



Read your weeds: A simple guide to creating a healthy lawn

Weeds can tell you a lot about the condition of your lawn and indicate what you need to do to grow healthy grass that is naturally resistant to weeds and pest problems. Learn to “read your weeds” for what they indicate about your lawn care practices and soil conditions, and you’ll be on your way to creating a healthy lawn that will be less work in the long run.

Weeds thrive in soil that is compacted, poorly fertilized, and not pH balanced, and in lawns that are improperly watered, seeded, or mowed.

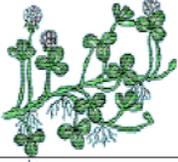
Reading weeds is actually very simple. Use the following chart to identify the weeds in your lawn and correct the conditions that are promoting them with the information below. For instance, annual bluegrass often indicates compaction and excessive watering. Aeration and proper irrigation would correct the conditions that are promoting blue violet growth.

Remember, many plants that are considered weeds have beneficial qualities.

Try to develop a tolerance for some weeds. For instance, clover, considered a typical turf weed, takes free nitrogen from the atmosphere and distributes it to the grass, which helps it grow. Clover roots are extensive and extremely drought resistant, providing significant resources to soil organisms, and clover will stay green long after turf goes naturally dormant. Crabgrass provides erosion control; dandelions’ deep roots return nutrients to the surface; and plantains are edible!



Common Lawn Weeds and What Contributes To Them

Weed	Common Name	Soil Compaction	Mowing Height	pH	Fertility	Watering	Poor Drainage
	Annual bluegrass	X	L		E	E	
	Clover	X		L	L (N)	D/E	
	Crabgrass		L		L	D/E	
	Dandelion	X		L	L (Ca) E (K)		
	Ivy (Ground)						X
	Knotweed	X		L	L (Ca) E (K, Mg),		X
	Plantains	X	L	L	L		X

X- Condition associated with the weed, D- Drought, E- Excessive, H- High, L- Low, K- Potassium, Mg- Magnesium, N- Nitrogen

Illustrations Source: *Cornell University Cooperative Extension*

How to Eliminate the Conditions that Promote Weeds

1. Soil compaction

Quick tip: Aerate.

Compaction is an invitation for weeds. If you can't stick a screwdriver easily into your soil, it is too compacted. If your lawn is hard, compacted, and full of weeds, aerate it to help air, water, and fertilizer enter. Get together with your neighbors and rent an aerator. Once you have an established, healthy lawn, worms and birds pecking at your soil will aerate it for free.

2. Mowing height

Quick tip: Mow high.

Bad mowing practices cause many lawn problems. Mowing lower than 1 and ½ inches can kill the root system by preventing photosynthesis. A low mowing height also invites sunlight in for weeds to sprout. Generally, you should keep a lawn at 3 inches. Mowing high allows the grass to develop deeper, drought-resistant root systems. For the first and last cut of the season, mow to 2 inches. Also, mowing with a dull blade makes the turf susceptible to disease. Keep your mower blades sharp to prevent the development and spread of fungal disease, or ask your service provider to sharpen their blades frequently.

3. pH

Quick tip: Test it.

Low pH means acidic conditions and high pH indicates alkaline conditions. If the pH is too high, your grass cannot properly absorb nutrients. Ideal pH should be between 6.5 – 7.0, slightly acidic. Generally, lime is added to raise the pH and sulfur is added to lower the pH. Adding compost can naturally correct your pH. A soil test is highly recommended to determine the soil pH and specific nutrient needs.

4. Fertility

Quick tip: Leave grass clippings.

Soil testing is also the best way to determine your soil's specific nutrient needs. Fertilizing in early fall ensures good growth and root development for your grass. Nitrogen, the most abundant nutrient in lawn fertilizers, promotes color and growth. Adding too much nitrogen, however, or quick-release synthetic fertilizers, can weaken the grass, alter the pH, and promote disease, insects, and thatch build-up. Your grass clippings contain 58% of the nitrogen added from fertilizers, can improve soil conditions, suppress disease, and reduce thatch and crabgrass. Leave the clippings on your lawn. You can use a mulching mower and leave the leaves, too. Compost is an ideal soil conditioner; it adds the much-needed organic content to your soil, and suppresses



many turf pathogens. In the fall and spring, preferably after aerating, spread $\frac{1}{4}$ inch layer of organic or naturally-based compost over your lawn. Compost tea and worm castings are also great additions.

5. Watering

Quick tip: An inch a week, early in the morning.

Drought conditions, excessive watering, or poor drainage due to soil type are all invitations for weeds. Watering needs are very site specific, but generally speaking, a deep watering of about one inch once a week in the early morning is best.

6. Poor drainage

Quick tip: Make sure you have the right plant in the right place.

Your type of soil impacts your drainage and is also site-specific. Once you establish a deep root system from mowing high, you will need less water. Check with your local nursery for more specific recommendations based on your soil type.

Other Considerations

Thatch

Quick tip: aerate and rake.

If your lawn feels spongy, you may have thatch build-up. Thatch is a dense layer of grass stems and roots on the surface of the soil, and is a symptom of shallow watering and chemical fertilizer usage. When thatch layers become $\frac{1}{2}$ inch or more, the roots will grow up within the thatch instead of in the soil, making grass susceptible to insects, disease, and weather stress. Thatch is reduced by aeration, top dressing with organic matter, or power raking. In healthy lawns, earthworms and soil microorganisms break down the thatch.

Grass seed and seeding

Quick tip: Over-seed.

Some weeds are the result of using poor quality grass seed. Over-seed with the proper grass seed for your region to promote a dense turf that out-competes weeds. Consult the UMaine Cooperative Extension website to learn the best grass variety for your region and site conditions (sun or shade).