

March 2005 (pr)

HG/Garden/2005-10

Sweet Corn in the Garden

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Summary

Sweet corn prefers full sun and fertile, well drained soil for maximum yield. Incorporate plenty of organic matter and a complete fertilizer into the area before planting. When soils are above 60°F, space rows 24-30 inches apart and plant seeds 1-2 inches deep and 9-12 inches apart in the row. Plant corn in blocks to ensure good pollination and ear development. Sweet corn may be transplanted or seeded under clear plastic for early production. Plant corn every 10-14 days for a continuous crop throughout the season. Sidedress sweet corn with nitrogen fertilizer when plants have 8-10 leaves and again at silking. Corn requires regular watering, so maintain soils near field capacity. Water stress will reduce yield and ear quality. Organic mulches help conserve water, supply extra nutrients, and reduce weed growth. Control insect and diseases if they occur. Harvest when ears are plump, silks are dry, and kernels are milky. Use ears immediately for best quality.



Recommended Varieties

There are many different sweet corn varieties for the home vegetable garden. Major differences include maturity dates and sugar content. Sweet corn has a maturity range of 60 to 90 days from planting depending on variety. Early varieties generally produce smaller ears and are less sweet than later maturing types. Early varieties do well where the growing season is short and temperatures are cool. Late maturing varieties are better adapted to long seasons and warm temperatures. Sugar content in the kernels should also be considered. Sweet corn varieties are classified as standard sugary (su), sugary enhanced (se), or super sweet (sh₂). Standard types germinate better than the se or sh₂ types in cool soils. All types germinate well in warm soils. Eating quality may be adversely affected when su, se and sh₂ are planted together and tassel at the same time. If cross pollination occurs, the extra sweetness of the se and sh₂ types is lost and they taste more like the standard variety. Time your plantings so they tassel at different times. All sweet corn varieties will grow in Utah, but not all are available. Most garden centers and nurseries carry varieties proven to grow well and produce high quality, flavorful ears. Here is a partial list of varieties proven to grow well in Utah.

Corn Type	Selected Cultivars	Comments
Standard (su) Sweet Corn	Earlivee, Jubilee, Silver Queen, NK199	Lower sugar content than se or sh ₂ types. Good cool soil germination.
Sugar Enhanced (se) Sweet Corn	Incredible, Sugar Buns, Miracle, Peaches and Cream	Higher sugar content, maintains quality long after harvest. Better cool germination than sh ₂ types.
Super Sweet (sh ₂) Sweet Corn	Honey & Pearl, Phenomenal, How Sweet It Is, Supersweet Jubilee	Poor germination in cool soils, extra sweet flavor, isolation needed from su and se types. Maintains quality after harvest.

How to Grow

Soil: Sweet corn will grow in all Utah soil types that are rich in organic matter, well drained, and fertile.

Soil Preparation: Before planting, incorporate 2-4 inches of well composted organic matter and 1-2 lbs of all-purpose fertilizer (16-16-8) per 100 square feet of planting area. Work the compost and fertilizer into the top 6 inches of soil.

Plants: Sweet corn is a warm weather vegetable that requires soil and air temperatures above 60°F for best germination and plant growth. Plant corn after the last frost-free date for your area. For earlier production, some gardeners grow transplants for planting after the frost-free date. Seeds may be sown 3-4 weeks earlier if planted through or under clear plastic tunnels (see photo).

Planting and Spacing: To plant 100 feet of row, you will need 3-4 ounces of seed. Planting in blocks of three or more rows rather than in a single long row improves pollination and production. Plant corn seeds 1-2 inches deep. Seeds should be spaced 9-12 inches apart in the row with 24-30 inches between rows. For high-density corn, plant in 15 by 15 inch squares. Plant the same variety every 10-14 days until early July for continuous production throughout the season. Corn requires 60-90 days to mature depending on variety. Planting a 65, 70, 75, and 80 day variety of the same type (su, se, or sh₂) all at the same time will also ensure production over a longer time period. With a little planning, a continuous supply of fresh sweet corn can be produced.

Water: Sweet corn requires regular watering throughout growth for best production. Soils should be maintained near field capacity. Water needs are critical during tasseling, silking, and ear formation. Drought stress during ear development will decrease yield, lower kernel quality, and affect flavor. Watering amounts depend on soil type.

Fertilization: In addition to the fertilizer used when preparing the site, sweet corn needs additional nitrogen fertilizer to produce optimum yields. Sidedress sweet corn with 1/2 lb of 34-0-0 per 100 square feet when plants have 8-10 leaves and with an additional 1/4 lb when the first silks appear. Place the fertilizer 6 inches to the side of the plant and irrigate it into the soil.

Mulches and Row Covers: Clear plastic mulches help conserve water, provide some frost protection, and allow earlier planting and maturity, but stimulate weed growth under the plastic. Fabric row covers also protect young plants from frosts. Organic mulches like grass clippings, straw, and shredded newspaper also help control weeds. Mulching the crop during the summer will reduce water loss and improve nutrient availability.

Problems

Weeds: Control weeds with regular cultivation especially when plants are small. Once sweet corn begins to grow vigorously, it will out-compete the weeds. When cultivating, avoid root damage which can slow plant growth.

Insects and Diseases:

Insect	Identification	Control
Aphids	Green or black soft-bodied insects that feed on leaves, tassels and ears. Plants become crinkled, curled, and growth is stunted when plants are small. Honeydew makes plants and ears sticky.	Use insecticidal soaps, appropriate insecticides, or strong water stream to dislodge the insects. Aphids cause cosmetic damage to the ears.
Corn Earworms	Larvae feed on silks and ears of corn. Damage symptoms include holes in ear tips, loss of silks, and damp excrement near silk.	Spray with BT or appropriate insecticides. Regular applications are necessary to protect the plants. Apply mineral oil to silks. Remove damaged part of ear at harvest.
Cutworms or Army Worms	Larvae feed near the soil surface and sever the plants close to the ground. Most damage done at night.	Use barriers or collars around plants. Keep organic mulches way from young plants.

Disease	Symptom	Control
Root Rots and Damping Off	Seedlings darken, wilt and die. Associated with cool, wet conditions in the spring.	Use treated seed. Allow soils to dry before re-watering.
Smut	White fungal galls that form on the tassel, stem, or ear. Early plant infection will stunt growth and deform ears.	Remove and destroy galls and severely infected plants. Plant resistant varieties.
Wilt Diseases	Wilting leaves, streaking and drying of leaves, stalk rotting, and plant lodging may occur. Plants often die.	Remove infected plants. Maintain clean garden practices.

Harvest and Storage

Sweet corn ears mature in 15-24 days from silk emergence depending on the temperature. Ears are mature when silks are dry and brown. The husks should appear moist and green. Kernels in the tip of the ear should be plump and release milky juice when punctured. Ears can be harvested over a 5-7 day period. For best quality and flavor, harvest and use immediately. To harvest, grasp the ear, snap downward while twisting the ear. Sweet corn can be stored for several days if refrigerated. Do not husk until ready for use.

Productivity

Expect one ear per plant. Plant 10-15 feet of row per person for fresh use and an additional 30-40 feet of row per person for canning or freezing. Expect about 10 dozen ears per 100 feet of row.

Nutrition

Sweet corn is high in fiber, potassium, folic acid, and vitamin A. One ear contains 80 calories and 20 grams of carbohydrates.

Frequently Asked Questions

Often, when I plant corn early in the year, I have poor emergence. How can I get a better stand? It is best not to plant too early in the spring. Wait until the soil is warm, preferably above 60°F. Try sowing more seed and thin to the correct distance after they emerge. Fungicide seed treatments may also be helpful. The sh₂ varieties do not germinate well in cold, wet soil. For early plantings, sow su types or plant through clear plastic.

Sometimes the ears do not fill out at the tips. What's wrong? Poor kernel development at the tip is often caused by: 1) hot, dry weather during silking and pollination; 2) planting seeds too close together; 3) low soil fertility; and 4) poor natural pollination. Be sure to keep soils moist in dry weather; plant at recommended spacing (9 to 12 inches in the row); apply fertilizer according to soil test recommendations; and plant corn in blocks of three or more rows rather than one long row.

I regularly get lots of shoot growth around the base of my corn plants. Are these productive or should they be removed? Extra shoot growth or suckering is common in sweet corn if plants are grown far apart in the rows. Most suckers do not produce usable ears and removal does not increase plant productivity. Plant the seeds closer together to decrease sucker formation and increase ear yield.

How can I keep raccoons out of my sweet corn? It is very hard to keep raccoons and skunks out of sweet corn. If you grow large amounts of corn, an electric fence made with two or three wires helps. Space the wires 4 inches apart starting at 4 inches above ground level. Raccoons prefer sweet corn in the early milk stage so have the fence operating before the corn is ripe. If you have a dog, kennel it close to the corn. The barking may help, but it can also annoy you and your neighbors.

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