

Cucumbers

Marketing

Cucumbers are grown in Kentucky primarily for fresh market (slicing types) rather than for processing (pickling types). Fresh market options include wholesale markets, auctions, cooperatives, farmers' markets and roadside stands. Sales to local retail markets, such as supermarkets and restaurants, are also an option. Some pickling types are sold at auctions and farmers' markets.

Market Outlook

U.S. per capita consumption of fresh cucumbers rose about 15 percent (one pound per capita) from 1995 to 2005. This indicates a normal increase for quantity demanded. Prices can fluctuate, with lower prices occurring when production peaks in June. Adding value by some fresh cut processing (slicing) could increase wholesale profits.

Production Considerations

Site selection and planting

Cucumbers do best in well-drained soils that are high in organic matter. The soil should be plowed in the fall and then disked two or three times in early spring for a well-prepared seed bed. Land that has been in sod is very desirable. Avoid planting on land that was treated the previous year with a triazine herbicide.

Cucumbers are very cold-sensitive and should not be planted until all danger of frost has passed and the soil has warmed sufficiently.

Two pounds of seed are needed per acre for direct seeding. This crop requires a continuous



supply of moisture during the growing season, with the critical time occurring at fruiting. Pickling cucumbers mature quickly and fit well into double-cropping systems.

Growing cucumbers on raised beds with black plastic and trickle irrigation increases yields and earliness. Cucumbers can be direct-seeded through the plastic, or two- to three-week-old seedlings can be transplanted into holes cut in the plastic. Plasticulture cucumbers are usually grown in double rows.

Vines should be trained to run lengthwise in the row soon after vining starts. This training makes hand-harvesting easier and quicker with less damage to the plants. Cucumbers can also be trellised to improve fruit quality; trellising has been most beneficial in mid-summer plantings for fall harvest. Providing one strong hive of bees for each acre of cucumbers will help to ensure good pollination in commercial plantings.

Pest management

Cucumber beetle, the major insect problem of cucumbers in



Kentucky, is also the carrier (vector) of the most serious cucumber disease problem, bacterial wilt. The use of imidacloprid insecticide at transplanting provides good protection for about 4 weeks and may be followed by regular foliar insecticide applications. Other serious diseases include powdery mildew, downy mildew, gummy stem blight, belly rot and viruses. Multiple control strategies are needed to prevent or reduce disease losses.

Harvest and storage

Picking the first harvestable cucumbers is very important to ensure continued production. Cucumbers picked by hand should be harvested every other day for best yields and quality. Cooling soon after harvest can help maintain quality and extend shelf life. Cucumbers for the fresh, wholesale market are often waxed and marketed in 1¹/₉ bushel waxed cartons. Fruit can be held in storage for about 2 weeks at the proper temperature and relative humidity.

Pickling cucumbers are harvested when the fruit is small and immature. For best yields it is essential that plants be picked clean at each harvest, being sure to remove any overgrown fruit that was missed during previous harvests. The fewer fruits that are allowed to become full-grown, the more the vines will produce.

Labor requirements

Labor needs for irrigated cucumbers are approximately 20 hours per acre for production, plus 50 hours per acre if plants are trellised. Plasticulture will add 18 hours more per acre for the removal and disposal of the plastic. Harvesting, washing and packing will require about 348 hours per acre.

Economic Considerations

Initial investments include land preparation and the purchase of seed or transplants. Additional start-up costs can include the installation of an irrigation system and black plastic mulch. Production costs for cucumbers grown on black plastic with trickle irrigation are estimated at

\$874 per acre, with harvest and marketing costs at \$2,478 per acre. Total costs are approximately \$3,714 per acre.

Production costs for irrigated late summer plantings with a single strand trellis are approximately \$1,474, with harvesting and marketing costs of \$3,654. Total expenses are estimated at \$5,567.

Since returns vary depending on actual yields and market prices, the following per acre returns to land and management estimates are based on three different scenarios. Conservative estimates represent the University of Kentucky's statewide average cost and return estimates for 2005.

SUMMER PRODUCTION

Pessimistic	Conservative	Optimistic
\$(548) *	\$98	\$813

FALL TRELLIS PRODUCTION

Pessimistic	Conservative	Optimistic
\$(81) *	\$623	1,142

* Parentheses indicate a negative number, i.e. a loss

More Information

- Fresh Cucumber Marketing Fact Sheet (University of Kentucky, 2005)
<http://www.uky.edu/Ag/NewCrops/cuke2005.pdf>
- Marketing Options for Commercial Vegetable Growers, ID-134 (University of Kentucky, 1999)
<http://www.ca.uky.edu/agc/pubs/id/id134/id134.htm>
- Vegetable and Melon Enterprise Budgets (University of Kentucky, 2004)
http://www.uky.edu/Ag/AGEcon/pubs/software/budgets_veg_melon.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 and Management of Squash and Cucumbers, B-1178 (University of Georgia, 2000)
<http://pubs.caes.uga.edu/caespubs/pubcd/B1178.htm>

- Drip Irrigation for Vegetables, MF-1090
(Kansas State University, 1993)
<http://www.oznet.ksu.edu/library/hort2/samplers/MF1090.asp>

- Plastic Mulches for Vegetables, MF-1091
(Kansas State University, 1993)
<http://www.oznet.ksu.edu/library/hort2/samplers/MF1091.asp>