The Mavis Institute

The crossroads between Nature & Technology.

Soil-less Potting Media

In general, standard media recipes are created based on the types of plants being grown (ex. bedding plants, potted plants, or for seed germination).

A standard recipe for a homemade soilless mix consists of 3 parts sphagnum peat moss or coir and 1 part perlite and 1 part vermiculite.

Soil-less mixes media do not contain any soil, but generally consist of peat moss/coir combined with horticultural grades of vermiculite and/ or perlite and added fertilizer.

Peat-based media are useful for seed germination because they are relatively sterile, light in texture and weight, and uniform. The light texture enables seeds to readily germinate and emerge, allows tender roots to grow, and makes transplanting seedlings easier.

Mixing Instructions

- 3 parts of peat/coir into the container.
- Add 1 part perlite
- Add 1 part vermiculite

mix thoroughly.

Supplies

Hand Shovel

Mixing Container

Peet / Coir

Perlite / Vermiculite

Sphagnum Peat Moss has a course texture and contributes to good aeration, yet provides water holding capacity to prevent soil from drying too quickly. Adding too much sphagnum peat, however, can restrict soil drainage by holding too much water. Sphagnum peat moss can be difficult to wet and should be moistened prior to mixing in other ingredients.

Coconut fibre or Coir is a natural fibre extracted from the husk of coconut. Coco coir has a neutral pH level, which means that it will not hinder nutrients from dissolving into the soil-water mixture and being taken up by the plants. Coir should be moistened prior to mixing in other ingredients.

Perlite is expanded volcanic rock (fluoride-based), manufactured when heated to 1,800°F. Like sand, perlite provides great drainage, but is lighter in weight and holds more air. Although more expensive than sand, the advantages may outweigh the additional cost. Disadvantages of perlite include: 1) a tendency to float to the top of the medium when watered; 2) an inability to hold or retain water; and 3) a need to be moistened before it is mixed into other ingredients to reduce dust, which is harmful if inhaled.

Vermiculite is often used instead of perlite. Vermiculite is clay belonging to the mica family and is naturally found in laminated flakes. It expands when folds of vermiculite can hold water, nutrients, and air, unlike perlite. Only horticultural grades, sold at garden centers, are recommended. Vermiculite can easily compact, which reduces its ability to hold water and air.

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