

# Cool Season Vegetables

---

## Guide to Planting Seedlings in Spring

Hardening off seedlings is a gardener's way of doing the same thing for plants. You can't just take young sprouts that have grown vigorously in a warm indoor environment, plunk them outside into the cool spring ground, and expect them to thrive. Instead, you must toughen them up for the transition by gradually adjusting their *temperature, water, food,* and exposure to *wind* and *sunlight*. In this way when planting seedlings out, you'll produce stocky, thick growth that's less vulnerable to cold, wind, and disease.

Begin this process one to two weeks before transplanting by setting your starts outdoors for a few hours in the afternoon. Choose a sunny location that's protected from strong winds. Cold frames are wonderful tools for this, but there are plenty of other suitable methods, such as placing the plants on a protected patio or by the sunny side of a building. After two or three days of this initiation, your plants will be ready to stay out from morning to late afternoon for the remainder of the week. Then, if the weather promises to be mild, let them "camp out" for a few nights in final preparation.

### Temperature

Seedlings prefer a warm atmosphere for germination, but their optimum *growing* temperatures are on the cool side. For instance, while broccoli, Brussels sprouts, cabbage, cauliflower, Swiss chard, collards, Chinese cabbage, kale, lettuce, and parsley prefer germination temperatures from the mid-70s to the 80s, they actually grow best between 60 degrees and 65 degrees Fahrenheit.

### Water

To help a plant harden off, you should also restrict its water supply. So give your seedlings' soil a chance to dry out some during those transition days. You might even let leaves droop just a little before you water. (And try to water only on sunny days — doing so reduces over chilling.)

### Wind

So far, to "hardy up" your plants, you've been decreasing warmth and water. But wind and light are two factors you'll want to increase when planting seedlings. Vegetables that get doses of mild wind make more xylem (tough cells and shorter internodes (the stem distances between leaves). This means stockier, sturdier plants.

### Light

Although you need to increase your plants' exposure to sunlight, you don't want to over — do it: Moving plants directly from partial light into full sun can "burn" leaves. By gradually increasing light exposure during the hardening-off process, you'll allow the plant time to form carotenoids-pigments which act sort of like temporary sunglasses for the leaves until their chlorophyll levels have time to adjust.

### Transplanting

The best time to plant out is late afternoon, early evening, or on a day that is decidedly overcast. (A light misting rain is an added bonus.) Water the flats or containers well a few hours before transplanting. This helps the roots slip free without tear — You'll need a tool for making holes in the ground, a source of water, *and* a sense of not being pressed for time:

First, carefully get the seedlings out of their containers when planting seedlings into the ground. (Peat pots and the like can be planted directly in the soil.) If a plant has its own individual pot, you can tap the sides gently until the roots slide out easily. Loosen any tightly balled roots before you put the plant in the soil.

Never pick up a seedling by its stem. While it may look like a naturally tough "handle," the stem is truly a seedling's most vulnerable spot. A young plant can survive some root damage or even losing a leaf or two. (Indeed, some growers recommend deliberately pinching off a few lower leaves of lettuce, parsley, celery, and brassica transplants to reduce wilt and stimulate root growth.) But if you squeeze a stem too tightly, you'll injure the seedling's food and water transport system and make the plant more vulnerable to disease.

Once you've got a seedling ready, open a small pocket in the earth with a trowel, dibble, or large spoon . . . and put the plant in. Don't dig too large a hole, or an air space that could harm the roots may form when you're filling in around the plant.

Bury most stems up to their first set of true leaves to provide a firm anchor for the surge of new growth to come. This is especially important for top-heavy crops like cabbage, broccoli, cauliflower, and Brussels sprouts.

The most critical factor in successful transplanting is creating a cohesive bond between the root ball and the surrounding soil so there'll be an uninterrupted uptake of nutrients and water. To ensure this, lightly press the soil around the stem with your hands. This firm footing is particularly important for brassicas.

Some gardening authorities recommend watering the transplants after each bed or row is complete, and others swear that you should do it plant by plant. If the soil is moist and the humidity high, I'd go with the first method. If opposite conditions prevail, I'd say water as you go. Be sure to do one or the other: Watering in helps establish good root contact and provides the medium for nutrient uptake.

Try hard *not* to wet your transplants' leaves as you water the soil. The cold could shock the plant. What's more, the moisture could make the leaves "think" it's raining, open their stomata, and "perspire" to balance the perceived moisture. The end effect? The plant could actually lose water.

**Questions? Call the Master Gardener Hortline: 636-875-7457 or [email: mgstcharles@gmail.com](mailto:mgstcharles@gmail.com).**