

Being inside all the time during the winter makes me want to get my hands in some dirt and work with plants even more than usual. But Nebraska winter makes it unpleasant to walk to your car, let alone be outside for extended periods. So I turn to potting mixes. However, when you open a bag of potting media, it doesn't actually contain any soil. Depending on the company that it comes from and the type of mix it is, it usually contains a mix of peat, perlite, and vermiculite.

Peat, or peat moss, is the result of plants breaking down in bogs over a long period of time. It is harvested from these bogs, and then processed, and can be used in potting mix, to make peat pots, and many other gardening products. It is used in potting mixes because it has a very high water holding capacity. Peat moss helps create air pockets in the soil for the roots. It can be tricky to work with after it dries out completely, because it will become resistant to water. A tip to help rehydrate the peat moss is to soak it in warm water after it dries out. Peat moss is made by nature, and as such, nature can only produce so much of it during a single year, and overharvesting could lead to a shortage. Some companies only sustainably harvest peat moss, so be sure to research the method of peat moss harvest that your preferred potting media brand uses.

Coir is a newer product that is being tested as an alternative to peat moss. It is a byproduct of the coconut industry, and is made from the short fibers on the outer hull of the coconut. It doesn't have quite the water holding capacity of peat moss, but is a much more sustainable and environmentally friendly product. For a long time, coir was also considered a waste product, so this also solves a waste disposal issue.

Perlite is the small white particles that look similar to fertilizer granules. They are actually expanded pieces of a type of volcanic rock. When the volcanic rock is heated to extremely high temperatures, they expand, similar to popcorn, giving them a lightweight, almost foam like consistency. It is added to potting mix to improve aeration by providing bigger air pockets in the soil. Plant roots need air just as much as they need water. They also help with drainage, because of the big air pockets in the media, water can move into and through the soil better. Be careful when using perlite, as the dust can be harmful if you breathe it in.

Vermiculite is an inorganic material that is similar to perlite in that it expands when heated. But instead of being like popcorn, it expands like an accordion, forming several layers. Vermiculite is used for its ability to help retain water. If it becomes compressed, it will lose this ability and its usefulness in the potting mix. Vermiculite makes soil lighter and easier for roots to move through, making mixes that are high in vermiculite preferable for starting seeds.

Peat moss is used for its water holding capacity, but there are arguments that it isn't a sustainable practice. Coir from coconut processing has been being used as an alternative. Perlite and vermiculite are used for aeration and to lighten the soil. I've used this information to make my own potting mixes, depending on what characteristics I needed, and what kind of plants I was planning to grow and I hope you can do the same. If you have any questions or would like to suggest a topic for me to write about, feel free to contact me at the Buffalo County Extension Office, at 308-236-1235, or mearnest2@unl.edu.