

Home Gardening Series

Irish Potatoes

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Vegetables

Environment

Light – sunny
Soil – well-drained
Fertility – medium-rich
pH – 4.8 to 6.5
Temperature – cool
Moisture – uniform moisture

Culture

Planting – seed pieces late winter or early spring
Spacing – 10-12 inches x 24-36 inches
Hardiness – cool season, hardy
Fertilizer – medium to heavy feeder

Irish Potatoes – *Solanum tuberosum*

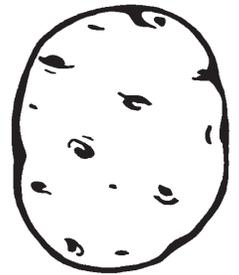
The potato is a cool-season vegetable which ranks with wheat and rice as one of the most important staples in the human diet. Potatoes are native to America and were cultivated from Chile to New Grenada at the time the Spanish explorers reached South America. The Spaniards introduced the species to Europe soon after 1580, and the popularity of potatoes spread all over Europe and the British Isles by the end of the 17th century. In 1719, Irish immigrants introduced white potatoes to New England, and now white potatoes are often called “Irish potatoes.”

Potatoes are not roots but specialized underground storage stems called “tubers.” Maximum tuber formation occurs at soil temperatures between 60 and 70 degrees F. The tubers fail to form when the soil temperature reaches 80 degrees F. Potatoes will withstand light frost in spring and can be grown throughout Arkansas.

Cultural Practices

Planting Time

Potatoes are among the earliest vegetables planted in the garden. Early, midseason and late varieties may be planted in early to mid February through early March in southern Arkansas and early March to early April in northern Arkansas. Midseason and late varieties may be planted as late as July to August 1 for fall production. Late potatoes are best for winter storage.



Spacing and Depth of Planting

Start potatoes from a “seed piece” rather than from true seed. However, there is a particular potato variety called Homestead Hybrid which is grown from true potato seed. Plant seed pieces in a window box or greenhouse for transplants, or plant directly in the garden. Seed pieces are small, whole potatoes or larger ones that are cut into 1 1/2- to 2-ounce pieces. Plant the pieces soon after cutting. Be sure there are at least two to three good “eyes” in each seed piece. Some garden centers and seed suppliers sell potato eyes that weigh less than an ounce; these are not the desired size. Small, whole, certified seed potatoes are the best choice for home gardeners.

Plant seed pieces 10 to 12 inches apart and cover them in a furrow 2 to 3 inches deep. Space the rows 24 to 36 inches apart. The 24-inch spacing

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Cultivars

Crop	Variety	Days to Maturity	Seed/ 100 Ft of Row	Disease Resistance or Tolerance	Sources (see "Sources" paragraph below)	Remarks
Irish Potatoes	Kennebec	110	13 lb		12, 27	Smooth, oblong, white tuber; heavy yields; good quality.
	Irish Cobbler	95	13 lb		12	Round, white tuber; early; well adapted.
	Pontiac	100	13 lb		12	Round, oblong, red tuber; heavy yields.
	Superior	90	13 lb		10, 16, 23	Early, white, round tubers; moderate heat tolerance.
	All Blue		13 lb		4, 16	Deep blue/purple colored skins and flesh. Retains color after cooking as well. Suitable for all cooking. Mid to late maturity; vigorous plants. Blue flowered.
	Yukon Gold		13 lb	LR, PVA	4, 8, 16, 33	Mid-early variety; oval, medium-large potato with a light yellow flesh. Large, upright plants have violet flowers. Declared best eating potato.
	Dark Red Norland		13 lb	PVA, PVY, PLRV	*See note	Early, stores well. Oval-oblong, smooth, red potato with white flesh. Great for early digging. Medium-large purple flowering plants.

Abbreviations: **LR**: Leaf Roll; **PLRV**: Potato Leaf Roll Virus; **PVA**: Potato Virus A; **PVY**: Potato Virus Y
(R): Resistant; **(T)**: Tolerant

***NOTE:** Check your local garden centers or farm stores for seed potatoes in the spring.

is often beneficial because plants will shade the soil and prevent high soil temperatures that inhibit tuber development.

Care

The soil should be fertile and well-drained. Clay soils should be improved with organic matter and plowed in the fall. Use raised beds to improve soil drainage.

Mulching is usually helpful in growing potatoes. Apply organic mulch after the potato plants have emerged to conserve moisture, help keep down weeds and cool the soil. Some gardeners cover rows of early potatoes with clear plastic film at planting to warm the soil and promote early growth. After the plants emerge, remove the film to allow the plants to grow.

Hill the potatoes after they break the surface of the ground, gradually build up a low ridge of loose soil by cultivation and hoeing. This ridge, which may become 4 to 6 inches high in summer, reduces the number of sunburned (greened) tubers. The object of potato cultivation is to eliminate competition from weeds, to loosen and aerate the soil and to build up the row. Misshaped potatoes result when the tubers develop in hard, compacted soil.

Irrigate to ensure uniform moisture while the tubers are developing. A uniform moisture supply also helps cool the ground and helps eliminate knobs caused by secondary growth.

Sources

For a list of sources referred to by number, request FSA6106, *Seed Sources: Vegetable and Herb*, for current address, telephone and web site.

Harvesting

Harvest potatoes after most of the vines have died. Handle as gently as possible during harvest. Leave the tubers exposed to the sun just long enough for the soil to dry and fall off. Too much direct sunlight blisters the tubers and causes them to turn green and rot in storage. Since the tubers develop 4 to 6 inches beneath the soil surface, a spade fork is useful for digging potatoes.

Potatoes for use in early summer ("new" potatoes) may be dug before the vines die (usually in July). When the potatoes reach 1 to 2 inches in size, dig a few hills to use for soups or to cook with peas, cream or butter.

Late potatoes are usually dug in October. They will keep in the garage or basement for several weeks in their natural dormancy. Store over the winter in a dark room or in a cooler at a temperature between 38 and 40 degrees F with high humidity. Check periodically for spoilage.

Common Problems

Early blight disease causes yellowing and dying of the leaves. The presence of brown spots and yellowing of the lower leaves are the first signs of the disease. The entire plant will become infected if the disease is not controlled. Control early blight by weekly applications of suggested fungicides, beginning when seedlings are 6 to 8 inches high.

Potato scab disease (indicated by scabby, rough skin) does not develop when the soil pH is 5.6 or below. Plant resistant varieties when available.

Colorado potato beetles, flea beetles and leafhoppers can significantly reduce potato yields. Control these insects with suggested insecticides.

diseases – early blight, scab, late blight, tuber rots, virus complex, 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 to 120

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

approximate yields (per 10 feet of row) – 6 to 15 pounds

amount to raise per person – 75 to 100 pounds (plant about 15 pounds of seed potatoes per person)

storage – medium-cool conditions (38 to 42 degrees F), moist (90 percent relative humidity) conditions; 6 to 8 months. Sprouting is a problem at higher temperatures.

preservation – usually stored in medium cool, moist conditions

There are more than 100 varieties of potatoes. The horticultural varieties generally have white flesh and light brown or red skin. There are different types of potatoes with yellow to blue flesh and many different skin colors. An interesting one now being grown is Yellow Finn. Russet Burbank is one of the most important varieties produced in the United States. The weather in Arkansas is too warm and the moisture fluctuation is too great for the production of smooth Russet Burbank tubers and good yields.

Frequently Asked Questions

Q. Should I save some of my potatoes for seed potatoes?

A. No. Saving your own seed potatoes can lead to a buildup of viruses and diseases.

Q. My potato plants flowered and formed green fruits that resemble small tomatoes. What are they?

A. These small seed balls are the fruits that contain the true seeds. They are not edible.

Q. What causes green skins on my potatoes?

A. The green areas on tubers develop where the potato was exposed to the sun. This condition occurs when potatoes are not planted deeply enough or not covered with straw. The green portions taste bitter because they contain an alkaloid. Cut off and discard these green areas. Exposure of potato tubers to fluorescent light or sunlight will cause greening during storage.

Q. Can I make chips from homegrown potatoes?

A. Yes. Any potato variety can be used to make chips when the potatoes are freshly dug. Commercial chips are made from selected varieties that are carefully handled and stored. Chips made from inferior varieties or improperly stored potatoes will be brown and have a dark ring because they contain excessive amounts of sugars.

Q. I used potatoes bought at the grocery store as seed for planting, and they rotted without sprouting. Why?

A. Many potatoes sold for fresh market consumption have been treated to prevent sprouting in storage and when planted. Potatoes have a rest period that must be broken before the seed pieces will sprout. Cool or extremely warm temperatures can break the rest period and allow potatoes to sprout. Plant certified seed potatoes that have been properly stored to induce sprouting.

Q. Can I save the small potatoes from my spring crop for planting in the fall in my garden?

A. Yes. This is commonly done. Sometimes the potatoes saved from the spring garden fail to sprout when planted in the fall because of a natural dormancy in newly harvested potatoes. A recommended procedure for breaking the dormancy includes harvesting the potatoes and placing them in a cool storage area, preferably about 50 degrees F, until about three to four weeks before the anticipated fall planting date. To prevent rotting, do not cut. Plant the small potatoes whole.

- Q. How do I know when my potatoes are ready for harvesting?**
- A. Potatoes are mature when the plant starts to yellow. Potatoes require 75 to 140 days from planting to maturity depending upon variety and the season they are grown. Immature potatoes often skin and bruise easily. Dig spring-planted potatoes before the soil becomes hot. Avoid harvesting potatoes when the soil is wet to avoid storage diseases.
- Q. I have some seed potatoes left from my spring garden. Would it be all right to eat them?**
- A. No. Potato tubers purchased for seed purposes should not be eaten because they frequently have been chemically treated. Like all treated seeds, seed potatoes should not be fed to humans or animals.
- Q. After harvesting, how should I handle my potatoes to result in the longest storage time possible?**
- A. Dig potatoes when the soil is dry. Be careful not to skin or bruise the tubers. Do not wash the potatoes. Place them in crates or some suitable container and store them in a dark area for three to five days at 60 degrees F with high humidity. After this curing period, keep the potatoes at 40 to 45 degrees F with humidity near 85 percent and provide good air circulation.
- Q. Can potatoes be left in the ground for storage?**
- A. Generally no. Cool, humid conditions (38 to 45 degrees F and 85 percent relative humidity) are best for Irish potato storage. The potatoes would not stay dry enough in the soil to prevent second growth or sprouting. Several weeks at high temperatures can break the rest period in home-grown potatoes after which sprouts will develop on the tuber. It is better to dig the potatoes and put them in a cool, damp area.
- Q. After a rainfall, the potato plants in one area of my garden began to die rapidly. The stems rotted. A dark discoloration is moving up the stem to the top of the plant, and the stem has a foul odor.**
- A. This is black leg of potatoes, one of the major bacterial potato problems. To prevent this problem, plant only in well-drained areas. Seed piece treatment also helps prevent the entry of bacteria and other organisms.
- Q. The stems of my Irish potato plants are decayed. The plants weaken but do not die.**
- A. This is Rhizoctonia, a soil-borne fungus that causes decay in stems and seed pieces. Approved seed-piece fungicides are the best control for this disease. Always follow label instructions closely.
- Q. When I dug my potatoes, they were covered by small, raised bumps.**
- A. This is a physiological condition called large lenticle. It is caused by water-saturated soil conditions. Choose a well-drained site and raised beds.
- Q. After I dug my potatoes, I found that they were rough with deep scars.**
- A. This is potato scab, caused by a soil-borne organism. Control by maintaining an acid soil, below pH 5.6, around your potato plants and a uniform moisture level from the time the potato is formed until it is harvested.
- Q. The lower foliage on my potato plants is beginning to turn yellow and is covered with brown spots.**
- A. This is early blight of potatoes and is similar to blight on tomatoes. Spray with a fungicide when spots are observed and repeat at 7- to 14-day intervals for two to three sprays.
- Q. The foliage of my potato plants is distorted, rolled and is not as healthy as it should be.**
- A. Several viruses attack potatoes. The best prevention of potato viruses is to plant only certified seed pieces.
- Q. When I dug my potatoes, I noticed small holes chewed in the tubers. How do I prevent this?**
- A. Several soil-inhabiting insects, such as wireworms and white grubs, cause this type of damage. Use control measures for these pests before planting. Use insecticides only as directed on the label.
- Q. The leaves of my potatoes are disappearing fast. All I see on the plant are some pinkish worms.**
- A. These pinkish larvae are immature Colorado potato beetles. They defoliate plants and can be controlled with insecticides. Use as directed on label. In small plots, control by hand picking the larvae and destroying them.