

How to Test and Amend Soil

Even gardeners with a green thumb can be foiled by bad soil. If you're doing everything right but your plants are still dying, it might be time to take a look below the surface. Learning how to test your soil and use natural amendments to restore it to a healthy type will tremendously help your lawn or garden flourish this season.

The Different Types of Soil

When it comes to your soil, you might be thinking, "Why does it matter? Dirt is dirt". That's not exactly the case, though. There are several kinds of soil, and each is different. Each soil type drains differently and has varying levels of nutrients that can impact the growth of your lawn and garden. Here's a quick rundown of some of the soil types:

- **Loamy soil.** This kind of soil is the best type for gardening. It tends to be slightly acidic (which lots of plants prefer) and drains well to keep plants hydrated but not soggy.
- **Clay soil.** When you have clay soil, it tends to be thick and feels sticky when it's wet. While clay is rich in nutrients, it doesn't drain well.
- **Sandy soil.** Sandy soil drains well but doesn't retain any moisture, which makes it difficult for plants to stay properly watered. Sandy soil is also low in nutrients and won't feed plants well.
- **Silty soil.** This soil type is rich in nutrients; however, it can get slimy when wet, resulting in poor drainage.
- **Chalky soil.** When you're dealing with chalky soil, you'll find it is very alkaline and free draining. It dries out very quickly and doesn't have many nutrients to offer besides calcium.

- **Peaty soil.** Soil that is peaty is damp and spongy. It will retain moisture well, but drainage can be a problem.

Find out What Kind of Soil You Have

Now that you know about the different soil types, it's time to do a test to find out what kind of soil you have. Use the following steps to get your soil sample:

- Dig down about six inches and take some soil. If you have a large planting area, you'll want to test soil from multiple places.
- Put soil in a pint-sized jar until it's about halfway full. Then, add a few drops of liquid dish soap and fill the jar the rest of the way up with water.
- Put the lid on tightly and shake the jar for about three minutes.
- Put the jar aside and allow 24 hours for all the particles to settle. Once it's settled, you'll be able to see the individual layers that make up your soil.

Check Your Soil's pH

Your soil pH is another important factor in how well things will grow and even what you can grow in your soil. Knowing what the pH of your soil is and how to amend it is a big part of having a healthy garden:

- You can pick up a pH test kit from your local garden center, but if you're more of a DIY person, there are several options for testing pH at home.
- A pH reading of 7 means your soil is neutral. pH readings below 7 are acidic, and readings above 7 are alkaline. An ideal soil reading will be around 6.5. This means your soil is slightly acidic, and nutrients will dissolve well and be readily available.

- To raise your soil pH, you can add limestone to your soil. The lime will break down in the soil and raise the alkalinity over time.
- To lower your soil pH, sulfur should be added. Peat moss can also be used, but this method isn't sustainable. Additionally, peat moss has been overharvested in some areas, which may make it difficult or expensive to obtain.
- When amending your soil pH, be sure to check your pH levels regularly and add any amendments slowly over time.

What to Do With Difficult Soil

Many gardeners often dump too much time and too many resources into their lawn before realizing it's just not working as well as they'd hoped, or it's taking too long. If you find yourself in this situation – with a soil type or pH that will take too much to fix – you can still have a garden.

You might look at planting raised garden beds and using prepackaged soil. This is a perfect solution to yards that are massive works in progress. A few advantages to a raised garden bed include:

- You can quickly and easily put together a raised garden bed.
- Raised beds are more accessible to gardeners with physical limitations such as arthritis.
- You can often plant earlier since the soil stays warmer in a raised bed.

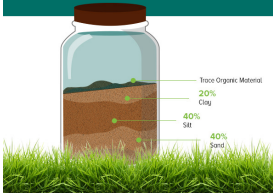
No matter what challenges are put in front of you, there's always a way to create your own little slice of heaven by growing a garden. With the right testing processes and soil amendments (or raised garden beds), you'll have your garden on track and ready to grow in no time.



WHAT SOIL TYPE DO I HAVE?

- Step 1:** Dig down about 6 inches to get a handful of soil. If you're testing a large area (like a lawn) you might want to do 2-3 small holes on various parts to get a good assessment.
- Step 2:** Fill a pint-size jar halfway with soil, a few drops of dish soap, and the other half with water.
- Step 3:** Tighten the lid and shake the jar for 3 minutes. Then set aside.
- Step 4:** Wait a day until the particles settle and separate into their clay, silt and sand layers.

Loamy soil is considered the best soil combination because it retains water but doesn't get soggy.
IDEAL SOIL COMPOSITION FOR LOAMY SOIL:



6 SOIL TYPES
 Check out the different soil types below to learn how to amend each for a more lush lawn and productive garden.

LOAMY Soil (Best For Gardening)

- Feels slightly damp and fine
- Easily cultivated and drains well
- Tends to be acidic

How to Maintain: Replenish regularly with compost and fertilizer.

CLAY Soil

- Feels sticky when wet and hard when dry
- Poor drainage
- Rich in nutrients

How to Amend: Add 3-4 inches of humus (decayed organic material) and let it sit for a week, well-aerated manure or compost. Fill the humus into your soil 4-6 inches deep.

SANDY Soil

- Feels gritty
- Excellent drainage but doesn't retain moisture
- Low in nutrients

How to Amend: Add biochar and then fertilizer or compost. Keep your plants well-matched to obtain moisture.

SILTY Soil

- Feels slimy and soft
- Retains moisture but has inadequate drainage
- Usually rich in nutrients

How to Amend: Add compost, fertilizer, wood shavings or other organic matter annually.

CHALKY Soil

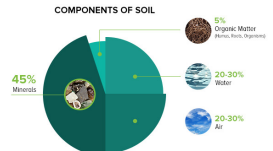
- Feels stony
- Free draining and dries out quickly
- Large amounts of calcium carbonate but low in other nutrients and is very alkaline

How to Amend: Add green manure, fertilizer and organic matter to help improve soil. Match plants to their resistance.

PEATY Soil

- Feels damp and spongy
- Retains water, but may need assistance with drainage
- The soil heats up quickly in spring and is slightly acidic

How to Amend: Mix with compost and lime to lower acidity.



Infographic created by Safer Brand.