



CORN (Zea Mays)



Full Sun

The varieties and uses of Corn

A uniquely American contribution to world agriculture, corn (originally maize) is divided into several groups depending on the ultimate use of the grain.

Field corn is planted for livestock feeding. Sweet corn is used for human food when fresh, and can be frozen. Popcorn makes a nutritious natural snack and a fine baking flour. Some varieties of corn, commonly known as Indian corn, are also grown as ornamentals; when no longer wanted as decorations, the ears can be fed to cattle or chickens.

Preparing the ground

Whether you're planting a few rows of corn in your garden, or an acre of corn to feed your animals and your family during the winter, you must remember that corn is a heavy feeder and will deplete your soil if planted in the same place year after year.

Even in the home garden, it makes sense to plan a crop rotation with corn always following beans or preferably clover. A rotation for a small plot of land to feed livestock might allow clover to grow as long as possible before planting corn. Just before turning this green manure crop under, spread manure or compost on the plot. Twenty tons of manure per acre is good if you have it, but any amount will help.

After tilling or plowing, plant your corn. In summer, before you are ready to harvest your corn crop, sow rye grass to plow under the next spring. Then plant soybeans or other garden beans; after harvest, plant winter wheat; plow it under and plant alfalfa in the spring. Allow the alfalfa to grow to hay the next year, and then begin the rotation again with corn.

Another rotation more adapted to the home garden would plant alfalfa for green manure, followed by sweet corn, the next year by tomatoes, then beans and peas, then spring vegetables seeded to wheat in the fall, then back to alfalfa and corn again.

When you follow one of the above rotations or plan one of your own using vegetables you are accustomed to growing, remember that corn also needs lime. Apply lime at the rate of 1,000 pounds per acre the year before you plant corn. Also spread phosphate rock at the rate of two tons per acre every four years. If your soil tests low in potash, use potash rock, greensand or a good fertilizer high in potash.

Planting Corn

Don't be in a big hurry to plant your corn, especially if you are planning a large crop. The proper time to plant, old people say, is when oak leaves are as big as squirrel's ears. You might want to wait a little longer, especially on a large plot, until the soil is about 62 °F. (16.670C.) about three inches down (use a soil thermometer). If you wait until the soil has warmed up, your corn gets off to a quick enough start; the warm soil hastens germination, and also cuts your chances of

running into insect and weed problems brought on by rain and cold weather early in the year.

If you plant more than a quarter-acre, it would be a good idea to have a corn planter of some kind. Hand-pushed mechanical planters are available, and planters that attach to garden tractors can also be purchased. If you have a small farm, you might want to look into getting an old, two-row corn planter from a neighboring farmer.

Plant field corn in 40-inch rows with plants spaced 15 inches apart. In the garden, plant your sweet corn more thickly, with six to eight inches between plants and 30 inches between rows, closer if you plan to cultivate the corn by hand. If you want to plant pole beans with your corn, allow three feet between stalks. This is a good combination since the beans use the cornstalks as poles and fix nitrogen for the corn. When the corn reaches six inches in height, plant a bean on each side of it about eight inches away. Plant popcorn and ornamental corn as you would sweet corn.

Depth of planting depends on the time of year and moisture available. Early in the season, plant sweet corn at 1-1/2 inches and field corn at two inches. As the soil warms up and moisture decreases, plant a little deeper; late plantings of sweet corn should be made three to four inches deep. To space sweet corn plantings for summer-long enjoyment, plant an early variety as soon as the soil warms up, a mid season variety five to ten days later and a late variety in another week.

Weeds are a problem almost immediately after planting. Mulching right after planting will help to keep weeds down, but is really only practical on a small plot. Mulch between the rows, but mulch between plants only when they reach six to eight inches in height.

If you are cultivating by hand, rake your plot about three days after planting to get weeds that might be germinating. On a larger plot, use a rotary hoe or spike-tooth harrow with the teeth set very shallow. When the corn gets high enough for you to see rows easily across the field or garden, begin cultivating with shovel cultivators or with a tiller. Be careful not to bury the plants with clumps of dirt. As the corn grows higher, you can be less careful about cultivating since you won't have to worry so much about burying the plants. When the plants have reached knee height, you should have cultivated them three times. After this, stop cultivating since you won't want to destroy the spreading root systems of the corn.

Harvesting Corn

The only way to really know if your sweet corn is ready to harvest is by pulling back part of the husk and checking the kernels. If milk spurts out of a kernel of sweet corn when you press it with your thumb, the corn is just right. If your fingernail punches into the kernel too easily, the corn is a little green yet. If you must press pretty hard to penetrate the kernel, it is too old. Older ears can be left on the stalk to dry for cornmeal; for eating fresh and freezing, though, you will probably want to pick at the milk stage.

Field corn can be left to dry on the stalk until late in the fall, harvested by hand, and stored in corncribs over winter. You won't even have to bother shelling your corn before feeding in many cases. When the stalk is dead and brown, walk down the rows and pull off the ears, husking them and tossing them into a wagon or pickup truck alongside the row.

Husking is a skill you will develop; husking pegs, once made from wood or bone, are still available from some hardware stores and through the mail, and will help you strip the husk from the ear. Once husked, the corn should be stored in a crib to dry completely. Stalks left in the field should be disked under for organic matter after shredding with a shredder or even a rotary mower.

Another method of harvesting corn by hand is cutting the whole stalk, not just the ears, and arranging them in bundles, and the bundles into shocks. To do this, you must use a corn knife and cut the stalks off with short downward strokes, leaving about four inches of the stalk in the ground. Continue down a row, gathering the stalks in your left arm. When your arm is full of stalks, drop them in a neat bundle. Later, you can tie the bundles with baler twine and shock them by leaning four of them together as if you were constructing a tepee. Arrange the rest around this central core.

The size of the shock is up to you; you might want to tie several lengths of baler twine around the entire shock to keep it standing. Later in the fall when the pressing work is over and you have more time, haul the shocks in from the field and husk out the corn. You can store the corn in a crib or shed and feed the stalks and husks to cows, horses or sheep.

Popcorn can be harvested by removing the ears from the stalk but leaving the husks attached. The husks can be pulled back and used to tie several ears together, and these can be draped over a wire and hung from a rafter to dry. To keep mice from getting at the corn, poke a hole in a large tin can lid and slide it over the wire.

Controlling insects and diseases that threaten Corn growth

The European corn borer and the ear worm both threaten corn crops, but the latter is more severe in the South and central states. Where winter temperatures fall below 0°F. (-17.77°C.), most overwintering ear worms die. The borer often attacks sweet corn, and can be spotted by the presence of a small pile of sawdust like material beside a small hole beneath the tassel. Squeeze the stalk and smash the worm before it has time to crawl down and eat its way into the ear.

Corn root worm is a serious pest to commercial growers who plant corn in the same fields year after year. The pest can be controlled by rotation of crops. They thrive particularly in poorly drained soils and during cool, wet springs.

Birds are a problem, particularly on small plots where they can wipe out the entire planting. Tar-coated seeds may save some crops, but are difficult to plant except by hand. You might want to make a scarecrow for a small plot, or try covering the corn rows with wire until the corn is too high for the birds to bother.

Animal predators, particularly raccoons, usually bother the corn when it is almost mature. Organic gardeners have tried to keep raccoons out of their patches by various methods, some more successful than others. A transistor radio hung in the patch and turned on at night is supposed to keep them away. Leaving a dog tied in or near the patch might also be a good idea if you're having particular trouble.

Corn diseases and blights can be a serious problem, but they have been partially combatted by breeding more resistant varieties of corn. Some of the molds that rot corn can make you ill, however, so it is good practice never to eat moldy corn or feed it to livestock. Besides a risk of poisoning, moldy corn might be infected with aflatoxins that are carcinogenic.

The best defense against corn diseases and blights is to use resistant hybrids and to use clean

culture practices. Plow under plant debris, and rotate crops. If you are having problems with an infestation of your corn crop, contact your county agent for more information.

Storing and using Corn

Whole corn can be stored in any number of different structures. Traditional corncribs were built at most four feet wide and out of wooden slats to allow plenty of air to circulate through the drying corn. You might build one if you grow enough corn, or perhaps you could buy a crib from a neighbor, dismantle it and reassemble it on your property.

New metal cribs can also be purchased, and you might be able to build a crib from a snow fence. A few bushels of corn can be kept in steel drums. These will be rat-proofed if kept tightly covered, and both traditional slatted cribs and metal ones can be rat proofed with hardware cloth. In any case, it's a good idea to have a few farm cats living near the corncrib. Corn for table use as meal should be shelled and ground. You can feed the whole ear, ground cob and all, to cows and steers, but chickens and pigs eat shelled, coarsely ground kernels. A variety of shellers, hand-cranked and mechanical, are available, as are motor-powered gristmills. Check farm sales for used ones.

Corn can also be stored and fed as silage (although not to your family)—chopped, when green, stalk and all, and stored in a tightly packed pile so air is excluded. This method of storage is not very practical for a small farm since it requires fancy equipment.

Extra sweet corn can be frozen, canned or parched—dried on the cob and popped with popcorn. Popcorn must be shelled before popping. It is best to shell all your popcorn and store the seeds in tightly closed glass jars in a cool, dry place. If the corn doesn't pop well, it might be because it is too dry. In this case, add a tablespoon of water to every quart jar of popcorn, shake well, and seal for a few days. If corn is still too dry, repeat the treatment. You know when you've added too much water if the corn pops with a loud explosion and the popped corn is jagged, small and tough.