



Broccoli

Broccoli (from the Italian plural of broccolo, referring to “the flowering top of a cabbage”) is a plant of the cabbage family *Brassicaceae* (formerly *Cruciferae*). It is classified in the Italica cultivar group of the species *Brassica oleracea*.

Like other cruciferous vegetables, broccoli contains the phytonutrients sulforaphane and the indoles, which have significant anti-cancer effects. A compound found in broccoli appears to be more effective than modern antibiotics against the bacteria which cause peptic ulcers. Moreover, tests in mice show that the compound offers protection against stomach cancer, the second most common form of cancer in the world.

There are four types of broccoli: heading (most common), Romanesco, sprouting, and raab.

The heading type, which is most closely related to cauliflower, forms a large central head. The heads of broccoli are really flower buds that must be harvested before the flowers open or show yellow. Mature heads measure 3 to 8 inches across. Smaller, lateral heads develop throughout the summer after the central head is cut. The spiraling heads of Romanesco broccoli are quite dramatic. Sprouting or Italian broccoli forms many florets or small heads, but these do not produce a solid head. Broccoli raab,

or turnip broccoli, is not a true broccoli but a type of turnip cultivated for its flower head. Broccoli is a hardy biennial, but is treated as an annual because it loses its flavor once the flowers blossom. It prefers cool (60 - 65°F) air temperatures.

Planting:

Broccoli can be grown from transplants or direct seed into garden. It matures in about 55 to 65 days from transplanting, although it may take longer as a fall crop. Five- to seven-week old transplants are set out to harden four weeks prior to the last frost date. Temperatures below 45°F may inhibit heading or encourage seed-stalk formation (bolting). Transplants for fall planting can be produced along with cabbage and cauliflower transplants, taking about 4 to 6 weeks from seeding to setting into the garden. In Central Maryland, seeds are sown directly in late July for a fall harvest, or transplants are set out by September 1. Fall-planted broccoli often produces higher yields than spring plantings.

Sprouting and raab broccoli are sown directly into the garden in spring. Follow seed packet directions for spacing.

Heading and Romanesco types should be planted 16” to 24” inches apart in rows which are 24” to 30” apart.

Cultivation:

- **Fertilizing** – Broccoli is a heavy feeder. Mix compost into the soil and fertilize at transplanting; side-dress three weeks later and when central head has been cut ($\frac{1}{4}$ lb. of 10-10-10 per 10 ft. row). This will help produce later but smaller heads from side shoots.
- **Weeding** – Broccoli has a relatively shallow, fibrous rooting system. Cultivate carefully or use a thick mulch to prevent weeds.
- **Watering** – Keep the root zone moist by watering deeply and regularly during dry periods. Water more frequently when heads begin to develop.

Harvesting:

Cut large terminal bud clusters before flowers open, then cut small side bud clusters as flowers develop over following weeks. Harvest with 6 to 8 inches of stalk. Approximate yield per 10 foot row is 6 to 10 bunches or about 4 to 6 lbs.

Storage and Preservation:

Store in very cold (32°F), moist (95% RH) conditions, 10 to 14 days. Broccoli can be blanched and frozen.

Nutrition:

A good source of beta-carotene (converts to Vitamin A); Vitamin C, calcium, potassium, folate, and iron.

Preparation & Use:

Rinse in cool water. Eat raw or blanched briefly in boiling water, cooled in an ice bath and patted dry; with dip. Can also puree, steam, boil and microwave. Roasting for 10-15 minutes at 375 degrees brings out broccoli's sweetness.

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