Video of the Week:  Spread Fertilizer Evenly on Lawn

TURFGRASS

Time to Fertilize Warm-Season Grasses

June is the time to fertilize warm-season lawn grasses such as bermudagrass, buffalograss, and zoysiagrass. These species all thrive in warmer summer weather, so this is the time they respond best to fertilization. The most important nutrient is nitrogen (N), and these three species need it in varying amounts.

Bermudagrass requires the most nitrogen. High-quality bermuda stands need about 4 lbs. N per 1,000 sq. ft. during the season (low maintenance areas can get by on 2 lbs.). Apply this as four separate applications, about 4 weeks apart, of 1 lb. N per 1,000 sq. ft. starting in early May. It is already too late for the May application, but the June application is just around the corner. The nitrogen can come from either a quick- or slow-release source. Plan the last application for no later than August 15. This helps ensure the bermudagrass is not overstimulated, making it susceptible to winter-kill.

Zoysiagrass grows more slowly than bermudagrass and is prone to develop thatch. Consequently, it does not need as much nitrogen. In fact, too much is worse than too little. One and one-half to 2 pounds N per 1,000 sq. ft. during the season is sufficient. Split the total in two and apply once in early June and again around mid-July. Slow-release N is preferable but quick-release is acceptable.

Buffalograss requires the least nitrogen of all lawn species commonly grown in Kansas. It will survive and persist with no supplemental nitrogen, but giving it 1 lb. N per 1,000 sq. ft. will improve color and density. This application should be made in early June. For a little darker color, fertilize it as described for zoysiagrass in the previous paragraph, but do not apply more than a total of 2 lb. N per 1,000 sq. ft. in one season. Buffalograss tends to get weedy when given too much nitrogen. As with zoysia, slow-release N is preferable, but fast-release is also OK.
As for all turfgrasses, phosphorus and potassium are best applied according to soil test results because many soils already have adequate amounts of these nutrients for turfgrass growth. If you need to apply phosphorus or potassium, it is best to core aerate beforehand to insure the nutrients reach the roots. (Ward Upham)

Too Wet to Mow the Lawn

What do you do when the lawn can't be cut because of constant rain? The best thing to do is to set your mower as high as possible and bring it down in steps. It is always best never to take more than one third of the grass blade off at one time. If more is taken, the plant reacts by using stored energy reserves to quickly send up new growth. This reduces the amount of energy available for the plant to deal with stress or damage done by insects or disease. However, sometimes it is just not possible to keep the "one-third rule." In such cases, cut as high as possible even though it may mean you are cutting off more than one third of the blade. Bring the height down gradually by cutting more often and at progressively lower heights until you reach the target height. (Ward Upham)

PESTS

Aphids on Roses

We have seen large populations of aphids on roses this past week. Rose aphids are small (about 1/8 of an inch long), soft-bodied, pear-shaped insects which may be green, pink or red. Generally, aphids can be recognized by their cornicles, a pair of tube-like structures projecting from the rear of their bodies.

Aphids feed by sucking sap. Leaves may be stunted and distorted. Flower buds can be deformed and may fail to open. Rose aphids excrete a sticky substance known as "honeydew" which usually becomes black with sooty mold. Ants are attracted to this substance and often are present with the aphids.

Aphids are often controlled effectively by nature. Adverse weather conditions such as beating rains and low temperatures, as well as fungus diseases, insect predators and parasites tend keep the aphids in check. However, high populations do occur and can cause reductions in flower quality and quantity. If control measures are warranted, use horticultural oil, insecticidal soap, acephate (Acephate, Orthene), malathion, cyfluthrin (Baythroid, Multi-Insect Killer) or permethrin (numerous trade names). (Ward Upham)
Cucumber Beetles and Bacterial Wilt

If you had cucumbers or muskmelons that suddenly turned brown and died last year, you may have had a disease known as bacterial wilt. The cucumber beetle carries this disease. Once a plant is infected, there is no cure, so prevention is the key. Because cucumber beetles overwinter as adults, early control measures are essential.

There are two types of cucumber beetles: striped and spotted. The striped cucumber beetle is the most common. The 1/4-inch-long beetles are conspicuously colored: black head and antennae, straw-yellow thorax, and yellowish wing covers with three distinct parallel and longitudinal black stripes. Young plants can be protected with row covers, cones, or other types of mechanical barriers. Edges must be sealed to ensure that the beetles do not find a place to enter. Plants will eventually outgrow these barriers, or they will need to be removed to allow insect pollination of the flowers. Apply insecticides before beetles are noticed in the planting. Continue to spray weekly throughout the season.

Homeowners can use Rotenone or permethrin (numerous trade names). Once plants have started flowering, spray late in the evening after bees have returned to the hive. Check labels for waiting periods between when you spray and when the fruit can be picked. (Ward Upham)

Oak Galls

A number of tiny non-stinging wasps, mites and flies cause abnormal growths to develop on the leaves, twigs or branches of oak trees. These galls can include growths that are round, spiny, flattened, elongated or star-shaped. There are hundreds of different types of galls, each of which is caused by a specific insect. Galls form in response to a chemical that the insect injects into the plant tissue. Mature females lay eggs that hatch into legless grubs. Galls form around them. Larvae feed, develop, and pupate inside these galls. Adults may emerge either the same season or may overwinter inside the gall depending on the life history of that specific insect.

Generally, these gall insects do not cause significant damage to their hosts, though some of the leaf galls can cause enough deformity to make a tree unsightly. Also, severe infestations of twig galls can cause twig dieback or, rarely, tree death. However, just because a twig is covered with galls does not mean it is dead. I have seen twigs that looked like a solid mass of galls leaf out in the spring. Insecticide sprays applied when galls are noticed are ineffective because damage has already occurred. Also, larvae are unaffected because of the protection afforded by the gall. Insecticide sprays can kill emerging adult wasps and flies, but long periods of emergence and
short residuals of most contact insecticides make this impractical. Stem and twig galls can be pruned if deemed to be practical and necessary. In short, this is a problem that is best ignored unless pruning is done to improve the appearance of the tree. (Ward Upham)

Sawfly Larvae Ash

We had a report from Sedgwick County that a number of ash trees have sawfly larvae feeding on the leaves. These sawfly larvae are a light green color with a broad, whitish stripe on the top side. In the middle of the whitish stripe there appears to be a darker green stripe that is actually the digestive tract of the insect. Though sawfly larvae resemble caterpillars, they have at least six pairs of "stublike" prolegs behind the three pairs of true legs on their abdomen. (Caterpillars never have more than five pairs of prolegs.)

There are usually no detrimental effects to the health of the tree if nature is allowed to run its course. Even if all the leaves are eaten, it is early enough in the growing season for trees to put out a complete new set of leaves and still have enough time to make all the food reserves needed to survive the coming winter. However, if control is desired, a number of insecticides can be used for control including cyfluthrin (Bayer Lawn and Garden Multi-Insect Killer), malathion, esfenvalerate (Monterey Bug Buster II) and Sevin. An effective organic product is spinosad (Captain Jack’s Deadbug Brew; Fertilome Borer, Bagworm, Leafminer and Tent Caterpillar Spray). Horticultural oils and insecticidal soaps are also effective because of the soft skin of sawfly larvae. (Ward Upham)

ORNAMENTALS

Fireblight

We have had reports of fireblight hammering certain trees in the Wichita area. Fireblight is most common on ornamental pears, fruiting pears and apples. Symptoms of fireblight include blackened, blighted shoots scattered throughout the tree crown. The shoots may have the classic Shepherd's crook where the blighted tips bend downward. There may be small amber droplets of bacteria on the stem. This late in the season, antibiotic applications are not effective in controlling the disease. It is important, however, to control insects that may become contaminated with the bacterium and/or create wounds for infection.

During the summer, prune out the blighted tips during dry weather. Make your pruning cut 10 to 12 inches below the discolored area of the branch. Disinfect pruning equipment between cuts
with a 10 percent bleach solution, rubbing alcohol or some other disinfecting agent. If using bleach, be sure to clean and oil equipment after use because bleach is corrosive. Some people prefer the ugly stub method and snap the branch off below the blighted area. This helps someone see at a glance where fireblight occurred in the tree and will facilitate follow-up pruning during the winter. (Ward Upham)

**MISCELLANEOUS**

**Helping Roundup (Glyphosate) Products Work**

Though glyphosate products (Roundup, Killzall, Pronto Weed & Grass Killer) are non-selective and will kill most plants the spray contacts, these herbicides are not taken up by the roots of nearby desirable plants. This is because the active ingredient is neutralized when it contacts the soil due to being tightly bound to soil particles.

Unfortunately, this binding effect can also take place in hard water that is high in magnesium and calcium, which reduces its effectiveness. To avoid this, mix ammonium sulfate with your spray water before adding the glyphosate product. The ammonium sulfate ions tie up the calcium and magnesium ions so that the glyphosate remains at full strength. Also some of the glyphosate will form a compound with the ammonium that weeds will more readily absorb, thus increasing effectiveness.

Note that this binding effect takes place in hard to very hard water (above 7 grains or above 120 ppm). Adding ammonium sulfate to softer water will not help. So if you have your water tested and find you have hard water, how much ammonium sulfate should you add? As a general rule, add 8.5 pounds per 100 gallons. This would equal about 1.4 ounces per gallon or four tablespoons per gallon. (Ward Upham)

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