

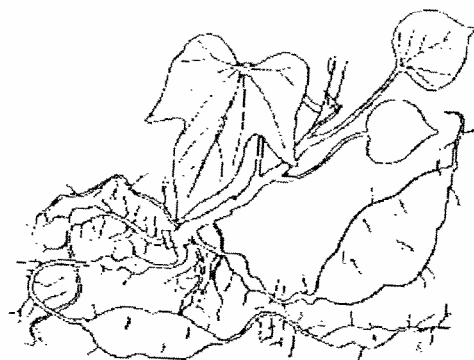
Growing Sweet Potatoes in North Florida

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Sweet potato, *Ipomea batatas*, is a tender warm season vegetable. Sweet potatoes are vigorous growers and are in the morning glory family. They are a native crop and were grown by the Indians when Columbus arrived.

Commercial production in the United States is predominately in the southern states, with North Carolina and Louisiana in the lead. Although there is some commercial production in Florida, it is limited because of the sweet potato weevil and soil-borne nematodes. Because of the weevil, sweet potatoes grown in Florida may not be shipped outside of the state.



Planting & Growing Instructions: Select a sunny site with access to water. Do not plant in an area where sweet potatoes were previously grown or following other vegetable crops because nematodes and pest/disease numbers will be higher in these soils. Rotation with corn may help reduce nematode numbers. Commercial growers will plant sweet potatoes on the same soil every 3 to 4 years and rotate with other crops.

Deep sandy loam soils are best and good drainage is a must. Preferred soil pH is between 5.8 and 6.2. Soils with more than 2% organic matter are not the best soils because they produce many rough or cracked roots. Avoid using soils that have large nematode populations. Turn the soil 2 to 3 months before planting to reduce disease and nematode problems.

Varieties recommended include Beauregard, Georgia Red, Jewel, Hernandez and Picadito (Boniato). In north Florida, plant between March and June. In south Florida, the Cuban sweet potato (boniatos) is grown year-round. It is the same genus and species but the root has white flesh, plus is drier than and not as sweet as the traditional orange fleshed sweet potato.

Sweet potatoes are not grown from seed or from seed pieces like Irish potatoes. They are grown from slips. A slip is a plant piece propagated from a sweet potato root. Commercial growers either grow their own or purchase them from a certified seed source. To grow your own slips, select a sweet potato that is firm and free from blemishes or soft spots. Roots are pre-sprouted by keeping them for 2 to 4 weeks at 75-85°F and 90% RH. After sprouts are ¼" long, place the sweet potato horizontally in the soil (soil temp must be 65 to 70°F) and cover with 1 to 2" of soil. Keep soil between 70 to 80°F and moist but not wet. They can also be grown in a jar half filled with water. Use a narrow neck jar or inject toothpicks to suspend it above the containers base. Start these 6 to 8 weeks before planting time. Each root will produce up to 15

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plants. When slips are 8 to 12" long with 8 or more leaves, cut and plant. As slips are pulled out of the ground, some of the mother root tissue and roots are attached. Plant cuttings 3" deep and make sure at least 2 nodes (place where leaves attach to stems) are below ground and 2 or more leaves above ground. Space 10 to 12" apart in rows spaced 3 to 4' apart. 9,000 to 15,000 slips are required per acre. Water initially to get them established.

Fertilization should be based on a soil test. In general, a 5-10-10 fertilizer with micronutrients would be acceptable. Broadcast 1 to 2 weeks before planting or sidedress with 2-4 pounds of 5-10-10 per 100 feet of row at planting. If banding, place the fertilizer in a row 2 to 3" away from plants and 1 to 2" deep. Too much nitrogen will create a vigorous plant with a lot of vines and very few roots. Potassium is critical in producing sweet potato roots. One or two additional applications may be needed during the growing season depending on soil and weather conditions at the 2 pound rate.

Keep the soil moist but not wet during the growing season. Inconsistent irrigation will affect root development and size.

Problems: Sweet potatoes are susceptible to a number of diseases, nematodes and insects. The most common diseases are black rot, pox or soil rot, rhizopus soft rot, scurf, southern stem rot, surface rot and wilt/stem rot. The best advice is to avoid problems: select disease free roots for propagation, plant in a well drained soil, rotate crops, and avoid damaging the roots while growing and harvesting.

Nematodes are a big problem in Florida soils and there are no chemicals available for control in the home garden. Rotate crops and avoid nematode infested soils. The variety Georgia Red has moderate resistance and Jewel is resistant (doesn't mean they are not affected).

Foliar pests are not too difficult to control but pests below ground are a challenge. Foliar pests include leafminers, sweetpotato whitefly, armyworms, and aphids. The most serious pests are those that have immature stages that feed on the roots: sweetpotato weevil, wireworms, banded cucumber beetle, pale-striped and sweetpotato flea beetles, and grubs. Sweetpotato weevils destroy the roots because the roots become bitter in taste. The variety Jewel has some resistance. Follow integrated pest management practices by rotating crops and starting with pest free plants.

Harvesting and Curing: For a 100 plants grown in a 100' row, expect around 300 pounds of sweet potatoes. Sweet potatoes can be harvested in 90 to 120 days after planting. In commercial production, harvest begins when most of the roots are in the #1 class. #1 is free of defects and between 3 and 9" length, not more than 18 ozs & between 3 ¼ and 1 ¾ inch diameter. Dig up one of the plants or check around the base to see if roots have reached adequate size. Roots continue to grow until leaves are killed by a frost. If a frost or heavy rains occur and roots are mature, harvest immediately to avoid crop damage. For a home gardener, roots are dug by hand taking care to avoid damaging the outer surface of the roots. Roots are then cured prior to storage or cooking. Place in a warm location at 80 to 85°F and 90 to 95% relative humidity with good ventilation for 5 to 7 days. Curing heals cuts and reduces decay and shrinkage in storage. Plus some of the starches are converted to sugars, enhancing flavor. Then they can be stored at 55 to 65°F for 6 or more weeks. Never refrigerate unless cooked because they will develop a hard core and bad taste.