Sweet Corn Production in Miami-Dade County, Florida

Y. C. Li, W. Klassen, Mary Lamberts, Teresa Olczyk, and Guodong Liu

In 2016, gross sales from approximately 34,500 acres of sweet corn in Florida were $160.1 million, with an average yield of 145 CWT per acre (USDA/NASS 2016, https://www.nass.usda.gov/Quick_Stats/Ag_Overview/stateOverview.php?state=FLORIDA). Miami-Dade County is the main area to produce sweet corn. The production cost was approximately $12.91 per crate or $3,874/acre for an acceptable yield of 126 CWT per acre in 2016. Sweet corn produced in Miami-Dade County is sold for the fresh market nationwide during winter and spring.

Situation

In 1995–1996, gross sales from approximately 14,300 acres of sweet corn in Miami-Dade County were at $9.8 million, with an average yield of roughly 300–450 42-lb crates per acre. The production cost was approximately $12.91 per crate or $3,874/acre for an acceptable yield of 300 42-pound crates per acre in 1999–2000. Sweet corn produced in Miami-Dade County is sold for the fresh market nationwide during winter and spring.

Varieties

Refer Chapter 17 in the Vegetable Production Handbook of Florida for variety selection (Ozores-Hampton et al. 2017, http://edis.ifas.ufl.edu/CV135). Currently the major varieties grown in Miami-Dade County are Primetime, Summersweet9730, and Sunvolt. Bt-corn hybrids are not grown because they cannot be exported to Europe.

Soils, Land Preparation, and Planting

Sweet corn in Miami-Dade County is grown on both gravelly and marl soils. Sandy soils (west Kendall area) also are suitable for sweet corn. To be suitable, gravelly soils must be a minimum of 6 inches deep above the bedrock. Sweet corn is relatively tolerant to flooding because it can form a spongy tissue called aeranchyma (aer- means air and enkhumia infusion in Greek) delivering or exchanging oxygen with carbon dioxide and ethylene between shoots and to roots. Nevertheless both, yield and quality are reduced under prolonged flooding.

The planting season for sweet corn extends from early October to January and occasionally February. Typically seed is spaced 6–8 inches within the row and rows are spaced 28–32 inches apart (Ozores-Hampton et al. 2017, http://edis.ifas.ufl.edu/CV135). Seeding rates of 20,000 to 22,000 seeds per acre are used.

Fertilizer

Calibrated soil tests for the calcareous soils of Miami-Dade County are not available at present. Tissue analysis is recommended to determine the composition and rates
of fertilizers to be applied. Instructions for tissue sample collection, preparation, and submission are provided in Plant Tissue Information Sheet (Mylavarapu et al. 2017), which is available online at http://edis.ifas.ufl.edu/ss182 and from the Miami-Dade County Cooperative Extension Service. Information on plant tissue analysis for sweet corn is provided in Chapter 2 in the Vegetable Production Handbook for Florida 2017-2018 (Liu et al. 2017, http://edis.ifas.ufl.edu/cv296). The total amount of fertilizer required in Miami-Dade County depends on the variety, soil fertility, and other environmental factors. Pre-plant fertilizer formulas of 6-6-6, 6-3-6, 10-10-10, or similar formulas are satisfactory. All of the phosphorus and two thirds of the N and K fertilizer should be applied as dry fertilizer prior to planting. The remainder should be side dressed 2 to 4 times during the season. Due to the high soil pH in the area, foliar application of chelated iron or zinc may be likely needed if soil test report shows low in the nutrients (please see this EDIS publication at http://edis.ifas.ufl.edu/hs1208).

**Irrigation and Freeze Protection**

Center pivots, in line low volume sprinklers, or traveling guns can be used for irrigation. Irrigation frequencies depend on plant growth stages, soil type, and weather conditions. Normally, corn is irrigated once every 5–7 days though more frequent irrigation may be required at certain growth stages during drought period.

Sweet corn has little resistance to frost. Indeed, chilling injury occurs when temperatures drop 2 °F below freezing. Because of the cost of solid set overhead sprinklers, most sweet corn growers in Miami-Dade County do not provide freeze protection for sweet corn. More information on irrigation is available in Chapter 3 in the Vegetable Production Handbook for Florida 2017-2018 (Zotarelli et al. 2017, http://edis.ifas.ufl.edu/cv297).

**Insect Management**

Refer to Chapter 17 in the Vegetable Production Handbook of Florida for extensive information on insect control (Ozores-Hampton et al. 2017, http://edis.ifas.ufl.edu/cv135). The major pests are the fall armyworm and the corn silk fly, lesser cornstalk borer, cutworm, and wireworm.

**Disease Management**


**Weed Management**


**Harvest**

Harvesting season extends from January through April. The harvest date depends on the variety. When hand harvested, sweet corn usually is packed in the field.

**Multiple Cropping/Rotation**

Because of the long residual action of certain herbicides commonly used in corn production, few crops can be grown in rotation with sweet corn.

**References**


