

## SEED STARTING

### *MATERIALS FOR STARTING SEEDS INDOORS*

#### **Soil-less mix**

Sow seeds in a purchased sterilized seed starting mixture. There are a few recipes to make your own mix by combining one part peat moss with one part vermiculite or perlite.

#### **Containers**

Start seeds in purchased plastic or peat seed trays or use disposable household containers such as milk cartons. Sterilize used containers with a diluted bleach solution (one part bleach to nine parts water). Make several drainage holes. There are many choices for individual containers. Peat pots, peat pellets, cow pots, fiber blocks and cubes all allow transplanting without root disturbance. Plastic cell packs work well for small-seeded annuals. Paper, plastic and foam cups with bottom drainage holes make economical containers.

#### **Proper lighting**

Inadequate lighting is a common cause of poor-quality transplants. Artificial lighting is necessary to produce healthy, stocky plants, and seedlings grow best with light in the blue/cool spectrum. Fluorescent lights using standard cool white bulbs are recommended, and there are many LED plant lights on the market that will work well. Follow the manufacturer recommendations for LED grow lights spacing from plants.

### *PROCEDURES FOR STARTING SEEDS INDOORS*

There are two methods for starting seeds indoors. In the one-step method, seeds are sown directly into individual containers. This method is best for large seeds and plants that do not transplant well. In the two-step method, seeds are first sown in a seed tray or flat. When the second set of true leaves appear, seedlings are transplanted into individual containers.

1. Check the seed package directions for temperature germination requirements. After deciding to meet the germination requirements, seeds may be planted.
  - a. Most flower and vegetable seed germinate rapidly at 75° to 80°F.

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- b. Some seeds like to be kept warmer. Seedling heat mats, regular heating pads, and 4 to 6 inches under incandescent lights all can work as heat sources for these seeds.
    - c. Some seeds require an initial chilling, freezing or soaking (check seed packet).
2. Thoroughly moisten the soil-less planting mix to prepare for planting. The mix should be damp, like a wrung-out sponge.
3. Fill chosen container(s) to 1/4 inch of the brim. Pat down top of soil-less mix lightly.
4. Sow seeds at the depth and spacing per the seed package directions.
  - a. Some seeds need to be covered to twice their thickness.
  - b. Some seeds need light to germinate and should not be covered.
5. Use a fine spray to moisten the surface of the seed tray/pot after planting.
6. Cover the containers with a sheet of clear plastic wrap, container lid or enclose them in a clear plastic bag. Be sure that you remove the plastic a few minutes each day to provide ventilation.
7. Once the a few of the seeds germinate, remove the plastic wrap or bag, and keep moistening the soil medium surface for the remaining germination. This is a good time to place a fan blowing on the seedlings to combat fungal diseases such as damping-off.
8. Place the containers 2 to 3 inches under fluorescent lights for 14 to 16 hours a day. You can have too much light. As the plants grow, raise the lights but continue to have them 2 to 3 inches above the tops of the plants. LED lights will have different instructions for spacing.
9. If seed was started in a seed tray, transplant to individual containers when the plants have developed their first set of true leaves. Use an all-purpose potting mix for transplanting. Do not use garden soil as it is too dense for the seedlings to make good progress.
10. After transplant, check seedling moisture daily. Overwatering is a common cause of leggy or weak seedlings. Although top watering is acceptable, the best method is to water your seedlings from the bottom, allowing them to almost dry out between waterings. At watering time be sure to wet all of the growing medium until some drips out, and do not leave the containers in standing water. If your seedlings are pale green or discolored, add a water-soluble fertilizer at half strength. This should be necessary only once or twice before planting outdoors.
11. Transplants must be “hardened off” gradually before planting out in the garden. This is accomplished by exposing plants to increasing amounts of cold, sunlight and wind.
  - a. At first, place them outside in a sheltered, shady area. If that is not available lattice, shade cloth or row cover can be used. Bring them back inside at night to protect from cold and frost.
  - b. Gradually increase exposure a few hours over 7 - 10 days before transplanting.