

Chester County Water Resources Authority

Caring for Your Lawn and Your Environment

Many of us spend a great deal of time and effort caring for our properties and take pride in doing a good job and keeping a beautiful home. One of the ways that we care for our homes is to work hard on our lawns and landscaping. Whether we plant rose bushes, carefully weed and mulch flower beds or apply chemicals and fertilizers to keep our lawns green, many of us work very hard to have a well-manicured lawn.

However, our efforts can come at a great cost, not just in terms of dollars but also in time and negative impacts to native communities of plants and wildlife. In this brief brochure, you'll find some tips on 'Organic Lawn Care', 'Native Plants in Southeastern Pennsylvania' and 'A List of Resources for More Information'.

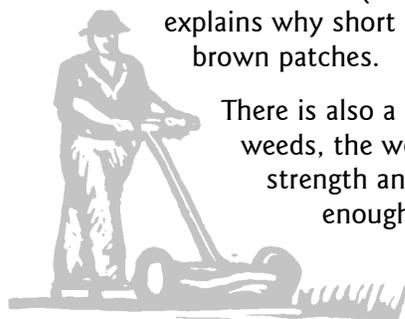
Recommendations for Organic Lawn Care

While adding fertilizers, topsoil and other additives can help bring out a full, dense lawn, three of the most important factors in lawn care are:

1. **Mow High.** Set the mower as high as it will go (3 to 4 inches).
2. **Grasscycling.** Leave the grass clippings on your lawn.
3. **Water Infrequently.** Water only when your grass shows signs of drought stress, and then to water deeply.

1. Mow High

A common myth is that "If I mow short, it will be longer until I have to mow again." That is false! Your grass needs grass blades to complete photosynthesis (convert sunshine into sugar) to feed the roots. When the grass is cut low, it then grows very rapidly in order to make more blades that make sugar. This fast growth uses up a lot of the grass' stored sugar, and weakens the plant. It is now vulnerable to disease and pests! Tall grass is healthier and can use the extra sugar to make rhizomes (more grass plants) thus thickening the turf. This explains why short grass in the summer is always riddled with dead brown patches.



There is also a fight for sunlight. If the grass doesn't shade the weeds, the weeds will shade the grass. Sun is food. Food is strength and life. Grass will shade the weeds only if it is tall enough. The shade of tall, dense grass turf will prevent essential light from reaching most weeds and will aid in the destruction of new weed seedlings (such as the notorious dandelion) (2).

2. Grasscycling

Do your part for the environment by recycling when you mow. According to the Professional Lawn Care Association of America, grasscycling—leaving grass clippings on the lawn—saves time, landfill space and nurtures the soil. Grass clippings are 85% water and return 20% of their nitrogen to the soil to feed the lawn's root system. They decompose rapidly and return nutrients to the soil with no thatch buildup. Grasscycling can be practiced year-round with most mowers (3).

3. Water Infrequently

The following recommendations will help you maximize the benefits and reduce the use of water for maintaining a healthy, attractive lawn.

Summer showers provide water. In southeastern Pennsylvania, our summer showers and thunderstorms will typically provide enough water for our lawns, especially if we use native grasses. However, there may be periods when you wish to water your lawn, such as right after landscaping to get the turf started.

Lawn watering is not recommended during droughts. If you decide to water your lawn, understand that without careful oversight and planning, you can waste a very valuable resource. A study published in 1993 found that between 30 to 60 percent of urban freshwater is used for watering lawns (depending on the city) (1,4).

Infrequent watering forces grass roots deeper. By watering infrequently you will force your grass roots to go deeper into the soil; deeper than most weed roots. As the top few inches of soil becomes bone dry, the weeds and weed seedlings with shallow roots die while the grass still enjoys water from deeper below the surface.

Dry soil reduces weeds. Since the roots of weeds are in the top inch or two of soil, a hot day will quickly dry the soil and stress the weeds. Weeds and weed seedlings love a daily watering. It's just what they need for a good start (2).

Other Lawn Care Strategies

These tips should help you improve your lawn **without fertilizers** or pesticides. If you feel that there is a need for the use of lawn chemicals, first get a soil test to determine whether the soil is deficient in any nutrients. If it is, consider using organic fertilizers and ask questions to make certain that you do not over-apply the chemicals. Be careful to follow all safety precautions when applying chemicals and be careful about allowing children and pets on a lawn that has been recently treated. Also, make certain that you do not apply chemicals to sidewalks and driveways, as chemicals that are accidentally applied there can runoff and be a source of pollution.

Don't mow near stream banks or wetlands. Instead plant native wetland plants, such as flowering silky dogwood, swamp azalea or any number of attractive wildflowers.

On large lots, reduce the area mowed to 1/4 or 1/3 of an acre, or only that portion of your property that you use. Put the rest in trees, wetlands or wildflowers and save mowing costs.

Plant trees and shrubs. Their roots improve ground water recharge.

Think “Safety First” when Mowing Your Lawn

Follow these basic safety steps:

- ◆ Read all operating instructions.
 - ◆ Keep equipment well-maintained.
 - ◆ Dress properly for the job (sturdy shoes, long pants, no loose jewelry).
 - ◆ Store gas in an approved container, away from the house.
 - ◆ Clean up and clear the area before you start.
 - ◆ Keep hands and feet away from moving parts.
 - ◆ Never take passengers.
 - ◆ Turn off the engine and remove the key when leaving equipment unattended.
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Why Should I Garden with Native Plants?

Native plants provide a beautiful, hardy, drought resistant, low maintenance landscape while benefiting the environment. Because native plants are accustomed to our native soil and climate they save time and money by eliminating or significantly reducing the need for fertilizers, pesticides, water and lawn maintenance equipment (5).

- ♦ Most native plants **do not require fertilizers**.
- ♦ Native plants require **fewer pesticides** than lawns.
- ♦ Lawns can be made up of **native grasses**.
- ♦ Native plants require **less water** than lawns.
- ♦ Native plants provide shelter and food for **native wildlife**.
- ♦ Native plants promote **biodiversity** and stewardship of our natural heritage.

What is a native plant?

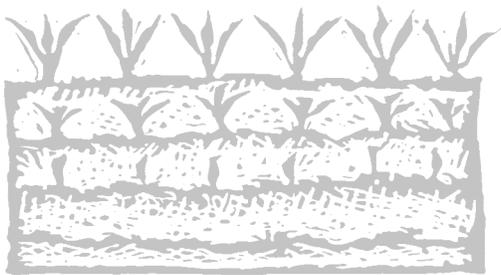
Native plants (also called indigenous plants) are plants that have evolved over thousands of years in a particular region. They have adapted to the geography, hydrology, and climate of that region. Native plants occur in communities, that is, they have evolved together with other plants. As a result, a community of native plants provides habitat for a variety of native wildlife species such as songbirds and butterflies.

Native plant list

The following is a list of some native trees and shrubs that are found in different habitats within Pennsylvania (6, 7):

Red Maple	Pin Cherry
Flowering Dogwood ❁	Mountain Laurel ❁
Flame Azalea ❁	Common Juniper
Common Witchhazel ❁	Franklinia ❁
White Oak	Arrow wood ❁
White Ash	Black Willow
Spicebush ❁	Shadbush ❁
Eastern Redbud ❁	Sassafras ❁

❁ = flowering



What is a Non-Native Plant?

Non-native plants (also called exotic species) are plants that have been introduced into an environment in which they did not evolve. Introduction of non-native plants into our landscape has been both accidental and deliberate. Purple loosestrife, for example, was introduced from Europe in the 1800's in ship ballast. It quickly spread and can now be found in 42 states.

Some non-native plants are invasive

Some non-native plants have no enemies or controls to limit their spread and are called "invasive" plants. As they move in, complex native plant communities, with hundreds of different plant species supporting wildlife, will be converted to a monoculture. This means the community of plants and animals is simplified, with most plant species disappearing, leaving only the non-native plant population intact.

Non-native plants can threaten wetlands

For example, purple loosestrife colonizes wetland areas, replacing native plants unable to compete for available sunlight, water, and nutrients. Wetlands infested with purple loosestrife lose as much as 50% of their original native plant populations. This limits the variety of food and cover available to birds and may cause the birds to move or disappear from a region altogether (5).

Cited sources in this factsheet:

- (1) Wild Ones Handbook: Today's Lawns Webpage—
www.epa.gov/glnpo/greenacres/wildones/wo08.htm
- (2) Organic Lawn Care for the Cheap and Lazy—
www.richsoil.com/lawn/
- (3) Lawnmasters Lawn Care Tips—
www.geocities.com/RainForest/4803/
- (4) Redesigning the American Lawn by F. Herbert Bormann, Diana Balmori, Gordon T. Geballe, Yale University Press, 1993.
- (5) U.S. Environmental Protection Agency, Region V Great Lakes National Program Office—
<http://www.epa.gov/glnpo/greenacres/nativeplants/index.html>
- (6) Wissahickon Stewardship Program Managers Manual, Spring 1993.
- (7) Native Plants in the Chester County Landscape, Chester County Planning Commission, CCPC Bulletin #51, 1996.





There are many other tips and techniques for managing your lawn in a fashion that is environmentally responsible. You and your family may have other techniques that work for you.

Share them with us! Send in your ideas for “Caring for Your Lawn” and we will put them on our website to share with others. If you have questions concerning the ideas in this brochure, or would like additional ideas on ‘Watershed Stewardship’ or ‘Backyard Conservation’, please contact us.

WE'RE HERE TO HELP!!

Remember, “watershed stewardship” is everyone's responsibility. But it can also be fulfilling. This weekend as you go about your chores, look at your watershed and be a watershed steward!!

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Other sources of information and assistance:

Chester County Planning Commission
610-344-6285

Chester County Conservation District
610-696-5126

Chester County Health Department
610-344-6526

Penn State Cooperative Extension of Chester County
610-696-3500

Natural Resources Conservation Service, U.S. Department of Agriculture
(Chester County Office)
610-696-0398

