Okra Production in Miami-Dade County, Florida[1]

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Situation

Okra is known as ladies' fingers or ochro in many English-speaking areas. This crop is a flowering plant species in the mallow family, used as a traditional vegetable crop grown annually on 1000 to 1500 acres in Miami-Dade County, and sold nationwide for the fresh market. The commodity is rich in Vitamin K, Vitamin C, and magnesium according to the USDA (n.d.). Yields of the crop range from less than 600 bushels/acre to more than 1000 bushels/acre.

Varieties

Refer to Chapter 10 of the *Vegetable ProductionHandbook of Florida 2017–2018* (Miller et al. 2017, http://edis.ifas.ufl.edu/pdffiles/cv/cv29400.pdf) for variety selection. Clemson Spineless 80 is the major variety currently grown in Miami-Dade County.

Soils, Land Preparation, and Planting

Okra in Miami-Dade County is grown both on gravelly and marl soils. Okra is seeded directly into the soil. Plant spacings are 1.5–4 inches between plants and 36 inches between row centers. Often growers plant okra following a winter vegetable crop, so that the fruits are harvested from early spring to late fall (Miller et al. 2017, http://edis.ifas.ufl.edu/pdffiles/cv/cv29400.pdf).

Fertilizer

Calibrated soil tests for the calcareous soils of Miami-Dade County are not available at present. Therefore, 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 your local UF/IFAS Extension office. Information on plant tissue analysis for okra is provided in Chapter 2 of 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. It may be possible to use less inorganic fertilizer if a cover crop has been grown or if a soil organic amendment (compost, biosolids, and manure) has been applied. Pre-plant fertilizer formulas of 6-6-6, 6-3-6, 10-10-10, or similar formulas are satisfactory. For okra on flat ground, all of the P and 20%–30% N and K should be broadcast and incorporated prior to planting. The remainder of the fertilizer should be side-dressed in 2 or 3 applications beginning at 3–4 weeks after planting. Okra is often planted as a second crop on plastic mulch. In this case, the fertilizer is provided by fertigation once or twice a week with daily rates ranging from 0.5 lb N to 2 lb N/acre. Magnesium nitrate or sulfate and EDDHA-chelated iron

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should be applied if deficiency symptoms appear (please see this EDIS publication at http://edis.ifas.ufl.edu/hs1208).

Irrigation and Freeze Protection

A water cannon ("big gun") or center pivot system can be used to irrigate okra on flat fields. Drip irrigation systems are used for okra on plastic mulch. One drip irrigation tubing per bed has proven to provide adequate amounts of water for the plants. There is more information on irrigation in Chapter 3 of the *Vegetable Production Handbook for Florida 2017-2018* (Zotarelli et al. 2017, http://edis.ifas.ufl.edu/cv297).

Okra sustains frost injury when temperatures drop 3°F below freezing. Few growers grow okra in the middle of winter.

Insect Management

Refer to Chapter 10 of the *Vegetable Production Handbook of Florida 2017–2018* (Miller et al. 2017, http://edis.ifas.ufl.edu/pdffiles/cv/cv29400.pdf) for extensive information on insect control. The major pest of okra is the melon thrips, which scars the fruit, and aphids. Although the silverleaf whitefly develops prolifically on okra, the plant compensates for the feeding damage. The main concern is that tremendous numbers of this pest migrate from okra fields to other crops, such as tomato, bean, and ornamental crops.

Disease Management

Refer to Chapter 10 of the *Vegetable Production Handbook of Florida 2017–2018* (Miller et al. 2017, http://edis.ifas.ufl.edu/pdffiles/cv/cv29400.pdf).

Weed Management

Refer to Chapter 10 of the *Vegetable Production Handbook of Florida 2017–2018* (Miller et al. 2017, http://edis.ifas.ufl.edu/pdffiles/cv/cv29400.pdf).

Harvest

The harvest season extends from March through November (Miller et al. 2017, http://edis.ifas.ufl.edu/pdffiles/cv/cv29400.pdf). Okra is hand-picked and sold for local consumption, but primarily for shipment to other states.

Multiple Cropping/Rotation

Okra can be mowed and rejuvenated after several harvests. The mowed plants will regrow with good yield. In practice such ratooning is repeated two or three times. Okra can be grown as a second crop after tomatoes, squash, beans, and cucumbers.

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