Sweet Corn for Utah Gardens
Sweet corn is a popular vegetable in Utah.
It grows best with full sun and fertile, well-drained soil
Add organic matter and a complete fertilizer to the soil before planting.
When soil temperature reaches 60ºF, plant the seeds

• Space rows 24-30 inches apart
• Plant seeds 1-2 inches deep
• Space seeds 9-12 inches apart in the row
Plant corn blocks at least four rows wide to ensure good pollination
Transplant or seed under clear plastic for early production
Sidedress sweet corn with nitrogen fertilizer

- When plants have 8-10 leaves
- Sidedress again at silking
Corn requires regular watering, so maintain soils near field capacity.
Water stress reduces yield and ear quality
Organic mulches conserve water, add nutrients and reduce weeds
Harvest when ears are plump, silks are dry and kernels are milky
Use ears immediately for best quality
Recommended cultivars

- There are many different sweet corn cultivars for the home garden
Major differences include maturity dates and sugar content

- Sweet corn maturity ranges from 60 to 90 days depending on cultivars
- Early cultivars have smaller ears, are not as sweet and mature later
- Early cultivars do well with short growing seasons and cool temperatures
- Late maturing cultivars adapt better to long seasons and warm temperatures
Sugar content in the kernels is also important.
Sweet corn cultivar are classified as

- Standard sugary (su)
- Sugary enhanced (se)
- Super sweet (sh2)
Which cultivars are best to plant?

- Standard types germinate better in cool soils than the se or sh2 types.
- All types germinate well in warm soils.
- Eating quality is adversely affected if su, se and sh2 mature together.
If cross pollination occurs

- The extra sweetness of the se and sh2 types is lost
- The corn then tastes more like the standard cultivars
Time plantings so they tassel at different times
Most sweet corn cultivars will grow in Utah, but not all are available.
Most garden centers and nurseries carry cultivars that

- Grow well
- Produce high quality, flavorful ears
Here is a partial list of cultivar proven to grow well in Utah
Standard (su) Sweet Corn

- Earlivee, Jubilee, Silver Queen, NK199
- Lower sugar content than se or sh2 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 sh2 types
Super Sweet (sh2) 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
Properly Prepared Soil With Good Drainage And Tilth Make This Easier
Incorporate 2-4 inches of composted organic matter before planting
Add 1-2 lbs. of (16-16-8) fertilizer per 100 sq. feet of planting area.
Work the compost and fertilizer into the top 6 inches of soil
Sweet corn is a warm weather vegetable

- It requires soil and air temperatures above 60°F for best germination and plant growth
- Plant after the last frost-free date for your area
It takes 3-4 ounces of seed to plant 100 feet of row
Single File Row Never Give The Best Yields
Precision Planting Gives Each Plant Space To Develop
For high-density corn, plant seeds on 15 by 15 inch squares.
For continuous production plant every 10-14 days until mid-July

- Corn requires 60-90 days to mature depending on cultivar
Continuous production is possible by

- Planting a 65, 70, 75, and 80 day cultivar of the same type (su, se, or sh2) all at the same time
- This ensures production over a longer time period
With planning sweet corn can be produced for two to three months.
Corn needs requires regular watering through the season

- Maintain soils near field capacity
- Water needs are critical during tasseling, silking and ear formation
- Drought stress during ear development decreases yield, lowers kernel quality and affects flavor
- Watering needs depend on soil type
Fertilization

- In addition to the preplant fertilizer, 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
- Add 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
Fertilized, Healthy Plants Yield More With Less Pest Damage
Mulches and Row Covers:
Clear plastic mulches

- Help conserve water
- Provide some frost protection
- Allow earlier planting and maturity
- It stimulates weed growth under the plastic
Fabric row covers

- Protect young plants from frosts
Organic mulches control weeds but reduce soil temperatures

- Grass clippings
- Straw
- Shredded newspaper
Sumer mulching reduces water loss and improves soil nutrients
Problems
Weeds

- Control weeds with regular cultivation especially when plants are small
- Once sweet corn gets large, it will out-compete the weeds
- Cultivate carefully to avoid root damage which slows plant growth
Never Let Weeds Win
Insects and Diseases:
Aphids are green or black soft-bodied insects

- They feed on leaves, tassels and ears
- Plants become crinkled, curled and growth is stunted when plants are small
- Honeydew makes plants and ears sticky
- Aphids cause cosmetic damage to the ears
To control aphids

- Use insecticidal soaps
- Appropriate insecticides
- Wash off the insects with a strong stream of water
Aphids
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
Corn Earworm
Sap Beetles
European Earwigs
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
Army worms
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
Root Rot on Beans
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 cultivars
Smut
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
Wilt diseases
Harvest and Storage

- Corn matures 15-24 days from silk emergence
  Depending on 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
• Plant 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
Problems

• When I plant corn early in season it does not come up well.
• How can I get a better stand?
Problems

• It is best not to plant too early in the spring
• Wait until the soil is warm, preferably above 60ºF
• Try sowing more seed and thin to the correct distance after they emerge
• Fungicide seed treatments may also be helpful
• For early plantings, sow su types or plant through clear plastic
The sh2 cultivar do not germinate well in cold, wet soil

- For early plantings, sow su types or plant through clear plastic
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
4) poor natural pollination
Raccoons and skunks severely damage sweet corn

• If you grow large amounts of corn, an electric fence helps
• Have the fence operating before the corn is ripe
Skunks and Raccoons
Sweet Corn Reproduction

- Male flowers are tassels which are covered with spikelets. These hold the anthers which produce the pollen.

Branch of tassel

Spikelets

Anthers
Sweet Corn Reproduction

- Female flowers are silks. Each potential kernel produces a silk and the pollen grain lands on that and grows down the silk and fertilizes the kernel.
Sweet Corn Development

• Plants have a tendency to produce suckers or tillers
• These do not compete with the main stalk so they do not need to 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
  Removal does not increase plant productivity
- Plant the seeds closer together to decrease sucker formation and increase ear yield
Sweet Corn: Pollination

• Corn is wind pollinated so plant sweet corn in blocks of at least four rows to ensure good pollination
• Prevent pollination by field corn, Indian corn or popcorn
• Pay special attention to supersweet cultivars because if pollinated by other corns they do not develop high sugar content
• Cross pollination between colored or yellow and white cultivars will affect appearance of white corn
Sweet corn – cross pollination

• Cross pollination between yellow and white corn affects white corn appearance
  - Yellow color – most common in Utah
  - Bicolor corn (“white and yellow”) – also common here
  - White – less popular
  - Specialty types – i.e. blue
Incomplete pollination

• Incomplete kernel development
  - Lack of tip fill
  - Blanking
  - Causes
    • Not planting enough sweet corn
    • Lack of moisture
    • Hot weather
    • Inadequate fertilizer
    • Birds
    • Insect including earwigs feeding on silks
Corn: the indicator plant
Nitrogen deficiency
Phosphorus deficiency
Potassium deficiency
Iron deficiency
Zinc deficiency