

Eight Ways to Put Green Into Lawn Care

By Wendy Sue Harper, Ph.D., NOFA-VT Vegetable Technical Assistance Program Coordinator

Lawns are estimated to cover 49,421 square miles in the United States—over 5 times the size of Vermont.¹ That's 32 million acres! Cristina Milesi, a NASA research scientist, found, "there are three times more acres of lawns in the U.S. than irrigated corn. In terms of surface area, lawns—including residential and commercial lawns, golf courses, etc—could be considered the single largest irrigated crop in America."¹

Why should we care about lawns in Vermont? Colleen Hickey, Educational and Outreach Coordinator of the Lake Champlain Basin Program, says, "our most recent work shows that most of the phosphorus entering the lake is now coming from urban sources instead of rural ones, and research conducted at the University of Vermont found that 75% of lawns in Chittenden County do not need any phosphorus fertilizer, which is typical of northeast lawns." Phosphorus in water is everyone's problem; each one of us is part of the solution.

You can help alleviate environmental problems by preventing phosphorus and pesticide run-off into nearby bodies of water, avoiding wasting water, and protecting biological diversity. The organic "green" lawn care checklist below can help you.

1) Add Compost and Fertilizers Based on a Soil Test

Many lawns do not need phosphorus fertilizers. A soil test will reveal exactly what fertility and lime your lawn needs; kits are available through the university extension system. Add compost, lime, and fertilizer based on soil test results. Choose bagged organic fertilizers with no or low phosphorus for lawns. Always make sure you brush fertilizers and composts off impermeable surfaces and back on to lawns.

Top-dressing, a thin surface application of ¼ inch of compost, spread on lawns improves the biological, chemical, and physical soil environment for the plant; it adds microorganisms, acts as a slow-release fertilizer, and can help decompose thatch and build soil structure to reduce compaction. Research at Cornell University has demonstrated that compost topdressing can suppress some soil-borne fungal diseases just as well as fungicides.² Suppression lasts at least 30 days. Compost teas can also be applied to the lawn to suppress some fungal diseases.

2) Leave Mower Clippings on Your Lawn

Leaving lawn mower clippings on your lawn can reduce both fuel and fertilizer costs. Fuel is saved by not having to collect clippings mechanically, and clippings that are left in place are a great source of fertilizer for grass. About 50% of nitrogen added to lawns is in the clippings, contributing about 2 lbs annually of nitrogen per 1000 square feet, thus reducing fertilizer needs by about a third.³

Clippings contain phosphorus, and thus, must be managed well. When mowing with a side-delivery mower, always blow clippings back onto the lawn; avoid blowing them onto impermeable surfaces, like driveways and streets. This helps keep phosphorus out of runoff and watersheds. If lawn clippings are too thick, then you can rake them up, compost them, and add the compost back to your lawn.

3) Cut Grass at the Correct Height

Set your mowing height to at least 3 inches. This height contributes to a healthy lawn by shading out weeds that like sunlight, helping to keep the soil cool and moist, and encouraging good root development.⁴

As a rule, avoid mowing more than 1/3 of the total grass height. It is better to mow high, then again with the blade set down at 3 inches. Cutting off more than a third of grass weakens the plants by harming their ability to produce food and energy for themselves. If you set your mower at 3 inches, mow your grass when it is 4.5 inches high.

4) Keep your Mower's Blade Sharp

A sharp blade helps your mower and your grass. A sharp blade does not tear and stress grass thereby decreasing disease problems. It also improves mower efficiency by reducing mower vibration, lengthens mower life, and reduces gasoline consumption by as much as 22 percent.²

Plan to sharpen your blade at least once during the growing season, although many professionals recommend doing so at least once a month or after 8 hours of mowing.²

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Putting Green Into Your Lawn Care System

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5) Overseed your Lawn Once a Year

A thick healthy lawn crowds out unwanted weeds. Some grass plants in a lawn die each year, so it is important to add seed or “overseed” each year. Overseed anytime from late-August to late-September or in April. Overseeding can add diversity to your lawn if you use a mix containing perennial and annual grasses and legumes, like Vermont Conservation Mix. This mix tolerates a range of soil conditions and light conditions from full sun to partial shade. It also contains perennial ryegrass, which prevents weeds due to its quick germination and growth. Follow the seeding rate on the bag. Endophyte-enhanced grasses have fungi that naturally live inside the grass in a mutually beneficial relationship. Their natural toxins help protect the grass from environmental stresses, diseases, and leaf feeding insects.

6) Manage for Minimal Water Usage

Your lawn needs about 1 inch of water per week.^{2,4} Much of the time in Vermont, rainfall will provide all the water that a lawn needs. A simple rain gauge will allow you to determine your weekly rainfall.

Provide drought insurance for your lawn by topdressing with compost. Compost additions improve the water-holding capacity of soil and available moisture to grass. Humus holds 4 to 5 times the moisture of clays. In drought conditions grass goes dormant; it turns brown, but it will green up and grow when water is available. If you do plan to irrigate your lawn, do so deeply, once a week, and early in the morning. Late day watering is not recommended because it increases the incidents of fungal diseases.

7) Use Preventative Pest Management

A bio-diverse lawn is less susceptible to pests. Lawns have changed dramatically over the centuries. In the medieval times, lawns were made from chunks of grass taken from pastures. Only wealthy people had lawns because they could afford laborers to hand-mow them with scythes. The ideal turf was a flower meadow with all kinds of short flowers e.g. little daisies and scarlet pimpernels.⁵ Today’s grass lawns did not exist until after World War II, when even clover came to be considered a weed.

Innovation and Inspiration!

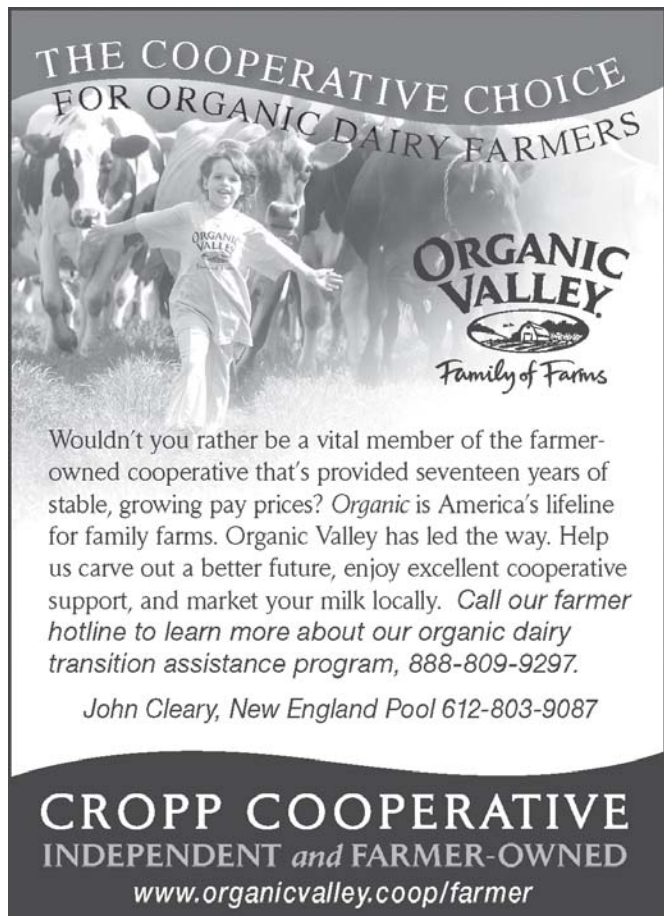
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The best defense against pests—insects, diseases, or weeds—is to develop a diverse, healthy lawn that is properly managed using preventative approaches. To solve pest problems, proper identification is essential. There are several herbal, biological, or botanical pesticides to use for organic control when preventative measures fail described in Barbara Bellows excellent document on sustainable turf care.² Always follow instructions on the label and wear appropriate protective clothing.

8) Reduce Gasoline Use and Carbon Dioxide Emissions

Consider reducing your lawn size, replacing grass with other landscape plants, and designing your lawn edges to minimize the use of gasoline powered weed-whackers. Many beautiful perennial landscape plants and ground-covers can add texture, color, and contrast to your yard. Consider a mechanical push mower or scythe that use human energy instead of petroleum to reduce carbon dioxide emissions.⁶

As part owner of the largest crop in America, following these few simple but significant practices can help you, Vermont, and our country have clean water and a green turf crop.

Special thanks to Dr. Sid Bosworth, Extension Associate Professor of Agronomy, University of Vermont for his thoughtful suggestions.

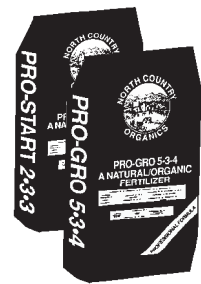
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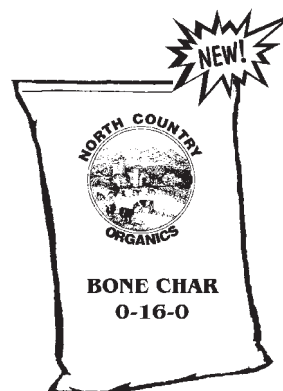
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