

How To Get The Right Soil Mixture For Healthy Seedlings

Leimone Waite, Master Gardener, Jan. 11, 2018

Q: I would like to start some seeds in my greenhouse and am looking to purchase some potting soil to use for seed starting. I noticed that there are soils sold as seed starting mix but they are expensive for such a small bag. Is it really necessary to buy seed starting mix?

A: It is not absolutely necessary to use seed starting mix but you do want to select a mix that is light-weight, well drained and has smaller particles of materials. Soil mixes vary quite a bit.

We have done a couple of informal studies as to the quality of soil mixes when starting seeds and have found that not all soils are created equal when it comes to germination success and plant growth. Here are a few things to keep in mind when selecting a soil for starting seeds or for growing plants in containers.



(Photo: Courtesy photo)

First, look for a potting soil mix, not compost, manure or mulch. These should be used as additives for the garden but not as a potting soil. Most all potting soils have similar ingredients such as peat moss, perlite and fir bark but the percentage of each and other materials mixed in will create a big difference in performance for each soil.

Peat moss is mined from peat bogs. This is a limited resource so more eco-friendly soil mixes may replace this with coir, a coconut husk material, or compost. These replacement materials do not hold water as well as peat moss so they may dry out faster. I like to look for a soil that has a mix of both peat moss and coir.

Perlite, a volcanic rock material, is used to lighten the soil mix and improve drainage and air movement in the soil. You will sometimes see vermiculite as an additive as well in seed starting mix. This lightens the mix and helps retain moisture.

Aged pine bark is a good lightweight soil ingredient that helps hold moisture and support root growth. It can sometimes be replaced by compost but this tends to decrease the drainage properties of the soil mix.

Other things to pay attention to when selecting a soil mix is that some have an added “starter charge,” or a slow release fertilizer. Other soils may have moisture retention treatments. When starting seeds you want to avoid the soils that have a “starter charge” as some seedlings will burn when exposed to high amounts of fertilizer. Most of the fertilizer in the “starter charge” is gone after the first couple of weeks but this may still be long enough to cause harm to the seedlings. Slow release fertilizers in the mix are not as much of a concern as they do not release large amounts of fertilizers all at once.

You do want to avoid the moisture retention treatments for seed starting as they may keep the mix too wet and cause the seed to rot before it sprouts. The moisture retention mixes are great for growing in outdoor containers during our hot summer weather but not for indoor seed starting.

If you would like to take a class to learn more about starting seeds and growing plants in the greenhouse environment, I am teaching a class this spring that puts on our spring plant sale. As part of the class you

grow a crop to sell and learn all aspects of greenhouse growing. The class is AGEH 23-Nursery Practices and Management.

The Shasta Master Gardeners Program can be reached by phone at 242-2219 or email mastergardener@shastacollege.edu. The gardener office is staffed by volunteers trained by the University of California to answer gardeners' questions using information based on scientific research.