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GROWING table beets

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EC 72-1225

GROWING
Table Beets

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Table beets are garden vegetables that belong to the *Chenopodiaceae* or Goosefoot family. This group is supposedly so named because the leaf shape of many of its members resembles the footprint of a goose.

Sugar beets, an important Nebraska crop, Swiss chard and spinach are other food plants that belong to this family. Kochia and lambsquarter, also goosefoots, are two of our serious weeds.

Beet roots are usually served boiled and buttered, pickled or in salads. They add color to meals. There is little color loss if they are not pared or cut before cooking. The weight-conscious person may be interested to know that table beets contain only about 35 calories per 100 grams. Beet tops may also be used as food and are prepared in the same manner as spinach.

Variety and planting date trials show that beets are another of the many vegetables that can be successfully grown in Nebraska.[1] Following are suggestions for growing beets in your garden.

Requirements

Beets are hardy. They grow best under moderate temperature but they may be planted in the spring and left in the garden until late in the fall in all regions of Nebraska. They can be grown in nearly all types of soil but do best when soil is friable, fairly deep and moist but well drained.

For high yield and quality, table beets require an adequate supply of moisture throughout the season. Interrupted growth because of inadequate water may cause malformed roots. An

[1] Honma, Shigemi, 1954, Horticulture and Forestry Progress Report 25, Nuland, D. S. *et al.*, 1966, Horticulture and Forestry Progress Report 52 and Neild, R. E., 1971, Horticulture and Forestry Progress Report 71, Agriculture Experiment Station, College of Agriculture, University of Nebraska.

inconsistent supply of moisture may result in color difference in alternating rings of the root. Supplemental irrigation will be beneficial in the eastern third of Nebraska and is essential in the remaining two thirds. Beets require little space (5 to 10 feet of row per person per year) and are ready for harvest 7 to 8 weeks from planting.

Varieties

Detroit Dark Red, Ruby Queen and Perfected Detroit have performed well in Nebraska trials and are the leading garden varieties in the United States. These varieties produce globe-shaped roots with very dark red flesh that is excellent for canning as well as when freshly prepared.

Crosby Egyptian and Early Wonder have flat-topped roots. They grow more rapidly and mature slightly earlier but tend to develop broad alternate zones of dark and lighter flesh, particularly in warm weather.

Soil Preparation and Fertilizer

Beet seedlings are small and weak so good seedbed preparation is important to obtain the stands needed for high yields of top quality roots. Do not work soil when it is wet and do not plant immediately after heavy trashy crop residues are turned over. Where erosion is not serious, spading or plowing in the fall favors preparation since the soil "mellows" over winter from alternate freezing and thawing. The seedbed should be smooth and well worked but firm.

Compared to other vegetables, beets require a moderate amount of nitrogen and a relatively low amount of phosphorus but a high level of potassium. Fortunately, most Nebraska soils usually are well supplied with potassium so large quantities of this element need not be applied.

Beets also have a high requirement for boron. Since only limited or no response to boron has been noted in crop nutrition research in Nebraska and since snap beans, cucumbers, peas, strawberries and other garden crops are sensitive to injury from excessive boron its use is not recommended.

For early planting, when soil is cool, a moderate application of starter fertilizer will help reduce damage from damping-off disease

organisms by helping get the seedling off to a more vigorous start. Use one half pint of high analysis starter fertilizer such as 11-48-0 or 10-35-5 per 100 square feet (10 x 10 ft) broadcast and worked into soil ahead of planting or 1/2 pint per 100 feet of row applied in a band 1 to 1 1/2 inches below the row where the seed is planted.

Planting

Beets tolerate light frost and seed will germinate at lower temperature but less damping-off occurs and stands are better when first planting is delayed until the soil temperature at seeding depth is 50° or higher. Beets require 50-55 days to first reach harvestable size (1 1/4 to 1 1/2 inches diameter). Latest sowing should be early enough to allow enough time for beet roots to enlarge before a severe freeze destroys plant tops.

Earliest and latest planting dates and earliest and latest harvest dates for different regions in Nebraska are in Table 1.

Seeds are placed 1/2 to 1 inch deep, 2 to 3 inches apart in 16 to 30 inch rows. Two ounces of seeds will plant 100 feet of row. Use a taut string between two stakes to keep rows straight and parallel. A row can be marked at the proper depth for seeding with a stick or a hoe handle.

Closer row spacing allows beet foliage to cover soil better, keeping it cooler, and helps prevent germination of warm season grassy weeds.

Wider row spacing facilitates use of mechanical cultivating equipment. Heavier seeding rates in rows should be used for early plantings.

In dry seedbeds and on sandy soils 1/4 to 1/2 inch of water

Table 1. Estimated planting and harvest dates for table beets in different regions of Nebraska.

	Planting		*Harvesting*	
Region	*Earliest*	*Latest*	*Earliest*	*Latest*
East	4/13	6/6	8/8	10/17
Central	4/17	6/11	8/6	10/15
West	4/29	7/23	8/25	10/3

following planting will help assure rapid germination important for obtaining good uniform stands.

Beet "seeds" are really dried beet fruit containing several seeds so more than one seedling may be produced. Thinning may be necessary. From 15 to 18 healthy plants per foot of row should be the objective plant stand.

Weed Control

Good seedbed preparation is one of the best ways to prevent weed problems in table beets. Developing weeds are most easily controlled and less damage is done to the crop if they are destroyed when small. Remove any weeds in the rows when plants are thinned. Young beet plants are easily injured and should be hoed or cultivated with care.

Beets planted early may germinate slowly. A few earlier germinating radish seeds mixed with the beet seeds will help mark the row should cultivation be necessary before rows are readily seen. Hoe or cultivate shallow and do not mound or throw soil about the plants.

Hoeing or cultivation are preferred methods for controlling weeds in small gardens but herbicides are available when large plantings are made. Cycloate (Ro-Neet) is a useful herbicide and has given good results controlling weeds in sugar beets in Western Nebraska. Cycloate at a rate of 3 to 3 3/4 tablespoons per 1,000 square feet should be incorporated into the seedbed ahead of planting.

Insects

Flea beetles (small beetles that jump quickly and cut holes in leaves in early spring), leafhoppers (small green wedge-shaped insects) and webworms (slender green worms with black spots and stripes) are some of the more common insect pests of table beets. Although damage may become serious if not controlled, effective materials are available.

Flea beetles and leafhoppers may be controlled with Sevin (50% WP[1]) and Methoxychlor (50% WP) at the rate of 2 tablespoons per gallon of water. Webworm may also be controlled with

[1]WP = Wettable Powder

Methoxychlor at the same rate as above. *Read the label carefully before using agricultural chemicals.*

Diseases

Leaf spot, virus and damping-off organisms that destroy small seedlings are some of the diseases attacking table beets. For leaf spot apply Maneb (80% WP) or Zineb (76% WP) at a rate of 1 1/2 to 2 tablespoons per gallon of water when the disease first appears and every 10 days thereafter.

Virus diseases are best prevented by controlling flea beetles and leafhoppers known to transmit virus particles. Crop rotation, good seedbed preparation, adequate seeding rates and the use of high quality treated seed and starter fertilizer are good practices to follow. They are particularly important in soils frequently cropped to beets and in gardens where stands have been reduced because of damping-off organisms.

Harvesting

Table beets are ready for harvest when they reach 1 1/4 to 1 1/2 inch diameter. These beets are choice quality but sizes up to four inches are quite satisfactory when sliced, diced or cut into strings following cooking and paring. With good growing conditions beet roots may reach 1 1/2 inch diameter in about seven weeks.

The rate at which beets grow after they begin to swell is partially dependent upon the number of plants per row. Growth rate is slower at higher plant populations and there are more choice size beets for a longer period of time. These may be periodically removed as the season progresses allowing the small string-like beets to swell and take their place.

Beets can withstand frost and mild freezing but should be harvested before a hard freeze occurs. Beets can be expected to keep from one to three months if stored at 32° F under conditions of high humidity. Small beets are softer and shrivel faster than large beets in storage so roots should be topped and sorted by size before they are to be stored.

Issued April 1972, 3,000