

AGRICULTURAL EXTENSION SERVICE—UNIVERSITY OF MINNESOTA

YARD'N GARDEN

Growing Carrots and Other Root Vegetables

FACT SHEET 110
C. GUSTAV HARD

Carrots, beets, parsnips, radishes, turnips, and rutabagas are the most commonly grown root crops. They all have similar cultural requirements. They grow best in cool weather. Since they are hardy, they may be planted early in the spring and left in the garden until in the fall. Some of the root vegetables are grown in nearly all home gardens.

The tops of beets and turnips are used as cooked greens and are harvested while the plants are young.

Preparing the Soil and Fertilizing

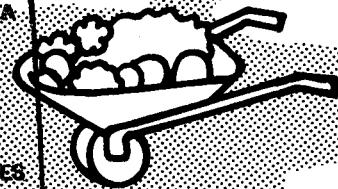
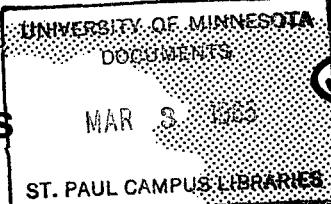
Proper soil preparation is very important for success with the root crops. They grow best in a deep, loose soil that retains moisture and is well-drained. You can improve both heavy soils and lighter sandy soils by adding well-rotted manure or compost. Do not use fresh manure, as it can stimulate branching of the roots. Deeply till the soil, then pulverize and smooth the surface. Incorporate well-rotted manure and a complete fertilizer, such as 5-15-5, at a rate of 2 pounds per 100 square feet into the soil before planting to provide adequate nutrients for good growth. In midseason you should apply a side dressing of the same fertilizer at a rate of 1 pound for every 25 feet of row. Do not use a combination fertilizer and nutrient on vegetables. They contain weed killers that will kill vegetable plants.

Root crops do not grow well in very acid soils. The optimum pH range is between 6 and 6.5. Liming will raise the pH of acid soils. Use a soil test to determine if any special fertilization or liming is required.

Planting and Thinning

The root crops are planted directly in the garden. Plant radishes and turnips April 20 for a spring crop, and again August 1 for a fall crop. Plant carrots, beets, and parsnips May 10. For a continuous supply of young carrots make two or three plantings, spaced three weeks apart. Rutabagas require a longer growing season and should be planted June 1 for a fall crop. Radishes and parsnips can be seeded together in the same row. The radishes will be ready to harvest in a few weeks and will not interfere with the later maturing parsnips. This system, called intercropping, will conserve space in the garden.

The root crops must be thinned to allow room for the roots to develop. Thin parsnips, rutabagas,



and turnips as soon as the plants are large enough to pull. Thin carrots and radishes as soon as they reach a small, edible size. If you wish to use the tops of beets for beet greens, you can delay thinning until they reach useable size. Carrots, beets, parsnips, radishes, and turnips should be thinned to a 2-inch spacing. Rutabagas should be thinned to a 4-inch spacing.

The long rooted vegetables such as carrots and parsnips should never be transplanted, because as they develop the roots will fork.

Note: Planting dates given are for the Minneapolis-St. Paul area. Plant one week earlier or later for each 100 miles south or north.

Watering

Proper watering can make the difference between good production and poor production. Vegetables need at least 1 inch of water from rainfall or irrigation each week during the growing season. Always soak the soil thoroughly when watering. There is little or no value in a light watering that only wets the surface of the soil. On most soils, watering once a week is sufficient. Very sandy soils may require more frequent watering.

Controlling Weeds

The root crops grow slowly for the first few weeks after planting and cannot successfully compete with weeds. Frequent, shallow cultivation will control the weeds and keep the surface of the soil loose. It is best to start cultivating before the weeds become a problem. The roots of the root crops are very close to the surface of the soil, so it is important not to cultivate too deeply. Cultivate just deeply enough to cut the weeds off below the surface.

Harvesting

Carrots are usually harvested when the roots are 1/2 to 3/4 inches in diameter at the upper end, but you can harvest them any time they reach a useable size. To harvest, push the root to the side and pull it out of the ground. If you are removing the entire crop at one time, it may be helpful to use a spading fork to loosen the soil next to the plants before pulling them.

Beets, turnips, and rutabagas are harvested when they reach a useable size. For best quality, do

not allow them to become overgrown. As with carrots, spading the soil next to the plants will make them easier to pull.

Parsnips are usually left in the ground until late fall. The roots can be 10-12 inches long, so be careful not to break them when harvesting. It is best to dig them up with a spading fork.

Radishes are usually ready to be harvested in 3-6 weeks after planting. They can be pulled any time they reach a useable size. They may get pithy and develop a strong taste if they are left in the ground too long.

Problems

Carrot root flies are maggots that feed on and destroy the roots of many root crops. Control by harvesting plants as soon as possible. Do not apply poisonous insecticides to plant parts that are to be eaten. A soil insecticide may be used to control maggots at planting time. See Extension Folder 593, Controlling Insects in the Home Vegetable Garden.

Flea beetles chew small, round holes in leaves. They can spread disease and destroy the crop.

Forked roots may be due to rocky or stony soil or heavy soil. See section on soil.

All tops with no bottoms or small bottoms is a condition usually caused by planting too close or by not thinning plants.

Hot tasting radishes may result from hot weather and dry soil, or harvesting too late.

Pithy radishes can result from the same conditions that cause hot tasting radishes.

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