

Grow Your Own

PEPPERS

N.S. MANSOUR

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

Peppers produce a large yield in a small amount of space, making them suited for even small gardens. Their popularity with gardeners also can be attributed to their unique taste, their visual attractiveness, and their richness in 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. The "sweet" include Bell, Pimiento, and Sweet Cherry. The "hot" include Anaheim, Cayenne and Jalapeno; and the very hot, Tabasco and Habanero.

Bell peppers, probably the most popular type grown in gardens, are characterized by large, block-shaped fruits with three or four lobes. They are about 3 inches wide,

4 to 6 inches long, and sometimes they taper slightly. They start off as dark green to yellow-green, and most turn red when fully ripe, although some turn yellow, purple, orange, or brown. A few start out white and don't change color!

Bells normally are harvested in the mature, green stage. They serve 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 are two of the most dependable in this group. Other dependable varieties are Early Cal Wonder, Bell Boy, Bellringer, Cal Wonder 300, Keystone Resistant

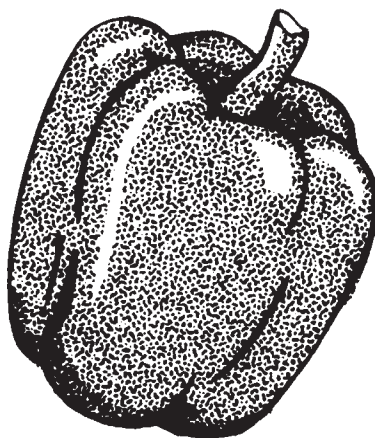
Giant, Pip, Canape, Lady Bell, Gypsy, and New Ace Hybrid.

Varieties that are not red at maturity include Golden Bell, Klondike Bell, and Orobelle, which turn from green to yellow. Oriole turns orange. Purple Bell, Lorelei, and Violetta turn purple. The Dove stays white.

Pimiento peppers are sweet with 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 Perfection Pimiento, and Pimiento L.

Cherry peppers are cherry- or globe-shaped with three cells. They grow on long upright stems, usually above the leaves of the plant. They range from 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.



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Celestial peppers are cone-shaped and taste very hot. 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 grow on a plant at the same time, making the plant colorful and attractive. Celestial peppers are ornamental, grow best in containers, and are good patio plants. Popular varieties are Celestial, Floral Gem, and Fresno Chile.

Tabasco peppers are 1 to 3 inches long, slim, tapered, and very hot. They are attractive ornamental plants that provide fruit you can harvest. The most popular pepper of this group is Tabasco, grown commercially for making tabasco sauce. Other hot peppers are Chili Piquin, Coral Gem, Japanese Cluster, Thai Hot, and Small Red Chili.

Ornamental and novelty peppers include the varieties Riot, Marbels, and the orange, lantern-shaped, ultra-hot Habanero.

Climatic requirements

Because peppers are of tropical origin and in the same family as tomatoes and eggplant, they thrive 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 is too dry.

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

Peppers mature slowly. Under good growing conditions, they take at least 45 to 55 days after pollination to produce harvestable fruit. For this reason, several varieties should not be grown where the frost-free season is less than 120 days.

In many areas, temperatures during the day and night are so low that even without frost, maturity may take an additional 15 to 20 days.

Other environmental conditions that cause an extreme loss of water 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 also can cause buds and blossoms to 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 crumbles 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 pre-plant fertilizer (20-20-20, for example) for each 100 square feet is recommended. One week after blossoming begins, sidedress with $1\frac{1}{2}$ ounces 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 a 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 good exposure to sunlight. Pepper seedlings don't grow satisfactorily



Pepper seedlings

under house lights or on windowsills.

Transplant stocky, sturdy plants into a well-prepared soil that has been fertilized before. Normally, a pre-plant 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.

Plastic mulches and row covers

Peppers respond well to plastic mulch and row covers. Plastic mulch should be black or the new photo-selective plastic that maximizes soil warming yet controls weeds. Row covers, if used, should be removed when temperatures inside the cover exceed 90°F for 2 or 3 consecutive days at mid afternoon.

Cultivation and watering

If cultivation is necessary to remove other plant competition, it should be shallow. 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 also 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 Publications Orders, Agricultural Communications, Oregon State University, Administrative Services 422, Corvallis, OR 97331-2119).

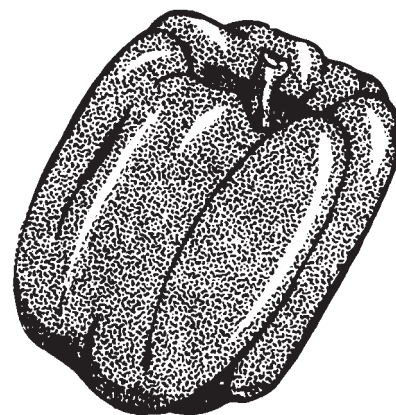
Harvesting and drying

You can harvest at any time. Peppers generally are 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, usually are picked when they are full-grown and mature—3 to 4 inches long, firm, and the desired color.

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 it from the bunch and discard it.

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, fresh 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. Blanching 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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