

Sweetpotato Production



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Introduction

- A nutritious root crop
- Ranks 7th in world food production after wheat, rice, maize, potato, barley, and cassava
- Between 2000 and 2014, annual per capita consumption increased from 4 to 7.5 lbs





Climatic Requirements

- Requires a minimum frost-free period of 4 months
- ✤ Air temperature: 77-85 °F
- Soil temperature: 65-85 °F
- Night air temperature is the most critical factor for storage root growth
- 60-77 °F promote storage root formation and growth
- Long photoperiod favors storage root growth
- Sandy loam soil with 5-7.5 pH



Production Process

- Key steps for successful sweetpotato production in northwest Washington:
- Slip production
- Plastic mulch
- Curing
- Storage
- Cost of buying slips: the single biggest expense for sweetpotato production

But you can grow your own slips!



Slip Production

- Sweetpotatoes propagated from slips or vine cuttings
- Varieties differ in their ability to produce slips
- One sweetpotato root can produce 20-40 slips
- Select healthy roots 1.5-3 inches diameter







Slip Production

- Buy sweetpotatoes at grocery store
- Fill tray with potting mix; add fertilizer if not included
- Warm tray; can use heating mat
 - Air temperature: 80-85 °F
- Place roots in tray without touching, lightly cover with mix
- Slightly moisten mix, do not over-water
- Cover tray with clear plastic box/dome, maintain ventilation



Sprouting sweetpotatoes using heating mat





Slip Production

- Water trays to keep the mix moist
- Sprouting usually begins 3 weeks
- Cut vines when 8 inches tall, 5 leaves and strong stems
 Cut vines 2 inches above the mix to prevent diseases and insect transfer
- No. of slips required per 20 feet:
 8 inches in-row spacing: 30
 12 inches in-row spacing: 20
 15 inches in-row spacing: 16







Planting Sweetpotatoes

- Transplant: 3-4 weeks after frostfree date
- Fertilizer: ½ lb for 20-ft row; overfertilization, especially N, causes vigorous vine growth but lower yield
- Spacing: 8 in. in-row, 6 ft between-row
- Irrigation: Keep the soil moist; overwatering causes root rotting
- Weeding: Shallow cultivations as needed





Harvesting Sweetpotatoes

- Check after 80 days, harvest any time roots are adequately sized
- Harvest before soil temperature drops below 55 °F
- Stop irrigation 1 week prior to harvest
- Cut vines 1 day prior to harvest, easier to harvest and sets skin
- Dig with shovel or fork
- Minimize skinning and bruising the roots
- Do not leave sweetpotatoes exposed to sun for more than 1 hour







- Start curing same day as harvest
- Shake off excess soil, DO NOT WASH ROOTS
- Curing sets the skin, heals wounds and bruises, enhances flavor (starch -> sugars), roots firmer

Ideal conditions:

- 80–90 °F
- 85–90% humidity; no water condensation on roots
- Ventilation
- 7-10 days
- At home:
 - 65–75 °F
 - Humidifier
 - 2–3 weeks





Storing Sweetpotatoes

Ideal:

Store 55–60 °F, 75–80% humidity, in the dark

- Below 55 °F, chilling injury
- Above 60 °F, sprouting
- Maintain ventilation



At Home:

- Wrap cured sweetpotaoes in newspaper or paper bag, store in a cool closet
- Properly cured and stored sweetpotatoes will last
 6 months or more



U.S. standards:

- Jumbo (>9 inches length and >3.5 inches diameter)
- U.S. no. 1 (3–9 inches length and 1.75–3.5 inches diameter)
- ♦ U.S. no. 2 (≥1.5 inches diameter)





- Wireworm: A potential pest threat in NW WA
- Feeding holes can be an entry point for pathogens
- WSU NWREC experiment: test wireworm-resistant entries that are productive in NW WA





Experiment at WSU NWREC

- Varieties: Covington, Beauregard, wireworm-resistant entries
- Grown using plastic mulch
- Planting: 25 May 2021
- Harvesting: 24 Sept. 2021
- Yield per plant: 4-5 lbs.







Thank you!!!!



