

Organic Potatoes:

Growing and Seed Saving Information



Types of Potatoes

Potatoes (*Solanum tuberosum*) are a hardy cool season crop in the the *Solanaceae* family which includes peppers, tomatoes, tomatillos, eggplant and ground cherries. They are classified by early, mid, and late season varieties, which refers to the days to maturity.

Soil and Nutrient Requirements

Loose, deep, well drained soil on the acidic side (pH 4.8-5.5) will grow the best potatoes. Avoid heavy nitrogen applications, as this can lead to abundant foliage but lower quality tubers that mature later. 140-150 lbs of nitrogen/acre is average.

Position

Potatoes need at least 6 hours of sunlight.

Seeding Depth

3-6"

Plant Spacing

12"

Row Spacing

30-36"

When to Sow

Potatoes can be planted 1-2 weeks before the last frost date in spring. Small potatoes (1-1.5" diameter) can be planted whole or larger potatoes can be cut into pieces. Each piece of the tuber should have at least one eye (dormant bud). Cut the tubers a day early in order for the skin to dry before planting. Sprouts appear in 2 weeks.

Other Considerations

Hill plants shortly after emergence and again 3 weeks later, making sure to cover all exposed tubers to avoid greening, increase number of tubers, and promote larger growth.

Frost Tolerant

Yes

Drought Tolerant

Potatoes need consistent plentiful moisture for best yields and lowest incidence of scab.

Heat Tolerant

Potatoes grow best when temperatures average just below 70 degrees.

Seed Specs

Fingerling- 20 pieces/lb avg; Full Size- 8-10 pieces/lb avg.

Seeding Rate

Fingerling- 50 lb/1000', 900 lbs/acre, using 12" plant spacing, 30" row spacing. Full Size- 80-100lb/1000', 1,100-1,450 lb/acre, using 12" plant spacing, 36" row spacing.

Harvest

New potatoes can be harvested when plants begin to flower, around 7-8 weeks after planting. Storage potatoes should be harvested no earlier than 2 weeks after plants have died back.

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Storage

Potatoes should be left out in a dry dark place to cure. Store potatoes in burlap, boxes, or crates in a dark, moist area at 38- 40°F.

Pest Info

- The Colorado potato beetle (CPB) can be a significant pest. While *Bacillus thuringiensis var. tenebrionis* is effective against CPB and was formerly the easiest insecticide to use, the current formulations have been removed from OMRI-A status due to difficulties with assessing inert ingredients. Luckily there is a new addition to the arsenal in the form of spinosad (such as Entrust™). Spinosad works rapidly and effectively against CPB, as well as against corn earworm, imported cabbage worm, codling moth, and several other difficult lepidopterous pests. Ideally we will regain access to Bt so that these two formulas can be used in rotation with one another to prevent selection of resistant insects. Crop rotation, control of solanaceous weeds, barrier trenches between old and new plantings, trap cropping, use of straw mulch or row cover can delay or reduce CPB pressure.

Disease Info

- Scab, caused primarily by the bacteria *Streptomyces scabies*, adversely affects grade and cooking quality, though not yield and storage. Scab is most severe in dry weather, when bacteria antagonistic to *Streptomyces* in the potato lenticel dry up, allowing scab to more easily infect the plant. For prevention, select scab-resistant varieties and maintain good soil moisture.
- Late blight is severely destructive, with the potential of total crop loss. Caused by the fungus *Phytophthora infestans*, late blight is most prevalent in moister climates such as the eastern regions of the U.S. Symptoms of late blight include water-soaked areas at the leaf tips that spread inwards and become dark brown and brittle after one or two days. Symptoms can superficially resemble early blight, but are distinguished by the fact that late blight obliterates the pattern of leaf veins where as early blight does not. Action must be taken quickly if symptoms appear. Because late blight is wind borne and spreads easily, controlling its presence in your field can help nearby growers. Remove and destroy infected plants and/or use fungicidal sprays such as oxidate (such as Storox™, see Supplies) and/or copper hydroxide (such as Champion WP™). Check with your organic certifier before applying suggested compounds.