J&L Garden Center

The All Season Gift and Garden Center

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Sweet Potatoes

Several decades ago, when orange flesh sweet potatoes were first introduced in the United States, growers and distributors wanted to distinguish them from the more traditional white flesh types of potatoes. The African word, "nyami", referring to the starchy, edible root of the *Dioscorea* genus, was adopted in its English form - "yam". 'Yam' became an unofficial name for sweet potatoes. To prevent confusion, the United States Department of Agriculture requires that sweet potatoes labeled as "yams" also be labeled as "sweet potatoes". The sweet potatoes grown in the U.S. are in the genus *Ipomoea,* not *Dioscorea.*

Sweet Potato

True "yams" are originally from West African and Asia. Sweet potatoes are originally from South America. Most "Yams" grown in the U.S. are actually sweet potatoes. True yams are rarely found in the United States, except as imports. Although Sweet Potato and Yams are generally used interchangeably, they are definitely not the same. ***There are several differences between sweet potatoes and yams.***

Yam

Sweet potatoes are moist & sweet. They are smooth, with a thin skin. The tubers are short and blocky, with tapered ends. The skin color ranges between red, purple, brown and white. The 'meat' color ranges from white through yellow, orange, and purple.

Yams are dry and starchy. They are rough, with a scaly skin. The skins vary in color from dark brown to light pink. The 'meat' color ranges from white or yellow, to purple or pink. The tubers are long and cylindrical, some with "toes". Yam tubers can grow up to 8 ft in length and weigh up to 150 lbs. The tubers can be stored up to six months without refrigeration.

Sweet potato, Ipomoea batatas, is a tender, warm-weather vegetable that requires a long, frost-free growing season to produce large, edible roots. Sweet potato is native to Central and South America. It is one of the most important food crops in tropical and subtropical countries, where both the roots and tender shoots are eaten as a vital source of nutrients. Commercial production in the United States is mainly in the southern states. However, home production is nationwide.

Though orange-fleshed varieties are the most common today, white or very light yellow-fleshed types were once considered the finest varieties and widely grown. A few white-fleshed varieties are still available for home growing.

Photo Credit: Proven Winners

Sweet potatoes (Ipomoea batatas) are in the same plant family as morning glory. Ornamental varieties of sweet potatoes are often grown as a ground cover, in hanging baskets, in planters, and pots. Ornamental varieties have very colorful leaves, but the tubers are not usually very tasty. Several varieties of ornamental sweet potato are cultivated as annual flowers. Some varieties are: 'Blackie' with dark purple, nearly black foliage; 'Margarita' with chartreuse-yellow leaves; and 'Tricolor' with pale green, white and pink margined leaves. Cut-leaf varieties are also very attractive.

Photo Credit: Proven Winners

How to Grow

Climate: Sweet potatoes grow best in warm to hot climates. Plants and tubers can be damaged by temperatures below 50ºF. The roots need 4 to 5 months of frost free weather to grow and mature.

Soil: Sweet potatoes grow best in soil types that are fertile, moist, well drained and nutrient rich. Both surface and internal drainage are important. Poor surface drainage may cause wet spots that reduce yields. Poor internal drainage will also reduce yields. Soils with a high moisture content, and poor aeration, cause sweet potato roots to be large, misshapen, cracked, and rough skinned. Too much water in the soil prevents tubers from forming.

Soil Preparation: Mix 2 to 4 inches of well composted organic matter, and 1 to 2 lbs of all purpose fertilizer (16-16-8) per 100 square feet. Work the fertilizer into the soil to a depth of 6-8 inches. Sweet potatoes grow even better in 8 to10 inch raised beds. Good drainage, and a loose soil that provides easy root development, dramatically increase both the size and the quantity of tubers.

Plants: Sweet potatoes are grown from slips, which are 'plant sprouts from the root'. Sweet potatoes are not planted from seed or from cut tubers. To produce your own slips, please read the section about ***Growing Your Own Slips.***

When to Plant (Transplanting): Do not plant sweet potato slips until the ground has

warmed up to 65° F., and all danger of frost has passed. To give them a head start, sweet potatoes can be planted in raised beds, about 8" high. This helps the soil warm faster and keeps them well drained. Using weed cloth or black plastic on the soil will also help the soil warm up faster.

Spacing: Space plants about 12" to 18" apart with 3' to 4' between rows. The vines will spread and fill in, so give them plenty of room. Water regularly after planting to help the plants establish.

Mulches: Mulches will conserve moisture and help to reduce weed problems. Try planting through black plastic mulch for earlier sweet potatoes. You may be able to plant up to ten days earlier than you can plant in uncovered soil. Use frost blankets or floating row covers for additional frost protection.

Water: Sweet potatoes are quite drought tolerant as they mature. Provide ample water for the first two months after planting. However, as the plants mature, they should be watered with moderation. Too much late-watering can cause root cracking. **Tip:** Don't water your sweet potatoes during the final 3-4 weeks prior to harvest, to keep the mature tubers from splitting.

Fertilization: In addition to the fertilizer applied at planting, sweet potatoes should be side dressed with additional fertilizer. Use ½ lb (16-16-8) per 100 square feet in late-June, for optimum vine growth and tuber sizing. The bigger the plants grow, the more tubers they will produce.

Insects & Diseases

A wide variety of insects feed on sweet potato foliage, but treatment to control foliar damage is rarely necessary. This is because sweet potato plants grow vigorously, and damage to the foliage must be extensive before any root growth is affected. However, the larvae of some foliar-feeding beetles live in the soil, and occasionally do damage sweet potato roots. Damage caused by these root-feeding larvae, or grubs, may be reduced by controlling the adult stage that develops on the foliage. In most cases, these controls should be applied only when signs of foliar damage is observed. Insect damage is lessened if you rotate your crop each year.

Sweet potatoes are susceptible to a variety of both field and storage diseases. The most common sweet potato diseases are scurf, stem rot (wilt), black rot, and soft rots. Many diseases can be avoided by choosing disease resistant varieties and using certified disease free sweet potato slips. Rotating their location in the garden, from year to year, also helps prevent many diseases.

To prevent disease problems in storage, carefully handle sweet potatoes during harvest, to prevent unnecessary wounding. Cure roots immediately after harvest. Cure roots at 85° to 95° F and 85 to 90 percent relative humidity for 5 to 10 days.

Store roots at 55° to 60° F. Avoid handling stored roots because handling can create new wounds for diseases to enter.

Harvest and Storage

Sweet potatoes can be harvested when roots are 1½ to 2 inches big. Some roots may be "harvested and eaten," starting in late summer. Dig into the side of the bed and remove some of the developing roots, while leaving the rest of the plant untouched.

For fall harvest, most gardeners should wait until the foliage starts to turn yellow, or after the first frost damages the leaves, but before the soil gets too cold. Frost damaged tubers will not store very long.

Use a spading fork or shovel to carefully dig up the tubers. Be careful not to bruise, cut, or otherwise damage them. Eat any damaged tubers first, they will not store.

Potatoes grown in sandy soil probably need not be washed for storage. Those grown in clay soil may need rinsing to remove any stuck-on soil. The roots store best when cured for 1-2 weeks at 80°F and then stored in a cool, dry location (50-60º F). When properly cured, sweet potatoes can be stored for 3 to 4 months.

Productivity

Sweet potatoes can produce very large roots, in a long growing season. Expect 1 to 2 lbs of tubers from each plant. More if you fertilize and water them properly.

A rule of thumb is to plant 5 to 10 slips per person in your family, in order to have sufficient tubers for fresh eating, and storage purposes. Productivity depends on the variety planted, soil conditions, fertilizer, ***and the weather.***

Nutrition

Sweet potatoes are an excellent source of vitamin A and vitamin C, carbohydrates, and fiber. They also supply lots of calcium and iron.

Recommended Varieties:

Beauregard is also known as the Louisiana Sweet Potato and is the one most commonly found in grocery stores. The Beauregard has a coppery skin with a moderately deep orange-colored flesh. The Beauregard matures amazingly fast, usually in 90-105 days, and is resistant to white grubs, soil pox and cracking. It grows well in both Northern and Southern climates.

Centennial The Sweet Potato 'Centennial' has a meaty, bright orange flesh. It has won top prize in many bake-offs and contests. It matures in 120 days - "Baby Bakers" in about 90 days. It is a 'Clay-Soil-Tolerant' variety. This variety stores very well when properly cured.

Darby The Sweet Potato 'Darby' has deep orange flesh that is soft and juicy when baked. It matures in 115 days and grows well in both northern and southern gardens.

Georgia Jet The 'Georgia Jet' Sweet Potato is one of the most popular varieties. Maturing in only 90 days, this Sweet Potato has a deep orange pulp, a moist flesh

and fantastic flavor. It is not overly large, so lends itself well to individual servings. Most Sweet Potatoes produced commercially in the U.S. are grown in the southern states, but this particular variety is more cold-tolerant than most. This gem will grow well for gardeners in both the northern and southern regions.

Hernandez The Sweet Potato 'Hernandez' has bright orange flesh that tends to be very moist when cooked. It matures in 90 days and grows well in both northern and southern gardens.

Jewell The Sweet Potato 'Jewell' has deep copper-orange flesh and rich, excellent flavor. It bakes quickly and features a soft texture. Flesh type is moist, market and canning quality is good, storage life is good. It matures in 130 days.

Nancy Hall The Sweet Potato 'Nancy Hall' has yellow flesh that is juicy and sweet when baked. White milk flows after slicing open. A real old time favorite. Normal maturity around 110 days. Beautiful light green foliage and strong stems. Keeps very well. Vine Type.

'O'Henry Once you try an O'Henry Sweet Potato, you will simply fall in love. They taste just as good as a Beauregard, only less sweet. It is a white-skinned, cream-fleshed sweet potato which cooks up drier than other sweet potato varieties. The tubers grow directly under the plant, making it much easier to harvest. It matures in 95 days and grows well in both northern and southern gardens.

Porto Rico (Bush Type) The Sweet Potato 'Porto Rico' has a light red flesh with a delicious "old fashioned" flavor. It is an excellent baking potato. It matures in 110 days and grows well in both northern and southern gardens.

Vardaman (Bush Type) The foliage of the 'Vardaman' Sweet Potato will add a touch of unusual purple color to your garden-scape while providing you with a mildly flavored, nutritious and versatile addition to your annual harvest. It boasts a golden-colored skin and deep orange flesh. The 'Vardaman' matures in about 110 days and grows equally well in northern and southern gardens.

White Yam The Sweet Potato 'White Yam' is as white as cotton inside and out, and as sweet as sugar. It is America's oldest and driest potato. It matures in 110 days and grows well in both northern and southern gardens.

Grow your own slips

If you only need a few plants, you can grow your own slips from a root suspended in a container of water. To grow more plants, place several sweet potato roots about one inch apart in a hotbed and cover with 2 inches of sand or light soil. Add another 1 to 2 inches of sand when the shoots begin to appear. Keep the soil in the bed moist throughout the sprouting period, but never allow it to become waterlogged.

Maintain a soil temperature of 70-80°F. The slips are ready to pull in about 6 weeks: when they are rooted and 6 to 8 inches tall.

Once rooted and ready to plant, place your slips in a jar of water until you are ready to actually plant them. You can wait until weather conditions are perfect for your area, and that will give you time to prepare your soil.

Buying slips

When you buy Sweet Potato slips and take them home, your slips may appear severely wilted, which is normal. There may be leaves that appear rotten, or slimy, this is also a natural occurrence. Just remove the slick or slimy leaves and place your plants in a jar of water. Sweet potatoes are extremely tough and resilient plants. Once they have livened back up, they will take off and grow well.

Plant slips as soon as possible after purchase. The ideal time to plant them is late-afternoon, after the hot part of the day is past. Keep slips out of the hot, direct sunlight and place them in wet peatmoss, sawdust, perlite, or vermiculite, if you cannot plant them immediately.

Keep transplants moist after being planted in the field. Water before the soil dries, but do not keep the soil soggy wet. Weed control will be necessary until the vines cover between the rows.

Frequently Asked Questions

Q. Why are the tubers cracked when I dig them up?

Heavy rains, or over irrigation during the 3 to 4 weeks before harvest, will cause the roots to split. Sweet potatoes like a dry period before harvest, which helps cure the roots and prepares them for storage.

Q. Are yams and sweet potatoes the same thing?

Moist-fleshed varieties of sweet potato are often called "yams." However, sweet potatoes are not true yams. Sweet Potatoes belong to the morning glory family, Convolvulaceae. True yams belong to a completely different plant family, called *Dioscoreaceae*.

Q. My sweet potato roots are covered with black splotches in the skin. What can I do to prevent this condition?

A. This condition is probably caused by a disease known as "scurf" that is superficial in the skin of the root. The sweet potatoes are still good to eat, although they may not keep as well in storage. Check for varieties resistant to this problem.

Q. Why did my sweet potato roots grow long and stringy instead of short and plump?

A. Too much rain, irrigation, or poorly drained soil prevents proper root formation. Sweet potatoes prefer hot, dry weather once the vines cover the ground.

Q. Are sweet potatoes ruined if the vines were frosted before digging?

A. No, but they should be harvested immediately. The length of time that they can be stored may be reduced and some experts say that taste and quality of the roots may be adversely affected.

More resources

http://www.sweetpotato.org/
https://extension.usu.edu/files/publications/publication/HG_Garden_2006-10.pdf
http://www.ncsweetpotatoes.com/
Disease problem information http://www.aces.edu/pubs/docs/A/ANR-0917/
Insect problem information http://www.aces.edu/pubs/docs/A/ANR-1104/
http://www.newhopeseed.com/vegetable/sweet_potato_recipes.htm
http://extension.usu.edu/yardandgarden/vegetables/sweet-potatoes

Uses

The versatile sweet potato is ideal for the health conscious food consumer. With the ever-growing interest in health and natural foods, the sweet potato is quickly finding its place in the family weekly diet the year around. The sweet potato blends well with herbs, spices, and flavorings, producing delicious dishes of all types. From processed baby foods, to the main dishes, casseroles, salads, breads, and desserts, sweet potatoes add valuable, appetizing nutrients to any meal.

As a main dish or prepared as a dessert, the sweet potato is a nutritious and economical food. One baked sweet potato (3 1/2 ounce serving) provides twice the recommended daily allowance of vitamin A, yet it contains only 141 calories, making it valuable for the weight watcher. Sweet potatoes also provide 42 percent of the Recommended Daily Allowance for vitamin C, 6 percent of the RDA for calcium, 10 percent of the RDA for iron, and 8 percent of the RDA for thiamine for healthy adults. It is low in sodium and is a good source of fiber and other important vitamins and minerals. It is a complex carbohydrate food source, it provides beta carotene which may be a factor in reducing the risk of certain types of cancers.

When buying sweet potatoes, select sound, firm roots. Handle them carefully to prevent bruising. Storage in a dry, unrefrigerated bin kept at 55-60 degrees F. is best. DO NOT REFRIGERATE, because temperatures below 55 degrees F. will chill this tropical vegetable, giving it a hard core, and an undesirable taste when cooked.

Most sweet potato dishes freeze well. Save time and energy by making a sweet potato dish to serve, and one to store in the freezer.

To freeze, wash cured sweet potatoes. Bake or boil them until slightly soft. If boiled, drain immediately. Thoroughly cool the baked, or boiled, sweet potatoes. Wrap them individually (skins left on) in freezer film, or aluminum foil. Place in plastic freezer bags. Seal, label and freeze.

Helpful Hints:

Bake a large pan of sweet potatoes at the same time. This saves time and energy. Freeze some for later use, or store the sweet potatoes in the refrigerator for 7 to 10 days.

Freshly dug, or uncured sweet potatoes, are better boiled and used in dishes that include fruits or syrups. The curing process makes the sweet potato sweeter and improves the cooking quality.

Canned or frozen sweet potatoes may be substituted for the fresh form in any recipe calling for cooked sweet potatoes as the starting point. Canned sweet potatoes are generally smaller in diameter because of their better canning qualities. Six to eight canned sweet potatoes are approximately the equivalent of four medium fresh sweet potatoes.

To reduce calories in your favorite sweet potato recipe, experiment with the recipe by reducing the sugar, or fat, by using the next lower measure on the measuring cup. For example, when a recipe calls for 1 cup of sugar or fat, reduce the amount to 3/4 cup. For 3/4 cup, reduce it to 2/3 cup, and so on.

Sweet potatoes can be baked, boiled, fried, broiled, canned or frozen. They can also be cooked in the microwave oven.

Before cooking sweet potatoes, scrub skin and trim off any bruised or woody portions.

If you are cutting calories, serve a plain sweet potato, cut down on margarine or butter, and use skim milk, or unsweetened orange juice, as liquid when you prepare mashed sweet potatoes.

Remember, it is what you add to the sweet potato that increases calories. One small, baked in skin, only has 141 calories.

A freshly baked or boiled sweet potato is delicious and nutritious. You need only to add a pat of butter, or serve it plain. Don't feel that you must add high-calorie ingredients to make the sweet potato acceptable.

Rub a little fat, or oil, over clean and dry sweet potatoes of uniform size. Place on baking sheet and bake at 400 degrees F. until soft, usually 30 to 50 minutes, depending on the size. Sweet potatoes that are greased before baking peel easily.

Boiled Sweet Potatoes: Drop clean sweet potatoes into enough boiling water to cover them. Cover pan and return water to boiling as quickly as possible. Lower heat and cook until tender. Drain at once. Peel and season with butter and salt to taste. Boiled sweet potatoes can be used for pies, cookies, casseroles, glazed, candied or frozen.

Deep Fat French Fried Sweet Potatoes: Pare and cut into length-wise strips, about 1/2 inch thick. Heat oil in fryer to 365 degrees F. Keep fry basket in fat as it heats.

Raise basket and add enough sweet potato strips to cover bottom of basket. Lower basket slowly into hot fat. If fat bubbles much, lift and lower basket until bubbling subsides. Fry until sweet potato strips are brown and tender. Remove from hot oil and drain onto paper towels. Sprinkle with salt, if desired. Spread sweet potatoes on baking sheet and place in a warm oven while others are being cooked.

Charcoal Broiled Sweet Potatoes: Rub a little fat over clean sweet potato skins. Wrap double foil loosely around sweet potatoes. Cook in coals for about 45 minutes. Keep warm on edge of grill.

Skillet Sweet Potatoes: In large deep skillet, heat 1 1/2 inch deep vegetable oil to 365° F. Add sweet potato strips to cover bottom of skillet; fry 5 minutes or until brown and tender. Remove from hot oil and drain on paper towels. Sprinkle with salt or powdered sugar.

Microwave Sweet Potatoes: For best results, choose uniform size sweet potatoes. Pierce washed sweet potatoes with a fork. Place on a paper towel in the microwave oven about 1 inch apart. Turn sweet potatoes over and rearrange after half of the cooking time. Cook on HIGH power level. Cooking time will vary, depending on the number of sweet potatoes and the type of microwave oven you use.

1 potato - 4 to 6 min 2 potato - 6 to 8 min
3 potato - 8 to 12 min 4 potato - 12 to 16 min Sweet potatoes may still feel firm when done. Let stand 5 minutes to soften.