

# MAINTAINING ST. AUGUSTINEGRASS LAWNS

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**With proper maintenance, you can help keep your St. Augustinegrass lawn dense, healthy and attractive.**

St. Augustinegrass (*Stenotaphrum secundatum* [Walt.] Kuntze) is a popular warm-season turfgrass for home lawns. It is found in the United States, southern Mexico, South America, South Africa, western Africa, the Caribbean, the Hawaiian Islands, Australia and the South Pacific.

St. Augustinegrass is medium to dark green and coarse textured. It grows well in nearly all soil types and tolerates shade, heat, salt and, to some degree, drought. It does not tolerate waterlogged soils or extended periods of cold weather. St. Augustinegrass is an relatively aggressive lawngrass that spreads by above-ground stems called stolons. St. Augustinegrass can form a dense lawn that can tolerate light traffic and compete well with most weeds. St. Augustinegrass is the most shade tolerant warm-season turfgrass.

Texas Common, Raleigh, Seville, Palmetto and Floratam are examples of St. Augustine varieties commonly used for home lawns in the southern United States. Variety availability will likely vary with location in the state since sod producers will grow varieties that are best adapted to their region. Contact your county Extension agent for information on the variety best suited for your location.

It is a common misconception among homeowners that only a dark green lawn is a healthy lawn. This often leads to higher amounts of fertilizer and water than are required for the lawn to persist and may actually result in greater thatch, disease and insect problems. The following seasonal management guidelines can help you focus on management practices that will keep your St. Augustinegrass lawn in good condition. Because many factors affect turf growth, these are general recommendations.

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## MARCH THROUGH MAY

### Mowing

Begin a routine mowing program as soon as the grass begins to green up in the spring. Mow often enough to remove no more than one-third of the leaf area with any one mowing. Set the mowing height at 2½ to 3 inches (3 to 3½ inches in shady lawns). The lower the mowing height, the more often you will need to mow. Frequent mowing at a lower height produces higher quality turfgrass.

It is best to recycle or mulch grass clippings. Grass clippings decompose quickly and return significant amounts of nutrients to the soil. If you must bag the clippings, consider composting them for use in the landscape.



St. Augustinegrass spreads by above-ground growth structures called stolons.

### Nutrient Management

Nitrogen fertilizer application on St. Augustine can range from 3 to 5 pounds of nitrogen per 1,000 square feet per year. The total annual rate depends upon desired quality, length of the growing season, recovery from traffic and a number of other factors.

Begin fertilizing 3 weeks after the grass turns green and when there is little chance of a late frost. Apply ¾

to 1 pound of soluble nitrogen per 1,000 square feet of lawn every 8 weeks, or 1 to 1½ pounds of slow-release nitrogen every 10 weeks. Have your soil tested to determine what additional nutrients your lawn may need. For information on soil testing procedures, contact your county Extension agent.

We strongly recommend that you have your soil tested once every 3 years. Besides testing for nutrients that may or may not be supplied by the soil, it will also determine soil pH and if there is a need for fertilizer or lime application. If the soil is not tested, a common recommendation has been to use a complete fertilizer with a 3-1-2 ratio of nitrogen, phosphorus and potassium (Examples: 15-5-10, 21-7-14, etc. Every bag of fertilizer has the nutritional analysis printed on the bag). However, not soil testing and using a 3-1-2 analysis may apply phosphorus when it is not needed. This could result in phosphorus runoff loss to surface water (streams and lakes) and contribute to a decline in aquatic habitat. Hence, the strong recommendation for soil testing.

To determine the amount of fertilizer needed to equal 1 pound of nitrogen per 1,000 square feet, divide 100 by the first number in the fertilizer analysis. For example, if you are using a 15-5-10 fertilizer, then you need 6.6 pounds per 1,000 square feet. (To determine the amount needed to apply 1½ pounds per 1,000 square feet, substitute 150 for 100.)

$$100 \div 15 = 6.6$$

Then determine the size of the area to be fertilized. If your lawn is 5,000 square feet, you will need 33 pounds of 15-5-10 fertilizer.

$$(5,000 \div 1,000) \times 6.6 = 33 \text{ pounds of fertilizer}$$

## Watering

Irrigation may be needed to supplement natural rainfall. The trick is to water only when the grass needs it. When you do water, wet the soil to a depth of 6 inches. Then don't water again until the grass shows symptoms of drought stress—a dull, bluish color, rolled or folded leaves, and footprints that do not “spring back.” Follow these steps to determine how long to water to apply the right amount your lawn needs.

1. Set out five or six open-top cans randomly around the lawn (tuna or cat food cans work best).
2. Turn on the sprinklers or irrigation system for 30 minutes.
3. Using a ruler, measure the depth of water caught in each individual can, and record the depths.

4. Calculate the average depth of water of all the cans.

Example: You have placed five cans in your yard. The depths of water in the cans were 0.5 inch, 0.4 inch, 0.6 inch, 0.4 inch and 0.6 inch. Add the depths together and divide by the number of cans you used.

$$0.5 + 0.4 + 0.6 + 0.4 + 0.6 = 2.5 \text{ inches}$$
$$2.5 \text{ inches} \div 5 \text{ cans} = 0.5 \text{ inch of water in 30 minutes}$$

5. Use a garden spade or a soil probe to find out how deeply the soil was wet during the 30-minute period. The probe will push through wet soil easily, but it is more difficult to push through dry soil.
6. When you know how much water was applied in 30 minutes and how deeply that volume of water wet the soil, then determine how long you must water to wet the soil to a depth of 6 inches.

Example: If the sprinklers sprayed 1/2 inch of water in 30 minutes and wet the soil to a depth of 3 inches, you would need to apply 1 inch of water to wet the soil to a depth of 6 inches. To do so you must water for 1 hour.

Run-off from watering a lawn can waste a significant amount of water, which is costly and a poor use of a limited natural resource. The factors determining how quickly run-off occurs are the type of soil and the application rate of the sprinkler system. Do not apply water faster than the soil can absorb it. To prevent run-off:

1. Check the lawn while watering. If water begins running into the streets or gutters, note how long it took before run-off occurred. This is the maximum amount of time you should water at one time.
2. Stop watering and allow the soil surface to dry (30 minutes to 1 hour).
3. Begin watering again and continue for the time you've determined. With an automatic irrigation system, change your timer to the new, shorter time.
4. Continue this cycle until the appropriate amount of water has been applied to wet the soil to a depth of 6 inches.

## Weeds

The best form of weed control is a healthy, dense lawn. To control summer annual grassy weeds (e.g., crabgrass and goosegrass), apply preemergent herbicides (which control weeds as the seeds germinate). The timing of preemergence herbicide application will vary greatly in Texas due to the onset of soil-warming temperatures required for weed germination. This may mean applying

these products by late February in Houston or by late March in Dallas. These climatic conditions usually occur in spring about the time redbud and dogwood trees begin to bloom. Apply postemergent herbicides (which control weeds that have already sprouted) as needed. Apply herbicides only when weeds are present and when the grass is healthy and actively growing.

Postemergent weed control is most effective if you apply the herbicide when the weeds are still very small. St. Augustinegrass is very sensitive and may be injured by some herbicides, such as 2,4-D. Read the label carefully before applying any herbicide to ensure that it is the right product for the weeds you have and that you do not injure the turf. Follow all instructions on the label. It explains how and when to use the product and how much to apply.

### Insects

Chinch bugs and white grubs are the two most serious insect pests in St. Augustinegrass lawns. Routinely check for these pests and treat as necessary. (See ENTO-PU-044, *Chinch Bugs in St. Augustine Lawns* and ENTO-PU-016, *White Grubs in Texas Turfgrass*," available at [agrillifelearn.tamu.edu](http://agrillifelearn.tamu.edu).)

### Thatch

Thatch (a surface layer of undecomposed plant stem and roots) is likely to form on St. Augustinegrass lawns that are heavily fertilized and watered. A thatchy lawn is prone to drought and insect damage. If the thatch layer is more than  $\frac{3}{4}$  inch thick, it can be removed gradually by mowing the lawn with a vertical mower or scalping the lawn (cutting with a rotary mower at its lowest setting) in April or May when the grass is healthy and actively growing. This practice will likely damage the lawn but it will recover if fertilized and watered properly.



Frequent mowing at a low mowing height produces a higher quality turfgrass.

### Correcting compacted soil conditions

In areas of heavy traffic, aeration can help eliminate compacted soils. Use a core-aerating machine when the grass is actively growing. If you have an underground irrigation system, flag the sprinkler heads first to avoid damaging them.

## JUNE THROUGH SEPTEMBER

### Mowing

Follow the same recommendations as for March through May.

### Nutrient Management

Continue the fertilizer program begun in the spring, applying  $\frac{3}{4}$  to  $1\frac{1}{2}$  pounds of nitrogen per 1,000 square feet every 8 to 10 weeks. Without soil test information, it is recommended that you use a fertilizer that either contains nitrogen only (21-0-0, ammonium sulfate) or is very low in phosphorus (Examples: 21-3-6 or 15-0-15) to reduce the chance of excessive phosphorus buildup in the soil. High soil phosphorus levels may lead to its surface runoff in periods of excess rainfall or irrigation. This may eventually contribute to eutrophication of streams and lakes. High levels of soil phosphorus can also lead to deficiencies in iron and zinc.

To prevent yellowing caused by iron chlorosis, apply liquid or granular iron fertilizer throughout the growing season. Follow the label directions for the rate of application. Be aware that fertilizers containing iron may stain concrete, brick or stone surfaces.

### Watering

Follow the same recommendations as for March through May.

### Weeds

Apply postemergent herbicide as needed. Herbicides containing 2,4-D should be used with care, as St. Augustinegrass is sensitive to this herbicide. Herbicides may damage the lawn if you apply them when the temperature is higher than 90°F.

### Insects

Follow the same recommendations as for March through May. The most effective time to treat for white grubs is in August when they are immature and close to the soil surface.

## Eliminating compacted soils

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Follow the same recommendations as for March through May.

## SEPTEMBER THROUGH FEBRUARY

### Mowing

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Continue the recommended mowing practices until the grass goes dormant and does not require mowing.

### Nutrient Management

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Continue fertilizing as recommended until 4 to 6 weeks before the first expected frost. At that time, apply a low nitrogen, highpotassium fertilizer. Apply no more than ½ pound of nitrogen per 1,000 square feet.



If managed properly, St. Augustinegrass forms a dense cover that handles light traffic well.

Do not fertilize St. Augustinegrass from December through February unless the lawn has been overseeded (planted with coolseason grass for green color in the winter). Fertilize overseeded lawns once in December and again in February with ½ pound of nitrogen per 1,000 square feet, using a nitrogen-only fertilizer such as ammonium sulfate (21-0-0).

### Watering

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Even though St. Augustinegrass is normally dormant in winter, you may still need to water it periodically when the weather is warm, dry and windy. If the lawn has been overseeded, water based on the earlier discussed principle.

### Weeds

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Winter annual grass and broadleaf weeds are not common in St. Augustinegrass. Therefore, it may be desirable to apply preemergent herbicides for annual winter weeds when the average soil temperature drops to 70°F. Your county Extension agent can give you an estimate of that date in your area. Apply postemergent herbicides as needed.

### Insects

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St. Augustinegrass lawns should experience no detrimental insect activity during the winter.

For more information, see the website at [aggieturf.tamu.edu](http://aggieturf.tamu.edu)