

Sweet Corn

Sweet corn (*Zea mays* convar. *saccharata* var. *rugosa*) is a variety of maize with a high sugar content. It is a tender annual which likes warm weather. It is picked when immature (milk stage) and eaten as a vegetable, rather than a grain. Since the process of maturation involves converting sugar into starch, sweet corn stores poorly and must be eaten fresh, canned, or frozen before the kernels become tough and starchy.

Varieties:

Sweet corn varieties differ significantly in time to maturity and in quality. Yellow, white, bi-colored, standard, and super sweet varieties are available. Most varieties are hybrids that have been bred for greater vigor and higher yields. A continuous harvest can be planned by planting early-, mid-, and late-season varieties. Successive plantings of the same variety can be made every two weeks or when the last planting has three to four leaves. Corn sown in early spring will take longer because of cool temperatures. Use only the quickest maturing cultivars for July plantings. Keep in mind that several caterpillar pests may be present in great numbers by late summer. Always select cultivars with leaves that form a tight cover at the tip of the ear. This will prevent pests like the corn earworm from feeding on the ear.

Three flavor types of hybrid sweet corn

- **Sugary** (su) includes popular cultivars like Silver Queen that have that “good corn flavor” that some gardeners believe was lost with the two newer types below. The sugar in the

kernels is quickly converted to starch after harvest.

- **Super sweet** (sh2) has twice the sugar content of sugary cultivars and converts sugar into starch more slowly than standard varieties, so it stays sweeter longer. Growing the super sweet varieties does present challenges. Seeds may germinate erratically and seedling vigor is low. The plants must be well-watered at all times (especially after seeding) and often benefit from some type of support. When dried, the kernels have a shrunken appearance.
- **Sugary enhanced** (se) is somewhere between the two previous types in sugar content, it is easier to grow, and has tender kernels. Newer cultivars draw on the genetics of combinations of these three main types of sweet corn.
- **Early maturing** cultivars tend to produce relatively small plants. Plant this type in rows 30 inches apart with plants 8 to 9 inches apart. For medium to large plant varieties, use a 36-inch row spacing with plants 12 inches apart in the row.
- **Baby corn** is simply immature corn. Candystick is a recommended cultivar that has a dwarf habit (takes up less space) and produces ¼-inch diameter cobs at maturity. Harvest when the silks develop but ears are not yet fertilized.

Planting:

Seed after danger of frost is past. Super sweet varieties should be planted when soil temperatures reach 65 degrees F. It should be

spaced 9 to 12 inches apart in rows 2 to 3 feet apart. Because corn is wind-pollinated, block plantings of at least three to four short rows will be pollinated more successfully than one or two long rows. Good pollination is essential for full kernel development.

Most of the various types of corn cross-pollinate readily. To maintain desirable characteristics and high quality, extra sweet and standard sweet corn should be isolated from each other by distance (400 yards) or planting time (two weeks). White and yellow types will also cross-pollinate, but the results are not disappointing. Sweet corn must be isolated from field corn as well.

Cultivation:

- **Fertilizing** – Corn is a heavy feeder. Side-dress it twice, when plants are 12 to 18 inches high and again when tassels appear, with ¼ lb. of 10-10-10 or equivalent per 10 feet of row.
- **Watering** – Keep plants uniformly supplied with moisture for best performance. Water deeply and regularly during dry periods. Mulching is helpful in corn growing because adequate moisture is required from pollination to harvest to guarantee that ears are well filled. Since main crops of corn usually ripen during Maryland's drier periods, it is especially critical to supplement rainfall during dry periods. Mulching reduces the need for supplemental watering and keeps the moisture content of the soil fairly constant. Most organic mulches are suitable, including newspaper sections.
- **Weeding** – Hand pull weeds when soil is moist to avoid disturbing corn roots. Mulching also aids in preventing weeds. It is not necessary to remove suckers or

side shoots that form on sweet corn. With adequate fertility these suckers may increase yield, and removing them has been shown in some cases to actually decrease yield.

- **Special directions** –Pre-germinating seed before planting in cool, spring soil may help prevent soil rot, Southern corn rootworm, and seed-corn maggot problems. Support the growing stalks with one or two strands of heavy string around the perimeter of the planting, to prevent plants falling over (lodging) during thunderstorms.

Harvesting: Corn should be harvested in early morning when husks are still green, silks dry brown, kernels full size and yellow or white to the tip of the ear; at milky stage (use thumbnail to puncture a kernel – if liquid is clear the corn is immature; if milky it's ready; and if no sap, you're too late.) Cover unharvested ears checked by this method with paper bags to prevent insect or bird damage. Experienced gardeners can feel the outside of the husk and tell when the cob has filled out. Corn matures 17 to 24 days after first silk strands appear, more quickly in hot weather, more slowly in cool weather. Depending on the variety, corn usually matures between 63 and 100 days. Approximate yield per 10 foot row is 5 to 10 lbs. or roughly 10 to 20 ears.

Storage and Preservation: Field heat can be removed from ears by plunging them in ice-cold water (add a teaspoon each of bleach and lemon juice per gallon of water) for 15 minutes. Drain the ears and store them in the refrigerator (4 to 5 ears to one gallon plastic bag) until ready to use. The corn of the newer types will remain sweet and fresh for 2 to 3 weeks.

Authors: Jon Traunfeld, Extension Specialist, Vegetables & Fruits

Have a Plant or Pest Question?

Visit us at extension.umd.edu/hgic