

THIS ORGANIC YARD

You can help protect the health of your family and the environment, and still have a lovely lawn, by going organic. It's easier than most people think. This article provides easy steps, and resources for exploring further.

Soil is not simply a plant medium but a living, breathing organism. Beneath our feet, this ecosystem converts complex organic compounds into plantfood and improves the structure and health of the soil itself. Healthy soil means healthy plants, less susceptibility to disease and pests, and less maintenance for you!

When the Town of Narragansett decided to drastically reduce their use of chemicals, their lawns and playing fields were already established. Their organic inputs and practices have increased the health and durability of both lawns and playing fields. The Parks & Recreation Department uses very few chemical inputs: fertilizer only in spot application on areas that get hard, constant wear, and virtually no herbicides or insecticides.

Mycorrhizal fungi thrive in organically-fed soil. These fungi have a heroic capacity to turn nutrients into plant food. Organic treatments increase soil's ability to hold water and air, so roots can drink heartily yet not drown. Organic nutrients leach from soil more slowly than synthetics, so are better at protecting our waterways.

Basic Practices:

Get your soil tested. It's easy and inexpensive. Find out how at:

<http://www.uri.edu/ce/factsheets/sheets/soiltest.html>. The results come with recommendations for soil amendments to balance nutrients and Ph (acidity level).

Put those grass clippings to work. The best organic fertilizer for grass is, you guessed it, grass! Cut off only 1/3rd of the blade at a time, don't mow when it's wet, and you can leave the clippings on the lawn even without a mulching lawn mower. As with any lawn input, keep it on the grass, and out of storm drains and waterways.

Mow high. Barry Fontaine, Director of Parks & Recreation, reports that they mow grass to 2.5 inches, but increase to 3 to 3.5 inches during dry weather or water bans. Longer blades shade themselves so less moisture evaporates, and they need less water. Grass tends to grow deeper roots if the blades are taller, which means that plants can reach down for water when the top soil layers are dry.

Reduce thatch: If your thatch is over 1" thick, NOFA (Northeast Organic Farming Association) suggests mechanically de-thatching using a vertical slicing machine, which can be rented inexpensively. Cover the lawn twice, with the second pass at right angles to the first, to avoid missed areas. More NOFA tips are at: <http://www.organiclandcare.net/files/NOFA%20Standards.pdf>.

Barry Fontaine shares a successful technique they have used for reducing thatch and increasing soil health: night crawlers. "*The use of the night crawlers has been an eye-opener for me,*" he says, "*allowing us to free up staff time that would have been used for mechanically aerating and de-thatching.*" Barry's crew puts down night crawlers in the evening. The worms aerate and fertilize as they process soil through their bodies. After a rain, birds come in to feast on the worms that have come to the surface. The birds' pecking further aerates the soil, reduces thatch, and helps control pests in the soil.

Water smart. Deep but infrequent watering encourages roots to penetrate more deeply. Water in the mornings, to reduce evaporation. Watering in the evening encourages fungal disease that you then have to control. You'll only need an inch of any kind of water per week on an established lawn.

Tolerate diversity. As the Europeans do, if it's pretty and blends in, leave it. Sometimes a patch of "wildings" adds interest. The author left a patch of bird-seeded sedum that grew into a beautiful chartreuse swatch, perfectly framing a perennial border. Free landscaping!

If you're not sold on the European approach mow high to shade out weeds and weed seeds. Corn gluten meal (see below) controls weeds before they emerge, and vinegar can be used directly after they do. Find more info on vinegar's effectiveness at: <http://www.ars.usda.gov/is/pr/2002/020515.htm>. The Master Gardeners are a great resource for information on whatever is living in your yard, wanted or not (<http://www.urimga.org/>, or 1-800-448-1011). Make a game of weeding with your kids by helping them identify their finds and their origin, whether local or distant lands. The University of Illinois has a neat interactive weed identifier: <http://weedid.aces.uiuc.edu/>, as does Michigan State University: <http://www.msuturfweeds.net/>. The only danger is that your kids begin to *like* the weeds they learn so much about. After all, a "weed" is only a plant in the wrong place!

Keep pests within limits. A healthy, lush lawn with lots of organic activity beneath it tends to keep pests in balance. As the University of New Hampshire's website states, "pest management programs that rely [mainly] on pesticides...are unstable and susceptible to any amount of pest pressure." Integrated Pest Management (IPM), on the other hand, uses understanding of the life cycles of pests and their interaction with the environment to craft a more effective and environmentally sensitive approach. IPM uses pesticides, in a targeted way, only when other approaches fail.

The University of California offers useful IPM information at: <http://www.ipm.ucdavis.edu/PMG/menu.homegarden.html>. Or, take free, online short-courses such as "Pest Identification-Weeds" and "Turfgrass IPM" from the University of Connecticut. Current offerings are at: <http://www.hort.uconn.edu/ipm/>.

Control grubs. Grubs are usually the white crescent-shaped larval stage of Japanese and some other. Healthy grass can tolerate up to 10 grubs beneath each square inch. But, if your grub population is out of control, big, irregular patches of your lawn can die, or feel spongy underfoot. Fescues tend to have less of these pesky larvae than Kentucky bluegrass or ryegrass. As with all pests, proper identification is essential before you treat. Master Gardeners can help you with this. An effective treatment is milky disease, also called milky spore. Apply it in the spring around forsythia time, again in the fall, and then once the following spring. As each infected grub dies, the beneficial disease is released into the soil. Though it can take 3 to 5 years in our cool climate for complete control, this treatment is reported to last at least a decade, and affects only grubs.

If you fertilize, use organics. (approximate %s of nitrogen, phosphorus, potassium)

Corn gluten meal (10-0-0): This provides slow release nitrogen to continually feed your lawn. CGM also contains natural substances that inhibit a seed's tiny feeder roots so they can't get established. They only inhibit sprouting seeds, so use the meal on established plants, such as your lawn. This natural herbicide is harmless to beneficial insects, soil organisms, pond/ stream life, pets, and your children.

Bone meal (1-11-0): Its phosphorus aids cell and seed formation, cell division, and root growth.

Fish emulsion (5-1-1): A partially decomposed blend of finely pulverized fish with a high nitrogen content and several trace elements. It may have a strong odor for a day or two. Deodorized brands are now on the market.

Seaweed Extracts (9-2-7): An especially good source of trace elements. Less odiferous than fish emulsion, but more expensive.

Manures: Nutrient concentrations vary widely with the source animal. Although concentrations are lower than in manufactured fertilizers, manures improve soil structure and increase its water holding capacity. Use composted manure only. Blend with soil for initial preparation, as it adds organic matter. For topdressing, spread it around with a shovel using no more than 1 cubic yard for 1,000 square feet of lawn, (1/4" to 1/3" deep). Sweep it off the grass blades and down into the turf with a push broom. Water lightly (heavy watering can sheet it right off your lawn. Not good.)

Invite your lawn to tea. Fill a large barrel 2/3rds full of rainwater, shovel in a few scoops of composted manure, and let it sit, stirring a couple of times, for a week or more. Dunk a watering can in and use the “tea” on the lawn. (If you use a sprayer, use a filter so it doesn’t clog.) Add a new scoop of manure every month or so, and work the dregs into your garden in the fall. Either solid or liquefied manure will increase plant growth, provide valuable nutrients and beneficial organisms, and help suppress diseases.

Your own compost: Your yard will literally eat it up, and your garbage will turn from waste to resource. RI Resource Recovery Corporation sells bins for \$40 each. They’re inexpensive, unobtrusive, and the right size for a household. Email David Bordieri David@rirrc.org or call 942-1430 x256 for information on how to get one. And check the Master Gardeners website for fun courses on composting.

Vermicompost: The Worm Ladies of Charlestown (www.angoraandworms.com) can help you set up a worm composting bin. A small bin sits right in your kitchen, and does not smell a bit while those worms digest your kitchen scraps. The resulting worm castings will be small in amount, but huge in nutrient value for plants.

Organic compost: You can buy organic compost by the yard, and even have it delivered. Find sources by web-searching for: organic compost RI.

Fertilize only the lawn. Any kind of fertilizer can have adverse effects on waterways. RI Rivers Council says, “*Even a modest increase in phosphorous can trigger accelerated plant growth, algal blooms, low dissolved oxygen, and create unlivable conditions for certain fish, invertebrates, and other creatures.*” So, please, sweep it up and put it back on the lawn. Also, more is not better when it comes to fertilizers or other inputs. Use only the recommended amount, at needed times.

What about cost? Organic lawn care is generally less expensive than conventional in the long run. As the soil gets healthier, it will feed your grass itself. Healthy soil and healthy plants tend to have less pests, so you’ll need less herbicide and insecticide. Cost in time can also be reduced. Compost top-dressing needs to be done very infrequently, and grass clippings are not only free, they’re easier to leave than to rake up. Organic inputs can often be purchased at farm/feed stores in bulk, for a lesser price.

Going organic is getting to know and care for the “nature” of your lawn, which can be a pleasurable adventure. As your yard’s health increases, it will need less “healthcare”, from you and from the store. Enjoy!