

Grow Your Own 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, 1 pound of sweet corn will yield 55 grams of carbohydrates, 9 grams of protein, 2 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.

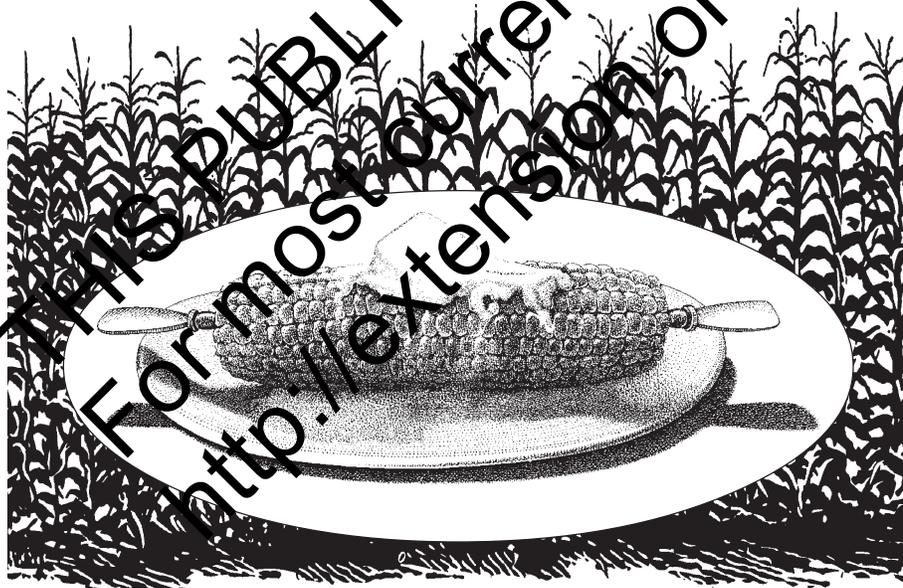
These variations make our sweet corn tender, moist, and sweet. Besides its popular use as corn-on-the-cob, sweet corn can be used in

scalloped dishes, succotash, relishes, fritters, soups, and chowders. Many, but not all, sweet corn varieties are quite acceptable for freezing.

Trying to decide which 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, and disease resistance. Selecting a yellow- or white-kerneled 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.

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Sweet corn may be divided into four distinct types: standard, supersweet, sugary enhanced, and synergistic. Standard varieties contain a "sugary gene" responsible for the kernels' sweetness and creamy texture.

Supersweet varieties contain a special gene that makes the kernels sweeter than those of standard varieties. Supersweet and sugary enhanced varieties convert the sugar to starch more slowly, preserving the sweetness for a longer time.

Kernels of the supersweet varieties have a crispy texture and contain low amounts of the water-soluble polysaccharides (complex sugars) that impart the creamy texture to other sweet corn varieties.

Synergistic varieties are not numerous. Their cobs have one-fourth supersweet kernels and three-fourths standard kernels. Seeds of this type have the improved emergence characteristics of standard sweet corn.

Varieties

The maturity dates listed in seed catalogs are relative—the actual number of days to harvest varies from year to year, and location to location, depending on the actual degree days or heat units your area receives.

Table 1.—Corn for the home garden.

Category, type, variety	Season
<i>Sweet corn</i>	
Standard (su₁)	
<i>Yellow</i>	
Sundance	early
Spring Gold	early
Early Sunglow	early
Earlivee	early
Jubilee	main
<i>White</i>	
Silver Queen	late
<i>Bicolor</i>	
Harmony	early
Butter and Sugar	early
Supersweet (sh₂)	
<i>Yellow</i>	
Summersweet 7200	main
Burpee's Sugar Sweet	main
Supersweet Jubilee	main
Florida Staysweet	main
Sweetie	main
Pinnacle	main
Krispy King	main
<i>White</i>	
How Sweet It Is	main
<i>Bicolor</i>	
Phenomenal	main
Sugary enhanced (se)	
<i>Yellow</i>	
Sugar Buns	early
Miracle	main
Kandy Korn	late
Kandy King	main
<i>White</i>	
Matsum Lady	main
White Lightning	main
Snowbelle	main
<i>Bicolor</i>	
Doubt Delight	main
Carica Bell	main
Synergistic	
Honeycomb	main
Sugar Loaf	main
Popcorn	
Peppy (white)	early
Iopop 12 (yellow)	main
White Cloud	main
Ornamental	
Fiesta	main
Papoose (miniature)	main
Chinook	main
Carousel (miniature)	main
Wampum	main
Indian Ornamental	late

The varieties listed in Table 1 are recommended for Oregon. Use early varieties in western Oregon.

Planting dates

Sweet corn requires warm soil for germination (above 55°F for standard varieties and about 65°F for supersweet 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 it should have been developed for weather conditions in your area.

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

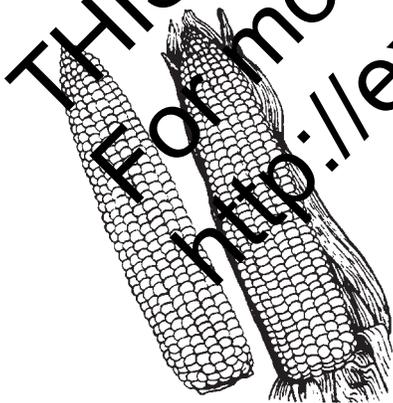
(70 days to harvest) for the first early variety, Miracle (85 days to harvest) for the second early variety, and Jubilee (90 days to harvest) for the main crop variety.

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 Oregon.

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. Cultivate the soil 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



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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.

Use the following planting specifications:

- Seeds per foot—four to six (thin to one plant every 6 to 9 inches after emergence)
- Row width—30 to 36 inches
- 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. After pollination, kernel growth may be hampered by temperature, moisture, and soil conditions. This is why some ears may be filled completely while others may not.

As much as possible, isolate supersweet varieties from all other types. Cross-pollination can take place between supersweet and standard or sugary enhanced (se). If this occurs, it will affect severely the quality of both types.

One way to isolate corn is to choose varieties with differing lengths of growing season (at least 10 days difference) 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 10 or more days between planting the different types—while providing as much distance as possible—

then your varieties should not cross.

Popcorn and field corn have genes that are dominant over sweet corn. If a cross takes place, the sweet corn will be tough and starchy.

After the plants are up, thin them 6 to 9 inches 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 ensure adequate sunlight.

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 10-10-10 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 nitrogen is needed, you can sidedress it around the plants before tasseling. Plants stunted by nutrient deficiency seldom recover to 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 variety. You do not have to remove suckers; their removal does not increase yield—it may reduce it.

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 rewatering. (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 soil.)

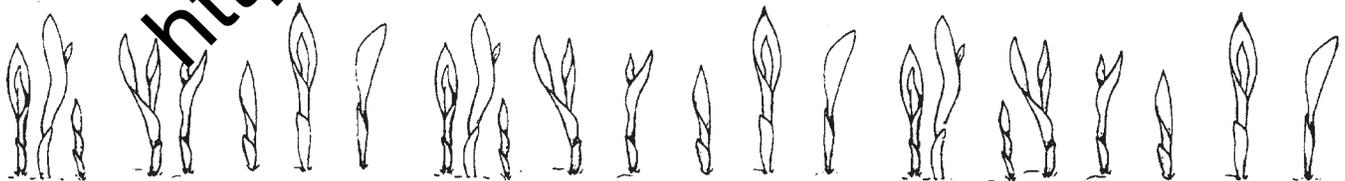
An adequate supply of soil moisture is critical especially at silking time and at kernel-forming time. However, avoid waterlogged, poorly drained soils because root decay may occur, resulting in poor plant growth.

Insects and diseases

These insects may be a problem in sweet corn: corn earworms, cutworms, armyworms, wireworms, rootworms, slugs, aphids, spider mites, earwigs, and cucumber beetles.

Diseases seldom are a problem in home gardens. Diseases that may be problems in larger plantings are root, stalk, and ear rot, seed rot, seedling blight, and smut. For more information, see FS 242, *Discourage Plant Diseases in Your Home Garden* (single copy no charge; order from Publication Orders, Extension and Experiment Station Communications, 422 Administrative Services, Oregon State University, Corvallis, OR 97331-2119).

Corn seedlings.



Harvesting

Generally, depending on temperatures, sweet corn will be ripe 22 to 24 days after silking. Kernel development is faster 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 that 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. Pull cob from stalk with a downward motion and twist to the side. Corn for canning 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.

Afterharvest handling

Cool your crop as quickly as possible after harvest—sugar loss from harvested sweet corn is rapid at high temperatures. You must keep a fresh corn product for any length of time after harvest, place it

in a moist environment with a temperature as close to 32°F as possible. Supersweet varieties store much better than standard varieties.

To get the best taste, cook and eat sweet corn the day you pick it.

Preserving corn

Corn may be frozen, canned, or dried. For all methods, husk ears and remove silk. Wash.

Freezing whole kernel corn.

Blanch in boiling water for 4 to 5 minutes. Allow 1 gallon of water for each pound of corn. Cool promptly in ice water. Drain. Cut the outer third of the kernels from the cob. Pack into moisture- and vapor-resistant freezing containers, leaving ½ inch head space. Seal and freeze at 0°F or below for best quality.

Canning whole kernel corn. Cut the outer third of kernels from the cob. Use either the raw- or hot-pack method.

Raw pack. Pack corn loosely into jars, leaving 1 inch head space. Add salt, if desired, ½ teaspoon per pint, 1 teaspoon per quart. Fill jars with boiling water, leaving 1 inch head space.

Hot pack. Heat kernels to boiling (use 1 pint of water per quart of corn). Pack corn and liquid into jars, leaving 1 inch head space. Add salt, if desired.

After packing, wipe rims of jars, adjust lids, and process in a pressure canner, following manufacturer's directions for venting and operation.

Process pint jars of raw- or hot-packed corn for 55 minutes at 240°F (10 pounds pressure with a weighted gauge, 14 pounds with a dial gauge). Process quarts for 85 minutes.

Canning cream-style corn. Cut the kernels halfway to the cob, then scrape the cob. Heat kernels to boiling, using 1 pint of water for each 4 cups of corn. Pack into pint jars, leaving 1 inch head space. (Do not use quart jars. Large amounts of cream-style corn heat too slowly for safe canning.) Process pints for 85 minutes in a pressure canner at 240°F (10 pounds pressure with a weighted gauge; 11 pounds with a dial gauge).

For an added margin of safety, boil all home-canned corn for at least 10 minutes before tasting.

Drying. Steam-blanch ears for 5–10 minutes (depending on size) or until milk sets. Cool promptly in ice water. Drain and cut kernels off the cob. Spread in thin layer on drying trays. Dry to brittle stage in a dehydrator at 140°F.

For further information, contact your county office of the OSU Extension Service.

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