

Down the Garden Path



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GARDEN

Bitter Cucumbers a Temporary Problem

B. Rosie Lerner, Extension Consumer Horticulturist

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If you've noticed that your cucumbers are a little (or a lot) bitter lately, don't give up hope. A little water, mulch, and patience will provide relief.

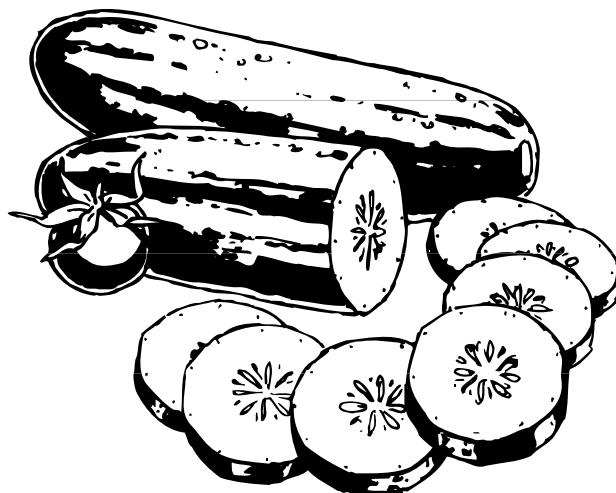
Most cucumber plants contain a bitter compound called cucurbitacins which can be present in the fruit as well as the foliage. Bitterness in cucumbers tends to be more prominent when plants are under stress from low moisture, high temperatures, or poor nutrition.

For some cucumber eaters, the bitter taste can be accompanied by a digestive discomfort known as a burp. Some of the newer cultivars of cucumbers do not have the bitter compound and thus no burp. So, some seed companies called their bitter-free cukes "burpless".

The amount of bitterness in the cucumber depends on the severity of the heat and drought. Cutting off the stem-end and removing the skin of bitter cucumbers will remove much of the bitterness in most cases. Some fruits will be bitter all the way through and should be discarded. Bitter cucumbers will not taste any better when pickled!

Watering during droughty periods to provide 1 to 1 1/2 inches of water in a single application will help keep bitterness out of subsequent fruits. Apply a mulch such as straw, shredded bark, or newspaper, to help cool the soil, conserve moisture, and keep weeds under control.

Next year, consider planting bitter-free cultivars. New cultivars arrive each year so be sure to read through next season's garden catalogs to find the bitter-free types. In addition, provide optimum growing conditions when possible. ☺



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Blossom-End Rot: A Gardener's Disappointment

B. Rosie Lerner, Extension Consumer Horticulturist

Many home gardeners are frustrated by what appears to be a plague upon their ripening tomatoes. Just as your mouth waters for the first harvest, a black, leathery spot appears at the base of the fruit.

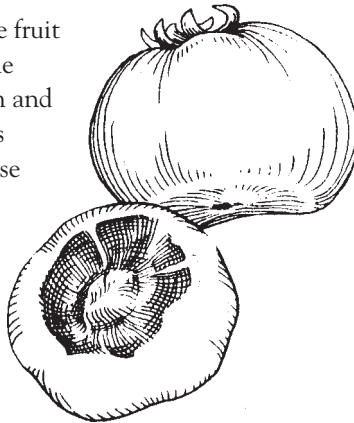
Blossom end-rot is caused by a physiological disorder rather than an infectious disease. The black scar tissue is caused by a deficiency of calcium in the developing fruit, usually brought on by extreme fluctuations in soil moisture. The early round of fruits set on the plant are often the most affected.

The spot develops on the blossom-end of the fruit opposite the point of stem attachment, thus the name blossom-end rot. The scar is usually firm and leathery, although secondary rotting organisms may enter through the damaged tissue and cause a soft rot to develop. In most cases, the fruit will go ahead and ripen and one can cut away the affected portion and still eat the rest. However, affected fruits should not be used for canning.

Tomatoes aren't the only fruits affected by blossom-end rot; summer squash and other cucurbit type plants are less often affected.

There is no spray that will control blossom-end rot except maybe from the irrigation hose. Most Indiana soils have plenty of calcium although some sandy or muck type soils may be deficient.

The fruits that have already developed the scar can not be helped, but the new developing fruits can be. Watering during dry spells and mulching to conserve soil moisture will help reduce the fluctuations in the moisture supply and thus prevent calcium deficiency in the fruits. ☺



OVER THE BACK FENCE

Q: Every year my tomatoes get cracks and are misshapen. Why?

A: Tomatoes may crack open from excessive growth by a rainy period following a dry spell. To reduce the incidence of fruit cracking, water during drought and apply mulch to conserve soil moisture.

Catfacing is a term applied to deformed, misshapen fruit and occurs when days are cool and cloudy during fruit set. The blossom tends to stick to the side of the developing fruit resulting in puckering. -B. Rosie Lerner ☺



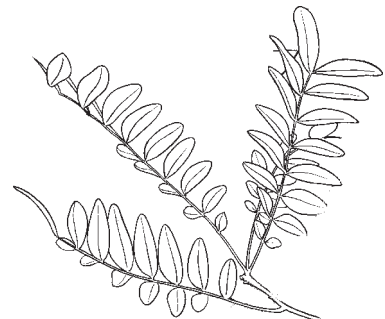
Q: I have a lot of worms on my Thornless Honeylocust tree that are spinning webs at the tips of the branches. What can I do to get rid of them?

A: Your description sounds like mimosa webworm. The following information is from Purdue Extension publication E-11, *Mimosa WebWorm*.

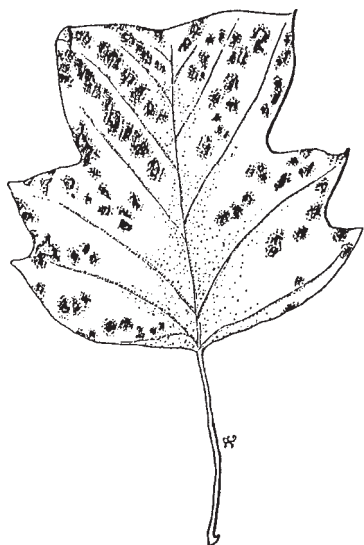
Mimosa webworms attack both mimosa and honeylocust trees in Indiana. The larvae web foliage together and skeletonize leaflets. Injury is most noticeable by August when second generation larvae are at the peak of activity. Continued feeding may cause infested trees to turn brown as if scorched by fire.

Mimosa webworm can be controlled by a combination of sanitation practices and chemical spraying. Fall raking and burning of fallen leaves may help destroy some overwintering pupae. *Bacillus thuringiensis* can be used when applied at the first signs of webbing when caterpillars are small. Several insecticides (acephate, carbaryl, diazinon, chlorpyrifos) can be used to control mimosa webworm. When using any pesticide, read and follow label directions.

For more information, refer to Purdue publication E-11, *Mimosa Webworm*, available from your local County Extension Office or by visiting the *Reference Links* section of *The Virtual Plant and Pest Diagnostic Laboratory* webpage (<http://www.btny.purdue.edu/ppdl/>). -Peggy Sellers ☺



Q: The leaves on my tuliptree are turning yellow and dropping. What is wrong?



Environmentally Stressed Tuliptree Leaf

A: Recent hot weather has brought with it yellowing and drop of tulip tree leaves. This unexplained disorder, apparently caused by environmental stress, commonly develops in tulip trees during hot dry weather after midsummer.

An added symptom that frequently accompanies the leaf yellowing is the appearance of circular, black spots between the veins of the yellowing leaves. The black spotting is often mistaken as a symptom of fungal leaf spot.

Though alarming in appearance the problem does not affect tree vigor or health, affected trees will not die or show signs of decline. -Paul Pecknold ☺

THE GRAPE VINE

Aster Yellows

Gail Ruhl, Plant Disease Diagnostician and Peggy Sellers, P&PDL Director

Aster yellows is a disease caused by a phytoplasma (formerly known as a mycoplasma) that attacks a wide range of vegetable, ornamentals and weeds. Common plants affected include carrot, chrysanthemum, cockscomb, coreopsis, marigold, statice, and strawflower.

Phytoplasmas are smaller than bacteria but larger than viruses. Phytoplasmas can only survive and reproduce in live plant tissue and cannot be isolated and cultured using conventional laboratory methods. Positive identification of phytoplasmas requires the use of an electron microscope. Diagnosis of aster yellows in most labs is done by comparing the suspect plants to the typical symptoms in disease identification photos.

Symptoms of the disease can include yellowing (chlorosis), stunting, and abnormal flower development. This disease causes parts of flowers (petals, anthers and pistils) to revert to vegetative or leafy structures that remain green. Aster yellows overwinters on perennial host plants and is spread by leafhoppers (primarily by the aster leafhopper).

The leafhoppers serve as vectors of the phytoplasmas. Leafhoppers must first feed on a plant that is infected. Approximately 10 to 14 days must pass between the time a leafhopper feeds on an infected plant and when it is capable of transmitting the phytoplasma to new plants. During this period (latent period), the aster yellows' phytoplasma actually migrates into the body of the insect and reproduces within its cells. The leafhoppers are rendered infective (capable of infecting new plants) only after sufficient amounts of the phytoplasma have migrated to their salivary glands and remain infective until they die.

Control of aster yellows is best accomplished by preventing the entrance of the phytoplasma into the garden. Plant only healthy seeds, cuttings, and plants. Many weeds, including dandelion, plantain, and ragweed are also infected with this disease and can serve as a source of the phytoplasma in your garden, thus weed control is important in disease prevention. Diseased plants should be promptly destroyed and discarded to prevent further spread.

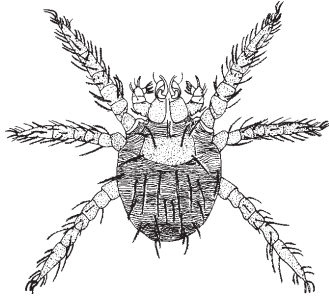
Insecticides to control leafhoppers in home gardens are generally not recommended. ☺



YARD

Chiggers

Joe Boggs, *The Ohio State University*



Chigger

Have you been outside playing in the yard and now you itch? If so, chiggers are likely culprits.

Chiggers overwinter as eight-legged adults, and adult females are about 1/20 inch long which is relatively large compared to the 1/150 inch long six-legged larvae - the "biting" stage. The overwintered females lay about 15 eggs a day on vegetation once soil temperatures reach 60 degrees Fahrenheit. Eggs hatch into six-legged larvae which climb onto an animal host (e.g. humans), inject digestive juices into the skin and feast upon the liquefied skin cells.

The larvae do not burrow into the skin, but their feeding activity causes the skin to form a raised, hardened structure with a straw-like "feeding tube" in the center. The larvae use the feeding tube to continue to extract digested skin cells. Once satiated (satisfied or full), larvae drop to the ground and transform into eight-legged nymphs which later mature into the adults. Adults and nymphs are predators and feed primarily on eggs of insects.

For more information including control recommendations, refer to Purdue publication *E-34, Chiggers*, available from your local County Extension Office or by visiting the *Reference Links* section of *The Virtual Plant and Pest Diagnostic Laboratory* webpage (<http://www.btny.purdue.edu/ppdl/>).

Editor's note, this information was adapted from information in the newsletter, the BYGL (Buckeye Yard & Garden Line), July 24, 1997. ☺

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