Growing Sweetpotatoes at Home

The sweetpotato is a tropical, warm-season crop originating from South America. It is a member of the morning glory family and is grown for its enlarged storage roots (Figure 1).

Sweetpotatoes make an excellent addition to the Southern garden and provide the gardener with a delicious source of fiber, vitamins, minerals, and complex carbohydrates. With a little bit of know-how, you can grow sweetpotatoes at home.

Site Selection
Sun Exposure
Sweetpotato plants require full sunlight to develop to their full potential. Plants should receive at least 8 hours of full sun each day. Sweetpotato plants are vines, and they trail along the ground. In a mixed vegetable garden, avoid planting sweetpotatoes near taller vegetable plants with more upright growth habits, as they will block sunlight from the low-growing sweetpotato vines. If space is limited, plant sweetpotatoes on the south or west side of taller plants to allow for more direct sunlight.

Soil
Well-drained, sandy or loamy soils provide the best environment for storage roots to develop. Planting sweetpotatoes in heavy clay or rocky soil will result in misshapen sweetpotato roots. Soil that does not drain well may result in lower yields and rotten sweetpotato roots. Sweetpotatoes are fairly tolerant of a wide range of soil pH but will grow best in soils with a pH of 5.5 to 6.5. Sweetpotatoes do not require large quantities of organic matter in the soil but do benefit from soil amended with organic matter. If you add animal manure to the soil, be sure to add it well before planting to allow for decomposition.

Production
Starting Material
The starting material for sweetpotatoes is different from most other home vegetable garden crops. Sweetpotatoes are produced from vegetative stem tip cuttings, or “slips.” Slips are produced from sprouted...
sweetpotato storage roots saved from the previous year’s crop. Slips may or may not have roots when they are cut. A good sweetpotato slip should be firm, green, and 8 to 12 inches long, preferably with one or two leaves (Figure 2).

You can produce slips at home or purchase them from a reputable vendor. Information about sources for sweetpotatoes and sweetpotato plants is available from the Mississippi Sweetpotato Council at www.mssweetpotato.org.

Growing Your Own Slips

Eight weeks before you plan to plant slips, place smaller sweetpotato roots (approximately 1½ inch wide) from the previous year’s crop into hotbeds and cover with 2 inches of soil. Or plant sweetpotato roots in raised beds, cover with 2 inches of soil, and cover the entire bed with black or clear plastic mulch. Plastic mulch should contain a 2-inch ventilation hole in the side of the plastic mulch every 4 linear feet of plant bed. Plant beds should remain between 75 and 85°F. Remove plastic when shoots begin to emerge from the soil (approximately 2 to 4 weeks after bedding). Slips are ready to cut when the growing point of the shoot extends 9 to 13 inches above the soil surface.

Planting

Sweetpotatoes should be grown in ridged planting beds 12 inches wide and 8 to 10 inches tall. Plant after soils have warmed to at least 65°F and all danger of spring frost has passed (Figure 3). In Mississippi, sweetpotato slips can be transplanted from early May through June. Plant slips with the cut end down 4 to 5 inches deep and 9 to 15 inches apart. Rows should be 3 to 4 feet apart. Planting slips farther apart in a row will often provide a gardener with an earlier harvest or larger sweetpotato roots.

Fertilization

Proper nutrient management begins with a soil test. Test results will include recommendations for fertilizer application rates. In the absence of a soil test, apply 5-10-10 fertilizer at a rate of 15 to 30 pounds per 1,000 square feet and incorporate prior to ridge formation and planting.

Water

Sweetpotatoes are tough plants and are generally considered to be drought tolerant. However, plants produce the best quality and greatest quantity of sweetpotato storage roots when they receive timely and sufficient—but not excessive—watering. Plants should be
watered immediately after they are transplanted to allow roots to form on slips. Maintain even soil moisture the first 2 weeks after planting. After plants are established, sweetpotatoes should receive approximately 1 inch of rainfall or irrigation per week.

**Pests**

Like most garden plants, sweetpotatoes have their share of pests. The best way to control weeds in the home garden is by shallow hoeing, hand removal, and mulch. A layer of mulch 1 to 2 inches thick should suppress most weed species and help maintain even soil moisture during the growing season. Using herbicides on sweetpotato plants in a home garden is generally not recommended; applications of broad-spectrum herbicides will injure sweetpotato plants.

In south Mississippi, sweetpotato weevils can be problematic. Throughout the state, beetle larvae that burrow into the developing sweetpotato roots and caterpillars that eat sweetpotato foliage can also threaten sweetpotatoes. In addition, deer find sweetpotato leaves to be very palatable and will graze on sweetpotato plantings if there is no barrier between the deer and the sweetpotato plants. Deer repellents and fences can deter deer but may not eliminate feeding completely.

Diseases in sweetpotatoes are not common in the home garden. You can minimize disease by cutting sweetpotato slips instead of pulling them, acquiring plant material from reputable vendors, and rotating crops to avoid planting sweetpotatoes where they have been grown within the last 2 years. For more information on weed, insect, and disease control in sweetpotatoes, consult your county Extension office.

**Harvest**

Unlike most crops, sweetpotatoes never truly “ripen” or reach a stage of “maturity.” Young sweetpotato storage roots are formed within the first 2 weeks of planting and then just grow larger. Sweetpotato varieties vary in days to maturity, but most range between 90 and 120 days. Sweetpotatoes should be harvested in the late summer to early fall before soil temperatures drop below 60°F. Carefully place a shovel or garden fork into the ground far enough away from where the vine enters the ground to avoid cutting through the sweetpotato storage roots. Use the shovel or fork to lift up each individual hill. Use care not to “skin” (scrape) the sweetpotato skin excessively while digging and handling them. Excessive skinning or abrasion will shorten the time roots can be stored and may cause roots to spoil or shrivel. Harvesting sweetpotatoes when the soil is dry will result in increased skinning and should be avoided if possible.

**Curing**

Cure sweetpotatoes immediately after harvesting them. To cure them, place them in an environment with temperatures of 80 to 85°F and 85 to 90 percent humidity for 7 to 10 days. Curing helps to heal wounds that occur during harvest, preventing shriveling and reducing the risk of rot during storage. Curing also makes the sweetpotato more palatable by converting starches to sugars and improving aroma and texture.

**Storage**

Under the right conditions, properly cured sweetpotatoes can be stored for months. Sweetpotatoes should be stored in a dark, cool place. Temperatures should remain between 55 and 60°F. Remember that sweetpotatoes are of tropical origin, and a raw sweetpotato should never be stored in the refrigerator. When stored below 55°F for extended periods of time, roots can experience chilling injury, resulting in hard cores when they are cooked. If roots are stored above 60°F for extended periods, sprouts may begin to appear from the top of the root.
<table>
<thead>
<tr>
<th>Variety</th>
<th>Days to Maturity</th>
<th>Skin Color</th>
<th>Flesh Color</th>
<th>Yield</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beauregard</td>
<td>90–100 days</td>
<td>light rose</td>
<td>moderately deep orange</td>
<td>high-yielding</td>
<td>leading commercially grown variety in Mississippi</td>
</tr>
<tr>
<td>Centennial</td>
<td>90–100 days</td>
<td>orange</td>
<td>deep orange</td>
<td>variable depending on soil-borne disease pressure</td>
<td>susceptible to soil pox disease; avoid soils that have resulted in little or no storage root formation in the past</td>
</tr>
<tr>
<td>Covington</td>
<td>110–120 days</td>
<td>rose</td>
<td>orange</td>
<td>high-yielding</td>
<td>root shapes tend to be round to blocky when grown in heavier soils</td>
</tr>
<tr>
<td>Hernandez</td>
<td>110–130 days</td>
<td>red</td>
<td>deep orange</td>
<td>high-yielding</td>
<td>requires a longer growing season</td>
</tr>
<tr>
<td>Jewel</td>
<td>110–120 days</td>
<td>copper</td>
<td>orange</td>
<td>variable depending on soil-borne disease pressure</td>
<td>avoid soil with a history of soil-borne diseases</td>
</tr>
<tr>
<td>Murasaki-29</td>
<td>100–110 days</td>
<td>dark purple</td>
<td>cream-white</td>
<td>yields in north Mississippi have been below expectations</td>
<td>flesh has a drier texture than typical sweet potato varieties and a mildly sweet, nutty flavor</td>
</tr>
<tr>
<td>Nancy Hall</td>
<td>100–110 days</td>
<td>light orange</td>
<td>creamy orange</td>
<td>lower yielding than newer varieties</td>
<td>an old favorite</td>
</tr>
<tr>
<td>O’Henry</td>
<td>90–100 days</td>
<td>cream</td>
<td>white</td>
<td>acceptable yield</td>
<td>a mutation of Beauregard</td>
</tr>
<tr>
<td>Porto Rico</td>
<td>110–120 days</td>
<td>copper</td>
<td>salmon</td>
<td>acceptable yield</td>
<td>plants are bushier and a good choice for gardeners with limited space</td>
</tr>
<tr>
<td>Vardaman</td>
<td>90–100 days</td>
<td>golden orange</td>
<td>deep orange</td>
<td>lower yielding than newer varieties</td>
<td>compact growth habit; shares its name with the major sweet potato-growing town in Mississippi</td>
</tr>
</tbody>
</table>

Varieties

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