

10 Ingredients to Make Your Own Potting Soil

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Mixing homemade potting soil gives you the flexibility to give your container vegetable garden the nutrients it needs to grow healthy and strong.

Although many container-vegetable gardeners eventually find a reliable, favorite brand of potting soil, buying farm-sized amounts is not cheap and shipping is a nightmare if you can't find a local source. Mixing your own custom blends of potting soil with readily available ingredients allows you to develop a soil mixture suited specifically to your farm's needs. It also allows you to pick and choose your nutrient sources - especially important to farmers looking to cut out the chemicals. All good-quality potting soil is easy to handle, is well-draining and contains ample organic matter. It should provide physical support to your plants as well as nutrients and sufficient water and air. Making your own potting soil mix is easy, and it gives you complete control of one of the most critical steps in the growing process.

Like all good recipes, quality ingredients are key to making healthy potting soil. Here are the ingredients you should look for.

1. Garden soil

For homemade potting soil mixtures, garden soil adds density and is a cheap source of bulk. Don't use soil that contains pesticides, chemical fertilizer residues or other environmental pollutants. Using your farm's topsoil or soil from a certified organic grower is best. Solarize the soil first by covering the pile with clear, plastic sheeting for at least four to six weeks to kill weed seeds, pests and pathogens. Sterilization is also possible in an oven or microwave, but this method leaves the house smelling, well, earthy.

2. Compost

Containing billions of beneficial microbes and with great water-holding capacity and nutrient content, compost is a must for quality, homemade soil mixtures. And if you make compost yourself, it's free. It should be fully decomposed and screened into a small, consistent particle size. An added benefit: Recent studies note a decrease in foliar diseases on plants grown in soil mixes containing 20 to 30 percent compost.

3. Sand

Coarse builder's sand improves drainage and adds weight to the mix, providing ample physical support for growing plants.

4. Sphagnum peat moss

A very stable ingredient, peat takes a long time to break down and is widely available and inexpensive. It bulks up mixes without adding a lot of weight and, once wet, holds water fairly well. The environmental impact of current peat harvests is a factor for some farmers, many of whom prefer to turn to coir fiber products instead. Organic farmers cannot use peat moss treated with a wetting agent, and most are treated. Limestone must be added to mixes containing sphagnum peat moss to help balance the finished product's pH.

5. Coir fiber

A byproduct of the coconut industry, coir looks and acts a lot like sphagnum peat. It has more nutrients than peat moss and lasts even longer, but it's more expensive to purchase. Coir is sold in compressed bricks.

6. Composted pine bark

Composted pine bark lightens up soil mixes by increasing pore sizes and allowing air and water to travel freely in the potting soil mixture. It is slow to break down, but might rob nitrogen from the soil as it does.

The addition of a nitrogen fertilizer is necessary when using composted pine bark as an ingredient. It is most commonly found in mixes designed for potted perennials and shrubs.

7. Perlite

A volcanic rock, perlite is heated and expanded to become a lightweight, sterile addition to potting soil mixes. It holds three to four times its weight in water, increases pore space and improves drainage. With a neutral pH, perlite can be used in place of sand when a lighter mix is required.

8. Vermiculite

Vermiculite is a mined mineral that is conditioned by heating until it expands into light particles used to increase the porosity of soil mixtures. It also adds calcium and magnesium to the soil and increases the water-holding capacity. Select medium grade for seed-starting mixes and coarse grade for older, potted plants. Use caution when handling vermiculite, as it naturally contains asbestos. The EPA recommends growers use substitute products, such as peat, sawdust or perlite, whenever possible to avoid excessive exposure.

9. Limestone

Calcium carbonate or dolomitic limestone are used to adjust the pH of soil mixes containing acidic ingredients, such as sphagnum peat or composted pine bark.

10. Fertilizers

Additional nutrient sources are especially important when using soil mixtures that don't contain compost. Choose natural fertilizers derived from mined minerals, animal byproducts, plant materials or manures. A combination of these natural fertilizers provides a long-term, stable and eco-friendly source of nutrients. Such a blend can include combinations of any of the following: alfalfa meal, blood meal, bone meal, cottonseed meal, crab meal, feather meal, fish meal, greensand, kelp meal, dehydrated manures and rock phosphate.

Use newly mixed potting soil as quickly as possible. Try to estimate exactly how much you'll need on a given day to avoid storing it.