

Corn, Is it a Fruit, Vegetable or Grain?

By Anne-Marie Walker



Corn, *Zea mays*, belongs to the Poaceae family, and while eaten sometimes as a vegetable and sometimes as a grain, it is actually classified by botanists as a fruit, as are tomatoes, green peppers, cucumbers, zucchini and other squashes. Sweet corn is a variant in which the sugar in the fruit kernels turns from sugar to starch less slowly after harvest.

When selecting a variety to plant in Marin, home gardeners need to remember that corn germinates best with soil temperatures of at least 60 -70°F.

Accordingly, it is classified as a warm season crop that works best in full sun. Before planting, amend the soil with a blended all natural fertilizer (5-5-5) and direct seed covering with about 1 inch of soil. Because corn is wind pollinated, planting four short rows of plants (each about eight feet long) works well. Seeds can be planted every four inches and after three to four leaves appear, thinned to eight inches. When the plants are 12 inches tall, side dress with fertilizer or water with fish emulsion and seaweed product (4-1-1). Each stalk has been bred to produce two ears, maybe three with optimal conditions. It is unnecessary to remove suckers and if you plant more than one variety, you need to isolate the varieties from each other to ensure maintaining the desirable characteristics; remember it is wind pollinated! A distance of 400 yards is recommended between varieties. Corn is ready to pick when the silk browns, the husk is still green and the kernels are full sized to the tip of the ear. Experience teaches it is best to feel along the ear to ascertain ripeness as sometimes the tip may not develop fully. Pull the ear down and twist and snap from the stalk. Picking in the cool of the morning is best and store as quickly as possible in the refrigerator to maintain sweetness.

The tassel which forms at the top of the stalk produces the pollen. The young ear forms lower on the stalk and each silk is attached to a potential kernel. Home gardeners often wonder about blanching, spots on the ear where kernels don't fill in. This is most often caused by strong winds or temperatures above 90°F during the pollination process which occurs over a three to five day period. Improper formation of kernels can also occur as the result of inadequate watering. Blanching (the absence of kernels) can be minimized by maintaining a vigorous plant with adequate moisture levels; 1 to 1.5 inches of water per week. These practices have also been demonstrated to minimize shrivel of kernels.

Corn can develop some of the following problems some of which can be minimized by proper selection of variety planted:

- Worms – break off wormy end of ear
- Mosaic virus – select more resistant variety as there is no cure
- Aphids – hose off with water
- Rust – select more resistant variety and avoid overhead sprinkling
- Fungi – remove plant debris and maintain uniform soil moisture
- Cutworms – remove weeds and destroy crop residue
- Lodging – if your stalks fall over, you have over fertilized. Adjust accordingly.

Weed control can be difficult but two approaches can help. The first is to mulch; straw can help shade out weeds. Another approach is to use the Native American method of planting a Three Sisters Garden; interplanting corn, beans and squash. With this method, mound the soil about 4 inches high, first planting corn. When the corn emerges and two leaves have formed, plant the beans followed by the squashes. The corn provides a natural pole for the beans to climb and the squashes provide shade to reduce weeds and retain soil moisture. These three crops also complement each other nutritionally. Pilgrims and colonists quickly recognized the value of corn eating it as a vegetable, storing it as a grain, feeding it to livestock, and fermenting it into whiskey.

Photo of corn courtesy of ANR Repository