COOPERATIVE EXTENSION SERVICE
HOME, YARD & GARDEN PEST NEWSLETTER
College of Agricultural, Consumer and Environmental Sciences, University of Illinois at Urbana - Champaign
Illinois Natural History Survey, Champaign

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First Issue for 1998

Welcome to the first of 22 issues of the *Home, Yard and Garden Pest Newsletter* for 1998. The second issue will appear in two weeks, followed by weekly issues from May through early August. Issues will return to biweekly for most of August and September, with one issue planned for late October and one for late November.

This newsletter is now available by subscription on the World Wide Web. Because we do not have to use paper or postage, Web subscriptions are $25 (compared to $28 for a regular subscription). Another advantage of Internet subscription is more timely information. Most people receive their newsletter about 10 days after the authors write the articles. This delay is because of the time involved for editing, producing, printing, and mailing each issue. The Web version will be available in about half as much time. The *Home, Yard and Garden Pest Newsletter* Web site is at http://www.ag.uiuc.edu/cespubs/hyg. Web subscribers will receive a login name and password for full access. Nonsubscribers can visit the site by using guest access.

As always, we will let you know what we are seeing and hearing about in the way of disease, insect pest, and weed occurrences throughout Illinois. We will also try to predict the pests that will be showing up, and when. We will report any new pests, pesticides, and nonchemical pest management methods pertinent to landscape maintenance professionals.

Because this newsletter is only as good as the information it provides, we encourage you to contact any of the authors with details concerning the occurrence of pests in your area. Author telephone numbers are listed at the end of the newsletter. If you have comments about a particular article or want additional information, contact the article's author (name listed in parentheses at the end of each article). Any general comments can be sent to the newsletter coordinator, Phil Nixon. *(Phil Nixon)*

Pest Management Handbooks Available

Three pest management handbooks are now available from University of Illinois Extension. They contain suggestions for the control of weeds, diseases, and insect pests for the commodities or areas that each handbook covers. These handbooks help keep you up to date on new pesticides and other methods of control.

The *Commercial Landscape & Turfgrass Pest Management Handbook, 1998–1999* addresses pests associated with turf, trees, shrubs, flowers, and groundcovers and includes suggestions for control. Its cost is $10; the handbook is now published biannually, although updates will be available in 1999. The new *Illinois Homeowners' Guide to Pest Management*, which sells for $8, contains suggestions for the control of pests associated with trees, shrubs, turf, flowers, groundcovers, vegetables, fruit, and houses by homeowners and other residents. This book is intended to be revised in two or three years. The *1998 Illinois Agricultural Pest Management Handbook* ($20) contains suggestions for control of pests in the commercial production of agronomic crops, livestock, and vegetable crops. It also contains information on noncrop weed control.

These publications can be ordered from University of Illinois, ACES Information Services, 1401-C7 South Maryland Drive, Urbana, IL 61801 or by calling (217) 333-2007 or (800) 345-6087. Checks should be made payable to University of Illinois. Shipping costs are $2.50 for orders under $25 and $4 for orders between $25 and $99.99. Call for discount prices when ordering 10 or more copies of a publication and for shipping rates on larger orders. *(Phil Nixon)*

Illinois Pesticide Review Newsletter

The University of Illinois Extension's *Illinois Pesticide Review* newsletter offers news about pesticides and regulations pertinent to Illinois. Each *IPR* pro-

vides pertinent and current pesticide and pesticide-related information. In addition, the authors of *IPR* newsletter collaborate on articles with the Illinois Department of Agriculture, the US EPA, grower organizations, environmental groups, and others. Each issue spotlights University of Illinois research, teaching, or outreach that pertains to pesticides.

This newsletter is available through ACES Newsletter Service for $15 per year. Call (217) 244-5166 or (800) 345-6087 for subscription information. For those with World Wide Web access, the newsletter is available free of charge at http://www.aces.uiuc.edu/~pse/. *(Rhonda Ferree)*

INSECTS

Spruce Spider Mites

Spider mites have been found on Colorado blue spruce at The Morton Arboretum in northeastern Illinois, which means they are active throughout the state. Spruce spider mites and other mites that feed on needled evergreens are most active in the early spring, usually ceasing their feeding by early May (in southern Illinois) to early June (in northern Illinois). They spend the summer as eggs that hatch in the fall for a short feeding time before winter.

Scout for spider mites by vigorously shaking or striking the foliage over a white piece of paper. Some of the mites will fall onto the paper where they can be seen as tiny, moving dots. Smashing them will produce greenish or yellow-orange streaks. Those making greenish streaks are usually spider mites that are feeding on the foliage; those making yellow-orange streaks are usually predaceous mites that are feeding on the spider mites. Numerous predaceous mites will reduce the need for chemical control.

Damage appears as light to brownish dots or stippling on the needles. The mites feed on cells of the leaf, removing and destroying the chlorophyll. This creates a light spot that dries and turns brown. From a distance, the foliage appears bronzish, dirty, or bleached. Heavily attacked foliage will turn brown, and severe attack can kill branches and trees. These mites attack spruce, juniper, pine, arborvitae, hemlock, and Douglas-fir.

Control spider mites with contact miticides such as insecticidal soap, summer spray oil, dicofol (Kelthane), and several pyrethroids. Do not use oil on bald cypress. Oil may cause damage on Savin junipers, spruces, and Douglas-fir and will take the blue color off of Colorado blue spruce. Be sure to achieve good coverage with any sprays, particularly insecticidal soap and summer spray oil. Two treatments a week apart will be necessary to obtain a high level of control. Thanks to Dave Shetlar, The Ohio State University, for information about oil-sensitive plants. *(Phil Nixon and Fredric Miller)*

Hemlock Rust Mite

Eriophyid mites, probably hemlock rust mite, have been detected in northeastern Illinois by Don Orton of the Illinois Department of Agriculture. Eriophyid mites are very tiny, cigar-shaped mites and are difficult or impossible to see without a hand lens or microscope. Hemlock rust mites feed on hemlock, causing the foliage to become bluish and then yellowish as feeding continues. Feeding is heaviest in the spring. This mite may also attack fir, yew, and spruce, particularly dwarf Alberta spruce, on which it may cause needle drop. Control with the miticides listed for spruce spider mite. *(Phil Nixon)*

European Pine Sawfly

European pine sawfly has hatched throughout the state. This insect appears as groups of larvae feeding on the needles of mugo, Scotch, and other pines. Larvae are elongate, caterpillarlike creatures, with several stripes of various shades of green. They have large, black heads. They are not caterpillars; they pupate and emerge later in the year as wasplike insects. Caterpillars have three pairs of true legs and up to five pairs of prolegs (leglike structures on the abdomen). Sawfly larvae also have three pairs of true legs, but they have six or more pairs of prolegs.

Larvae feed on second- and third-year needles, maturing and dropping from the plant to pupate beneath the tree by the time the current year's needles are emerging from the candles. The presence of these new needles will keep defoliated branches from dying, but damaged twigs will be leafless except for the current year's needles appearing as a tuft on the end.

Because these insects feed in groups, they can easily be removed by hand. Larger populations can be controlled with sprays of many chemical insecticides. Because these are not true caterpillars, *Bacillus thuringiensis kurstaki* (*Bt*) sprays will not be effective. *(Phil Nixon and Fredric Miller)*

Scouting Report

Succulent oak gall, cankerworm, and eastern tent caterpillar were all present in southern Illinois on April 16. Be watchful for these insects throughout central Illinois. They should appear in northern Illinois by the end of the month. Eastern tent caterpillars are very numerous on crabapples and other hosts in the Benton and Salem areas. *(Phil Nixon)*

HORTICULTURE

Preemergence Weed Control

Preemergence herbicides are used to control weeds before the weed seeds germinate. If you have not done so already, you should apply these products soon. In certain areas of the state, some weed seeds have already germinated. However, many are still lying dormant and will be controlled by preemergence herbicides.

Applications of preemergence herbicides are useful in many sites—landscape beds containing trees and shrubs, tree rings, perennial plantings, annual flower beds, and in mulched and graveled areas. Be sure the type of site to which you wish to apply the herbicide is listed on the product label. Future planting areas and flower beds should not be treated until—or preferably after—planting.

Remember two things when choosing a preemergence herbicide: First, no single preemergence herbicide will control all germinating weed seeds. Product labels list the weed species the product has been shown to control. Consult previous scouting notes to determine if one weed is particularly problematic, and be sure the product you choose will control it. Second, herbicide labels list the landscape plants that the product can safely be applied over. If a particular plant is not on the list, damage could occur if that plant comes into contact with the herbicide. New plant species are added to most product labels each year, so check them carefully.

Consult the *Illinois Commercial Landscape & Turfgrass Pest Management Handbook, 1998–1999* for a complete list of preemergence herbicides and their uses. Products with a broader spectrum of weed control and an extensive list of ornamental plants on their labels include Preen, Pendulum, Ronstar, and Surflan. These products control many broadleaf and grassy weeds. Products labeled to control annual grasses include Barricade and Pennant. If nutsedge is a problem, Pennant controls the germinating seeds.

Finally, most preemergence herbicides do not control existing vegetative structures such as nutsedge tubers, quackgrass rhizomes, and field bindweed rootstocks. Perennial plants that produce these structures are often difficult to control. A systemic, postemergence herbicide (such as Roundup) is generally needed to control these type of structures. *(Rhonda Ferree)*

Winter Annual Weeds

Winter annuals—including henbit, deadnettle, and common chickweed, plus garlic mustard, yellow rocket, and other wild mustards—have been quite colorful this spring, ranging from white to yellow to purple.

A complete understanding of the life cycle of winter annuals is important when deciding on control measures. Winter annuals germinate in the fall, overwinter as seedlings, flower in the spring, then die in late spring as temperatures rise. If you have a problem with winter annuals this year, make a note of it and consider applying a preemergence herbicide this fall before they germinate again. Many products labeled for landscape use (including Barricade, Pendulum, Predict, and Gallery) will control winter annuals before they germinate.

If you are not willing to wait for natural dieback and if mechanical control is not feasible, you can control these weeds with postemergence herbicides such as Roundup Pro or Finale. *(Rhonda Ferree)*

Annual Grassy Weed Control for Homeowners

Many herbicides are available to manage annual weeds. Preemergence herbicides are absorbed by germinating seeds and seedlings of annual grassy weeds such as crabgrass. Timing of application is very important: The weed killer should be applied before the crabgrass emerges from the soil. Many preemergence crabgrass herbicides are available in combination with lawn fertilizer at garden supply stores, so crabgrass prevention and spring fertilization can be done at the same time.

Crabgrass germinates when soil temperatures are approximately 60°F at the quarter-inch level for five to seven consecutive days. Other annual grasses germinate as soils get above 60°F.

For central Illinois, mid- to late April is the suggested time for applying a preemergence crabgrass herbicide. In the southern portion of Illinois, make the

application one to two weeks earlier, and in northern Illinois, one to two weeks later than the period suggested for the central portion of the state. If the spring is very warm, use the earlier dates; in cold, late springs these materials could be applied later. Using forsythia flowering as a guide is not a dependable method for determining application dates. Some herbicides may be reapplied for extended control; refer to the label for timing and rates. Core aerifying or de-thatching should be done according to label instructions.

Preemergence annual grass herbicides, except siduron (Tupersan), will interfere with seed germination of desirable turfgrasses, whether you are seeding a new lawn or overseeding into an existing lawn. Thus, siduron is the only preemergence herbicide that can safely be used for spring seeding or overseeding. Siduron is often combined with high-phosphorus starter fertilizers and is available at many retail garden outlets. *(Tom Voigt)*

Broadleaf Weed Control for Homeowners

Broadleaf weeds, such as dandelion, clover, and creeping Charlie, are undesirable in turf because of the obvious differences in leaf shape, growth habit, and flower shape and color. Chemical control of these weeds is most often accomplished with postemergence herbicides, which are systemic (that is, the herbicides are absorbed by plant organs and translocated throughout the weed). Thus, weeds must be actively growing for these materials to be effective.

Postemergence broadleaf weed herbicides found in garden centers typically include mecoprop (MCPP), dicamba, and 2,4-D. Two- and three-way combinations are available. Additional herbicides are available to commercial landscape services for use on lawns.

When using any chemical pest control, be sure to read, understand, and follow the label directions for proper use. If mishandled or misapplied, postemergence broadleaf herbicides may damage or kill many desirable ornamental or edible plants in the landscape.

Keep in mind the following general guidelines for using broadleaf herbicides on lawns.

- Avoid use on windy days because these herbicides can damage many landscape and garden plants if they drift.
- Do not apply them on hot days (over 85°F) or during periods when weeds are stressed by heat or drought.
- It's best to have adequate soil moisture, but no rain for 24 hours after application.
- Do not mow turf for a few days before and after application.
- Consider spot treating weeds rather than broadcasting weed killer over the entire area.
- Use caution on newly seeded areas; wait four mowings before treating a newly seeded lawn and wait 30 days before seeding an area treated with broadleaf herbicides.
- Refer to the label for information about any potential hazards when using weed control products (such as dicamba) on lawns over tree and shrub roots. *(Tom Voigt)*

PLANT DISEASES

May 1 marks the 23rd year of operation of the University of Illinois Plant Clinic. Many of you are very familiar with the clinic and its operation, while others are new to the system. Those who have used the clinic in the past should take note of the section at the end of this article, "Changes for 1998." To save time and effort, everyone should take care when sending samples and follow the procedures outlined in the Suggestions for Specimen Collection and Submission (on page 7 of this newsletter).

The Plant Clinic is a seasonal service offered by University of Illinois Extension and is available May 1 through September 15. Although some people think of us as a disease clinic, we are much more. We handle plant and insect identification; diagnosis of disease, insect, weed, and chemical injury; and nematode assays. We also provide help with nutrient-related problems, as well as recommendations involving all diagnoses. The clearinghouse concept for plant problems has been in existence at the University of Illinois since 1976 when the clinic opened. Although this multidisciplinary venture is managed through the Crop Sciences Department, operation relies on input from both research and Extension components in many departments. Specialists are consulted on an as-needed basis. They do not have offices at the clinic.

Ornamental hosts generally comprise about 40% of the clinic samples. We also process a large number of field crops, fruits, vegetables, and turf. An average year generates approximately 2,600 samples. Demand has been high: In 1997 we handled over 3,100 samples. The clinic will attempt to help with any plant problem, but the main limitation with specialty plants is locating a campus-based expert to provide help.

Is the clinic a service you should use? That depends on what you have tried to do to get an answer to your problem. Hopefully you have tried to work through your local Extension office, agricultural consultant, chemical representative, seed dealer, or others involved in the problem. Our lab is most helpful in providing specific tests, laboratory backup, or an unbiased opinion based on plant samples and facts. If you chose to use the Plant Clinic, keep in mind the adage "garbage in, garbage out." In that regard, try to provide a complete sample as well as photos and facts concerning symptom development over time, cultural practices, chemicals used (including rates), fertility practices, weather in your area, soil type, and any other pertinent information. Specimen data forms to guide you through this information retrieval are available at Extension offices or by calling the clinic at (217) 333-0519. A form that you are free to photocopy is included on page 6 of this newsletter. Also included, on page 7, is a form describing how to submit samples to the clinic.

The Plant Clinic is located on the South Farms of the University of Illinois. The address is 1401 West St. Mary's Road, Urbana, IL 61802. There is a fee for samples to help cover costs. Regular samples (including cultures) are $10. Specialty tests for soybean cyst nematode and pinewood nematode, as well as some virus assays, are $15. All other nematodes cost $30 per sample.

The clinic opens May 1, 1998, and we look forward to helping with your plant problems. *(Nancy Pataky)*

Changes for 1998

The first change for 1998 will be the requirement that fees accompany samples. The clinic does not have a billing office or staff specifically to handle bills and payments. Hiring employees to handle these matters would double the fees we charge. Obviously, this is not a desired course of action. Still, staff time required to follow up on unpaid bills has forced us to make changes. The logical way to handle fees with as little administrative time as possible is to require prepayment with the sample. Ours fees are low enough that this should not cause undue hardship to most clients. To make this system easier for our clients, we will not process checks until diagnosis is completed. Please make sure that this policy is made clear to your staff who might be working with clients.

Cases of herbicide injury to ornamental plants will no longer be handled by the Plant Clinic. We are not equipped to perform chemical residue testing and have in the past tried to diagnose such injuries based on symptoms and facts presented. Often the facts are few and the samples not adequate to make a judgment. Also, staff with expertise in this area are not readily available to help. The result has been slow response time and often a diagnosis in which we have not been able to provide helpful information. Chemical injury cases should be referred to the chemical representatives of the companies whose products are involved, the person from whom the chemical was obtained, or—if all else fails—the Illinois Department of Agriculture as a formal complaint.

Last year we initiated a change of which many of you may be unaware. **Insects samples are no longer free, and all insect samples should be sent directly to the clinic**. They will still be handled by entomology specialists and will be subject to the same $10 clinic fee as other regular diagnoses.

The final change is a minor one. The city of Urbana has been split into multiple zip codes. **The new zip code for the Plant Clinic is 61802.** Please change this in your records and on any forms you may have. If you have questions about the clinic, feel free to contact Nancy Pataky at patakyn@mail.aces.uiuc.edu or at (217) 333-0519. *(Nancy Pataky)*

Fungicide Note

Although it is fortunate that nonchemical pest control measures are fairly consistent over the years, chemical controls are ever changing. Chemical labels change often and so do chemical recommendations for control of insects, diseases, and weeds. Be sure to refer to your product label every time you purchase a product, even when using a product that you have used in the past. Two good sources of current chemical recommendations are *Illinois Homeowners' Guide to Pest Management* and *Illinois Commercial Landscape & Turfgrass Pest Management Handbook, 1998–1999.* The former will be updated every two or three years, while the latter will be revised every other year. A chemical update that has occurred since those two publications went to press follows. This information was obtained from Dr. John Hartman at the University of Kentucky.

Immunex is the homeowner-use formulation of the fungicide propiconazole and is no longer being manufactured. Two other familiar products containing propiconazole are Alamo and Banner. They are still available. Immunox is the homeowner-use formulation of the fungicide myclobutanil. Immunox at first

(continued on page 8)

Plant Clinic
1401 W. St. Mary's Road
Urbana, IL 61802
(217) 333-0519

UNIVERSITY OF ILLINOIS
PLANT CLINIC SPECIMEN DATA FORM

Office Use Only
Plant Clinic #

Submitter _____ Date Received

Grower _____ County

Commercial_____ Home Grower_____ Charge

County_____ Date Paid Ck #

Send response to:

Name_____

Address_____

City_____ State_____ Zip_____

Phone# (_____)_____

Crop or Plant Name_____ Variety_____

Describe Problems or Symptom/Sketch Distribution:

Symptoms Appeared in Past: Days_____ Weeks_____ Months_____

Describe Conditions Prior to Symptom Development:

Temperature_____ Rainfall_____ Other_____

Planting History: Crop Two Year Ago_____ Crop One Year Ago _____

Soil Type: _____ pH_____ %Organic Matter_____

Soil Test Information:_____

Type of Nitrogen Application:_____

Chemicals Applied this Year:_____

Fertilizer_____ Type of Application_____

Herbicide(s)_____

Rates_____

Type of Application_____

Chemicals Applied Last Year_____

Ornamentals:

Approximate Age and Size:_____

Condition of Nearby Species:_____

UNIVERSITY OF ILLINOIS PLANT CLINIC

Suggestions for Specimen Collection and Submission

1. Collect fresh specimens. Send a generous amount of material, if available.
2. Ship in a crush-proof container immediately after collecting. If holdover periods are encountered, keep specimen cool. Mail packages to arrive on weekdays.
3. Include **Plant Clinic Specimen Data Form** with each sample submitted.
4. Include fee as a check made payable to the University of Illinois.

Note: Diagnosis and recommended controls by the University of Illinois Plant Clinic are based solely on the material and information submitted. The less representative the sample, and the less complete the information provided, the greater the chance for misdiagnosis.

Submitting Plant Specimens for Disease/Injury Diagnosis:

Leaf - Collect early and late stages of infection. Press leaves between heavy paper or cardboard.
Fleshy Plant Parts - Samples with a rot disease should not be sent in an advanced stage of decay. Collect fresh specimens with early symptom development.
Canker - Select recently produced cankers. Submit the whole cankered portion where possible; preferably with healthy wood above and below the canker.
Wilt or General Decline - Send the entire plant, with roots, if feasible; submit several plants, from healthy to severely infected. Dig, do not pull, plants from the soil so diseased roots will remain intact. If the whole plant cannot be sent, select samples from areas of active symptom development. Include the intact root system if root rot is suspected.
Turf - Submit several 4 inch plugs of grass cut as deeply as roots will hold soil. Plugs should show gradation from healthy to severely diseased.

Submitting Nematode Specimens:

Diseases caused by nematodes require special attention. See **Report on Plant Disease No. 1100** for detailed instructions on the handling and shipping of nematode infested material.

Submitting Insect Specimens:

Care should be taken to package insects so they arrive unbroken. Be sure to separate and label the insects if two or more are included in the same package and provide appropriate information on each.
Adult specimens such as flies, grasshoppers, cockroaches, wasps, butterflies and beetles can be submitted in a dry crush-proof container. Do not tape insects to paper or place them loose in envelopes.
Larvae or soft-bodied specimens such as aphids, caterpillars and grubs should be submitted in a small leak proof bottle or vial of 70 percent alcohol. Rubbing (isopropyl) alcohol is suitable and readily available.

contained propiconazole, but the formulation has been changed so that it now contains myclobutanil. It is possible that both products are on the shelf, but new supplies will contain only Immunox (myclobutanil). Immunox is fairly new, so look for it in garden centers as an option for powdery mildew control and other common fungal diseases on ornamental crops. Always read the label carefully for crop clearance and specific diseases controlled. (*Nancy Pataky)*

Home, Yard and Garden Pest Newsletter *is prepared by Extension specialists from the University of Illinois at Urbana-Champaign and the Illinois Natural History Survey. Information for this newsletter is gathered with the help of staff members, Extension field staff, and others in cooperation with the USDA Animal and Health Inspection Service.*

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