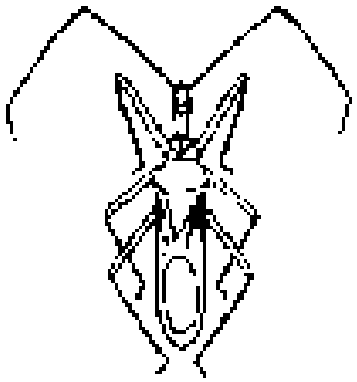
RUTGERS COOPERATIVE EXTENSION AT THE NEW JERSEY AGRICULTURAL EXPERIMENT STATION

PLANT & PEST ADVISORY

LANDSCAPE, NURSERY & TURF EDITION $1.50 AUGUST 7, 2003



INSIDE

IPM Basics: Rethinking Your IPM Focus

Steven K. Rettke, Ornamental IPM Program Associate

The standard definition of IPM is that it is a management concept that uses all available strategies to achieve acceptable pest control. The term *integrated pest management* was coined many decades ago and was originally defined as an applied pest control that combined cultural, biological and chemical strategies. Chemical controls were to be used only as necessary and in a manner that would be least disruptive to biological controls.

Unfortunately, many landscape services claim to provide IPM programs and yet depend on pesticides as the primary management method, with only the occasional consideration of the biological and cultural control possibilities. The improvements and advancements of biorational pesticides should continue to be used and promoted, but not at the expense of ignoring the appropriate biological and cultural strategies. (Remember: IPM does NOT equal Integrated *Pesticide* Management.)

Landscapers who want to provide high-level IPM programs may need to reevaluate their practices to determine if they are truly providing an integrated program. Information about chemical options abound, while often the information on the cultural and biological options are not emphasized enough. Many landscapers have taken the big steps toward monitoring properties and the selective use of pesticides (often biorational), but are still *not* using integrated controls to their fullest.

IPM practitioners that are managing a large estate or only a handful of separate properties can be especially successful with the intensive use of cultural and biological methods. They are typically at a site every day or at least several times a month and can spend the time required to establish cultural and biological practices. The cornerstone of a true IPM program should always be good horticulture.

The following is a summary of some important integrated strategies too often forgotten or not considered when managing turf and landscape plants. The six pest problems listed below were only selected at random and similar cultural/biological control options exist for many other pests. It needs to be emphasized that some of these strategies may not have major impacts when utilized alone. However, when implemented in combination they often provide valuable solutions. Pesticides can then be reduced and only applied when the other options fail.

SEE IPM BASICS ON PAGE 2

IPM Basics from page 1

1- **Azalea Lacebug:**

✔ When populations are low and plants are small, simply crush the bugs by pressing leaf parts together between the thumb and forefinger.

✔ Dislodge nymphs (no wings) with a strong jet spray of water (syringing). Many may not be capable of crawling back to suitable leaves to feed upon and will soon die.

✔ Azaleas are rarely excessively damaged by Lacebugs when watered sufficiently and planted in shady areas of the landscape. Lacebugs thrive in sunny locations.

✔ There are several beneficial insects such as spiders, lacewings, assassin bugs and the minute pirate bug that can be useful for reducing lacebug populations. Encourage and conserve these predators by avoiding unnecessary cover sprays with broad-spectrum insecticides. Syringing may allow time for beneficials to buildup, and keep damage to a minimum until significant predators arrive.

2- **Fireblight:**

✔ Pruning out blighted shoots during dry weather can go a long way in preventing future infections by the fireblight bacterium. Pruning during the late summer, fall and winter are considered to be the most effective seasons for most effective controls. Disinfect pruning tools between cuts.

✔ Nearby apple, crabapple, pear, quince, hawthorn and mountain ash should be examined for cankers. They may be producing bacterial spores that become windborne during the spring. These potential cankered plants should be inspected in both nearby wild or cultivated locations. Cankered wood should be removed when possible.

✔ Maintain soil pH between 6.0 and 6.5 around plants susceptible to fireblight (= rose family).

✔ Maintain adequate levels of soil potassium and increase when a deficiency is determined.

✔ High nitrogen fertility programs should be avoided on fireblight susceptible plants. Excessive nitrogen will promote more succulent growth that can lead to greater shoot infections.

✔ Plant susceptible pears and apples in fertile, well-drained soils since growth stops earlier in the season on dryer soils, making them less vulnerable to fireblight.

✔ The most important aspect in managing this disease is using plants with genetic resistance. All plants not in the rose family are resistant. Avoiding susceptible species and cultivars within the family is the key.

3- **Black Spot of Roses:**

✔ Gather and dispose of the fallen leaves (especially important in the fall). Remove infected, black spotted leaves throughout the season.

✔ In the spring, when frost is no longer a danger, remove all mulch around roses and rake ground thoroughly. This will allow the sun's rays to reach the exposed soil. When new growth begins in the spring, then apply new mulch.

✔ Mulch helps to reduce splashing raindrops from reaching leaves. Dry leaves will not support the fungus. Therefore, avoid overhead watering.

✔ When foliage is dry, remove infected leaves and twigs before new growth begins, since they likely harbor over-wintering fungus.

✔ Disease resistance is always the first line of defense. There are great volumes of information listing the resistance of different cultivars and varieties of roses to this fungus. However, be aware that some resistance claims are exaggerated.

4- **Chinch Bug:**

✔ Watering the turf is encouraged since this pest requires dry conditions for highest populations. Young nymphs lack protective body hairs and can easily be drowned. Moist conditions also encourage the spread of the lethal fungus *Beauveria* that can significantly suppress chinch bug levels.

✔ Endophyte enhanced perennial ryegrasses, fine fescues, and tall fescues are highly resistant to this pest.

✔ The hairy chinch bugs prefer hot, sunny lawns and their numbers can be discouraged by shading these areas with trees and shrubs.

✔ This pest will thrive in high thatch layers. Help prevent thatch buildup over one-half inch thick by core aerating, top dressing and avoiding excessive nitrogen.

✔ Big-eyed bugs can be good natural predators, however, the time lag in their population buildup will not prevent the early damage. The ore aggressive nematodes can provide suppression when applied with a silicone-type surfactant.

5- **Summer Patch:**

✔ Low mowing (below 2 inches) is a cultural practice that will increase the severity of this root fungus disease. On fine fescue and Kentucky bluegrass lawns, increase the cutting height to 3 inches during late spring and summer.

✔ Core aerification is critical in order to reduce thatch and compaction that are both important toward suppressing the symptoms of summer patch.

✔ Prevent the increase of soil pH above 6.5. Decreasing soil pH below 6.0 will actually suppress this fungus. The use of acidifying sulfur coated urea or ammonia sulfate fertilizers will lower pH levels over time. Avoid quick release urea fertilizers. The bulk of the fertilization should be applied during the fall months. Avoid nitrogen applications during the late spring and summer months.

✔ Avoid deeper watering during the summer season when the midday sun is at its hottest. Moist soil temperatures (upper 2 inches) can be elevated 5 to 10 degrees above air temperature since water conducts heat very

See Summer Patch on page 4

Bacterial Leaf Scorch of Oak

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

Late August to early September is the time we usually begin to spot **Bacterial leaf scorch (BLS) of oak** in certain areas of New Jersey. As its name suggests, the primary symptom of this disease is a marginal scorch of affected leaves. BLS is caused by *Xylella fastidiosa*, a bacterium that lives and multiplies in the xylem of affected trees. The bacterium induces moisture stress in the host by inducing the production of gums that block xylem vessels. This moisture stress causes the leaf scorch and subsequent branch dieback and tree decline.

Symptoms

The marginal leaf scorch caused by *X. fastidiosa* is not clearly defined and is easily confused with scorching due to environmental stress. On oak, scorch symptoms are often irregular in shape, and frequently a dull red or yellow band is apparent between healthy and scorched (necrotic) tissues. These symptoms usually occur in mid-August to leaf fall 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. The process of tree decline may occur quickly or slowly depending on the tree or the environment.

Disease Incidence

BLS of oak is one of several shade tree diseases caused by *X. fastidiosa*; the pathogen also affects American elm, sycamore, London plane, red mulberry, red maple, and sweet gum. Furthermore, the bacterium resides in a wide variety of other plants (called alternative hosts), many of them weeds, without causing visible symptoms of disease.

BLS occurs throughout the eastern, southeastern, and mid-western United States and in Texas. In New Jersey, BLS affects populations of oaks (mostly red and pin oaks) in most counties, but is most troublesome in certain sections of Burlington, Camden, Gloucester, Salem, Mercer, and Middlesex Counties (Figure 1). In some cases, up to 30% of street tree and landscape oaks are symptomatic for this disease. Incidence of BLS in other oaks and other shade tree species in New Jersey is rare.

Disease Spread

Xylella fastidiosa is spread (or vectored) from tree to tree by xylem-feeding insects such as **sharpshooter leafhoppers** and **treehoppers**. These insects subsist on the fluid within xylem vessels and pick up bacteria when feeding on infected trees. When an insect carrying the bacterium subsequently feeds on a healthy tree, the new tree becomes infected. Both nymphs and adults can spread the disease; adults remain infective for the remainder of their life, nymphs are infective only until their next molt. The particular species of insects that spread *Xylella* to oaks and other shade trees is currently unknown.

Diagnosis

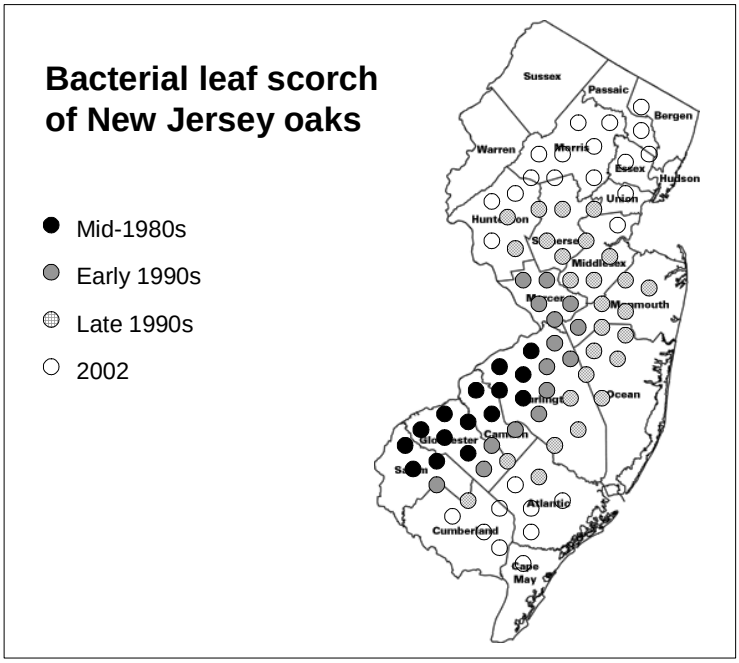
Xylella fastidiosa was not recognized as a pathogen of landscape trees until the early 1980s, and its symptoms are very similar to those caused by other agents. It is not surprising, therefore, that the disease is frequently misdiagnosed. When trees are suspected of being infected with the leaf scorch bacterium, it is best to submit a small branch specimen (pencil-width in diameter), with scorched leaves attached, to the Rutgers Plant Diagnostic Laboratory for analysis. Diagnosticians will identify this disease by looking for the bacterium in xylem fluid or through the use of selective antibody (ELISA) techniques. Proper sampling is necessary for an accurate diagnosis; the best samples have leaves that are symptomatic for the disease.

Management

Residents, landscapers, arborists, and golf course superintendents in New Jersey should look for BLS of oak from late August until mid-October. Since there is no cure for this disease, proper management strategy includes the maintenance of tree vigor for as long as possible. If possible, water affected trees during times of water stress to reduce the debilitating affects of this disease. In addition, other diseases, insects, and environmental stresses (including drought) enhance the development of bacterial leaf scorch. This disease may also

See Bacterial Leaf Scorch on page 4

Figure 1. Distribution of bacterial leaf scorch of oak in New Jersey from 1986 to 2002.



SUMMER PATCH FROM PAGE 2

well. Elevated soil temperatures will increase the severity of summer patch infection. Maintain deep irrigation in the early morning hours to prevent drought stress.

✔ Use resistant varieties of Kentucky bluegrass and fine fescue. Tall fescue and perennial ryegrass species are resistant to summer patch.

6- **Crabgrass:**

✔ Avoid attempting to establish turf during the spring, when crabgrass is germinating. Crabgrass germination occurs when the surface soil temperature reaches 53°F.

✔ Avoid core aeration or verticutting during the spring period when crabgrass is germinating.

✔ Raise mowing height when crabgrass seed is germinating in the spring. Do not scalp the lawn, since this stops root growth. Crabgrass will then be able to out-compete the desirable grasses.

✔ Lower the mowing height slightly in the fall when crabgrass is setting seed. Also, collect the grass clippings at this time.

✔ Do not apply soluble nitrogen during the hottest weeks of summer when crabgrass is most aggressive.

Sources: *Managing Turfgrass Pests. Thomas L. Watschke (1995); & Woody Ornamental Insect and Disease Fact Sheet Set. David J. Shetlar and James A. Chatfield, OSU Extension (1992.)* ❑

BACTERIAL LEAF SCORCH FROM PAGE 3

predispose infected trees to other disease and insect problems. Branches and infected trees in a severe state of decline should be routinely removed, as they are potential hazards. Expensive tree injections reduce symptom development, but do not cure the disease and must be repeated. In areas known to be affected by this disease, plant trees that are not known hosts of the bacterium. ❑

Diseases of Turfgrass

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

General

Pythium blight, **brown patch**, **dollar spot**, **anthracnose**, **summer patch**, **slime mold**, and **crown rust** are all active at this time**.** Refer to recent issues of this newsletter (www.rce.rutgers.edu/pubs/plantandpestadvisory) for complete disease control information.

Anthracnose

This disease, caused by the fungus *Colletotrichum graminicola*, continues to be reported on annual bluegrass, fine fescue, perennial ryegrass, and Kentucky bluegrass. The fungus typically attacks turf growing under low soil fertility and/or heat or drought stress. Low cutting height and traffic can also enhance symptom development. To identify **anthracnose** in the field, look for small black fruiting bodies (acervuli) with protruding black spines. For best results, increase turf vigor with frequent, light applications of nitrogen, maintain adequate irrigation, reduce thatch, and raise the cutting height (whenever possible). Although most effective when applied on a preventative basis, Banner, Chipco Signature, chlorothalonil, Compass, ConSyst, Eagle, Endorse, Heritage, Medallion, Rubigan, Spectro, or thiophanate-methyl can also be sprayed on infected turf to enhance symptom remission. In some cases, Prostar may enhance the severity of this disease therefore, restrict the use of this product to sites that do not have active infections. Note: resistance has been reported at some locations for the QoI (Strobilurin) and benzimidazole fungicides, so alternate among different fungicide chemistries for best results.

Brown Patch

This disease, caused by the fungus *Rhizoctonia solani*, is very common on tees, greens, and home lawns due to the extended hot, humid weather. To reduce the incidence and severity of **brown patch,** avoid nitrogen applications during warm weather, irrigate between midnight and 8 a.m. to reduce the period of leaf wetness, and spray turf with Chipco 26GT, chlorothalonil, Compass, ConSyst, Curalan, Eagle, Endorse, Heritage, mancozeb, Medallion, Prostar, Spectro, thiophanate-methyl, or Touche per manufacturer's recommendations.

Gray Leaf Spot

Gray leaf spot has developed recently on perennial ryegrass in the Mid-Atlantic States. Symptoms start as tiny brown leaf and stem lesions covering 1 to 2 inch patches. In severe cases, the leaves curl and lesions may extend the entire width of the blade. As the disease progresses, patches coalesce into large (one to two feet) areas of blighted turf. Extensive foliar blighting may occur during warm (75-85^{0}F days and 60-65^{0}F nights), wet weather. Newly established seedlings are more susceptible to infection than mature plantings. When conditions are conducive to infection, the causal agent (*Pyricularia grisea)* produces abundant one to two-celled, pear-shaped spores (conidia). For best results, avoid high rates of quick release nitrogen sources during July and August and extended periods of leaf wetness (i.e., water in the early morning hours). Fungicide studies conducted in New Jersey, Georgia, Maryland, and Kentucky have shown that Heritage, Compass, and thiophanate-methyl (e.g., Cleary 3336) were most effective when applied on a preventive basis every 14 to 28 days beginning in mid to late-July. Chlorothalonil and the DMI fungicides, such as Banner and

SEE TURF DISEASE ON PAGE 5

TURF DISEASE FROM PAGE 4

Bayleton, have also provided effective control when disease pressure was moderate. Combination products containing chlorothalonil and thiophanate-methyl (e.g., ConSyst and Spectro), or chlorothalonil and mancozeb (e.g. Zyban), have also performed well in field trials.

Slime Mold

Although not actually a disease, inquiries continue to be received about the appearance of tan to black colored material 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. Upon close examination, these mysterious structures have been 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.

Summer Patch

Summer patch has started to appear on Kentucky bluegrass, annual bluegrass, and fine fescues during the last week. To control existing infections, apply Banner, Bayleton, Compass, Eagle, Heritage, Rubigan or thiophanate-methyl in 4 to 5 gal of water/1000 ft^2. 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 not present) and improved drainage will also aid in disease suppression. Soil pH should be maintained at or slightly below 6.0 for optimum disease control.

Anthracnose Basal Rot Field Research Tour

Be sure to attend a **special research tour** at Ridgewood Country Club (96 West Midland Avenue, Paramus, NJ) on **August 18, 2003 at 9 AM** on the practice putting green adjacent to the clubhouse. Participants will have an opportunity to observe an on-going study designed to evaluate a broad range of fungicides for their ability to prevent **anthracnose basal rot** on a bent/poa practice putting green. This is a large study utilizing fungicides at different rates and timings from twelve different chemical classes. Currently, selected fungicides from six chemistries are providing good to excellent disease control. This is a collaborative research project conducted by Dr. Bruce Clarke and Dr. James Murphy (Rutgers University) and Mr. Todd Raisch (Superintendent, Ridgewood CC). Anthracnose basal rot, caused by the fungus *Colletotrichum graminicola*, is an extremely destructive disease of turf maintained at green and tee height. Since little is known about its etiology and management, this is an excellent opportunity to observe the symptomology and control of a disease of increasing importance in the tri-state area. A data summary will be provided.

This research is co-sponsored by the Rutgers Center for Turfgrass Science, Rutgers Cooperative Extension, The Tri-State Research Foundation, The Golf Course Superintendents Association of New Jersey, and the New Jersey Turfgrass Foundation.

Directions to Ridgewood Country Club: Take Route 4 East or West to Route 17 North. Take the 2nd Midland Avenue exit (the exit is just past the Midland Avenue overpass). Travel approximately ½ mile to the club entrance on the left. Follow signs to the clubhouse. The research plots are located on the practice putting green directly behind the clubhouse.

Rutgers Turf Field Days a Success

Over 600 turf managers enjoyed the Rutgers Turf Research Field Days last week at the Adelphia and North Brunswick research stations. This was a record turn out and highlighted the growing interest among turf managers in the Rutgers Turfgrass Program and its expanding number of basic and applied research projects. Mark your calendars now for next year's field days. In 2004, the Landscape Turf Research Day will be held on Wednesday, July 28 at the Plant Science Research Farm in Adelphia, NJ, and the Golf Turf Research Day has been set for Thursday, July 29 in North Brunswick, NJ. Further details will be announced next spring. ❑

New Jersey Pesticide Applicator Website Keeps You Current

Patricia Hastings, Program Associate, Pest Management

Not sure if you are in compliance with the new pesticide applicator regulations? Check out the Rutgers Cooperative Extension Pest Management Office 'Pesticide Applicator Training' web page at: http://www.pestmanagement.rutgers.edu/PAT. The purpose of these pages is to provide information and tools to meet the November 2001 licensing requirements for New Jersey commercial and private applicators. It is a good resource for those seeking a license for the first time, as well as those that wish to keep their certification and license current. Commercial applicators such as landscapers can find out the details on the extensive on-the-job training and basic pesticide course now mandatory for new applicators and operators.

For licensed applicators, it offers the current schedule of recertification training courses in New Jersey. Further, there are links to easy-to-use templates for required pesticide application record forms. These templates incorporate all of the 'new' record-keeping requirements of the revised regulations. Remain in compliance with these easy-to-use tools. ❑

Plant Diagnostic Laboratory Highlights

Richard J. Buckley, Laboratory Coordinator

Turf

Anthracnose remains the most common submission from golf turf this period. Samples of golf greens diagnosed with anthracnose have been sent to the laboratory from Pennsylvania, New York, and several New Jersey counties. There is no trend in the submissions with samples coming from both the lower end, high round golf courses, and the high end, "need for speed" courses. Stress is stress and at this point a little **anthracnose** is just par for the course. The other disease of note from all turf areas this week was **brown patch**. Casual observations of home lawns indicate the disease is rampant. Several samples were submitted from local golf courses as well. The fungus *Rhizoctonia solani*, the cause of **brown patch**, is a very effective leaf blighter during periods of high humidity, adequate rainfall, and warm temperatures. Fortunately, the same conditions that are stimulating the fungus are also stimulating the grass. Most turf areas are growing so well that the damage from the **brown patch** is minimal. Finally, this week we got two samples of golf greens with very active **slime molds**. One was bright yellow and the other gray. **Slime molds** are not pathogens. They simply use the grass blades to support their fruiting bodies. The best solution is to keep the greens dry and mow them up.

Landscape

The most exciting thing this week in ornamentals was the first positive sample of **bacterial leaf scorch**. A red oak from Trenton, a known positive tree that we have been monitoring, tested positive yesterday for the disease. The leaf scorch symptoms were very subtle, but evident up close. Obviously, drought is not an issue this summer, so any scorching you see at this time might be due to **bacterial leaf scorch**. Samples with **shade tree anthracnose** continue to trickle into the laboratory. Most trees that were defoliated earlier in the year from **anthracnose** should have a nice new set of leaves by now. Several sycamores near my house that looked "dead" in June appear perfectly healthy now. The samples we are seeing at this time are all oaks. Infected oaks may not defoliate as readily, so symptomatic leaves would persist through the season. **Oak anthracnose** can also be confused with **bacterial leaf scorch** infected trees, so be careful with your diagnostics. Also of note, **Dogwood anthracnose** was identified on a dogwood from Bergen County. ❑

Nursery Twilight Meeting

Tuesday, August 19, 2003
4:30 to 8:00 p.m.
Rutgers Cream Ridge
Fruit Research Station
Cream Ridge NJ

This program is sponsored by Rutgers Cooperative Extension of Mercer and Monmouth Counties in cooperation with the New Jersey Nursery and Landscape Association.

Agenda:

4:30 Registration and Dinner (Sandwiches, Salads and Beverages)

5:30 Welcome, Carl Nordstrom, NJNLA

Ornamental IR-4 Research, Tom Freiberger, Farm Supervisor, Rutgers Cream Ridge Fruit Research Station

New Technology-Vibratory Root Balling Machines, George Leidig, Autrusa/Imants USA

Pesticide Regulation Update and Info on Beneficial Insects, Dr. George Hamilton, Specialist in Pest Management, Rutgers Cooperative Extension

Nursery Disease Diagnosis, Rich Buckley, Plant Diagnostic Laboratory, Rutgers Cooperative Extension

Nursery Irrigation Issues, Jim Johnson, Agricultural Agent, Rutgers Cooperative Extension of Cumberland County

Oriental Beetle Research, Dr. Jim Lashomb, Research Professor, Cook College Department of Entomology

8:00 Adjourn, Pesticide Credits

COST: Free!
Pesticide License Recertification Credits: (Anticipated) Core-1, PP2-3, 3A-3
To register, call Rich Obal, Agricultural Agent at Rutgers Cooperative Extension of Monmouth County at (732) 431-7260 by Friday, August 15, 2003.
Pre-registration is required, **deadline is August 15, 2003.

Weekly Weather Summary

Keith Arnesen, Ph.D., Agricultural Meteorologist

Weather Summary for the Week Ending 8 am Monday 8/ 4/ 3

	RAINFALL			TEMPERATURE				GDD BASE50		MON
WEATHER STATIONS	WEEK	TOTAL	DEP	MX	MN	AVG	DEP	TOT	DEP	%FC
BELVIDERE BRIDGE	1.98	27.62	7.43	89	59	74.	1	1721	74	100
CANOE BROOK	1.61	27.26	5.98	89	59	75.	1	1781	138	94
CHARLOTTEBURG	2.54	29.07	7.61	87	59	75.	3	1361	83	100
FLEMINGTON	1.05	28.68	8.08	88	57	75.	1	1676	-13	87
LONG VALLEY	.86	24.02	1.93	82	58	71.	-1	1276	-180	86
NEWTON	1.58	24.32	4.61	86	57	72.	0	1540	46	99
FREEHOLD	1.66	23.60	3.61	90	55	75.	0	1825	16	91
LONG BRANCH	2.66	26.35	6.43	85	60	73.	-2	1663	-68	89
NEW BRUNSWICK	.28	25.65	5.66	89	59	76.	2	1780	-115	72
TOMS RIVER	.97	23.25	2.71	88	58	75.	1	1797	63	65
TRENTON	1.22	22.59	3.38	88	60	75.	-1	1756	-219	83
CAPE MAY COURT HOUSE	.77	19.58	1.89	86	61	74.	-2	1741	-107	39
DOWNSTOWN	.39	21.89	3.19	89	58	75.	-1	1852	-135	47
GLASSBORO	.48	23.03	3.35	87	63	76.	0	1973	12	61
HAMMONTON	.09	19.06	-.68	89	58	76.	0	1936	-24	25
POMONA	.74	20.64	2.79	88	59	75.	0	1802	-28	44
SEABROOK	1.07	23.78	5.72	86	64	76.	0	2026	32	70
SOUTH HARRISION	.36	22.04	2.20	87	61	75	NA	1953	NA	NA

WES KLINE — GDD BASE 40 PINEY HOLLOW Last Week 263 (Ending 7/28/03) This Week 249 (Ending 8/4/03)

Landscape IPM Manual Available

Landscape IPM: An Alternative Approach to Traditional Landscape Maintenance

This comprehensive 258-page manual includes detailed chapters filled with information from Rutgers Cooperative Extension professionals and others in the field. The easy-to-read text spells out the steps needed for getting started in Landscape IPM, while dozens of figures, drawings and examples help illustrate these practices.

Here is just a sampling of some of the items you'll find in the manual:

- Employee Training: is it Worth it?
- Guide to Insect Pests by Host Plants
- Pest Appearance & Management Timetable
- Growing Degree Days for Key Pests
- Pheromone Traps
- Sample IPM Monitoring and Reporting Forms
- Decision Making Guidelines for Monitoring Beneficial Insects
- Effective Use of Biological Controls
- Turfgrass IPM
- Marketing
- Customer Education

The Manual is available for $10, postage included. Send checks payable to Rutgers, the State University of New Jersey to:

Rutgers Cooperative Extension
Publications Distribution
16 Ag Extension Way, OTC Bldg.
Cook College
New Brunswick, NJ 08901-8551

Rutgers Plant Diagnostic Lab

The Plant Diagnostic Lab 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

Most samples (except fine turf)
$30 in-state
$75 out-of-state

Fine and sports turf
In-state:
$65 per sample
$100 disease and nematode assay
Out-of-state:
$95 per sample
$150 disease and nematode assay

For further information, visit us on the web at:
http://www.rce.rutgers.edu/plantdiagnosticlab

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Pesticide User Responsibility: Use pesticides safely and follow instructions on labels. The pesticide user is reponsible 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.

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