

# Maintaining Bermudagrass

L a w n s



**David R. Chalmers**, Associate Professor and Extension Turfgrass Specialist

**James A. McAfee**, Associate Professor and Extension Turfgrass Specialist

**Roger Havlak**, Extension Program Specialist–Turfgrass and Water Management

The Texas A&M University System

BERMUDAGRASS

# Your Bermudagrass lawn can be healthy and attractive if you give it proper care.

Bermudagrass (*Cynodon dactylon* [L.]) is a popular turfgrass for lawns, golf courses, athletic fields and general utility areas. Found in Australia, Africa, India, South America and the southern United States, it grows well in nearly all soil types and resists drought. Bermudagrass ranges from very fine to coarse leaf texture, and it has a low, dense growth habit. It spreads both above ground (stolons) and below ground (rhizomes), which makes it very aggressive and able to wear well and compete successfully with most weed species.

The biggest negatives to bermudagrass are that it tends to creep into flower beds, and it does not tolerate shade well. Do not select bermudagrass for lawns that are shady.

Coarse-textured varieties such as Common bermudagrass can be established from seed, sprigs, plugs or sod. They require less management than some other bermudagrass varieties, but normally produce a lower quality lawn.

Hybrid varieties such as Tifway 419 have a finer texture and produce very high quality lawns. However, they require more maintenance than coarse-textured varieties. The hybrid varieties do not produce viable seed and must be grown from sprigs, plugs or sod.

Dwarf varieties such as Champion or Tifdwarf are finely textured grasses for use on golf course greens that require intensive management. They are not recommended for home lawns.

Follow these guidelines for mowing, watering and fertilizing your bermudagrass lawn, as well as for controlling weeds, insects and thatch, and eliminating compacted soil. Because many factors can affect turf growth, these are general recommendations.

## MARCH through May

### Mowing

Begin routine mowing as soon as the grass begins to turn green in the spring. Set the mowing height at 1 to 2 inches for Common bermudagrass and ½ to 1½ inches for hybrid varieties. Remove no more than one-third of the leaf area with any one mowing. The lower the mowing height, the more frequently you will need to mow. The grass will be much better quality if you mow frequently at a lower height.



Bermudagrass grows well in nearly all soil types.

It is best not to bag grass clippings. They decompose quickly and return many nutrients to the soil. If you do bag the clippings, consider composting them to use in the landscape.

### Fertilizing

Begin fertilizing after the grass turns green and there is little chance of a late frost. Have the soil tested to determine what nutrients your lawn needs. For information on soil testing procedures, contact your county Extension agent. If you do not have the soil tested, 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).

Apply 1 pound of soluble nitrogen per 1,000 square feet of lawn every 4 to 6 weeks, or 1½ pounds of slow-release nitrogen fertilizer every 8 to 10 weeks. To determine the amount of fertilizer to apply to equal 1 pound of nitrogen per 1,000 square feet, divide 100 by the first number in the fertilizer analysis. (To determine the amount needed to apply 1.5 pounds per 1,000 square feet, substitute 150 for 100.) For example, if you are using a 15-5-10 fertilizer, then 6.6 pounds of fertilizer per 1,000 square feet will be needed.

$$100 \div 15 = 6.6$$

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

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

### Watering

To keep your lawn healthy, water it only when the grass needs it. When you do water, wet the soil to a depth of 6 inches. Don't water again until the grass shows symptoms of drought stress—a dull bluish color, rolled or folded leaves, and persistent footprints. This usually occurs in 5 to 10 days, depending on the weather.

Follow these steps to determine how long to water in order to apply the right amount.

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 in each individual can, and record the depths.
4. Calculate the average depth of water from all of 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 will be 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, determine how long you must water to wet the soil to a depth of 6 inches.

**Example:** If the sprinklers sprayed 0.5 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 amount of time you've determined. With an automatic irrigation system, change the 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.

New-style irrigation controllers allow you to water several times a day, so that you can program them to prevent run-off.

### Controlling weeds

The best form of weed control is a healthy, dense, actively growing lawn. To control crabgrass and other grassy weeds, apply preemergent herbicides (which control weeds before they sprout from the ground) in the spring when the soil temperature reaches 65 °F (your county Extension agent can give you an estimate of this date in your area), or when the redbud and dogwood trees begin to bloom. Apply postemergent herbicides (which control weeds that have already sprouted) when weeds are present and the grass is healthy and actively growing.

Control broadleaf weeds with herbicides that contain 2,4-D, MCPP or dicamba. Grassy weeds can be controlled by applying MSMA at 7- to 10-day intervals. Weed control is most effective if you apply the herbicide when the weeds are still very small. Read the label

carefully before applying any herbicide to ensure that it is the right product for the weeds you have and that it does not damage the turf. Follow all the instructions on the label. It explains how and when to use the product and how much to apply.

### Controlling insects

Armyworms, bermudagrass mites and white grubs can seriously injure bermudagrass lawns (see L-1131, "White Grubs in Texas Turfgrass," available from the Texas Agricultural Extension Service). Check for these pests routinely and treat as necessary.

If you suspect that nematodes are in your lawn, send a soil sample to the Plant Disease Diagnostic Laboratory for testing. Contact your county Extension agent for more information.



Begin mowing as soon as the bermudagrass begins to turn green in the spring.

### Controlling thatch

If the thatch layer (layer of undecomposed plant matter) is more than 1/2 inch thick, mow the lawn with a vertical mower in May when the grass is healthy and actively growing. Be sure to remove the organic matter that the vertical mower brings up from the lawn surface. To prevent thatch, avoid excessive fertilizing and watering. For more information on thatch, see the Extension publication L-5226, "Thatch Management for Home Lawns."

### Eliminating compacted soil

In areas of heavy traffic, aerate the soil several times a year to help loosen compacted earth. 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 August**

### **Mowing**

Follow the same recommendations as for March through May.

### **Fertilizing**

Continue the fertilizer program begun in the spring, applying 1 to 1½ pounds of nitrogen per 1,000 square feet every 4 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 low in phosphorus (Examples: 21-3-6 or 15-0-15) to reduce the chance of excessive phosphorus build-up in the soil. Such build-ups can lead to deficiencies in iron and zinc.

### **Watering**

Follow the same recommendations listed for March through May.

### **Controlling weeds**

Continue applying postemergent herbicides as needed. At temperatures higher than 95 °F, products such as MSMA and 2,4-D can injure bermudagrass. Apply them in the early morning or late evening.

### **Controlling 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**

Follow the same recommendations as for March through May.

## **SEPTEMBER through February**

### **Mowing**

Continue the recommended mowing practices until the grass goes dormant and does not require mowing. If the lawn is overseeded (planted with cool-season grass to maintain its green color in the winter), it will need mowing throughout the winter.

### **Fertilizing**

Do not fertilize bermudagrass unless the lawn has been overseeded. Overseeded lawns should be fertilized once in December and again in February with ½ pound of nitrogen per 1,000 square feet, using a nitrogen-only fertilizer such as 21-0-0. To calculate the amount of product needed per 1,000 square feet, substitute 50 for 100 in the spring formula.

### **Watering**

You may need to water dormant bermudagrass periodically if the weather is warm, dry and windy. Continue the spring and summer watering schedule if the lawn has been overseeded.

### **Controlling weeds**

Apply postemergent herbicides as needed to control winter annual broadleaf weeds.

### **Controlling insects**

Bermudagrass lawns should experience no detrimental insect activity in the winter.



**The best form of weed control is a healthy, dense, actively growing lawn.**

**For more information,  
see the Web site at  
<http://aggieturf.tamu.edu>.**

The information given herein is for educational purposes only. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by Texas Cooperative Extension is implied.

Produced by Agricultural Communications, The Texas A&M University System  
Extension publications can be found on the Web at: <http://tcebookstore.org>  
Visit Texas Cooperative Extension at <http://texasextension.tamu.edu>

*Educational programs conducted by Texas Cooperative Extension serve people of all ages regardless of socioeconomic level, race, color, sex, religion, handicap or national origin.*

Issued in furtherance of Cooperative Extension Work in Agriculture and Home Economics, Acts of Congress of May 8, 1914, as amended, and June 30, 1914, in cooperation with the United States Department of Agriculture. Edward G. Smith, Director, Texas Cooperative Extension, The Texas A&M University System. 5M, Reprint