

Down the Garden Path

July 27, 1995

Plant & Pest Diagnostic Laboratory

Number 83



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YARD

Now is the Time to Prevent White Grub Damage on Your Lawns

Timothy J. Gibb, Extension Turfgrass Entomology Specialist

Damage to lawns occurs when white grubs feed on the roots of turfgrass just below the soil surface. Root pruning interferes with water and nutrient uptake into the plants. Initial above-ground symptoms appear as wilting that will not respond to irrigation, followed by chlorosis or discoloration from dark green to lighter green, to yellow, and eventually to brown as the damage increases. Grub damage usually begins in small irregular circles or patches, but may progress quickly to the point that all of the roots are devoured over a large area and the turfgrass can be rolled up like a carpet. Such damage usually is noticed in late fall and is beyond the point of rescue. The area must then be resodded or reseeded.

Rescue treatments can be applied, however, prior to this time. Because root pruning directly reduces the ability of the plant to take up water, increased irrigation has been found to lessen the damage that grubs do if applied early and in large quantities. On the other hand, even smaller numbers of grubs can cause serious turf damage when the turf is also under drought stress. Applying continuous and ample irrigation can sometimes negate the need for chemical control.



Chemical control of white grubs poses two potential obstacles. First, the controls have to be applied just after egg hatch, when grubs are most susceptible to chemicals and when very little damage has occurred. Remember that chemical controls are designed to PROTECT the lawn, rather than to just kill the grubs. Grubs can be killed with insecticides even in the late fall, however, by then excessive turfgrass damage has likely occurred. Late July and early August is the best time to apply insecticides for grub control in Indiana.

A second major difficulty in grub control deals with getting the chemical to work correctly. In most instances, reasons for chemical failure have to do less with the chemical not killing the insect and more with the fact that the chemical is not applied correctly. Remember that the chemicals that are used to control grubs must pass through the turfgrass and thatch layers before entering the soil where grubs live. Many chemicals become bound very tightly to organic matter in the thatch, and thus never penetrate to the target zone. This is especially true in lawns with excessive thatch. To a certain extent, irrigation after application will help move the chemical downward, however, dethatching prior to insecticide application has been shown to increase efficacy many fold. ☺



Establishing Your Lawn During the Summer? Consider Sod

Zac Reicher, Extension Turf Management Specialist

We all know that best time to seed a lawn is fall, and the second best time to seed is in the early spring. Seeding Kentucky bluegrass or perennial ryegrass is rarely successful if attempted after mid-May. But what if the new house you just built gets finished in June or July? You can plant a cover crop like wheat or annual rye to hold the soil and then reseed in the fall with a desirable grass, or you can sod.

Sodding is more expensive than seeding, but it provides an instant turf at almost any time of year. Establishing sod successfully is as time-consuming and difficult as seeding a lawn. Unfortunately, sod is often laid incorrectly which can cause many future problems including diseases, thatch buildup, and other problems resulting in a poor lawn.

It is critical that sodbed preparation is identical to that used for seedbed preparation. If you have poor soil in your lawn (typical of most new subdivisions), you may want to add a layer of topsoil or "good black dirt". Unfortunately, the four to six inch layer of topsoil needed for optimum results is normally not practical. The worst condition is when only an inch or two of topsoil is distributed over a new lawn before seeding or sodding. If you can not add at least four inches of topsoil, do not add any.

Be sure to remove any construction materials that may have found their way into the soil. Till the soil to about six inches prior to sodding or seeding. Avoid tilling soils that are too wet because it will smear the soil and decrease drainage. Over-tilling should be avoided because it will create a fluffy and fine-particled soil that is prone to compaction, poor drainage, and poor aeration.

Fine grading with a rake following tilling serves to smooth the soil surface. Prior to fine grading, allow adequate time for soil to settle to avoid uneven turf later. Fine grading should occur immediately before sodding. After the sod bed is prepared, apply a starter fertilizer, high in phosphorus, at the rate of 1.5 lbs. P2O5/1000 ft² which will quicken rooting and establishment.

Sod should be cut as thin as possible to favor rapid rooting. Sod is available as long rolls, small rectangles, and most recently, large rolls one and one-half to two feet wide and 50 or more feet long. These large rolls are used for large areas like fairways or sports fields. Sod should be laid so ends at adjacent strips are staggered. Strips should be tightly fitted together to minimize cracks from shrinkage. Sod should be rolled following laying to insure good contact with soil. On slopes, sod pieces should be staked with wooden garden stakes to prevent sloughing.

Care following sodding is similar to that following seeding. Frequent irrigation is needed until roots become established. Gradually reduce irrigation frequency as sod knits down. After a month or two, you may only need to irrigate once a week depending on the weather. Do not wait too long to mow sod for the first time. Use the same rule as mowing an established lawn, mow often to avoid removing more than a third of the leaf blade in a single mowing. Avoid applying fertilizers and herbicides until after the sod is thoroughly rooted. Most weeds developing in new sodding will be controlled with regular mowing.

For the healthiest and most attractive sodded lawn, aerify at least once a year after the sod is rooted. Aerifying will help reduce compaction, especially on poor soils, and will provide channels in the soil for growing roots. Sodding a lawn can be an expensive proposition, but with the proper planning, installation, and management, a sodded lawn can be well-worth the initial cost. ☺

Brown Rot of Stone Fruit

Nancy Pataky, University of Illinois

Brown rot causes easily distinguishable, fluffy, brown rot of the fruit of the peach, nectarine, plum, prune, sweet and sour cherry, apricot, almond, and Japanese quince. Because it is most severe in areas with frequent spring and summer rains, this is another common disease to expect in 1995.

Brown rot is caused by the fungi *Monilinia fructicola* and *M. laxa*. They may infect blossoms, fruits, twigs, and small branches and require some type of wound or insect injury to infect. In warm, damp conditions, the fruit quickly turns light brown, followed by development of tan to gray spore tufts, giving it a fuzzy appearance. The rotted fruit eventually shrinks and blackens, giving it a mummified appearance. These mummies may stay attached to the tree.

Brown rot is not known to cause leaf infection. Besides fruit rot, however, it may infect flowers, resulting in wilting and the production of the same spore tufts as seen on the fruit. If the fungus invades stems, cankers result. Often the cankers ooze gum or sap.

Control the disease by removing mummified fruit and pruning out infected twigs or cankers. Insect control is also essential because insects provide the wounds needed for infection. Disease incidence can be decreased by harvesting carefully to limit fruit injury when the fruit is still somewhat hard, and refrigerating fruit immediately. Commercial growers should consider fungicide sprays. For more information consult Purdue Publication BP-45 *Brown Rot of Stone Fruits*, available from your County Extension Office or the Media Distribution Center (317-494-6794).

Editor's note: This article was adapted from an article appearing in the Home, Yard and Garden Pest Newsletter (No. 12, July 12, 1995). ☺



OVER THE BACK FENCE

--ERRATA--

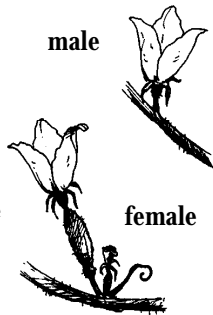
In the June 30, 1995 (No. 81) issue of *Down the Garden Path*, the figure of cucumber flowers was incorrectly labeled. The question and answer, including the correctly labeled figure, is below.

Q: My zucchini seems to have a lot of flowers, but they just fall off without producing any fruit. Is this a nutritional problem or do I need to have a male and female plant?

A: All of the vine crops (Cucurbits) including squash, cucumbers, melons, pumpkins, and gourds, produce separate male and female flowers on the same plant. The pollen is carried from the male to the female flowers by bees.

Female flowers look as if they have a miniature fruit just below where the petals are attached. Male flowers simply have a slender stalk below the petals. If the male flowers are the ones falling off, this is normal!

Often, the very first flush of flowers will be all males, and these are expected to fall off. However, if the female flowers are the ones dropping, then it is safe to conclude that some factor is preventing successful pollination. Some culprits include excessively hot or cold temperatures and lack of bee activity due to weather, low population, etc. Some commonly used insecticides including carbaryl (Sevin) are highly toxic to bees and so if you must apply such products, try to time your sprays for periods when the bees are not active. --Rosie Lerner ☺



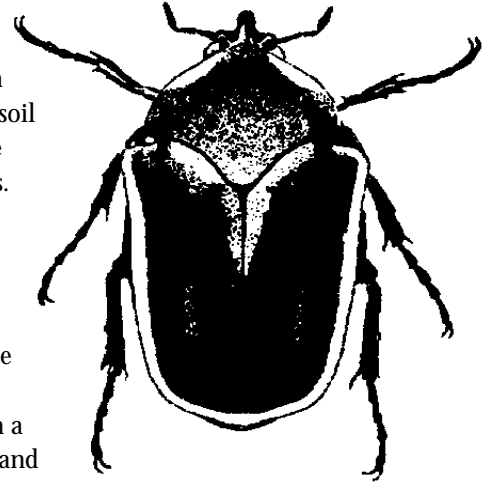
THE GRAPE VINE

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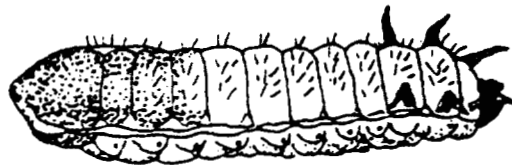
Timothy J. Gibb, Extension Entomology Diagnostician

A large green beetle that flies like a drunken bumble bee is emerging from yards throughout the state. Green June beetles measure up to one inch in length, and are velvety green dorsally with yellow to yellow-orange on the margins of the elytra (forewings). The underside of the beetle is shiny green with yellow-orange markings.

These nuisance beetles are most active in the early morning hours. Females lay their eggs from mid-July through August inside a prepared ball of soil about the size of a golf ball. The eggs hatch in about 10 to 15 days. The immature beetles or grubs grow rapidly feeding on animal manure and decomposing vegetation remaining in tunnels during the day and coming to the surface at night to feed. These nearly vertical tunnels can reach a depth of one and one-half feet, and deposits of soil two to three inches wide can be seen at the entrance of the tunnels.



Grubs may reach two inches at maturity and are unique among grubs because their legs are reduced in size and not used in locomotion. Green June beetle grubs have the peculiar behavior of crawling on their backs. The grubs over winter in the burrow, resume feeding in the spring, and pupate in June. In July, the adults emerge and the cycle repeats itself.



Green June beetle grubs feed primarily on decaying organic matter. Turf damage caused by these beetles is mostly mechanical due to the sometimes extensive tunneling in the soil. Heavily thatched turfgrasses and areas where organic fertilizers have been applied are commonly attractive to green June beetles. Adult beetles also damage fruits such as peaches, apricots, pears, apples, and plums. Fruits with thin skins seem to be most susceptible.

Controls for grubs, when warranted, are similar to those recommended for other grubs. Control of adult green June beetles can be achieved by manually picking them off plants and destroying them or by using Sevin (Carbaryl) according to label directions. ☺

GARDEN

In a Pinch!

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Summer is not the preferred time to prune landscape trees and shrubs, but it is a great time to prune many annual flowers. Plants such as petunias, impatiens, zinnias, and marigolds tend to get leggy and produce fewer blooms by mid summer.

Pinching these plants back about halfway will encourage more branching and in turn, more flowers. The plants may look a bit ragged initially after being cut back, but with a little water and fertilizer, you will be rewarded with a much more attractive plant.

Removing the faded blossoms from annual and perennial flowers which, is often referred to as dead-heading, is another good gardening practice. Dead-heading will help encourage more blooms by preventing seed pods from competing for the plant's food supplies. The plants will also be more attractive with the old blooms removed. Many annual flowers can simply be pinched off as they fade. Some will need to be cut off with a knife, scissors, or pruning shears. Send the clippings to the compost pile to be recycled.

The answer to the age-old question of whether or not to pinch the suckers (small side shoots) from tomatoes really depends on how the plants are being trained. If you have staked tomatoes, where the goal is to have one main stem that is tethered to a support, removing the side shoots is helpful in preventing the side shoots from breaking off from the weight of the fruit load. However, if your tomatoes are caged or allowed to sprawl along the ground, there is no advantage in removing the suckers. In fact, the additional foliage provided by the suckers will help reduce the incidence of sunscald on the developing fruit as well as increase the potential for flowering and fruit set. ☺

Down the Garden Path is published 17 times a year by the Plant and Pest Diagnostic Laboratory. For subscription information and comments, write to:

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