



## *Winter Vegetable Gardening Tips from Joyce Gemmell*

### **Broccoli** *Brassica family*

The first broccoli seed in North America was sold by Stokes Seed Co., NY, in the 1920's. The crop has only been popular since World War II when the frozen food industry blossomed. Since then, many hybrids have been developed for the home garden with large compact central heads like one sees in the supermarkets.



There are other types grown in Europe and the Orient: the cauliflower-broccoli cross called **Romanesco** (85 days), and **Floccoli** (65 days), the green sprouting **Broccoli raab** (a turnip broccoli) and the **Chinese broccoli** which is actually a kale.

Most home vegetable gardeners like a plant that will produce a large central head, which after cutting, causes the plant to sprout many side shoots that can be harvested over a long season. **Bonanza Hybrid** (Burpee, 55 days) is a good one.

There are several varieties called **Sprouting Broccoli** that do not form a large central head. These are probably one of the easiest Brassicas to grow: **Early Purple Sprouting** (120 days) and the old Italian variety **Calabrese** (85 days). If you want a large-headed type, one of the best is **Premium Crop**, an All-American Selection. Burpee, Park and Stokes all carry it.



Do not forget that maturity dates listed here and in catalogues *are from setting out the transplants in the spring*. Also, for large head types, try **Goliath & Packman**.

Broccoli grows well in fertile, well-drained soil. It needs to grow rapidly without slowing down. Prepare soil deeply and with correct drainage. A soil on the acid side, below 6.5, can increase the susceptibility to club root disease, which can be misidentified for

nematodes. Black rot, a very destructive bacterial disease, has been, in the past, reported in the El Cajon area. Both bacterial and fungal diseases can stay in the soil indefinitely and is one of the reasons one should rotate Brassicas in the garden on a 2 to 4 year basis.

Broccoli is a heavy feeder and soil should be supplied with a pre-plant fertilizer such as 16-20-0 or a slow release, balanced formula. If organic methods are used, incorporate composted chicken manure and some bone meal or a blood meal and bone meal combination at least a week ahead of planting.

Broccoli is shallow-rooted and sometimes plants will blow over as they mature and become top heavy. Plant transplants up to the bottom set of leaves. This will place them a little deeper and prevent plants from leaning and forming a gooseneck stem. Never plant transplants that have a flower bud formed or ones with woody stems. Large transplants in six-packs at the nursery can be root-bound and under stress. Pass them up.

Space plants 12-18 inches apart depending on variety size, or wider spacing if furrow irrigating between rows. In raised beds, a staggered planting works well. Hand pull weeds under the shallow rooted plants.

Broccoli does very well under row covers such as Reemay. Young transplants are shaded about 20% and insects are kept off until tissue is hardened. Row covers do not mean you can forget about what is going on underneath. A weekly inspection, at least, is a must for aphids or earlier deposited worm eggs beginning to hatch.

Row covers produce mini-environments of warmth during the day, slower evaporation and protection from insects, birds and ground squirrels. Seedling can also be eaten by cutworms as soon as they are put out. Plants should have a paper collar put around the stem as they are placed in the ground if you have had cutworms before.

Some microclimate areas can produce edible broccoli all summer long; but don't count on it if you garden out on the valley floor with lots of sun and hot air. As soil and air temperatures rise in the summer, broccoli becomes tough and of poor flavor. The cabbage butter-

**Planting Dates:**  
**Coastal region**  
Plants can be set out from September to February.  
Seeds can be planted from August to December.

**Inland Region**  
Plants can be set out from September to February.  
Seeds can be planted from August to October.

fly lays eggs all summer and the bug problem can be more than the crop is worth compared to other seasonal vegetables in the summer.

***Also check out ...***

[http://vric.ucdavis.edu/veg\\_info\\_crop/broccoli.htm](http://vric.ucdavis.edu/veg_info_crop/broccoli.htm)

<http://www.ipm.ucdavis.edu/PMG/selectnewpest.cole-crops.html>

Broccoli is a member of the cabbage family and is a very close relative to cauliflower. This delicious vegetable contains more nutrients than any other vegetable! Some of these nutrients include vitamins A, C, & D, beta carotene, calcium, fiber, iron and antioxidants. Consumption of foods high in antioxidants can help protect against cancer and heart disease.

Broccoli, raw (edible parts), 100 g

Nutritional value per 100 g (3.5 oz)

Energy	141 kJ (34 Cal)
Carbohydrates	6.64 g
Sugars	1.7 g
Dietary fibre	2.6 g
Fat	0.37 g
Protein	2.82 g
Water	89.30 g
Vitamin A equiv.	31 µg (3%)
- beta-carotene	361 µg (3%)
- lutein and zeaxanthin	1121 µg
Thiamine (Vit. B1)	0.071 mg (5%)
Riboflavin (Vit. B2)	0.117 mg (8%)
Niacin (Vit. B3)	0.639 mg (4%)
Pantothenic acid (B5)	0.573 mg (11%)
Vitamin B6	0.175 mg (13%)
Folate (Vit. B9)	63 µg (16%)
Vitamin C	89.2 mg (149%)
Calcium	47 mg (5%)
Iron	0.73 mg (6%)
Magnesium	21 mg (6%)
Phosphorus	66 mg (9%)
Potassium	316 mg (7%)
Zinc	0.41 mg (4%)

Percentages are relative to US recommendations for adults.

Source: Wikipedia : USDA Nutrient database