Top 10 Practices to manage your lawn and landscape organically

1. Start with a soil test

Why: A soil test will help you determine what practices are needed for a healthy soil and a healthy lawn.

How: You can also get a free soil test kit from the UMaine Extension Office in Falmouth, or you can order one online .

How much: Test kits are free and the test costs just $15.

What: A basic soil test analyzes soil structure, chemistry, and nutrients. It will identify the pH, or relative acidity (or alkalinity) of the soil, which should be maintained in the neutral range (between 6.2 and 7) to ensure that the nutrients in the soil are most readily available to the grass plant. In addition, the soil analysis will give you information about the nutrients in your soil –phosphorus, potassium, calcium, and magnesium – all important for the health of grass and plants.

2. Mow smart

Mowing correctly is the easiest way to have healthy grass. A small change in how you mow can make a big difference.

Tip: Mow your grass often and cut very little.

Grass height should be at least 3" throughout the growing season. The last cut of the year should be down to 2" to avoid fungal problems developing over the winter.

Tip: Keep your mower blades sharp.

Sharp blades help prevent fungal diseases from attacking your lawn. A dull blade "rips" the top of a blade of grass, leaving a jagged edge which invites pests and disease. A sharp blade provides a clean cut, which helps the grass to heal faster and promotes photosynthesis.

Tip: Don't bag your lawn clippings.

Leaving the clippings on the lawn returns organic matter and nutrients to the soil. In newer lawns, grass clippings can cut your fertilizer needs by 25 to 40 percent. In lawns 10 years and older, grass clippings provide all the fertilizer your lawn needs. This will help shade out weeds and foster deep, drought-resistant roots. Longer roots allow grasses to readily utilize nutrients and water, developing greater strength to counter pests and lawn diseases.

3. Aerate

Why: Compacted soil encourages weeds. If your lawn is hard, compacted, and full of weeds or bare spots, aeration will help air, water, and fertilizer to enter. If you cannot stick a screwdriver easily into your soil, it is too compacted.

When: Cool-season turf grown in Maine, such as tall fescue, Kentucky bluegrass, and ryegrass should be aerated in the fall when the grass emerges from summer dormancy. Aerate your lawn with a core aerator just prior to reseeding (late summer or early fall).

How: Rent a core aerator from a local hardware or garden store. Aerators are heavy and burdensome, so you might need to hire someone to use it or contract with a lawn care company to aerate for you. A core aerator will remove soil cores that are approximately ¾ inch in diameter and 3 inches long. (Core aerators are preferable to spiked aerators, which simply punch holes in the soil and compact the surrounding soil.)

Tip: For best results, aerate lawns when the soil is moist. Lawns that are properly aerated should have 20 to 40 holes per square foot. Since most core aerators will not remove this number of holes with a single pass, you may need to take several passes.

4. Water the right amount, at the right time

How much: In Maine, well-established organic lawns are drought-tolerant and only require 1”–1.5” of water a week including rainfall. Use a rain gauge or a tuna fish can to measure this amount.

When: If watering is needed during a summer drought, be sure to water deeply and only in the morning hours.

Tip: Avoid frequent, shallow watering. This can lead to shallow root growth, which allows for weeds to colonize. It also creates a humid environment, which encourages harmful soil fungi and pathogens.

5. Choose fertilizers with care

Why: Chemical fertilizers can harm the microorganisms in soil and undermine healthy turf. Natural organic products will feed the soil, build organic matter, and encourage microbial diversity. Use only the amount indicated as necessary by soil testing, as even natural fertilizers in excess can cause environmental problems for local streams and water bodies. As the organic material in the soil increases through organic management, less additional natural fertilizer becomes necessary.

Fertilizers compatible with organic land care (Beyond Pesticides)

Tip: Compost can be applied yearly to add organic matter and jump-start soil biology. In the fall, preferably after aerating and overseeding, spread ¼ inch layer of compost over your lawn. Compost tea and worm castings are also great additions. The University of Maine provides a list

of Commercial Compost Suppliers in the state; look for products that meet National Organic Program (NOP) standards.

Tip: Grass clippings are rich in nitrogen and potassium, and can build organic matter in the soil. Leave the clippings on your lawn. You can also leave a thin layer of mulched leaves on the lawn – a great alternative to raking.

Note: Per Maine law, fertilizers containing phosphorus cannot be purchased at retail stores unless a soil test indicates it is necessary or the fertilizer will be used to establish a new lawn.

6. Over-seed with the right variety of grass

What: Adding grass seed to your lawn, known as "over-seeding," is actually a more effective way to manage weeds than using herbicides.

When: Seeding should be done primarily in late summer and early fall (following aeration when necessary) with a top dressing of ¼ inch of compost. If you have bare spots or areas where the grass is sparse, they should be reseeded or over-seeded with a mixture of grass cultivars.

Tip: Grass varieties differ enormously in their resistance to certain pests, tolerance to climatic conditions, growth habit and appearance. These are the four most common type of grass seeds grown in Maine

- Kentucky bluegrass is most often seen in northern lawns, as it tolerates cold temperatures well.
- Fine fescues (e.g., red fescue, chewings fescue, hard fescue) do not do well with significant foot traffic, but are very tolerant of dry, acid, or low fertility soils.
- Perennial ryegrass can tolerate heavy foot traffic but has high nutrient requirements. Cold winters in Maine can thin out lawns dominated by perennial ryegrass.
- Endophytic grass seeds (e.g., tall fescue) provide natural protection against some surface insects and fungal diseases, but not all are hardy throughout Maine, and may be reduced by very cold winters, allowing weed intrusion in the spring.

Most grass seed mixes available for purchase contain two or more of the above types of grass seed, and are a good choice because over-seeding will encourage particular varieties to establish in locations on the lawn where they do best.

Maine's yardscaping program provides a helpful list of some grass seed sources.

7. Embrace clover

Why: The addition of 10% mini or Dutch white clover can help reduce or eliminate the need for fertilizing. Clover is drought tolerant and, once established, grows despite lack of water. White clover is a rapid spreader that crowds out broadleaf weeds while growing harmoniously with grass. It will thrive in areas that are poorly drained or too shady for a conventional lawn. Clover is a beneficial plant that takes free nitrogen from the atmosphere and distributes it to the soil.

Left uncut, white clover grows 4 to 8 inches tall and produces small white flowers that are often tinged with pink. The flowers not only create a beautiful visual effect, but also bring in bees, butterflies, and beneficial insects that prey on garden pests. (Honeybees rarely sting when they are away from their hive, but if they make you uncomfortable or if you are allergic to bee stings, mow more often when clover is in bloom.)

More: Read this Beyond Pesticides article on ways that clover can be good for soil, water, and bees.

8. Rethink weeds

Why: Many plants that are considered weeds in lawns have beneficial qualities. Clover adds much-needed nitrogen to soil. Crabgrass helps with erosion control. You can eat plantain (find out how in this Live Science article). Even dandelions help aerate soil and reduce erosion, and their deep roots draw up nutrients that help other plants.

Tip: If you do want to eliminate certain weeds, many can be taken care of easily with organic practices. Plantain thrives in low fertility, high compaction, and poor drainage conditions, factors that can be alleviated with the above tips on mowing, watering, and fertilizing.

9. Plant native species and attract pollinators

Why: Native plants are best suited to the local growing season, climate, and soils. They have natural defenses to insects and disease, and will grow with minimal pesticide and fertilizer use. Native plants are essential for maintaining Maine's beautifully diverse landscape and attracting pollinators. The more diverse our plants are, the better they can weather changes in the environment.

Native plants will attract pollinators such as bees, butterflies, moths, hummingbirds, beetles, and wasps.

These pollinators are vital to maintaining healthy ecosystems. They are essential for plant reproduction, and produce genetic diversity in the plants they pollinate. Bees in particular are "keystone organisms". Without bees, many flowering plants would eventually become extinct.

Tip: Milkweed, bunchberry, and cinnamon ferns are great examples of native plants with great benefits.

Consult this UMaine Cooperative Extension's Bulletin: Gardening to Conserve Maine's Native Landscape: Plants to Use and Plants to Avoid.

Bonus: Native plants also attract more birds to your yard. Audubon's Native Plants Database will help you explore the best plants for birds in your area, and has local resources and links to more information.

10. Consider permaculture

What: Permaculture is a creative design process based on whole-systems thinking. The term is generally used to describe sustainable agriculture designs for urban and suburban yards based on natural ecosystems. These are often home gardens that are closed-loop, linking household compost, rainwater collection, vegetable gardening, and keeping agricultural animals to create a system as self-sufficient as possible.

Take a Permaculture Design Course with the Resilience Hub