

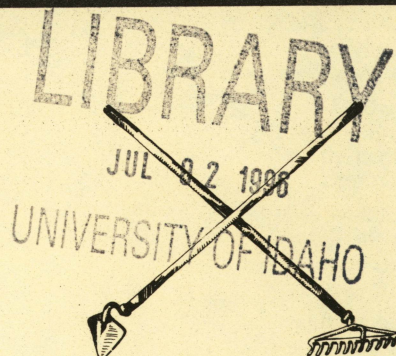


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Gardening

Growing Sweet Corn

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Sweet corn is a warm-season vegetable that can be grown easily in most gardens. Successive plantings will yield continuous harvests. Like most vegetables, corn will grow best with plenty of sunlight. More than any other vegetable, the good taste of corn depends on harvesting the ears at the right time and cooking them quickly. Taste is the best reason for homegrown sweet corn.

In addition to its fine flavor, one pound of sweet corn will yield 55.1 grams of carbohydrates, 8.7 grams of protein, 2.5 grams of fat and 240 calories of food energy. Kernel texture, shape and flavor are governed by starch and sugar content, and this differs with each variety. These variations make our sweet corn soft shelled, moist and sweet. Besides its popular use as corn-on-the-cob, sweet corn can be used in scalloped dishes, succotash, relishes, fritters, soups and chowders. Many, but not all, sweet corn cultivars (varieties) are quite acceptable for freezing.

Trying to decide what sweet corn variety to plant by searching a seed catalog or looking over a seed rack can be very confusing. Many excellent varieties are available to home gardeners, and several new ones are developed and introduced each year.

Some factors to consider when you choose varieties are the kernel color, the maturity date (heat units) and disease resistance. Selecting a yellow or white kernalled corn is a matter of personal preference. Another choice is to plant a variety that produces bicolor ears, with both yellow and white kernels. Yellow corn has the nutritional advantage of being a fairly good source of vitamin A. White corn contains virtually no vitamin A.

Sweet corn may be divided into two distinct types according to genetic background — standard and extra-sweet. Standard sweet corn varieties contain a "sugary gene" responsible for the kernels' sweetness and creamy texture.

Extra-sweet varieties contain a special gene that makes the kernels sweeter than those of the standard varieties. The sugar is also converted to starch more slowly, preserving the sweetness for a longer time. The kernels of the extra-sweet varieties have a crispy texture and contain low amounts of the water-soluble polysaccharides that impart the creamy texture to other sweet corn varieties.

Varieties

The varieties listed in the tables (like nearly all sweet corn sold today) are hybrids. The maturity dates are relative — the actual number of days to harvest varies from year to year and location to location depending on actual degree days or heat units received in each area. For example, increase the seed packet's estimated days to maturity by 20 percent in Aberdeen and 25 percent in Idaho Falls because of the lower number of growing degree days. For corn to be considered early in eastern Idaho, the variety should be a 70 days to maturity variety such as Polarvee. Usually any variety more than 75 days to maturity will not ripen in colder areas of Idaho. Jubilee is the most widely grown corn variety in areas of Idaho that have at least 90 growing days and 1,500 heat units.

Planting Dates

Sweet corn requires warm soil for germination (above 55°F for standard sweet corn varieties and about 65°F for extra-sweet varieties). Early plantings of standard sweet corn should be made at the mean frost-free date unless you use special soil-warming protection such as a polyethylene mulch film. The warmer the temperature, the faster the corn grows to maturity. The corn variety you plant should have an early maturity date and have been developed for weather conditions in the area planted.

Table 1. Hybrid yellow sweet corn.

Variety	Use*	Days to maturity	Heat units
Polarvee	HL	70	1,148
Northernvee	HL	70	1,148
Earlivee	HLR	72	1,187
Buttervee	HL	73	1,199
Spancross	HL	73	1,199
Early Star (Cr7801)	HL	74	1,206
Sunnyvee	HL	74	1,206
Early Golden Giant	HL	74	1,206
Starbrite 81	HLR	76	1,226
Golden Beauty	H	76	1,226
Miniature	H	76	1,226
Marcross	H	77	1,243
Golden Jewel	H	77	1,243
Cr8001	HLR	79	1,285
Barbecue	HL	80	1,300
Carmelcross	HL	80	1,300
Remarkable	HLR	81	1,324
Intrepid	HLRP	82	1,347
Tablevee	HL	82	1,347
Tastyvee	H	83	1,362
Crisp 'n Sweet 710	P	85	1,398
Miracle	HLRSP	85	1,398
Wisconsin 900	H	86	1,414
Resistall	HLRSP	87	1,431
Crisp 'n Sweet 711	P	87	1,431
Cr8002	HLRSP	87	1,431
Cr8101	HLRSP	87	1,431
Golden Cross Bantam Elite	HLR	87	1,431
Golden Cross Bantam	HLR	88	1,443
Cr8003	HLRSP	88	1,443
Jamboree	HLR	88	1,443
Butter Nugget	HL	88	1,443
Iobelle	HLRS	89	1,458
Ioana	HLR	90	1,480
Regal Bantam Evergreen	HLR	90	1,480
Iochief A	HLR	90	1,480
Iochief B	HLR	90	1,480
Jubilee	HLRSP	90	1,480
Flavorvee	HLRP	91	1,503
Stylepack	LSP	98	1,586

*H = for home garden use; L = for local fresh market; R = for roadside stand and u-pick; S = for shipping; P = for commercial processing.

Table 2. Hybrid bicolor sweet corn.

Variety	Use	Days to maturity	Heat units
Pride and Joy	HLRS	81	1,324
Honey and Cream	HL	82	1,347
Bi-Lightning	HLRS	82	1,347
CrSEYW8032	HLRS	85	1,398
Double Treat (CrYW8019)	HLRS	88	1,443

Table 3. Hybrid white sweet corn.

Variety	Use	Days to maturity	Heat units
Tokay Sugar	H	78	1,263
Platinum Lady	HLRS	82	1,347
White Lightning	HLRS	91	1,503
White Cross Bantam	—	91	1,503
Supreme	P	96	1,563
Hybrid Cogent	P	96	1,563
Hybrid Stowell	—	98	1,586
14.13	—	98	1,586

For a continuous supply of sweet corn throughout the summer, plant an early variety, a second early variety and a main crop variety in the first planting. For example, you may wish to select sundance (70 days to harvest) for the first early variety, Aztec (75 days to harvest) for the second early variety and Gold Cup (80 days to harvest) for the main crop variety. Make a second planting and successive plantings of your favorite main crop or late variety when three to four leaves have appeared on the seedlings in the previous planting. Plantings can be made as late as the first week of July in warmer areas of Idaho.

Seedbed

Soil texture can vary greatly for sweet corn production. A sandy loam is best all-around, but corn can be grown in clayey or loam soils also. The soil cultivation should be conducted when soil moisture will allow formation of a mud ball and will allow the ball to crumble into pieces under finger pressure. Cultivation should mix crop residues and organic matter in the top 7 to 8 inches of soil, destroy current weed growth and provide a granular-type bed for seeding. Overcultivated soil becomes powdery and has a tendency to crust. The ideal pH for corn growth is from 6.0 to 8.0.

Table 4. Hybrid sweet corn and popcorn.

Variety	Use	Days to maturity	Heat units
Open Pollinated Sweet Corn — Yellow			
Golden Midget	H	76	1,226
Golden Market	H	77	1,243
Extra Early Bantam	H	78	1,262
Golden Bantam	H	83	1,362
Improved Bantam	H	83	1,362
Bantam Evergreen	H	83	1,362
Open Pollinated Sweet Corn — White			
Country Gentleman	H	98	1,586
Stowell's Evergreen	HLR	98	1,586

Hybrid Popcorn

Iopop 12	Midseason yellow hybrid with good yield, excellent stalk strength and good popping volume. Hulless type. Iopop 12 has small kernels; 76 kernels per 10 grams. Broad geographic adaption.
Robust 41-10	Produces large, yellow kernels with 52 kernels per 10 grams. This is the highest yielding variety on the market because of its large ear size and double earring potential. It is a single cross that is very vigorous and can tolerate more adverse conditions than most hybrids. It has a popping volume of 38 MWVT. Flakes are very large and make excellent candied popcorn.
White Cloud	Early white hybrid with excellent eating quality. Hulless type. Small kernel.

Table 5. Novelty corn — ornamental.

Ornamental Flint	Gaily colored, long ears with unusual color variations. Make great winter decorations.
Strawberry Popcorn	Ear is 2 inches long with strawberry shape and color; grown for their attractive, ornamental quality.

Planting Specifications

- Seeds per foot — 4 to 6
- Row width — 30 to 36 inches
- Germination — 6 to 10 days
- Ounces per foot — .16
- Seed depth — 1½ to 2½ inches

Planting Suggestions

Since sweet corn is wind pollinated, the plants should be in three or more short rows in place of one long row. Pollination can be hampered by soil conditions. This is why some ears may be completely filled while others may not. Varieties should be separated as much as possible because cross-pollination can take place between low-sugar plants and high-sugar plants and reduce the sweetness of the high-sugar corn.

One way to isolate corn is to choose varieties with differing lengths of growing season and plant them at the same time. This will separate the time of pollination and reduce the chances of cross-pollination. Another control method is to allow at least 10 days between planting, and your varieties shouldn't cross. Popcorn and field corn have genes that are dominant over sweet corn. If a cross takes place, the sweet corn is likely to be tough and starchy.

After the plants are up, thin them to 1 foot apart. Too many seedlings have the same effect as too many weeds. If you leave them too close, your corn will have small, poorly filled ears. Good spacing is necessary to insure adequate sunlight. Presprouting of corn seed is often used to check germination and to speed growth.

Fertilizer

Since corn has a high nitrogen requirement, the first application of nitrogen and other nutrients should be broadcast before planting. As a general rule, use 2 to 3 pounds of fertilizer such as 10-10-0 for each 100 square feet of garden area. Spread the fertilizer evenly over the soil. Work it into the soil 3 to 4 inches deep.

If additional fertilizer is needed, it can be sidedressed around the plants at the four-leaf stage. Plants stunted by nutrient deficiency seldom recover and produce up to their potential.

Cultivation and Watering

Cultivation should be shallow when necessary to remove other plant competition. Deep cultivation will destroy much of the root system and reduce yield and quality. The number of suckers a sweet corn plant produces depends on the corn variety. Suckers should not be removed; their removal does not increase yields but may reduce them.

Corn requires a high supply of moisture throughout the growing season. The soils should be filled to capacity and then allowed to dry to 60 percent of water-holding capacity before re-watering. (At 60 percent moisture, a mud ball at the 5-inch soil depth will crumble under finger pressure into medium-sized fragments; it will feel damp. Fingerprints will be left on the ball.) An adequate supply of soil moisture is especially critical at silking time and at kernel-forming time. However, waterlogged, poorly drained soils are to be avoided because root decay and resulting poor plant growth may occur.

Insects and Diseases

These insects may be a problem in sweet corn: corn earworm, cutworm, armyworm, wireworms, rootworms, slugs, aphids, spider mites, earwigs and cucumber beetles. For more information, see University of Idaho CIS 226, *Garden Vegetable Insect Control*.

Diseases are seldom a problem in Idaho home gardens. Diseases that may be problems in larger plantings are root, stalk and ear rot, seed rot, seedling blight and smut.

Harvesting

Generally, depending on temperatures, sweet corn will be ripe 22 to 24 days after silking. Kernel development is fastest during hot weather if soil moisture is adequate. However, if the air temperature is cool or the soil is dry, maturity will be delayed.

When mature enough to eat, the silks are brown. The end of the ear is blunt, not pointed, which indicates kernels at the top are completely filled out. The liquid squeezed from a kernel will be milky (immature — watery, overmature — solid or creamy). The prime quality of a corn ear will last about 4 to 5 days before the sugar starts to turn to starch. Pick when the sugar is at its maximum. Canning corn can be picked when it is in the cream stage.

Sweet corn loses quality quickly after picking, especially at high temperatures. Process as quickly as possible after harvesting. Pull cob from stalk with a downward motion and twist to the side.

Afterharvest Handling

Sugar loss from harvested sweet corn is rapid at high temperatures; therefore the crop should be cooled as quickly as possible after harvest. For any fresh, corn product to be kept for any length after harvest, place in a moist environment and a temperature as close to 32°F as possible. To get the best taste, sweet corn should be cooked and eaten the day it is picked.

Other College of Agriculture publications you will want to get on home gardening are:

CIS 226 Garden Vegetable Insect Control	35 cents
CIS 446 Onions, Leeks, Shallots, Chives and Garlic for the Home Garden	35 cents
CIS 658 Gardening — Growing Beans and Peas	25 cents
CIS 659 Gardening — Growing Peppers	25 cents
CIS 660 Gardening — Growing Beets, Carrots, Radishes and Other Root Crops	35 cents
CIS 661 Gardening — Growing Cole Crops	25 cents
EXT 617 When To Harvest Vegetables	50 cents

You can get copies of these publications from your University of Idaho Cooperative Extension county office. Or, you can order directly from:

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