UK COOPERATIVE EXTENSION SERVICE
UNIVERSITY OF KENTUCKY — COLLEGE OF AGRICULTURE

Sweet Cherries

Introduction

Sweet cherries (*Prunus avium*) are mainly consumed fresh; however, they may also be frozen, canned or processed for wine. Frequent losses due to such factors as fluctuating winter temperatures, spring frosts, and rain-induced cracking make commercial sweet cherry production a challenge in Kentucky.

Marketing and Market Outlook

U.S. per capita fresh cherry consumption has doubled in the past 10 years. Despite the increased demand, most sweet cherries continue to be produced in Washington, California and Oregon. The drier, cooler growing conditions in these western states are much more conducive to cherry production than Kentucky's warmer, wetter climate.

Potential fresh market outlets in Kentucky include farmers markets and roadside stands. The strong demand for fresh fruit at these markets would probably make sweet cherries a popular product. Since sweet cherries are not a common crop in Kentucky, competition for sales would be low, or possibly, non-existent in many areas. Unfortunately, success in commercial sweet cherry production will require overcoming a number of significant production obstacles.

Production Considerations

Site selection and planting

Sweet cherries do well on a wide variety of soil types, as long as the site is well-drained. Trees generally do not thrive on heavy, poorly drained soils. Select a site that is considerably higher than surrounding areas, with good slopes and lower areas for air drainage. Avoid protected areas, such as near wood lots, since these obstruct air flow and allow frost pockets to form. Sweet cherries bloom early in the spring and are prone to spring frost losses; however, some recently developed self-pollinating cultivars do bloom later.

One-year-old nursery stock should be planted in the spring. Most sweet cherry cultivars are self-incompatible and require another cultivar to serve as a source of pollen. Pollinizers are dispersed throughout the orchard, generally one tree for every eight to nine trees. One to two honey bee hives per acre will also be needed.

Trees are pruned lightly until after they come into production the third season. Sweet cherries are trained to a central leader or modified central leader system. Annual pruning during dormancy is used to develop and maintain tree size and shape. Pruning also opens the canopy for more effective pesticide coverage.

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Pest management

A number of diseases, insects, animal pests and environmental conditions can cause heavy sweet cherry losses in Kentucky. Brown rot and cherry leaf spot are the most serious disease problems. Common insect pests include cherry aphid, plum curculio and cherry maggot. A regular preventative spray schedule must be followed to control insect and disease problems, and to ensure high quality fruit. Rains occurring just before harvest can result in fruit cracking, making the fruit unmarketable. Even minor cracking can open the fruit to further damage from the brown rot fungus. Birds feeding on ripening fruit have been known to cause substantial yield reductions. Deer feeding on shoots and bark may destroy young cherry trees. Mice and rabbits can also injure trees. Cherry growers use cultivation, herbicides and cover crops in their orchard management program.

Harvest and storage

Fresh market sweet cherries are hand-harvested leaving the pedicels intact. Fruit maturity can be determined by color and the use of a refractometer that measures the level of soluble solids (sugar).

Cherries should have field heat removed immediately after harvest. Because it has a very short shelf life, the fruit needs to be moved to market as quickly as possible. Sweet cherries can be stored for no more than 10 to 14 days at 32°F.

Labor requirements

Labor needs per acre are significant, mainly due to the amount of labor required to hand harvest the fruit. Washington State University estimates it takes 30 people to pick one acre of cherries in one day.

Economic Considerations

Initial investments include land preparation, purchase of trees, tree establishment, and installation of an irrigation system. A good sprayer for insect and disease control will also be needed. Additional costs include the purchase of post-harvest grading and cooling equipment.

Production costs for irrigated sweet cherries are estimated at $800 to $1,000 per acre, with harvest and marketing costs at $6,100 to $7,500 per acre. Total expenses per acre, including both variable and fixed, are approximately $6,900 to $8,500. Presuming gross returns of $4,000 to $14,000 per acre, returns to land, capital and management would be approximately negative $2,900 (a net loss) to $6,000 (a net gain) per acre. The high establishment costs and significant growing challenges make sweet cherry production in Kentucky a risky enterprise.

More Information

- Commercial Tree Fruit Spray Guide, ID-92 (University of Kentucky, *et al*, 2006) http://www.hort.purdue.edu/fruitveg/ID168_2006.pdf
- Tree Fruit Pest Management Handbook, ID-93 (University of Kentucky, *et al*, 1993) http://www.ca.uky.edu/agc/pubs/id/id93/id93.htm
- Crop Profile for Sweet Cherries in Washington (Washington State University, 2002) http://www.tricity.wsu.edu/~cdaniels/profiles/cherry.pdf
- Cherries – *Prunus avium*, *Prunus cerasus* (University of Georgia) http://www.uga.edu/fruit/cherry.html
- Growing Cherries in Indiana (Purdue University, 2001) http://www.hort.purdue.edu/ext/HO-9.pdf