Starting your seedlings indoors, or purchasing greenhouse-grown transplants from your local garden store, can give you a head start that will add weeks to your growing season. This practice can make or break a crop if you live where summers are short, or in a climate where midsummer heat leads to a melt-down of cool-natured plants.

Growing your own seedlings indoors is easy and fun because you can try vegetable varieties rarely offered at garden centers, and start them under pest-free conditions. But take some time to “harden off” trans-plants before setting them out in your garden.

1. Harden Off Plants

Plants adjust to small, gradual changes in their environment better than sudden shifts, which is what the hardening off process is all about. Just as you get burned when you bare your untanned skin to the sun, leaves of plants started indoors will develop pale, sunburned patches if they are suddenly exposed to too much sun. The story has a happier ending when you introduce seedlings to bright light and sheltered breezes gradually, over a period of one to three weeks. In response to more abundant light, the leaves and stems bulk up on chloro-plasts — the mighty green organelles that transform light and carbon dioxide into energy for the plant. Much of that energy is sent to the main stem, which suddenly needs to get tough enough to twist and bend without breaking when blasted by wind. You may not see much new growth while plants are hardening off. But don’t worry; they are busy growing and rearranging exactly the kinds of cells they will need to prosper once they are set free in the garden.

This period of adjustment can take place on your deck or patio, within a protected enclosure out in the garden, or a little of both. For example, you might begin by setting your seedlings outside in a sheltered spot for two hours one day, and four hours the next, gradually increasing light and air movement levels until the babes have made it through several days and nights in the outdoor world.

If you are away from home all day, put the plants in a location that will receive early morning sunlight and be shaded as the sun’s position changes late in the morning. Watch your seedlings closely for signs of drying out, and be ready to shift them to larger containers if you see roots sneaking out of the drainage holes. If frost is predicted, take the plants inside.

2. Prepare to Transplant

While your seedlings are hardening off, prepare the planting space by amending the soil with compost and mixing in an appropriate amount of your favorite organic fertilizer. Both additions energize the soil’s food web, so that seedlings slipped into planting holes will be met by a welcoming committee of root-friendly fungi, bacteria and water-soluble nutrients. Some plants form stronger alliances with soilborne microor-ganisms than others, but soil scientists think that all plants take up nutrients and resist diseases better when they have strong relationships with life-forms that flourish in the rhizosphere — the fertile real estate where root and soil come together. Mixing at least a handful of compost into the bottom of planting holes used for vegetable seedlings helps these partnerships fall into place quickly.

When the plants have been hardening off for at least a week, and the soil is ready to receive them, check your weather forecast. Soil temperatures should be to the plants' liking, and it's helpful to have some cloud cover or light rain during the first few days after transplanting. Delay transplanting if a heat wave is on the way, or if the soil is clammy and cold. Meanwhile, make sure the patients are well hydrated and amply fed going into the transplanting operation. Drench them with a weak solution of organic fertilizer the day before transplanting and again just before you remove them from their pots.

3. Handle With Care

Nature occasionally transplants a broken stem to a moist spot where it takes root and grows, but she never lifts, handles and replants six-week-old seedlings! To make this bizarre adventure more acceptable to plants, push them out of their containers from the bottom rather than pulling them out by their stems. In most cases, you can place one hand over the container with the main stem between your fingers, tip it over and shake or tap to loosen the root ball. If necessary, pry roots loose using a knife. Handle the freed plant by its root ball (a large spoon is great for this), and avoid touching the main stem. As you set the plant in its permanent home, use the lowest leaves as handles. Should they break off, it's no big deal.

As a general rule, it's best to keep as much soil packed around the root ball as possible. Exceptions are seedlings whose roots have grown into a solid mass. To encourage these frustrated roots to grow outward into surrounding soil, you should use a fork or your fingers to tease out a few outer roots. Finish the transplanting process by drenching the soil with water — an important step that eliminates air pockets around the roots and helps beneficial soilborne microorganisms move into the plant's rhizosphere.

4. Cover Plants

Nicely hardened-off seedlings transplanted in perfect weather (mild, cloudy and still) can fend for themselves, but great transplanting weather seldom lasts long enough. To be safe, temporarily shield transplants from sun and wind by covering them for at least two days after transplanting. Increase to four or five days if the weather is very sunny, windy or cold, or if the plants' roots were damaged as you set them out. For example, if you found three plants rather than one in a purchased pot of basil, and you separated them as you set them out, covering the plants for four days or more after transplanting can make the difference between success and failure.

You can use upturned flowerpots, cardboard boxes or buckets as plant covers. In hot weather, opt for a piece of lightweight cloth held aloft with stakes. Remove the covers after a few days, and then pat yourself on the back for a job well done. After all, one of the huge differences between people and plants is that we are built to move around, while a plant's idea of a great life is to stay in one place. For plants, good transplanting practices soften the transition from life confined in a pot to life in a garden. For people, they open the door to earlier harvests and a more successful garden.

Direct-Sow Vegetable Seed Planting

Skip starting seed indoors; plant directly outdoors with easily grown vegetables.

When the soil warms to 50 to 60 degrees F., you can start seeds directly outdoors. Use a soil thermometer, a helpful way to ensure proper soil temperature and subsequent germination success.

Start with a weed free bed. Amend with 2–3” of compost worked into the soil. Follow spacing and depth directions on seed packets.

Vegetables need 6–8 hours of sun per day to grow well.

Crop rotation is a must to deter disease, insect problems, and soil-nutrient depletion. Wait three years to replant the same crop.

Use a corner of a hoe, or other tool, or your finger, to make shallow furrows to place seeds and gently cover them with soil. Mark your rows with tags to keep track of what you have planted. If you want straight rows tie a string from the tag/stake on one end to the stake on the other end.

After planting seeds, water with a gentle spray for even coverage. Keep soil moist, but not too wet, until the seeds germinate. Then water plants throughout the growing season on a regular schedule. For ease of watering, use a soaker hose or drip watering system. Do not use overhead sprinklers; water on leaves encourages fungal diseases.

After the seedlings are about 2 inches high, check the spacing of each plant. If seedlings are not at the recommended spacing, thin out too closely growing plants as needed by cutting them at ground level, and leave the well-spaced ones. Do not yank stems out of the ground which may disturb the remaining seedlings.

As plants grow and the weather warms up, add mulch a few inches away from the stems along the rows to conserve moisture and stop weeds from taking hold. Two or three inches of straw is a good mulching material.

Planting your purchased vegetable plants

Hardening off your young plants is always a good idea. If you purchased your plants from down the hill, they will be a bit sensitive to our environment. But your purchased plants are tougher than they look.

Here in Big Bear, we are at a very high altitude. Meaning the air is thinner, the sun is stronger, compared to lower elevations. We are susceptible to freezing temperatures at night in the early summer, as well as late fall. So be prepared to protect your sensitive plants if needed. Keep an eye on the weather.

Vegetable plants purchased at our nurseries or local stores have had a chance to be “out in the weather” for a few days before you bought them, so they have gone through a short acclimation period.

Prep Your Soil

Make sure your soil is prepared and ready for planting. Digging in your mulch, amendments, or compost creates a well aerated soil and loosens the soil for easy planting and allowing the plant roots to spread and grow easily.

Level Your Soil

Start with a good leveled dirt area. You can hill or mound as needed for certain plants later. Once the soil is level, you can dig in and plant your plants. Dig the hole so that the placed plant soil level is level with the prepared bed soil. See picture above. This will allow for an even and more consistant watering to all the roots. Uneven soil creates pockets of water which gives you uneven watering.

Water Deeply

If your soil was not moist before you planted, it will take some very deep watering to get the water all the way down to the bottom roots of your plant. So water deeply. Check your progress by digging down close to the plant (be careful not to disturb the roots) and see how deep your water has gotten. If the soil is still dry, you need to water more. Once you have watered deeply and thoroughly, you will not need to water this deeply again, a gentle light watering will be all that is needed as the weeks go by. Never hesitate to check your soil moisture by digging down during the growing season. You might find you are watering too much, or not enough. You plants prefer a steady moisture to grow properly.

Water the Soil Only

Giving your plants a shower may seem like a good idea, but it makes them susceptible to mold and other diseases. Plus most of the water on the plant leaves will evaporate into the air which does nothing for your plants water needs. Water only the soil around your plants. After a few weeks, spread mulch around your plants to keep the moisture in the soil. Keep the mulch a few inches away from the stems of your plants. Mulch keeps the soil from drying out quickly, and you won’t have to water as often.