



Cool Season Seed Starting Guidelines

Preparing Containers and Labeling

Use a good quality potting mix. It should be nicely moist but not soggy. If it is dry, add some water, mix well, and let stand for an hour or so before proceeding.

If you are reusing flats, pots or six-packs, wash and rinse them well. You may want to rinse them in a solution of 1 part bleach to 9 parts water if you have had problems in the past with fungal diseases like damping off. Use wooden or plastic plant labels or write on the containers themselves, using indelible ink pens, a china pencil, or a plain lead pencil.

Fill the containers loosely with potting mix and tap gently (don't pack) to settle the soil.

Planting seeds

Use a chopstick or something similar to make planting holes/indentations at the right depth for your seeds. In a six-pack you might want to put two seeds in each cell in case one doesn't germinate, spaced 1/4-1/2" apart. In a flat or a pot, space the seeds about 1/2" apart. Place the seeds carefully in the holes and cover with more potting mix, and gently firm the soil. Do not pack down. Water with a very fine spray/mist to avoid disturbing the seeds. Cover the containers with plastic bags or plastic wrap to retain moisture. Make sure that any cover doesn't touch the soil surface.

Germinating

Cool season vegetables should germinate well at outdoor temperatures in late summer in Santa Clara County. The seeded containers can be kept outside in a protected spot in bright indirect sunlight. No additional heat is necessary. Check daily for germination and make sure the soil surface stays moist. When the seeds begin to germinate, remove the cover immediately. Protect from insect pests or animals, if necessary. Check them every day to ensure that the soil remains moist but not soggy.

Transplanting or thinning

When the seedlings have one or two pairs of true leaves, transplant them into six-packs or 4" pots to grow to planting size. Prepare and fill the pots or six-packs as described above, but make the planting holes deep and wide enough for seedling roots.

For seedlings growing in flats: Very gently grasp a seedling by its leaves (not the stem) and use a stick or other small device to pry its roots gently out of the flat without tearing them. Still holding the tiny seedling by the leaf, transfer it to the waiting pot, easing the roots into the prepared hole. Gently push soil around the roots, so that the seedling is

planted at the same height or slightly deeper than it was in the original flat. Don't pack the soil down, as this may damage the roots. Water gently to settle the soil around the roots.

For seedlings growing in six-packs: If you planted more than one seed per cell in a six-pack and all of them germinated, you must separate them and replant or thin them when they have one or two pairs of true leaves. To thin, use a scissors to snip off unwanted plants just above the soil line. Don't pull them out, as this may damage the roots of the other seedling(s) in the pot. To separate them, follow instructions in the next paragraph.

For seedlings growing in a pot: If you have a pot with several dozen tiny seedlings in it, these must be separated and planted each in its own six-pack cell or pot to grow to planting size. To do this, invert the pot of seedlings, holding your hand over the top of the pot and seedlings with fingers spread. Tap the edge of the pot on the table so the entire contents drops gently into your hand, and immediately turn it right side up. Drop the entire mass (seedlings are now on top) from a height of 2-3 inches onto a clean surface. The root ball will fall apart. Gently separate individual seedlings, holding them by a leaf (not the stem), and transferring them in a prepared pot or six-pack, one seedling per cell or pot, as described earlier under "For seedlings growing in flats."

Hardening off and planting in the garden

Your transplanted seedlings can now be returned to their protected spot in bright indirect sun to grow to planting size. Most commercial potting soil contains sufficient fertilizers for seedlings; but if the one you used does not, plan to fertilize the seedlings with half-strength fertilizer solution now and again after 3-4 weeks.

When plants are big enough to plant in the garden, you must acclimate the seedlings to the harsher conditions of the open garden by gradually increasing their exposure to full sunlight, wind, and temperature extremes. This process is called hardening off. Hardening off cool season seedlings that have been grown outside is much easier than doing this for warm season vegetables that have been raised inside under artificial light. There are no hard and fast rules. Over a period of about a week, gradually increase the time the plants are in full sun, exercising care if a day is particularly hot or windy. Be sure to keep the seedlings well watered, and avoid locations that might attract animal or insect pests.

Choose a planting day that is expected to have moderate temperatures. Plant in the late afternoon to avoid the most intense sun. Be sure both the planting area and the plant are well watered before transplanting. A dry root ball can be fatal to a plant in the ground, and planting into dry soil can quickly dehydrate the root ball.

Dig a hole for the plant. If the bed has not been fertilized already, add some fertilizer to the bottom of the hole and mix into the soil. Place your hand over the top of the pot or six-pack cell with the stem of the plant between your fingers, invert the pot, and tap or squeeze the container to loosen the plant so it will slide out. If roots are visible on the outside of the soil, gently rough up the roots on the sides and bottom. Place in the planting hole so the soil levels are even. Gently fill in around the plant and firm it in place. Water in well, even if the soil is moist, to settle the dirt around the plant roots.

If it is quite warm and/or the sunlight is intense, use row cover or temporary structures to shade the newly planted seedlings for a few days. If your garden is visited by vertebrate pests such as squirrels, rats, or birds, protect the seedlings with netting or cages fashioned from metal screening. If snails and slugs inhabit your garden, be sure to control them before planting or check at night to prevent damage. Provide extra water for the first few weeks while the seedlings' roots are getting established.