

Plant Wise

IOWA STATE UNIVERSITY
University Extension

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August 2011

Sticky Situations on Cherry Trees

By Erika Saalau
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Gummosis is a sticky amber ooze or "gum" exuded from lesions on stone fruit tree bark.



Have you noticed any gum oozing from cherry tree branches and trunks? It's called gummosis, a sign that your cherry tree is under some sort of stress. That's right, trees can get stressed! Gummosis is not a disease but can be associated with disease or insect damage to the tree. Gummosis is most common on stone fruit trees such as plums, peaches, nectarines, and cherries.

Gummosis is often associated with cankers, which are sunken lesions on trunks, branches, or twigs. Cankers may be caused by mechanical injuries (such as lawnmowers or pruning), insects, winter damage, sunscald, herbicide injury, and various fungal or bacterial infections. In response to these stresses or injuries, a sticky amber ooze or gum is exuded from these lesions (see pictures). With time, cankers may become more obvious, as branches swell or form corky growths on the margins. Severe damage or infections may cause wilting of leaves and eventual death of fruit-bearing wood.

Insects such as peach tree borers feed under the bark, creating wounds and tunnels on the inner bark. As a result, branches exude gum through wounds. Fungal pathogens from the genus *Botryosphaeria* may also infect cherry trees and cause cankers between the trunk

and scaffold limbs. These fungi are usually opportunistic and colonize plants when their defenses are low. On the other hand, bacterial cankers caused by *Pseudomonas syringae* can sometimes become a serious disease in commercial orchards. Bacteria colonize leaf surfaces and enter the tree via wounds, creating oozing cankers and girdled limbs. Sometimes entire limbs may wilt and leaves and fruit may show spots.

In summary, cherry gummosis is the plant's reaction to stress. Pathogens or insects may be involved, but the best way to prevent gummosis is by taking an integrated management approach. Avoid unnecessary mechanical injuries to your tree and prune under dry weather conditions. Provide a good growing site (well-drained soils) for your tree and a balanced fertilization program to promote vigorous growth. Also, practice good sanitation by pruning and destroying cankered limbs.

Annual White Grub Control

By Donald Lewis
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The white grubs that routinely damage lawns in Iowa are called annual white grubs. These root-eating, underground June beetle larvae have one generation per year and take one year to complete their life cycle of egg - larva - pupa - adult. The adult beetles of our annual white grubs are specific kinds of June beetles called masked chafers. They are slightly smaller than June bugs and tan or straw brown in color. As the name implies, they have a black stripe across the eyes and face.



The masked chafers begin flying in late June and lay eggs in the turf for most of the month of July.

The eggs hatch in two to three weeks, meaning early to mid-August is the earliest the white grub larvae will be in the soil to begin feeding on grass roots. The grubs grow rapidly and are fully grown at one inch in length by late August or September. The damage symptoms that grass plants express because of the root feeding going on in the soil usually do not appear until late August, September, or October. Early symptoms include wilting and tan discoloration. Later symptoms can vary from small discolored patches to large, irregular dead areas. The dead patches have a spongy feel and can be easily lifted from the soil because the roots have been destroyed (consumed) by the grubs. Other possible signs of white grub infestation are large numbers of birds (starlings, grackles, or crows) feeding in the turf or patches of overturned sod caused by foraging skunks or raccoons.

White grub populations and damage to lawns vary greatly from year to year and place to place, even varying from spot to spot within the same lawn due to variations in beetle numbers, weather, turfgrass vigor, soil conditions and other factors. There is no method that predicts if and where grubs will occur or how severe the damage will be. What happens in your lawn this summer is a random event and not directly tied to previous experience; therefore, decisions concerning white grub management are difficult. There is no one right answer for everyone.

It is possible to determine the number of grubs in a lawn by sampling several areas. Sampling for white grubs should be done in August or September before damage appears. At each sample site, cut through the sod on three sides of a one square foot area, then peel back the sod and examine the upper 1 to 2 inches of soil for white grubs. It normally takes at least ten annual white grubs per square foot to cause damage to healthy, vigorous (i.e., watered) turfgrass; fewer if grass is non-irrigated and under stress.

There are three basic approaches to grub management in the home lawn, depending on your tolerance for damage, comfort with pesticides and willingness to spend the cash. White grub insecticide treatments are not only expensive but hard to justify from an environmental standpoint unless you own a golf course.

In places such as golf courses and some lawns, the risk of any white grub damage is so intolerable that preventive insecticides are applied to every part of the lawn, every year. When this approach is chosen, the proper time of application is between early June and Aug. 15. A compromise modification of the golf course approach is to treat only those areas that have been previously damaged.

The second approach is the wait-and-see approach. Watch the lawn carefully for early signs of damage (wilting, turning brown) during August to early September when grubs could be feeding. Apply a curative insecticide only where and when needed. The risk is that you might still lose some sod, especially if summer rainfall or irrigation keeps the grass growing and vigorous through July and August. Damage symptoms may not appear until after it is too late for effective treatment (late September through late October).

The final alternative is to do nothing. This approach is much easier to follow if you believe "it's just grass, anyway."

White grub management decisions are difficult and frustrating. Many homeowners are frightened into applying grub controls because of advertisements on TV, in plant centers or because of horror stories they have heard about grub damage. Studies at Cornell University have shown that more than 70 percent of all grub control treatments were applied needlessly because there were no grubs in the lawn.

If you do choose to apply insecticides, read the application directions carefully before buying. Some grub treatments are preventive and must be applied before mid-August. Others are curative and work only if the grubs are present. Know which you are getting before you buy. Apply carefully according to label directions and thoroughly water in the insecticide. Watering accomplishes two things: it moves the insecticide into the soil where the grubs reside, and it removes the active ingredient from the surface and greatly reduces the hazard of insecticide exposure to people, pets and wildlife walking on treated turf. Irrigate the treated area with at least one-half inch of water.

Transplanting Peonies

By Richard Jauron
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Peonies can be left undisturbed in the garden for many years. Occasionally, however, it becomes necessary to move established plants. Peonies shaded by large trees or shrubs should be moved to a sunny site to improve flowering. The redesign of a perennial bed or border may require moving the peonies. Large, vigorous plants can be dug and divided for propagation purposes.

September is the best time to transplant established peonies. Begin by cutting the peony stems near ground level. Then carefully dig around and under each plant. Try to retain as much of the root system as possible. Promptly replant the peonies in a sunny, well-drained site.

Division of large peony clumps requires a few additional steps. After digging up the plant, gently shake the clump to remove loose soil from the root system. Using a large knife, divide the clump into sections. Each division should have at least three to five buds (eyes) and a good root system. Smaller divisions will require several years to develop into attractive plants.

Peonies perform best in full sun and well-drained soils. When selecting a planting site, choose a location that receives at least six to eight hours of direct sun each day. Avoid shady areas near large trees and shrubs. Poorly drained soils often can be improved by working in large amounts of compost, peat moss or leaf mold.

When planting a peony, dig a hole large enough to comfortably accommodate the plant's root system. Position the peony plant in the hole so the buds are one to two inches below the soil surface. (Peonies often fail to bloom satisfactorily if the buds are more than two inches deep.) Fill the hole with soil, firming the soil around the plant as you backfill. Then water thoroughly. Space peonies three to four feet apart.

In late fall (mid-November to early December), apply a four to six inch layer of mulch over the newly planted peonies. Excellent mulching materials include weed-free straw and pine needles. Mulching prevents repeated freezing and thawing of the soil during the winter months that could heave the plants out of the ground. Remove the mulch in early spring before growth begins. Transplanted peonies may not bloom well the first spring. However, flower numbers should increase rapidly by the third or fourth year.

Black Walnut: The Killer Tree

By Chris Feeley
Extension Forester
Iowa State University



As a forester, I very often am asked "Will black walnuts have harmful effects on nearby plants?" Like a true professional, I always give the best answer. Maybe.

In the 1880s, scientists identified a compound called juglone that is produced by black walnut trees. After conducting a few tests, the scientists demonstrated that

injury and sometimes death resulted when the chemical juglone came in contact with a susceptible plant. The symptoms that they noted were yellowing leaves, wilting and eventual death of certain plants.

We now know that juglone is produced in the fruit, leaves and branches, and can be excreted from the root system into the soil. The actual concentration in each tree part varies with the season. In spring, juglone is concentrated in the actively growing leaves. The amount of juglone in the roots remains relatively high throughout the summer, and the concentration of juglone in the hulls of the fruit increases as the crop matures.

All species of the walnut family (Juglandaceae) produce juglone. This would include many native trees such as black walnut, butternut, the hickories and pecan. However, black walnuts have the highest concentration of juglone.

In most cases, the damage caused by black walnuts to other plants is a combination of the presence of juglone in the soil, and the competition for light, water and nutrients.

However, juglone can cause severe damage and even kill solanaceous crops (tomatoes, potatoes, peppers and eggplant). Fortunately, not all plants are susceptible to the chemical. Most trees, vines, shrubs, annuals, perennials, corn, beans, onions, beets and carrots are tolerant of juglone.

Gardeners who have large walnut trees near their vegetable gardens should consider an alternate site. The greatest concentration of juglone in the soil exists within the dripline of the trees. The dripline is the area between the trunk of the tree and the end of the branches. The toxic zone from a mature tree occurs on average in a 50-foot radius from the trunk. Avoid planting your garden in these areas to protect your garden from damage.

Walnut leaves can be composted because the juglone toxin breaks down when exposed to air, water and bacteria. The toxic effect can be degraded in two to four weeks. In the soil, breakdown may take up to two months after the living walnut tree has been removed. Mulch or woodchips from black walnut are not recommended for plants sensitive to juglone. However, composting the woodchips for a minimum of six months allows the chemical to break down to a safe level even for plants sensitive to juglone.



Upcoming Horticulture Events of Interest:

Glenwood Lake Park Farmers Market

Wednesdays, June 1 to Sept. 7 4:00 PM – 7:00 PM

Vendors offering locally-grown garden and orchard produce, baked goods, eggs, crafts, plants, etc.

Mills County Master Gardeners will usually have a question/answer table to help solve your garden problems.

Silver City Farmers Market

Saturdays throughout the summer beginning on June 4

Time: 8:00 AM – 11:30 AM
Located in the Silver City Park

Mills County Master Gardeners on hand to answer all your gardening questions!

Food Preservation 101 Class

Date: Monday, August 29
Time: 6:30 – 8:00 PM
Location: Montgomery County Extension Office
400 Bridge Street, Red Oak
Cost: FREE

Presented by Barb Fuller, ISU Extension Nutrition and Health Program Specialist. Topics covered will include canning, freezing and dehydrating food.

Pre-registration is requested. Call 712-623-2592 by August 26th to pre-register.

Potatoes grown for storage should be harvested after the vines have died and the crop is mature. To check crop maturity, dig up one or two hills after the plants have died. If the skins on the tubers are thin and rub off easily, the crop is not fully mature. Allow the crop to mature for several more days before harvesting the potatoes. When harvesting potatoes, avoid bruising, skinning or cutting the tubers. Damaged potatoes should be used as soon as possible.

Why are some of my potato tubers green?

Potato tubers actually are enlarged underground stems. When potato tubers are exposed to light (either in the garden or storage), their skin turns green due to the formation of chlorophyll. The chlorophyll itself is not a problem. However, higher levels of glycoalkaloids also develop in the green tissue. Green tubers have a bitter taste and can cause nausea, headaches and other health problems if eaten in large quantities.

Tubers with small green areas can be safely eaten if the green portions are cut off and discarded. It would be best to discard potatoes that are largely green.

When growing potatoes in the garden, hill soil around the base of the potato plants to prevent the tubers from being exposed to light. After harvesting, store potatoes in a dark location.

How should I store my potatoes?

After harvesting the potatoes, cure the tubers at a temperature of 50 to 60 F and high relative humidity (85 to 90 percent) for two weeks. The curing period allows minor cuts and bruises to heal. Thickening of the skin also occurs during the curing process.

Once cured, store potatoes at a temperature of 40 F and relative humidity of 90 to 95 percent. Store the crop in a dark location, as potatoes turn green when exposed to light. If storage temperatures are above 50 F, the tubers may begin to sprout in two or three months. When stored below 40 F, potatoes develop a sugary, sweet taste. Sugary potatoes can be restored to their natural flavor by placing them at room temperature for a few days prior to use. Do not store potatoes with apples or other fruit. Ripening fruit give off ethylene gas, which promotes sprouting of tubers.

Is it necessary to water an established lawn during hot, dry weather?

Gardeners have two basic options when confronted with hot, dry weather. One option is to do nothing and allow the grass to go dormant. The alternative is to water the turfgrass during dry weather to maintain a green, actively growing lawn.

Ask the ISU Extension Gardening Expert

When should I harvest my potatoes?

Potatoes can be harvested when the tubers are small and immature ("new" potatoes) or when the crop is fully mature.



"New" potatoes are dug when the plants are still green and the tubers are greater than 1 inch in diameter. New potatoes should be used immediately, as they do not store well.

Cool-season grasses, such as Kentucky bluegrass, can survive long periods of dry weather. In dry weather, the shoots of the turfgrass plants stop growing and the plants go dormant. Dormancy is a natural survival mechanism for turfgrass. While the leaves have turned brown and died, the turfgrass roots and crowns remain alive. Generally, Kentucky bluegrass can remain dormant for four to six weeks without suffering significant damage.

Cool-season grasses are at risk of dying if dormant for more than six weeks. To ensure survival of dormant grass, it's best to water lawns that have been dormant for six weeks. Apply 1 to 1 ½ inches of water in a single application. Water again seven days later. The grass should begin to green up after the second application.

How often should I water my garden?

A deep watering once a week is usually adequate for fruit, vegetable and flower gardens. When watering the garden, water slowly and deeply. Moisten the soil to a depth of 8 to 10 inches. Most annuals, perennials, vegetables and small fruits perform best when they receive 1 to 1 ½ inches of water per week (either from rain or irrigation).

Will treating my lawn for white grubs reduce the population of Japanese beetles on my plants next summer?

It would be nice if life could be that simple, but the relatively small area you can treat (compared to the grassy sites in the surrounding area) will not have any impact on the following year's adult population. Japanese beetle adults are very strong and capable fliers and may travel long distances from where they developed as larvae in fence rows, roadside ditches and other grass sites, to where they are feeding. You are likely to have beetles next summer whether you treat the grub stage in your lawn or not. Controlling one life stage does not preclude potential problems with the other.

This does not mean you should not treat the turfgrass. If desired, high value turf can be protected from the root-feeding larvae by treating the soil with a preventive insecticide in a timely fashion and according to label directions. Most of the available insecticides must be applied before mid-August to be effective as preventive treatments. Treating for grubs will protect the turfgrass. It will not prevent beetles from feeding in your landscape the following year.

How do I control "creeping Charlie" in my perennial flower bed?

Hand pulling, digging and hoeing are the best ways to control ground ivy or "creeping Charlie" in garden areas. (While broadleaf herbicides can be used to control

ground ivy in turfgrass areas, herbicides are not a viable option in flower and vegetable gardens.) The key to effective control of ground ivy in gardens is persistence. Repeatedly pull, dig, and hoe the ground ivy (remove the plant debris to prevent it from rooting) until it has been eliminated. Once destroyed, maintain clean, weed-free borders around flower and vegetable gardens to prevent the ground ivy from "creeping" back in from adjacent areas.

Why are some of the fruit on my cucumber vines misshapen?

Poorly-shaped fruit are usually the result of poor pollination. Poor pollination may be due to cool, wet weather or improperly applied insecticides that limit bee activity. When insecticides are necessary, select an insecticide with a low toxicity to bees and apply it early in the morning or late in the evening to reduce the risk to bees.

What would be a good planting site for the magic lily?



The magic lily (*Lycoris squamigera*) is a rather intriguing plant. Other common names include resurrection lily, surprise lily, hardy amaryllis and naked lady. The life cycle of *Lycoris squamigera* is different from most other plants. Its long, strap-shaped leaves emerge in the spring, but die back to the ground by early summer. Pink, lily-like flowers are borne

on 18- to 24-inch-tall, leafless, flower stalks in mid to late summer. Each flower stalk produces 4 to 12 flowers.

The magic lily performs best in partial shade to full sun in well-drained soils. Plant bulbs 4 to 5 inches deep and 6 to 8 inches apart. Since the dying foliage is rather unsightly, interplant the magic lily with other perennials.

There are large, green caterpillars on my tomato plants. What should I do?

The large, green caterpillars are probably tomato hornworms. Tomato hornworms are bright green, up to four to five inches long and have red or black, horn-like projections on their rear ends. After feeding, hornworms move to the soil where they pupate and spend the winter. The following summer the pupae transform into five-spotted hawk moths and start the cycle over.

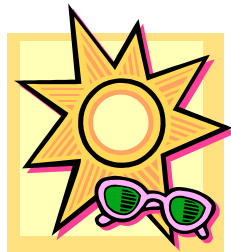
Tomato hornworms feed on the leaves and fruit of tomatoes and other vegetables including eggplant,

potatoes and peppers. They can quickly defoliate portions of the plant and heavily damage the fruit.

Often the best control option for home gardeners is to simply pick the caterpillars off by hand and destroy them. Another control option is to use a biological insecticide, such as *Bacillus thuringiensis* (Bt), or a synthetic home garden insecticide. As always, carefully read and follow label directions when using pesticides.



AUGUST GARDENING TO DO LIST



- Harvest, dry and store herbs for later use. Many herbs can be frozen very easily in ice cube trays.
- Certain pesticides have a waiting period of several days between the time of last spray and harvest. Read and follow directions on all pesticide labels before applying them to vegetable crops. Wash all produce thoroughly before use.
- Moistened and turn your compost pile on a regular basis. Do not add weeds with mature seed heads to compost piles. Most home compost piles do not reach a high enough temperature to kill the weed seeds.
- Continue deadheading plants to prolong bloom, prevent unwanted seedlings, and improve the overall appearance.
- Water tomatoes consistently to avoid problems with splitting and blossom-end rot.
- When the stalk tips of onions yellow, fold down the stalks just above the bulbs to hasten ripening and produce larger bulbs.

- Plant seeds of radish, lettuce, and spinach for a fall harvest.
- Place orders for fall planting of spring-flowering bulbs.
- Raise the mower blade to 3 inches to prevent injury to the grass during summer heat.
- In mid to late August, remove the blossoms and new growth on tomatoes to encourage ripening of existing tomatoes.
- Pinch off the growing stem tips from eggplant, pepper, and melon plants to promote ripening of their existing fruits and vegetables.
- Add water to ponds and water features as needed in dry, hot weather.
- Dig potatoes for storage after vines have died and skins on tubers do not rub off easily.
- Pick up and destroy windfall apples to reduce pest populations.

Resources for Horticulture information

ISU's Hortline at (515) 294-3108
(Monday-Friday, 10 a.m.-noon, 1-4:30 p.m)

ISU/Mills County Extension: 712-624-8616
www.extension.iastate.edu/mills/yardgarden.htm

Iowa State University Publications

- NCR 0025 Lawn Weeds and Their Control (\$7.25)
IDEA 2 Small Fruits: Insect and Disease Management for Backyard Fruit Growers in the Midwest
SUL 13 Leaf Spot and Melting-out in Turfgrass
RG 601 Gardening for Butterflies
PM 0819 Planting a Home Vegetable Garden
PM 534 Planting & Harvesting Times for Garden Vegetables (Free)
PM 1890 Potatoes
RG 313 Growing Garden Lilies

Horticulture Publications on-line
<https://www.extension.iastate.edu/store/ListCategories>

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