Know Your Sweet Corn
By Mark S. Brunell

Seedlings of Stowell's Evergreen sweet corn
Photo by Mark Brunell

Now that the weather is warming up, many gardeners are planning their warm-season crop of vegetables. Along with tomatoes, peppers, beans, and squash, corn (*Zea mays*) is a common sight in the summer garden. Most people are surprised to learn that corn is a grass, and that it lives only for a few months. Referred to as maize outside of the U.S., corn can be found in two common forms: field (dent) and sweet. Occasionally, flour and flint corn varieties are grown in home gardens, especially for popcorn and as ornamentals (like Indian corn). When people talk about growing and eating corn they are usually referring to sweet corn, which is picked immature and eaten like a vegetable.

It is important to understand basic corn genetics when choosing which varieties to plant. European settlers were introduced to sweet corn by Native Americans in the late 1700s. This original type of sweet corn is today called standard corn, and genetically it differs from grain corns by the presence of a gene called sugary (abbreviated *su*). Plants with the *su* gene produce about twice the sugar of field corn (although after harvesting the sugar is rapidly converted to starch, so consumption must quickly follow harvest). This gene is recessive, meaning that if a sweet corn ear is pollinated by grain corn pollen, the resulting corn will taste starchy, not sweet. This can be a problem if sweet corn and grain corn are grown together in the garden, in which case they must be isolated by several hundred feet of distance (not possible for most home gardeners) or planted sequentially so that the grain corn is not 'tasseling' (releasing pollen) when the sweet corn is 'silking' (in receptive female condition).

There are many varieties of standard sweet corn available today, and most are hybrids (sometimes listed as 'F1'). Hybrids have superior growing and eating qualities; however, the seed cannot be saved for growing a future crop as the offspring will not be the same kind of corn as the parents. Gardeners wishing to save their own seed should choose open-pollinated varieties, such as Stowell's Evergreen, Country Gentleman, or Golden Bantam.

In the early 1960s, two other genetic types were introduced: *se* for sugary enhanced and *sh2* for supersweet. Compared to standard sweet corn, *se* sweet corn has about twice the sugar content and holds its sweetness longer after harvest, and *sh2* can have over three-times the sugar content and holds even longer. As for eating quality, *se* corn has a very tender skin on the kernel, whereas *sh2* corn often has a tougher skin. Seed-savers should avoid these varieties as they are all hybrids. When growing *su* and *se* corn varieties in the same garden, no isolation is required; however, *sh2* varieties should always be isolated from *all* other corn types, as cross-pollination will result in starchy kernels.

In recent years, sweet corn breeders have developed many new varieties, which are various combinations of the three basic genetic types. Among these is the synergistic (*sy*) type, which possesses separate *se* and *sh2* kernels on the same ear, to give the tenderness of *se* with the sweetness *sh2*. Synergistic varieties do not need isolation from *su* and *se* corn, but should be isolated from *sh2* varieties, as *sy* pollen will reduce the quality of the *sh2* kernels. All genetic types of sweet corn are available in white, yellow, and bicolor (yellow and white) colors. Color has no relationship to sweetness. The genetic type should be listed in the seed catalog or on the seed packet. If not, try an internet search of your variety for more information.

Corn is a warm-season crop and should be direct-seeded in the garden after the last frost date, preferably when the soil temperature exceeds 60ºF (65ºF or higher for *sh2* varieties). Choosing where to plant corn requires some planning. The crop requires full sun, ample water and rich soil because corn is a very heavy feeder. Before planting, prepare the soil by incorporating as much composted organic matter into the soil as possible. To help replenish the soil, do not plant corn on the same ground year after year, but rotate it with peas or beans, which will add nitrogen to the soil. Corn is a tall plant (4 to 8 feet depending on variety) that will cast shade on other crops, so if possible place the plants on the north end of the garden. Corn is typically grown in rows, and the recommended spacing within rows is generally 8 to 12 inches, and between rows 24 to 40 inches. It is recommended that at least 3 rows, side-by-side, should be grown to ensure good pollination. Poor pollination will result in ears with some empty kernels. Corn can also be planted in blocks, with the plants spaced on a grid or hexagon pattern with 12 to 18 inch centers. It is important to allow enough space between plantings to provide access for weeding, as corn suffers under weed competition. Mulching can help reduce both weeds and water loss. When weeding, avoid deep cultivation because the prop roots at the stem base can be damaged.

Plant corn seed about 1 inch deep (about ½ inch for *sh2* varieties), and place 3 seeds in each plant location, thinning to a single plant when the seedlings are 6 inches tall. While the plants are growing, provide plenty of water, steadily. Do not drought-stress the plants. The plants are most susceptible to water stress during silk and tassel production. Each corn plant will make about two ears, and when a milky-liquid squirts from a popped kernel the ears are ready to harvest. Try to harvest in the early morning when it is cool, and keep the ears in the shade during harvest and refrigerate or cook as soon as possible. Allowing harvested corn to warm up will cause it to rapidly lose its sweet flavor.

Published Oakland Tribune 5/2011