



Publication 426-413  
Reprinted 1990

## Potatoes, Peppers, and Eggplants

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### POTATOES (WHITE or IRISH)

#### *Environmental Preferences*

**LIGHT:** sunny  
**SOIL:** well-drained, moderate organic matter  
**pH:** 4.8-6.5  
**TEMPERATURE:** cool (55-65°F.)  
**MOISTURE:** uniform moisture, especially while tubers are developing

#### *Culture*

**PLANTING:** 1½ - 2 oz. seed pieces with at least one good eye in early spring; will resist light frost.

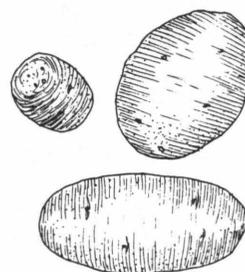
**SPACING:** 10-12" x 24-36"

**FERTILIZER NEEDS:** In addition to 2 lbs 10-10-10 per 100 sq feet of garden space, add high phosphorus fertilizer (¼ lb per 75 feet of row) before planting. Sidedress about 6 weeks after planting when tubers begin forming or at first cultivation with 4 lbs 10-10-10 per 100 sq. ft.

#### **CULTURAL PRACTICES:**

Both white-skinned and red-skinned potatoes can be grown as an early crop for new potatoes and as a late crop for storage. Choose an early maturing variety and a medium-to-late maturing variety if you want early and late harvests. Plant potatoes from March 15 to April 20, depending on your location. Plant no earlier than between six and four weeks

prior to the last spring frost. Hard frosts and freezes may set back growth. Potatoes prefer cool springs and moisture throughout the growing season. Crops can be successfully planted as late as June for fall harvest and storage but yield may be reduced.

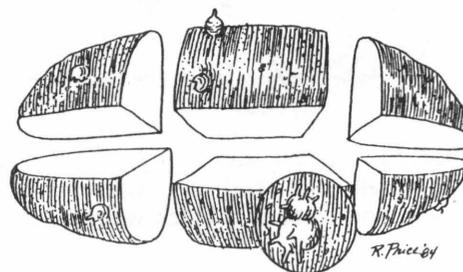


Avoid a garden site in a turned-under lawn as insect grubs may damage developing tubers unless soil insecticides are used.

A soil pH of 6.0 to 6.5 is most desirable for vigorous growth; however, scab disease will be less when the pH is between 5.0 to 5.2.

Purchase certified seed stock that has been inspected for diseases that lower yields. Saving your own seed potatoes is generally not worthwhile because viruses and diseases often show up the next year. Seed potatoes should be firm and unsprouted. Wilted and sprouted potatoes usually have lost vigor from being too warm in storage.

Seed pieces for planting should be cut to about 1½ to 2 ounces or into 1½ inch cubes. Potatoes about six ounces in size will cut into four pieces nicely. Each seed piece must have at least one good bud or eye. Plant potatoes in furrows cut-side down, three to five inches deep. Late crops should be planted five to six inches deep.



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Pull a ridge of soil over each row when planting. Hoe the ridges lightly just before the sprouts break through to eliminate weeds. Later cultivation should be shallow and far enough from the rows to make certain that no roots are damaged.

When the tops have grown too large to allow cultivation, a finishing cultivation, sometimes called laying by or hilling up, is given. Laying by throws soil over the potatoes to prevent exposure of the potatoes to sun which can cause greening or scalding. Green portions of potatoes taste bitter and contain an alkaloid. Cut off and discard green areas before using.

If large quantities of straw are available, a good crop can be grown with less work by placing the seed pieces on top of the soil and covering with 2-3 feet of straw. Tubers will form at ground level and in the straw, easing harvest considerably.

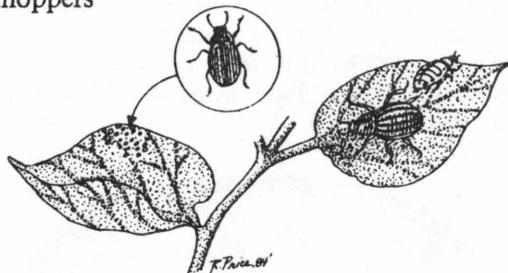
The release of the new "true seed potatoes" is an interesting development. The major advantage of growing potatoes from seed is the decreased chance of disease. True seed potatoes are a novelty now, although future breeding work will develop varieties with improved yields. At the present time the use of seed pieces from good quality stock potatoes is less time consuming and gives a better yield.

### Common Problems

**DISEASES:** early blight; scab; late blight; tuber rots; virus complex; and fusarium, verticillium, and bacterial wilts.



**INSECTS:** Colorado potato beetles, flea beetles, leafhoppers



**CULTURAL:** green skin (sun exposure), hollow heart (alternate wet and dry conditions), black walnut wilt (too close to a black walnut tree).

### Harvesting and Storage

**DAYS TO MATURITY:** 100-120

**HARVEST:** Dig early potatoes when tubers are large enough to eat. Harvest potatoes for storage two weeks after the vines die down or just after the first light frost nips the vines, before heavy freezing. Avoid skinning tubers when digging and avoid long exposure to light.

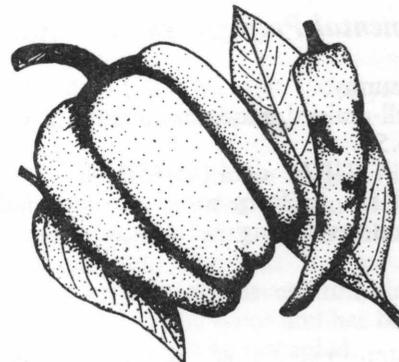
**APPROXIMATE YIELDS:** (per 10 foot row) 10-20 lbs.

**AMOUNT TO RAISE PER PERSON:** 75-100 lbs. Plant about 15 lbs. of seed potatoes per person.

**STORAGE:** medium-cool (40-50°F), moist (90% RH), dark conditions; 6-8 months. Sprouting is a problem at high temperatures.

**PRESERVATION:** usually stored in medium cool, moist conditions. Cooked potatoes can be frozen.

### PEPPERS



### Environmental Preferences

**LIGHT:** sunny  
**SOILS:** well-drained, loose, moderate organic matter  
**pH:** 5.5-6.5  
**TEMPERATURE:** warm (70-75°F);  
**MOISTURE:** average

### Culture

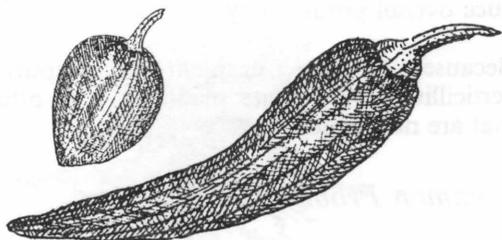
**PLANTING:** Set out transplants after the soil has thoroughly warmed in the spring, start seed indoors 6-8 weeks previous to this date or buy transplants.

**SPACING:** 18-24" x 30-36"

**FERTILIZER NEEDS:** Incorporate 2 lbs 10-10-10 per 100 sq. feet before planting, use starter solution for transplants. Using no more than 1 lb 10-10-10 per 1,000 sq ft., sidedress cautiously after first fruit sets, as too much may cause excessive vegetative growth.

#### **CULTURAL PRACTICES:**

Peppers are divided into six botanical groups, but most are classified according to their degree of hot or mild flavor. The mild peppers include bell, banana, pimiento and sweet cherry while the hot peppers include the cayenne, celestial, large cherry, and tabasco.



Bell peppers, about 3" wide by 4" long, usually have 3-4 lobes and a blocky appearance. They are commonly harvested when green but will turn red or yellow when fully ripe. About 200 varieties are available. Banana peppers are long and tapering and harvested ripe when yellow, orange or red. Pimiento peppers have conical, 2-3" wide by 4" long, thick walled fruit. Most pimientos are used when red and fully ripe. Cherry peppers vary in size and flavor. Usually they are harvested orange to deep red.

Slim, pointed, slightly twisted fruits characterize the hot cayenne pepper group. These can be harvested either when green or red and include varieties such as Anaheim, cayenne, serrano and jalapeno. Celestial peppers are cone shaped, 3/4" to 2" long, and very hot. They vary in color from yellow to red to purple making them an attractive plant to grow. Slender, 1" to 3", pointed Tabasco peppers taste extremely hot and include such varieties as Chili Piquin and Small Red Chili.

Peppers generally have a long growing season and suffer slow growth during cool periods. Therefore, after the soil has thoroughly warmed in the spring, set out 6-8 week old transplants to get a head start toward harvest. Practice good cultivation and provide adequate moisture. Mulching can help to conserve water and reduce weeds.

To get maximum yields from sweet peppers, harvest while still green. This stimulates the plant to continue flowering and produce new fruits. However, allowing the fruit to mature and turn red increases the Vitamin A and C content.

Hot peppers are usually allowed to ripen fully and change colors (except for Jalapenos) and have small, long, thin, tapering fruits. Yields are small for hot peppers.

Blossoms may drop when night temperatures go above 75° or when a full crop of fruit has set on the plant.

#### **Common Problems**

**DISEASES:** tobacco mosaic virus, bacterial spot, anthracnose

**INSECTS:** aphids, flea beetles, cutworms, European corn borer

**CULTURAL:** blossom end rot (moisture irregularities or calcium deficiency)

#### **Harvesting and Storage**

**DAYS TO MATURITY:** 100-120 from seed, 70-85 from transplants

**HARVEST:** Harvest sweet peppers when they reach full size, while still in the green or yellow state. When allowed to mature on the plant most varieties turn red and sweeten. Cut instead of pulling, to avoid breaking branches. Allow hot peppers to ripen on the plant. Entire plants may be pulled and hung just before fall frost.

**APPROXIMATE YIELDS:** (per 10 feet of row) 2-8 lbs.

**AMOUNT TO RAISE PER PERSON:** 3-10 lbs.

**STORAGE:** medium cool conditions (45-50°F), moist (95% RH); 2-3 weeks

**PRESERVATION:** freeze, pickle, and use in relishes, dry.

## **EGGPLANTS**

### **Environmental Preferences**

**LIGHT:** sunny

**SOIL:** well-drained, high organic matter

**pH:** 6.0-7.0

**TEMPERATURE:** warm (70°-85°F)

**MOISTURE:** average



**Culture**

**PLANTING:** Transplant after danger of frost, when soil is thoroughly warm.

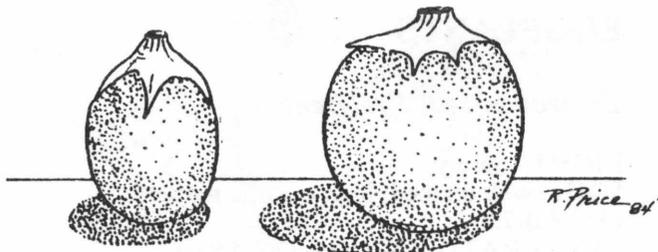
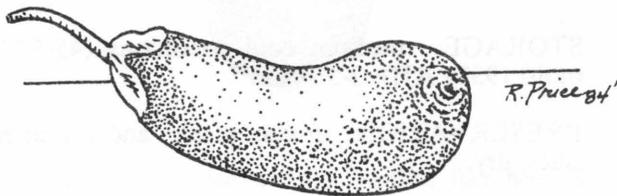
**SPACING:** 18-24" x 30"-36"

**HARDINESS:** very tender annual

**FERTILIZER NEEDS:** Preplant broadcast 3 lbs 10-10-10 per 100 sq. ft. Use starter solution on transplants. Sidedress 1 lb 10-10-10 per 100 sq. ft. 3-4 weeks after planting and repeat in one month if needed.

**CULTURAL PRACTICES:**

The standard eggplant produces egg-shaped, glossy, purple-black fruit 6-9" long. The long, slender Japanese eggplant has a thin skin and delicate flavor. Both standard and miniature eggplants can be grown successfully in containers, but standards yield a better crop. White, ornamental varieties are available and edible but have poor eating quality.



Warm to hot weather throughout the season is necessary for good production. Seeds germinate quickly at 70°-90°F, and plants should be grown for 8-9 weeks before setting them out. Cold temperatures will stop plant and root growth, reducing plant vigor and yields. Using hot caps or cloches protects plants from cold conditions.

Though eggplants do well in hot weather, they must have well drained soil and do not thrive in very humid areas. When plants are about 6" high, nip back the growing tip to encourage branching. Pick fruits when immature, about 2/3 maximum size. Mature fruit should not be left on the plant as this will reduce overall productivity.

Because of the eggplant's susceptibility to verticillium wilt, rotate plantings with other crops that are not related.

**Common Problems**

**DISEASES:** Verticillium wilt

**INSECTS:** flea beetles, aphids, lace bugs, Colorado potato beetle, red spider mites

**Harvesting and Storage**

**DAYS TO MATURITY:** 100-150 days from seed; 70-85 days from transplants

**HARVEST:** Fruit should be large, shiny, and a uniformly deep purple color. When the side of the fruit is pressed slightly with the thumbnail and an indentation remains, the fruit is ripe. Japanese eggplant may be ready to harvest from finger or hot dog size. If fruit is a dull color and has brown seeds, it is too ripe and should be discarded.

**APPROXIMATE YIELDS:** (per 10 feet of row) 20 pounds

**AMOUNT TO RAISE PER PERSON:** 12 lbs.

**STORAGE:** cool (45-50°F) moist (90% RH) conditions; 1 week

**PRESERVATION:** freeze, pickle