



J&L's Gardening Handouts

Tips and Suggestions for Year Round Gardening

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Potato Pointers

Potatoes are not just good, they are good for you. A medium-sized potato has no fat, no cholesterol, and contains only 110 calories. Potatoes are sodium free, are a great source of Vitamin C, have more potassium than bananas, and are a good source of fiber. They have less than 10% of the daily value of carbohydrates and are a great antioxidant. Potatoes also contain glutathione, an antioxidant that may help protect against some cancers. Whether mashed, baked or roasted, people often consider potatoes 'comfort food'. The taste of a newly dug potato, fresh from the garden, can't be beat.

Potatoes, a cousin of the tomato, are native to South America. Potatoes were so well liked by the early Spanish explorers that they were taken back to Europe where they became very popular, and they became an important food crop for the entire continent. Potatoes were so important that when Ireland's potato crop was destroyed by Late Blight in the 1850's, thousands of people starved to death. Today, the potato is the fifth most important crop worldwide, after wheat, corn, rice and sugar cane.



Selecting Potatoes

Potatoes can be an easy and a rewarding vegetable crop in your home garden, when you care for them properly. Each plant requires up to four square feet, and can produce up to ten pounds of potatoes, for every one pound of potatoes you plant.



When purchasing potatoes to use for planting, it is best to buy certified seed potatoes. Certified seed potatoes are disease free, and are true to variety. Using potatoes from the supermarket, or any other uncertified source, has a few risk factors, and is generally not recommended. Also, potatoes from supermarkets, have been treated to prevent sprouting.

For the average gardener, using your own leftover seed potatoes is often very tempting, but it is probably not a good idea. If you want to use you own potatoes, be cautious, and examine the seed potatoes for any sign of stress, imperfections, or disease; do not plant any potato that you would not want to eat.

Planting Time

Plant your potatoes between mid-March and mid-July. Do not plant seed potatoes until the soil reaches 40 F. If potatoes freeze, they will not be viable. It takes potatoes two to three weeks to emerge from the ground, so the earliest you should plant seed potatoes is two weeks before the last anticipated freeze of 28 degrees Fahrenheit or lower.



If you plan to store your potatoes for winter use, plant them later in the spring than you would plant them for summer use. If you want to extend storage length, you can plant a second crop as late as June 1, and still harvest the potatoes for storage. You can plant potatoes later than June 1, but they may not have time to mature. They will still grow; you can still eat them; they may just not store very well.

Pre-Sprouting, Green Sprouting, or Chitting

If you want to get an early start to the potato growing season, or even for planting later in the summer, you can pre-sprout your potatoes before planting. This is often called "chitting" or "green sprouting". The sprouts will be ready to plant outside, as soon as conditions become favorable enough for growing. It can reduce the time from planting to harvest by 10 to 14 days.



Potatoes store best at about 40 F. When it is planting time, you can induce sprouting by raising the temperature of stored potatoes to room temperature, or to at least 60 F.

Don't cut the potatoes until you are ready to plant them. Keep the humidity high, to prevent the potatoes from drying out too much and shriveling up. Shrivelled potatoes will still grow and produce, but production will be poor.

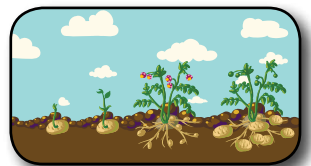
Lay out your potatoes in a single layer on the floor, in planting trays, in egg cartons, or in flats. Place them in direct sunlight. Let the potatoes sit in that warm environment for two to four weeks, until the eyes start to sprout. The sprouts will start to green up, and should grow to at least 1/2 inch long.

By putting them in the light, the shoots will remain short, dark green, and compact. Left in the dark, long, pale brittle shoots develop, that can easily break off while planting.

If you buy tubers that have already started sprouting, don't remove the sprouts, it is best to chit them immediately.

Planting Potatoes

Potatoes grow best in light, sandy soil. They do not like heavy soil, or soil that stays too wet. Potatoes that are grown in heavy soil are usually deformed, stunted, and sometimes do not produce tubers at all.



Potatoes need full sun to produce their largest yield. They will grow in partial sun, if they are not kept too wet.

However, your harvest will be less in the shade.

Crop rotation is important for gardening in general, but it is really important for both potatoes and tomatoes. Avoid growing a crop of potatoes in the same place for at least three years.

Prepare your garden soil by adding one inch of either **Bumper Crop Compost** or a well-rotted mulch. Apply one pound of **16-16-8 Multi-Purpose Fertilizer** per one hundred square feet. Rototill your garden six to twelve inches deep.



Do not add a lot of fresh manure to potato gardens, or you may cause more harm than good. Fresh manure may add maggots to the soil, which love to eat growing potatoes. Too much fresh manure may rob fertilizer from the plant, and may cause the potato to turn black on the inside. This internal black spot is not a disease, it is a physiological disorder caused by stress or from physical injury.

You can either plant seed potatoes whole, or you can cut your potatoes into pieces. Each piece should have at least two, or three "eyes". After cutting, dust the pieces with either Sulfur, or **Bonide Garden Dust**, and let them sit one to two days in a cool, dry area. Letting the cut pieces sit and dry out, helps the fresh-cut areas harden, so they will be less likely to rot in the ground.



Plant your seed potatoes four to six inches deep, and eighteen inches apart. Space your rows two or three feet apart, so your plants will have room to grow, and you will be able to mound dirt around the potato plants during the summer. Cover your potatoes, and water them thoroughly to remove air spaces in the soil.

Watering Potatoes

Once planted, do not water potatoes until the plants are at least five inches tall. The soil usually has plenty of moisture until mid-June, or even early-July. Too much water during this time will make the potatoes rot in the ground. Many potato growers do not water until the potato plants show signs of wilting.



Once you start watering potatoes, you need to maintain an even watering schedule the rest of the summer. Irregular watering causes the plants to start, and stop growing, making them grow in unusual shapes and sizes. The tubers may even form little knobs on the outside edges. Dry conditions may also make the potatoes turn black inside.

This blackness is called Internal Black Spot. It is not a disease, it is a sign of physical stress, similar to Blossom End Rot of Tomatoes. Black Spot is a common problem of potatoes. This condition doesn't usually show up until after harvest and storage. The unaffected part of the potato is still edible, it is just not as appetizing.

Fertilizing Potatoes

Potatoes need a lot of fertilizer each year; the bigger the plants, the more potatoes you will harvest.

After mixing 16-16-8 Multi-Purpose Fertilizer in the soil before planting, side dress them with a little 16-16-8 Multi-Purpose Fertilizer every four to six weeks during the summer. Continue fertilizing them until mid-August.

Hilling - Mounding

Potatoes form tubers on the stems, between the seed and the leaves. To help the potatoes form more tubers, cover the stems with soil during the summer. Mound soil around the stems regularly during the summer. Be careful not to cover the entire plant.



Sunlight will green potatoes that break the soil surface, so keep them covered. Straw may be used, instead of soil, to cover the plants. The more you are able to "hill" the plants, the more potatoes you will harvest. Do not dig right next to the plant, or you may damage the root system, and stunt its growth.



Harvesting Potatoes

Potatoes are usually ready to start harvesting for table use when the blossoms appear on the plant, usually 70 to 90 days, for the early varieties. These should be washed and cooked immediately, as they don't store well. Harvest the larger potatoes, and leave the smaller tubers to continue to develop. Be careful not to damage the root system, so the plants will continue to grow.



Potatoes need to mature before harvesting them for storage. Wait until the plants have died down (100-120 days). Remove the tops, but let the potatoes stay in the ground one to two weeks, and then dig them. This time period allows the skin to thicken, and the tubers to mature for storage. Do not allow them to freeze, or the potatoes will not store properly.



After digging, let the potatoes cure one or two days, before putting them in storage. If you are planning on storing them long, don't wash them. Just gently rub off any dirt, and store in a cool, dark area. However, some potatoes may need washing before storage. If so, be sure they are completely dry before placing them into storage.

Store only firm, healthy potatoes. Eat the damaged ones first. Store potatoes in total darkness, between 40 and 50 degrees F., until you are ready to use them.

Potatoes Turning Green

By B. Rosie Lerner, Extension Consumer Horticulturist Purdue University November 7, 2007

Whether store-bought or homegrown, potatoes will turn green when they are exposed to light. Most folks know that they shouldn't eat potatoes that have turned green, or at least cut away the affected portion. But it's not actually the green color that is the problem.

The green color comes from the pigment chlorophyll, produced as a response to light. The potato tuber that we eat is actually a modified stem structure that grows underground. The "eyes" of the potato tuber are buds, which will sprout into shoots.



Chlorophyll itself is not toxic; however, another response of the potato tuber to light exposure is increased production of a colorless alkaloid called solanine. The amount of solanine increases with the length of exposure and the intensity of light.

Consuming a large quantity of solanine can cause illness, or even death in extreme cases. However, most people are not likely to eat enough of the affected tissue to cause illness, because of solanine's bitter taste.

The highest concentration of solanine is in the skin of the potato; removing the green portion will also remove most of the toxin. Sprouts of the eyes are also high in solanine and should be removed before cooking.

Potatoes will turn green when growing too close to the soil surface, as well as when stored under even low light conditions -- thus, the recommendations to mound potato plants in the garden and store harvested potatoes in complete darkness.

The next time you see a green potato, be thankful for that color change. It's warning you of the presence of toxic solanine.
<http://www.hort.purdue.edu/ext/potatoesgreen.html>

Potato Problems

Internal Black Spot causes the inside of the potato to have a large black area, usually in the center of the potato. This is a physiological problem, not a disease. Extreme summer heat, and dry soil conditions, usually cause this problem. Bruising during harvest can also cause this black spot to occur. Potatoes with this problem do not spread it, nor does it make the potato rotten. Eat the unaffected portion of the potato; it is still edible, just not very appetizing.

Late Blight This disease causes the plant to die suddenly; late in the growing season. The affected plant has leaves with brown rings, that eventually turn yellow and die. Keeping water off the leaves, and fertilizing regularly, is the best prevention for this disease. This disease is caused by a fungus. Spraying with a fungicide, such as daconil, or zineb will help prevent this disease. By the time this disease appears, it is usually too late to cure.

Aphids and Beetles These insects are best controlled by either spraying (or dusting) with an insecticide labeled for use on potatoes, such as **Sevin, Eight or Malathion**. Spray the leaves thoroughly (top and bottom) at regular intervals. Potatoes also have other insect and disease problems, please ask one of our sales clerks if you have other questions about your potato plants.

Remember: Insecticides and fungicides are poisonous. Be sure to always wash your plants and your hands immediately after harvesting, and wash your plants again before you eat them.

Be sure to read the label on every pesticide container - every time - before using the material. Pesticides must be applied only as directed on the label to be in compliance with the law. The label will indicate how long you should wait to harvest the crop, after you apply the pesticide.

Potato Varieties

Russet Burbank This is the most famous potato, the Idaho Baker. It is great to cook with; fried, mashed or baked. The Russet Burbank is an oblong shaped, brown skinned potato. It's vine is 30"-36" tall. It stores well during the winter and does not bruise easily. It



does not grow well in extremely hot areas. Approximately 120 day maturing.

Norgold Russet This is an early maturing russet potato. It is smooth, round and has a brown skin. It too is great for all types of cooking. It has a small plant, about 20 inches tall. Approximately 80 day maturing.

Cal White This potato is an excellent white potato. It has a thick, light brown skin. This potato has a large plant and is very easy to grow. The leaves are large so it is fun to watch grow. Very shallow eyes. Approximately 100 day maturing

Kennebec - Young tubers are tasty for eating early. Later, good for boiling, mashing, baking. Large potato with smooth skin and shallow eyes. Stores well. Approximately 80 day maturing.

Red Pontiac This is the easiest potato to grow. It has a large plant and you can almost watch it grow. It is a large, round, red potato with shallow eyes. It stores well and grows great in this area. Approximately 100 days maturing.



Red Norland This is the earliest potato. It has a small plant and does not grow well in wet areas. It has a smooth, round, red skin with shallow eyes. Good for potato salads. Stores well. Approximately 70 days maturing.

Red LaSoda This variety has a large plant and is easy to grow. It produces well and cooks well. It has a dark red skin and has deep eyes. The tubers are almost round. Approximately 110 days maturing.

All Blue This potato plant has a blue cast. It has blue blossoms and the tuber is purplish-blue. Blue flesh that turns pale when cooked. This is a real novelty and conversation piece. It has a unique flavor and makes great mashed potatoes. Approximately 120 days to maturity.



All Red - Has rich-cranberry-red skin and white flesh, with rosy swirls which hold color during cooking. Large, round tubers with smooth cranberry-red skin and light-rose flesh even when cooked - boiled or roasted. Approximately 70 to 90 days to maturity.

Viking Purple - Early-season. 70-90 days. Stunningly beautiful purple potato has flecks of pink in the skin and pure white flesh. Moist and firm, perfect for baking or mashing. An excellent storage variety.



Yukon Gold This potato has an attractive, smooth, thin, yellow skin. It has shallow eyes and a pale-yellow flesh that tastes as buttery as it looks. It is great for all types of cooking. It keeps well. Approximately 110 days maturing.



More Resources:

<http://potatoes.wsu.edu/varieties/red-vars.htm>

<http://www.thompson-morgan.com/how-to-grow-potatoes-in-the-ground>

<http://www.hort.purdue.edu/ext/potatoesgreen.html>

<http://www.potatoes.com/nutrition>

<http://nationalpotatocouncil.org/potato-facts/>

<http://extension.oregonstate.edu/gardening/tips-keeping-harvested-potatoes-fresh>

Fingerling Potatoes

Narrow, finger-shaped potatoes, called "fingerlings" are used for roasting, boiling, baking, frying, sautéing, grilling, mashing, and are used in salads.



The skin of Fingerling potatoes ranges in color from light-tan to vibrant-purple, while the interior color ranges from creamy-white to light-gold. These potatoes have a distinctly, mild flavor.

Fingerling potatoes are a family of heritage potatoes that naturally grow much smaller than conventional potatoes. They also tend to be elongated and slightly knobbly, making them very finger-like in shape; stubby fingers, not long & slender.

Fingerlings are very small potatoes. Sizes vary, but most are 1 to 2 inches in diameter and 2 to 3 inches long. However, Austrian Crescent, can produce tubers up to 10 inches long.

Some people confuse this family with new potatoes, which are just young potatoes harvested before they fully mature. While they are both small, and they both have thin skins, fingerling potatoes have a more complex flavor, and they are harvested when they are fully mature.

Just like regular potatoes, fingerling potato farmers allow the tops to die back before harvesting the tubers.

Fingerling potatoes are a novelty because of their small size; their moist, waxy texture, and their striking colors. Because the texture of fingerlings is firm and waxy when cooked, they make an ideal potato for salads and casseroles. Waxy potatoes don't absorb oil as readily as mealy potatoes, so they don't go limp in salads, or become soggy in casseroles. Fingerling potatoes are a great alternative for dishes that traditionally use russet potatoes, or new potatoes.

Cost of fingerling Potatoes? Top size, russet potatoes can sell for about \$1 per pound in grocery stores. Fingerling potatoes can sell for up to \$6.00 per pound.

Fingerling Potato Care

Fingerling potatoes are just as easy to grow as other potatoes. Plant, and take care of them, just as you would any of the common, large potatoes.



1. Don't plant seed pieces in the garden until after the last hard frost.

2. To avoid diseases, you need to rotate your crops; do not plant them where other potatoes (tomatoes, peppers, and eggplants) have been grown, for at least a year, two or three years is even better.

3. Cut fingerling seed pieces smaller than those for ordinary potatoes. Cut tubers into 1 ounce pieces that have at least 2 to 3 eyes per piece. Larger potato varieties usually require a 2 ounce piece.

4. Set the seed pieces in 4 to 6 inch deep planting holes or in trenches. Because fingerling plants are usually larger, and not as uniform as other varieties, give them more room than you would typical potatoes. Space seed pieces about 18 inches apart, in rows that are 3 feet apart.

5. Like all potatoes, fingerlings need a loose, deep, sandy, or sandy loam soil, or soils generously amended with organic matter such as Bumper Crop compost. Ideally,

cultivate a 3 to 4 inch layer of well aged, composted manure into the planting bed early in the season. Fertilize well before planting, and side dress them monthly during the summer.

6. Be especially careful to keep fingerlings' soil moist. Even brief dry periods will produce misshapen or smaller tubers.

7. Once the plants have emerged from the ground, hill soil up, covering all but one-third of the sprouts. Repeat hilling about three to four weeks later. Sunlight will green potatoes that break the soil surface, so keep them covered. You can also mulch the rows with clean straw mulch, to help conserve moisture and stop weed seeds from germinating.

Fingerlings are no more, or less susceptible, to potato pests (blights, scab, and insects such as Colorado potato beetle) than ordinary potatoes. To help prevent disease, plant certified disease-free potatoes, maintain soil pH close to 6, mulch the soil, and avoid overhead watering.

8. When tops have yellowed and withered, pull or dig up plants. Because the tubers are small, harvesting, picking and cleaning can take more time than with larger varieties. The easiest cleaning method is a strong spray of water from a hose.

9. Fingerling potatoes will stay fresh for two or three months if stored in a cool, dry place. Storing Fingerling potatoes in a burlap bag, may extend their freshness for an additional week or two.

10. Once you start eating fingerlings, you may decide to set aside more garden space for them, and less space for the traditional varieties.

Varieties

Banana Fingerling Potato - Matures in 90 to 120 days. This is one of the most popular fingerling potatoes. Yellow-skinned, yellow-fleshed, and medium-sized tubers; 1 inch by 3 inches. Can be the largest yielder, as it sets up to 40 tubers per hill. Along with 'French Fingerling', this variety is the one you'll most likely find served in restaurants. Best baked, steamed, or in salads.



Rose Finn Apple Fingerling Potato - Matures in 90 to 120 days. heirloom variety. Rose-blushed, beige skin and deep-yellow flesh. Though not as easy to grow as Banana, this potato's exquisite flavor and cooking qualities set it apart. Tubers set near the surface, so hill well to avoid greening and frost damage. One of the best tasting of the fingerlings. Excellent for potato salad. Produces lots of medium-sized, well-clustered potatoes. Very good roasted over the coals. The tubers are long-keeping and the vines are very vigorous.

French Fingerling Potato - Matures in 90 to 120 days. A petite, sleek and slender heirloom potato. Silky-smooth, cranberry-red skin covers moist yellow flesh marbled with red, especially just under the skin. The 1½ by 3 inch long tubers look as good as they taste. Thin delicate skin doesn't need to be peeled. It has a robust, nutty, earthy and buttery flavor when cooked. Use in salads, baked, fried, mashed or boiled.

Austrian Crescent Fingerling Potato - Matures in 90 to 120 days. They can grow quite large, and yield well when hilled properly. Nutty-tasting yellow flesh is wrapped in a light, thin, yellow skin. It tends to have an attractive crescent shape. Austrian Crescent is very firm when cooked; the pieces hold their shape in potato salads. They are also flavorful when lightly steamed, or boiled, or used in stir fries. Relatively high starch content for a fingerling.

