



# Starting your own Seeds

Starting your own seeds is not only more cost effective, you will actually grow plants that are of superior quality compared to those you can buy at the nursery. There are a few things to consider.

Timing is important. Each plant has different requirements for optimal growth. The UC Master Gardeners of Santa Clara County has a [Vegetable Planting chart](#) on their website that will give you the time of year that you can transplant or direct seed a vegetable. Find a printable version [here](#). This is one of the most valuable tools for a successful Santa Clara County garden.

Vegetable	Method	When to transplant												From seed to transplant	
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec		
Artichoke	Transplant														12 weeks
Arugula	Transplant														4 weeks
Asparagus	Plant crowns														
Basil	Transplant														6 weeks
Beans	Transplant														3 weeks
Beets	Direct seed														6 weeks
Bok choy	Transplant														3 weeks
Broccoli	Transplant														6 weeks
Brussels sprouts	Transplant														6 weeks
Cabbage	Transplant														6 weeks
Cabbage, napa	Direct seed														3 weeks
Carrots	Direct seed														6 weeks
Cauliflower	Transplant														4 weeks
Chard	Transplant														4 weeks
Chayote	Plant fruit														
Cilantro	Transplant														4 weeks
Collards	Direct seed														6 weeks
Corn	Direct seed														4 weeks
Cucumber	Transplant														4 weeks
Dill	Direct seed														8 weeks
Eggplant	Transplant														
Fava beans	Direct seed														6 weeks
Fennel	Transplant														6 weeks
Garlic	Plant cloves														4 weeks
Kale	Transplant														4 weeks
Kohlrabi	Transplant														6 weeks

Some seeds need to be planted directly into the garden (**direct seeded**). Others need to be started indoors and **transplanted** when the plants reach size. Check the planting chart as some seeds need 4 weeks to reach transplant size and others need 6 weeks before they can be transplanted. That means if you want to plant all your plants in your garden on the same date, you need to start the seeds with longest time-to-transplant first. You will need to do a second seeding 2 weeks later for the seeds requiring 4 weeks growth before transplanting.

For our fall plant distribution, we used **self-wicking sub-irrigated tray systems** that we put together ourselves with mesh trays donated by local nurseries. Instead of using pots, we used **soil blockers** to make our transplants. We are trying to reduce the amount of plastic we use, plus completely skip the cost of buying it. The downside of using soil blockers is the cost of the blocker itself and the cost of all the components of the soil. Several of our gardeners had blockers so we were able to make many blocks in a short amount of time with minimal cost. Instead, you can re-use 6 pack pots or any other kind of seeding tray to seed your seeds.

Again, while there are many methods to start seeds, the process and instructions below are for making Soil Block mix and using your soil blocker. It also describes how to make a self-wicking tray which requires you water only every few days. Each tray system can hold 48 blocks. The soil blockers we used stamp 2 rows of 4 blocks for a total of 8 blocks.

Clean & disinfect trays	Assemble self-wicking trays	Mix & prep soil	Stamp blocks	Plant seeds
<ul style="list-style-type: none"> <li>-Nursery trays (17"x17"x2")</li> <li>-Water</li> <li>-Bleach</li> <li>-Container</li> <li>-Brush</li> </ul>	<ul style="list-style-type: none"> <li>- 2 mesh trays, one of them cut with slit on one side for wick</li> <li>-Cover bottom tray with plastic</li> <li>-Add spacer</li> <li>-Cover top tray with felt and pull wick through slit</li> <li>-Fill bottom tray with some water</li> <li>-Stack trays</li> <li>-Wet wick and make sure wick is hanging down in water of bottom tray</li> </ul>	<ul style="list-style-type: none"> <li>- Sift peat moss with ¼" sieve</li> <li>-Mix the following:               <ol style="list-style-type: none"> <li>1. peat moss (65%)</li> <li>2. Perlite (25%)</li> <li>3. Vermiculite (10%)</li> <li>5. E.B. Stone Sure Start fertilizer (2 tbsp per gallon of soil mix)</li> </ol> </li> <li>-Add water and mix until soil sticks</li> </ul>	<ul style="list-style-type: none"> <li>- Fill Soil Blocker with soil mix until full</li> <li>-Blocker makes 8 blocks at a time</li> <li>-Push blocks onto top tray</li> <li>-Tray holds 48 blocks</li> </ul>	<ul style="list-style-type: none"> <li>- Drop 3 seeds on each block</li> <li>-Cover with ¼- ½" of soil mix</li> <li>-Gently tap down</li> <li>-Mark seeds with tape or popsicle sticks</li> </ul>

## A. What materials do you need?

- i. Soil – actually it’s a soilless planting medium that we mixed together. It is comprised of:
  1. Sphagnum peat moss (65%)
  2. Perlite (25%)
  3. Vermiculite (10%)
  4. Sure Start fertilizer from E.B. Stone – 2 tablespoons per gallon of soil mix

Warning: If you decide to buy a premixed growing media, check the ingredients. It should be Sphagnum peat-based (70%-95%) with perlite or vermiculite for aeration and drainage. The first ingredient to be listed should always be Sphagnum peat. Coir and Composted Bark Fines/Composted Forest By-products are not the same as Sphagnum peat moss, and should be avoided as the main ingredient when selecting growing media. Growing media should be light and fluffy when dry, and spongy when wet. DO NOT use growing media with these ingredients: Rock, clay, sand, topsoil, compost

- ii. Sifter or sieve (1/4” holes max) to sift the peat moss and remove the bigger clumps, sticks, etc.
- iii. Water
- iv. [Soil blocker](#) to stamp blocks OR use 4”x4” plastic pots
- v. Sub-irrigated or self-wicking tray systems

1. Materials to build one tray system (pre-disinfected), holding 48 4”x4” blocks:

- 2 nursery trays, 17”x17”x2” (medium or thicker) - get free at local nurseries.
- Poly sheeting (or some type of thick plastic that’s safe to use as a liner for the water reservoir)
- Spacer - Light weight e.g. upside down plastic nursery trays
- Wicking material
  - Safe to use in water reservoir
  - Won’t disintegrate in the sun right away
  - e.g. felt, cotton fabrics



2. Additional Materials

- Tray or container for potting mix
- Bleach
- Container for water
- Water
- Scissors
- Utility knife
- Trowel (optional)
- Seeds
- Frog Tape
- Thick Pencil

## B. Building the Self-WickingTrays

1. Disinfect materials - water, bleach, container
2. Cut poly sheeting to size and place in bottom tray (scissors)
3. Cut wicking material to size (scissors), allow for wick to hang down
4. Cut slit on top tray (box cutter/utility knife)
5. Pull wicking material through slit
6. Add water to reservoir (water, container to hold water)
7. Nest top tray over bottom tray
8. Moisten wicking material (water, container to hold water)

## C. Seeding process – using the soil blocker

1. Dump some potting mix in a tub/container (potting mix, tub/container)
2. Moisten potting mix evenly (water, container to hold water, trowel [optional])
3. Push soil blocker into potting mix until each channel is full of potting mix
4. Move blocker onto top tray and stamp out the blocks (repeat)
5. Sow seeds to the depth required for specific crop (seeds) and cover with potting mix
6. Add labels to the tray to show what is seeded and where (tape, thick dark pencil)

**D. How to care for your seedlings**

Your seedling trays need to be placed next to each other in a consistently warm (preferably 70 – 85 degrees F) sunny place, preferably on a table. In fall and winter, place them in a green house or in a warm room facing a south facing window. To help with germination, place a seedling heat mat underneath your trays. Fill the bottom trays with water and make sure the wick is hanging in the water. Be careful: the bottoms of the pots/blocks should not rest in the water. Check frequently and add water as needed. Seedlings will need 4-6 weeks before they can be transplanted.

Since we planted 3 seeds per block, 3 seedlings may sprout. After a few weeks, thin the seedlings by pulling out the weakest seedlings. Every block should have one seedling.

When you are ready to plant, harden them off by moving them inside and outside for longer and longer periods of time over the course of three days. This will allow them to acclimatize to their new environment and will give them the best chance at survival outdoors.

Happy Seeding!

Calvary Gardening Ministry



San Jose, September 2022