

FERTILIZING TEXAS LAWNS 10-POINT CHECKLIST FOR WARM-SEASON GRASSES

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This checklist can help you make decisions on fertilizing your lawn so that it will be healthy and attractive yet minimize the damage to your pocketbook or the environment.

1. Determine the amount of work and money you want to spend on managing your lawn.

Management levels can be broadly defined as:

Low: The minimum level of management required to maintain turf density.

Moderate: The level required for enhanced visual appearance and quality.

High: The level needed for lawn areas that are highly visible or must withstand high traffic or use.

2. Measure your lawn and refer to its size when buying lawn care products.

If you know the size of your lawn, you are less likely to buy and apply too little or too much fertilizer. It's the first step to measured lawn care.

Start by measuring each section of your lawn in square feet (Fig. 1). Then add up the sections to arrive at the total size of the lawn in square feet.

Lawn care products are usually recommended and applied in measured amounts per 1,000 square feet.

3. Test the soil every 2 to 3 years.

Soil tests are available from your county Extension office or from the web at soiltesting.tamu.edu/.

4. Choose a fertilizer product based on the soil test recommendations.

If you do not have a current soil test, apply nitrogen using a fertilizer analysis ratio (the three numbers

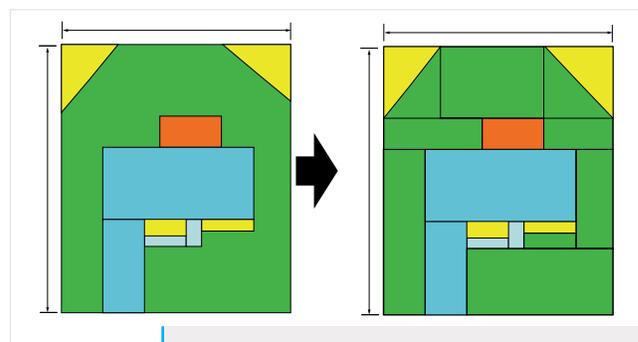


Figure 1. This lawn has been divided into nine sections so that the square footage can be calculated easily and accurately.

that appear on the fertilizer package) that is four to six parts nitrogen (N), one part phosphorus (expressed as available phosphoric acid, or P₂O₅) and two to four parts potassium (expressed as soluble potash, or K₂O)

To determine future needs, have your soil tested before the next fertilizer application.

5. Match the annual nitrogen application program to your grass type and level of work and inputs.

The level of management needed—low, moderate, or high—is based on the needs of the type of grass (Table 1) you have and your expectations for your lawn. In Texas, warm-season grasses include Bermudagrass, buffalograss, centipedegrass, St. Augustinegrass and zoysiagrass. The nitrogen requirements differ for each type.

The amount of nitrogen your lawn needs annually should be split into single applications of 1 pound of nitrogen or less per 1,000 square feet.

Low-annual program: Apply nitrogen during the spring and/or fall. This program works where one or two applications are deemed adequate.

Moderate-annual program: Make the applications listed in the low-annual program, as well as one supplemental summer application to improve turf density and quality.

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High-annual program: To enhance quality as needed, make two to three supplemental summer applications in addition to the applications listed in the low-annual, program.

6. Know how much fertilizer to apply in any single application by using Table 2.

1. Find the fertilizer analyses in the first column.
2. Select an application of 1/2 to 1 pound of fertilizer per 1,000 square feet of lawn.
3. Find the number of pounds of fertilizer product to buy for each 1,000 square feet of lawn area opposite the nitrogen analysis in your fertilizer.

Note: The fertilizer analysis listed in Table 2 leave P₂O₅ and K₂O blank. P₂O₅ and K₂O needs are best determined by a soil test.

7. Know how to determine the right amount of fertilizer to buy no matter what the analysis.

Using a 40-pound bag of 16-4-8 as an example, you can determine the percentage and pounds of each nutrient supplied in that 40-pound bag by multiplying 40 pounds by the percentage in decimals (0.16, 0.04, and 0.08):

- ▶ Nitrogen = 16 percent ($40 \times 0.16 = 6.4$ pounds of N supplied).
- ▶ Phosphorus = 4 percent ($40 \times 0.04 = 1.6$ pounds of P₂O₅).
- ▶ Potassium = 8 percent ($40 \times 0.08 = 3.2$ pounds of K₂O).

Table 1. Annual nitrogen recommendations for Texas warm-season lawns based on management level and grass type.			
WARM-SEASON GRASS	LAWN MANAGEMENT LEVEL		
	LOW	MODERATE	HIGH
	LB. NITROGEN APPLIED PER 1,000 SQ. FT. PER YEAR		
Bermudagrass (common)	2	2-3	4-5
Bermudagrass (hybrid)	2	3-4	5-6
Buffalograss	0-1	2	NR*
Centipedegrass	0-1	1-2	NR*
St. Augustinegrass (sun)	2	2-3	3-4
St. Augustinegrass (shade)	1	1-2	NR*
Zoysiagrass	1-2	2-3	3-4

*NR = not recommended

At the 1-pound rate of nitrogen per 1,000 square feet, you could treat 6,400 square feet of lawn.

For more help in determining your fertilizer needs, see the fertilizer calculator on the web (<http://soiltesting.tamu.edu/webpages/calculator.html>).

8. Know when to first apply fertilizer in the spring.

Make the first application of fertilizer after the second mowing of lawn grass (not weeds). At this time, the grass is actively growing and can readily use applied nitrogen. It is usually about 6 weeks after the average last spring frost date.

9. Know if additional fertilizer is needed between the spring and fall applications.

Space any supplemental nitrogen applications at least 45 to 60 days apart. Newly established, previously neglected or higher maintenance lawns can benefit from such applications.

10. Know when to apply the last fertilizer application in the fall.

Apply nitrogen in the fall to increase the density of your lawn, which will enable it to resist winter weeds as well as improve fall color and spring recovery. If not applied too late in the fall, nitrogen (1 pound or less per 1,000 square feet) will be taken up by the lawn, greatly reducing potential leaching into the groundwater supply during the winter.

The dates by which to apply your last fertilizer application are listed by growing season in Table 3.

Table 2. Amount of fertilizer to apply for various nitrogen analyses at rates of 1/2 and 1 pound of nitrogen per 1,000 square feet of lawn.			
FERTILIZER BAG READS ¹	AMOUNT OF FERTILIZER NEEDED TO APPLY NITROGEN PER 1,000 SQ. FT.		
	1/2 LB. N RATE	3/4 LB. N RATE	1 LB. N RATE
	6-?-?	8.3 lb.	12.5
8-?-?	6.2 lb.	9.4	12.5 lb.
9-?-?	5.5 lb.	8.3	11.1 lb.
15-?-?	3.3 lb.	5.0	6.6 lb.
20-?-?	2.5 lb.	3.7	5.0 lb.
21-?-?	2.4 lb.	3.6	4.8 lb.
29-?-?	1.7 lb.	2.5	3.4 lb.

¹To determine the amount of phosphorus and potassium, you will need to have your soil tested.

Table 3. Recommended cut-off dates for late-season nitrogen fertilizer for Texas cities within the same autumn frost zones (Fig. 2).

CITIES	AVERAGE FIRST AUTUMN FROST DATE ¹	APPLY NITROGEN BY THIS DATE ²
Harlingen, McAllen, Corpus Christi	No freeze	November 1
College Station, Laredo, Victoria	December 16	November 1
Austin, Houston, San Antonio, Waco	December 1	October 15
Abilene, Dallas, El Paso, Lubbock, Midland	November 16	October 1
Amarillo	November 1	September 15

¹These are averages across large areas of Texas. Frost dates may differ for some locations.
²The final late-season nitrogen application should be applied no later than 6 weeks before the expected autumn frost date.

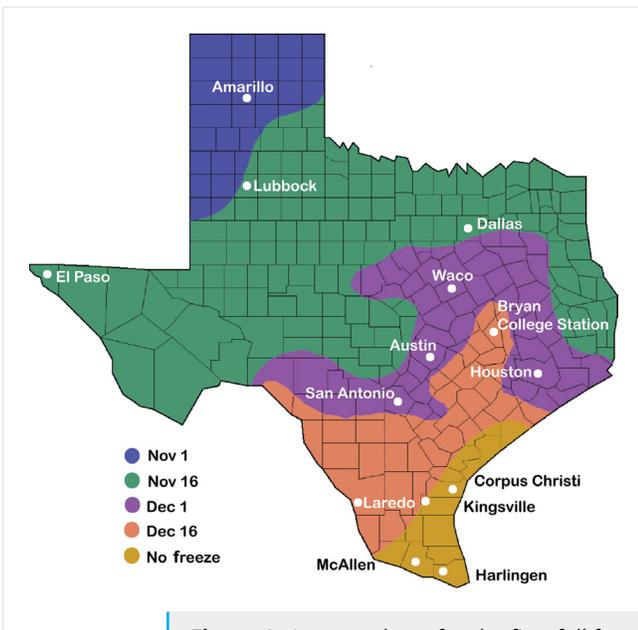


Figure 2. Average dates for the first fall frost.

For more information, see the Texas A&M AgriLife Extension publication ([SCSC-PU-034](#)), *Lawn Fertilization for Texas Warm-Season Grasses*. It further explains the principles behind the 10-point checklist and other important areas not covered here, including environmental issues with nitrogen and phosphorus, uniform application of fertilizer, factors (shade and soil) affecting fertilizer use, and evaluation of lawn fertilizers.

OTHER PUBLICATIONS ON LAWN CARE

AgriLife Learn (agrilifelearn.tamu.edu) also offers these publications on lawn care:

[ENTO-PU-044 Chinch Bugs in St. Augustine Lawns](#)

[SCSC-PU-041 Herbicides: How They Work and the Symptoms They Cause](#)

[SCSC-PU-067 Keep Your Lawn Alive During Drought](#)

[SCSC-PU-034 Lawn Fertilization for Texas Warm-Season Grasses](#)

[AGEN-PU-038 Lawn Maintenance Safety](#)

[AGEN-PU-039 Lawn Maintenance Safety \(Spanish\)](#)

[SCSC-PU-066 Lawn Water Management](#)

[SCSC-PU-017 Maintaining Bermudagrass Lawns](#)

[SCSC-PU-099 Maintaining St. Augustinegrass Lawns](#)

[AGEN-PU-078 Rainwater Harvesting](#)

[SCSC-PU-047 Sprayer Calibration for Turfgrass](#)

[SCSC-PU-046 Spreader Calibration for Turfgrass](#)

[PLPM-PU-033 Take-All Root Rot of Turfgrass](#)

[SCSC-PU-010 Thatch Management for Home Lawns](#)

[ENTO-PU-016 White Grubs in Texas Turfgrass](#)