

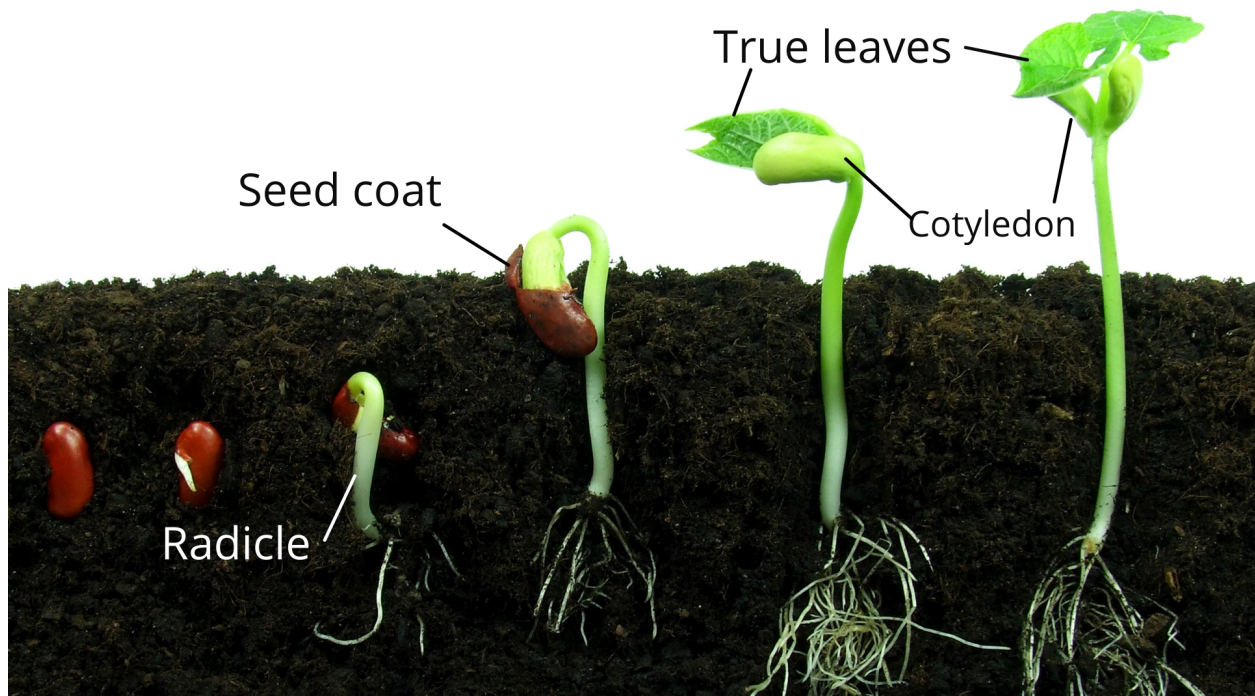
Propagating Seeds

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There are only 2 things plants need to germinate:

1. The correct temperature for that plant species
2. Consistent moisture

Once the plant has germinated it will start photosynthesizing and will need nutrients and sunlight. Once the seeds have sprouted their **first true leaves** (see graphic below) it is time to up pot your seedlings. Germination is complete once the first true leaves have developed. Now the plant will start photosynthesizing.



When to start your seeds

- Depending on the germination rate of your plants, start indoors 4-6 weeks before desired transplanting date
- “Days to maturity” listed on the seed packet indicates days to harvest from date of *transplant*, not indoor seeding

How many seeds to start

- Determine how many plants you want, pounds you want, or space you have available
- Determine spacing for each variety

- Add 25% extra as contingency for poor germination or mortality

Seeding Mix or Potting Mix

- Seed starting mix is generally soilless mixture, with peat, coir, compost, vermiculite and/or perlite. It is a low-nutrient, lofty, and absorbent medium
- Potting mix generally is a mix of compost, soil, peat, coir, vermiculite, perlite, and dry mix fertilizers. This is a higher nutrient, richer, heavier, and faster draining medium.
- You can start seeds in a potting mix, but it might take longer. Potting mix is also more expensive and young seedlings do not require additional nutrients, so it is wasteful for use as a seed starting mix. However, if you are starting seeds at home this is likely the most accessible seed starting mix you will be able to get at your local hardware store.
- You can transplant into seed starting mix, but your seedlings will not grow as strong or healthy. They will need additional liquid fertilizer regularly and might suffer transplant shock.

Seeding Mix Recipe

Ingredients:

3 parts coco peat

2 parts compost

1 part soil

1 part perlite/vermiculite (optional)

Hydrate coco peat overnight or by adding water and break up using your hands. Add other ingredients and mix all materials till they are fully incorporated. Add water as needed. The moisture level should be as moist as a wrung-out sponge (wet but not dripping).

Up-Potting Mix Recipe

Ingredients:

1 part coco peat

1 part compost

1 part soil

1 cup ~ EB Stone dry mix fertilizer

perlite/vermiculite (optional)

Hydrate coco peat overnight or by adding water and break up using your hands. Add other ingredients and mix all materials till they are fully incorporated. Add water as needed. Moisture level should be as moist as a wrung out sponge (wet but not dripping).

Sunlight

Once the seed germinates, it will require a minimum of 6 hours direct sunlight. This means if you are starting seeds inside your home, you must have a very sunny windowsill or use a grow light. 'Leggy' seedlings or seedlings that lead towards the light are an indication that there is not enough sunlight.

Temperature

Each variety of seed will have an ideal germination temperature. For example, peppers need to be between 80–90°F/27–32°C. Generally peppers are started early in the season when the temperature has not warmed up yet, therefore heating mats are needed to achieve the correct temperature. Check the germination temperature for your seedlings before seeding.

Which size tray or container?

- Smaller (seed trays) is usually better for germination, soil warms faster and does not become soggy or over watered
- Larger pots (4" pots) are better if you cannot up-pot before transplanting and for larger seeded veg, like cucumbers, melons, and zucchini

Seeding

- Mix should be moist to start with (seed soil moisture test [video](#))
- Depth of hole should be 4x the size of the seed
- Cover seeds lightly with soil and water very gently
- Label and date your seedlings

Watering

- Morning watering is best
- deep and thorough water is required. Water should be coming out the bottom of the pot or seed tray.
- Allow surface to dry-out between waterings once the seeds have germinated.

- Plants in the edges of trays or in south facing areas dry-out faster

Emergence

- first stage: cotyledons
- second stage: first true leaves
- third stage: 14 days after germination - seedlings begin search for additional nutrients = time to fertilize / transplant / up-pot

Up-potting

- Anytime after first true leaves (foliage leaves) have emerged
- Larger containers are good, but take-up more space and require more potting mix
- Try to keep soil and roots intact and undisturbed when up-potting
- Water thoroughly

Pests and diseases

- Regular monitoring
- Remove or spray infested plants ASAP
- Don't overwater
- Provide adequate airflow