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How to Grow and Care for Bell Peppers

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Bell peppers (*Capsicum annuum*) may be the most colorful crop in the garden. Most often found in shades of red, yellow, orange and green, you can also grow white, purple, and brown varieties. Some even produce a rainbow of different colored fruits on one plant. Bell peppers grow into compact bushes with large, alternate leaves, white flowers and fruits on multiple branches. The fruits come in miniature, standard and giant sizes from blocky square-shaped peppers with raised shoulders, to more rounded shapes with tapered bottoms.

Bell peppers require warm temperatures to germinate and produce fruit. Like tomatoes, they belong to the nightshade family, but aren't nearly as fussy about growing conditions. What you do need to know is, despite being fairly sturdy and prolific, they are vulnerable to a host of diseases, some of which can topple your pepper patch like a row of dominoes.

Bell peppers don't pack heat like their [hot pepper](#) cousins and can vary in taste from sweet to a more predominant "green" flavor like [parsley](#). Eaten raw or cooked this is a versatile fruit that adds color, flavor and vitamins to a host of dishes.



The foliage of all nightshade plants, including bell peppers, is toxic to people.^[1]

Common Name	Bell Pepper, Sweet Pepper
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Plant Type	Fruit, annual
Size	18 in. to 3 feet tall
Sun Exposure	Full sun
Soil Type	Fertile loam
Soil pH	Neutral 6.5-7
Bloom Time	Summer
Hardiness Zones	9-11 (USDA)
Native Area	Mexico, Central and South America
Toxicity	Foliage toxic to people ^[1]

How to Plant Bell Peppers

It takes about 75 days for a bell pepper to mature to its green stage and another two to three weeks to develop fully ripe color of red, yellow, orange and more, depending on variety. Due to the time they take to mature, it's best to start peppers from seed 10 to 12 weeks before the last frost date, or purchase seedlings for transplanting into the garden.

When to Plant

Grown as a garden vegetable annual, bell peppers need heat both to germinate and grow. Seeds germinate best at 75 degrees F, and established plants need daytime temperatures of 75 degrees F and above. In most growing zones, bell peppers are planted out in late April or early May.

Selecting a Planting Site

Bell peppers require 6 to 8 hours of sunlight daily. Plant them in well-worked, loamy soil with good drainage. Avoid areas where





Spacing, Depth, and Support

Place plants [18 inches apart](#) in rows 2 1/2 to 3 feet apart. Dig a hole deep enough so the upper portion of the pepper sits at the same level as in the pot. It's okay to pinch off the seed leaves, but avoid stripping and exposing the stem. Peppers don't require staking, however plants heavy with mature fruit will benefit from a single [stake for support](#).

Bell Pepper Plant Care

When you start with strong, healthy transplants and follow a fairly standard care routine, bell peppers are not hard to grow. They are vulnerable to a number of diseases including bacterial, fungal and viruses.^[2] [Soil borne disease](#) can be hard to eradicate and manage so the best course is prevention by employing good garden practices: [crop rotation](#), removing crop debris, and [improving soil quality](#) with compost and cover crops.

Light

Bell peppers need 6 to 8 hours of direct sun daily. Avoid planting them next to taller crops like corn that block the sun.

Soil

A nutrient rich, loamy soil that drains well supports disease resistance and a well-developed root system. Peppers thrive in soil with a balanced pH level of 6.5 to 7.



Water

Bell peppers require 1 to 2 inches of water per week. Drip irrigation works best and soaker hoses provide the deep watering needed.

Overhead watering and too much or too little water leads to fungal



RELATED: [The 9 Best Soaker Hoses of 2023](#)

Temperature and Humidity

Bell peppers flourish in daytime temperatures between 70 and 80 degrees F and nighttime temperatures between 60 and 70 degrees F. At 90 degrees F and below 60 degrees F blossoms can be damaged resulting in blossom drop or small, misshapen fruit. Relative humidity levels of 50 to 70 percent are sufficient. Higher levels can encourage color development in varieties other than green.

Fertilizer

Heavy feeders, bell peppers benefit from scheduled applications of fertilizer. Apply one with a slightly higher NPK ratio of phosphorous such as 5-10-10 at planting time and again when blossoms set. As fruits begin to form a balanced NPK of 10-10-10 can support development. Avoid fertilizers high in nitrogen early in the season which can cause excessive leafy growth instead of blossoms, buds and fruits.

Pollination

Flowers have both male and female parts for self-pollination. You don't need more than one pepper plant or insect pollinators to get fruits. Cross-pollination can occur when different varieties are grown together but it won't affect the current crop. Saved seed, however, won't produce a plant the same as the parent.

Types of Bell Peppers

Dozens of varieties are available including heirlooms and hybrids. Many have been cultivated for disease resistance and for fruit size and color. No matter where you live, you can find a bell pepper to grow in your garden.



- **Sweet Chocolate Bell:** 75 days. Medium size heirloom fruits ripen from green to brown and develop best flavor when fully ripe.
- **Ozark Giant:** 70-85 days. Large, heirloom fruits are thick walled and sweet. Heavy yields turn from green to red and require staking.
- **Gourmet:** 58 days. Bears large orange fruits with thick walls and crisp, sweet flesh. Tobacco mosaic virus (TMV) resistant.
- **Early Sunsation Hybrid:** 69 days. One of the earliest bell peppers with large, bright yellow fruits.
- **Mini Belle Blend:** 60 days. Tiny 1 1/4 inch fruits turn from green to shades of yellow and red at maturity. Compact plants work well in containers. Tobacco mosaic virus (TMV) resistant.

Variety vs. Variety

Bell peppers are often referred to as sweet peppers, but not all sweet peppers are bells. Sweet Banana, Corno di Toro, Marconi, Gypsy Hybrid, Lipstick, and other sweet peppers produce narrow, elongated fruits with more seeds than the blocky fruits of bell peppers. Both types are used interchangeably but bell peppers are better for stuffing while long, thin, sweet peppers are often used in salads and for pickling.

Harvesting Bell Peppers

When it comes to picking your peppers, it's all about color and that first frost date for your growing zone. Choose a variety with a "days to maturity" that falls within your growing season and remember, seedlings set out too early just sit, waiting for temperatures to warm up. The number of days to maturity usually refers to the "green" stage



size.

Use a sharp sterile snipper, or hand pruner to remove fruit leaving an inch of stem attached. Peppers can be refrigerated for one to two weeks or washed, seeded, sliced and frozen for eight to ten months.

Tip

Like tomatoes, peppers that show some color will continue to turn when picked early but the fruit won't develop full flavor and will shrivel if left out too long.

How to Grow Bell Peppers in Pots

Due to their compact, bushy form, bell peppers adapt readily to growing in pots. Choose a pot at least 12 inches in diameter with plenty of drainage holes. Both plastic and ceramic pots work well.

- 01 Fill the container with an organically rich potting mix. Avoid using garden soil.
- 02 Make a hole in the center deep and wide enough to accommodate the seedling's root system.
- 03 Backfill around the roots, gently pressing down to seat the plant but avoid compacting the soil.

The quality and nutrient value of your potting mix will determine how often to add fertilizer. Apply a 5-10-10 when planting and again at first bloom. Add a balanced 10-10-10 when fruit starts to form. Peppers grown in pots need to be watered more often than those in the ground.



produce buds or fruit to direct energy toward peppers already developing. Use a sharp, sterile hand pruner and cut branches at their base.

Propagating Bell Peppers

Greenhouse growers may offer a variety of bell pepper seedlings, but starting plants from purchased seed greatly extends your options. Seeding is the easiest method and fresh seed gives the greatest germination rate as pepper seeds are short-lived.. Start seeds 10 to 12 weeks before you plan to set the seedlings out in the garden. You need a tray with one to two inch cells or small pots with drainage holes, and soilless [seed starting mix](#).

- 01 Dampen the seed starter with warm water. Fill the cell tray or pots with the seed starter.
- 02 Using your index finger, poke a shallow hole in the center of each pot.
- 03 Place a seed in each hole and cover with seed starter.
- 04 Cover the tray with a plastic dome or use plastic bags to cover pots.
- 05 Place the starts in a warm location with steady temperatures of 75 to 80 degrees F. Bottom heat aids [germination](#).
- 06 Maintain moisture but avoid overwatering which can cause [damping off](#). Watering from the bottom helps. If the soil surface appears dry, add water.
- 07 Once seedlings emerge, remove the plastic.
- 08 Peppers can be potted up when the first set of true leaves appears. Waiting until several sets of leaves are present results in a stronger stem and helps avoid damage during repotting.



- 10 When daytime temperatures warm up, begin hardening off your seedlings by placing them outside for several hours each day.
- 11 Plant peppers in the garden when nighttime temperatures are steady at 60 degrees F and above.

Common Pests and Plant Diseases

Healthy pepper plants are not affected much by insect pests. Most damaging are aphids, thrips, flea beetles, pepper weevils and hornworms. Pepper weevils ruin fruits by laying eggs in the flesh. Larvae tunnel through the inside causing damage and rot. Hornworms can defoliate a mature plant and flea beetles can defoliate young seedlings.

Bell peppers are vulnerable to disease and once a fungal or bacterial infection sets in, it can spread through the patch affecting an entire crop. Particularly susceptible to fungus, peppers also can succumb to bacterial wilts and cankers. Viruses endemic to bell peppers include cucumber mosaic virus and tomato spotted wilt virus.^[2]

FAQ

Can bell peppers and hot peppers be grown together?

Yes. While pepper plants can cross pollinate this does not affect the current crop. Bell peppers won't develop heat when planted next to hot peppers. However, plants grown from saved seed will not be true to the mother plant.