

Horticulture 2017 Newsletter

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Video of the Week: [Selecting the Best Transplant](#)
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TURFGRASS

Fertilize Irrigated Cool-Season Lawns in May



May is an excellent time to fertilize cool-season lawns such as tall fescue and Kentucky bluegrass if they will be irrigated throughout the summer. Non-irrigated lawns often go through a period of summer dormancy because of drought and do not need this fertilization.

May is a good time to fertilize because the springtime flush of growth characteristic of these grasses has tapered off, so the fertilizer you apply will be less likely to cause excessive shoot growth than if you fertilized at a full rate

in April. Slow-release nitrogen sources are ideal. These nitrogen sources promote controlled growth, which is desirable as the stressful summer weather approaches. Relatively few fertilizers available to the homeowner supply ALL of the nitrogen in the slowly available form. But one such product that is widely available is Milorganite. Other such products available in the retail market include cottonseed meal, alfalfa-based fertilizers, and any other products derived from plants or animals. (Bloodmeal is an exception, and contrary to popular belief, the nitrogen it supplies is quickly available.) These products are all examples of natural organic fertilizers. They typically contain less than 10 percent nitrogen by weight, so compared to most synthetic fertilizers, more product must be applied to get the same amount of nitrogen. Translation: they are more expensive! Apply enough to give the lawn one pound of nitrogen per 1,000 square feet. For example, if the fertilizer is 6 percent nitrogen by weight, you will need to apply almost 17 pounds of fertilizer product per 1,000 square feet. Summer lawn fertilizers that contain at least a portion of the nitrogen as slow-release are fine to use as well. Be sure to follow label directions. If cost is prohibitive, you can use the less expensive quick-release (i.e., soluble) sources, but split the application into two doses as follows: apply enough to give the lawn 0.5 lb nitrogen per 1,000 square feet in May and again in early June. (Ward Upham)

FRUIT

Be on the Lookout for Peach Leaf Curl and Plum Pocket



Peach leaf curl is a fungus disease that causes developing peach leaves to become puckered and distorted and show a reddish-green hue. A similar disease called plum pocket may develop on American and sand hill plums. Plum pocket results in formation of distorted, light green, bladder-shaped fruit. Asian and European plums are not susceptible to the local strain of plum pocket. Unfortunately, it is too late to control any of these diseases with fungicides this year.

Trees that are severely infected with peach leaf curl are likely to lose many leaves. If trees are healthy, new leaves will grow. Indicators of a healthy tree are large, deep green leaves and last year's growth being at least 18 to 24 inches long. If these tree vigor indicators are not present, especially if there was only 12 inches or less of growth last year, then a fertilizer application would be helpful.

The fertilizer should be spread on the soil under the branch area. Apply 1 and 1/3 to 2 cups of a 13-13-13 fertilizer under the branch area. If a soil test indicates that only nitrogen is needed, use 1/3 to 1½ cups of nitrate of soda (16-0-0) instead of the 13-13-13. You may also substitute a high nitrogen fertilizer such as a 27-3-4, 30-5-4 or something similar for the 13-13-13, but use only half the amount used for nitrate of soda. The sooner fertilizer is applied, the more immediate benefit it will have in promoting new leaf growth. Both peach leaf curl and plum pocket can be controlled with a single fungicide application applied this fall after leaf drop or early next spring before bud swell.

Effective fungicides include Bordeaux mixture and chlorothalonil (Bravo, Daconil and others). Be sure to cover the entire tree including the bark and trunk. (Ward Upham)

Fruit Sprays and Spray Water pH



The most common fungicide used in fruit tree sprays is captan. Unfortunately, this product is subject to alkaline hydrolysis. This is a process whereby certain pesticides will break down when mixed with high pH water. So let's say you mix up your spray mixture by captan to 5 gallons of water. If that water has a pH of 7, the captan will break down so that only half of it will still be present in 8 hours. However, if the water you use has a pH of 10, half the captan will break down in 2 minutes.

Malathion used to be the most common insecticide used for fruit pest control by gardeners but is becoming more difficult to find. It isn't nearly as sensitive to alkaline hydrolysis as captan but

still will break down under high pH conditions. Fortunately, it is stable at a pH between 5 and 7. Lambda-cyhalothrin, found in Bonide Fruit Tree & Plant Guard, is a relatively new product for fruit pest control that also is stable between a pH of 5 to 7.

Note that alkaline hydrolysis does not affect all pesticides. Captan is the exception, not the rule. For a listing of common pesticides and their susceptibility to alkaline hydrolysis, see <http://ecommons.library.cornell.edu/bitstream/1813/5149/1/FLS-118.pdf>

So, how do you bring down the pH of your spray water if it is high? Commercial people use buffering agents but that may be difficult for homeowners to find. Food grade citric acid can help. If you have a pH of 8.0, add 2 ounces of this citric acid per 100 gallons of water (1 and 1/4 teaspoons per 10 gallons) to bring the pH down to about 5.5. (Ward Upham)

FLOWERS

Blackspot of Roses



A common disease of roses is blackspot, a fungus disease that can cause defoliation of susceptible plants. Look for dark, circular lesions with feathery edges on the top surface of the leaves and raised purple spots on young canes. Infected leaves will often yellow between spots and eventually drop. The infection usually starts on the lower leaves and works its way up the plant. Blackspot is most severe under conditions of high relative humidity (>85%), warm temperatures (75 to 85 degrees F) and six or more hours of leaf wetness. Newly expanding leaves are most

vulnerable to infection.

The fungus can survive on fallen leaves or canes and is disseminated primarily by splashing water. Cultural practices are the first line of defense.

1. Don't plant susceptible roses unless you are willing to use fungicide sprays. For a list of blackspot resistant varieties, go to:

https://ag.purdue.edu/btny/ppdl/Pages/POTW_old/3-22-04.html

2. Keep irrigation water off the foliage. Drip irrigation works well with roses.

3. Plant roses in sun in areas with good air movement to limit the amount of time the foliage is wet.

4. Remove diseased leaves that have fallen and prune out infected rose canes to minimize inoculum.

If needed, protect foliage with a regular spray program (10- to 14-day schedule) of effective fungicides. Recommended fungicides include tebuconazole (Bayer Disease Control for Roses,

Flowers and Shrubs), myclobutanil (Immunox, Immunox Plus, F-Stop Lawn & Garden Fungicide), triticonazole (Ortho Rose & Flower Disease Control) and chlorothalonil (Broad Spectrum Lawn & Garden Fungicide, Garden Disease Control, others). (Ward Upham)

MISCELLANEOUS

Flooding Damage



Waterlogged soils push out oxygen that roots need to survive. Every living cell in a plant must have oxygen or it dies. Some plants have mechanisms to provide oxygen to the roots even under saturated conditions but most of our vegetables and flowers do not. The longer these plants are subjected to saturated soils, the more likely damage will occur.

Usually, as long as water drains away within 24 hours, the impact on plant health is minimal. However, shallow, stagnant water under hot, sunny conditions can literally cook small plants, reducing survival time to as little as a few hours.

Vegetables: What about safety regarding eating produce from a garden that has been flooded? Standing water should not cause a safety problem as long as the aboveground portions of the plant remain healthy. Do not use produce from plants that have yellowed. Also, using produce flooded with water contaminated with sewage (lagoon) or animal manure can also be dangerous.

The safest approach is to discard all garden crops that have been in contact with such water. Certainly, leafy vegetables should always be discarded. However, you may eat fruit from such crops as tomatoes, peppers, eggplants, sweet corn, squash, cucumbers, and similar vegetables that develops after the waters have subsided as long as the fruit is not cracked or soft. Always wash vegetables thoroughly before eating.

Lawns: Under the cool conditions of early spring, turfgrasses can often survive several days of flooding. However, during hot, sunny conditions with shallow, stagnant water, lawns may be damaged quickly, sometimes in a few hours. This situation often occurs when shallow depressions in a lawn allow water to pool. Note such areas and fill in with additional soil once the waters have subsided.

Trees: Trees differ markedly in their ability to withstand flooding. Some trees have mechanisms in place to provide oxygen to the roots of plants with water saturated soils and others do not. However, most trees will maintain health if flood waters recede in 7 days or less. It also helps if water is flowing rather than stagnant as flowing water contains more oxygen. If the roots of sensitive trees are flooded for long periods of time, damage will occur including leaf drop, iron chlorosis, leaf curl, branch dieback, and in some cases, tree death. Another danger of flooding is the deposition of sediment. An additional layer of silt 3 inches or more can also restrict oxygen to the roots. If possible, remove deep layers of sediment as soon as conditions permit. This is especially important for small or recently transplanted trees.

Try to avoid any additional stress to the trees this growing season. Ironically, one of the most important practices is to water trees if the weather turns dry. Flooding damages roots and therefore the root system is less efficient in making use of available soil water. Timely waterings are vital to a tree's recovery. Also be diligent in removing any dead or dying branches which may serve as a point of entry for disease organisms or insect pests. The following information on tree survival came from the US forest Service.

Trees Tolerant of Flooding: Can survive one growing season under flooded conditions. Red maple, silver maple, pecan, hackberry, persimmon, white ash, green ash, sweetgum, sycamore, eastern cottonwood, pin oak and baldcypress.

Trees Moderately Tolerant of Flooding: Can survive 30 consecutive days under flooded conditions. River birch, downy hawthorn, honeylocust, swamp white oak, southern red oak, bur oak, willow oak and American elm.

Trees Sensitive to Flooding: Unable to survive more than a few days of flooding during the growing season. Redbud, flowering dogwood, black walnut, red mulberry, most pines, white oak, blackjack oak, red oak and black oak.

After the Flood: Soils often become compacted and crusted after a heavy rainfall. This also can restrict oxygen to the roots. Lightly scraping the soil to break this crust will help maintain a healthy root system and therefore, a healthy plant. Be careful not to cultivate too deeply as shallow roots may be damaged. If you think the excessively wet weather will continue, bedding up the rows before planting even just a couple of inches, will improve drainage and allow for better aeration. (Ward Upham)

Poison Ivy Identification and Control



Learning to identify poison ivy is vital if you wish to avoid the rash that accompanies exposure. Unfortunately, poison ivy can make identification difficult because it occurs in three forms: an erect woody shrub, a groundcover that creeps along the ground, and a woody vine that will climb trees.

When poison ivy climbs, it forms numerous aerial roots that give the vine the appearance of a fuzzy rope. The leaves of poison ivy also vary. Though the compound leaf always has three leaflets, the leaf margins may be toothed, incised, lobed or smooth. The size of the leaves also can vary, although usually the middle leaflet is larger than the other two. Also, the middle leaflet is the only one with a long stalk; the other two are closely attached to the petiole (leaf stem). The number of leaves gives rise to the saying: "Leaves of three, let it be!" Poison ivy is often confused with Virginia creeper or Woodbine. Each of these vines, however, has five leaflets rather than three.

There are three methods commonly used to eradicate poison ivy. These include pulling or grubbing out the plants by hand, cutting off the vine, and then treating the cut stump or the regrowth, and spraying the plants directly. The method used depends somewhat on the plant's growth form.

If the plant is growing as a groundcover, direct spray or grubbing the plant out is often used. If grubbing, wear gloves and a long-sleeved shirt. The soil must be moist for grubbing to work well. Wash the clothes and yourself immediately after you finish. It might also be a good idea to rinse the washing machine.

If the plant is in the shrub form, direct spray is the most common control method. If the plant is a woody vine that has climbed a tree, the preferred method is to cut the plant off at the base and treat the sprouts after they emerge. Some triclopyr herbicides also have instructions on treating a freshly cut stump directly. Triclopyr (Brush-B-Gon Poison Ivy Killer, Brush Killer Stump Killer) is most often used for poison ivy control. Other Herbicides that can be used include glyphosate (Roundup, Killzall Weed and Grass Killer, Nutgrass, Poison Ivy and VineKiller) or dicamba. Poison ivy is tough. Repeat applications may be necessary. (Ward Upham)

Recent Rains Trigger Mushroom Development



The frequent, heavy rains in certain areas of the state have resulted in the appearance of mushrooms in home lawns and landscape beds. Although mushrooms are often spectacular in size and color, most are relatively harmless to plant life. Some of these mushrooms are associated with arc-like or circular patterns in turfgrass called fairy rings. The ring pattern is caused by the outward growth of fungal mycelium. The mycelium forms a dense, mat-like structure in the soil that decomposes organic matter. This

decomposition releases nitrate into the soil, which in turn stimulates the growth of the grass at the outer portion of the ring. This results in a dark green appearance of the grass at the margin of the ring. Unfortunately, the thick fungal mat formed by the fungus interferes with water infiltration. The fungus also may release certain byproducts that are toxic to the turf. This may lead to dieback of the turf close to the ring. Therefore, in some cases the ring is evidenced by a darker green color and in others, by a brown ring with the outside edge being darker green than the rest of the turf.

Fairy rings are difficult to control. You can sometimes eliminate the ring by digging to a depth of 6 to 12 inches and 12 inches wide on both sides of the ring, refilling the hole with non-infested soil. Or you can try to mask the symptoms by fertilizing the rest of the lawn so that it is as dark green as the ring. This often isn't a good idea because it tends to promote other turf problems. Commercial people can use certain fungicides to control fairy rings but these products are not available to homeowners. See <http://www.ksre.ksu.edu/bookstore/pubs/EP155.pdf> for more info on these fungicides.

Some mushrooms in lawns are not associated with fairy rings. These may be mycorrhizal

(symbiotic association with tree roots) or saprophytic (live on dead organic matter such as wood, etc.) in the soil. Because some of these mushrooms are beneficial, you don't really want to kill them. Besides, a fungicide spray to the mushroom itself does little good. Remember the mushroom is simply the fruiting structure of the organism. Most of the fungus is below ground and inaccessible to the chemical. If mushrooms are a nuisance, pick them and dispose of them as soon as they appear. Remove sources of large organic debris from the soil. Also, mushrooms tend to go away as soil dries. Patience may be the best control. Some of the mushrooms in the lawn are edible, but others are poisonous. Never eat mushrooms unless you are sure of their identity. (Ward Upham)

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