



Homeowner Best Management Practices for the Home Lawn¹

Laurie E. Trenholm²

Everyone enjoys the look of a nice healthy lawn. Not only do lawns increase the value of a property, they cool the air, combat glare and noise, and reduce soil erosion. Most importantly, a healthy lawn actively filters and traps sediment and pollutants that could otherwise contaminate ground and surface water.

It is very important that homeowners use Best Management Practices, or BMPs, when maintaining their lawns. Failure to follow BMPs can result in pollution of Florida's ground or surface water resources. For a healthy, Florida-friendly lawn, please read these easy-to-follow tips:

Lawns Get Hungry

All lawns benefit from regular fertilizer applications throughout the growing season. Applying the proper amount of fertilizer for your grass species will help to promote a vigorous, healthy lawn that can out-compete weeds.

In June of 2007, the Florida Department of Agriculture and Consumer Services passed a rule regulating labeling requirements for urban turf fertilizers. This rule limits fertilizers that can be sold

for use on lawns to those that contain low or no phosphorus (2nd number on the bag), and limits the total annual amount of phosphorous that can be applied to a home lawn. It limits nitrogen application amounts to the rates recommended in this fact sheet, which vary due to your lawn species and your location in the state. You are allowed to apply 1 pound of nitrogen per 1,000 square feet of lawn each time you apply fertilizer if the nitrogen is in a slow-release form, or 0.7 pounds of nitrogen if you are using a quick-release source.

The new labeling requirements will make it easy for homeowners to find lawn fertilizers with both slow-release nitrogen and low phosphorus. Slow-release nitrogen may be safer for your lawn and the environment and will provide a longer-lasting response from the grass. See Table 1 for the recommended fertilizer rates for your grass species and location in the state. See Table 2 for how to apply nitrogen from the various fertilizer sources at the proper rates. The low phosphorus will not be harmful for most lawns in Florida, since turf requirements for this nutrient are low, and many Florida soils are high in phosphorus. This rule is intended to reduce

1. This document is Fact Sheet ENH979, one of a series of the Environmental Horticulture department, Institute of Food and Agricultural Sciences, University of Florida. Publication date: April 2004; revised December, 2007. Please visit the EDIS website at <http://edis.ifas.ufl.edu>
2. Laurie E. Trenholm, Assistant Professor, Extension Turfgrass Specialist, Environmental Horticulture department, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL 32611.

potential non-point source pollution that might result from application of excess fertilizer to lawns.

It is important to test your soil to determine phosphorus levels. Check with your local County Extension Office for information on how to submit soil samples for phosphorus testing.

In south Florida, you can apply fertilizer throughout the year. In north and central Florida, wait until danger of frost has passed before you apply fertilizer in the spring. Your fertilizer application should be around the end of September in north Florida and mid-October for central Florida.

If you have a small strip of lawn that adjoins impervious surfaces, such as sidewalk or pavement, use a spreader that has a deflector shield (Figure 1) that will spread the fertilizer in a 180° arc to keep it away from the paved area. Use the same shield when you are fertilizing areas next to water bodies. Leave a 10-foot strip around the water body unfertilized to avoid pollution.



Figure 1. Deflector Shield

If you spill fertilizer on the driveway or sidewalk, be sure to sweep it up and put it back in the bag. Always sweep up spilled fertilizer rather than rinsing it away, even when the spill is on the lawn. Spilled fertilizer easily finds its way down storm drains and into the water supply.

Store your unused fertilizer where it will stay dry. Do not store it next to pesticides, fuel, or solvents.

Let the Mowing Begin!

Mowing may seem like the bane of your existence during the summer months, but it is actually one of the most important home lawn management practices. Follow these suggestions for a healthy, happy lawn:

- **Never remove more than 1/3 of the leaf blade at any one time.** Cutting too much of the leaf blade can stress your lawn and will leave it susceptible to insect or disease invasion.
- **Mow at the highest height for your grass species.** For St. Augustinegrass and bahiagrass, this is 3.5 to 4 inches. If you have St. Augustinegrass cultivars 'Delmar' or 'Seville', mow at 2 to 2.5 inches. Mow centipedegrass at 1 to 2 inches.
- **Leave grass clippings on the ground.** They do not contribute to thatch, and actually return a small amount of fertility and organic matter back to the lawn.
- **Keep your mower blades sharp.** Dull mowers tear the leaf blades. This makes the lawn look bad and leaves it susceptible to insect or disease invasion.
- **Do not mow your lawn when it is wet.** This is dangerous for you, tough on the mower, and bad for the grass.
- **If you miss a weekly mowing, raise the mower height** so you don't remove too much tissue. Bring the height back down to the recommended level gradually over the next few weeks.

Irrigation or Irritation?

More lawns are damaged by improper irrigation practices than any other single cultural practice. Train your grass to be more drought-tolerant using the following methods:

- Adjust the frequency with which you irrigate, rather than the amount of water you apply.

- Irrigate less frequently. Each time you water, water for a slightly longer time. This will help train your roots to grow deeper in the soil, which will in turn make your lawn more drought tolerant. Grasses irrigated in this manner will have a better chance of surviving watering restrictions.
- Turn your automatic sprinkler system to the "off" position, and turn it on when your lawn shows signs of needing irrigation. Adjust your timer seasonally. Irrigation frequency will vary depending on where you are in the state, as well as the amount of shade in the landscape, soil type, etc. For more information, please refer to EDIS publication ENH61, "How to Calibrate Your Sprinkler System." <insert hyperlink> Remember that functional rain shut-off sensors are required by Florida law on all irrigation systems installed since 1991.
- Irrigate your lawn as-needed. A lawn is ready for watering when the leaf blades start to fold in half lengthwise or when footprints remain visible in the lawn long after being made. Irrigate when about 50% of the lawn shows these signs, *unless* rain is forecast in the next 24 hours.
- In most parts of Florida, irrigate to apply 1/2 - 3/4 inch of water.
 - To determine how long you need to run your irrigation system to achieve this, place straight-sided cans around the perimeter of each irrigation zone and see how long it takes to fill the cans to 1/2 - 3/4 inch.
 - If you are in an area with very sandy soil, you may need to apply the higher amount of water.
 - Heavier clay soils may only need the 1/2-inch rate.
 - In southeast Florida and the Keys, where soil depths are shallow, you may only need to irrigate 1/4 inch to saturate the soil.
 - If application of these amounts results in runoff, reduce the amount of water applied. In some soils it may be necessary to apply half of the amount needed, let it percolate

through the soil, and then apply the remaining water a short time later.

- Irrigate every 2 -3 weeks during the winter months, even if your grass is dormant. The roots are still viable, and this will help the grass green up more quickly in the spring.
- Irrigate around sunrise or in the early morning hours. You want the leaf blades to dry out fully during the day.

Weed Woes

A healthy lawn that is properly fertilized, mowed, and irrigated will typically out-compete most weeds. However, some degree of weed control is often required to supplement even the best cultural practices.

Some weeds can be chemically controlled after they have emerged. Others, particularly grassy weeds, are better controlled "pre-emergence." You need to know where the weed pressure is and what the weeds are. You then need to select the right product for control and to apply it at the right time.

For pre-emergence crabgrass control, look for a product containing pendimethalin (available under multiple brand names). Apply this at label rates around the first of February in south Florida, mid-February in central Florida, and the first of March in north Florida. Note that there are no chemicals currently available to control grassy weeds in St. Augustinegrass. If your commercial lawn-care service claims to have special access to grassy weed control chemicals for St. Augustinegrass, that service is making illegal application of chemicals.

For St. Augustinegrass lawns, atrazine is a commonly used herbicide for control of many broadleaf weeds. Be careful not to apply this when temperatures are high (> 85°)—it may injure the grass.

Please refer to EDIS publication ENH884, "Weed Management in Home Lawn" <http://edis.ifas.ufl.edu/EP141> for more information.

Whenever you apply chemicals, remember that *the label is the law* and that the directions must be followed!

The best defense against weeds or other lawn problems is to grow a happy, healthy, environmentally friendly lawn by following the fertilization, mowing, and irrigation tips as described above.

Happy growing!

Table 1. Recommended fertilizer rates for various home lawn grass species.

| Species/Location | Interim N Recommendations (lbs 1000 ft ⁻² yr ⁻¹)*, ** |
|---|---|
| Bahiagrass- North | 2-3 |
| Bahiagrass- Central | 2-4 |
| Bahiagrass- South | 2-4 |
| | |
| Bermudagrass- North | 3-5 |
| Bermudagrass- Central | 4-6 |
| Bermudagrass- South | 5-7 |
| | |
| Centipedegrass- North | 1-2 |
| Centipedegrass- Central | 2-3 |
| Centipedegrass- South | 2-3 |
| | |
| St. Augustinegrass- North | 2-4 |
| St. Augustinegrass- Central | 2-5 |
| St. Augustinegrass- South | 4-6 |
| | |
| Zoysiagrass- North | 3-5 |
| Zoysiagrass- Central | 3-6 |
| Zoysiagrass- South | 4-6 |
| <p>*Homeowner preferences for lawn quality and maintenance level will vary, therefore we recommend a range of fertility rates for each grass and location. Additionally, effects within a localized region (i.e., micro-environmental influences such as shade, drought, soil conditions, and irrigation) will necessitate that a range of fertility rates be used.</p> <p>** These recommendations assume that grass clippings are recycled.</p> | |

Table 2. Examples of proper application rates for specific fertilizer products.

In the table below, values given represent the percentage of N (across top) in the fertilizer bag and the number of square feet of lawn area (left-hand side) that you have. Remember that N is the first of the three numbers on the fertilizer bag. The value given is the weight of fertilizer to use for the given lawn area in pounds. Note that numbers are rounded to the nearest half pound.

| Lawn (square feet) | 6% N | 10%N | 12%N | 15%N | 16%N | 23%N | 27%N |
|--------------------|-----------|---------|-----------|-----------|-----------|-----------|-----------|
| 1000 | 16.5 lbs. | 10 lbs. | 8.5 lbs. | 6.5 lbs. | 6 lbs. | 4.5 lbs. | 4 lbs. |
| 1100 | 18.5 lbs. | 11 lbs. | 9.5 lbs. | 7 lbs. | 7 lbs. | 5 lbs. | 4 lbs. |
| 1200 | 20 lbs. | 12 lbs. | 10.5 lbs. | 8 lbs. | 7.5 lbs. | 5 lbs. | 4.5 lbs. |
| 1300 | 22 lbs. | 13 lbs. | 11.5 lbs. | 8.5 lbs. | 8 lbs. | 5.5 lbs. | 5 lbs. |
| 1400 | 23.5 lbs. | 14 lbs. | 12.5 lbs. | 9 lbs. | 9 lbs. | 6 lbs. | 5 lbs. |
| 1500 | 25 lbs. | 15 lbs. | 13.5 lbs. | 10 lbs. | 9.5 lbs. | 6.5 lbs. | 5.5 lbs. |
| 2000 | 33.5 lbs. | 20 lbs. | 17 lbs. | 13 lbs. | 12 lbs. | 9 lbs. | 8 lbs. |
| 2500 | 41.5 lbs. | 25 lbs. | 21 lbs. | 16.5 lbs. | 15.5 lbs. | 11 lbs. | 9.5 lbs. |
| 3000 | 50 lbs. | 30 lbs. | 25.5 lbs. | 19.5 lbs. | 18 lbs. | 13 lbs. | 12 lbs. |
| 3500 | 58 lbs. | 35 lbs. | 30 lbs. | 23 lbs. | 21.5 lbs. | 15.5 lbs. | 13.5 lbs. |
| 4000 | 66 lbs. | 40 lbs. | 34 lbs. | 26 lbs. | 24 lbs. | 18 lbs. | 16 lbs. |
| 4500 | 74 lbs. | 45 lbs. | 38 lbs. | 29.5 lbs. | 27.5 lbs. | 20 lbs. | 17.5 lbs. |
| 5000 | 82 lbs. | 50 lbs. | 42.5 lbs. | 33 lbs. | 31 lbs. | 22 lbs. | 19 lbs. |

The percentage corresponds to the first of the three numbers found on the bag. For example, use the 15% calculations when using a 15-2-15 product. These figures assume that you are applying the recommended rate of 1 pound of nitrogen per 1,000 square feet with a slow-release nitrogen fertilizer. For more information on lawn fertilization, please refer to YourFloralawn.ifas.ufl.edu or to your County Extension Service office for lawn fertilization fact sheets.