Earth-Friendly Lawn Care

THE BASICS

Lawns CAN be grown in an environmentally sensitive way, and this article will explain how. It summarizes the products and lawn care practices that we recommend, based on the very best research from academia, government (federal and state environmental agencies), plus our own knowledge and experience in this region and that of our customers. This article is consistent with the quick tips in the University of Maryland's pamphlet *Growing Green Lawns*.

Our goal is to help gardeners in this region SUCCEED – while protecting and even improving the environment.

Also see our brochure *Earth-Friendly Lawn Care Throughout the Year.*

Choosing Grass Seed

We agree with the University of Maryland that the best all-purpose turf species for the D.C. region is Tall Fescue. The use of recommended tall fescue cultivars usually results in a turfgrass stand of higher quality and density, greater stress tolerance, lower nutrient requirements, less water usage, fewer pest problems and thus reduced pesticide use, greater water infiltration, and reduced runoff.

Clover:

Clover, which was long considered beneficial before it was rebranded as a weed in the 1960s (because a new lawn herbicide killed it), is now making a comeback! Clover's chief virtue is its ability to turn Nitrogen that's in the air into Nitrogen that can be used by plants, (making it "self-feeding), so the inclusion of clover reduces the lawn's need for fertilizer products to be applied. Clover is also quite drought-tolerant, and it's loved by pollinators. It's sold at Behnke's in the spring, the best time for planting it.

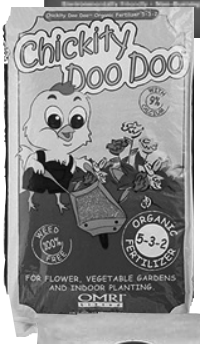
Zoysia:

Some homeowners choose this warm-season grass for its drought- and heat-tolerance and its ability to stand up to wear and tear. Unlike cool-season grasses like fescues, Zoysia is dormant (brown) in the Mid-Atlantic area from October until May. Zoysia does not tolerate shade. Zoysia is sold at Behnke's as plugs and sod in late May and June.

The care of Zoysia is very different from the care given to tall fescue - for example, it's fed in May through July, not in the fall. This article covers cool-season grasses like fescues only. For information about Zoysia, refer to this publication by the University of Maryland.

Feeding

Turfgrasses need supplemental Nitrogen every year, or they'll become thin and weedy, cause soil erosion, and look worse and worse. The goal is to provide enough Nitrogen for lawns to become thick enough to out-compete weeds, and recover from disease and drought damage. Thin lawns are more vulnerable to not just weeds but also disease. here are ways you can provide the necessary nitrogen to your lawn:



• Organic Fertilizers — made of such ingredients as alfalfa meal, poultry meal, and composted Manure. Behnke's recommends two brands for turf use: ***Espoma® Organic Lawn Food***, (a 29-pound bag covers 5,000 square feet) or ***Chickity Doo Doo® Organic Fertilizer*** (made from poultry manure). Always read and follow the directions on the bag.

It's best to apply these products in the fall. Fertilizing in spring is recommended only for new lawns or older lawns that are weak and thin. It's best to apply in conjunction with core aeration, if possible, especially for a lawn that needs rejuvenating.

• Synthetic Fertilizers — are less expensive than organic fertilizers, and thus are very popular. If you choose a synthetic fertilizer, be sure it's formulated as a "slow-release" product, like the ***Turf Trust®*** brand sold at Behnkes, because fast-acting synthetics can run off and pollute our waterways. Synthetics, whether fast- or slow-release, have been shown to kill some beneficial microorganisms in the soil.

• Grass Clippings — This one won't cost you anything. Leaving grass clippings on the lawn after mowing provides lawns with about ½ pound of Nitrogen each year, and the practice will not cause thatch build-up (which is usually caused by overfertilization and other poor lawn-care practices). If you don't leave grass clippings on the lawn, please compost them rather than sending them to the landfill.

• Clover — a legume that's "self-fertilizing" because it turns Nitrogen in the atmosphere into Nitrogen that plants can use in the soil. (It "fixes" Nitrogen.) Including just 5% clover in your lawn and leaving the clippings on the lawn will give your lawn the full 2 pounds of Nitrogen per 1000 square feet it needs every year. Clover also feeds essential pollinating insects! (Though if someone in your family is allergic to bee stings, you may choose not to grow this otherwise super-useful plant.)

A Word about Overfertilization:

The results of overfertilization of your lawn are: less drought-tolerance, increased vulnerability to insect damage and disease, the need for more frequent mowing, possible thatch build-up, and possible burning of roots and foliage. The result of overfertilization on the environment is increased pollution of our waterways, including adding to the dead zones in the Chesapeake Bay. This well-documented environmental harm led to the passage of the Fertilizer Use Act of 2011, which mandates reduced nutrient amounts in commercial fertilizer products and requires fertilizers to be at least 20 percent slow-release. (Organic fertilizers are already slow-release, so this change will apply only to synthetics). The law will be phased in and fully implemented by 10/1/13.

Go to http://www.hgic.umd.edu/_media/documents/hg103_002.pdf for the University of Maryland's tips on calculating how much fertilizer is needed for your lawn size.

What about Compost as Fertilizer?

The University of Maryland's Fertilizer Facts for Home Lawns include this important note: "No amount of fertilizing is going to overcome poor soil or poor growing conditions. Examples of poor growing conditions include: areas of poor drainage, growing a species of grass not suited for site conditions, compacted soil, or turf with an excessive

thatch build-up (which prevents fertilizer and water from reaching the soil)." And "Adding organic matter is the best way to improve poor soil types. Sources of organic matter include: well-rotted manure,compost, leaf mold, grassclippings or processed sewer sludge."

Our favorite type of organic matter for improving soil is compost - but compost is a soil amendment, not a fertilizer. Compost's job is to add organic matter to the soil, so it feeds the soil, not the plant. The fiber it adds to the soil helps with moisture retention and aeration. Compost also increases the number of beneficial microorganisms in the soil. We love the ***Leafgro®*** brand of compost that's made by Montgomery County from leaves collected locally. It's a great product at a great price.

To apply compost, drop it in piles around the lawn, then rake it across the lawn to a thickness of ¼ to ½ inch with a heavy garden rake. On existing lawns it is best to core-aerate the area and then apply the compost, raking it into the core holes. If that is not possible, simply work a ¼- to ½-inch layer over the surface and be careful not to rake out the grass in the process. It should be added to the soil before new lawns are planted.

Soil Testing:

Most soils have adequate Phosphorous for established lawns, but not enough for newly planted lawns. Nitrogen, on the other hand, is used up regularly by turfgrass, so it's safe to assume that your soil need it routinely. If you suspect other nutrient deficiencies in your soil, have the soil tested. Commercial lawn-care companies are required to test the soil for their new customers and every three years thereafter. We notice that the University of Maryland's lawn care advice for homeowners doesn't suggest that soil tests be done. If you DO have your soil tested to determine what your lawn needs, be sure the analysis and recommended products are specifically for lawn (most labs analyze soils with agriculture in mind).

A Word about Thatch:

Thatch in lawns is often misunderstood - both its cause and control. Some lawns have serious thatch problems while others do not. Thatch is a layer of living and dead organic matter that occurs between the green matter and the soil surface. Excessive thatch (over 1/2 inch thick) creates a favorable environment for pests and disease, an unfavorable growing environment for grass roots, and can interfere with some lawn care practices.

The primary component of thatch is turfgrass stems and roots. It accumulates as these plant parts build up faster than they breakdown. Thatch problems are due to a combination of factors, like applying too much Nitrogen and overwatering. Also, thatch is more often found in grasses that spread by runners, like Bermuda, Zoysia, Bent Grass and Kentucky Bluegrass. Despite popular belief, short clippings dropped on the lawn after mowing do NOT cause thatch build-up. Clippings are very high in water content and breakdown rapidly, assuming the lawn is being mowed on a regular basis.

Weeds — Preventing Them and Getting Rid of Them

The best way to keep weeds down in a lawn is to have a thick, healthy lawn by overseeding in the fall, and by fertilizing as outlined above. A thick lawn simply out-competes most weeds. Mowing to the proper height (3") also helps fight weeds.

For preventing broadleaf weeds, some homeowners apply corn gluten meal in late winter, when the forsythias are blooming. Corn gluten is a part of corn, so safe that it's routinely fed to livestock. It works by simply creating a barrier on top of the soil that prevents the weed seeds from reaching the soil and germinating. In the recommended dose of 20 pounds per 1,000 square feet of lawn, it also provides 1.8 pounds of Nitrogen, very close to the needed 2 pounds of N needed by your lawn each year - that's because corn gluten is at least 60% protein, a good 9-0-0 fertilizer.

And homeowners are now being encouraged to accept a few weeds, especially clover (the Nitrogen-fixing wonder plant) and dandelions, both of which are loved by pollinators. Both are

popular components in a "freedom lawn", the new term for a laissez-faire mix of turfgrass and weeds. Authorities are also encouraging homeowners to take up the pastime of hand-weeding, when all else fails. It's good exercise!

Lawn Diseases and Insect Damage

Good lawn-care practices, like avoiding too much fertilizer and overwatering, are your best defense against disease and destructive insects. Still, if you do suspect a disease or destructive insects in your lawn, talk to the knowledgeable staffers in our Garden Shop department. (Take notes on the problem, or even better, bring us a photo or sample.) Also, the University of Maryland has many online publications about lawn pests. And always use Integrated Pest Management, which means trying the least toxic solutions first.

Watering

No longer are authorities recommending we give lawns an inch of water every week. Certainly when they're NEW they need regular watering but after they're established, lawns can be allowed to go dormant in the summer and in the winter. They'll quickly green-up naturally in the fall with cooler and wetter weather.

If you need to water because you've recently planted grass seed, do it as early in the day as possible but never at night, and preferably when there isn't much wind. Most importantly, water deeply, to one inch, in order to encourage deep roots, thereby increasing drought tolerance. We recommend an "oscillating" type of sprinkler for square for rectangular lawns and an "impulse" for sprinkler for curved or round lawns.

If you use an irrigation system, make sure it's the efficient type with a smart controller that automatically adjusts irrigation schedules based on environmental factors (especially whether it's raining or not). Too much water is wasted with "set-it & forget it" systems that water whether it's needed or not.

Watering by hand is not recommended because it's unlikely to

provide the necessary amount of water required to water thoroughly and deeply. However, if you find hand-watering relaxing and enjoy it, just remember to allow adequate time for this task. Allow the water to penetrate the top 4-6 inches of soil before moving on. Test with a stick or probe.

Mowing, Blowing and Discarding

Lawns should be mowed at what's usually the highest mower setting - 3 or 4 inches. Mow when the turf is dry and leave grass clippings on the lawn (they'll provide about 25% of your lawn's yearly Nitrogen requirement). Don't mow when the lawn is drought-stressed or dormant – that can damage the turf.

Gas-powered mowers and blowers cause air and noise pollution, so electric mowers are preferred, and push mowers are the eco-ideal (where possible).

Less Lawn

These days environmental experts are urging us to reduce or eliminate turfgrasses when they're not needed for their toughness (to play on, there's nothing better). "Lawns" could be composed of more sustainable groundcovers, or converted to something totally different - ornamental grasses, flowering perennials, shrubs, trees, pervious patios, edibles, even a meadow. To see beautiful examples of lawnless or small-lawn gardens, visit the Lawn Reform Coalition's website.

Environmentalists and government bodies are also urging everyone to embrace imperfect, good-enough lawns and abandon the expensive, resource-intensive quest for lawns of golf course-quality. Golf courses are expensively managed landscapes that are highly impractical for homeowners to emulate, not to mention wasteful of resources.

Mower photo from Susan Harris.

This article was written by Susan Harris for Behnke Nurseries.

The Behnke Nurseries Co. Since 1930

11300 Baltimore Ave.,Beltsville, MD 20705
www.Behnkes.com • (301) 937-1100