



**CORNELL
COOPERATIVE
EXTENSION OF
ONEIDA COUNTY**

HOME GROWN FACTS

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GROWING CORN

Corn demands fertile soil, consistent moisture and warm weather. If you have those and plenty of garden space to spare, it's not hard to grow great-tasting corn, and you won't get it any fresher.

Site Characteristics

Sunlight:

- full sun

Soil conditions:

- requires high fertility

Needs deep, well-drained, fertile soil, pH 6.0 to 6.8 and consistent, plentiful moisture.

Growing Information

How to plant:

Propagate by seed

Germination temperature: 65 F to 85 F - Will not germinate below 55 F

Days to emergence: 4 to 7 - Supersweet hybrids require more moisture and often take longer to germinate.

Seed can be saved 2 years.

Maintenance and care:

Corn requires rich, fertile soil. Add compost or well rotted manure in fall. Consider planting a legume cover crop the season before corn to help meet the nutrient needs of this heavy feeder.

Make first planting after last frost date. Soil should be at least 65 F for fast germination. (Corn will not germinate if soil temperature is less than 55 F.) To speed increase in soil temperature, consider covering soil with black plastic for several weeks before planting.

Plant in blocks of at least 4 rows of a single hybrid (as opposed to fewer, longer rows) for good pollination and well-filled ears. (Some corn varieties need to be isolated from others. See variety information below.)

Plant seeds 1 inch deep and 4 to 6 inches apart in rows 30 to 36 inches apart. Thin to 8- to 12-inch spacings when plants are 3 to 4 inches tall. Increase seeding rates to ensure a good stand if soils are cold or you are using seed that has not been treated with fungicide. (Untreated seed has natural color. Treated seed is dyed.)

Helping You Put Knowledge to Work

For a sequential harvest, make first planting using an early hybrid. Two weeks later, plant another block of an early hybrid, plus blocks of mid- and late-season hybrids. Continue making plantings until late June or early July, depending on the length of your growing season.

To save space, you can intercrop corn with early-harvested cool-season crops.

Corn plants have many roots close to the surface, so cultivate around them with care. You can hill soil up around the base of plants as they grow to bury small weeds in the row and give the corn a better foothold. After the soil has warmed, you can mulch corn to help suppress weeds and retain moisture.

It is not necessary to remove suckers (side sprouts growing from the base of the plant). Studies show that removing them may actually reduce yields.

Corn is a heavy feeder - particularly of nitrogen - and may require several sidedressings of fertilizer for best yields. Look for signs of nutrient deficiency. Purple-tinged leaves are a sign of phosphorus deficiency. Pale green leaves are a sign of nitrogen deficiency.

For miniature or baby corn, plant seeds 2 to 4 inches apart and harvest as silks emerge from the ear, or harvest secondary ears from normally spaced plantings, allowing the main ear to fully mature. Also try hybrids specifically bred for early baby corn harvest.

Pests:

European corn borer, corn earworms - Destroy cornstalks in fall to kill overwintering larvae of European Corn Borer. Plant early to avoid corn earworm.

Seedcorn maggots - Avoid heavy manure or organic matter in garden, which attract adults and encourage egg laying. Do not overwater. Use insecticide-treated seed. Wear gloves when planting.

Diseases:

Rust - Avoid wetting foliage if possible. Water early in the day so aboveground plant parts will dry as quickly as possible. Avoid crowding plants. Space apart to allow air circulation. Plant resistant or tolerant varieties: Top Notch, Temptation, Sweet Rhythm, Wizard, Sweet Symphony, Silverado. Standards like Sweet Sue and Silver Queen are very susceptible.

Smut - Pick and remove galls before they break open. Plant tolerant varieties: Top Notch, Temptation, Sweet Rhythm, Sweet Symphony, Zenith

Varieties

Virtually all varieties on the market are hybrids. It is difficult to maintain vigor and sweetness in open-pollinated varieties. Look for differences in kernel color (white, yellow, bicolor), ear size, sweetness (explained below) and days to harvest - early (55 to 70 days), midseason (71 to 85 days) and late (more than 85 days). Days to maturity are only estimates, and will vary considerably depending on growing conditions, most notably heat.

Sweet corn hybrids come in different levels of sweetness:

Normal (su) - These hybrids are flavorful, stress-tolerant, and vigorous growers. But they aren't as sweet as other hybrids and their sugar starts turning to starch quickly after picking. Hence the tradition of getting the water boiling before picking and shucking them.

Sugar-enhanced (se, se+, EH, Everlasting Heritage) - Fall between normal and supersweet hybrids in terms of vigor, stress tolerance, flavor, sweetness, and how quickly their sugar changes to starch. They do not need to be isolated from normal hybrids.

Supersweet (sh2, shrunken) - These hybrids contain two to three times more sugar than normal hybrids, and the sugar in their kernels changes to starch very slowly after harvest. But they aren't as vigorous as normal hybrids, are more easily stressed by cold and other problems, and often lack the corny flavor of normal hybrids. They must also be isolated from Normal and Sugar-enhanced varieties pollinating within 10 to 14 days by at least 25 feet (250 feet for larger commercial plantings), or the kernels will be tough and starchy.

Other improved genetics - In recent years, corn breeders have come up with a host of other varieties that are often different combinations of these three basic types. They include Synergistic types (Sweet Breeds, TripleSweets), Augmented types (Gourmet Sweet Brand, Multisweet, Xtra-Tender Brand), Table Sweet, and more. Figuring out which of these varieties need isolation from others can be complicated. Look to your seed company for specific information, but in general, keep su and se types isolated from sh2 types:

su and se types:

- Normal (su)
- Sugar-enhanced (se, se+ EH)
- Synergistic types (Sweet Breeds, Triple Sweet)
- Table Sweet

sh2 types:

- Supersweet (sh2, shrunken)
- Augmented (Gourmet Sweet Brand, Multisweet, Xtra-Tender Brand)
- Mirai

If you plan to grow corn in the traditional "Three Sisters" planting of corn, beans and squash, choose another type of corn that you won't harvest until the ears are fully mature and dry. These include popcorn, ornamental corn or field corn (dent, flint and flour corns grown for meal or animal feed). That way, you won't have to walk on squash vines or disturb climbing beans harvesting sweet corn while the other crops are still growing.

Broom corn - traditionally used for making brooms - is a different species, *Sorghum bicolor*.

Miniature or baby corn can be grown from regular hybrids or those developed specifically for early harvest. See Growing Information.

Some varieties recommended for New York:

Early sweet corn: , Fleet, Geronimo, Jester (II), Seneca Spring, Sundance, Sugar Buns, Temptation, Trinity,

Midseason sweet corn: Jubilee, Precious Gem, Silverado, Tuxedo,

Late Season sweet corn: Bodacious, Delectable, Sensor, Silver Queen, Sugar Ace

Super-sweet: Northern Extra Sweet

Popcorn: Mini Bluepopper

Source: <http://www.explore.cornell.edu> 2006

This publication may contain pesticide recommendations. Changes in pesticide regulations occur constantly, some materials mentioned may no longer be available, and some uses may no longer be legal. All pesticides distributed, sold, and/or applied in New York State must be registered with the New York State Department of Environmental Conservation (DEC). Questions concerning the legality and/or registration status for pesticide use in New York State should be directed to the appropriate Cornell Cooperative Extension Specialist or your regional DEC office. **READ THE LABEL BEFORE APPLYING ANY PESTICIDE.**