no proven healing value, commercial asphalt-based preparations specifically for tree wounds or orange shellac can be applied to wounds as a cosmetic treatment. □

TURF DISEASES FROM PAGE 3

Turf Expo

This year's Turf Expo will be held at the Trump Taj Mahal Casino/Resort on December 5-7, 2006. This is an excellent opportunity to receive the latest turf management information from nationally renowned speakers. For additional information, please contact Michelle Rickard (215) 757-6582 or e-mail njtadirector@yahoo.com or Marlene Karasik (732) 932-9400 ext. 339 or e-mail mkarasik@aesop.rutgers.edu. □

Diseases of Turfgrass

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

General

Dollar spot, gray leaf spot, rust, and stripe smut are all active at this time. Refer to recent issues of this newsletter for additional information about the identification and management of these diseases.

Stem and Crown Rust

These diseases are prevalent on susceptible Kentucky bluegrass and perennial ryegrass cultivars, respectively, at this time. As rust intensifies, affected turf prematurely yellows and orange pustules called uredia (reproductive structures) appear on leaf blades. To control both stem and crown rust, maintain adequate fertility and soil moisture, and apply Armada, Banner, Bayleton, chlorothalonil, Compass, Eagle, Headway, Heritage, Insignia, mancozeb or Tartan per manufacturer's recommendations.

Stripe Smut

This disease, caused by the fungus *Ustilago striiformis*, will soon develop on sensitive Kentucky bluegrass cultivars. Symptoms typically appear as long black streaks (striations) between the veins of infected blades. These areas eventually rupture releasing abundant black smut spores. Research at Rutgers has shown that one well-timed application of a systemic fungicide in early to mid-October offers excellent control and is, therefore, far superior to multiple applications in the spring (mid-May). For best results, apply Armada, Banner, Bayleton, Eagle, Rubigan, Tartan or thiophanate-methyl now per manufacturer's recommendations.

Take-all patch

This disease, caused by the root and crown infecting fungus, *Gaeumannomyces graminis* var. *avenae*, may redevelop on bentgrass greens and fairways during the next few weeks. Although this disease is most prevalent from April through June, late-summer and fall outbreaks are not uncommon. Infection takes place during cool, wet weather and symptoms are most striking after stress. Infected grass first appears bronze to reddish-brown in color and then fades to a dull brown. Patches are usually circular or ring-shaped and range in size from several inches to two feet or more in diameter. The centers of affected turf are frequently colonized by bluegrass (*Poa* spp.), fescue (*Festuca* spp.), or weed species. Upon close examination, decaying roots and leaf sheaths appear black and dark strands of mycelium often develop parallel to the root axes. The disease is enhanced by poorly drained, light-textured, and high pH soils. Although take-all is difficult to control, best results have been achieved through the use of acidifying fertilizers during cool weather (e.g., ammonium sulfate) and preventive applications of Banner, Bayleton, Headway, Heritage, Insignia, or Rubigan in October and November. If the disease has been particularly severe, fungicides should be reapplied twice next spring at 21 to 28-day intervals beginning in early April. Chemicals should be applied in 4 gal water/1000 sq ft or irrigated into the root zone (1/8 to 1/4" of water) for maximum effectiveness. Whenever practical, overseed infested areas with less susceptible grasses such as fine fescue, Kentucky bluegrass, or perennial ryegrass to mask symptom expression. Maintain soil pH at approximately 6.0 since the disease is enhanced in alkaline soils. Manganese (2 lb Mn/A), applied in early April, can help reduce disease severity in soils that are deficient in this micronutrient.

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Plant Diagnostic Laboratory Highlights

Richard J. Buckley, Laboratory
Coordinator

Turf

We have been waiting for a **Gray leaf spot** outbreak all summer and we finally got a sample with the disease. Gray leaf spot has been present on our turf farm in pockets here and there since mid-summer. We saw the disease early, and with the weather condition – heat, humidity, and rain - I started to hope for a huge outbreak. A single sample from a perennial ryegrass fairway on a Connecticut golf course was all we could get. There is still time, but my concern over a possible epidemic is waning. Overall, most turf areas look pretty good. In fact, keeping up with the mowing might be the primary problem faced by turf managers over the last two weeks. The laboratory did see a sample of **fairy ring** from a Warren County residential lawn and some **take-all** from a Pennsylvania golf course. Otherwise, pretty quite on the turf front.

Landscape

Red oak and pin oak with **bacterial leaf scorch** (BLS) are the main focus of the laboratory at this time. Symptoms on trees known to be infected are quite spectacular this year. **BLS** is a slow killer, so sadly we can watch the decline of large specimens over time. This week, the new samples with positive tests come from in Mercer, Middlesex, Essex, Somerset, and Union Counties. Other diseases and insect pests of note include: **horsechestnut leaf blotch** on a pair of Ocean County horsechestnuts; **tuliptree scale** on Magnolia from Long Island; **elongate hemlock scale** on hemlock from Bergen; and **phytophthora crown and root rot** on new spruce seedlings from a Sussex County tree farm. □

South Jersey Landscape Conference and Trade Show

This year's conference and trade show will be held on Thursday, November 30, 2006 from 8:00 A.M. to 4:00 P.M. at Masso's Crystal Manor in Glassboro.

The conference promises to be bigger and better. More time and space has been dedicated to visit with exhibitors between sessions. Registration will include both a continental breakfast and buffet luncheon, as well as a comprehensive educational program. A diversified program on both business management and plant science will be presented. Esquire Anthony Francioso will discuss written contracts and their legality for landscapers. Mr. Bob Bruch of the New Jersey Department of Agriculture will lead a discussion on the the new New Jersey taxes on landscape and green services. Detailed examples of taxable situations will be presented.

Jim Willmott of Rutgers Cooperative Extension (RCE) will discuss major pest problems and the effect of turf nutrition on their management. Steve Rettke also of RCE

will discuss the problems of controlling armed scales on landscape plants.

The popular landscape business panel on ideas to "Make your Business more Successful" will be led by landscape leaders Jeff Link, Virgo Landscaping and Nurseries LLC and Tom Fitzsimmons, Chuz Landscaping Inc. sharing their ideas with other landscapers. Other local landscapers will participate.

One Core Unit will be given as well as NJ pesticide units will be given to all New Jersey Pesticide Applicators. Certified Nursery and Landscape Professionals will also receive 5 credits for attendance.

Regular information is posted on the web at <http://gloucester.rce.rutgers.edu> including a detailed copy of the program. Pre-registration is required. Contact Jerry Frecon or Alice Rogers at (856) 307-6450 Ext. 1 for more information. □



Weekly Weather Summary

Keith Arnesen, Ph.D., Agricultural Meteorologist

Temperatures averaged near normal, averaging 62 degrees north, 65 degrees central and 66 degrees south. Extremes were 83 degrees at Hammonton, Pomona and Seabrook on the 18th, and 42 degrees at Charlotteburg on the 12th. Weekly rainfall averaged 2.65 inches north, 2.42 inches central, and 1.40 inches south. The heaviest 24 hour total reported was 4.14 inches at Toms River on the 15th to 16th. Estimated soil moisture, in percent of field capacity, this past week averaged 94 percent north, 87 percent central and 79 percent south. Four inch soil temperatures averaged 63 degrees north, 65 degrees central and 66 degrees south.

Weather Summary for the Week Ending 8 am Monday 9/18/ 6										
WEATHER STATIONS	RAINFALL			TEMPERATURE				GDD BASE50		MON %FC
	WEEK	TOTAL	DEP	MX	MN	AVG	DEP	TOT	DEP	
CANOE BROOK	1.64	28.13	-.05	80	45	63.	0	3060	570	96
CHARLOTTEBURG	2.40	32.41	3.96	78	42	62.	2	2594	617	94
FLEMINGTON	2.56	33.90	6.93	80	44	63.	-1	2912	359	96
NEWTON *	4.00	37.80	11.58	77	44	61.	0	2358	126	96
FREEHOLD	2.16	30.56	4.34	80	44	64.	-1	3004	298	95
LONG BRANCH	2.31	29.79	3.23	79	50	64.	-2	2948	298	92
NEW BRUNSWICK	1.67	27.66	1.04	82	47	65.	0	3135	292	96
TOMS RIVER	4.80	25.26	-1.89	80	47	65.	-1	3053	398	94
TRENTON	1.17	26.97	1.77	81	49	66.	0	3200	250	91
CAPE MAY COURT HOUSE	.57	18.07	-5.46	80	48	65.	-3	3130	458	71
DOWNSTOWN	1.11	24.26	-.47	82	47	65.	-2	2970	8	92
GLASSBORO	1.00	27.10	1.15	80	53	67.	0	3401	470	86
HAMMONTON	2.62	26.04	.11	83	47	66.	0	3325	386	89
POMONA	2.45	27.46	3.83	83	46	65.	0	3199	457	94
SEABROOK	.67	29.83	6.05	83	52	67.	0	3613	633	71
SOUTH HARRISON	.85	29.65	5.35	81	51	66	NA	3233	NA	NA
WES KLINE — GDD BASE 40 PINEY HOLLOW LAST WEEK 204 (Ending 9/11/06) THIS WEEK 177 (Ending 9/18/06)										
* SOME CUMULATIVE VALUES ESTIMATED DUE TO EARLIER MISSING DATA										

Recycle Your Drip Irrigation Tape Year-Round

If you're looking for a cost effective way to recycle your drip irrigation tape, then look no further. The Cumberland County Improvement Authority (CCIA) will continue to collect and recycle drip tape generated by New Jersey farmers in 2006.

This year-round agricultural plastics recycling program, started as a pilot project in 2005 through a grant provided by the New Jersey Departments of Agriculture and Environmental Protection, has been modified for 2006.

Mulch film, silage bags, peat moss bags, and other agriculture plastics will *no longer be accepted*. Quality control of the drip tape is the most important variable to a successful recycling program. Here are some guidelines to follow:

- Once the drip tape is removed, be sure to remove as much of the contaminants as possible (dirt, water, plant material, etc.). Excessive contaminants will cause the material to be rejected at the collection site. Minimizing these contaminants will lower your recycling costs.
- Drip tape should be rolled up and tied with drip tape only.
- Keep the material as dry as possible because moisture will add to the weight of the material and increase the cost of recycling to the farmer.
- Keep the drip tape as clean as possible - it will save you money on recycling costs.
- *Do not* place any other material in the collection bin except drip tape. If other material is commingled with the drip tape, the entire load will be rejected for recycling.

Collection Site Information:

Date: Collection runs year-round

Cost: \$30 per ton

Location: Cumberland County Solid Waste Complex

169 Jesse Bridge Road, Deerfield, New Jersey

Located off Route 55, Exit 29 (Sherman Ave., Route 552)

Time: Monday-Friday 7:30 a.m.-3:30 p.m. (Saturday by appointment only)

Contact: Dennis DeMatte, Jr., Recycling Coordinator, CCIA

Phone: 856-825-3700

- When entering the Solid Waste Complex, identify the material as drip tape. This is necessary since the CCIA also has a nursery and greenhouse film collection program and the drip tape must be stored in a separate area.
- Vehicles used to transport the drip tape are not required to be licensed by the NJDEP so long as the drip tape is transported directly to the collection site.
- Prior to delivery of the drip tape, all growers *must* establish an account with the CCIA or utilize a licensed solid waste hauler.

For additional questions regarding the recycling of plastics generated in agriculture, contact Karen Kritz, NJ Department of Agriculture, 609-984-2506 or e-mail Karen.Kritz@ag.state.nj.us. □

Rutgers Diagnostic Services

The following facilities are sponsored by Rutgers Cooperative Extension, the outreach component of Cook College and the New Jersey Agricultural Experiment Station and are located on the Cook College Campus in New Brunswick, NJ.

Plant Diagnostic Laboratory

The Rutgers Plant Diagnostic Laboratory is a full-service plant health diagnostic facility. The Lab's mission is to provide accurate and timely diagnoses of plant health problems for the residents of New Jersey.

The Lab provides plant health diagnostic services in cooperation with Extension faculty, staff, and other university personnel. The Lab serves residential and commercial clientele.

The Rutgers Plant Diagnostic Laboratory provides the following services:

- Disease and Insect Pest Diagnosis
- Plant and Weed Identification
- Insect Identification
- Fungus and Mold Identification
- Nematode Assays
- Screening for Acremonium Endophytes
- Fungicide Resistance Screening
- Other Services Available by Contract

For fees and instructions on how to submit samples, go to the web at:

<http://www.rcrc.rutgers.edu/>

plantdiagnosticlab or call the lab at 732-932-9140, fax 732-932-1270 or e-mail clinic@rce.rutgers.edu.

Rutgers Soil Testing Laboratory

The Rutgers Soil Testing Laboratory is a service unit that performs chemical and mechanical analyses of soils for the residents of New Jersey and for University research personnel. The mission of the Laboratory is to provide accurate and timely soil and water test reports to meet the increasing agricultural and environmental needs of the state.

For testing and fees provided for landscape, greenhouse and sports turf, go to the web at:

<http://www.rcrc.rutgers.edu/soiltestinglab> or call the Lab at 732-932-7000, ext. 4231 or e-mail soiltest@rce.rutgers.edu. Soil test kits are available through your county Rutgers Cooperative Extension office. □

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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 RCRE in your County.

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