



earth-wise guide to

Lawn Care



www.growgreen.org

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

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

Identify before you buy
Need help diagnosing a plant problem? Call the Texas AgriLife Extension Service at 512-854-9600 and ask for the Master Gardener desk or email them at travismg@ag.tamu.edu



Bermuda



Buffalo



St. Augustine



Zoysia

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

Follow the Mandatory Watering Schedule

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

- **Do not bag your grass clippings** unless disease is present
- Use a mulching mower if possible
- Do not blow clippings into a storm drain

Irrigate Efficiently

- Don't overwater to help prevent fungal diseases. Water before the sun comes up or after the sun goes down to prevent 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
 - if using standard synthetic, follow the "Right Rate" recommendations (right) carefully

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.

- 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

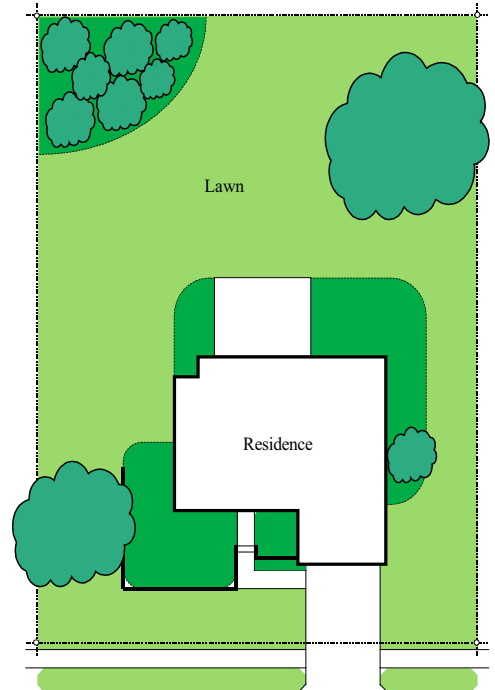
- Measure your lawn size, not your property size (over-application is one of the greatest threats to water quality)
- Leave grass clippings on the lawn to return 60% of the needed nitrogen and 100% of the phosphorous and potassium to the soil naturally
- If not bagging the clippings, use half as much, 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

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!**

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



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.

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.austintexas.gov/sites/default/files/files/Watershed/growgreen/lawncare.pdf)

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

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 toxicity

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-buytl .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%	○	●	◐	○	○	◑/○
	Ortho® Weed-B-Gon® Crabgrass Killer for Lawns	Calcium acid methanearsinatate 0.50%	○	●	◐	○	○	◑/○

most toxic

why grow green?

The Grow Green program is based on Integrated Pest Management (IPM) principles that encourage the LEAST TOXIC approach to pesticide and fertilizer use. The goal is to reduce the amount of landscape chemicals that degrade water quality when they run off into waterways or leach into our groundwater.

Per land development regulations, the City of Austin requires that certain neighborhoods implement a least-toxic approach (Integrated Pest Management or IPM) when managing pests on-site. The Grow Green fact sheets are based on IPM which includes accurate pest identification, problem prevention, physical, and/or biological treatment when feasible. Chemical products are allowable but least toxic options (marked with a ladybug) are preferred.

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 its use. Many other pesticides and pesticide products are available and may be suitable for use other than those listed in these tables. **Check labels carefully as trade names and active ingredients may change.**

Products rated by Grady J. Glenn, Ph.D., B.C.E., of the Pesticide Safety Education Program, Texas AgriLife Extension Service. The rating system was developed by Philip Dickey of the Washington Toxics Coalition.