

PLANT & PEST ADVISORY

LANDSCAPE, NURSERY & TURF EDITION \$1.50

MAY 19, 2005



INSIDE

Developing an IPM Program for Your Landscape Company 1

Plant Diagnostic Lab Highlights 3

Managing Poa Trivialis and Poa Annua 4

Diseases of Turfgrass 4

Diseases of Landscape Ornamentals 5

Updated Recs 5

Canada Goose Management Options for Grounds Managers, Part II 6

Weekly Weather Summary 7

Developing an IPM Program for Your Landscape Company

Steven K. Rettke, Ornamental IPM Program Associate

Changing a landscape company's philosophy from traditional plant management methods to the use of Integrated Pest Management can be a troublesome procedure. Landscape IPM involves scientific decision-making and requires more written records than traditional methods. To help make this transition easier, a written implementation manual is a good idea. This article provides a sample skeleton outline of what a typical IPM implementation manual might contain.

Develop a Field Manual

Landscape IPM methods require site-specific information. Every landscape typically contains at least several key pests, key plants and key locations that will be unique to each site. These concepts are extremely useful in order to simplify monitoring procedures at any given site. They will enable field technicians to concentrate on plants and locations that are prone to problems as well as those plants and locations that have low aesthetic thresholds.

The potential control strategies of problems at each site need to be considered. Will cultural or biological methods solve the problem or are pesticides necessary? Solving problems with cultural or biological solutions should always be the first line of defense with all IPM programs. When they become necessary, a list of preferred pesticides should be listed for each specific problem. *Provide written records of this information for each site!*

Establish a Monitoring Calendar and Time Schedule

Many pest problems (insects/mites & diseases) are mostly host specific. As a result, many potential problems on specific plant species can be predicted to occur during certain times of the year. To help further refine scouting activities, a monitoring calendar for each site can be established that will contain the time of the season key pests may occur on the key plants. This information will determine the time of year when monitoring visits for individual sites will be most beneficial and how often the visits are required.

The classic IPM time schedule for ornamental monitoring usually involves one late winter or dormant visit. During the first half of the growing season (late April to mid-July), monitoring visits should ideally

SEE IPM PROGRAM ON PAGE 2

IPM PROGRAM FROM PAGE 1

be done at two-week intervals. During the second half of the season, monitoring intensities typically can be reduced to perhaps one visit per month.

A more customized monitoring schedule is often less rigid than the classic schedule and can be more practical. A customized monitoring schedule can be determined by the customer's needs based on the site and what the customer can afford. Furthermore, the first hand experience of the field technician working on the site should help determine how often the site needs to be visited during the year. ***Provide written records of this information for each site.***

Develop an Estimating Sheet

Landscape IPM programs have a reputation of being more expensive to implement than do traditional landscape management methods. IPM programs do have a tendency to be more expensive primarily because of the greater emphasis given to cultural management strategies (pruning, mulching, irrigation, site amendments, IPM appropriate design/redesign, etc.). To keep IPM programs more price competitive, the IPM related services could be charged separately. Their cost would be in addition to the standard fee established for monitoring and decision-making.

The price of an IPM program is generally based on how much time will be required for each monitoring visit. Monitoring time estimates are subsequently based on the size of the property and the number of key plants and key locations present at the site (e.g., there are specific time estimates that have been calculated and can be used as guidelines). Possible spray costs, the number of monitoring visits necessary and the travel time to the site all require consideration when estimating an IPM fee. ***Provide written records of this information for each site.***

What to Emphasize and Discuss on the Initial Visit

When initially introducing an IPM program to a potentially new client or to an existing client it needs to be determined how much they want to be educated on IPM. Obviously, not all landscape clients are the same and although some will express great interest in the IPM approach (they will probably be the most loyal clients), others will only desire that their landscapes are aesthetically pleasing and are not overly concerned how the desired results are achieved. Hence, less time should probably be devoted to attempting to educate this latter client on IPM methods.

Ideally, a pre-written brochure that briefly explains the concept of IPM and gives an outline of the proposed program should be distributed to clients. The brochure should mention that landscape IPM programs provide monitoring services and knowledgeable decision-making abilities. The brochure could also state that IPM methods provide superior results over traditional landscape management methods that rely exclusively on calendar cover sprays.

During the initial visit, a rough site map could be prepared and later formalized if the customer purchases the IPM program. Site maps can be an excellent way to show off your knowledge to a potential client. Photocopied maps can also be a convenient method of maintaining monitoring records.

Develop a Record Keeping System

Most importantly, an on site work sheet for the scouts to use each visit needs to be designed. During every monitoring visit, descriptions of particular problems or concerns observed need to be recorded as well as the recommended actions. How a monitoring technician records the information has important practical implications. Extensive narrative records may contain a great deal of information, but will they be too time consuming to write and too awkward to organize. Good records need to be simple and fast and most importantly, need to be useful. Pre-written check-off forms that identify common plants and the problems that commonly afflict them can be a simple but effective type of record keeping. When using a computer to store monitoring information, a letter and number code system works well. For example, numbers can identify specific plant species and letters can represent specific problems. Other combinations of letters or numbers can identify actions taken to solve problems and their evaluations. A potential problem with this method may be finding the time and labor to enter the observations into the computer. The efficient use of palm computers in the field may solve this problem if data entry is fast and easy. ***Remember, one of the fundamental differences between traditional plant management and landscape IPM is the use of written records. Written records will improve monitoring efficiency and improve decision-making.***

Finding Personnel Who Will Implement an IPM Program

Finding personnel who have monitoring skills is possibly the most difficult task a landscape company must encounter when first attempting to develop an IPM program. Successful IPM monitoring requires a certain minimum level of knowledge and experience by the field technician. Often times, observant landscapers (i.e., turf managers, arborists, etc.) will naturally develop important IPM monitoring skills over several seasons. Since such knowledge does not happen overnight, it is suggested that a company first developing IPM services should start slowly and only offer them to 5-10% of their client base (this conservative beginning also has financial implications). Hiring experienced IPM practitioners outside the company will probably require higher starting salaries, but may be the fastest way to get an IPM program off and running. And once in place, the monitoring personnel should have access to reference materials. The establishment of a library of books, magazines, and other publications are important so IPM practitioners can

PERSONNEL ON PAGE 3

keep up on the latest information available. Landscape IPM involves cutting edge information and therefore the continuing education of the practitioners is necessary.

Ideally, experienced and well-educated IPM scouts will establish a long employment history with a company. When valued IPM scouts do leave a company, then the established written records become especially important. Otherwise, if written records were not kept, then all of the information that was accumulated over time at the various sites will be leaving together with the lost employee. **Monitoring and written records are the backbone of any landscape IPM program.**

IPM Spray and Monitoring Equipment

Pesticide treatments within a landscape IPM program are applied selectively and precisely to plant material. Backpack and handheld sprayers are useful IPM equipment that can apply pesticides accurately within a limited area. Backpack sprayers can be especially convenient during monitoring, since both hands are free to inspect plants and record information. When low volume pesticide treatments are required, treatments possibly can be made immediately, hence saving steps and time. When larger spray volumes are necessary, it is important to have spray rigs that provide multiple tanks. For instance, a single 500-gallon tank does not give the desired flexibility required within a landscape IPM program. Ideally, at least three (3) spray tanks should be available for use by the IPM practitioner. Increasing the number of spray tanks to at least three expands the selection of pesticides that can be used. Although IPM does **not** mean "integrated pesticide management", it is certainly important to expand pesticide choices when managing problems.

There are numerous tools and gadgets that are available for use by the IPM practitioner, with many of them being non-essential equipment. It sometimes appears that these gadgets with their fancy dials and gauges are purchased to mostly impress clients. Although there is nothing wrong with a company buying equipment for this purpose, it is important to have available the basic, but essential IPM monitoring equipment.

The list of a half-dozen essential IPM monitoring tools that should probably be carried with scouts as they monitor the landscape: A 10-15X **hand lens** should always be used during every monitoring visit (Never walk the landscape without a hand-lens). A lot of valuable information cannot be observed without the use of magnification. A **beating tray** needs to be used often during monitoring. Determining population densities of mites, lacebugs, leafhoppers, aphids, thrips, etc., are easily determined through the use of a beating tray during regular monitoring visits. **Soil probes** and **hand trowels** are invaluable tools to obtain information about soil conditions and the health of plant roots. **Hand-pruners** and a **pocketknife** are used constantly to remove small insect populations, prune-out damaged twigs or small branches, or investigate cankers and borer activity. And finally, although often not thought of as tools, the all-important monitoring forms and pen are required to record information on site.

Reference: Presentation Outline, "Designing and Implementing an IPM Program for Your Company;" Bob Way, former Rutgers Landscape IPM Program Associate (1995). □

Plant Diagnostic Laboratory Highlights

Richard J. Buckley, Laboratory Coordinator

Turf

Winter turf diseases still cling to life on golf courses in the tri-state area. **Pink snow mold** continues to flare-up every few days in the northern part of the region in tandem with periods of cool, wet weather. Careful with the **snow mold** diagnostics – two superintendents swore they had **Pythium blight** that turned out to be **snow mold** when the turf got into the laboratory. The fungus that causes **pink snow mold**, *Microdochium nivale*, produces huge numbers of conidia that are dragged all over by the mowers. Some pathologist refer to the disease as **Fusarium patch** at this time of year. **Pink snow mold** was diagnosed on several turf samples from Connecticut golf courses. We also had a number of samples with poorly performing grass that were free of diseases and insect pests. The turf was thin, yellow, or purplish in color and consisted of cold, slow growing grass. Once the turf got into the laboratory incubators the grass took off. We assume that once we finally get consistent warm weather the grass will take off in the field as well. Be patient. It might not be in your best interest to add fertilizer to "jump start" the grass. Stick to your program. As soon as we get some proper weather, the grass will grow.

Ornamentals

A number of Japanese red maple samples were sent to the laboratory this week. In each case, the submitter diagnosis was **Verticillium wilt**. **Verticillium wilt** is a problem of maple, but is not as common as most plant managers think. One of the plants, from a Long Island landscape, actually had the disease. It took two submissions, but once the proper plant tissue got to the laboratory, the fungus was easily isolated. A proper sample for **Verticillium wilt** diagnosis must include branches showing greenish-brown streaking of the cambium. The rest of the maples were diagnosed with **canker diseases** caused by the fungi *Cytospora* and *Phomopsis*. Speaking of *Phomopsis*, a sample of vinca from Salem County was diagnosed with **canker and dieback** caused by the fungus *Phomopsis livella*. **Phomopsis canker and leaf blight** was identified on holly that was submitted from a Burlington County landscape. Last, but not least English ivy from Camden County had **anthracnose** and **Phyllosticta leaf spot**.

Greenhouse and nursery

Several samples of Rhododendron from an Ocean County nursery were diagnosed with various **leaf diseases** caused by the fungi *Pestalotia*, *Cercospora*, *Phyllosticta*, and *Botrytis*. Some of these samples had evidence of **black vine weevil** and **rhododendron midge** feeding. They also exhibited lots of **winter desiccation**. Quite a mess down there! □

Managing Poa Trivialis and Poa Annua

James A. Murphy, Ph.D., Specialist in Turfgrass Management

Q: We have had an explosion of inquires and samples of poa trivialis and poa annua in high maintenance residential blue grass lawns this spring. Any thoughts on management and control?

A: While cool wet weather of the last two years certainly contributes to the problem of Poa annua and Poa trivialis infestations, these grassy weeds have been a problem in landscape turfs for many years. What we are seeing now is that the scope of the problem has expanded largely due to the substantial increase in acreage of high quality turf being installed and managed on residential properties. Thus, the number of complaints regarding these weeds has increased. There are certainly a number of other issues (including weather) that contribute to this problem, but it is important to recognize that these weeds have been a challenge for quite some time and will not "go away" easily or quickly if there is a dry warm summer.

Those are tough grassy weeds for residential turf. There aren't effective selective herbicides choices available, thus recommendations are limited to cultural techniques. Unfortunately, the cultural techniques are not popular (see below for explanation).

If (and this is a big if) a property owner were willing to fertilize minimally, mow at 3 inches or higher, and let the turf dry out in the summer (go dormant), one could expect a significant reduction in the population of annual bluegrass and probably Poa trivialis. Several years of this type of management may be needed in some cases to decrease the population to a very low level. As you might expect, there is a substantial period of unattractive turf, which is not popular with many property owners and is rarely implemented. We have taken this approach many times over the years in our research plots that develop infestation of Poa annua and the results are usually very good. Where we don't do this, the infestation in our research plots becomes progressively worse with each year.

Another non-chemical option which is shorter-term involves sod cutting and physically removing the infested areas. Again, this isn't a very popular option because it is labor intensive and expensive. It also requires re-establishment of turf, which isn't without risk. □

Diseases of Turfgrass

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

Aschochyta Leaf Blight

Leaf blight, caused by the fungus *Ascochyta*, often appears on Kentucky bluegrass plantings in late-May. Turf that has a thick thatch layer (2" to 3") is most susceptible to attack. Upon close inspection, both healthy and diseased leaves are evident within blighted areas. Infected blades typically appear "white" from the "tip down". Under certain conditions, lesions may extend all the way down to the leaf sheath. As lesions age, prominent black pycnidia (fruiting bodies) develop along the bleached portion of affected tissue. Unlike **anthracnose** fruiting bodies, these structures lack visible black spines. During moist conditions, spores are released and infect healthy turf. Since *Ascochyta* enters grass through wounds, infection is most severe just after the grass is mowed. For best results, avoid frequent mowing, raise the height of cut, use a "sharp mower blade" to avoid wounding, water as deeply and infrequently as possible without causing moisture stress, water in the early morning hours, avoid excessive applications of nitrogen, and remove excess thatch. Although fungicides are not currently labeled for the control of this disease, mancozeb has shown promise in research trials. Chemical control, however, is rarely warranted since affected turf typically recovers with proper maintenance.

Dollar Spot

Dollar spot has been observed on golf and landscape turf during the past three weeks. To prevent this disease from causing severe damage to susceptible turf again in 2005, maintain adequate nitrogen fertility, water in the early morning hours, reduce thatch, avoid the sole use of any fungicide for prolonged periods of time (to reduce the possibility of fungicide resistance), and apply Banner, Bayleton, Chipco 26GT, chlorothalonil, ConSyst, Eagle, Emerald, mancozeb, Rubigan, Spectro, thiophanate-methyl, or vinclozolin. Repeat fungicides as needed through late-October.

Red Thread

This disease, caused by the fungus *Laetisaria fuciformis*, is prevalent on sensitive turf at this time. Infections are characterized by the appearance of short red threads (1/16"-1/4" long) emerging from tan-colored leaf blades. Affected patches are typically pink in color and range from one to six inches in diameter. Although perennial ryegrass and fine fescue are most susceptible, bluegrass, velvet bentgrass, bermudagrass, and tall fescue may also be affected. Red thread is most severe on low fertility turf during periods of cool, wet weather. Well-fertilized turf, however, may also be attacked. To obtain optimum disease control, maintain adequate fertility

SEE TURF DISEASES ON PAGE 5

Diseases of Landscape Ornamentals

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

Black knot of Prunus

Black knot, caused by *Apiosporina morbosa*, is a widespread canker disease of many trees in the genus *Prunus*. On susceptible species, tree value is reduced when black, spindle-shaped galls form on branches. Hosts commonly affected by this disease include almond, apricot, blackthorn, most cherries, chokecherry, peach, and many wild and cultivated plums. Black knot can be difficult to control on susceptible trees.

Black knot first appears in the fall as small, light-brown swellings on current-season twigs. These swellings continue to enlarge through the next growing season to form a canker or knot. Eventually the knot splits to reveal a

velvety, olive-green fungal stroma (structure bearing spores) that turns hard and black the following winter. Well-developed knots are black, roughened, and spindle-shaped. Although the average knot caused by *Apiosporina* is 4



Black knot, Wild cherry (Kackley-Dutt)

to 12 inches in length, the swellings can enlarge yearly and grow each season closer to the base of the branch. Knots eventually girdle affected branches, and tissue distal to the knot dies. Occasionally, the fungus will grow into the main trunk, girdling the tree and killing it.

An integrated approach to control of black knot begins with the selection of planting material that is free from disease. To avoid moving the disease into the landscape, choose only top quality, disease-free trees from a reputable dealer, and inspect trees before planting. Disease impact is reduced in trees that are properly maintained. Healthy, vigorous trees can resist infection by reducing the spread of the disease through affected branches. To ensure plant vigor, choose sites that are suitable to the horticultural requirements of newly planted trees. Be sure to adequately space the plants. In older, established plantings, maintain or improve plant vigor with proper pruning, fertilization, and irrigation. Decrease humidity in the tree and around the planting by pruning unnecessary limbs and branches. Thoroughly clean up wild cherries and plums in the vicinity of desirable trees.

Through careful monitoring and early detection, black knot can be eradicated before the value of a tree is reduced. Branches with symptoms of the disease should be promptly removed. When pruning, remove affected branches at least 6 to 8 inches below knotted tissue in late fall or in early spring prior to budbreak. Since pruning tools are an excellent way to spread the disease, surface-sterilize tools with denatured alcohol between cuts, and prune only during dry weather to avoid unnecessary

SEE DISEASES OF ON PAGE 7

Updated Recs

Now available on from your county Extension office or the web at www.rcrc.rutgers.edu is the following updated Extension bulletin:

E036 - "Pest Control Recommendations for Shade Trees & Commercial Nursery Crops, 2005", authored by Dr. Ann Gould, Extension Specialist in Ornamental Pathology, Dr. Stephen Hart, Extension Specialist in Weed Science and Dr. James Lashomb, Extension Specialist in Ornamental Pest Management. This is a 61 page document. □

TURF DISEASES FROM PAGE 4

levels, avoid drought stress and excessive thatch, and apply Banner, Bayleton, Chipco 26GT, chlorothalonil, Compass, Eagle, Heritage, Insignia, Prostar, Rubigan, or vinclozolin per manufacturer's recommendations.

Slime Mold

Although slime mold is not actually a disease, inquiries have been received recently about the appearance of yellowish 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 are actually clumps of the common **slime mold** fungus *Fuligo*. *Fuligo* is not injurious to plants and will soon disappear on its own. However, it can be easily dispersed with a rake or steady stream of water if desired. No fungicides are recommended.

Stripe Smut

Symptoms of this disease, caused by the fungus *Ustilago striiformis*, are starting to appear in infested Kentucky bluegrass lawns. To identify stripe smut in the field, look for clumps of black spores protruding through "shredded" leaf blades. Although fungicides are most effective when applied once in mid-October, present infections can be controlled now with the application of a penetrant fungicide such as Banner, Bayleton, Eagle, Rubigan, or thiophanate-methyl. Follow label directions carefully for best results. □

Canada Goose Management Options for Grounds Managers, Part II

Joseph B. Paulin, Program Associate in Wildlife Management

Continued from Part I in the previous issue, Vol. 11, No. 4.

Habitat Modification

Populations of Canada geese can cause serious problems when congregating in mowed areas such as private lawns, recreational and industrial parks, athletic fields, cemeteries, and golf courses. Habitat modification involves changing the landscape where geese reside in a manner that alters the patterns of goose movement and decreases food availability, thereby reducing or eliminating the number of geese present. This technique usually involves elimination or modification of vegetation, planting of nonpalatable ("goose-resistant") species, or creating cover or foraging areas to draw geese away from specific areas. Modifying a small area of habitat to ensure satisfaction prior to implementing a large-scale modification is recommended. (For more information see: Paulin, J. B. and D. Drake. 2003. FS1026 "Canada goose Management Series: Habitat Modification." Rutgers University, Rutgers Cooperative Research and Extension).

Harassment

Harassment techniques such as pyrotechnics, propane cannons, properly trained dogs, and visual deterrents such as flagging and Mylar "eye-scare" balloons can be effective in deterring Canada geese from entering a particular area. Success of the technique utilized will vary depending upon location, size of the property, size of the goose population, time of year, and vigilance with which the harassment technique is implemented. No state or federal permits are required to use harassment techniques provided geese are not handled, harmed, or killed. However, in New Jersey, a state permit is required to operate a propane cannon on agricultural land (contact the New Jersey Division of Fish and Wildlife to obtain a permit). Furthermore, noise ordinances may exist in certain municipalities. Prior to employing a noise-making device, check with your local police or municipal officials.

Nest and Egg Destruction

It is illegal to possess or physically contact goose nests or eggs under the Migratory Bird Treaty Act without a federal depredation permit. Special Canada goose permit applications can be obtained from the United States Department of Agriculture Animal and Plant Health Inspection Service-Wildlife Services [(USDA-APHIS-WS) 908-735-5654] or the United States Fish and

Wildlife Service (<http://forms.fws.gov/3-200-67.pdf>). You must have a copy of the permit on your person when engaging in nest and egg destruction. Nest and egg destruction is used to prevent goslings from hatching out and increasing local goose populations. (For more information see: Paulin, J. B. and D. Drake. 2004. FS1030. "Canada goose Management Series: Nest and Egg Destruction." Rutgers University, Rutgers Cooperative Research and Extension).

Capture and Euthanasia

It is necessary to secure and have on your person a federal depredation permit in order to capture and euthanize geese. Special Canada goose permit applications can be obtained from the United States Department of Agriculture-Animal and Plant Health Inspection Service-Wildlife Services [(USDA-APHISWS) 908-735-5654] and the United States Fish and Wildlife Service (<http://forms.fws.gov/3-200-67.pdf>). Capture and euthanasia involves trapping and euthanizing captured geese according to methods approved by the American Veterinary Medical Association (AVMA). An example of a commonly used AVMA-approved method is a carbon dioxide gas chamber. (For more information see: Paulin, J. B. and D. Drake. 2004. FS1029 "Canada goose Management Series: Capture and Euthanasia." Rutgers University, Rutgers Cooperative Research and Extension).

Additional Sources of Information Available Through Rutgers Cooperative Research and Extension

Note: Many of the Rutgers Cooperative Research and Extension Factsheets and Publications mentioned above and below are available through county Extension offices or on the web at: <http://www.rcrc.rutgers.edu/pubs/> under Natural Resources and the Environment.

Drake, D. and J. B. Paulin. 2003. FS1027. "Positive benefits and negative impacts of Canada geese." Rutgers University, Rutgers Cooperative Research and Extension

Paulin, J. B., D. Drake and J. L. Bucknall. 2003. FS1017. "Regulations Governing the Management of New Jersey wildlife." 4pp. Rutgers University, Rutgers Cooperative Research and Extension

"Canada Goose Damage Management Resource Guide." NJAES/Center for Wildlife Damage Control at Snyder Research and Extension Farm in partnership with United States Department of Agriculture and Animal Plant Health Inspection Service, Wildlife Services

Contact Information

- Your local Rutgers Cooperative Research and Extension County Agent. Refer to the blue pages of your local phone book for listings.
- Rutgers Cooperative Research and Extension, Wildlife Extension Program, 732-932-1509
- New Jersey Division of Fish and Wildlife, 609-292-2965.
- United States Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services, 908-735-5654.
- United States Fish and Wildlife Service, Migratory Bird Permits, 413-253-8643. □

DISEASES OF ORNAMENTAL FROM PAGE 5

spread of spores. If possible, remove the branch from the tree by properly cutting the limb flush to the branch collar, not flush to the trunk. Since *Apiosporina* can persist and sporulate in dead plant material for extended periods, branches removed from diseased trees should be taken from the site and destroyed. Although fungicides are not recommended for use in the landscape, Junction (mancozeb + copper hydroxide) (professional use only) may be applied for control.

Petal blight (Ovulinia) on Azalea and Rhododendron

Some azaleas are flowering now, and it brings to mind one of the most common petal diseases of azalea and rhododendron, **Ovulinia petal blight**. Petal blight, as its name suggests, affects only the flowers in landscape, greenhouse, and field. Small (less than 0.05 inches in diameter), water-soaked spots appear on infected petals. These spots rapidly enlarge until the flower becomes limp, slimy, and turns prematurely brown. Entire trusses may become diseased almost simultaneously. Within 6 to 8 weeks after infection, overwintering structures known as sclerotia form on infected flowers. Most of these flowers adhere to the plant, but some may fall to the ground. The small, black, raisin-shaped sclerotia germinate the following spring and produce spores that

infect newly developing petals.

Wet, misty weather or heavy dew at flowering time enhances disease development. Since infection rate is higher when warm temperatures and frequent precipitation coincide with flowering, petal blight is often not as severe on early- and late-flowering cultivars or species. Mountain laurel (*Kalmia latifolia*) can be affected by petal blight if grown near infected rhododendrons.

Proper management of **petal blight** includes the removal of dead trusses and fallen petals as soon after bloom as possible to prevent the development of sclerotia. In greenhouses, reduce humidity through increased aeration and minimize leaf wetness whenever possible. Always inspect and quarantine new stock to prevent development of this disease in existing areas. For best results, apply one of the following through bloom in a manner consistent with the label: captan, chlorothalonil, Consyst (chlorothalonil + thiophanate-methyl), ferbam, Junction (mancozeb + copper hydroxide), mancozeb, maneb, Manhandle (mancozeb + myclobutanil), myclobutanil, PCNB, propiconazole, Spectro (chlorothalonil + thiophanate-methyl), Stature, SysStar (thiophanate-methyl + flutolanil), thiophanate-methyl, triadimefon, ziram, or Zyban (thiophanate-methyl + mancozeb). □

Weather Summary for the Week Ending 8 am Monday 5/16/05

WEATHER STATIONS	R A I N F A L L			TEMPERATURE				GDD BASE50		MON %FC
	WEEK	TOTAL	DEP	MX	MN	AVG	DEP	TOT	DEP	
BELVIDERE BRIDGE	.46	9.54	-.11	86	37	62.	2	236	81	76
CANOE BROOK	.00	9.09	-1.55	84	35	62.	3	265	131	70
CHARLOTTEBURG	.72	12.01	1.53	83	33	61.	4	184	108	77
FLEMINGTON	.02	10.95	.83	84	39	62.	2	226	81	67
NEWTON	.41	9.95	.62	82	36	61.	3	204	103	73
FREEHOLD	.00	11.25	1.18	82	40	62.	1	254	66	70
NEW BRUNSWICK	.00	9.26	-.56	81	42	62.	1	244	31	76
TOMS RIVER	.00	9.97	-.12	81	39	59.	-2	193	20	57
TRENTON	.00	8.29	-.82	80	41	62.	0	249	8	49
CAPE MAY COURT HOUSE	.12	7.63	-1.21	74	40	56.	-5	139	-73	48
DOWNSTOWN	.02	8.98	-.11	81	37	60.	-2	218	-34	51
GLASSBORO	.00	9.89	.26	80	48	63.	1	292	51	44
HAMMONTON	.01	8.83	-.54	82	38	60.	-2	232	-1	39
POMONA	.01	8.59	-.23	79	38	57.	-4	168	-23	54
SEABROOK	.05	9.43	1.18	80	44	63.	0	327	70	45
SOUTH HARRISON	.01	9.64	.29	79	45	61	NA	281	NA	NA
WES KLINE — GDD BASE 40 PINEY HOLLOW										
Last Week* 74 (Ending 5/9/05)										
This Week 143 (Ending 5/16/05)										
* February total base 40 equals 32 units										

MILLTOWN, NJ 08850
PERMIT #576
POSTAGE PAID
FIRST CLASS

New Brunswick, N.J. 08901-8551
18 College Farm Road
Rutgers' Cook College
Plant & Pest Advisory
RUTGERS
COOPERATIVE RESEARCH & EXTENSION
NJ AGRICULTURAL EXPERIMENT STATION



PLANT & PEST ADVISORY Landscape, Nursery & Turf Edition Contributors

RCR&E Specialists and Staff

Bruce B. Clarke, Ph.D., Turf Pathology
Ann B. Gould, Ph.D., Ornamentals Plant Pathology
Steven Hart, Ph.D., Weed Science
Joseph R. Heckman, Ph.D., Soil Fertility
Albrecht Koppenhofer, Ph.D., Turfgrass Entomology
James A. Murphy, Ph.D., Turf Management
Gladis Zinati, Ph.D., Nursery Management
Richard J. Buckley, Coordinator, Plant Diagnostic Laboratory
RCR&E County Agricultural Agents and Program Associates
Bergen, Joel Flagler (201-336-6780)
Burlington, Raymond J. Samulis (609-265-5050)
Camden, James Willmott (856-566-2900)
Steven Rettke, Program Associate IPM
Cape May, Russell Blair (609-465-5115)
Cumberland, James R. Johnson (856-451-2800)
Essex, Jan Zienteck, Program Coordinator (973-353-5958)
Gloucester, Jerome L. Frecon (856-881-4191)
Hunterdon, Winfred P. Cowgill, Jr. (908-788-1338)
Middlesex, William T. Hlubik (732-745-3443)
Monmouth, Richard G. Obal (732-431-7261)
Morris, Pedro Perdomo (973-285-8307)
Passaic, Elaine F. Barbour, Agric. Assistant (973-305-5742)
Somerset, Nick Polanin (908-526-6293)
Sussex, Brian Oleksak, Program Associate (973-579-0985)
Union, Madeline Flahive-DiNardo (908-654-9854)
Warren, William H. Tietjen (908-475-6505)

Newsletter Production

Jack Rabin, Associate Director for Farm Services, NJAES
Cindy Rovins, Agricultural Communications Editor

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.

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.

Reproduction of Articles: RCRE invites reproduction of individual articles, source cited with complete article name, author name, followed by Rutgers Cooperative Research & Extension, Plant & Pest Advisory Newsletter.

For back issues, visit our web site at: www.rce.rutgers.edu/pubs/plantandpestadvisory.