



Sweet Corn

*Diane Relf and Alan McDaniel**

ENVIRONMENTAL PREFERENCES

LIGHT: sunny

HARDINESS: tender annual

SOIL: deep, well-drained loam

FERTILITY: rich

pH: 6.0 to 7.0

TEMPERATURES: warm (60 to 75F)

MOISTURE: average

corn will almost always be the highest quality, since cool nights in September increase sugar content.

Pollination is a very important consideration in planting sweet corn. Because corn is wind-pollinated, block plantings of at least three to four short rows will be pollinated more successfully than one or two long rows. Good pollination is essential for full kernel development.

Most of the various types of corn will cross pollinate readily. To maintain the desirable characteristics and high quality, extra-sweet and standard-sweet corn should be isolated from each other. A distance of 250 feet or planting so that maturity dates are two weeks apart is necessary to ensure this isolation. Sweet corn plantings must be isolated from field corn, popcorn, and ornamental corn as well. White and yellow types will also cross pollinate, but the results are not as drastic.

CULTURE

PLANTING: seed after danger of frost is past; extra-sweet varieties should be planted when soil temperatures reach 65F.

SPACING: 9 to 12 inches x 24 to 36 inches; minimum of three rows side by side (preferably four rows) to ensure good pollination

FERTILIZER NEEDS: heavy feeder; sidedress when plants are 12 to 18 inches high with 3 tablespoons 10-10-10 per 10 feet of row.



CULTURAL PRACTICES:

Sweet corn varieties differ significantly in time to maturity and in quality; yellow, white, bi-color, standard, and extra-sweet varieties are available. Most varieties planted are hybrids which have been bred for greater vigor and higher yields. A continuous harvest can be planned by planting early, mid-season, and late-season varieties or by making successive plantings of the same variety every two weeks or when the last planting has three to four leaves (corn sown in early spring will take longer because of cool temperatures). Use only the earliest varieties for July plantings to ensure a good fall crop. Fall-maturing sweet

The newly developed extra-sweet or super-sweet types convert sugar into starch more slowly than standard varieties. They are not necessarily sweeter than just-picked old favorites (though some cultivars are), but they will retain their sweetness after harvest longer than usual. Super-sweet varieties may be less creamy than standard varieties due to genetic differences. This characteristic decreases the quality of frozen or canned super-sweet corn, though newer cultivars of extra-sweets show improvement.

Early maturing varieties tend to be relatively small plants (called "coon corn" by old-timers because the ears are easy for raccoons to reach). These should be planted in

*Extension Specialists, Horticulture, Virginia Tech

rows 30 inches apart with plants 8 to 9 inches apart. For medium to large plant varieties, use a 36-inch row spacing with plants 12 inches apart in the row. Be sure to plant a block of rows for good pollination and full ears.

Some gardeners are interested in growing “baby corn,” such as that found in salad bars and gourmet sections of the grocery store. Baby corn is immature corn, and many varieties are suitable, but 'Candystick', with its 1/4-inch cob diameter at maturity, is a good one to try, especially since its dwarf habit means it takes up less space in the garden. Harvesting at the right time is tricky; silks will have been produced, but ears not filled out yet. Experimentation is the best way to determine when to harvest baby corn.

It is not necessary to remove “suckers” or side shoots that form on sweet corn. With adequate fertility, these suckers may increase yield, and removing them has been shown, in some cases, to actually decrease yield.

Mulching is a useful practice in corn growing because adequate moisture is required from pollination to harvest to guarantee that ears are well filled. Since main crops of corn usually ripen during Virginia’s drier periods, it is especially critical to maintain soil water supplies. Mulching reduces the need for supplemental watering and keeps the moisture content of the soil fairly constant. Most organic mulches are suitable; newspaper held down with a heavier material on top is an excellent moisture conserver in corn.

Normally, sweet corn is ready for harvest about 20 days after the first silks appear. Corn that is going to be stored for a day or two should be picked in the cool temperatures of early morning to prevent the ears from building up an excess of field heat, which causes a more rapid conversion of sugars to starch. Of course, the best time to pick is just before eating the corn; country cooks say to have the pot of water coming to a boil as you are picking the corn, husking it on the way from the garden to the house! This is an exaggeration, but with standard varieties, sugar conversion is rather rapid. Field heat can be removed from ears picked when temperatures are high by plunging the ears into ice water or putting them on ice for a short time. Then store in the refrigerator until ready to use. Extra-sweet varieties will also benefit from this treatment, but they are not as finicky.

COMMON PROBLEMS

DISEASES: Stewart’s wilt (bacterial disease spread by flea beetle); smut (especially on white varieties); stunt (transmitted by leafhopper)

INSECTS: corn earworm, European corn borer, flea beetle, Japanese beetle (eats silks), corn sap beetle (damages kernels after husk is loosened)

OTHER: birds eating seed, raccoons eating mature ears of corn, gardener’s impatience (picking too soon)

CULTURAL: poor kernel development (failure to fill out to the tip) caused by dry weather during silking stages, planting too close, poor fertility (especially potassium deficiency), or too few rows in block resulting in poor pollination. Lodging (falling over) from too much nitrogen.

HARVESTING AND STORAGE

DAYS TO MATURITY: 63 to 100

HARVEST: when husk is still green, silks dry-brown, kernels full size, and yellow or white color to the tip of the ear; and at “milky” stage (use thumbnail to puncture a kernel - if liquid is clear the corn is immature, if milky it’s ready, and if no sap, you’re too late). Cover unharvested ears checked by this method with paper bag to prevent insect or bird damage. Experienced gardeners can feel the outside of the husk and tell when the cob has filled out. Corn matures 17 to 24 days after first silk strands appear; more quickly in hot weather, slower in cool weather.

APPROXIMATE YIELDS (per 10-foot row): 5 to 10 pounds or roughly 10 to 20 ears

AMOUNT TO RAISE PER PERSON: 20 to 30 pounds or about 40 to 60 ears

STORAGE: refrigerate immediately to prevent sugars from turning to starch; cold (32F), moist (95% RH) conditions; will keep four to eight days, but standard varieties will become starchy after a few days

PRESERVATION: frozen on cob or off; canned