



Potatoes

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Figure 1: Red, white and blue potatoes. 20211106-FPAC-PJK-13577_TONED, FPAC/USDA photo by Preston Keres, November 6, 2021, Public Domain

after tubers begin forming using 1 lb. 10-10-10 per 50-foot row.

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. Plant potatoes early from March 15 to April 20, depending on your location. 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 grub worms may damage developing tubers unless soil insecticides are used.

A soil pH of 6.0 to 6.5 is most desirable; however, scab disease will be less when the pH is between 5.0 to 5.2. Work this into the furrow and mix with the soil before planting.

Purchase certified seed stock that has been inspected for diseases that lower yields. Saving your own seed potatoes is generally not worthwhile because the viruses and diseases 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 6 ounces in size will cut into four pieces nicely. Each seed piece should have at least one good bud or eye. Allow to dry or cure before planting. Plant potatoes in furrows cut side down, 3 to 5 inches deep. Later crops should be planted 5 to 6 inches deep.

Environmental Preferences

- Light:** Sunny
- Soil:** Well-drained with moderate organic matter
- Fertility:** Medium-rich. pH: 4.8 to 6.5
- Temperature:** Cool (55 TO 65°F).
- Moisture:** Uniform moisture, especially while tubers are developing.

Culture

- Planting:** Plant 1½ - to 2-ounce seed pieces with at least one good eye in early spring; will resist light frost.
- Spacing:** 10 to 12 inches by 24 to 36 inches.
- Fertilizer:** Medium-heavy feeder. Add high phosphorus fertilizer before planting, using 2½ lbs. 5-10-10 per 50-foot row. Sidedress 1 or 2 times

Chitting, a controlled sprouting of the seed potato, is an old English technique for forcing potatoes. Early varieties respond best. Place potatoes in a cool room (55°F) with indirect light. Short, sturdy green sprouts about ½ inch long will develop in about one month, providing sprouted seed potatoes for planting. Use care not to break sprouts.

Pull a ridge of soil over each row when planting. Drag a board or hoe across the ridges 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 on potatoes taste bitter and contain an alkaloid. Cut off and discard green areas before using.

An alternative of planting in areas with heavy clay soil is to grow plants in straw or leaf beds above ground. This requires 2-3 feet of organic matter and more frequent watering than in ground production but produces clean, easily dug tubers.

Common Problems

- Insects:** Aphids, Colorado potato beetles, flea beetles, leafhoppers, whitefly.
- Diseases:** Early blight; scab; late blight; tuber rots; verticillium, and bacterial wilts.
- Cultural:** Green skin from sun exposure; hollow heart from alternating wet and dry conditions; Black Walnut wilt from being too close to a Black Walnut tree.

Harvesting and Storage

- Days to Maturity:** 100 to 120 days.
- 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: 6 to 15 pounds per 10-foot row.

Amount to Raise: 75 to 100 pounds per person (about 15 pounds of seed potatoes).

Storage: Medium-cool (40 to 50°F), moist (90% relative humidity) conditions for six to eight months. Sprouting is a problem at higher temperatures.

Preservation: Medium-cool, moist conditions.

Acknowledgement

This publication was part of a larger Virginia Cooperative Extension publication 426-312 on Potatoes, Peppers and Eggplants.

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2025

SPES-685NP