

● ALTERNATIVES

TAKING CARE OF YOUR LAWN WITHOUT USING PESTICIDES

BY CAROLINE COX

Lots of pesticides are used on lawns. Many people are familiar with 2,4-D, an herbicide that's often found in "weed and feed" products and is the most commonly used lawn care pesticide. According to the U.S. Environmental Protection Agency, about 9 million pounds of 2,4-D are used on U.S. lawns every year¹—that's more 2,4-D than is used on all 50 million acres of wheat grown in this country!²

This pesticide use is unnecessary. And it's not hard to have a pesticide-free lawn. Here's how EPA sums up what you'll need: "You don't have to be an expert to grow a healthy lawn. Just keep in mind that the secret is to work with nature. This means creating conditions for grass to thrive and resist damage from weeds, disease, and insect pests."³ This article outlines five uncomplicated steps that will get you to that goal.³

1. Build healthy soil

Grass grows best in a biologically active soil where soil organisms like earthworms recycle plant material so that nutrients are slowly released in the root zone of the grass.⁴

Probably the most important soil-building technique for lawns is fertilization.⁵⁻⁹ Public agencies in the Northwest recommend organic fertilizers, including compost, because they release nutrients slowly, are less likely to run off into streams, and support microorganisms that increase soil fertility and fight lawn diseases.^{4,10,11}

You need to apply fertilizer in the right amounts and at the right time. In the Pacific Northwest, most lawn care

experts recommend fertilizing lawns three or four times per year. The optimal dates, amounts, and nutrients for your lawn vary depending on your local climate, your soil, and the type of grass growing in your lawn.⁵⁻⁹ Ask your county extension agent for advice about how much fertilizer to apply and when to apply it. You should



Compost can be used as an organic lawn fertilizer. An ordinary leaf rake is all you need to spread the compost.

also "let your grass 'tell you' when to fertilize based on its appearance," according to Oregon State University Extension Service horticulture specialist Tom Cook. "If your lawn is thin and yellow, it needs fertilizer."⁵

Another important soil-building technique is aeration. Aeration removes cores of soil from your lawn and is used when your lawn has become compacted. A sign that your lawn needs to be aerated is that water puddles or runs off instead of soaking in. Aerating can be done by hand, with an aerifier that looks like an

overgrown fork with hollow tines, or you can rent power aerifiers. Aeration should be done in the spring after rain or irrigation has softened the soil. Your goal is to remove soil cores between 3 and 4 inches deep and about 6 inches apart. Leave the cores on your lawn to break down, and leave the holes unfilled.^{12,13}

2. Mow high, mow often

For each grass species, there is a range of optimal mowing heights. Mowing your lawn at the high end of this range allows the grass to develop a deeper root system and tolerate drought, heat, shade, disease, and pests. Recommended mowing heights are 3 inches for tall fescue, 2 1/2 inches for perennial ryegrass, and 1 inch for bentgrass.¹⁴

To have a high quality lawn you need to mow frequently when the grass is growing fast. You want to



Black and Decker

Mow without the noise and pollution of a gasoline mower by using a rechargeable electric mulching mower. This one can be used for grasscycling when the rear bag is removed.

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remove no more than 1/3 of the length of the grass blades so the grass is not stressed. For example, a perennial ryegrass lawn should be mowed when it gets to be about 3 3/4 inches tall with the mower set to mow at 2 1/2 inches. Weekly, or even more frequent mowing, may be necessary when your lawn grows quickly.^{8,14,15}

Grasscycling (leaving grass clippings on the lawn when you mow) adds plant nutrients and organic matter to your soil and keeps the clippings out of landfills. It also saves you time! Researchers estimate that grasscycling reduces fertilizer needs by 25 percent. It works best if you mow frequently, when the grass is dry, and with sharp mower blades. Mulching mowers have an extra blade that finely chops and distributes the clippings, but you can use a regular lawn mower for grasscycling just by removing the bag.^{8,14,15}

3. Water deeply and less often

Frequent, light watering produces a shallow-rooted lawn. Overwatering leaches grass nutrients, promotes certain weeds, and causes oxygen starvation of grass roots.⁶ This means that it's important to give your lawn the right amount of water.

There are three ways to tell if your lawn needs water. If your lawn is dark green and doesn't spring back when you walk on it, it needs watering.¹⁶ Or, dig a small hole and look at the soil. If the top two inches are dry, it's time to water.⁶ You can also push a six-inch screwdriver into the lawn. If it goes in easily, the soil is still wet. If it takes effort, then it's time to water. If a lush lawn is not your priority, you can water less often.¹⁶

When you water your lawn, you want to avoid runoff. More frequent, shorter irrigations may be necessary if you have clay soil.¹⁶

Early morning is an efficient time to water.⁶

4. Remove excess thatch

Thatch is the partially decomposed grass stems, roots, and leaves found between the green part of a lawn and the surface of the soil. If your lawn has about 1/2 inch of thatch, it helps

reduce soil compaction and prevents some weeds seeds from germinating. A thicker thatch layer can be a problem because grass roots grow in the thatch instead of the soil and make your lawn less tolerant of drought.¹³

Thatch problems are caused by excessive fertilizing and watering,¹⁷ infrequent mowing,¹⁷ and frequent pesticide use.¹³

If you need to reduce thatch, you can use a thatching rake. Simply pull it across the lawn and discard the debris. For larger areas, rent a vertical mower (dethatcher). Run the machine across the lawn, then do a second run perpendicular to the first. Rake up the debris and dispose of it.¹²

Spring and fall are the best times to remove thatch in California,¹² Oregon,¹³ and Washington.⁶ In Idaho, early fall is best.¹⁷ In Montana, spring is best.⁸



Set realistic goals for your lawn based on how much lawn care you want to do.

5. Keep your expectations realistic

A healthy lawn will probably have some weeds and some insect pests. But the lawn will function well; it doesn't need to be perfect.³

Are there certain areas in your yard that aren't well-suited to grass? Too shady, for example, or too dry? Consider other options,³ including native plants. Get ideas from other gardeners or your county extension agent.

Conclusion

It's not hard to have a healthy lawn that's also healthy for people, pets, and wildlife. "A vigorously growing turf resists pest damage and weed invasion," according to the University of California's integrated pest management program.¹² Other lawn experts agree! When you focus on soil building, mowing, and watering, your lawn will grow vigorously. You'll have few insect, disease, or weed problems, and pesticides will be unnecessary. ♣

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