



UNIVERSITY OF ILLINOIS EXTENSION

# 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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## Welcome to the 2002 Newsletter

This is the first issue of the 2002 *Home, Yard, and Garden Pest Newsletter*. This newsletter addresses diseases, insect pests, weeds, and other pests of commercial ornamental plants, including trees, shrubs, turf, flowers, and greenhouses. It is written by University of Illinois Extension specialists, with occasional contributions by others.

There are 20 issues per year. During April when ornamentals and pests are just getting started for the coming growing season, the issues are biweekly. During May and June, the heaviest pest season, the issues are weekly. From July through September, there is a return to a biweekly schedule, with monthly issues for October and November.

We let you know when and where pests are occurring, while it is happening through the growing season. We rely heavily on others throughout the state to let us know what they are seeing. We are always interested in receiving this information to pass it on to others. Changes in pesticide labeling, new pesticides, and information on other forms of pest control for the professional are also included. We will also try to let you know about upcoming educational opportunities in the state.

As coordinator of the newsletter, I am always interested in comments, concerns, and suggestions, as well as information about pest occurrence. I can be reached by e-mail at [pnixon@uiuc.edu](mailto:pnixon@uiuc.edu) or by phone at (217)333-6650. Questions or comments about specific articles should be addressed to the author listed in parentheses at the end of the article. Contact information about each major author is listed at the end of each newsletter issue. (*Phil Nixon*)

## PEST HANDBOOK ADDENDUM

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Due to few changes in pesticide registration and other pest management methods (and a large number of unsold copies), the *2001 Commercial Landscape and Turfgrass Pest Management Handbook* was not revised for 2002. An addendum to update the hand-

book for 2002 is posted on the *Home, Yard, and Garden Pest Newsletter* Web site at [www.ag.uiuc.edu/cespubs/hyg/welcome.html](http://www.ag.uiuc.edu/cespubs/hyg/welcome.html). It is also available as paper copy by calling (217)333-2007 or (800)345-6087. There is a charge for paper copies to cover postage and handling. The 2001 issue plus addendum is also available, for \$15 plus postage and handling. (*Phil Nixon*)

## PLANT DISEASES

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**The U of I Plant Clinic—Common Questions**  
**When does the Plant Clinic open again?** This question pops up as soon as the weather warms. In fact, plenty of folks were calling with this question in mid-February. Despite the snow of late March, temperatures are soon going to attract us to the great outdoors with renewed enthusiasm to work in the lawn, garden, landscape, or nursery. Regardless, the Plant Clinic once again will open its doors May 1. That is when we have staff to run the facility and the demand to meet it. Many of you must be out there working with plants despite the weather. If you have pressing problems, work with your local Extension office, try the Extension digital diagnosis system, or give me a call at (217)333-0519, and we will find someone who can help before the lab service is available. You can also contact me electronically at [patakyn@mail.aces.uiuc.edu](mailto:patakyn@mail.aces.uiuc.edu).

**What can the Plant Clinic do for you?** The Plant Clinic is a clearinghouse for plant problems sent to the University of Illinois from May to mid-September. Diagnoses are provided on trees, shrubs, turf, fruit, vegetables, field crops, or any other type of plant you can imagine. In addition to Plant Clinic staff members on hand, other campus specialists are called to help with diagnoses as needed; and in an average year, about 20 different specialists may have input on plant samples.

Services include plant and insect identification; diagnosis of disease, insect, weed, and chemical injury symptoms (chemical residue testing is not available); nematode assays; and help with nutrient-related problems, as well as management recommen-

dations involving these diagnoses. The clinic cannot handle herbicide-injury problems on ornamental plants, nor can it assess nutrient levels in tissue or soil samples. Still, look-alike problems can be eliminated as possibilities.

**Have the fees changed?** No, the fees for clinic samples were increased in 1999. They remain as follows:

General diagnosis (including cultures),

\$12.50

Specialty tests (SCN\*, PWN, ELISA),

\$18.75

Other nematodes (usually corn),

\$40.00

\*SCN indicates the test for soybean cyst nematode.

PWN indicates that for pinewood nematode analysis.

ELISA is a technique used to test for various viral pathogens.

**How do I find out more?** The Plant Clinic has a Web site at [cropsci.uiuc.edu/research/clinic/clinic.html](http://cropsci.uiuc.edu/research/clinic/clinic.html). There, you will find information on the clinic's location, instructions on how to send a sample, a fee schedule, and more. If you would like to contact us by U.S. mail, the address is Plant Clinic, 1401 W. St. Mary's Rd., Urbana, IL 61802. The telephone number is (217)333-0519.

(Nancy Pataky)

## Prevent Plant Disease Now!

Most problems of plant disease cannot be eradicated once they appear, at least not during the current growing season. For example, once you see scab on your crabapples, you cannot do much to help the tree that season. Likewise, diseases such as rusts, anthracnose, and needle casts must be managed before they appear.

Practically speaking, you can't take action against every disease that might occur. Instead, determine which diseases or what plants you wish to target. Start now, before the diseases occur, or it will once again be "too late for this year." List all the disease problems you remember from last year. Recall the amount of damage that occurred and whether you think control options are warranted: This may involve assessing the value of the plant, cost of management options, labor costs or availability, physical or aesthetic damage by the disease, etc. The goal is not 100%-disease-free plant material. A low level of disease is perfectly acceptable (at least to me). Tolerance for disease is something that varies with the grower, homeowner, landscaper, and nurseryman. Even I have my limits. I won't put up with a tree that is perennially defoliated by June.

As an example, maybe you or a client had problems with scab on a crabapple for the past 10 years. You are ready to take action for the upcoming season. Chemical sprays control the disease if initiated at the pink-bud stage of growth and continued according to label recommendations, but such control is effective for only one season. Consider the more lasting option of tree replacement with a scab-resistant species. You may need to do a little reading to determine disease severity and disease management options. Besides gardening and landscape texts, some very good disease fact sheets, called *Reports on Plant Disease*, available on the University of Illinois Extension Web site at [www.ag.uiuc.edu/%7Evista/horticult.htm](http://www.ag.uiuc.edu/%7Evista/horticult.htm)—free of charge. Other sources of information include past issues of this newsletter, references available in Extension offices, and the pest management guides for home growers and commercial growers.

Tired of powdery mildew on your zinnias? Ready to get rid of that rust-infested apple tree? For long-lasting disease management, use plant material with resistance to the disease pathogen you have identified. Many of the fact sheets from the university list resistant varieties or cultivars. This is a good starting point, but ultimately we have to work with the seed companies or nurseries to find out what is available for sale. Because it may take some time to track down the variety you want, get started now. (Nancy Pataky)

## Boxwood Problems

Several boxwood samples were submitted to the Plant Clinic last summer. That was several more than we usually see. In addition, I had some calls this winter about recurring boxwood problems. It is likely that many others are experiencing problems but have not called. Samples that were sent to us last summer had various problems, with disease being secondary to site or environmental stress. Here is a summary of boxwood problems to watch for in your landscape.

Initially, it would help to look in your records to find the species and cultivar you planted so you can determine the expected hardiness. The USDA has developed a map of plant hardiness zones for the United States. You can usually find this map in plant material texts. Southern Illinois is zone 6, but central and northern Illinois are definitely zone 5. Most boxwood species are hardy in zones 5 to 6, but some cultivar selections have been developed to tolerate colder temperatures found in zone 4. Sensitive boxwoods suffer winter injury if planted out of their natural zones.

Winter injury causes bronze to reddish brown foliage, especially on parts of the plant exposed to

winter winds or winter sun. In addition, temperature extremes cause splits in the bark, and entire branches may die to the crown of the plant. Look for such injury now and prune out any dead wood.

Volutella blight can be confused with winter-injury symptoms. In fact, the fungus often infects wounds from winter injury. Volutella blight is a fungal disease that infects leaves at the tips of stems. The leaves become reddish to bronze, and stem tips may die. *Volutella* moves down the stem, whereas winter injury happens seemingly at once and does not progress down the stem. If affected foliage is placed in a plastic bag with damp paper toweling (moisture chamber) for 24 hours, the salmon pink fruiting bodies of *Volutella* clinch the diagnosis. Prune out dead wood and thin the plant to allow better air circulation, which will discourage fungal growth.

If similar problems occur on your boxwood in wet locations in midsummer, it is likely that Phytophthora root rot is to blame. Dig up the plant and examine the root system to find many brown, rotted roots. You cannot eradicate the fungus from the soil, but you can help nearby plants by improving the drainage pattern. Low areas, poorly drained soils, or compacted areas should be avoided as planting sites for boxwood.

Boxwoods are surface rooters, so roots are fairly shallow. Cultivating around boxwoods or over-application of fertilizer may injure or kill roots, also resulting in top dieback and decline of plants in the summer. It is suggested that boxwoods be mulched but not too deeply. Two problems could result from thick mulch. Roots can grow into the mulch and become susceptible to drought stress when the mulch dries. Voles are known to live in mulch and feed on the trunk of this plant. For these reasons, keep mulch shallow and away from the trunk.

Southern states have major problems with root nematodes on boxwood. This is where our cold winters are actually an advantage. We rarely see nematode problems on boxwood in Illinois. Still, soil assays for nematodes can be done at the Plant Clinic if this is a concern. (*Nancy Pataky*)

## INSECTS

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### Using Dormant Oils Effectively

It is still early enough to spray dormant oils for control of insect and mite pests on trees and shrubs that have not broken bud, especially in the central and northern portions of Illinois. Spraying either evergreen or deciduous plants with a dormant oil after bud

break may kill newly expanding leaves or cause leaf edges to turn black.

Dormant oils, derived from paraffinic crude oil, are the heaviest of the petroleum-oil sprays and have a low unsulfonated residue (UR). UR is a measure of phytotoxic compounds remaining after distillation and refining. A high UR (greater than 92%) indicates a highly refined product with less probability of phytotoxicity. Dormant oils have a UR value below 92%, meaning a higher risk of phytotoxicity.

Dormant oils kill exposed insects and mites by either suffocating them (covering up the spiracles or breathing pores) or by directly penetrating the cuticle and destroying internal cells.

Dormant oils are effective in controlling certain scales that overwinter as nymphs or adults such as cottony maple, euonymus, lecanium, and obscure scale. However, dormant oils provide minimal control of oystershell and pine needle scale because both these scales overwinter as eggs. In addition, eggs are generally stacked on top of each other, and the dormant oil may not contact the bottom layer. As a result, applications of insecticides after egg hatch are generally required.

Honeylocust mite, European red mite, and spruce spider mite are controlled with dormant oil sprays, because they overwinter as exposed eggs on plants. Dormant oil sprays do not kill two-spotted spider mite, as they overwinter on the ground in leaf debris.

Dormant oil applications must be made when temperatures stay above freezing for 24 hours. Be sure to follow label directions because oil sprays may damage certain plants, including amur maple, Japanese maple, redbud, and sugar maple. In addition, the foliage (needles) of Colorado blue spruce can be discolored (change from blue to green) by dormant oil applications.

It is generally thought that the use of dormant oils would be less prone to resistance. However, this may not be true. For example, a Christmas tree plantation of Scots pines was sprayed with dormant oils for over 10 years to control pine needle scale (although dormant oils are not that effective for this scale). Eventually, the scales became more difficult to control. It was discovered that the scale covers were thicker than normal, making it harder for the dormant oil to penetrate. Remember—insects don't read the entomological literature. (*Raymond A. Cloyd*)

### Outlook for 2002 Insect Pests

The overall mild winter that we had in 2001-2002 has caused some to wonder if that will result in more

insect pests during the 2002 growing season. Mild winters or cold winters have little effect on the number of insects that people typically notice. Many, if not most, of the insect species that occur in Illinois range from Georgia in the south to Hudson Bay in the north. With the Illinois climate being moderate between those two extremes, it is very rare to have a winter that has any major effect on insect survival. Perhaps the el Nino winter of 4 or 5 years ago was warm enough to have an effect. Similarly, the cold spell in the early 1980s when the high temperature over a 3-day span barely reached the high teens below zero with little snow cover may be another example. Even the 35-below-zero temperature during the winter in the late 1990s had little effect on insect survival because a deep snow cover insulated the wintering insects.

A few species, however, are affected by mild or severe winters. Bagworm, honeylocust plant bug, mimosa webworm, and elm leaf beetle have a more southern distribution and are uncommon north of Interstate 80 in Illinois. Typically, after a couple of mild winters, these insects become pests in Rockford, Chicago, and other more northern areas of the state. Conversely, many sawflies prefer colder winters and become less common after mild winters. European pine sawfly is likely to be less common in southern Illinois after a mild winter, while redheaded pine sawfly and white pine sawfly are likely to be less common in the northern third of the state. It is true that in a mild winter, more pest insects survive, but so

do more predatory insects, parasitic insects, and other natural enemies. This increased survival of natural enemies typically brings insect populations into line rather quickly. Typically, the most important impact on insect numbers during the growing season is spring weather. Cool, damp springs encourage the development of fungi that attack insects and slow the development of insects. The result is fewer caterpillars and other insects surviving through the spring. (*Phil Nixon*)

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*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. Karel Jacobs and Donna Danielson of The Morton Arboretum also provide information and articles.

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