How to Plant Sweet Corn

Ask a gardener about the **real** reason to grow a garden and you'll likely get a two-word answer: Sweet corn. Though corn requires plenty of space in the vegetable garden, it is hard to beat its taste and tenderness, especially when freshly-picked. The key to high quality sweet corn is rapid growth, adequate soil moisture and nutrients, and harvesting the ears at optimum maturity. Sweet corn kernels can be yellow, white, or both of these colors on the same ear (bicolor). The level of sucrose (sugar) in the kernels determines the corn's sweetness. In most cases, however, sucrose is rapidly converted to starch if the corn is not cooked, frozen or refrigerated just after harvest. Starches make the corn less tender and less sweet. In most of the newer "sugar-enhanced" or "super-sweet" varieties, this conversion to starch is slowed so ears remain in optimum condition longer.

Corn is monoecious (mon-ee-shuss) which means that there are both male and female flowers on each corn plant. In some monoecious plants, male and female parts are in the same flower. In corn, male and female flowers are in different locations - the male flowers form a tassel which is at the top of the plant. The female flower is located at the junction of leaves and stem. It consists of a collection of hairs (silks) enclosed in the husks of what will become the ears. These silks are pollen-receiving tubes. Wind-blown pollen from the male flowers (tassel) falls on the silks below. Each silk leads to a kernel, and pollen must land on all silks for the ear to fill out completely with kernels. Kernel “skips” (ears only partly filled out with kernels) often is the result of poor pollination. Sweet corn requires rich soil with ample nitrogen and moisture. Even good garden soils may need some fertilizer to produce a top-quality crop. Aged manure and/or compost, mixed well into the soil, is helpful. Growing corn in an area that had healthy beans or peas the previous year is helpful because these legumes contribute more nitrogen to the soil. Cornstalks growing with ample moisture and in well-prepared, fertile soil can be expected to produce two ears per stalk.

Plant corn about May 10 in the Denver area or when soils reach a temperature of at least 50 degrees F. Corn seed will not germinate in colder soils, decaying instead. The Xtra sweet varieties require even warmer soil, at least 60 degrees F. You can warm soil by covering with black plastic and punching holes through it to plant seed. The rate at which corn grows is heavily influenced by warm soil and air temperatures.

Plant two or three seeds 12-15 inches apart, in rows 30-36 inches apart. Shorter, earlier varieties can be spaced somewhat closer. Plant seeds one to one-and-one-half inches deep, except for Xtra sweet varieties, which should only be planted three-fourths an inch deep. If both or all three seeds in a spot germinate, thin out the poorer seedlings, saving the best plant from each spot. Isolate Xtra sweet varieties from all other types of sweet corn; cross pollination with other types can result in tough, starchy kernels.

Because corn is wind-pollinated, plant it in blocks of rows, rather than in a long, single row, which would result in poor pollen distribution on the silks and many kernel "skips". Water the block-rows well after planting. Good soil moisture is especially critical for the germination of Xtra sweet corn, as it must absorb more water than other types for germination to occur. As plants grow and weather becomes warmer, watering frequency must increase. Most varieties of corn will produce shoots or "suckers" at the base of the plant. Research indicates that sucker removal does not increase yield or benefit the plant; therefore suckers are best left alone.

Fertilize when plants are 12-18 inches high, about July 1. Hoe frequently to control weeds, but take care not to damage corn stalks or roots. Adequate soil moisture is critical for plants to form tassels and silks and to develop ears. Ears should be ready to harvest about 3 weeks after silk emergence. Harvest sweet corn when kernels are well-filled, tightly packed and when a thumbnail puncture produces a milky substance.

To harvest an ear, grasp it firmly, bend it down and pull toward the ground with a twisting motion. Husk and cook or freeze immediately for best quality. Husks can be shredded and then composted or dug back into garden soil.