

Sweet Corn 101



Corn is an annual cereal grass, domesticated around 10,000 years ago by natives in Mexico and Central America. It is a staple of many diets and is the largest utilized cereal grain. The numerous varieties of corn fall under six main categories: corn for animal feed, dwarf corn, popcorn, decorative corn, multicolored Indian corn and sweet corn.

Sweet corn is one of the most popular vegetables to grow in the home garden. Sweet corn is most delicious when freshly harvested and comes in a wide variety of colors; white, yellow, red and even bicolored. Sweet corn is a fast-growing annual that is planted in spring and grows through the summer. Dates to maturity range from 2-3 months but it should be noted that later maturing varieties tend to be sweeter.

Planting instructions. Seedlings do not transplant well. Sow seeds outside after all danger of frost has passed. For best germination, allow the soil to warm to 60 degrees Fahrenheit. Corn is a heavy feeder, so add compost to the planting site. Seeds should be planted one inch deep and 8-12 inches apart. Corn is wind pollinated so planting in blocks of rows 30-36 inches apart is recommended. Pollen from the male tassels needs to make contact with the female silks, and close planting means more contact. More details about wind pollination to follow in this article.

Growing requirements include full sun and rich, well-drained soils. It is better to water deeply once per week than frequent light watering. If leaves begin to curl, provide additional water. Side dress with a good quality vegetable fertilizer that is high in nitrogen once the seedlings are 8 inches tall and reapply when they start producing tassels. Always follow label instructions.

Staking is not usually necessary as the stalks are generally very sturdy. The only exception is if corn is planted in a very windy area.

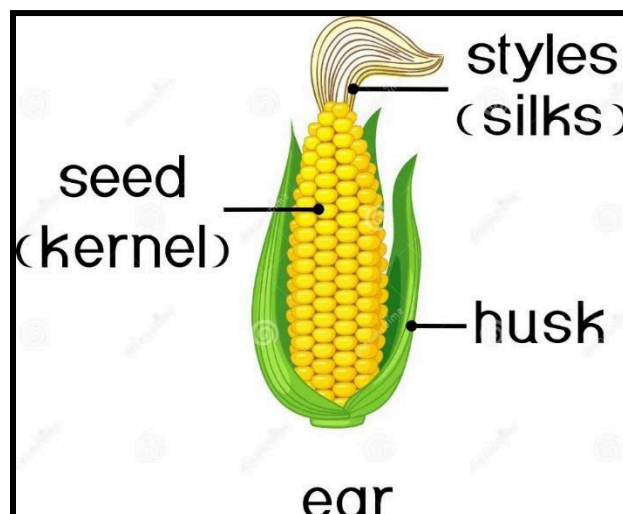
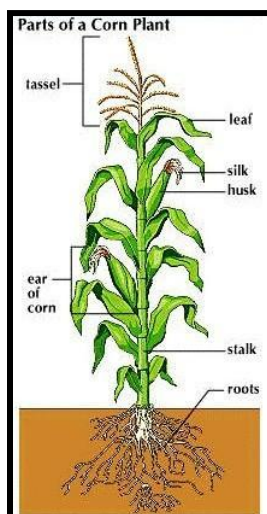
Harvesting Sweet Corn. Each stalk of sweet corn should produce at least one ear of corn. They are ready for harvest when the ears are fat, dark green and have rounded tips with brown tassels. Test for firmness by gently squeezing the ears. To remove the ear from the stalk, pull the ear downward and twist.

Storing sweet corn. Corn is most flavorful when eaten immediately after picking. You can freeze corn. To freeze and store corn, it is imperative to blanch it first. Blanching stops naturally occurring enzymes that, over time, cause the corn to lose color, flavor and texture. Skipping the blanching process will lead to pale, mushy, tasteless corn.

1. To blanch corn, remove the husks and the silk. Rinse under cold water.
2. Bring a large pot to a rolling boil.
3. Meanwhile, prepare an ice bath. Fill a large pot with plenty of ice and cold water.
4. Plunge the corn into the boiling water. If there are too many ears, blanch in multiple batches. It is important that the boiling water continues to boil. Small ears need to blanch for 7 minutes, medium ears for 9 minutes and large ears for 11 minutes.
5. Use a slotted spoon or tongs to remove the corn from the boiling water and immediately plunge it into the ice bath. This cooling process should take the same amount of time as the boiling process.
6. Once cooled, remove the cobs from the ice bath and pat dry with paper towels.
7. Cut the kernels from the cob by standing the cob on its end and slicing the kernels off from top to bottom.
8. Transfer to freezer safe bags or containers. Label with name and date and freeze immediately.
9. Corn should last 6 months in the freezer.

Best sweet corn cultivars for Southeast Michigan

- Honey Select Hybrid - 8-9-inch-long ears ready to harvest in 80 days
- Ambrosia Hybrid – Has a custard like flavor and a longer shelf life
- Golden Bantam – classic variety known for its buttery flavor
- Jubilee Hybrid – Known for its bright yellow kernels, matures in 90 days, has a long shelf life



The Mechanism of Wind Pollination

Unlike many plants, corn plants do not produce nectar. Pollination occurs by wind catching the lightweight pollen grains in the tassels and carries them to the silks in the developing ears.

The tassels are the male portion of the plant. Pollen shedding, called anthesis, occurs after the tassel is fully emerged from the top of the corn stalk. The release lasts from five to eight days with the peak release being around day three. This usually happens in the morning between 8 am and 11 am as temperatures rise and humidity drops.

The silks emerge from the corn husk (the covering of the ear of corn), starting at the base and progressing to the tip. They are covered with fine hairs that catch the pollen as it falls. Obviously, timing is everything. Pollen shed must align with silk emergence and there **MUST** be wind. This synchronization is referred to as 'the nick.'

The Result: Kernel Development

When a pollen grain lands on a receptive silk, fertilization occurs almost immediately. The pollen grain germinates, extending a pollen tube down the length of the silk strand. The tube delivers the male genetic material to the ovule at the base of the silk.

Fertilization of the female ovule (the kernel) occurs within 24 hours of contact. Once the ovule (kernel) begins to develop, the silk dries out, turns brown and falls off. What this means is; *Every single kernel of corn has to have its own silk that is pollinated individually!* If you see a gap in an ear of corn with no kernel, pollination did not occur in that spot.

Factors Influencing Successful Pollination

The success of wind pollination completely depends on favorable environmental conditions.

- Severe droughts can damage the silks. Since they are primarily composed of water, drought can slow their growth or cause them to fail to emerge from the husks entirely.
- High temperatures also pose a threat. Pollen viability is reduced when temperatures exceed 95°F combined with low humidity. The pollen grains can dry out and lose their ability to germinate.
- That is why planting corn in blocks rather than single rows increases the amount of pollen available to neighboring plants' silks.

Common Pests and Plant Diseases

Animals, including rodents, raccoons, and birds are usually the biggest pest problem for sweet corn as the ears ripen.

Pests seen in Michigan corn fields include:

- Corn earworms AKA tomato fruit worm. The moth lays eggs on silks or leaves. Caterpillars feed on tips of corn ears. Symptoms include ragged holes in the tips of the ears and the telltale signs of brown frass (bug poop).
- European corn borers literally bore into the stalk and sometimes the cob of the corn plant. Symptoms present as frass and silk near the hole.
- Flea beetles attack early, when plant begin to sprout, eating the tender plant material. Flea beetles spread Stewart's Wilt.
- Japanese beetles eat the silks and damage the kernels.
- Corn leaf aphids infest young plants causing the plant to wilt.

Monitor garden plants for early signs of insects or larvae. The best solution is growing healthy plants that can withstand a mild infestation. Proper spacing, fertile soils and consistent, even water application is the key. Companion planting to bring good predatory bugs to the garden can limit the need for chemical controls.

Diseases sometimes found are generally caused by fungal infections.

- Northern corn leaf blight occurs when temperatures are moderate, humidity is high and dew is heavy. It presents as light green lesions that develop into tan or grey cigar -shaped lesions on lower leaves. Planting with correct spacing allows the morning dew to dissipate quicker.
- Grey leaf spot lesions usually occur 2-3 weeks before tasseling. Warm temperatures splashing water spread the fungus. It presents on lower leaves as narrow, long, rectangular (up to 2 inches) that are light tan with veins. A layer of straw mulch can decrease the splashing of fungal spores onto the lower leaves.
- Stewart's Wilt affects the plant's ability to grow. Spread by flea beetles, it presents as stunted growth. This disease is usually not severe after cold winters which tend to decrease the over-wintering of fungal spores. Hip Hip Hurray for the frigid winter of 2026!
- Smut is caused by a fungus that attacks the corn's kernels. White varieties tend to be more susceptible, especially during periods of draught. Remove smut balls and discard in the garbage or burn them.

To manage fungal diseases, plant resistant varieties. Diligently clean up garden debris at the end of each season. Crop rotation is essential to limit future infections.

Sweet corn is a favorite garden vegetable. I like mine dripping with butter, and a little salt and pepper. It is the definition of summertime!

Enjoy! Alaine Bush, Advanced Master Gardener

