



Home Gardening Newsletter

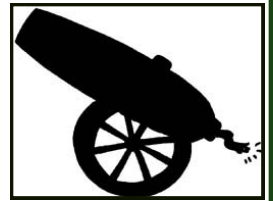
January-February
2015



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Horticulture News

Artillery Fungus



In recent years, I've received a few calls of black tar-like spots mysteriously appearing on the hood of ones car, deck railing or vinyl siding of homes. The culprit is a wood-dwelling fungus known as the "artillery" or "shotgun" fungus *Sphaerobolus stellatus*. *Sphaerobolus* (Greek for "sphere thrower") is very common across the United States and especially along the East Coast.

Artillery fungus helps decompose wood (wood chips), twigs, plant debris (corn cobs) and animal dung. It's harmless to people, animals and living plants, but it has the unpleasant habit of shooting black sticky spores up to 14 feet high making them a nuisance to homeowners.

The fruiting bodies of *Sphaerobolus stellatus* are small (1-3mm), roundish in shape and off-white to buff in color. At maturity, a dark brown, roundish "cannon" or "egg" contains the spores of the fungus. This egg (peridiole) may be ejected up to 14 feet from the fruiting body and has an oily or sticky surface that enables it to stick like glue to most surfaces it encounters. Once stuck to a surface, the "egg" dries and adheres quite stubbornly. Removal of the fungus is extremely difficult and often leaves an oily stain or mark on the surface.

If artillery fungus is present within a mulched landscape, environmental conditions that favor fruiting body development occurs in the spring and fall with temperatures in the range of 70-80 degrees F and high levels of moisture. A change in temperature to 90 degrees F will initiate the "shotgun" effect ejecting the "egg" from the fruiting body. Artillery fungus is considered phototropic, as the "egg" will shoot toward a light source.



In rare cases when this problem occurs, avoid using wood chips as mulch; pine or hardwood bark mulch does not seem to harbor the fungus as much and can be used as an alternative. Spores are known to survive up to 11 years so covering mulch which contains fruiting bodies with fresh wood chips may only solve the problem temporarily. Bleach and fungicides are not recommended nor labeled for this use.



For more information on Artillery Fungus go to:
NCSU website at <http://www.ces.ncsu.edu/depts/pp/notes/oldnotes/gp1.htm>
Penn State's website at <http://extension.psu.edu/pests/plant-diseases/artillery-fungus/faqs/about-artillery-fungus>

What's Wrong With My Potatoes? - Potato Scab

Each year, gardeners love to dig-up their beloved patch of red, white, blue, gold or purple potatoes in anticipation of their first mouth-watering bite! However for some, questions arise when their cherished field of Yukon Gold and others, display lesions that appear corky or sunken with brown to black discolorations.

The invading culprit is most likely *Streptomyces scabies* (Scab). Scab is a common tuber disease that occurs throughout Western N.C. and potato growing regions around the world. Scab is characterized by scab-like lesions on the surface of the tubers and can be quite variable. Although superficial lesions do not usually affect total yields, deep-pitted lesions do increase peeling losses and detract from the appearance of the potatoes bought in our local grocery stores.



Scab is a bacterial pathogen that usually appears in soil that is continuously planted in potatoes. Symptoms of scab infection are found only on tubers and plant parts below the ground. Lesions may appear raised, circular and corky in varying sizes and colors of tan to brown, or sunken and black in appearance. The depth of the lesion seems to depend on the variety, soil conditions and on the invasion of scab lesions by other organisms, including insects. Quite often scab is introduced into gardens and fields on infected seed potatoes and will survive in the soil indefinitely. Scab overwinters in infected plant tubers and roots and affects other fleshly rooted crops such as beets, radishes and turnips.

Conditions That Favor Scab

Soil alkalinity – Scab incidence increases as soil pH levels rise above 5.5. A higher pH increases the availability of calcium, which causes the tubers to be more susceptible to scab infection.

High calcium levels in the soil - Calcium a product of lime, creates a “welcome” environment for the development of scab.

Hot, dry weather - Scab is usually more severe if hot, dry weather occurs during tuber formation.

Continuous planting of potatoes - The scab organism tends to increase and become difficult to control when susceptible varieties are continuously planted in the same soil.

Control

Plant tolerant to resistant varieties. Varieties with varying resistance to scab include Dark Red Norland, Kennebec, Superior, Norchip and Atlantic. Commonly planted varieties that are not resistant are Red Pontiac, Katahdin and Yukon Gold.

Plant scab-free seed pieces. Fungicides for seed-piece treatment only suppress the disease; they do not rid the potatoes of the pathogen.



Rotate your potatoes with crops other than fleshy-rooted crops. Research indicates a reduction of scab incidence with the use of brassica cover crops (mustard, canola, rape, broccoli) prior to potatoes.

Maintain a low soil pH of 5.5 or less for suppression of scab. However, keep in mind that excessively low pH levels will detract from plant performance. Apply sulfur or acid-forming fertilizers to lower the pH based on the results of your soil test.

Avoid applying manure to potato fields as the scab organism can survive passage through the digestive tract of animals.

Maintain adequate soil moisture during the time of tuber formation and growth (4-6 weeks after planting). Avoid overwatering, as it may cause rotting or poor plant growth.

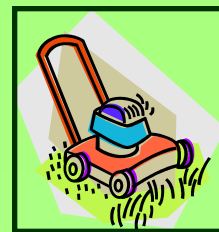
For more information about varieties tolerant to scab go to the 2013 Production Guide for Organic Potatoes at <http://plantpathology.ces.ncsu.edu/wp-content/uploads/2013/12/potato.pdf>

January-February Horticulture Tips



Lawns

- This is a good time to get your mower tuned up and sharpened along with other equipment and hand tools.
- Fertilize cool season lawns. Use a slow-release fertilizer at a rate of ½ to 1 lb. of nitrogen per 1000 sq. ft.
- Apply broadleaf herbicide for winter annual weeds if needed. Spray during a period of warm weather when weeds are actively growing. Follow label directions.
- Spray dormant oil where scale insects have been a problem.
- Be sure charcoal chunks are removed before wood ashes are applied to lawns.



Vegetables

- Break up soil for early spring vegetables whenever it is in workable condition. Soil may be too wet to till at planting time.
- Start cool season crops such as lettuce, radishes, and spinach in a cold frame. Ventilate frame on sunny days to prevent overheating.
- Plant asparagus crowns.
- Start transplants for cool season plants such as broccoli, cabbage, cauliflower, and kale indoors early in the month.
- Onion seeds for transplants can be sown indoors early this February.



Fruits

- Plant fruit trees and blueberry, blackberry, and grape plants now through April.
- Prune grape vines.
- Spray fruit trees with dormant oil when temperature is above 45 degrees F. and will remain above freezing for 24 hours. This will help eliminate some insects by suffocating overwintering eggs and larvae.
- Spray peach and nectarine trees with a fungicide to prevent leaf curl.
- Order fruit plants from the Swain Extension Center at www.swain.ces.ncsu.edu

Ornamentals

- Plant trees and shrubs when ground is not frozen.
- Cut back overgrown shrubs. Prune evergreen shrubs lightly. Prune summer-flowering shrubs to encourage new blooms. Prune shade trees if necessary.
- Spray woody ornamentals with dormant oil.
- Fertilize large shade trees with 3 pounds of 10-10-10 per inch of trunk diameter.



Other

- Clean out and put up bluebird boxes.
- Keep bird feeders full and birdbaths filled with fresh water.
- Check and repair garden equipment and tools before they are needed.
- Cut branches of forsythia, quince, crabapple, pussy willow, etc., to force for inside enjoyment.

Look for Christine Bredenkamp for more on Horticulture Tips and upcoming programs.



Changes in Soil Sampling Process

We are now in the season for soil sampling and by now you may know that a “peak season soil test fee” has been implemented. This fee is \$4 per soil sample from Nov. 26th 2014 to March 31st 2015. Homeowners who plan to submit 5 samples or less, pre-payment of the peak season soil fee is not necessary; an invoice will be mailed to you after samples are analyzed. Payment can be made over the phone (NCDA&CS Agromomic Division at (919) 733-2655) or by check (please include the invoice ID number on the check). Once payment is complete, you will receive an email with your soil report information.

Here are the basic steps

1. Take soil samples
2. Fill out the soil information form. Make notes (key) to remember where samples are located.
3. Pack soil boxes & form in a larger box for mailing. Do not include check at this time.
4. Mail samples and form to the NCDA & CS address on the form and or box.
5. Mail off or call in payment after you receive an invoice and wait for link for your soil test results.

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Sincerely,
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