UK COOPERATIVE EXTENSION SERVICE
UNIVERSITY OF KENTUCKY — COLLEGE OF AGRICULTURE

Strawberries

Introduction

The following information is based on the matted row system of strawberry production. The annual plasticulture production system is still considered experimental under Kentucky conditions because of low yields.

Marketing

The quality of Kentucky-grown strawberries is far superior to berries that are shipped in, consequently there is a strong market for local berries, particularly near population centers. Most strawberries grown in Kentucky are currently sold on a U-Pick basis. Other marketing options include roadside stands and local grocers. Farmers' markets, produce auctions, and restaurants are also outlets for strawberries. Some producers have sold strawberries to local ice cream makers.

Market Outlook

U.S. strawberry consumption increased more than 30 percent from 1990 to 2000. The increasing demand for strawberries has kept fresh market prices relatively stable. Strawberry acreage in Kentucky has declined somewhat in the past few years, which has increased the market potential for this crop. While small fruit producers nationwide are experiencing a decline in the demand for U-Pick berries, there is an increasing demand for an already-picked product.

Production Considerations

Site selection and planting

Strawberries need to be located on ground higher than the surrounding area in order to reduce the chance of spring frost damage. Irrigation is a necessity for commercial production. Many growers install overhead sprinklers since this system can also be used to help prevent frost and freezing injury.

The best time to plant strawberries in Kentucky is early spring. Approximately 5,000 vigorous, disease-free mother plants will be required per acre. Removing blooms the first season is necessary to encourage the early production of runner plants. A strong colony of bees is recommended to pollinate one acre of strawberries. A protective straw mulch is applied when plants become dormant in late fall and is removed the following spring. Most commercial fields in Kentucky produce marketable fruit for two to three seasons, with weed problems as the primary reason for terminating a planting.

Pest management

Insect pests include strawberry clippers, sap beetles, spittlebugs, strawberry rootworm, eastern flower thrips and tarnished plant bug. Botrytis blossom blight and fruit rot, various fungal leaf spots, leather rot and red stele are

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diseases that can affect strawberries. Kentucky strawberries generally do not require an extensive spray program for diseases and insects if disease resistant varieties are used. Other pests include birds and deer, which can cause serious damage in some sites.

Harvest and storage

The harvest season for strawberries begins in May and lasts two or three weeks. Only fully colored strawberries at their peak of flavor should be harvested since quality will not improve after harvest. Refrigeration will be needed for berries that are stored for a few hours or longer. Strawberries are usually sold in pint and quart plastic or fiber pulp containers.

Labor requirements

Labor requirements for strawberry production compare favorably with those for tobacco. Establishment through the first commercial year of production requires approximately 100 hours per acre. Harvest, beginning with the second year, will require 525 hours per acre for fields where pickers are hired and approximately 125 hours per acre for U-Pick operations.

Economic Considerations

The investment for strawberry production can initially be high primarily due to the costs of land preparation, planting and the installation of an irrigation system. In addition, strawberries must be established for a year before harvest and no returns are generated in that first year. The cost of establishment ($2,200) is assumed to be pro-rated over the four-year life of the strawberry planting. Expenses during the production years (years 2 to 4) are approximately $3,625 (U-Pick) or $5,950 (hired harvest), including the pro-rated establishment costs.

The returns to labor and management for strawberries can be nearly as high as for tobacco, and even greater for growers who produce high yields. Since returns can vary depending on actual yields and market prices, the following per acre returns to land and management estimates are based on three different economic scenarios. Conservative estimates represent the University of Kentucky's statewide average cost and return estimates (2005).

IRRIGATED, HIRED PICKER

Pessimistic	*Conservative*	*Optimistic*
$(240)*	$1,045	$1,300

IRRIGATED, U-PICK

Pessimistic	*Conservative*	*Optimistic*
$830	$1,950	$2,710

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

More Information

- Kentucky Strawberry Profitability Estimated Costs and Returns (University of Kentucky, 2008) http://www.uky.edu/Ag/NewCrops/strawberries.pdf
- Strawberry Marketing Fact Sheet (University of Kentucky, 2005) http://www.uky.edu/Ag/NewCrops/strawberries2005.pdf
- Strawberry Production in Kentucky, HO-16 (University of Kentucky, 2007) http://www.ca.uky.edu/agc/pubs/ho/ho16/ho16.pdf
- Midwest Commercial Small Fruit and Grape Spray Guide, ID-94 (Midwest Fruit Workers Group, 2008) http://www.hort.purdue.edu/hort/ext/sfg
- Midwest Small Fruit Pest Management Handbook, B-861 (Ohio State University, 2004) http://ohioline.osu.edu/b861/index.html
- Strawberries: Organic and IPM Options (ATTRA, 2003) http://attra.ncat.org/attra-pub/strawberry.html