



Eco
Friendly
Living

Eco Friendly Living Series

Natural Lawn Care

Caring for Your Lawn Naturally

Pittsfield Charter Township

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What is Natural Lawn Care?

Natural lawn care includes using natural fertilizers such as compost and mulch to improve your soil, selecting the right plants for the conditions in your yard, watering wisely, using fewer pesticides or eliminating pesticide use altogether, and implementing natural lawn maintenance techniques. By working with nature to maintain your yard, you can have a great looking landscape that is easier to care for and healthier for families, pets, wildlife and the environment.

The Benefits of Natural Lawn Care

- Protects the health of family, pets and wildlife.
- Prevents excess pesticides and fertilizers from ending up in nearby streams, lakes, rivers and detention ponds.
- Conserves water supply, leaving more in nearby waterways for fish and other aquatic life.
- Helps to restore and balance the soil system – the microbes, organic matter, soil structure and nutrients that make a healthy lawn possible.
- Over time, lawns will require less watering, fertilizing, and mowing, saving time and money.

Banish Weeds Naturally

Weed and feed products are a mixture of herbicides (weed killers) and fertilizers, and most of them contain pesticides (including 2, 4-D, dicamba, and MCPP) which can be harmful to humans, especially children. They can also harm pets and wildlife and contaminate ground and surface water. Consider alternatives, such as corn gluten, (an organic corn by-product that is a natural pre-emergent weed control), before applying weed and feed to lawns. Corn gluten can reduce weeds, especially if it is applied early in the season, before the soil reaches 55 degrees. Over the course of a few growing seasons, it will make a difference. (See Page 10 for a list of organic by-products that can be used to prevent and control weeds.) Also, invest in a sturdy weeding tool and go after the weeds for short periods on a regular basis, rather than all at once.

Don't be so focused on a perfect green lawn; instead realize that a healthy lawn can naturally resist disease and drought.



Working with Nature

Developing a Preventative Health Care Program for Your Natural Lawn

Think about natural lawn care as a preventative health care program. A healthy natural lawn can out-compete most weeds, survive most insect attacks, and fend off most diseases—before these problems ever get the upper hand. Your lawn care program should be tailored to your local conditions, such as rainfall amounts, soil type, and being sure to select the right plant for the right place.

A Preventative Health Care Program includes:

1. Building and maintaining healthy soil
2. Selecting grass and plants right for your site
3. Adopting a holistic approach to pest management
4. Practicing Natural Lawn Care
5. Watering deeply, but not too often
6. Using Organic By-Products for Weed Control

Put nature to work in your yard

In nature, soil recycles dead plants into nutrients for new plant growth. Plants are adapted to the water, sun and soil available in their site. Maintaining a wide variety of healthy plants, soil organisms, animals, and beneficial insects (Yes—there are good bugs!), can keep most pests and diseases in check.

By working with nature, you can have a great-looking yard that is colorful, easier to care for, cheaper to maintain, and healthier for families, pets, wildlife and the environment.

Build & Maintain Healthy Soil

With compost and mulch

A teaspoonful of healthy soil contains about 4 billion organisms!

This community of beneficial soil creatures keeps landscapes healthy by (1) creating a loose soil structure that allows air, water and plant root growth into the soil; (2) recycling nutrients and making them available to plants; (3) storing water until your plants need it; and (4) protecting plants from some pests and diseases.

Know what your soil needs

A soil test will tell how much nitrogen, phosphorus, potassium and lime your soil

needs to grow healthy plants. Depending on the condition of the soil, it may be necessary to apply these nutrients. A soil test kit can be obtained from most garden centers.

Feed your soil compost

Dig or rototill 1-3 inches of compost into 6-12 inches of top soil when making new beds or planting lawns. Top dress existing lawns with a quarter-to-half-inch of compost every spring or fall. Compost helps sandy soil hold nutrients and water, loosens clay soils and feeds the beneficial soil life so it can feed and protect plants.

Mulch it!

Mulch is a layer of organic material such as leaves, aged wood chips, compost or grass clippings that can be spread in the spring or fall around plants. Never exceed more than 3 inches of mulch in landscaping beds; it should be kept about 1 inch from steps and tree trunks. Mulch stabilizes soil temperature, prevents weeds, feeds the soil for healthier plants and helps to conserve water. And it recycles itself. Mulch improves flower beds and vegetable gardens, trees, shrubs, woody perennials and lawns.



Plant Right for Your Site

How to match the right grass and plant to the right place

Get to know your yard and decide how you want to use it

Conduct a yard assessment. Where is it sunny or shady at different seasons?

Dig a few places to see where your soil is sand, clay, soggy year 'round or bone dry. Identify if there are any current plants or grassy areas with problems. Test your soil for drainage; if water drains too quickly, plants will lack moisture; if too wet, they can rot.

Determine where you want play areas, vegetables, color, views, or privacy.

How much lawn do you need or want to maintain? What kind of nature "look" do you want and what kind of plantings and foliage will achieve that? Be sure not to plant "invasive species" that can quickly overtake your lawn.

Select plants and grass that will grow well in your 'natural' environment.

Determine the sun exposure. Light can vary greatly depending on the time of day, the season and whether it is filtered or completely blocked. Sunny areas get six or more hours of full sun, resulting in warm, dry soil. If plants are also exposed to wind, they will lose even more exposure. Look for shady areas under trees or eaves or against north-facing walls.

Knowing your soil will help determine the grass and plant-types you should select. In general, for natural lawns, it makes sense to select low-water plants to save yourself the time and expense of watering.

Pick plants that resist pests. (See page 5 for more on pest control.) Make space for wildlife. Invite birds, butterflies and other wildlife into your yard, protect streams and fish, and make a more attractive landscape by planting native trees and plants, especially ones with berries, fruits and flowers. Plant in layers (ground cover, shrubs and trees) so that your landscape is like a forest. Leave wild "buffer" areas of native plants along ravines, streams, shorelines and fence lines. A bird bath can also be added, but change the water frequently to avoid mosquito breeding grounds.

Pest Management Tips

Get to know your pests

Every week or two, walk around your lawn or garden to identify any pest problems before they get out of control. Early detection can eliminate the costs and hazards of using chemical pesticides to rid your property of unwanted pests. Additionally, proper identification will determine if the 'pest' is a beneficial insect (Yes! – there are good bugs!), or an undesirable insect.



Don't Allow Pests to Become Established

- Inspect plants before purchasing to ensure they are pest and disease free.
- Clean up around the garden and yard. Many pests survive through winter among weeds and plant debris. Remove any leaves, weeds and decaying plant material.
- Manage beneficial organisms by limiting use of pesticides, herbicides and fungicides.
- Grow a wide variety of plant materials to provide alternate food sources for beneficial insects and replace problem plants with pest resistant ones for a healthier, care-free yard.

GOOD BUGS

Spraying kills them & poisons your lawn

Praying Mantis – is a predator of mosquitoes, nocturnal moths, bees, beetles, small lizards, and even frogs.

Ground Beetle – feeds on slugs, snails, cutworms and root maggots

Green Lacewing – feeds on soft-bodied pests such as aphids, thrips, red mites, small caterpillars, moth eggs and mealybugs.

Spined Soldier Bug – also known as a 'stink bug' for the foul odor it emits when disturbed. It will save your garden from Mexican bean beetles, Colorado potato beetles, horn-worms, cabbage loopers, and cabbage worms.

Ladybug – imported 100 years ago to defend orchards, they dine on aphids, mites and mealybugs and can eat over 5,000 pests in a lifetime.

Braconid-Wasp – feasts on caterpillars, sawfly larvae, and tomato-loving horn-worms.

Bumblebee – identifiable by its black and yellow stripes, it collects nectar and pollen that will make tomato plants and apple trees produce more fruit.

Nematode – a microscopic parasite, it lives in the soil where it feeds on white grubs, flea larvae, and those rose-damaging Japanese beetles.

Earth Worm – nature's most efficient composter!

Develop an Integrated Pest Management Plan

An **Integrated Pest Management (IPM) plan** is essentially 'common sense pest control'. IPM is not a new concept; some forms of it have been practiced for centuries. An IPM involves carefully managed use of three different pest control tactics: **(1) Biological**, **(2) Cultural** (*horticultural*), and **(3) Chemical**; utilizing all three to get the best long-term results in pest management with the least disruption of the environment.

Below is a breakdown of the three pest control tactics:

Biological Control

The use of naturally occurring predators, parasites and pathogens to manage pests. For example, ladybugs can be used to help control sap-sucking aphids, as well as mite and mealybug populations.

Cultural Control

Involves the use of good gardening methods, such as selecting resistant plant varieties, growing plants in proper conditions, and maintaining plans through proper irrigation and pruning.

Chemical Control

This is the use of commercially available pesticides to protect plant material. Of course, for a "natural lawn", the use of pesticides would be a last resort, but at times it is necessary.



IPM is a highly effective approach that minimizes the use of pesticides and maximizes the use of natural processes. When the use of pesticides is reduced, the number of beneficial organisms in the soil and environment increases.

Only about 5-15% of the bugs in your yard are pests. "Good Bugs," such as the ladybug and the praying mantis, help control pests.



To learn how to attract the 'good bugs,' download **"The Bug Book – A Garden Field Guide"** at www.epa.gov/region1/eco/uep/pdfs/BugBook.pdf

Practice Natural Lawn Care

Mow higher, mow regularly, leave clippings

Mow more frequently when grass is actively growing so that you are only cutting no more than one-third of the height of the grass. This practice minimizes grass clippings. Always use a sharp mowing blade.

The desired height of grass varies depending on climate. Check the Michigan State University (MSU) Cooperative Extension website at www.msue.anr.msu.edu/ for local mowing recommendations. You don't have to grow a foot-high meadow to get good results. Just adding an inch will give most lawns a real boost!

'Grasscycling,' or leaving the clippings on the lawn, does not cause thatch build-up – but it does make lawns healthier.

Soil organisms recycle the clippings into free fertilizer, and a lot of work is saved by not bagging. And modern grass-mulching lawn mowers make grasscycling even easier.

Core aerating and overseeding can improve lawn quality.

Core aerating your lawn in the fall will improve root development. Follow up by overseeding thin areas with grass seed blends recommended for your area. Then 'top dress' by raking in ¼" to ½" of compost over the seed to improve the soil. Repeat yearly, as needed.

Go organic! And use slow-release fertilizers!

Choose 'natural organic' or 'slow release' fertilizers to reduce nutrient run-off and leaching. To avoid run-off, keep fertilizers on the soil and away from the sidewalks, streets and driveways. Fertilizers that run off are a waste of money and contribute to the pollution of streams, lakes and other water bodies. Read and follow product labels carefully before using fertilizer and other lawn chemicals, and use them sparingly. (Refer to Page 10 for Organic By-Products options for weed control.)

The MSU Cooperative Extension recommends most turf heights of 3.5 inches, which will help to develop a larger root mass that can recover from grub damage with less pesticide use.

Watering Tips

Water deeply, but not too often

Watering too much or too little can be the cause of many common plant problems. You can have healthier plants, save money on water bills and conserve precious water resources by learning to give your lawn/garden just what they need and no more.

Water deeply, but infrequently, to moisten the whole root zone. Let the soil dry between waterings to prevent lawn disease and save water. To stay green, lawns need only about one inch (1") of water a week in summer, including rain. Perennials require watering only when they remain "droopy" after it cools off in the evening.

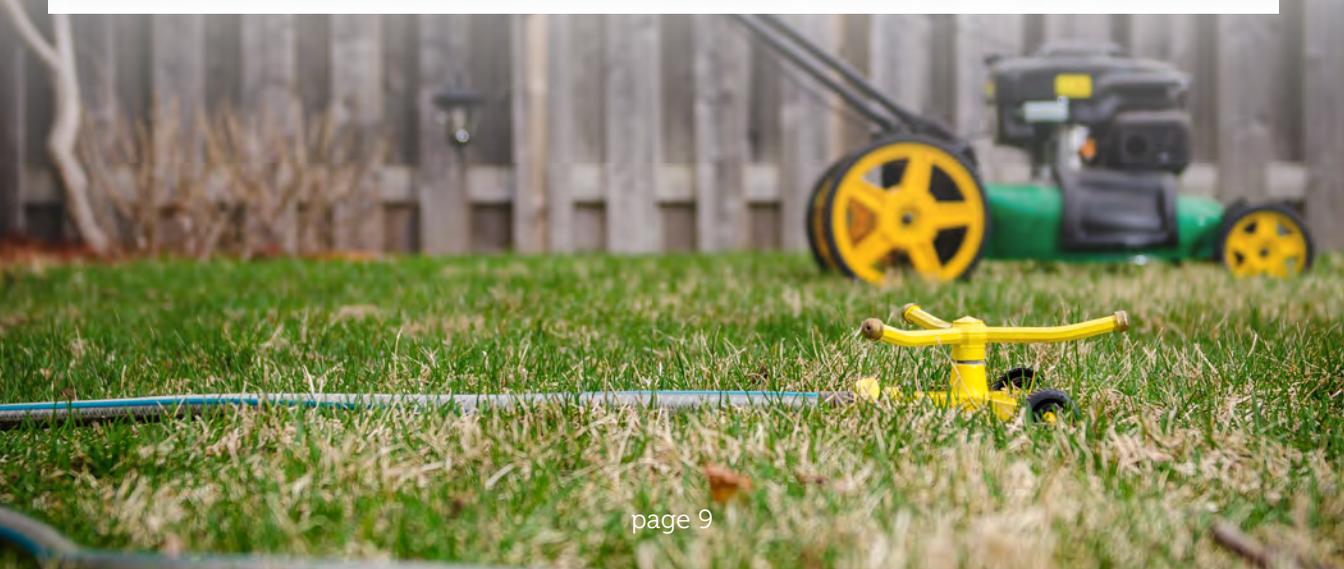
How much is one inch of water?

Scatter clean, empty tuna cans on your lawn; turn on sprinklers. When cans are filled with 1" of water, turn off sprinklers and verify how long it took to reach the required amount. Now, you've determined how long to run your sprinklers each week to keep your lawn green.

Make every drop count!

Below are some easy steps to lower water bills and get more water onto lawns and plants.

- Build soil with compost and mulch to hold water and reduce evaporation.
- Choose low-water-use-plants. Once established, they can often thrive on just rainfall.
- Direct downspouts out into lawns, rain gardens or into rain barrels.
- Use an outdoor water timer (available at most garden centers) to water just the right amount, frequency, and time of day.
- Water lawns separately from other plantings; landscape with open pavers, gravel or other options that let rain seep into soil.
- Plant dense strips of 'native' trees, shrubs, and groundcovers by lakes, streams and ditches to stabilize the soil and to slow and filter run-off.
- When soil is dry or compacted, it won't absorb water quickly. However, core aerating can help alleviate compacted soil. (Refer to Page 8 for more information on core aerating.)



Organic By-Products for Weed Control

In addition to using corn gluten (mentioned on Page 2), there are other plant and animal organic by-products that can be used as natural herbicides to prevent weed growth.

Corn Gluten

Corn gluten is sold in three forms: powder, granules, or pellets. It prevents weed growth by drying out seeds after they crack open to sprout. So, wait at least one month after corn gluten application to plant grass seed. Corn gluten is also a good nitrogen source. Apply in early spring and be sure it is real corn gluten; not corn feed or corn grain.

Alfalfa Meal

Called 'green manure,' alfalfa meal is a great source of potassium, phosphorous and nitrogen. Spread this fertilizer on soil surfaces, but do not apply it in the root zone – which is below the soil's surface. Because alfalfa meal heats up the soil, only use it in small amounts to avoid plan burn. Alfalfa meal is commonly used as one part of a fertilizer mix.

Seaweed

Soil needs a healthy amount of potassium, phosphorous and nitrogen, but also needs trace elements and natural plant growth hormones. Seaweed can give soil these often overlooked nutrients and hormones. This 'ocean potion' not only reduces grass stress levels, it also improves naturally occurring minerals in the soil.

Animal By-Products

Blood meal, bone meal, fish products, and chicken manure are also natural herbicides. Blood meal can be mixed with compost, bone meal works well with root systems, fish products come in a variety of forms, and chicken manure has more nutrients than other manures. Visit www.lawntogreatlakes.org for more on these animal by-products.

Vermicasting

Essentially, vermicasting is worm waste. Often called 'black gold,' this fertilizer comes directly from worms. It is a unique fertilizer as it makes use of already present, but previously unavailable soil nutrients. Unlike other soil activators, it makes nutrients immediately available to plants after application.

Minerals

Lime and sulfur are minerals that can also improve soil. Lime, which works best when applied in the fall, is ideal for reaching a perfect pH level (between 6.3 and 6.8 is good). Sulfur helps balance pH levels as well, but is typically used to lower 'alkaline' when the pH reading is over 7.



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ADDITIONAL RESOURCES

For questions or more information on Natural Lawns, contact any of the following agencies:

Pittsfield Charter Township

Department of Utilities and Municipal Services
(734) 822-3105 ~ www.pittsfield-mi.gov

Michigan State University Cooperative Extension Services

Locate your county Lawn & Garden Expert at
(888) 678-3464 ~ www.msue.anr.msu.edu/
or www.msue.anr.msu.edu/topic/info/lawn_garden

Environmental Protection Agency/Great Lakes

(312) 886-7594 ~ www.epa.gov/greenacres/

Learn how to attract the 'Good Bugs,' by downloading
"The Bug Book – A Garden Field Guide" at:
www.epa.gov/region1/eco/uep/pdfs/BugBook.pdf