UK COOPERATIVE EXTENSION SERVICE
UNIVERSITY OF KENTUCKY — COLLEGE OF AGRICULTURE

Sweetpotatoes

Introduction

The terms "sweetpotato" and "yam" are often used interchangeably; however, they are actually two entirely different crops. Only sweetpotatoes are grown in the U.S.; yams are grown in the Caribbean and many other tropical areas.

Marketing

The most profitable marketing opportunities for sweetpotatoes in Kentucky are through local fresh markets, such as farmers' markets and on-farm stands. "U-Dig" sweetpotato sales, similar to U-Pick, are also possible in some areas. Currently there are about 25 acres of commercial sweetpotato production in the state. While sweetpotato processing has grown in recent years, there are no significant processing markets available in Kentucky.

Market Outlook

U.S. sweetpotato use per capita rose above 4½ pounds in 2003, the first time use exceeded this level since 1985. Several factors have contributed to this increase. Sweetpotatoes regained some popularity with their emphasis as a "lower-carb potato" in the early 2000s; however, high antioxidant levels in sweetpotato skins have contributed to consumption staying strong after the low-carb diet craze. Sweetpotato consumption is highest among Americans over 60, and sweetpotatoes may have special appeal to aging, health-conscious Baby Boomers. White and purple flesh sweetpotatoes, as well as organic sweetpotatoes, are possible market niches that Kentucky growers could fill.

Higher market prices occur during the winter months so growers who are able to store their crop will be able to increase profits substantially.

Production Considerations

Site selection and planting

Sweetpotatoes grow best on medium to light sandy soils that are well drained. Fields high in organic matter should be avoided. Sweetpotatoes should not be grown on the same land more often than once every 3 years.

Propagation is from vine cuttings which are referred to as "slips." While slips can be purchased, it is often more economical for growers to propagate their own. Ten to twelve bushels of sweetpotatoes should be bedded in order to produce enough slips for one acre. Ordinarily 16 to 20 square feet of bed surface will be needed for each bushel. Sweetpotatoes are usually bedded about 7 weeks before field-setting time.

Slips may be transplanted to the field by hand, but many Kentucky growers use a one-row tobacco setter. About 15,000 transplants (slips) are set per acre.

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Pest management

The main insect pests are those that feed on the roots, such as

wireworms, flea beetle larvae, and sweetpotato weevils. Diseases include black rot and scurf, Fusarium wilt, nematodes and post-harvest rots. Pesticide applications may be necessary for control.

Harvest and storage

Sweetpotatoes should be harvested when sufficient 6- to 8-ounce potatoes are found in the hill. A good practice is to clip the vines before harvesting so they do not get in the way during harvest, resulting in less damage to the potatoes. A turn plow or a potato plow can be used to expose the roots with the least possible injury. Potatoes are graded in the field and then placed in containers that are to be put into storage. For large scale production, mechanical harvesting machinery must be used.

Following harvest, sweetpotatoes need to undergo a curing process to promote the healing of wounds. Curing also protects the roots from many storage diseases, improves flavor and texture, and increases the post-storage lifetime of the root. After curing, sweetpotatoes may be stored for 4 to 7 months under the proper conditions. Sweetpotatoes are cleaned, either by brushing or washing, and then sometimes waxed before packing into boxes, crates or baskets for market.

Labor requirements

Labor needs per acre are approximately 16 hours for production, 40 hours for harvest and 40 to 50 hours for post-harvest handling.

Economic Considerations

Initial investments include land preparation and the purchase of "slips" or sweetpotatoes for propagation. Total expenses, including both variable and fixed costs, are approximately $2,275 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 average cost and return estimates for wholesale production in 2005. Direct marketers could expect returns at significantly greater levels.

Pessimistic	*Conservative*	*Optimistic*
$244	$481	$1,075

More Information

- Marketing Options for Commercial Vegetable Growers, ID-134 (University of Kentucky, 1999) http://www.ca.uky.edu/agc/pubs/id/id134/id134.htm
- Vegetable Production Guide for Commercial Growers, ID-36 (University of Kentucky) http://www.ca.uky.edu/agc/pubs/id/id36/id36.htm
- Estimated Costs and Returns Per Acre for Sweetpotatoes (Alabama Cooperative Extension, 1999) http://www.ag.auburn.edu/dept/aec/pubs/budgets/99/vege.html
- Guide to Sweetpotato Production in Alabama (Alabama Cooperative Extension, 1996) http://www.aces.edu/pubs/docs/A/ANR-0982/
- Harvesting and Curing Sweetpotatoes, ANR-1111 (Alabama Cooperative Extension, 2004) http://www.aces.edu/pubs/docs/A/ANR-1111/ANR-1111.pdf
- Sweet Potato Commercial Vegetable Production, C-677 (University of Georgia, 1999) http://pubs.caes.uga.edu/caespubs/pubs/pdf/C677.pdf
- Sweetpotato: Organic Production (ATTRA, 2005) http://attra.ncat.org/attra-pub/PDF/sweetpotato.pdf
- Sweetpotatoes – Commercial Vegetable Production, MF-1110 (Kansas State, 1998) http://www.oznet.ksu.edu/library/hort2/samplers/mf1110.asp

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