

SWEET CORN

Vegetable Gardens



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Think of summer vegetables, and sweet corn usually comes to mind. Corn was a main source of food for early American people and was one of the few “native” vegetables to spread throughout the world. Sweet corn is rich in carbohydrates and sugars and contains vitamins A, B, and C, minerals and protein. It is an excellent vegetable for freezing or canning, extending this summer treat for year-round use.

Sweet corn is not well adapted to a small garden area, and corn planted too close will produce poorly. Consider whether you want to invest the space to grow sweet corn if your garden area is limited.

Varieties

Many new hybrid varieties are easy to grow and yield well. Several factors contribute to differences among varieties, including growing time or “days to maturity.” For a continuous supply of corn, consider an early maturing (65 to 75 day) variety. Additional plantings of mid-season (75 to 85 day) varieties can be planted for succeeding crops. The first planting can include both, for a continual supply of corn. Many early varieties have smaller ears, lower yields, and less vigorous plants than later-maturing ones.

Many standard varieties of yellow corn are available (Gold Cup, Merit, Jubilee, Miracle, Bodacious, Incredible, Sweetie, Sweet Time and Kandy Korn) along with some excellent white kernel varieties (Silver Queen, Silver Streak, Sterling Silver, Seneca, Snow, Comet, White Lightning). Bi-color varieties with yellow and white kernels together on the same ear have become popular (Harmony, Sweet Sal, Calico Belle, Candy Store, or Bi-color).

Disease Tolerance

Several diseases may cause problems in sweet corn. When available, choose varieties resistant to maize-dwarf-mosaic (a virus that causes severe plant stunting), bacterial wilt (a bacterial disease that causes stunting and discoloration), and smut (large gray galls that form on ears and tassels). Additional disease resistance is included in many modern varieties.

Sweetness

Plant breeders have developed several new varieties of sweet corn with higher levels and longer retention of sugar. These “extra sweet” types are outstanding in flavor and quality. The genetic mechanisms used to improve the sugar level in most of these varieties require that they be isolated from other types of sweet corn to prevent cross-pollination, causing a reversion to a starch corn. Isolation of 50 to 100 feet should be sufficient if wind direction and barriers are considered. Extra-sweet types of corn often germinate poorly in cold soils and you may find seedling vigor is not good. Wait until conditions are ideal before planting these types.

Soils and Fertilizer

Sweet corn thrives in deep, rich soils, but any well-drained garden soil should produce sweet corn. Sandy soils are better for early crops since they warm up faster in the spring.

Corn responds to high levels of fertilizer. It is best to provide a “base application” of fertilizer before planting. Apply to the soil before tilling and work the fertilizer in. Use 1 to 2 pounds of 10-10-10 or 12-12-12 fertilizer per 100 square feet unless you have specific recommendations from a soil test. (For more information on soil

testing, contact your local Extension office.) After planting, corn usually benefits from a “side-dressing” of additional fertilizer along the row as the crop is growing. Use 3 pounds of ammonium nitrate fertilizer per 100 feet of row when the corn is 8 to 12 inches tall and again just prior to tasseling in sandy soils or wet years, since fertilizer can be washed from the soil under these conditions.

Planting

Sweet corn is a warm-season vegetable. At the earliest, it should be planted a week before the average frost date in your area. Mid-April to early May in most of eastern and central Kansas is usually best. For extra-sweet types, delay planting until soil temperatures are above 60°F. For successive plantings, you will find that earlier planted corn will be slower to emerge, so wait until one planting is 1 to 2 inches tall before planting the next.

Plant kernels from 1 to 2 inches deep, spaced 8 to 12 apart in rows 30 to 40 inches wide. Don't replant “skips” since later-emerging plants will not produce well if shaded by neighboring plants. If many skips occur, replant. A yield of about 30 ears may be expected for every 25 feet of row planted. Three to four rows 25 feet long may provide corn for an average family.

Pollination

Sweet corn is a wind-pollinated crop. Wind transfers pollen from the tassel at the top of the plant to the small ears developing at the base of leaves on the stalk. Plant several short rows or “blocks” to ensure good pollination. Poor pollination causes cobs with missing kernels. Popcorn or field corn changes the quality of sweet corn if planted nearby. A separation of 50 to 100 feet is usually enough to prevent cross-pollination. If the corn does not pollinate at the same time, there is no danger from cross-pollination.

Cultivation and Watering

Weeds compete with corn and should be controlled. Corn is easy to hoe or cultivate, and several excellent herbicides are available for larger plantings. Corn usually needs 1 to 1½ inches of water per week to produce a heavy yield. If rainfall is less than that, water to soak the soil and check that the water has penetrated 12 to 18 inches.

Harvest

Sweet corn should be harvested when the juice in the kernel appears milky as you puncture a kernel with your thumbnail. This “milk” stage lasts only a short time, especially in hot weather, so check the planting regularly. Immature corn will produce a watery juice when punctured, while over-mature corn will produce a doughy, tough kernel. When silks dry to a deep, chocolate brown, feel the ends of the ears for fullness, indicating maturity. To remove ears from the stalk, twist the ear and bend it down sharply. This will not damage the stalk if other ears still remain. Use the corn immediately. Sugars in sweet corn are lost rapidly; most varieties can lose half their sugar in 10 to 12 hours if not properly cared for. Pick corn in the early morning and refrigerate it as it is harvested or begin processing immediately. Corn can be cooled quickly in cold water if harvesting is done during the heat of the day.

Diseases

Several diseases can reduce sweet corn yield; smut is one of the most common. Varieties differ in their susceptibility and little can be done to control smut once it develops. Most newer hybrid varieties are resistant to smut.

Maize-dwarf-mosaic virus, Stewart's bacterial wilt and several other diseases also can be problems, but resistant varieties are becoming available. Most seed catalogs list the disease resistance of varieties, so check for this information.

Insects

The corn earworm is probably the most destructive corn pest. This insect develops from moths that lay eggs on the silks of developing ears. The eggs hatch and the resulting larvae move into the tips of ears, feeding on the kernels. Insecticides or mineral oil can be applied to the ears to lessen the earworm damage, but little can be done once the worms are down inside the husks. Repeated applications are necessary from tasseling until the silks begin to dry up, usually about a two-week period. See K-State Research and Extension publication “Pest Control in Vegetable Gardens,” for insecticide suggestions.