Soil mixes: What are these things? When to use what?

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Our hardware and garden stores are full of different "soil" products, some with beautiful colorful packages, promising lush foliage, flowers, and greater yields. Where do you use garden soil, potting mix, and seed starter mix?

Garden Soil Mix

Garden soil is usually a mixture of topsoil with composted bark and animal manure. It is intended to be an amendment that is mixed with native soil and is to be used in outdoor gardening. The coarse organic matter in the mix improves water holding capacity of sandy soils and breaks up heavy clay soils, improving drainage. The mix of soil and compost is recommended at a ratio of 70% soil to 30% compost. This product is minimally processed and retains microbes that were in the original topsoil. Garden soil is not meant to be used as a growing medium for containers.



Potting Soil Mix



Potting soil is a special soilless formula usually made of peat moss or coir, compost, and perlite. It might also include aged pine bark, vermiculite, and sometimes moisture retention granules and slow-release fertilizer. Organic potting mixes can include composted manure, worm castings, and kelp meal. If a potting mix is acidic, limestone will be added to balance the pH. Potting soil mix has been created for plants in pots or containers, and window boxes. These containers need good drainage so that the soil maintains oxygen and the roots don't rot in

water logged soil. Garden soil is not the right choice for pots because it can become compacted and hold too much water. Potting soil mix is often

sterilized to kill microbes or weed seeds, but this will also kill beneficial microbes. The manufacturers will then add back fertilizer and organic additives to improve nutrients for the plants. It is coarser than garden soil due to the peat, compost, and perlite added to the mix.

Seed Starting Mix

Seed starting mixes usually are soilless and may have a higher percentage of perlite and vermiculite to make the soil extra light in texture and be well-drained. They have limited organic nutrients to help boost germination but should contain no fertilizer. Fertilizer can harm seeds and seedlings.



Sources:

 $\underline{https://content.ces.ncsu.edu/extension-gardener-handbook/18-plants-grown-in-containers\#qualities}$

https://garrettchurchill.com/garden-soil-vs-potting-soil-whats-the-difference

https://www.bobvila.com/articles/garden-soil-vs-potting-soil/

https://extension.psu.edu/how-to-construct-a-raised-bed-in-the-garden

https://www.canr.msu.edu/news/potting soils and seed starting mixes for your garden

https://extension.psu.edu/homemade-potting-media