Latin Name/Genus: Capsicum annuum, C. baccatum, C. chinense
Family: Solanaceae
Difficulty: Moderately difficult
Season: Warm season
Exposure: Full-sun
Zone: Hardy to Zones 3


Timing: Peppers need plenty of time to mature before they will flower and develop fruit. Begin indoors six to eight weeks prior to last frost date, growing under bright UV lights. Soil temperature for germination: $25-29^{\circ} \mathrm{C}$. Pepper seeds should sprout in $10-21$ days.

Starting: Sow indoors $5 \mathrm{~mm}-1 \mathrm{~cm}\left(1 / 4-1 / 2^{\prime \prime}\right)$ deep, keeping the soil as warm as possible (seedling heating mats speed up germination) - try keeping seedlings at $18-24^{\circ} \mathrm{C}$ during the day, and $16-18^{\circ} \mathrm{C}$ at night. Before pepper seedlings become root-bound, transplant them into $8 \mathrm{~cm}\left(3^{\prime \prime}\right)$ pots. For greatest possible flower set, try to keep them for 4 weeks at night, about $12^{\circ} \mathrm{C}$, then transplant them into $15 \mathrm{~cm}\left(6^{\prime \prime}\right)$ pots, bringing them into a warm room at night, about $21^{\circ} \mathrm{C}$. Nightly low temperatures should be consistently above $12^{\circ} \mathrm{C}$ before hardening off pepper plants and transplanting outdoors.

Days to Maturity: From transplant date.
Growing: Ideal soil pH is between 6.5-7.0. Though peppers will tolerate dry soil, they develop expotentially if kept moist. Harden off before planting outdoors $30-60 \mathrm{~cm}$ (12-24") apart. Five gallon containers also work, but require sufficient drainage and regular irrigation. Pinch back growing tips to encourage leaf production, which is beneficial in providing enough shade for the developing fruits and prevents sun-scald during hot summers. Using plastic mulch with a cloche can increase the temperature by a few degrees, if needed.

Nutrient Preferences: Soil should have abundant phosphorus and calcium, so add lime and compost to the bed at least three weeks prior to transplanting (by mixing $1 / 2$ cup of balanced fertilizer beneath each plant). Peppers appreciate the usual nutrient recommendations - nitrogen (especially during the leafy growth stage), phosphate, and potassium (both especially during the fruiting stage of growth).

Harvest: Peppers can be picked once firm and have reached desired size, however, sweetness can increase dramatically as the fruit ripens; if peppers are harvested when they are still young/green, the plant will continue producing more fruit. Peppers that start after late August will not usually develop or ripen. Pull out the entire bush just before the first frost and hang it upside down in a warm, dry place to ripen hot peppers.

Disease \& Pests: To prevent rot and wilt, plant in well-drained soils and follow a strict 4-year crop rotation. If cutworms become an issue, use paper collars at plant bases. Ensure aphids are controlled
(via insecticidal soap/oil, ladybugs, etc.), which spread tobacco mosiac virus disease (TMV) and can cause young growth to malform pepper plants, leaving their leaves to yellow.

Companion Planting: Pepper plants appreciate being planted near asparagus, basil, carrots, cucumbers, eggplant, endive, oregano, parsley, rosemary, squash, Swiss chard, and tomatoes; avoid planting peppers near beans, brassicas, or fennel.

