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Groundcover Alternatives to Turf Grass

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Plants that spread over time to cover the ground are referred to as groundcovers. Usually, this term denotes low-growing plants, but groundcovers can also refer to taller, spreading shrubs or trees that grow together to create a dense cover of vegetation.

Though turf grass is certainly one of the most popular groundcovers and useful for pathways and play surfaces, it is also one that requires relatively high maintenance. The wide range of low-maintenance, highly attractive, wildlife-benefiting groundcovers beckons to home landscapers searching for an alternative to traditional lawn spaces. (For more information about the disadvantages of turf grass lawns, consult the fact sheet "Turf Grass Madness: Reasons to Reduce the Lawn in Your Landscape."

Pink and purple phlox

What are the benefits of replacing some of your turf grass lawn with groundcovers?

- Reduces maintenance requirements and associated pollution. Groundcovers whose requirements fit the existing conditions of the site will require less fertilizer, pesticides and mowing than traditional turf grass. Less fertilizer and pesticides means less potential for pollution of runoff stormwater, and reducing lawn mower use cuts down on a significant source of air pollution.
- Offers higher wildlife value than a monoculture of turf grass. Diversity of vegetation supports a diversity of insects, the basis of the food web for local and migrating birds, small mammals, amphibians and reptiles as well as a variety of other beneficial wildlife. Besides food, many groundcovers also provide wildlife habitat.
- Serves as a living mulch by preserving soil moisture, suppressing weeds, protecting soil from temperature fluctuations, and hiding organic debris that hosts a variety of beneficial soil organisms.
- Loosens the soil with a network of roots, benefiting nearby trees and shrubs with increased pore space and oxygen content around their roots.
- Reduces mower and string trimmer damage to trees and shrubs by providing a buffer between woody plantings and turf areas.
- Adds variety to the landscape with diverse textures, colors, flowers, fruits, and changing seasonal interest.
- Directs foot traffic away from plantings to reduce soil compaction.
- Fulfills important design functions such as providing transition between lawn and shrub plantings, unifying scattered trees and shrubs, softening the edges of hardscape, or setting off a specimen plant, statue, or other landscape feature.

- Eliminates dangerous and/or difficult mowing situations on slopes, in tight corners, or against buildings, fences or walls.
- Gives your wallet a break. Though individual plants cost more in the short run than turf grass, long-run upkeep costs will generally be lower for groundcovers that fit your site conditions than for ill-adapted turf grass.

How to install and maintain groundcover plantings

Remove turf, if necessary: Various methods may be employed to kill existing turf grass. One choice is to cover your planned beds with a thick layer of newspaper or cardboard for 2 months, which suffocates the existing turf and weeds.

You can also rototill or spade the area 4 – 5 times over a period of 5 – 6 weeks. Treatment with non-specific herbicides like glyphosate (Round-Up®) is a quicker method of destroying turf grass, though somewhat less environmentally friendly. If you choose this method, do not spray on breezy days or if rain is predicted within 12 – 24 hours. To ensure the control of existing grasses, wait 10 – 12 days after spraying before planting.

Test and prepare your soil. Because plants will live in the same area for many years, it is worth the extra effort to provide healthy soil conditions at the start. Have your soil tested and add needed nutrients accordingly. Incorporate a 1-2" layer of compost to improve drainage and moisture retention. For information about testing your soil in Delaware, visit the University of Delaware Soil Testing page.

Choose a ground cover. Hundreds of groundcovers are available on the market, but only those with requirements that match your site conditions will offer you a lower-maintenance alternative to turf grass. Besides being adapted to the climate of your site, groundcovers that are native to your region are a great choice for supporting local biodiversity.

For a list of specific groundcovers that perform well in Delaware, consult the list at the end of this fact sheet. When selecting groundcovers for your site, consider the following factors:

- Required light conditions (sun, shade, part sun)
- Required soil conditions (moist/dry, clayey/sandy, acidic/neutral)
- Hardiness (tolerance for low winter temperatures)
- Deciduous/evergreen
- Mature height
- Ornamental features (flowers, fruit, fragrance, fall color, foliage size and shape)
- Cost (plugs are less expensive in larger quantities than containerized plants)
- Ability to withstand foot traffic
- Growth rate (how fast plants will achieve desired coverage)

Schedule a planting time. Autumn is the best time of year to plant and transplant groundcovers. Root growth is stimulated by warm soil, natural rainfall, and the reduced need to provide energy for top growth that is slowed by cooling air temperatures. Spring is the second best time to plant because the plentiful rainfall provides natural irrigation. Summertime planting requires careful monitoring of moisture levels to prevent soil from drying out in the hot sun.

Install your groundcovers. Dig planting holes 1/3 wider than the size of the plant's rootball; for mass plantings, you can dig a trench. Spacing depends on the number of plants, growth rate, and desirability of an "instant landscape." Install rootballs at the same depth they were growing in their container, filling any remaining space with soil and tamping it down to press out air pockets. Water new plantings as soon as possible to minimize transplant shock.

Provide mulch. A 1 – 1½ layer of mulch will conserve soil moisture, prevent erosion, suppress weeds, and help buffer the soil from air temperature

fluctuations. Mulching needs will be reduced as plant cover expands. Depending on the size of plants and planting area, it may be easier to spread mulch prior to planting.

Irrigate until established (about 3 months). If you chose plants whose moisture requirements match your climate's natural rainfall, you probably won't need to water your plantings after the first year, except perhaps during extreme drought.

Control for weeds. The need for weed control will be highest during the first year or two, diminishing as your plantings spread to completely cover the ground.

Fertilize. Applications of a slow-release fertilizer once or twice annually will encourage good plant coverage. Use fertilizers at appropriate levels for lowest environmental impact.

Prune, if desired. Few groundcover shrubs require pruning, though some gardeners employ it as a technique for stimulating new growth or neatening the appearance of a plant grouping. Prune spring-flowering plants after they bloom and summer- and fall-flowering plants in early spring before new flower buds form. Pruning in late summer or fall is not recommended because it stimulates new growth that could be injured by the winter elements.

Use IPM for disease or pest control. Selecting groundcovers appropriate to your site conditions generally translates to well-adapted, healthy plants with minimal pest or disease problems. On the other hand, if a plant is stressed by failure to have its requirements met, it may experience increased susceptibility to pests and disease. Practice Integrated Pest Management (IPM) to monitor potential problems and minimize harm to the environment. Remember that incorporating a diverse array of native plants into your design may actually aid in pest management—they will attract a diverse population of native insects, which will in turn attract native predators to dispose of them before most visible damage is inflicted.

Additional Resources

The Encyclopedia of Grasses for Livable Landscapes by Rick Darke (Timber Press, 2007)

Manual of Woody Landscape Plants by Michael A. Dirr (Stipes Publishing, 1998 [5th ed.])

Missouri Botanical Garden Kemper Center for Home Gardening Plant Information
http://www.mobot.org/gardeninghelp/plantinfo.shtml

NC State University Cooperative Extension and College of Agriculture and Life Sciences Plant Fact Sheets
http://www.ces.ncsu.edu/depts/hort/consumer/factsheets/

Perennial Ground Covers by David S. MacKenzie (Timber Press, 2002)

United States Department of Agriculture Natural Resources Conservation Service PLANTS Database
http://plants.usda.gov/

United States Fish & Wildlife Service Plants for Wildlife Habitat and Conservation Landscaping: Chesapeake Bay Watershed
http://www.nps.gov/plants/pubs/chesapeake/

University of Connecticut Database of Trees, Shrubs and Vines.
http://www.hort.uconn.edu/plants/

University of Texas at Austin Lady Bird Johnson Wildflower Center Native Plant Database
http://www.wildflower.org/plants/

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