

November 2004 (pr)

HG/2004-11

Beets in the Garden

Dan Drost and Wade Bitner, Vegetable Specialists

Summary

Beets are cool season vegetables that prefer sunny locations and fertile, deep, well-drained soils. Incorporate plenty of organic matter and a complete fertilizer into the area before planting. Plant seeds $\frac{1}{4}$ - $\frac{1}{2}$ inch deep. Thin seedling beets to 3 inches apart in the row with rows 12-18 inches apart. Plant 2-3 weeks before the last frost. Beets taste best when plants have been exposed to several weeks of cool frosty weather. Avoid water or fertilizer stress during growth. Irrigation should be frequent and uniform to ensure good growth. Control insects and diseases throughout the year. Harvest beets when the roots reach full size.



Beet Varieties

There are many good beet varieties for sale in local gardening outlets and through seed catalogs. Most grow well in Utah. Beet varieties include Detroit Dark Red, Red Ace, Early Wonder, Green Leaf, and Golden.

How to Grow

Soils: Beets prefer fertile, well-drained, deep, sandy soils rich in organic matter for best growth. Most light soils in Utah are well suited for beet production. Heavy soils need to be amended with plenty of compost to allow good root development.

Soil Preparation: Before planting, incorporate up to 2-4 inches of well composted organic matter and apply 2-4 cups of all-purpose fertilizer (16-16-8 or 10-10-10) per 100 square feet. Work this into the top 6 inches of soil.

Plants: Beets are always grown from seed. Beets can be sown after soils reach 40°F. Seeds germinate best at 55-75°F and require 7-14 days to emerge. Temperatures above 80°F reduce seed germination. Beets grow best when temperatures do not exceed 85°F. Many gardeners plant beets at 2-3 week intervals to maintain a steady supply throughout the year.

Planting and Spacing: Seeds should be planted $\frac{1}{2}$ -1 inch deep. Crusting soils will limit seedling emergence and affect plant stands. Maintain a uniform and moist soil surface to ensure good plant stands. Seeded beets should be spaced 3-4 inches between plants in the row with rows 12-18 inches apart.

Water: Water beets regularly. Water requirements depend on soil type. Mulching around the plants helps to conserve soil moisture. Use drip irrigation if possible. Moisture fluctuations cause root cracking, slow leaf development, and contribute to low yields. Water stress during the first 6 weeks of growth often leads to premature flowering and low yields.

Fertilization: Apply $\frac{1}{2}$ cup per 10 foot of row of a nitrogen-based fertilizer (21-0-0 or 34-0-0) 6 weeks after emergence to encourage rapid plant growth. Place the fertilizer to the side of the plants and irrigate it into the soil. Beets require adequate amounts of boron to develop properly. Black, sunken spots on or in the root generally indicate low boron levels in the soil.

Problems

Weeds: Beets do not compete well with weeds. Weed control is particularly important during germination and early establishment when plant growth is slow. Thin closely spaced plants to encourage good root size. Avoid cultivation as root pruning and damage will affect growth and yield.

Insects and Diseases: Most beets grow rapidly and are not susceptible to many production problems. Rotate planting locations in the garden from year to year to help control many diseases. Boron deficient plants are more susceptible to many of the more common root diseases.

Insect	Identification	Control
Leaf Miners	Small white maggots that burrow and feed in the leaves. Leave a lacy trail.	Do not significantly affect yield, but make the leaves less usable.
Flea Beetles	Small black beetles that feed on seedlings. Adults chew tiny holes in cotyledons and leaves. Beetles can reduce plant stands or may kill seedlings.	Control with chemicals at seeding or after seedlings have emerged from the soil.
Disease	Symptom	Control
Leaf Spots	Fungal diseases that cause circular spotting on infected leaves.	Occur when foliage remains wet for long periods. More common late in the year.
Root Rots	Fungal diseases that cause decay and rotting of the root. May affect plant stands	Crop rotation, improved soil drainage, and seed treatments are effective control options.
Yellows	Yellow discoloration of plants.	Carried by leafhoppers. Cover plants with fabric mulch. No known control.

Harvesting and Storage

Beets can be harvested as soon as the roots begin to size. Generally roots are mature 60-80 days from seeding, depending on variety. As the roots get larger they tend to get more fibrous. Use a digging fork to loosen soil and pull up needed plants by the tops and trim off leaves. Wash and store at 32°F and 95% relative humidity for 2-4 months. Young leaves may be cooked and eaten as well. Harvest beet leaves when they are 4-6 inches tall. Beets should be harvested before heavy frosts or freezes.

Productivity

Plant 5-10 feet of row per person for fresh use and an additional 10-20 feet for storage or canning. Expect about 75 lbs of beet roots per 50 linear feet of planted row.

Nutrition

Beets are low in calories and are a good source of vitamin C. A medium sized root has only 50 calories, no fat, and supplies 4% of the daily vitamin C requirement. Beet tops (greens) are an excellent source of vitamin A and provide more minerals and vitamins than the root.

Frequently Asked Questions

Why do my beets flower rather than form a bulb? Beets require some chilling to form flower stalks. If planted too early, this can occur.

Why do some of my beets fail to form a bulb? Beets need some room to grow. Over-crowding can contribute to poor bulb development.

What can I do to reduce woody beet roots? Hot weather and water stress can cause woody bulbs. Keep plants well watered when temperature go above 85°F.

Utah State University is committed to providing an environment free from harassment and other forms of illegal discrimination based on race, color, religion, sex, national origin, age (40 and older), disability, and veteran's status. USU's policy also prohibits discrimination on the basis of sexual orientation in employment and academic related practices and decisions. Utah State University employees and students cannot, because of race, color, religion, sex, national origin, age, disability, or veteran's status, refuse to hire; discharge; promote; demote; terminate; discriminate in compensation; or discriminate regarding terms, privileges, or conditions of employment, against any person otherwise qualified. Employees and students also cannot discriminate in the classroom, residence halls, or in on/off campus, USU-sponsored events and activities.

This publication is issued in furtherance of Cooperative Extension work. Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Jack M. Payne, Vice President and Director, Cooperative Extension Service, Utah State University.