



Easy Gardening

POTATOES • SWEET POTATOES • SWEET POTATOES

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Sweet potatoes (*Ipomoea batatas*) are an excellent source of beta-carotene, which is easily converted by the body into vitamin A, especially the varieties with orange flesh. A member of the morning glory or Convolvulaceae family, the plant also produces colorful flowers as well as trailing vines often used as groundcovers.

The sweet potato is a perennial plant (one that lives for more than 2 years) originating in the tropical Americas. When grown in the United States, it is treated as a warm-season annual (a plant that completes its life cycle in 1 year).

Texas is the fifth largest producer of sweet potatoes in the United States. Production is concentrated mostly in Van Zandt County in East Texas.

Varieties

This root crop has hundreds of varieties, some bred for their showy vines and

others for the tasty potatoes (Fig. 1). In Texas, the most common food varieties planted are Beauregard, Centennial, Jewell, and Vardaman; the most popular is Beauregard.

Climate

Hot days and warm nights are ideal for sweet potato production, which is why Texas is a large sweet potato producer.



Figure 1. Leafy vines of the sweet potato plant.

Sweet potatoes are extremely heat tolerant. They can also tolerate light frosts as long as the soil temperature stays above 55°F.

Site selection

Sweet potatoes require full sun and a warm climate. They must be planted in a well-drained, fine sandy loam soil with a slightly acidic pH 5 to 7.5. This allows the sweet potato to grow easily but not remain in a moist environment that encourages rot and disease.

Soil preparation

Have the soil tested before planting. It may need only nitrogen. Most areas of Texas have enough phosphorus and potassium in the soil, except for the eastern counties with sandy soils and 40 to 60 inches of rainfall per year; these areas may lack potassium.

Incorporate compost or a complete fertilizer into the soil. This will be the only fertilizing needed.

Work the soil into beds 8 inches high and 3 to 4 feet apart to ensure that it drains well and warms quickly in early spring (Fig. 2).

Propagation

Unlike other vegetables, sweet potatoes are propagated from slips, also called vine

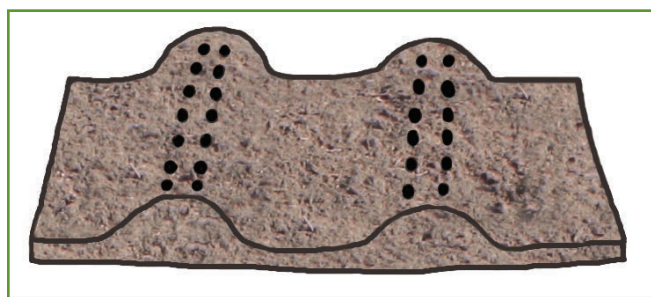


Figure 2. Soil beds 8 inches high and 36 inches wide.

cuttings. Slips can be produced at home, purchased at a local garden store, or ordered from online companies.

To produce slips, buy healthy, disease-free sweet potatoes from a local market. Scrub them clean and then cut them in half. Suspend each half over a jar of water by inserting toothpicks so that half is submerged in the water.



Figure 3. A sweet potato producing slips.

Place the sweet potato near a window for warmth and sunlight. Over the next few weeks, shoots will form on top (Fig. 3).

Wait 2 weeks after the last frost to begin planting them outside.

Planting

The optimal planting time is when the soil temperature at planting depth is over 65°F in the spring and at least 150 days before anticipated 55°F soil temperature in the fall.

Keep the beds weed free until the vines have covered the soil fully. Maintaining a weed-free area, especially in the first 40 days after planting, will improve yield quantity and quality at harvest.

Fertilization

Check the soil test results to determine how much nitrogen (N), phosphate (P),

and potassium (K) is needed. Commercial recommendations for fertilizing sweet potatoes are usually 50 pounds N, 70 pounds P, and 70 pounds K per acre (50-70-70). For a 100-square-foot planting area in a garden, that's roughly equivalent to 2 ounces N, 2.5 ounces P, and 2.5 ounces K.

To determine the amount of fertilizer to apply, check the formulation on the bag, and divide the number of ounces needed by the percentage in the formulation. For example, if the bag lists its formulation as 13-13-13, the actual amount of nitrogen needed would be:

$$2 \text{ ounces} \div 0.13 = 15.4 \text{ ounces of 13-13-13}$$

Applying this fertilizer will also supply 2 of the 2.5 ounces of phosphorus and potassium needed. To make up the difference, you will need to apply additional amounts of phosphorus and potassium separately using bone meal (0-12-0) for the phosphorus and a source of potassium such as muriate of potash (0-0-60).

An alternative would be to apply 19 ounces of 13-13-13 to get the total amount needed of phosphorus and potassium, even though an extra 4 ounces of nitrogen will be applied

Watering

Sweet potatoes need 10 to 20 inches of water per season. Because rain falls sporadically throughout the season, you will need to water them, especially at first during the slip establishment period. Transplanted slips are extremely sensitive to water stress during the first month of establishment.

To keep the tubers from rotting, do not water in the last 2 to 3 weeks before harvest.

TABLE 1. Sweet potato pests and controls

Pest	Control
Diseases	
Leaf spots	Clove, neem oil, rosemary, sulfur, thyme oil
Nematodes	Azadirachtin, sesame oil*
Insects	
Beetles	Azadirachtin, garlic juice extract, pyrethrins
Cutworms	Azadirachtin, Bt
Weevils	Azadirachtin, garlic juice extract

*Not listed by the Organic Materials Review Institute (OMRI)

Diseases and insects

Sweet potatoes are attacked by leaf spots, nematodes, beetles, cutworms, and weevils. (Table 1).

Harvesting

The sweet potato root has a delicate skin that is easily bruised at harvest. Take care not to bruise the roots with a hoe, shovel, or other harvesting tool. Even dropping the potatoes into a harvest bucket will injure the skin.

For home gardeners, the best time to harvest sweet potatoes is immediately before or just after the first fall frost. When the sweet potato leaves turn yellow, growth has stopped and the roots have matured. This is a good time for harvest.

Acknowledgment

Courtney Angel contributed to the manuscript of this publication.

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Produced by Texas A&M AgriLife Communications

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