Okra
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Introduction
Okra (*Abelmoschus esculentus*) is a heat-loving vegetable in the Hibiscus family. It is particularly popular in the South, where the immature pods are used as an ingredient and thickening agent in soups, stews, and gumbos. Okra can also be fried and pickled.

Marketing and Market Outlook
Okra is a very minor part of the state’s commercial vegetable production. Most commercial okra in Kentucky is grown for farmers markets or community supported agriculture (CSA) sales. In the past, some growers have shipped limited amounts of okra for commercial wholesale. While wholesale okra prices can be very good, the quantity demanded at these prices is low and growers should have a wholesale market defined before planting large acreages.

Okra is also a desirable vegetable for direct marketing to local restaurants, where chefs are often willing to pay a premium for smaller sizes of okra. Growers should consider targeting restaurants specializing in Southern, Creole, and/or Cajun dishes. Ethnic restaurants may have different preferences for okra variety, maturity, and size.

Production Considerations

Cultivar selection
Okra cultivars differ in maximum plant height, days to maturity, and yield potential. Fruit (pods) may be smooth or ridged while shape can be fat or slender. Pod color may be green, red, or nearly white. Some cultivars produce pods that remain tender to a larger size. Spineless cultivars have fewer spines on leaves and stems, making them less irritating to harvest. Consideration needs to be given to regional preferences, as well as whether to grow hybrids and/or heirloom cultivars.Growers should select only adapted varieties that have the qualities in demand for the intended market.

Site selection and planting
Well-drained, fertile, silt loam soils are most desirable; however, okra will grow on a wide range of soil types as long as the site is well-drained. Okra is a hot weather plant and should be seeded only after the soil has warmed up in the spring. This crop does poorly in a cool, wet spring/summer. Ten to 12 pounds of seed are required to plant an acre. Planet

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Junior-type push or tractor-drawn seeders can be used effectively. Okra can also be transplanted to the field, which will potentially provide an earlier harvest. Very high yields have been obtained with transplanted okra using black plastic mulch and drip irrigation.

Pest management
Okra is highly susceptible to root knot nematodes. Other common diseases include fungal wilts (Verticillium and Fusarium) and fruit rots. These diseases are controlled primarily by following proper cultural practices, including crop rotation. Insect pests include aphids, Japanese beetles, and corn earworms. Scouting to monitor populations can help growers determine when and how often insecticides should be applied. Weeds are controlled with herbicides and cultivation.

Harvest and storage
Pods are cut from plants while they are still tender (typically 2 to 3½ inches long) and are graded according to size. During periods of rapid growth, pods may need to be picked, at a minimum, of every day or every other day. It is very important that growers have labor on hand to harvest in a timely fashion. Pods that are allowed to stay on the plant will become too large for commercial sales. During hot weather the difference between having a profitable harvest and having pods that are too large to be sold can just be a few days. Although okra can be harvested over several weeks of time, harvesting should be done on a regular basis to increase yields. Yields average 8,000 to 10,000 pounds per acre. Okra may be stored for up to 10 days under the proper conditions.

Labor requirements
Labor needs for production are about 10 to 15 hours per acre. An estimated 40 hours per acre is needed for hand harvesting, grading, and packing. More labor is required for specialty (smaller) sized okra. Due to the difficulty in harvesting okra, it is often challenging to get labor to harvest large acreages.

Economic Considerations
Initial investments include land preparation, purchase of seed, and installation of an irrigation system. Additional start-up costs can include the purchase and installation of black plastic mulch. Production costs (2013) for trickle-irrigated okra are estimated at $990 per acre, with harvest and marketing costs at $4,245 per acre. Total expenses per acre, including both variable and fixed, would come to approximately $5,675. Presuming gross returns of $6,300 per acre, returns to operator labor, land, capital, and management would be approximately $815 per acre.

Selected Resources
• Vegetable and Melon Budgets (University of Kentucky, 2013) [http://www.uky.edu/Ag/CCD/vegbudgets13.html]
• Vegetable Production Guide for Commercial Growers, ID-36 (University of Kentucky) [http://www.ca.uky.edu/agc/pubs/id/id36/id36.htm]
• Commercial Production of Okra in Mississippi (Mississippi State, 2003) [http://msucares.com/pubs/infosheets/is1510.pdf]
• Okra for Fresh Harvest budget (Clemson, 2009) [http://cherokee.agecon.clemson.edu/okra6.pdf]