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Monthly Issues Start

This is the 20th issue of the 1998 *Home, Yard, and Garden Pest Newsletter*. The 21st and 22nd issues will be monthly and will be produced at the end of October and November. In those issues, we'll discuss any current pests, upcoming educational events, and handling pest problems in winter and very early spring. Those issues will also contain overviews of the pests of 1998 and what to look for in 1999. (*Phil Nixon*)

Pesticide Disposal

Disposal of pesticide concentrate that is no longer needed or legal to use continues to be a problem. The first step is to store the product in a safe place (away from children, potential flooding sites, etc.) for proper disposal or collection in the future. Be sure the container is labeled and in good condition.

One way to get rid of excess pesticide concentrate is to contact the pesticide manufacturer and see if they will take it back. Another method is to contact other possible users of the pesticide to see if they have a need for it. For legal reasons, never sell a pesticide unless you are a licensed dealer. Both of these suggestions are based on the assumption that the pesticide is in the original, properly labeled container.

Pesticides with outdated labels, pesticides for which the labeled uses have changed, or pesticides that have been taken off the market can usually still be used until supplies are exhausted. This means that for most pesticides with outdated labels, you can legally use up the pesticide according to the label on the container. There are exceptions to the rule: For some pesticides, the U.S. Environmental Protection Agency allows old label uses for only a short time after product cancellation or label change. In rare cases, the agency may issue a "stop use" on a product at the time of its cancellation. (For instance, it is no longer legal to use old supplies of 2,4,5-T or chlordane in the United States.) Contact the pesticide manufacturer to find out whether you can still use a particular product. You can also contact the Illinois Department of Agriculture at (217) 785-2427, or the U.S. EPA to obtain the same information.

Collection programs are another way to dispose of unwanted pesticides. These programs have been available somewhat sporadically over the last several years. Such programs involve a sponsoring state agency, a funding source, and frequently an industry or other group that takes responsibility for assisting the program's development. The University of Illinois Extension publicizes these collection programs when they occur.

The Illinois Department of Agriculture has sponsored the collection of agricultural pesticides and associated hazardous waste. The Illinois Environmental Protection Agency sponsored a series of collection sites for household pesticides and other wastes in spring 1998. The Illinois Department of Public Health sponsored a collection of commercial structural pest control pesticides in mid-1998.

With commercial agricultural or structural pesticide collection programs, there might be a requirement that persons wanting to dispose of pesticides declare which pesticides and how much of each they will be bringing to the collection site. This allows the sponsoring agency to work with the commercial waste collector to get the maximum amount of pesticide disposal for the money. In this process, some pesticides or pesticide formulations may be refused.

The most expensive option is a waste hauler or collector. Disposing of even few small containers could cost about \$1,000 in disposal and transport fees. Your local waste hauler may be able to dispose of certain pesticides; if not, he or she should be able to refer you to a company that can deal with the waste. These may include

- PDC Laboratories, Peoria; (309) 688-0760
- Waste Management and Industrial Services, near East St. Louis; (618) 271-2804
- Heritage Environmental Services, Indiana; (317) 243-0811

If you contact a commercial waste collector, they will ask you to submit an inventory of chemicals. They will then provide you with a price quote and set up a collection date and time. (*Phil Nixon and Bruce Paulsrud*)

INSECTS

White Grubs

With the hot, dry weather that we have had over the last few weeks, white grubs are popping up in some areas of Illinois. We've had reports of grub problems in the Bloomington, Glenview, Northbrook, and Joliet areas starting a week or more ago. This corresponds to the drier weather reported in northeastern Illinois, which tends to bring grubs into irrigated areas to lay eggs. As in the past, the Bloomington–Peoria area always seems to have some grubs, regardless of the weather pattern. Thanks to Bill Israel of Greenview Landscaping, Jim Fizzell of Fizzell Associates, and the Will County Extension Master Gardeners for the reports.

These infestations are from eggs laid in early July that hatched in late July. While soil moisture was high through August because of earlier rains, the grass grew roots as fast as the grubs ate them. As we got into September, the grubs got bigger and started eating more. At the same time, water became scarce for nonirrigated turf, and temperatures remained high. The normal high temperature for central Illinois in early September is the high 70s, but we experienced highs in the high 80s. Under lower temperatures, bluegrass, fescues, and other cool-season grasses will usually grow, even with only moderate moisture levels.

Control grub damage that shows up due to dry weather, locally high grub populations, or skunk and raccoon activity with quick-acting insecticides so that you will get a quick halt to the damage. Trichlorfon (Dylox, Proxol) and bendiocarb (Turcam, Intercept) will usually kill grubs in three to five days. Diazinon will take three weeks to kill the grubs, but they stop feeding within a few days. Thus, diazinon-treated areas may continue to have live grubs for a while, but damage should stop. Halofenozide (Mach 2) is being aggressively marketed as a curative insecticide and appears to be working in that manner.

Another option for late-season feeding damage, particularly if grub numbers are moderate (around 10 per square foot), is irrigating under dry conditions. Irrigation will cause the grass to grow faster—hopefully, faster than the rate at which grubs eat the roots. This option will be particularly effective as temperatures drop over the next few weeks, which adds to the fast growth of the grass. *(Phil Nixon)*

Dogwood Sawfly

Dogwood sawfly feeds on gray dogwood and other species of dogwood. They occur throughout the state,

and we've received reports of them migrating to pupate in southern Illinois. Dogwood sawflies appear as curled larvae on the leaf uppersides. They are yellow underneath, but covered above with long, white, waxy strands, making them look like fuzzy styrofoam peanuts. High numbers will strip the foliage from the trees. This late in the season, defoliation is unlikely to harm the plant.

Once the larvae are done feeding, they migrate from the dogwoods to find a place to pupate. Migrating larvae are about one inch long and lose their white fuzz to become solid dark green or dark spotted on top and yellow underneath. They have large black heads and seven pairs of prolegs. These larvae pupate in wood, preferring rotting wood in nature. However, they will also burrow into chipboard and wood siding.

Dogwood sawfly larvae are easily controlled with many chemical insecticides while they are feeding on dogwood. Once they begin migrating, control becomes more difficult. Stepping on them may become the best method, although insecticidal soap may be effective if you hit them with it. In cases where dogwoods are close to houses, you might want to keep an eye out for this insect. *(Phil Nixon)*

White Pine Sawfly

We recently received reports from Dave Feltes, IPM Extension Educator, of white pine sawfly larvae causing damage in Carroll County in the northwestern corner of the state. This insect feeds on both the young and older needles of white pine, mugo, and red pines. Completely defoliated branches or trees will die, so control is important.

The larva is about one inch long with a large black head. The body is yellow with four rows of black dots down the back and sides. When fully grown, the larva drops to the soil where it pupates to emerge as an adult, wasplike insect the following year. This sawfly is easily controlled with many chemical insecticides. *(Phil Nixon)*

Elm Lacebug

Elm lacebug is reported in the Chicago suburbs by Jim Fizzell of Fizzell Associates. This insect feeds on the undersides of American and Siberian elm leaves. The insect is about one-eighth inch long, flattened, and whitish. The wing veins make the wings look like lace when magnified. The nymphs are smaller and blackish. Feeding causes angular brown areas on the leaves. Damage this late in the season does not normally warrant control. *(Phil Nixon)*

PLANT DISEASE

Help Us Help You!

During the growing season there are so many disease problems to discuss that there is no time to explain the basics of how to diagnose a plant problem. Now that things have slowed down, we want to emphasize some of the information needed to obtain an accurate diagnosis.

It is very frustrating to receive a complaint from a client who says, “We were very disappointed with your diagnosis of our plant problem. We really expected a more exact answer, not just speculation.” Read through this material and try to understand that a poor diagnosis is often directly related to the amount of information received about a plant problem. Let your clients know this, and your job will be much easier. We all enjoy those disease or insect problems that we can identify merely by looking at one leaf, but that is the rare exception.

Diagnosis is definitely an art—one that requires observing symptoms, facts, and clues to determine the cause or causes of a problem. Plant diagnosis is difficult because so many problems (such as pathogens, insects, and chemicals) cause similar types of symptoms. For example, a tree planted too deeply will exhibit decline symptoms very similar to those caused by clay soil and poor drainage. How do we determine this from a sample of stems and leaves? Jumping to conclusions when there is a lack of information is a sure way to provide a misdiagnosis—something we like to avoid. Listed here are a few steps for obtaining information that may help make the diagnostic procedure a bit easier. These suggestions may seem simplistic, but they are worthwhile! Most of the difficulties that we encounter in diagnosing a problem at the Plant Clinic stem from a lack of information.

1. Correctly identify the plant. When only a few leaves comprise the sample, it is often difficult to identify the host. An ash tree leaflet looks much like the leaves of many perennial herbs. Ask the client for an identification. It is difficult to use reference materials without knowing the host. If we can identify to the exact cultivar, we can often determine more about specific disease resistance. Don't be afraid to ask. If the client cannot ID the plant, then get enough of a sample to have someone else help.

2. List the symptoms. First, determine the symptoms as they relate to the entire area. *Describe the*

pattern in the field, landscape, or planting area.

Because the diagnostician often cannot go to the site, this information is essential. Find out whether all plants in the landscape are affected or only one species, whether the problem is worse on one side of the planting, etc.

What are the symptoms on one affected plant?

Usually the response is “Refer to the enclosed sample.” This won't do. Turf samples almost always turn yellow after two days in a mail truck. Fleshy leaves often turn brown and crisp compared to their condition before mailing. Have the client describe what is abnormal in very specific terms. An accurate diagnosis depends on specific symptoms described *as they have occurred over time*. For example: “The plant has grown poorly since it was planted two years ago May. It leafed out well and then developed yellowed foliage, starting at the bottom of the tree and moving upward. The leaves fall off with half-inch brown spots by July.”

3. Dig for facts. This category of information could go on forever. It is probably best to include weather conditions, soil characteristics, cultural practices, site-specific oddities, and anything else the client can suggest. Here are some examples, but keep in mind that we are looking for information from the time the problem occurred or earlier, not after the fact.

Weather Conditions

- Rainfall—amount and frequency; has this been different than past years?
- Wind and exposure patterns compared to other healthier plants
- Frost occurrences

Soil Characteristics

- Soil pH in the root zone
- Type of soil or drainage
- Presence of compaction
- Is this a new home where topsoil has been removed?
- Was salt used nearby?

Cultural Characteristics

- Fertilizer type, timing, rates
- Watering practices: time of day, amount, frequency
- Pesticide use, especially herbicides, to the plant, to the lawn, or nearby

- Pruning practices
- Use of mulch
- Use of plastic or landscape cloth
- Age of plant, type of planting, site preparation
- What else is planted in this same area?

Site-Specific Oddities

- In general, ask the client to list what has changed on the site since the problem occurred.
 - Has there been any construction or changes in this area since the problem started?
 - Have new traffic patterns been established on the site?
- 4. Use reference materials.** Once you have gathered all of the above facts, use reference books. Often these texts will list problems by host. Look at photos, read descriptions, and compare with your sample.
- 5. Consult laboratory help when needed.** If you have done all of the above, you have likely narrowed the possibilities to something infectious, to an insect problem, or to a suspected cultural problem. Often you just need to be able to rule out the pathogenic or insect possibilities but do not

have the expertise or equipment to do so. That is where a lab such as the Plant Clinic is helpful. Often, though, by the time you get this far you have determined the cause of the problem or you have determined that control measures are the same for the possibilities identified, and lab help is not necessary. (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. Karel Jacobs and Donna Danielson of The Morton Arboretum also provide information and articles.

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