



**CORNELL  
COOPERATIVE  
EXTENSION OF  
ONEIDA COUNTY**

# HOME GROWN FACTS

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## GROWING POTATOES

A nutritional mother lode, potatoes are easy to grow as long as they have full sun, moderate temperatures, and light, rich, acidic, well-drained soil. Try varieties with colors, shapes and flavors you won't find in the supermarket.

### Site Characteristics

#### Sunlight:

- full sun

Requires at least 6 hours of sun each day.

#### Soil conditions:

- requires acid soil
- requires well-drained soil

Prefers well-drained, light, deep, loose soil, high in organic matter. Unlike most vegetables, potatoes perform best in acid soil with pH 4.8 - 5.5. (Scab is less of a problem at low pH. If pH is more than 6.0, use scab-resistant varieties.) Needs plentiful, consistent moisture.

#### Special locations:

- outdoor containers - Sometimes grown in barrels or stacks of old tires filled with compost.

### Plant Traits

#### Lifecycle: annual

An herbaceous perennial grown as an annual in areas that receive frost. Late spring frosts can damage foliage, but growth will usually rebound quickly from underground parts.

#### Ease-of-care: easy

Growing is easy if you have the right site and soil. Pests aren't usually as bad in garden settings as in commercial fields. Fun to grow with kids, especially if you use the deep mulching method.

#### Height: 1.5 to 3 feet

#### Spread: 1.5 to 3 feet

#### Flower color: violet

#### Foliage color: medium green

#### Foliage texture: medium

#### Shape: cushion, mound or clump

Flowers relatively inconspicuous.

#### Shape in flower: same as above

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## Growing Information

### How to plant:

Propagate by division or separation - Grown from seed potatoes -- tubers grown the previous season.

Germination temperature: 40 F - Do not plant seed potatoes until soil reaches 40 F.

Days to emergence: 14 to 28 - Sprouts from seed potatoes should emerge in 2 to 4 weeks depending on soil temperature.

### Maintenance and care:

Potatoes perform best in areas where summers are cool (65 F to 70 F), but are widely adapted.

Potatoes require well-drained soil. (They will rot under prolonged cold, wet conditions.) If your soil is poorly drained or a heavy clay, consider using raised beds. Adding organic matter (compost, cover crops, well-rotted manure or leaves) is a good way to improve soil before growing potatoes. Go easy on organic matter sources high in nitrogen (such as manure) and nitrogen fertilizer as too much nitrogen can encourage lush foliage at the expense of tuber production.

Unlike most vegetables, potatoes perform best in acid soil with pH 4.8 - 5.5. Use scab-resistant varieties with pH above 6.0. Because most other garden vegetables perform best at near-neutral pH, it's usually not feasible to grow potatoes in their preferred pH range, unless you dedicate one section of your garden to growing just potatoes in rotation with cover crops.

Buy certified disease-free seed potatoes from garden centers or through online or mail-order catalogs for best results. If you save your own seed potatoes, discard any that show any signs of disease. Avoid planting potatoes from the supermarket because they may have been treated with sprout inhibitors. They may also be less vigorous and more prone to disease. If you must use supermarket potatoes, use round, white Maine-grown potatoes, not russets or long white potatoes grown in California or Idaho. To see if they'll sprout, take three potatoes and put them in a paper bag and place the bag in a warm location (about 70 F). They should sprout in two weeks if they haven't been treated with sprout inhibitors.

Cut seed potatoes that are larger than a chicken egg into pieces about 1 inch across or slightly larger. Each piece should have at least one "eye" (the bud where the stem will grow from) -- preferably two eyes. Egg-sized and smaller tubers can be planted whole.

Traditionally, cut seed potato pieces are allowed to cure for a few days to a few weeks before planting. This is because the cut potatoes need high humidity, plenty of oxygen and temperatures between 50 F and 65 F to heal quickly. If you have excellent, well-drained soil that meets those conditions, you can plant the seed pieces without curing. But if conditions are not right, the seed potatoes will rot in the ground.

A less risky practice is to put about 5 pounds of cut potatoes into a large grocery bag and fold the top closed. Keep the bag at room temperature for 2 or 3 days, then shake the bag to unstick pieces that may have stuck together. Let sit for another 2 to 3 days and then plant.

If you want fast emergence, keep the bag of cut potatoes at room temperature until sprouts appear. Some varieties are slow to break dormancy and benefit from a 2- to 4-week "pre-warming" before planting. Others sprout in just a few days.

Plant about 2 to 4 weeks before your last frost date. The soil temperature should be at least 40 F. Do not plant where you've grown potatoes, tomatoes, peppers or eggplant in the past 2 years.

One common way to plant potatoes is to dig a shallow trench about 4 inches deep with a hoe. Place the seed potato pieces with their eyes up (cut sides down) about 8 to 12 inches apart in the trench, and replace soil. Space trenches about 2 to 3 feet apart. Stems and foliage should emerge in about 2 to 4 weeks,

depending on soil temperature.

When the plants are about 6 to 8 inches tall, “hill” the potatoes by hoeing soil loosely around the base of the plants to within about an inch of the lower leaves from both sides of the row. Repeat in about 2 to 3 weeks. You may want to make additional hillings, gradually building a 6- to 8-inch ridge down the row. (Hilling keeps the developing potatoes from being exposed to sun, which turns them green and bitter. Green potatoes contain a chemical, solanine, which is toxic in large amounts.)

Alternatively, snuggle seed pieces shallowly into the soil and cover with a thick layer of clean straw or other weed-free mulch. Add more mulch as needed to keep light from reaching potatoes. (A foot or more of mulch may be required.) Tubers grown this way can be easily harvested by pulling back the mulch after the plants die.

A third method if you have excellent potato-growing soil is to plant seed potatoes 7 to 8 inches deep and skip hilling or deep mulching. The potatoes are slower to emerge, but this method requires less effort during the growing season. Deep planting is not good in cold, damp soils and it requires more work to dig the potatoes at harvest.

Potatoes need at least 1 inch of water per week from either rainfall or deep watering. Mulching helps retain moisture. Keeping the soil from drying out also helps reduce scab.

Use row covers to protect from Colorado potato beetles, leaf hoppers and flea beetles. Crush the yellow eggs of Colorado potato beetles on the undersides of leaves. Remove adults by hand.

#### **Pests:**

Colorado potato beetles - Hand pick beetles, eggs and larvae.

Aphids - A hard stream of water can be used to remove aphids from plants. Wash off with water occasionally as needed early in the day. Check for evidence of natural enemies such as gray-brown or bloated parasitized aphids and the presence of alligator-like larvae of lady beetles and lacewings.

Flea beetles - Use row covers to help protect plants from early damage. Put in place at planting and remove before temperatures get too hot. Control weeds.

Leaf hoppers

Wash small nymphs off with a hard stream of water.

#### **Diseases:**

Early blight and Late blight - Use certified seed. Avoid wetting plant foliage if possible. Water early in the day so aboveground plant parts will dry as quickly as possible. Avoid crowding plants. Space apart to allow air circulation. Eliminate weeds around plants and garden area to improve air circulation. In autumn, rake and dispose of all fallen or diseased leaves and tubers. Locate new plants in a part of the garden different from previous year's location. Resistant or moderately resistant varieties include Allegany, Elba, Rosa and Sebago.

The fungus that causes late blight has recently become a major threat to home gardens and commercial growers because of the migration of new strains (genotypes) into the United States. The disease can readily spread from home gardens to commercial fields. Verification of a late blight diagnosis and implementation of prompt control measures are highly recommended. The newly arrived strains are more aggressive than previous strains. Cultural control measures such as those listed above may not adequately control these new strains.

Scab - Use certified seed. Locate new plants in a part of the garden different from previous year's location. If that is not possible, remove infested soil and replace with fresh soil. Lower soil pH to 5.2 with sulfur. Plant resistant varieties: Chieftan, Norland, Russet Burbank, Russet Rural and Superior.

Viral diseases - Use certified seed. Control aphids.

## Varieties

When choosing varieties, consider:

**Season:** Spread out your harvest by choosing early (ready to harvest in about 65 days), mid-season (80 days) and late (more than 90 days) varieties.

**Skin and flesh colors:** Range from purple, red, pink, gold and yellow, in addition to the usual white. Potato varieties have a range of subtle flavors, too.

**Size:** From huge baking potatoes to tiny fingerlings that bake or microwave quickly.

Also look for **scab-resistant varieties** if soil pH is greater than 6.0.

### **Some varieties recommended for New York include:**

Early: Dark Red Norland, Superior

Mid Season: Chieftain - red, high yielding, large, Reba, Salem, Yukon Gold

Late Season: Elba, Katahdin

### Specialty

Adirondack Blue (dark purple skin and flesh)

Adirondack Red (reddish-purple skin and red flesh)

French Fingerling (small, long tubers with pink skin and yellow flesh)

German Butterball (late maturity, round to oblong, golden skin, yellow flesh)

Source: <http://www.explore.cornell.edu> 2006

This publication may contain pesticide recommendations. Changes in pesticide regulations occur constantly, some materials mentioned may no longer be available, and some uses may no longer be legal. All pesticides distributed, sold, and/or applied in New York State must be registered with the New York State Department of Environmental Conservation (DEC). Questions concerning the legality and/or registration status for pesticide use in New York State should be directed to the appropriate Cornell Cooperative Extension Specialist or your regional DEC office. **READ THE LABEL BEFORE APPLYING ANY PESTICIDE.**