



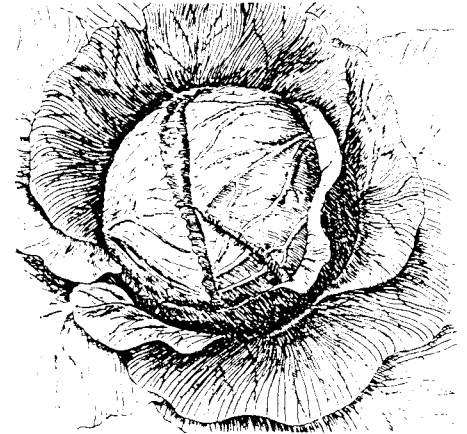
# Extension Extra

ExEx 6015  
February 1993  
Horticulture

SOUTH DAKOTA STATE UNIVERSITY / U.S. DEPARTMENT OF AGRICULTURE

## Growing Cabbage in the Home Garden

by Dr. Paul Prashar, professor, and  
Dr. David Graper, assistant professor and Extension horticulturist,  
SDSU Horticulture, Forestry, Landscape, and Parks Department



Cabbage, *Brassica oleracea* var. capitata, is probably the most ancient of vegetables. Cabbage belongs to one of the oldest but also one of the largest vegetable families. Head-type cabbage was first described in 1536. The popularity of the vegetable grew as colonists brought cabbage seed with them from Europe.

Cabbage plants range in color from green to purple; in leaf from smooth to crinkled; in heads from flat to pointed; in maturity from 55-130 days. The green, round-head types are most common in the market.

Chinese (celery) cabbage is really a member of the mustard family although sold as cabbage. It is of similar culture, although prefers cooler temperatures, and it has a light green to white stalk. Heads average 4-6 inches thick and 18-20 inches tall. This vegetable has a long, thick, rather smooth stalk, and thin leaves. It is excellent in salad and, when shredded or finely chopped, is a popular ingredient in Chinese dishes.

### Food Value

Cabbage is high in vitamin C, B complex vitamins, and minerals, and is a good source of calcium. A half-cup serving of raw cabbage has only 12-15 calories, depending upon the variety (dressing or butter not included).

### Climate

Cabbage is a cool-season crop, but it will grow in most areas or places because of its adaptability to a wide range of climate and soils. Cabbage thrives best in a relatively cool (59-65 F) moist climate. Exposure to prolonged periods of

temperatures below 50 F or above 77 F causes physiological changes in the plant. Well-hardened plants of cabbage can withstand short periods of temperatures below 20 F in spring, although this depends on variety.

### Soil

Cabbage is grown on all types of soil, from sandy to heavy, but requires good drainage. Provide a good supply of organic matter. The best pH is 6.0-7.5. In some areas, sandy soils may be deficient in boron, which causes a hollow stem in the plant. Correct this by applying one half pound of boron per 1,000 square feet.

### Transplants

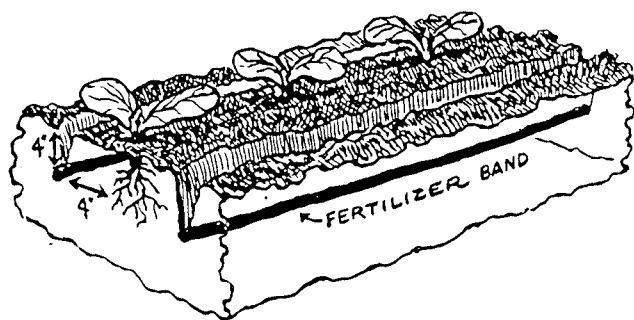
Buy 6-8 week old, healthy plants for transplanting. If you grow your own plants, start seed inside 6-8 weeks before transplanting outside. Be careful not to start your plants too early. This could result in poor quality transplants which may bolt (flower) and not produce a good head.

Plant seed rows 2 inches apart with 8-10 seeds per inch for healthy seedlings. Transplant the seedlings when the first pair of true leaves appears. Each transplant should have a minimum of 2 x 2 inch growing area.

### Establishing Plants

Get plants 1-2 weeks ahead of planting time so they can be hardened-off before planting. Hardening-off is done by exposing the plants to cooler temperatures (leave outside on the south side of the garage) while decreasing watering. Well-hardened plants can tolerate temperatures of below 20 F.

**Figure 1. Fertilizer banded to each side of the newly transplanted cabbage.**



Set the garden rows 18-24 inches apart with plants 12-18 inches apart within a row. Closer spacing tends to produce smaller, more compact heads. Wrap a 3-inch wide piece of wax paper twice around the plant stem to prevent damage by cutworms. Be sure half of the wax paper is buried in the ground and half above ground. A recommended insecticide for cutworms or root feeders can be dissolved in the starter solution and applied at planting time, or work a granular form of insecticide into the top 6-8 inches of soil.

### Fertilizing

Cabbage is a heavy feeder of phosphorus, so a high level of phosphorus in the soil is essential. A soil test determines this best. A yearly soil test for phosphorus is not necessary because it does not change much from year to year. If a soil test is not done, add 2 lbs of a high-phosphorous fertilizer, like 8-32-16, per 100 square feet of soil surface, and mix thoroughly into the soil.

Fertilizer applied in a band after transplanting can be very effective. Use 1 cup of 12-12-12 fertilizer for a 50' row. Dig a narrow trench 4 inches away and 4-5 inches deep on both sides of the row. Evenly spread the fertilizer along the trench on each side of the row. Fill the trench in with soil. When the plants are half grown, sprinkle one tablespoon of 35-0-0 around each plant, slightly mix in the soil, and water.

### Cultivating

After the first cultivation, subsequent cultivations should be shallow and farther away from the plants. Many roots are within 2 inches of the surface of the soil, run horizontally, and extend out beyond the base of the plant. If deep cultivation is used, more harm than good may be done. If the weeds are numerous, pull them by hand or control by shallow cultivation.

### Watering

Cabbage is a heavy user of water so maintain soil moisture at about 60%. Wait until the top 1 inch of soil has dried, then water thoroughly. Cabbage can be grown without irrigation in areas of sufficient rainfall if mulch is used. Prolonged dry periods during head development generally result in greatly reduced head weights. A heavy rain when heads are about to harvest, following prolonged dry periods, may cause head splitting. With the increased availability of water, the plants take up an excess of water causing plant cells to burst. If you want to leave the heads in the garden after the rain, make a vertical cut 6-8 inches deep with a spade on all 4 sides of each head. This will cut a few roots, decrease water uptake, and prevent splitting.

### Insects and Diseases

Most disease problems can be prevented by using good seed; healthy, disease- and insect-free plants; resistant varieties; treated seed; a pasteurized growing medium for germinating seeds; and crop rotation. Insects can be controlled by applying a recommended insecticide (consult your county agent). Some insects may be excluded from plants by using horticultural fleeces or floating row covers.

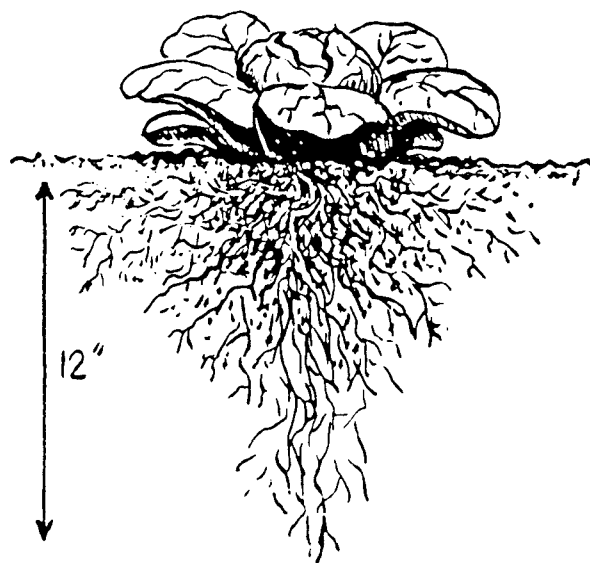
### Harvesting

Most people harvest cabbage from the garden as soon as it is big enough to use or when they need it. The most desirable size is when the heads are solid and weigh between 2 1/2 to 3 1/2 lbs.

### For Additional Information

ExEx 8021 Garden Insect Control  
ExEx 6006 Vegetable Varieties for South Dakota

**Figure 2. Fibrous root system of the cabbage plant.**



Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the USDA. Mylo A. Hellickson, Director of CES, SDSU, Brookings. Educational programs and materials offered without regard to age, race, color, religion, sex, handicap, or national origin. An Equal Opportunity Employer.

150 copies printed by CES at a cost of 5.5 cents each. February 1993.