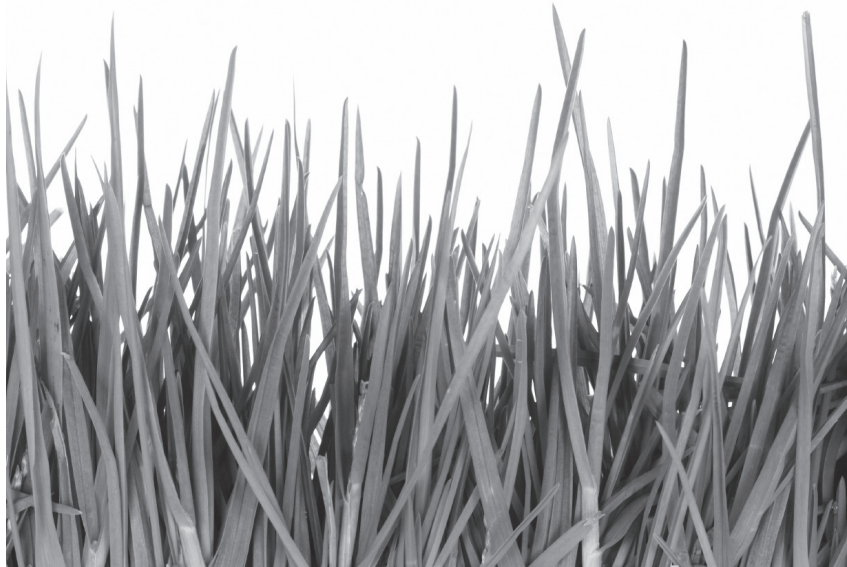




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A3964

# Do-it-yourself alternative lawn care

Doug Soldat

**M**any people are becoming interested in growing lawns by methods that are unconventional in that they do not rely on synthetic fertilizers or pesticides. The Environmental Protection Agency (EPA) deems conventional lawn care to be safe, posing only low-level risk to humans and the environment, but some people feel that conventional lawn care is unacceptable no matter how low the risk.

A wealth of helpful information about alternative lawn care methods is available on the internet and from other sources. Unfortunately, most of this information has little scientific basis. Yet scientifically sound information is available. Over the past several decades, scientifically rigorous turfgrass research at the University of Wisconsin-Madison has identified six key requirements for maintaining a successful alternative lawn.

## 1 Prepare the soil properly

Without a healthy soil, an attractive lawn maintained through alternative means is simply impossible. The majority of the lawn's biomass lives underground where it obtains mineral nutrition and water. Grass roots are very fine, and relatively shallow by nature (about 90% in the top six inches). This means a hard, compacted soil will lead to poor root growth and therefore to poor top growth. Weeds, which are better adapted for poor soils, will quickly dominate the lawn if conventional herbicides are not used. Several herbicides that the EPA has classified as reduced-risk are available to professional applicators to help correct an existing weed problem.

Adding one-half to one inch of compost once in the spring and again in the fall for several years is a good way to improve the quality of the soil over the long term. Unfortunately, applying compost is labor intensive. The compost must be shoveled on to the lawn and raked out with a leaf rake.

If completely renovating an area, make sure to bring in at least six to eight inches of good quality topsoil. Less topsoil will create a 'layering' effect in the soil, which will encourage shallow rooting.

## 2 Select the right grass

Putting the right plant in the right place is the strategy of a successful gardener. Likewise, choosing the right grass for the right soil and environment is the formula for creating a successful alternative lawn.

The best low-maintenance grass species for lawns in Wisconsin include tall fescue, fine fescues (Chewings fescue, hard fescue, or red fescue), and common—not improved—varieties of Kentucky bluegrass. (Improved varieties have been selected for dwarf growth type and dark green color, but have high nutrient requirements and therefore are not desirable for an alternative lawn.) Tall fescue is a very good low-maintenance grass but will die in low-lying areas that have ice cover over the winter. Fine fescues are suited for full sun or partial shade, but persist poorly in wet or compacted soils.

Because controlling weeds is difficult when using alternative methods to establish a lawn from seed, sodding is recommended. Sod provides instant, weed-free ground cover and will make controlling weeds a much less daunting task. Some sod growers may be able to provide a low-maintenance sod grown by alternative practices.

## 3 Mow as high as possible

Proper mowing is the most important tactic in maintaining an attractive alternative lawn. Mow the grass as high as possible (three to four inches) to maximize root depth and shade out competing weeds. Keep the mower blade sharp. Dull blades injure turf, and thus encourage weeds and other pests to invade.

The lawn should be mowed frequently: never remove more than one-third of the leaf blade at one time. When a large portion of the leaf blade is removed, the grass is weakened and this allows pests to encroach.

## 4 Provide sufficient nutrients

Keep the lawn dense by applying sufficient fertilizer. This is critical to keeping the grass vigorous and able to compete against weeds. Well fertilized lawns are known to have fewer insect and disease problems than unfertilized lawns.

Organic fertilizers should be applied at least twice a season, around Memorial Day and around Labor Day—and also possibly around the Fourth of July if the lawn's color or density are not what they should be at that time. Examples of nonsynthetic and organic

fertilizers made in Wisconsin include Milorganite, Chick Magic, and Chickity Doo Doo.

## 5 Control pests

Controlling weeds is the primary challenge for anyone managing a lawn by organic

or reduced-risk methods. If the lawn area is small enough, one may manually pull weeds throughout the season with a mechanical weed-pulling device. Break the task up into manageable chunks, rather than tackling it all at once. For example, dedicate 20 to 30 minutes to pulling weeds before each mowing.

For larger areas, other tactics may be required. Some of the better alternative products for controlling dandelions, for instance, are solutions containing chelated iron. These products kill dandelions and certain other broadleaf weeds by iron toxicity: the leaves of the weeds turn brown or black and die. But repeated applications may be required since weeds will often regenerate from a taproot or stolon. Other alternative weed killers contain acetic acid or plant oils, but these are more likely to harm the grass while attacking the weeds.

Corn gluten meal is an alternative product with proven success as an herbicide that will kill many weeds, including crabgrass, before they emerge. It should be applied at 12 to 20 pounds per thousand square feet when soil temperatures reach 55°F, usually in early May. For best results, another application should be made three to four weeks later. Keep in mind that the benefits of corn gluten meal are additive, and build up over time. Better results will be obtained in year two of application than in year one, and better results in year three than in year two. An added benefit of corn gluten meal is the significant amount of nitrogen it provides to the lawn. This reduces the need for fertilizer.



Insect and disease outbreaks are relatively rare compared to weed outbreaks. The University of Wisconsin Turfgrass Diagnostic Lab ([www.tdl.wisc.edu](http://www.tdl.wisc.edu)) can provide assistance in controlling them. They diagnose insect and disease problems and, when a problem is identified, suggest alternative methods to solve it.

## 6 Irrigate sufficiently

Proper irrigation is arguably not as critical for alternative lawn management as the five practices mentioned above, yet proper irrigation does play an important role in keeping grass competitive with weeds by keeping grass dense. Keeping grass dense is the main strategy for keeping weeds at bay. When a lawn is not sufficiently irrigated it turns brown, goes dormant, and stops growing. But weeds, often more adaptable to dry conditions, keep growing. In short, allowing the lawn to go dormant will invite an invasion of weeds.

The best time to irrigate is during the night or early morning when evaporation potential is low and demand on the public water supply is at its lowest. Turfgrass generally needs approximately one inch of water per week in summer for healthy growth. If supplemental irrigation is applied, it should not be applied daily but just once or twice per week for longer periods of time. This irrigation strategy will promote deep turf rooting, which in turn will result in healthier plants. See University of Wisconsin Extension publication *Watering Your Lawn* (A3950) for more information.

Keep in mind that when using alternative methods of lawn care it will be difficult, even with considerable time and money, to achieve results similar to what can be achieved by conventional lawn care practices. Many alternative lawns are limited because the soil quality is poor due to home construction practices, which often cause compaction and heavy disturbance of the original soil. Others are limited by too much shade, or the wrong grass variety choice. But by understanding the six key requirements for successfully maintaining an alternative lawn, you'll be able to make the adjustments necessary to attain the best possible results.

For more information, please see *Organic and Reduced-Risk Lawn Care* (A3954), a University of Wisconsin Extension publication available through The Learning Store (<http://learningstore.uwex.edu>).





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