Sweet Potato Production from Slips

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SWEET POTATO (Ipomoea batatas)

Immediately remove your certified sweet potato slips from their box upon receipt. The slips may have a dry, wilted, or pale appearance when they arrive—this is normal. Slips may or may not have visible roots, but lack of visible roots will not impair viability or yield. Plant slips out as soon as possible after arrival, when the soil has warmed to 60–65°F/16–18°C. If planting must be delayed, wrap the root end in moist paper towels, keeping any leaves that are present and stems above the root nodes dry; place upright and keep at room temperature, out of direct sunlight and wind. Soak the slips by placing them in a jar of water for 1 hour per day; soaking for longer periods may induce rot. If planting must be delayed by a week or more, loosely plant the slips in sterile potting medium, keep moist, and place indoors or in a greenhouse. Gently lift out and separate slips when ready to plant.

Slips may or may not have visible roots.

Being tropical in origin, sweet potatoes require ample warmth over a long season (at least 3–4 frost-free months) to produce a marketable crop.

SOIL REQUIREMENTS

Sweet potatoes grow best in warm, well-drained, sandy loam soils; slips planted into cool and/or poorly drained soil may rot. The ideal pH is about 6.5. High fertility is not required, but a sandier soil may produce straighter roots. Planting in raised beds can enhance soil warming, drainage, and root development. Many northern growers have found using black plastic mulch to be an effective growing practice. Form beds and cover beds with mulch 2–3 weeks before anticipated planting date, to allow the soil to warm to at least 65–70°F/18–21°C.

PLANTING

Because the top growing point may not be present, it may not be obvious which end of the slip is the root end. Indicators of the root end include greater thickness and the presence of nodes that tend to root-out first.

Space slips 10–18” apart (wider spacing produces larger roots) in rows spaced 24”–60” apart. On our Research Farm in Zone 5b, we space plants 12” apart in rows 24” apart, with 2 rows per bed (each bed 6’ apart center to center).

Plant slips sideways or straight down in the soil, ensuring that 2-4 nodes are buried 3–4” deep. Plant fewer nodes for short seasons, if you have tighter spacing, or if you are trying to speed up a late variety. Plant more nodes if you have a longer season, if you have a wider spacing, or if you are trying to maximize yield and root size.

It is critical to thoroughly water the slips around the stems immediately after planting and until established. This can take a week or more. The slips can dry out very quickly, especially when it is sunny, windy, or dry. If the forecast is for hot, dry, and/or windy conditions for the first 3–5 days after planting, we recommend pruning all leaves off the slips prior to planting to help the plants retain moisture.

Keep young plants weed free with shallow cultivation or mulching. Once the sweet potato plants are actively growing, they will smother most weeds with a proliferation of secondary/branching vines. These branching vines can also act as secondary roots, pulling water and nutrients from the soil. If growing on plastic mulch, however, you may wish to prune these vines.

Northern growers can optionally apply row cover for the first several weeks after planting, and again in the fall before harvest, to extend the season by creating a warmer growing environment. Row cover

is generally not required, however; we do not use row cover in our Zone 5b trials.

INSECT PESTS AND DISEASES
Sweet potatoes generally have few insect pests. Control may be necessary for flea beetles, Japanese beetles, and wireworms. Row covers will prevent beetles from feeding on young plants. Wireworm damage is best prevented by avoiding fields that were grass the prior year. Sweet potato weevils may be a problem in the southern United States and can be prevented with crop rotation and removal of crop residue. Avoid diseases such as scurf with crop rotation and by removing all plant debris after harvest.

HARVEST
Dig roots in fall before any hard frosts occur. If plants sustain frost, harvest roots as soon as possible — frost damage will travel downward from the foliage and stem to affect the roots. Cut back vines by hand or with a flail mower, then dig roots by hand with a spading fork or mechanically with a bed lifter. Handle carefully to avoid injuring the skins. Heavy and dry soil increases risk of damage to roots. Late varieties tend to have thinner skin that is more susceptible to skinning damage than earlier varieties.

STORAGE
Sweet potatoes must be cured before storing to toughen skins and improve eating quality. Brush loose soil from the roots and cure in a warm (85°F/29°C), dark, well-ventilated location with 85% relative humidity for 4–7 days. After curing, store in a cool (60°F/16°C), dark location and avoid any unnecessary handling. Do not allow the storage temperature to drop below 50°F/10°C, as this will injure the roots. Prior to eating, store the roots for an additional 3–4 weeks following curing to encourage full sugar development. Properly handled roots can be stored for 7 months or more.

LEARN MORE
See Tips for Starting Your Sweet Potato Slips in our Vegetable Grower's Library for additional recommendations and photos.

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ACCESSIBILITY 10/12/21 LD