



tip sheet: **Propagating Seeds Best Practices**

overview

Whether growing plants to be transplanted or starting seeds indoors to keep inside, there are a few simple ground rules to ensuring healthy plants.

objectives

Participants will learn:

- to understand the steps towards healthy seed-starting, from soil choice to care practices.

materials

You will need:

- Potting mix
- Seed-starting pots or a seed-starting tray (plant flat)
- Water
- Seeds with seed packets
- Labels and a waterproof marker

resources

- Ten Tools for Seed-Starting: <http://blog.greenhousemegastore.com/2012/03/20/10-things-you-need-for-successful-seed-starting/>
- Organic Gardening Magazine's seed-starting tips" <http://www.organicgardening.com/learn-and-grow/14-tips-starting-your-own-seeds>

starting seeds

1. Read your seed packets for temperature, spacing and depth preferences of your seed. If you do not have seed packets, a general rule of thumb is to plant the seeds twice as deep as their size, to plant one or two seeds per plant cell (or one for every 3x3" space, which is enough room to later transplant them).

2. Start with the right container. Most gardeners use flats or seed-starting trays to start seeds. Most flats are made up of cells about 1-3" deep. This is too shallow for most mature plants to thrive, but excellent for starting healthy transplants. Gardeners use flats because they save space, are designed to have good drainage, and are a uniform size that works with most gardening equipment, such as plant racks and lights. You can also use pots or recycled containers. Make sure they have adequate drainage. Check regularly that the soil doesn't stay waterlogged or dry out too quickly.

3. Prepare your potting soil: it should be moist, but not too wet nor dry. Potting soil is actually a sterile, soil-free mix. It is not recommended to use garden soil, which will become compact more easily and potentially bring with it insect larvae or diseases you're not ready to introduce to your indoor growing environment. A good choice for a potting soil is one that has peat moss or coconut coir as the base ingredient, and additionally materials like perlite and vermiculite. These help with air and water flow.

4. Fill your containers with potting soil and gently tamp down.

5. To the instructed depth, plant, then cover, your seeds.

starting seeds (continued)

- 6. Maintain seed flats** or containers with soil at the instructed temperature (approximately 68-70°F soil temperature for most plants).
- 7. Keep potting soil moist** until seeds germinate. Days to germination vary among seeds (refer to your seed packet, but likely 7-10 days).
- 8. When cotyledon (first leaves) appear**, put seed flat or container under grow lights, or in as direct sunlight as possible.
- 9. Continue to water** so soil remains moist but not too wet nor dry. *Optional:* After first true leaves appear, begin a mild and highly diluted liquid fertilizing regime as directed by product package instructions.
- 10. Before transplanting outside, harden off your seedlings.** Gardeners use a few tools to enable a smooth transition: moving plants outside, but keeping them under a blanket-like material called row cover, or Remay (a product name) to gently filter light and hold warm air; transitioning plants from the nursery to cold frames, all the while maintaining a schedule of hardening-off. This regime might include brushing the baby plants with the back of your hand for a few minutes a day (or using a gentle fan) to get them used to the wind, or moving plant flats in and out for short periods of time to get them used to sunlight.
- 11. Once seedlings have reached a safe transplant size** (3" or so in height), step up your seedlings to a larger pot or outdoors.

vocabulary

- **Flat/seed-starting tray/cell pack:** Designed for seed-starting, plant flats are also called seed-starting trays or cell packs. Each refers to a different type or size of the same concept: a well-drained, small volume grid ideal for seed-starting.
- **Cell:** The individual sections of a plant flat or seed-starting tray, each designed at a size ideal for various plants and stages of plant growth.
- **Germinate:** The act of a seed sprouting.
- **Propagating mat:** A specialized heat mat for plants designed to control the soil temperature for successful germination.
- **Potting soil:** A sterile mix used for seed-starting, often made up of a base material such as peat moss or coconut coir, and added materials for drainage, air flow and nutrition.
- **Perlite:** A naturally occurring, lightweight, air-popped volcanic rock byproduct that appears as a white, easily crumbled particle in soil mixes to aid with air flow and drainage.
- **Vermiculite:** A naturally-occurring, lightweight, heat-produced byproduct of a silicate rock that appears as a silver, shiny particulate in soil mixes to aid with air flow and drainage.
- **Coconut coir:** A natural fiber made from the shredded outer husk of coconuts used in potting mixes as a base material.
- **Peat moss:** A general word used to describe the dried sphagnum mosses used in potting mixes as a base material.
- **Attenuation:** The process of the lengthening of plant stems when reaching for a viable light source.
- **Leaf discoloration, seedlings:** For a variety of reasons, when the young leaves of a plant develop spots, bruises, bleach marks, etc.