

Corn Growing Guide

The corn we know today could never survive in the wild; it relies on humans to plant it. That's because the kernels (seeds) adhere firmly to the cob, rather than loosening and scattering on their own. It takes some strong hands — or a machine — to loosen the kernels! However, it wasn't always that way.

Like so many of our other favorite fruits and vegetables, the sweet corn we enjoy at picnics is very different from its wild ancestor. The domestication of corn began in Mexico and Central America thousands of years ago, from a wild grain called teosinte. Wild teosinte had small ears with just 5 to 10 small, widely spaced kernels. When Aztec and Mayan peoples began growing the crop and selecting which teosinte kernels to plant, they likely saved seeds from plants that grew better, had larger cobs, and had kernels that were tastier or easier to grind into meal.



Most grains have seed heads that shatter, scattering the seeds around the mother plant, effectively planting seeds for the next generation. Corn seed heads (cobs), on the other hand, hold on tightly to their kernels. Did the farmers also select for that trait? We don't know for sure, but we do know that when you sow corn seeds, you're doing what this plant can't do on its own!

Corn Facts

- One of the oldest domesticated crops, corn (*Zea mays*) is a member of the grass family.
- In addition to modifying corn to be larger and more productive than its ancient relative, Aztec and Mayan peoples also developed a process that further improved it. When dried corn is boiled and then soaked in an alkaline solution, called *nixtamalization*, the resulting kernels are tastier and richer in nutrients, notably niacin.
- Corn became a staple food for diverse cultures in Latin America, where it forms the basis for countless dishes, including tacos, tostadas, pozole, sopes, pupusas, tamales, and elote.
- Corn also became a symbol of resilience and pride across Mexico, Central America, South America, and the Caribbean. Festivals, such as *Fiesta del Maíz*, celebrate the corn harvest and the grain's deep roots in the region's cultural identity.
- Corn is one of the "sisters" in a Three Sisters Garden. The Cherokee and Haudenosaunee people, along with many more native peoples across North and Central America, planted beans, corn, and squash together in the same plot so that the three partners could benefit one another. Learn more: [Three Sisters Garden lesson plan](#).
- Corn is everywhere! And not just the obvious places like fresh ears at the market, bags of frozen kernels, corn chips, and taco shells. Products made from corn derivatives, such as cornstarch, corn syrup, citric acid, cellulose, and maltodextrin, can be found in medications, dyes, glue, toothpaste, and soap. There are corn-based plastics, common in food packaging and "compostable" utensils. Corn is also used to make ethanol for use in ethanol-blend gasoline.
- Corn gluten is the primary protein in corn. (Despite its name, corn gluten doesn't contain any true gluten, which is found in other cereal grains, primarily wheat.) Corn gluten is mostly used

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in animal feed; however, because it inhibits root formation in newly germinated seeds, it is also used as an organic, pre-emergent herbicide.

- Sweet corn kernels always form an even number of rows on the ear. The world's tallest corn stalk was reported to be 45 feet high!

How to Grow

There are several different types of corn. However, no matter the type of corn you're growing, the planting and growing techniques are similar. (The big differences come at harvest time.)

Types of Corn

- **Sweet corn.** This is likely what the word "corn" calls to mind. Yet prior to the development of sweet corn in the 1700s, corn was anything but sweet: think starchy or doughy or just plain tough. Today's sweet corn is harvested while still immature, in what's called the "milk stage." Poke a fingernail into a fresh kernel and you'll see the milky liquid. At this stage, some varieties of sweet corn need to be boiled quickly, because the sugar in the kernels quickly begins converting to starch once the ear is picked. Now there are types of corn called Supersweet (sh2) and sugary-enhanced (SE), that stay sweet for days after picking. (Old-timers sometimes say these are too sweet, and not "corny" enough!) Most people eating sweet corn think of it as a vegetable, rather than a grain.
- **Dent corn.** Named for the distinctive dimple in the top of each kernel as it dries, dent corn (also called field corn) is starchy and has a low sugar content. Much of the dent corn grown in the U.S. ends up in animal feed, but it's also used to make cornmeal, corn flour, corn syrup, corn chips, and tortillas.
- **Flint corn, Indian corn, and calico corn** (the latter name refers to varieties with multicolor kernels). Compared to dent corn, flint corn has less soft starch. Native Americans grew it for its high nutrient value. Flint corn is used for cornmeal, corn flour, hominy, polenta, and grits. Popcorn is a type of flint corn that is allowed to dry until the outer shell is hard, but there's enough moisture inside the kernel that, when heated, turns into steam, expands, and pops the kernel open. [Learn more about growing popcorn](#). Varieties with multicolor kernels are popular in autumn decorations.

Site selection

Choose a spot in full sun with rich, well-drained soil. Corn is a "heavy feeder," meaning it needs adequate nutrients, especially nitrogen, to produce a good crop. Plan to sow your corn in blocks rather than a few long rows. For example, you might plant six 8' rows side by side, rather than two 24' rows. This increases the chances that the wind-borne pollen will reach the silks (more on this below).

Corn stalks can grow up to 12 or even 15 feet tall, so plant it on the north side of the garden, or wherever it won't shade other plants.

Planting

Corn needs warm soil; in cool, damp soil the seed will rot. Wait until the soil is at least 65 degrees Fahrenheit, or sow seeds after your last spring frost date. Plant the seeds about 1.5" deep and 4" apart, in rows about 3' apart. In about a week or 10 days, you'll see sprouts that resemble wide blades of grass. (That's why it's best to plant in rows — so you don't weed out the seedlings, mistaking them for weedy crabgrass!) When the sprouts are about 4" high, thin the seedlings to about a foot apart.

Pollination

As the stalks grow taller, you'll begin to see tassels form on the top of the plant. The tassels contain the male flower parts of the corn plant. Corn is wind-pollinated, meaning that the tiny, lightweight pollen grains

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that develop on the tassels (the male flowers) are carried on the wind, hopefully landing on awaiting silks (the female flowers). The silks are the stigmas of the female flowers and they appear in the joints where the leaves meet the stem further down the stalk. There is one thread-like silk for each potential kernel on an ear. If every silk is fertilized, the ear will be completely filled with kernels; a missing kernel indicates that the silk wasn't fertilized. There isn't much you can do to aid pollination. Weather, an extended rainy spell for example, can prevent pollen from floating on the breeze to reach the silks.

Corn is one of the few edible crops we grow for its seeds! While we may notice the seeds in our cucumbers or tomatoes, they aren't the focus of our taste buds. However, we grow corn specifically for its seeds/kernels. Because seeds are the result of pollination and fertilization, that means that if your corn patch is cross-pollinated by a different variety of corn — say, your sweet corn is fertilized by pollen from a nearby farmer's flint corn — the flavor of your corn may disappoint. To ensure your variety pollinates itself, stagger planting times by about two weeks, or be sure different varieties of corn are separated by at least 250'.

Harvest

Pick sweet corn when the ears are filled out to the desired maturity. Some people prefer kernels that are small and tender; others prefer to wait until the kernels are larger and have more corn flavor. You can peel back a section of the husk, or leafy covering, and take a peek. Pierce a kernel with your fingernail; if the liquid inside is clear, it's not ready to pick. If it's milky, it's ready. Most corn plants will produce one or two ears. Dent corn and flint corn are allowed to dry on the stalks until the husks turn brown and dry. Harvest on a dry day before your first fall frost.

Pests

The most notorious pest of corn is the corn earworm. You peel back a leaf or two of the husk and there it is — a brownish caterpillar munching away on your prized kernels. This moth larva isn't fussy; the same species will also eat your tomatoes (then it's called the tomato fruitworm) and even peppers and cabbage. (When it's ravaging cotton, it's called the cotton bollworm.) Although the caterpillar's damage is often confined to the tip of the ear and is easily cut away, its presence can still dampen the enthusiasm of even the most seasoned gardener. Here's one method of deterring the pest: Wait until the silks have turned brown at the ends (indicating pollination is finished). Then use a medicine dropper to place five drops of mineral oil onto the tip of each ear. This is best used as a preventative before you see signs of the caterpillar — especially if you've had problems with the pest in previous years.

Enjoying Your Harvest

Corn is a signature ingredient in Latin American cuisine, along with other crops native to the Americas, such as beans, tomatoes, peppers, avocados, cacao, and squash. The history of these crops goes back thousands of years to the region's indigenous peoples.

Sweet corn can be enjoyed as steamed or boiled corn on the cob or cut off the cob and added to soups, stews, corn pudding, and other savory dishes. It can also be added to homemade cornbread. Elote, sometimes called Mexican street corn because it's a delicious snack commonly sold by street vendors, is made by grilling or boiling ears of sweet corn and then coating them with mayonnaise, cotija cheese, chili powder, and lime juice. Flint and dent corn can be dried and ground into corn meal and corn flour.

Making your own hominy and *masa harina* (Spanish for flour dough) is a somewhat complicated process, called nixtamalization, which involves soaking dried corn overnight in an alkali substance to make it tastier, more nutritious, and easier to grind. Hominy refers to the soaked kernels; one dish using hominy is a Mexican stew called *pozole*. Masa harina refers to flour made by grinding the soaked kernels; it is used in making traditional tortillas, tamales, and arepas.

Learn more: [Celebrating the Heritage of Hispanic Foods](#)

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