



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 boiled, fried or pickled.

Marketing and Market Outlook

Okra is a minor commercial vegetable in Kentucky. Most commercial okra in Kentucky is grown for farmers markets or community supported agriculture (CSA) sales. Kentucky growers have in the past shipped limited amounts of okra to commercial wholesale market channels. Wholesale market demand for okra is relatively low, and growers should have a marketing plan in place before planting large acreages.

Okra may be sold directly to local restaurants, where chefs are often willing to pay a premium for smaller-sized okra. Growers should consider approaching restaurants specializing in Southern, Creole and/or Cajun dishes. Restaurants specializing in ethnic cuisines are also possibilities for wholesaling okra; these restaurants may have varying preferences for 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 lack spines on the pods, making them less irritating



to harvest. Consider consumer preferences, regional as well as cultural, and whether to grow hybrids and/or heirloom cultivars. Growers should select only adapted varieties that have the qualities required by 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 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



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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 if and when insecticides should be applied. Weeds can be controlled with herbicides and/or cultivation.

Harvest and storage

Pods are cut from plants while 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, 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 be just a few days. Although okra can be harvested over several weeks, harvesting should be done on a regular basis to increase yields. Yields average 8,000 to 10,000 pounds per acre (600 15-pound boxes). Okra may be stored for up to 10 days under proper conditions.

Labor requirements

Labor needs for production are 35 to 40 hours per acre. An estimated 225 to 250 hours per acre is needed for hand harvesting, grading and packing 600 boxes. More labor is required for specialty (smaller) sized okra. Sourcing adequate labor for harvesting large areas of okra can be challenging due to the intensive harvest.

Economic Considerations

Initial investments include land preparation, purchase of seed, and installation of an irrigation system. Ad-

ditional start-up costs may include the purchase and installation of black plastic mulch. Production costs (2017) for trickle-irrigated okra are estimated at \$2,180 per acre, with harvest and marketing costs at \$4,855 per acre. Total expenses per acre, including both variable and fixed, would come to approximately \$7,640. Presuming gross returns of \$8,100 per acre, returns to operator labor, land, capital and management would be approximately \$455 per acre.

Selected Resources

- Vegetable and Melon Budgets (University of Kentucky, 2017) <http://www.uky.edu/ccd/tools/budgets>
- Vegetable Production Guide for Commercial Growers, ID-36 (University of Kentucky) <http://www.ca.uky.edu/agc/pubs/id/id36/id36.pdf>
- Okra, Page 69 in Southeastern U.S. Vegetable Crop Handbook (2018) http://pubs.ext.vt.edu/content/dam/pubs_ext_vt_edu/AREC/AREC-66/AREC-234.pdf
- Commercial Okra Production (University of Georgia, 2017) <http://extension.uga.edu/publications/detail.html?number=C627>
- Okra (Mississippi State University) <http://extension.msstate.edu/vegetable-gardening-mississippi/vegetable-varieties/okra>
- Okra for Fresh Harvest budget (Clemson, 2016) <http://www.clemson.edu/extension/agribusiness/files/enterprise-budgets/okra-irr.pdf>
- Okra, p. 183 in Midwest Vegetable Production Guide for Commercial Growers, ID-56 (Purdue University) https://edustore.purdue.edu/item.asp?Item_Number=ID-56
- Okra - FoodLink (Purdue University) <https://extension.purdue.edu/foodlink/food.php?food=okra>

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