

UK COOPERATIVE EXTENSION SERVICE

UNIVERSITY OF KENTUCKY — COLLEGE OF AGRICULTURE

Broccoli

Marketing

Fresh market wholesale options for Kentucky broccoli producers include cooperatives, produce auctions, local restaurants, groceries, and wholesalers. Cooperatives in Kentucky are currently marketing only broccoli grown for fall harvest. Retail markets include farmers' markets and roadside stands. Kentucky's location and climate also present opportunities for wholesale organic broccoli production.



Fescue sod ground is also good if the sod is plowed under early in the fall and allowed to decompose.

The ground for spring broccoli should be plowed in the fall in order to have a crop ready for early market. Plants should be in the field by the middle of April for a spring crop. Broccoli also does well as a fall crop and should be transplanted by mid-August. A minimum of 11,000 transplants will be needed for each acre. Tobacco setters can be used to transplant. Irrigation is often critical for establishing the fall crop. Broccoli responds well to plastic mulch and drip irrigation.

Market Outlook

U.S. per capita consumption of broccoli increased nearly 50 percent during the 1990s. Processing use (freezing) of broccoli remained flat during this same time period. Fresh use, however, soared to a record high 6.2 pounds per capita in 1999 before leveling off in 2001. Fresh broccoli use remained at 5.9 pounds per capita in 2004 and 2005.

Higher fuel/transportation costs, especially for bulky crops like broccoli and potatoes, impacted most large western produce growers in 2005. Future production alliances with northern, southern and western growers are feasible for Kentucky producers.

Production Considerations

Site selection and planting

Select a site that is well drained. While poorly drained soils should be avoided, slightly rolling land is suitable. This crop will do well on ground that has been in tobacco.



Pest management

Insect pests can be a major problem in broccoli production, especially in summer plantings for fall harvest. Scouting to monitor populations can help growers determine when and how often pesticides should be applied. Bt is a microbial insecticide which can be used effectively against most types of broccoli pests. A number of Bt products can be used in organic production. Several plant diseases (black rot, blackleg, and downy mildew) can also result in yield losses. A good crop rotation program and the use of disease-free resistant varieties will help in the prevention of many of these diseases. Fungicide/bactericide sprays may also be necessary.

Harvest and storage

Central heads and later-maturing lateral heads are cut by hand before the yellow petals appear. Heads need to be cooled immediately after harvest. Broccoli is sold to the wholesale fresh market in cartons holding 14 bunches

with two to three heads to the bunch. Top ice may also be required for wholesale markets.

Labor requirements

Labor needs are approximately 14 hours per acre for production, 90 hours per acre for harvest and 45 hours per acre for packing. Plasticulture will add 10 to 20 hours more per acre, mostly for the removal of the plastic.

Economic Considerations

Initial investments include land preparation and the purchase of seed or production of transplants. An additional start-up cost can include the installation of an irrigation system and black plastic mulch.

Production costs are estimated at \$959 per acre, with harvest and marketing costs at \$2,269 per acre. Since returns vary depending on actual yields and market prices, the following per acre returns to land and management are based on three different economic scenarios. Conservative estimates represent the University of Kentucky's statewide cost and return estimates for 2005. Figures are for trickle irrigated broccoli.

<i>Pessimistic</i>	<i>Conservative</i>	<i>Optimistic</i>
\$(59)*	\$387	\$981

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

More Information

- Bt Basics for Vegetable Integrated Pest Management, ID-156 (University of Kentucky, 2005) *Primarily intended for Extension agents, IPM trainers, etc.*
<http://www.ca.uky.edu/agc/pubs/id/id156/id156.pdf>

- Fresh Broccoli Marketing Fact Sheet (University of Kentucky, 2005)
<http://www.uky.edu/Ag/NewCrops/broccoli2005.pdf>
- Growers' Guide to Bt, ID-156A (University of Kentucky, 2005) *Primarily for grower use*
<http://www.ca.uky.edu/agc/pubs/id/id156a/id156a.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) *Interactive spreadsheets*
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>
- Broccoli: Commercial Vegetable Production, Circular 764 (University of Georgia, 1999)
<http://pubs.caes.uga.edu/caespubs/pubcd/C764-w.htm>
- Cole Crops - Broccoli, Cabbage, Cauliflower: Commercial Vegetable Production, MF-1108 (Kansas State University, 1998)
<http://www.oznet.ksu.edu/library/hort2/samplers/MF1108.asp>
- 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>