Brassica oleracea var. gemmifera

First recorded in Belgium in 1752, Brussels sprouts rapidly spread to England and France. Early planting and faithful aphid control are important to good sprout production. Brussels sprouts are believed to derive from savoy cabbage. Sprouts form in leaf axils of an elongated stem. Sprouts start forming in the lowest leaf axil and progress upward.

Culture

Brussels sprouts are grown like cabbage and require a long cool growing season. Because of these requirements, the plant never has gotten wide spread acceptance. Generally, in the south the cool season is too short and in the north the cool season turns too cold for the tender plant.

Soil should be well drained with plenty of organic matter. Plant Brussels sprouts much as you would cabbage. The secret to a good sprout harvest is a proper planting date. This is a cool weather plant, so when setting out the plants they will need about 90 days to develop until harvest. For summer harvest, you must plant transplants of an early, heat-resistant variety in the very early spring. Sprouts maturing in hot weather or under dry conditions are more likely to develop bitterness.

Fall production is the most practical and rewarding in most parts of the country.

They are most dependably grown when started indoors as transplants. Start seedlings in late March, 6 weeks prior to the last average frost date (May 15 in SE Wisconsin). Sow the seed ¼ deep in 4-inch pots and transplant outside after danger of hard frost has passed (early May). For fall harvest, set plants out in early July. Days to emergence: 5-17. Optimum soil temperature range for germination: 55-75°F. Space plants 24 inches apart in both directions, and otherwise grow like broccoli. Younger, smaller (4-5 inch) transplants will establish stronger roots and stems than larger ones. This will mean less floppy, stronger mature plants. Cool temperatures during sprout development are important for compact, quality buds. Excess nitrogen can cause discolored, loose buds. If you are setting out plants in summer for a fall crop, shade them from the hot sun.

About a month after setting out, hill-up the stem by building a small mound of soil around it to a depth of about 4in. In windy sites, support the stem with a stake 3ft high. Plant Brussels sprouts firmly, with the lower leaves just above soil level.

Cultivar Selection

Jade Cross and Captain Marvel are selections, which have good uniformity, vigor and disease resistance. Brussels sprouts mature in 90 to 115 days from time of transplant. Add 20-25 days if direct seeding.

Fertility

Cole crops are heavy nitrogen feeders. Use water-soluble starter fertilizer (15-30-15, or similar) for transplants, and side dress with a nitrogen fertilizer (3 tablespoons of 20-10-10 per 10-foot of row) when the plants are 12 inches tall. If you are troubled by hollow stems or brown hearts, you may be fertilizing too heavily with nitrogen or have a boron deficiency. Soil pH should be between 6.0 and 6.8 for all cole crops. Soils, which are acidic, will predispose the crop to clubroot.
Irrigation

Brussels sprouts, like all cole crops require large amounts of water. 1 to 1½ inches of water per week is required for uninterrupted growth. Provide ample moisture in the heat of summer to keep the crop growing vigorously.

Harvest

The sprouts of Brussels will develop where the leaves join the main stem of the plant, so it’s best not to break off any leaves at first. The fruit will first start maturing at the bottom of the plant. Harvest matured sprouts when they are 1 to 1 ½ inches in diameter. High quality sprouts should be bright green, firm, and well formed. Begin picking at the bottom, breaking off a leaf below the sprout, and then removing the sprout. The upper sprouts will continue to mature as the lower ones are harvested. On later-maturing varieties (115 plus days)

Pests

The imported cabbageworm, cabbage looper and diamondback moth are three key pests of cole crops grown in Wisconsin. Diamondback moths are particularly troublesome because of their tolerance to many chemical insecticides. All cole crops are susceptible to attack by these three pests.

Imported cabbageworm adults are the white butterflies commonly seen flying in great numbers on warm summer days. Female butterflies have 2 black dots on each forewing while the smaller males only have one dot per wing. Larvae are velvety green worms up to 1 inch long with a faint yellow stripe running down the back.

The cabbage looper got its name from the way it arches its body while moving. When fully grown, its greenish body is 1 ½ inches long and tapers near the head. There is a thin white line along each side and two white lines along the back. The cabbage looper adult is grayish-brown, night-flying moth with a wingspan of 1½ inches. The mottled brown forewings are marked near the middle with a characteristic small, silver-white figure 8 or letter Y.

The diamondback moth is a small, grayish-brown, night-flying moth with a wingspan of 1½ inches. It holds its wings together, roof-like over its back, when at rest. When in this position, a pattern of three diamond-shaped spots can be seen along the top of the moth’s body. The small caterpillars (up to 3/8 inch long at maturity) are pointed at both ends and range in color from cabbage green to yellow. When disturbed, the larva rapidly wiggles its body back and forth, often causing it to fall off the plant.

Adult flying cabbageworms can be screened out with the use of floating row covers such as a Reemay or AG-19 tent. There are also a wide variety of chemical insecticides such as Bt (Bacillus thuringiensis) that are effective in controlling caterpillar pests of cole crops. Flea beetles also can wreak havoc. Flea beetles chew tiny pinholes in the leaves. Early control is essential to minimize the damage. They can also be screened out with the use of floating row covers. Refer to UWEX publication A2088 “Managing Insects in the Home Vegetable Garden”.

Control aphids with a hard spray of water as well as applications of Hot Pepper Wax, insecticidal soap or liquid Rotenone. Late varieties won’t form many sprouts in summer, so there is much less chance of severe aphid damage. The aphid population usually drops radically after the first frosts.

Diseases

Diseases that affect cole crops are Black leg, Black rot, Downy mildew, Fusarium wilt, and Cabbage Yellows. The home gardener growing Brussels sprouts can prevent many cole crop diseases by practicing crop rotation, using sterile starting mixes, and adopting strict garden sanitation methods. Treating seeds in a hot water bath before sowing may help to control diseases such as black rot, black leg, and damping off (refer to UWEX publication A3684).

Seed Specification

Minimum germination standard: 75%. Usual seed life: 3-4 years. Approximately 60-85 seeds per ¼ gram, 250-350 seeds per gram; 7 grams per ¼ ounce.