Corn, specialty and sweet

(Zea mays)

Recommended Specialty Varieties

Baby

Baby Asian and other white, sweet corns

(Harvest baby corn when silks first appear and ears are quite small.)

Ornamental

Rainbow
Strawberry Popcorn
Blue Tortilla
Indian Fingers (small, multicolored ears, shiny kernels)
Papoose (small, multicolored ears)
Ornamental Indian Corn

Popcorn

Golden Hybrid (yellow)
White Cloud (white)
Black Popcorn (black kernel with white interior)
Peppy Hybrid (white)

Recommended Sweet Varieties	Disease Resistance
Standard Sugary	
Golden Cross Bantam (yellow)	BW
Jubilee (yellow)	SG, ST
Butter and Sugar (bicolor)	BW, SCLB
Silver Queen (white)	BW, SW
Sugary-enhanced	
How Sweet It Is(white)	AAS
Breeder's Choice (light yellow)	
Kandy Korn (yellow)	
Concord (bicolor)	
Super Sweet	
Early Xtra Sweet (yellow)	AAS
Ivory 'n Gold Bicolor (bicolor)	
Butterfruit (yellow)	
Sweetie (yellow)	
Illini Gold (yellow)	
Butterfruit Bi-color (bicolor)	
Escalade (bicolor)	
Maxim (yellow)	

Sweet corn varieties differ significantly in time to maturity and in sweetness; 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-, and late-season varieties, or by making successive plantings of the same variety every 2 weeks or when the last planting has 3 to 4 leaves (corn sown in early spring will take longer because of cool temperatures). Use only the earliest varieties for late summer/early fall plantings to assure a good fall crop. Fall-maturing sweet corn will almost always be the highest quality, since cool nights during fall increase sugar content.

Pollination is a very important consideration in planting sweet corn. Because corn Is wind-pollinated, block plantings of at least 3 to 4 short rows will be pollinated more successfully than one or two long rows. Good pollination is essential for full kernel development. Most types of corn will cross-pollinate readily. To maintain desirable characteristics and high quality, extra-sweet and standard sweet corn should be isolated from each other. A distance of 400 yards or planting so that maturity dates are one month apart is necessary to ensure isolation. Sweet corn plantings must also be isolated from field corn, popcorn, and ornamental corn. White and yellow types will also cross-pollinate, but the results are not as drastic.

The newly developed extra- 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.

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 diameter cob at maturity, is a good one to try, especially since its dwarf habit means that it takes up less space in the garden. Harvesting at the right time is tricky; silks will have been produced, but ears are not filled out. 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 growing corn because adequate moisture is required from pollination to harvest to guarantee that ears are well-filled. Mulching reduces evaporation of soil moisture 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 17 to 24 days after the first silk strands appear, more quickly in hot weather, more slowly in cool weather. Harvest corn when husks are still green, silks are dry brown, and kernels are full-sized and yellow or white in color to the tip of the ear. Experienced gardeners can feel the outside of the husk and tell when the cob has filled out. Harvest corn at the "milk stage": use your thumbnail to puncture a kernel -- if the liquid is clear, the corn is

immature; if it's milky, it's ready; and if there is no sap, you're too late. Cover unharvested ears checked by this method with a paper bag to prevent insect or bird damage.

Pick corn that is to be stored for a day or two 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. 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 to starch is rather rapid. Field heat can be removed from ears picked when temperatures are high by plunging the ears in cold 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 because they have a higher sugar content and they hold their sweetness longer. The conversion of sugars to starch is not as rapid in the newer supersweet types.

Nutritional Value of Corn

Serving size:	1/2 cup, about equal to the kernels from one ear, boiled
Calories	18
Fat	0.1 g
Calories from fat	4%
Cholesterol	0
Sodium	158 mg
Protein	1.7 g
Carbohydrate	3.6 g
Dietary Fiber	1.2 g

Primary Nutrients		%RDA(m)	%RDA(f)
Vitamin A	276 RE	28	35
Vitamin C	16 mg	27	27
Magnesium	76 mg	22	27
Iron	2.0 mg	20	13
Calcium	51 mg	6	6
		% Min Requirement	
Potassium	483 mg	13	

Problem Diagnosis for Corn

What the Problem Looks Like	Probable Cause	Comments
Worms up to 1-3/4 inches long eat down through kernels. Before tasseling, worms found in whorl of plant feeding on developing tassel.	Corn earworm Range in color from green to black with lengthwise stripes of various colors	Apply mineral oil with medicine dropper to silk just inside the ear tip3-7 days after silks first appear. Use 20 drops/ear. or Break off wormy end of ear and discard. Insecticides will not control worms inside ear. Preventive treatment to silks(above) will kill worms before they enter ears.
Holes in leaves	Armyworms Corn earworms various beetles Grasshoppers	Ignore or handpick insects. Loss of small amount of leaf. tissue will not reduce yields.
Mottled leaves. Slow growth Leaves die along margins.	Mosaic virus	No control. Certain varieties are more resistant.
Sticky, shiny leaves. Stunted plants. Insects visible.	Aphids	
Ears, tassels, leaves have gray gnarled growths (galls) that become powdery	Common smut Caused by a fungus	Remove and destroy galls as soon as noticed. Keep black powder in galls from getting into soil. Use resistant varieties. Plant early. Problem is more common in later harvests.
Brown spots (pustules) on leaves with powdery, rust- colored spores	Rust. Caused by fungus.	Use resistant varieties. Fungicides are available if needed. Favored by cool temperatures, high humidity, overhead sprinklers.

Problem Diagnosis for Corn (continued)

What the Problem Looks Like	Probable Cause	Comments
Incomplete kernel development Shriveled kernels	Poor pollination	Can be caused by not planting enough corn at one time. Plant at least 3-4 rows at least 8 ft long each time.
	Insufficient soil moisture especially from silking to harvest	Supply enough water
	Hot weather, high winds 2 - 3 weeks before harvest	
	Inadequate fertilizer	Fertilize as directed. Check for potassium deficiency. Grow varieties adapted to your area.
	Birds	Put paper bag over ear after pollination.
Ears only partly filled. Shortened silks.	Earwigs	Earwigs feed on silks and prevent pollination, killing kernels. Use traps. Check daily for earwigs and destroy
Brown lesions on stalks near joints. Stalks rotted inside. Kernels pink or moldy.	Stalk and ear rot caused by several fungi	Remove old plant debris. Need uniform soil moisture.
Stunted plants with yellow and green stripe or mosaic pattern; older leaves pale yellow	Maize dwarf mosaic virus	Control weeds esp. Johnson-grass. Control aphids. Destroy affected plants. Do not handle healthy plants after infected ones. Use resistant varieties.
Young plants chewed off at ground level.	Cutworms	Remove weeds. Destroy crop residues.
Distorted leaves or stalks. Stalks may be bent or leaves may fail to unfurl.	Herbicide injury Cold weather Aphids	 Plant at proper time. Use insecticidal soap.
Lodging (failing over)	Excess nitrogen fertilizer	Test soil. Adjust fertilizer .