

Cabbage and Chinese Cabbage

PLANTING

Cabbage and Chinese cabbage (*B. rapa*, Pekinensis Group) are cool-season vegetables that should be grown in early spring or fall. They grow best at temperatures of 60 to 65 F.

Chinese cabbage forms dense heads that may be very upright and tall (Michihili types) or round and barrel-shaped (Napa types). The leaves are slightly wrinkled and thinner than the leaves of regular cabbage with wide, crisp midribs.

Like many other cool-season crops, they will “bolt” or produce a flower stalk if exposed to a prolonged cold period of 10 or more continuous days of temperatures between 35 and 50 F following a favorable growing period. When planted in the spring, cabbages must be planted early enough to ensure that they are harvested before temperatures become too hot. Mature cabbages can withstand temperatures as low as 18 to 20 F.

PLANTING DATES		
Area	Spring	Fall
Piedmont	Feb. 15-Apr. 1 ^T	July 1- 30 ^T
Central	Jan. 15-Mar. 1 ^T	July 25-Aug. 10
Coastal	Dec. 1-Jan. 15 ^T	Aug. 1-Aug. 15

^T Transplant plants.

Cabbage transplants are best for spring plantings, but fall plantings may be directly seeded into the row. Plant spacing affects head size. For 2- to 3-pound heads, transplant plants or space seed 9 to 12 inches apart in rows 36 to 44 inches wide. Varieties for sauerkraut are spaced wider.

Direct seeding is possible, especially for the fall crop. Loamy to sandy soil is best for direct seeding. It is critical to keep the soil moist during seedling establishment. It is also desirable to have an area that is protected from the wind when seeding these crops. Direct-seeded plantings should be thinned to the desired stand when the plants are in the three-leaf stage.

Chinese cabbage is best sown in late summer and fall rather than spring. If seed is sown in the spring, young plants may bolt if they are exposed to frost or to a long period of cold nights.

Sow the seed thinly in the row, and thin the plants to 12 inches apart for Michihili types and 18 inches apart for Napa types.

CULTIVARS

- **Cabbage** - Bravo, Market Prize, Rio Verde, Savoy Express, Tropic Giant (hybrid), Green Jewels (hybrid)
- **Chinese Cabbage** - Pak Choi Type - Joi Choi (hybrid)

SOIL

Cabbage (*Brassica oleracea*, Capitata Group) grows well on a wide variety of soils, but a well-drained sandy loam with high organic matter content is preferred. Soil pH should be 5.8 to 6.5. Have your garden soil tested several months prior to planting and adjust soil pH according to recommendations.

FERTILIZING

A soil test is always the best method for determining the fertilization needs of the crop. Information on soil testing is available in the fact sheet HGIC 1652, *Soil Testing*.

If a soil test has not been taken, apply 5-10-10 at 3 pounds per 100 square feet before planting. These vegetables should be sidedressed once during the growing season. Sidedress with ammonium nitrate at 1 pound per hundred feet of row or calcium nitrate at 2 pounds per 100 feet of row. More frequent sidedressing may be required if the garden is sandy or leaching rains occur.

WATERING

Water the garden to provide a uniform moisture supply to the crop. The garden should be watered in the morning so that the foliage is dry before dark. Water sufficiently to moisten the soil to a depth of at least 6 inches. Light sprinklings will encourage shallow rooting of the plants. The critical periods for moisture are stand establishment and crop maturation. It is important to have a constant uniform moisture supply to produce a high-quality crop and to have the spring crop mature before high summer temperatures. Mulching can help conserve water and reduce weeds.

HARVEST AND STORAGE

Cabbage should be ready for harvest 60 to 80 days after planting transplants. Harvest cabbage when the head is firm and has reached adequate size depending on the variety and growing conditions. Once cut, move it out of the sun as soon as possible. Cabbage will “sunblister” and lose weight in direct sun. Store all harvested cabbage in the refrigerator. Cabbage can be stored at 34 F and 98-percent humidity for up to five months.

PROBLEMS

Head cracking or splitting occurs due to excessive water uptake and growth near maturity. Root-prune with spade or trowel or twist the stalk to break some of the roots and reduce water uptake.

Several worms (imported cabbageworm, cabbage looper, diamondback moth caterpillar), harlequin bugs, cabbage maggots, aphids and flea beetles are the major insect problems.

Common disease problems include black rot, wire stem, damping-off, downy mildew, *Alternaria* leaf spot and watery soft rot. Cabbage is more susceptible to wire stem and downy mildew than Chinese cabbage. Chinese cabbage is more susceptible to *Alternaria*.

Black rot causes the most serious damage and appears as V-shaped lesions down the leaves and spreads into the water conducting system of the plant. Black rot is caused by a bacterium that is seed-borne or that can be transmitted by transplants. Warm, moist weather favors the disease. There is no control for black rot once it is established in a planting. Prevent black rot by purchasing transplants that are marked with a tag indicating that they are certified disease-free or plant western-grown chemically treated seed.

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