



earth-wise guide to

Lawn Care

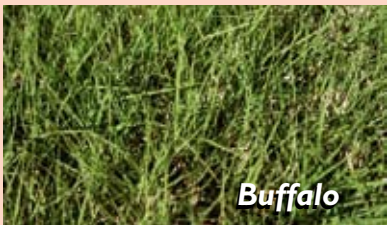
a dense, healthy lawn with deep roots improves the lawn's ability to absorb water, reduce runoff and out-compete weeds

in this fact sheet:

- Starting a New Lawn
- Grass Options
- Mowing
- Irrigation
- Aerating
- Fertilizing
- Weeding



Bermuda



Buffalo



St. Augustine



Zoysia

Grow Green encourages the use of native and adapted, drought-resistant plants and grasses. These plants conserve water and protect water quality by requiring fewer pesticides and fertilizers.

Starting a New Lawn

- Minimize your total lawn area. Consider lawn alternatives such as beds and mulched areas to reduce water and fertilizer needs
- Start with a minimum of six inches of high quality soil to grow a healthy lawn
- Prepare the soil by removing perennial weeds and tilling in at least 2" of compost
- Level your lawn area to avoid low spots where water will pool or consider creating a rain garden with moisture-loving plants for a large low area (www.growgreen.org/downloads/landscaping.pdf)
- Choose between seed, plugs, or sod, then keep soil moist until

the lawn becomes established

- Avoid over-watering a newly seeded lawn to prevent grass seed from washing away

Caring for an Established Lawn

Mow Properly

- Mow grass frequently enough so that no more than 1/3 of the leaf blade is removed at one time
- Mow when the grass is dry to prevent spread of turf diseases
- Cut the grass at the recommended height to help establish a deeper root system (refer to chart below)
- Sharpen mower blades regularly; sharp blades do less damage to grass
- **Do not bag your grass clippings** unless disease is present
- Use a mulching mower if possible
- Do not blow clippings into a storm drain

| Grass Options* | | | | |
|----------------|--------------------------|----------------------------------|--|-----------------------|
| Grass | Drought Tolerance | Mowing Height | Sun | Start-up Requirements |
| Buffalo | Very High | (Mowing optional) 2- 3" | 6 hours/day minimum | Sod, plugs, seed |
| Common Bermuda | High | 1.5 - 2" | Full sun | Seed or sod |
| Zoysia | High | 1.5 - 2" | Full sun to partial shade | Sod or plugs |
| St. Augustine | Low (Medium in shade) | 2 .5" (sun), 3 - 3.5" (shade) | Best for shady spots (requires the most water in sun) | Sod or plugs |

* see the Grow Green Plant Guide for more options

Mandatory Watering Schedule (May 1- September 30)

- Don't water more than two times per week
 - *Odd house numbers:* Wednesdays & Saturdays
 - *Even house numbers:* Thursdays & Sundays
- Water after 7 pm and before 10 am
- Hand-water anytime

www.waterwiseaustin.org
or call 974-2199 for information on water audits, finding a City-certified licensed irrigator, and other water conservation tips

Irrigate Efficiently

- Water before the sun comes up to help prevent fungal diseases and evaporation
- Water deeply and infrequently to encourage deeper roots and prevent thatch
- Water so that the soil is wet to a depth of 4-6 inches. To achieve this, you will need to apply 1/2 to 1 inch of water which can be measured in a small can or rain gauge
- Because water is more likely to run off clay soils and sloping lots, it may be necessary to irrigate slowly or in multiple short cycles to prevent water run-off
- Allow soil to dry out between waterings

- Watering is seldom necessary during the dormant season (December-February)

Aerating

- Aerate your lawn at least once a year to improve drainage and bring more oxygen to the soil
- Moisten your soil the day before aerating to make the job easier and more effective
- Use a hollow-tined aerator that removes the plugs to increase water and oxygen to the soil
- After aerating, apply 1/8" of compost to increase microbial activity (Call 972-1954 for information on Dillo Dirt, an organic compost produced by the City of Austin's Water Utility.)

Fertilizing

Right Knowledge

- Test your soil every 2-3 years and base your fertilizer application on the results (without a soil test, use rates for low to medium foot traffic on the following page)

Right Products

- Use organic fertilizers which are naturally slow release - they provide a good quality turf and soil
- If choosing a synthetic fertilizer,
 - make sure there is a high percentage of slow release chemical in the product

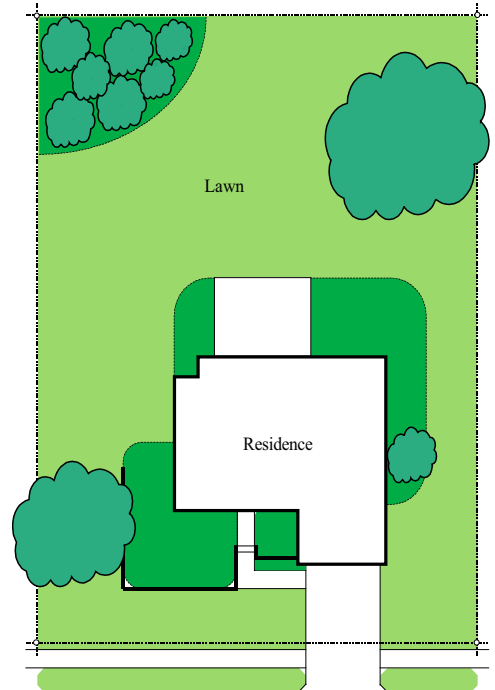
Overseeding with rye grass is not necessary. It requires more fertilizer, mowing and irrigation and can delay the growth of the permanent turf, often leaving it thin and weak.

- if using standard synthetic, follow the "Right Rate" recommendations (right) carefully
- Buy a fertilizer with low phosphorous (the middle number in the fertilizer ratio. 4-1-2)
- Improve both soil texture and nutrient levels by applying 1/4" compost to the top of your lawn **instead** of fertilizer

Right Rate

- Measure your lawn size, not your property size (over-application is one of the greatest threats to water quality)
- Leave grass clippings on the lawn to return 60% of the needed nitrogen and 100% of the phosphorous and potassium to the soil naturally
- If not bagging the clippings, use half as much, half as often as recommended on the bag (1/2 lb.N/1000 square feet, no more than twice a year)

- Use a fertilizer spreader with a deflector guard to avoid getting fertilizer on hard surfaces
- Save any leftover fertilizer for the next season; store in a cool dry place



When calculating how much fertilizer to apply, measure only the lawn areas – subtract house, driveway, walkways, and beds from the total area of your property.

avoid weed and feed products!

1. The best time to use a fertilizer is not usually the best time to use an herbicide
2. Spreading herbicides over the entire yard is usually overkill - hand-pull or spot treat weeds instead

Right Timing

- Spring Fertilization: April 15 (after the lawn has been mowed two times)
- Fall Fertilization: Early October (may only be necessary if lawn looks unhealthy)
- **Never fertilize before a rain!**

Right Method

- Water in gently to avoid runoff
- Sweep any fertilizer off sidewalks and roads back onto the lawn

Weed Appropriately

- As you develop a dense, healthy turf, weed problems will diminish
- Fill in bare spots in your lawn with grass plugs or seed
- Monitor and remove weeds regularly before they get established or bloom and release their seeds
- Avoid using herbicides. An effective and least toxic way to remove weeds is to pull them by hand
- If you decide to treat chemically, refer to the Grow Green Weed fact sheet (www.ci.austin.tx.us/growgreen/downloads/weeds.pdf)

When should I fertilize and how often?

| Turf Use: | Application Rate: | Application time: |
|-------------------------------|--|---|
| Low to Medium foot traffic | 1/2 pound of nitrogen per 1000 square feet of lawn area applied ONCE per year | ± April 15 (after grass has been mowed two times) |
| Moderate to High foot traffic | 1/2 pound of nitrogen per 1000 square feet of lawn area applied TWICE per year | ± April 15 by October 15th |

How much fertilizer should I apply?

Soil in Austin is normally high in phosphorus and potassium; therefore fertilizing amounts should be based on the nitrogen content of the fertilizer. In general apply 1/2 pound of nitrogen/1000 square feet. Refer to chart for amounts or visit <http://aggie-turf.tamu.edu/aggieturf2/calculators/fertsheet.html>:

| Fertilizer Analysis: Comparison of Nitrogen (N) to Phosphorus (P) to Potassium (K) | Amount of Fertilizer | |
|---|----------------------|------|
| | Lbs. | Cups |
| 4-2-3 | 12.5 | 25 |
| 6-1-1 6-2-4 | 8 | 16 |
| 8-2-4 | 6 | 12 |
| 9-1-1 | 5.5 | 11 |
| 11-2-2 | 3 | 6 |
| 26-2-13 | 2 | 4 |
| 32-0-10 | 1.6 | 3 |

To convert lbs. to cups multiply the number of lbs. x 2
Based on estimation that 1/2 lb. of dry fertilizer = 1 cup

product toxicity comparisons

Evaluation of active ingredients only; does not include toxicity information on inert or "other" ingredients.

Toxicity/Threat:

○ low ◐ low to moderate ◑ high ● highest NA not applicable
? unknown toxicity 🌱 earth-wise

Hazards:



A dense, healthy lawn is the best defense against weeds

| note | Product Name | active ingredient(s) / concentrations | human acute | human chronic | aquatic life | birds, bees, pets | soil mobility | environmental persistence |
|------|--|--|-------------|---------------|--------------|-------------------|---------------|---------------------------|
| | Weed and Feed Products | | | | | | | |
| 🌱 | Concern® Weed Prevention Plus™ 8-2-4 | Corn gluten | ○ | ○ | ◐ | ○ | ? | ? |
| | Fertilome® Weed & Feed Special 20-0-4 | Simazine .63% | ○ | ◐ | ○ | ○ | ○ | ◐ |
| | Scotts® Turf Builder® Halts® Crabgrass Preventer 30-3-4 | Pendimethalin 1.71% | ◐ | ○ | ◑ | ◐ | ○ | ◑ |
| | Vigoro® Ultra Weed & Feed 28-3-3 | 2,4-D 0.64%, MCPP 0.16%, Dicamba 0.03% | ◐ | ◑ | ◐ | ○ | ● | ◐ |
| | Scotts® Turf Builder® WinterGuard™ PLUS 2® Weed Control | 2,4-D 1.04% MCPP 0.52% | ◐ | ◑ | ◑ | ○ | ● | ◐ |
| | Vigoro® UltraTurf™ St. Augustine Weed & Feed with Atrazine 29-3-5 | Atrazine 1.102%, Related compounds 0.058% | ◐ | ◑ | ◑ | ○ | ● | ◑ |
| | Lesco Atrazine 0.92% Plus 17-4-6 | Atrazine .92% | ◐ | ◑ | ◑ | ○ | ● | ◑ |
| | Scotts® Bonus® S Max Southern Weed and Feed & Fire Ant Killer 26-2-9 | Atrazine 1.089% Bifenthrin 0.110% | ◐ | ◑ | ● | ◐ | ● | ◑ |

most toxic

product toxicity comparisons

Evaluation of active ingredients only; does not include toxicity information on inert or "other" ingredients.

Toxicity/Threat:

○ low ◐ low to moderate ◑ high ● highest NA not applicable
 ? unknown toxicity 🌍 earth-wise 🌎

Hazards:



| note | Product Name | active ingredient(s) / concentrations | human toxicity | | aquatic life | birds, bees, pets | soil mobility | environmental persistence |
|------|--------------|---------------------------------------|----------------|---------|--------------|-------------------|---------------|---------------------------|
| | | | acute | chronic | | | | |

Pre-emergent Products

| | | | | | | | | |
|--|---------------------------------|-----------------------------------|---|---|---|---|---|---|
| | Green Light® Portrait® Granules | Isoboxen 0.38% | ○ | ◐ | ○ | ○ | ◑ | ○ |
| | Hi Yield® Crabgrass Control | Benfenin 1.33%, Trifluralin 0.67% | ○ | ◐ | ◑ | ○ | ◑ | ○ |

Post-emergent Products

| | | | | | | | | |
|------------|--|--|---|---|---|---|---|-----|
| 🌍 | Agralawn Crabgrass Control | Cinnamon bark 0.95% | ○ | ? | ○ | ○ | ○ | ? |
| 🌍 | Spectracide® Weed Stop® 2x Weed Killer for Lawns Gel | Diquat dibromide 0.18% Fluazifop-p-butyl .06% Dicamba.04% | ○ | ? | ◑ | ○ | ◑ | ○ |
| | SedgeHammer® (formerly called Manage) | Halosulfuron - methyl 75% | ◑ | ◐ | ◑ | ○ | ◑ | ? |
| | Ortho® Weed-B-Gon Weed Chickweed, Clover & Oxalis | Triclopyr, triethylamine salt 8% | ◑ | ◐ | ◑ | ◑ | ◑ | ○ |
| | Hi-Yield® Grass Killer (Poast®) | Sethoxydim 18% | ◑ | ? | ◑ | ○ | ◑ | ○ |
| | Image® Kills Nutsedge | Imazaquin 3.3% | ◑ | ? | ◑ | ○ | ● | ◑ |
| | Fertilome® Crabgrass, Nutgrass & Dallisgrass Killer | Monosodium acid methanearsonate 13.2% | ◑ | ● | ◑ | ○ | ○ | ◑ |
| | Ortho® Weed-B-Gon Max® Plus Crabgrass Control Ready-to-Use | 2,4-D 0.12%, MCPP 0.22%, Dicamba quinclorac 0.10% | ◑ | ◑ | ◑ | ○ | ● | ◑ |
| | Spectracide® Weed Stop® 2x for Lawns Concentrate | 2,4-D 7.57%, Dicamba 0.71%, MCPP 2.73%, Sulfentrazone 0.18% | ○ | ◑ | ◑ | ○ | ● | ◑ |
| | Bayer Advanced™ All-in-One Weed Killer Ready-to-Spray | 2,4-D 4.85%, Quindorac 1.61% | ○ | ◑ | ◑ | ○ | ● | ◑ |
| | Hi-Yield® Atrazine Weed Killer | Atrazine 40.8% Related compounds 2.2% | ◑ | ◑ | ◑ | ○ | ● | ◑ |
| | Ortho® Weed-B-Gon® Spot Weed Killer for St Augustine Lawns | Atrazine 0.60% | ◑ | ◑ | ◑ | ○ | ● | ◑ |
| | Bayer Advanced™ All-in-One Weed Killer | MSMA 9.81%, 2,4-D 3.18% MCPP 1.6%, Dicamba .79% | ○ | ● | ◑ | ○ | ○ | ◑/○ |
| most toxic | Ortho® Weed-B-Gon® Crabgrass Killer for Lawns | Calcium acid methanearsinate 0.50% | ◑ | ● | ◑ | ○ | ○ | ◑/○ |

did you know?

Atrazine, the weed killer most often found in weed and feed products, has been found in 70% of the monitoring tests at Austin springs

The City of Austin and the Texas AgriLife Extension Service provide this information as a comparative reference only. Listing of specific product trade names does not constitute an endorsement of their use. Many other pesticides and pesticide products are available and may be suitable for use other than those listed in these tables.

Products rated by Grady J. Glenn, Ph.D., B.C.E., of the Agricultural and Environmental Safety Program, Texas AgriLife Extension service who can be reached for questions at (979) 862-1035. The rating system was developed by Philip Dickey of the Washington Toxics Coalition.

