

Grow Your Own PEPPERS

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Peppers probably come in a greater variety of sizes, shapes, colors, and tastes than most other garden vegetables. Currently the most popular peppers are the mild bell and banana types and the pungent Hungarian wax types.

Peppers will produce a large yield in a small amount of space, making them suited for even small gardens. Their popularity with gardeners can also be attributed to their unique taste, their visual attractiveness, and their richness as a source of vitamins A and C.

Although there are numerous common or commercial names for peppers, pepper varieties can be classified in two main types, those with mild or sweet-fleshed fruit and those with hot or pungent-fleshed fruit.

Pungency, which is determined by the amount and location of the compound capsaicin, varies from sweet to hot to very hot. The "sweet" include Bell, Pimiento, and Sweet Cherry. The "hot" include Cayenne, Celestial, and Large Cherry.

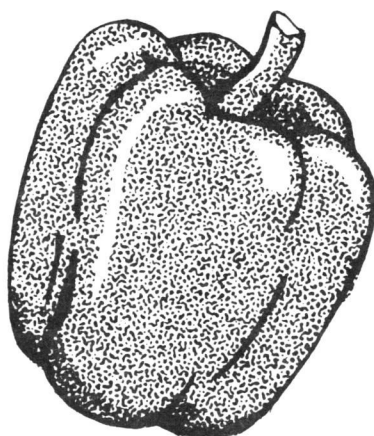
Bell peppers, probably the most popular type grown in gardens, are characterized by large, block-shaped fruits that have three or four lobes. They are about 3 inches wide, 4 inches long, and taper slightly. Starting off as dark green to yellow-green, most turn red when fully ripe although some turn yellow.

They're normally harvested in the mature, green stage for a variety of uses including stuffing, relishes, salads, and cooked vegetable dishes.

About 200 varieties are in the Bell group. California Wonder and Yolo Wonder belong to this group. Some dependable varieties are Early Cal Wonder, Bell Boy, Bellringer, Cal Wonder 300, Keystone Resistant Giant, Pip, Cnape, Lady Bell, Gypsy, and New Ace Hybrid.

Pimiento peppers are sweet and have very thick walls. The fruit is conical, 2 to 3 inches wide, 3 to 4 inches long, and slightly pointed. Pimientos are red when ripe, the most commonly used stage. Popular varieties include Bighart, Perfection, Pimiento, and Truhart.

Cherry peppers are cherry- or globe-shaped with three cells. They grow on long upright stems, usually above the leaves of the plant. They're usually orange to deep red when harvested and may be sweet or hot, large or small.



Varieties include Sweet Cherry, Bird's Eye, Red Cherry Small, and Red Cherry Large.

Celestial peppers are very hot and cone-shaped. They grow upright above the plant's leaves. They're $\frac{3}{4}$ inch to 2 inches long, have three cells, and may or may not change color from yellowish to red or purplish to light, orange-red.

Different colored fruit can appear on a plant at the same time, making the plant very attractive. They are ornamental, grow best in containers, and are good patio plants. Popular varieties are Celestial, Floral Gem, and Fresno Chile.

Tabasco. These 1- to 3-inch long fruits are slim, tapered, and very hot. They are attractive ornamental plants as well as having fruit that you can harvest. The most popular pepper of this group is Tabasco, grown commercially for making tabasco sauce. Others are Chili Piquin, Coral Gem, Japanese Cluster, Thai Hot, and Small Red Chili.

Climatic requirements

Because peppers are of tropical origin and in the same family as tomatoes and eggplant, peppers thrive best when temperatures are warm. Consequently, delay transplanting until the danger of frost is past.

The ideal temperature for growing green peppers is 70 to 80°F during the day and 60 to 70°F at night.

Blossoms may not set fruit if temperatures are below these ranges or if soil moisture is depleted.

Some varieties that experience temperatures below 60°F will not even blossom. Select the variety most suited for your area's temperature.

Peppers mature slowly, taking at least 45 to 55 days after pollination to produce harvestable fruit under good growing conditions. For this reason, several varieties should not be grown where the frost-free season does not exceed 120 days.

In many areas, temperatures during the day and night are so low that even though frost is not experienced, maturity of the crop may be delayed 15 to 20 days.

Other environmental conditions that cause an extreme loss of water will result in the dropping of flower buds, flowers, and small fruit. Even though there may be adequate moisture available in the soil, a dry (low-humidity), warm, or windy day will cause rapid, excessive transpiration that the plant can't tolerate. Low soil moisture, under favorable weather conditions, can also cause bud and blossom drop.

Soil preparation

Pepper plants grow best in warm, well-drained soils of moderate fertility and good tilth. Seedbed preparation should start when the soil has sufficient

moisture to form a mud ball that will crumble into medium-sized fragments.

Cultivation should mix crop residues and organic matter in the top 7 to 8 inches of soil. It should destroy current weed growth and provide a small, granular type of bed for transplanting. Overcultivated soil becomes powdery and has a tendency to crust. Ideal pH for peppers is 6.0 to 8.0.

Fertilizer

One pound of a preplant fertilizer (20-20-20, for example) for each 100 square feet is recommended. One week after blossoming begins, sidedress with 1½ oz of ammonium sulfate for each 10 feet of row.

You can base the amount of fertilizer you apply on a soil test report from the OSU Soils Laboratory or a private testing laboratory, if you wish.

Planting transplants

Peppers are best started in home gardens by using transplants after the soil has warmed in the spring. Peppers should start growing quickly after planting and maintain this rapid growth rate.

If peppers start blooming and set fruit while the plants are too small, they will be stunted and fail to develop the plant size necessary for a good yield. Such premature fruit should be removed.

Don't attempt to grow peppers from seed unless you have a greenhouse or a

hotbed with a good exposure to sunlight. Pepper seedlings don't grow satisfactorily under artificial lights or on windowsills.

Transplant stocky, sturdy plants into a well-prepared soil that has been fertilized before. Normally, a preplant fertilizer of 0.2 pound nitrogen for each 100 square feet is recommended. When first fruits set, sidedress with 1½ ounces ammonium sulfate for every 10 feet of row space.

Make the transplant holes 3 to 4 inches deep and about 14 to 18 inches apart in the row. Space the rows 24 to 36 inches apart. Before planting, fill the holes with water and let it soak in.

Move the plants carefully from the box or flat and set them in the transplant holes. Leave as much soil as possible around the roots. Fill the hole with soil and pack loosely around the plant.

Don't cover the roots deeper than the original soil ball. Leave a slightly sunken area around each plant to hold water. Water the plants after planting.

Try to transplant peppers in the evening or on a cloudy day. This will keep the plants from wilting and getting too dry. You can use a board or shingle to protect transplants from excessive wind and sun.

While use of peppers varies from family to family, about three to four hot pepper plants and eight to ten sweet pepper plants usually are enough for a family of four.

Pepper seedlings



Cultural practices and watering

Cultivation should be shallow when necessary to remove other plant competition. Deep cultivation close to the plants will destroy much of the root system and reduce yield and quality.

After the plants are well established, applied mulches can conserve soil moisture, prevent soil compaction, and help suppress weed growth.

Insects and diseases

These insects may be a problem: green peach aphid, garden symphylan, flea beetles, spider mites, and wireworms.

Disease can hurt pepper plants. These include: curly top virus, alfalfa mosaic virus, tomato ringspot virus, anthracnose, cercospora leaf spot, common mosaic, root rot, and verticillium wilt. See Fact Sheet 242, *Discourage Plant Diseases in Your Home Garden*, for more information (no charge for single copy; order from OSU Bulletin Office, Corvallis 97331).

Harvesting

You can harvest at any time. Peppers are generally harvested by breaking them from the plant, leaving the stem attached to the fruits. Be careful not to break entire branches from the plant.

Some gardeners prefer to cut off the fruits to prevent damage to the plant. If peppers are picked as they mature, yields will be greater.

The first peppers should be ready 8 to 10 weeks after transplanting. The Bell varieties, however, are usually picked when they are full-grown and mature—3 to 4 inches long, firm and green.

When the fruits are mature, they will break easily from the plant. The fruits may be left on the plant to ripen fully to a red or yellow color. Hot peppers, except Jalapeno (which remains green when ripe), are usually harvested at the red ripe stage.

Two methods are used to dry hot peppers.

The traditional method is to pick fruits when mature, tie the stems together, and hang them in a dry area such as a garage. Avoid direct sunlight, and check the fruit daily to be sure no rot is developing. If a fruit rots, pull from bunch and discard.

A simpler method consists of pulling up the entire plant and hanging it upside down in a dark, dry area for 3 to 4 weeks. Leaves will keep the fruits apart, so there is no need to check for rot. When fruits are dry, pull off and store.

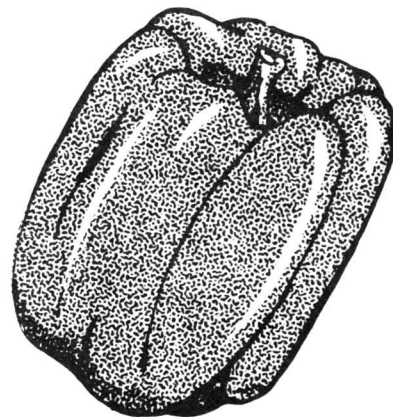
Storage

In general, peppers have a short storage life (1 to 2 weeks). Cool, moist conditions (45 to 50°F) and 85 to 90% relative humidity make for ideal storage. Freeze peppers whole or in slices. Peppers frozen without blanching are best in uncooked foods. Blanched peppers are easier to pack and are best in cooked foods.

Store hot peppers after drying in an airtight container out of the heat and direct sunlight. They will keep their hot flavor for several years if stored properly.

When you use dried hot peppers, place in a pestle and grind. For extra hot powder, grind the seeds, too. If you want mildly hot powder, remove the seeds. Be careful not to touch your eyes, lips, or mucus membranes without washing your hands after handling hot peppers.

If you have never used hot peppers in cooking, start off with small amounts and work up to hotter foods. Adding half a pepper to a dish for four people will make it hot enough for beginners. Dishes for four with one-and-a-half peppers are really hot!



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