Sweet Potato

Planting
The sweet potato (*Ipomoea batatas*) is a warm-season crop that is not planted until well after the last chance of frost in the spring. The soil temperature should be above 65 °F before planting this crop.

### Planting Dates

<table>
<thead>
<tr>
<th>Area</th>
<th>Spring</th>
<th>Fall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piedmont</td>
<td>May 10-June 10</td>
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<tr>
<td>Central</td>
<td>May 1-June 15</td>
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<tr>
<td>Coastal</td>
<td>April 15-July 1</td>
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Sweet potatoes do not produce tubers, but produce an edible storage root that is developmentally a true root derived from root tissue. They grow best in a well-drained, loamy to sandy soil. Those grown in heavy clay soil may be smaller and mis-shapened. Till organic matter into the garden to loosen and to improve the aeration and drainage of heavy clay soils.

Plant sweet potatoes on ridges in the Coastal and Piedmont areas to provide better drainage. In the Central part of the state, do not plant in ridges if the soil is sandy. Plant the transplants (called slips) in rows 3 feet apart with 8 to 12 inches between plants in the row at a depth of 3 to 4 inches. Water in transplants using a high phosphorus starter fertilizer according to label directions.

### Sweet Potato Slips

Sweet potatoes grow from plants or sprouts called "slips" produced from the roots of the previous season's crop. Most gardeners prefer to buy sweet potato slips rather than producing their own, but these slips are sprouts that are easy to grow from stored sweet potatoes. Roots from last year’s home harvest or those that were organically grown are more apt to sprout and make slips as compared with most grocery store sweet potatoes, which were chemically treated to not sprout during storage.

- ‘Beauregard’ sweet potato roots have a light rose skin, orange flesh, and a consistent shape. Barbara Smith, ©2016 HGIC, Clemson Extension

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*Piedmont:* Abbeville, Anderson, Cherokee, Chester, Edgefield, Fairfield, Greenville, Greenwood, Lancaster, Laurens, McCormick, Newberry, Oconee, Pickens, Saluda, Spartanburg, Union, and York counties.

*Central:* Aiken, Allendale, Bamberg, Barnwell, Calhoun, Chesterfield, Clarendon, Darlington, Dillon, Florence, Kershaw, Lee, Lexington, Marion, Marlboro, Orangeburg, Richland, and Sumter counties.

*Coastal:* Beaufort, Berkeley, Charleston, Colleton, Dorchester, Georgetown, Hampton, Horry, Jasper, and Williamsburg counties.
Producing Sweet Potato Slips

Start with healthy, medium-sized sweet potato roots and regular or wide-mouthed quart jars. Insert 3 or 4 toothpicks into each root halfway between its two ends. Place a root into each jar allowing the toothpicks to rest on the rim of the jar. Add water to each jar until the bottom half of each root is submerged. Place the jars in a warm location with indirect sunlight. Watch the water levels and add water as needed to keep the lower halves submerged. Change the water weekly to reduce problems with bacterial growth in the water, which will appear as cloudiness. Sprouts will appear in about 2 weeks.

Once the sprouts are six or more inches long, grasp each sprout near its base and pull or twist the sprout free from the mother sweet potato root. Place these sprouts into another jar with enough fresh water to cover their bottom ends. This will allow them to produce their own roots, which takes about 10 days. These rooted sprouts, now called slips, may be held in water until planting time or potted into containers for added root and leaf growth before planting into the garden. Plant slips at a depth of 3 inches.

Recommended Cultivars

• ‘Beauregard’ (90-100 days) has a light rose skin, moderately deep-orange, and very sweet flesh, great flavor, and is consistent in shape. It is the quickest to produce harvestable roots. It is resistant to some of the important sweet potato diseases, but is not resistant to root knot nematodes or bacterial soft rot in storage. Has moderate resistance to flood damage, but roots may misshapen. Stores well.

• ‘Centennial’ (100-110 days) is smooth and moist textured with deep orange flesh. It is resistant to root-knot nematodes and wireworms.

• ‘Covington’ (PP #18,516) (95-110 days) from NCSU has a great, sweet flavor and good yield. Storage ability is better than with Beauregard. Roots are very uniform in shape and not prone to mis-shapened or long, narrow roots. It has rose-colored, smooth skin and orange flesh. Yields are similar to Beauregard. Resistant to russet crack, Southern root knot nematodes and Fusarium wilt, and is moderately resistant to Streptomyces soil rot.

• ‘Excel’ has light copper skin with orange flesh. It is a high yielder (15% more than Jewel) with excellent baking and canning qualities and stores well. This variety has high resistance to Southern root knot nematodes, stem rot or wilt disease, and to internal cork.

• ‘Jewel’ (120-135 days) has deep copper skin and deep orange flesh. It is high yielding with good Fusarium wilt, Southern root-knot nematodes, and sweet potato beetles, and internal cork resistance. Stores well.

• ‘Mahon Yam™’ (PP #20,666) (90 days) is a sweet potato and not a yam. It has pink skin and an extra sweet, orange, stringless flesh with a slightly drier texture than Beauregard. The flavor is excellent, and the yield is very good with uniform, cylindrical roots. Storage is excellent when properly cured.

• ‘Murasaki’ (100-120 days) from LSU has a bright purple skin and a light-colored flesh. Plants have vigorous vines (grows 20’). The flesh is less creamy than other sweet potatoes, and the texture is flakier with a
nutty flavor. It is highly resistant to Southern root knot nematode and Fusarium soil rot.

- ‘Regal’ has brilliant purplish-red skin with dark orange flesh. It is similar to Jewel, with higher yields. It is resistant to internal cork and Fusarium wilt or stem rot, pox or soil rot, Southern root-knot nematodes, and many insect pests. This combination of resistances makes it an excellent cultivar for the home gardener because fewer pesticides may be needed.
- ‘Southern Delite’ (100 days) has rose to dark copper skin. It is a high yield with excellent baking flavor. It has high levels of resistance to a wide array of disease and insect pests.
- ‘Sumor’ (110-120 days) has smooth yellowish to light tan skin with white to yellow flesh. It is not very sweet and can be prepared similarly to a standard white potato. It has good field resistance to Fusarium wilt or stem rot, and is resistant to root-knot nematodes and many insect pests.
- ‘Vardaman’ (100-110 days) produces high yields of smooth, oval, rich orange-fleshed roots that separate easily from the plant at harvest. It has a compact, bush-type growth habit. It is susceptible to soil insects and nematodes, but has some resistance to Fusarium wilt.

Fertilization
It is best to base fertilizer applications on the results of a soil test. Please see HGIC 1652, Soil Testing for more information. If a soil test is not taken, apply 5-10-10 fertilizer preplant at 30 pounds per 1,000 square feet and till into the soil. Sidedress with 4 pounds of 5-10-10 per 100 feet of row before the vines cover the row. For measuring small amounts of fertilizer, a pint container holds approximately a pound of most fertilizers.

Watering
Sweet potatoes need uniform watering with at least 1 inch of rainfall or irrigation water per week for normal growth. Water sufficiently to moisten the soil to a depth of at least 6 inches. Rainfall or irrigation after a long dry period may result in cracking of the sweet potatoes. Water is especially vital during transplant establishment and root development. To reduce the incidence of disease, always water the crop in the morning, so that the leaves will dry before dark.

Weeds, Diseases, & Insect Pests
Weed control is important until the plants cover the row. Cultivate shallowly to prevent root damage. Most diseases and insects are not a problem in the home garden. However, home gardeners may experience a problem with wireworms and root-knot nematodes. A crop rotation with corn the following year may help to reduce a root-knot nematode problem, as will the use of nematode resistant varieties. For additional information on cultural control of root-knot nematodes, see HGIC 2216, Root-Knot Nematodes in the Vegetable Garden, and for more information on insect pests and their control, please see HGIC 2215, Sweet Potato & Irish Potato Insects.

Disease problems typically are reduced by using a two-year rotation between sweet potato crops. Do not use transplants with spots of black rot on the lower stems. For more information on diseases and control, see HGIC 2214, Irish & Sweet Potato Diseases.

Harvest
Sweet potatoes should be ready to harvest about 90 to 120 days after planting. Harvest the sweet potatoes when 30 percent of the roots are larger than 3½ inches in diameter. Harvest before frost because cool soil temperatures can reduce the quality and storage capacity of the sweet potatoes. When harvesting, it is best to cut and remove the vines before digging. Be careful while digging and handling the sweet potatoes, as the skins are easily damaged, and the roots are easily bruised.

Curing
Sweet potatoes require curing to heal wounds and to convert some of the starch in the roots to sugar. The optimal conditions for curing are to expose the roots to 85 °F and 90-percent humidity for one week. Few home gardeners can supply these conditions, so place the sweet potatoes in the warmest room in the house, usually the kitchen, for 14 days. No curing will occur at temperatures below 70 °F.
Storage
After curing, store the sweet potatoes in a cool location. Never expose them to temperatures below 50 °F and never refrigerate them. Temperatures below 50 °F will result in off flavors and possibly rot the sweet potatoes. Sweet potatoes can be stored under good conditions for over six months.

Sources of Sweet Potato Slips
Burpee 800-888-1447
www.burpee.com

Duckcreek Farms (no phone)
www.duckcreekfarms.com

Filagree Farms 509-422-6940
www.filagreefarm.com

Gurney’s Seed 513-354-1491
www.gurneys.com

Henry Fields Seed & Nursery 513-354-1494
www.henryfields.com

Johnny’s Seed 877-564-6697
www.johnnyseeds.com

John Scheepers Kitchen Garden Seed
860-567-6086
www.kitchengardenseeds.com

Jung Seeds & Plants 800-247-5864
www.jungseed.com

New Hope Seed Co. (no phone)
www.newhopeseed.com

New Sprout Organic Farms 828-357-5501
www.newsproutfarms.com

Park Seed Co. 800-845-3369
www.parkseed.com

Sandhill Preservation 563-246-2299
www.sandhillpreservation.com

Southern Exposure Seed Exchange 540-894-9480
www.southernexposure.com

Stark Bros. 800-325-4180
www.starkbros.com

Vermont Bean Seed Co. (no phone)
www.vermontbean.com

Excerpted from Home Vegetable Gardening, EC 570, 2002.

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